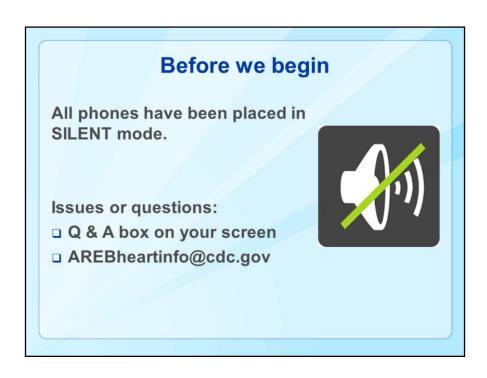MODERATOR:
Welcome to today's Coffee Break presented by the Applied Research and Evaluation Branch in the Division for Heart Disease and Stroke Prevention at the Centers for Disease Control and Prevention.

We are fortunate to have **Erika Fulmer and Andrew Kunka** as today's presenters. Erika is from DHDSP's Applied Research and Translation Team. Andrew is an attorney with the Center for Public Health Law Research, Beasley School of Law, at Temple University.

My name is **Lauren Taylor** and I am today's moderator. I am on the Applied Research and Translation team within the **Applied Research and Evaluation Branch**.

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 on the phone, please place your phones on mute.

All participants listening through your computer, you have been muted.

If you are having issues with audio or seeing the presentation, please message us using the Q & A box or send us an email at AREBheartinfo@cdc.gov
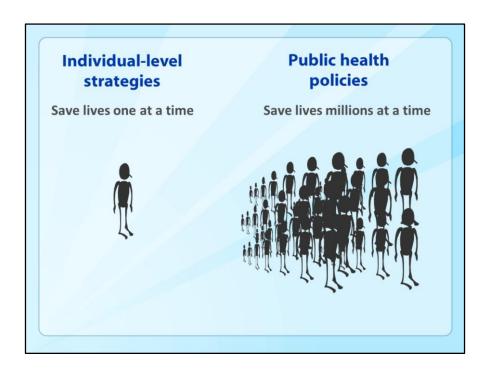
If you have questions during the presentation, please enter it on the Q & A box on your screen. We will address your questions at the end of the session.

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.

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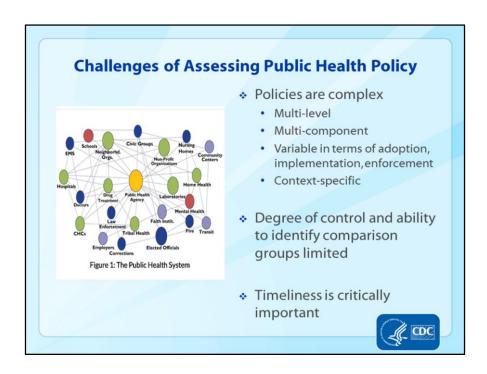
So, without further delay. Let's get started. Erika and Andrew, the floor is yours.

Thank you, Lauren. Hello everyone, we are here today to describe the methods and results of a concurrent early evidence assessment and state policy analysis of public access defibrillation (PAD) laws. These laws work to facilitate the rapid use of automated external defibrillators (AEDs) to save lives and mitigate disability in out-of-hospital cardiac arrests.

Public health policy touches EVERY individual, EVERY day. Addressing the cause of death and emergencies cannot be done one person at a time. Whereas individual-level strategies such as the provision of clinical care works to save lives one at a time, public health policy seeks to improve health outcomes of entire groups. Public health policy may touch millions of lives each day. Given that, it's incredibly important that we "get it right" and know whether it's having the intended impact.

The public health policies we'll speak about today refer to the legislation (formal laws) adopted by elected officials as well as rules and regulations promulgated by executive agencies to improve and protect the health of our entire population. –Seavey et al, 2014
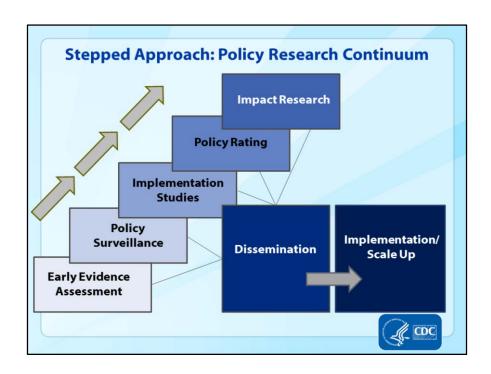
There are a number of inherent challenges when assessing public health policy. Policies are often complex, they occur at multiple levels. Within the US, this may include at the federal, state and local levels. They are context-specific. To really understand the implementation and impact of laws we need to look at the larger context-what are the environmental, economic, and political factors at play?

In terms of degree of control and ability to identify comparison groups, we can seek to match similar communities and compare outcomes, but we need to be very cautious about our interpretation and the generalizability of findings. We can use pre-post designs. However, we need to consider when a given law was adopted, when it was enacted and how and when it was implemented.

Finally, policy makers don't have years to wait for study findings. Instead, they have maybe a few months, often just a few weeks or even a few days when they need information.
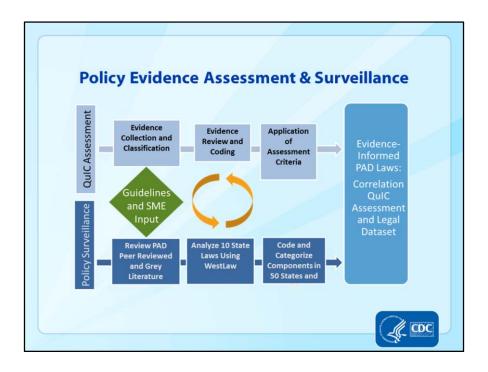
A primary concern for DHDSP's Applied Research Translation team is how we get the best available information to the field quickly to inform timely decision making.

Stepped Approach: Policy Research Continuum

To help address this need, our team rethought our work and consciously laid out a stepped approach called the Policy Research Continuum to guide our strategic planning.
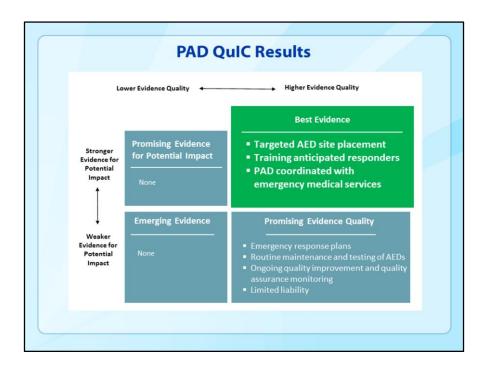
During today's call, we'll be focusing on the first few steps of this continuum and how we applied it to public access defibrillation. If you have additional questions about the broader continuum, I would refer you to April's archived Coffee Break which walks through each step in more detail. The first step, early evidence assessment, is where we examine the evidence base for emerging policy areas. Concurrently, we also examine which jurisdictions have enacted which policies (typically 50 states +DC)

Once we have these concurrent steps completed, we move to implementation to examine the barriers and facilitators to policy implementation. Additionally we may complete a policy rating looking at either just the evidence-informed legal features of a given policy across states or, if state-level information is available, an outcome-informed policy rating. Finally, in terms of policy evaluation, our hope is to ultimately examine the impact of the policy on public health outcomes.

We coordinate between and across steps of the continuum.

For PAD, we completed our early evidence assessments (what we call the Quality and Impact of Component Evidence or "QuIC" Assessment) and policy surveillance concurrently. This helped to ensure that our work was grounded in both evidence as well as real world application within enacted laws. It also enhanced our ability to efficiently engage subject matter experts and produce timely products. Most importantly, it allowed us to examine the association between state PAD laws and best available evidence for PAD implementation.

QuIC is a screening tool to assess evidence for public health policy components. These policy components often address new or upcoming topics in the field of public health. QuIC focuses on "early" evidence, where research on a given emerging policy is limited.

Analysts on the ART team applied QuIC to assess the strength of evidence for 7 PAD "policy components," defined as discrete requirements, provisions, or other elements that could be included in a PAD law. The evidence included peer reviewed journal articles as well as grey literature. Two coders independently coded the evidence for each of the PAD components. Consensus for each code was reached through discussion and reconciled coding was entered into the QuIC Evidence Assessment Tool. Based on the scores from the impact and quality assessments, each of the 7 PAD policy components were assigned to evidence strength categories as shown on this slide. Three had scores placing them in the "Best" evidence category while four others had scores placing them in the "Promising Evidence Quality" category.
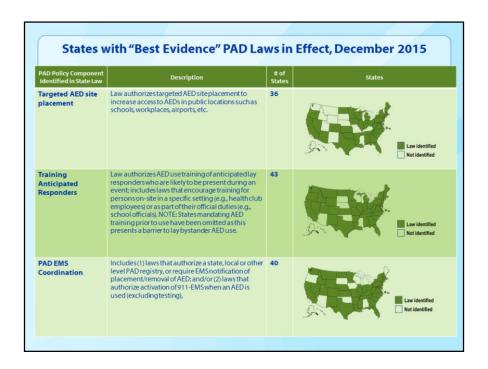
A policy evidence assessment report summarizing the results is currently in CDC Clearance. At this point, I will turn it over to Andrew to discuss the process and findings of the state PAD law assessment

State PAD Law Assessment

□ Methods
- Review literature
- Identify PAD policy components
- Code and categorize PAD policy components
- Descriptive analysis to examine correlations with QuIC results

Thank you **Erika** for providing an overview of the PAD QuIC evidence assessment. As previously mentioned, the PAD law assessment was done simultaneously with PAD QuIC assessment in order to get a full picture of those policy components found within the evidence and in actual real world application within enacted laws.

The PAD law assessment began by two legal researchers reviewing PAD peer-reviewed and grey literature while analyzing 10 states' enacted statutes and regulations to identify PAD policy components found in state law. The initial state law components identified were then used to select variables for a legal dataset in the form of question responses that captured specific PAD policy components that were **authorized in state law by being required, permitted or encouraged**. The researchers then created the dataset by collecting all relevant state PAD statutes and regulations for all 50 states and Washington, D.C, in effect as of December 31, 2015, and then coded the components found.

Once the legal dataset was complete, another researcher conducted descriptive analysis of the policy components coded and examined their association to the 7 QuIC assessment classified components.

States with "Best Evidence" PAD Laws in Effect, December 2015

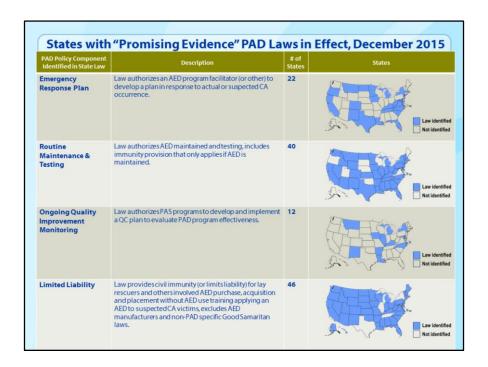| PAD Policy Component Identified in State Law	Description	# of States	States
Targeted AED site placement	Law authorizes targeted AED site placement to increase access to AEDs in public locations such as schools, workplaces, airports, etc.	36	Law identified / Not identified
Training Anticipated Responders	Law authorizes AED use training of anticipated lay responders who are likely to be present during an event; includes laws that encourage training for persons on-site in a specific setting (e.g., health club employees) or as part of their official duties (e.g., school officials). NOTE: States mandating AED training prior to use have been omitted as this presents a barrier to lay bystander AED use.	43	Law identified / Not identified
PAD EMS Coordination	Includes (1) laws that authorize a state, local or other level PAD registry, or require EMS notification of placement/removal of AED; and/or (2) laws that authorize activation of 911-EMS when an AED is used (excluding testing),	40	Law identified / Not identified

From these maps you can see how the authorization of each of the 3 "best" classified QuIC components varied across state laws.

Our examination of the association between state laws and the QuIC "best" classified components found that **36** states authorized targeted AED site placement to increase access to AEDs in public locations such as schools, workplaces and airports, **43** states authorized AED use training of anticipated lay responders that were likely to be present during an cardiac arrest event and **40** states authorized local or other level PAD emergency medical registration and/or activation of 911-EMS when an AED is used (excluding testing).

Map of States by Number of Best PAD Components In Effect December 31, 2015

3/3 Best Components (n=27, 53%)
2/3 Best Components (n=18, 35%)
1/3 Best Component (n=3, 6%)
0/3 Best Components (n=3, 6%)

From this map you can see the variation in the **total** number of "best evidence" QuIC PAD classified components authorized across state laws.

Our study found that 27 state's authorized all 3 "best" components, 18 states authorized 2 of 3, 3 states authorized 1 of 3 and 3 states authorized no "best" classified components within their PAD laws. As seen from this map, a majority of states, 27, actually authorized all three "best" components.

States with "Promising Evidence" PAD Laws in Effect, December 2015

PAD Policy Component Identified in State Law	Description	# of States	States
Emergency Response Plan	Law authorizes an AED program facilitator (or other) to develop a plan in response to actual or suspected CA occurrence.	22	
Routine Maintenance & Testing	Law authorizes AED maintained and testing, includes immunity provision that only applies if AED is maintained.	40	
Ongoing Quality Improvement Monitoring	Law authorizes PAS programs to develop and implement a QC plan to evaluate PAD program effectiveness.	12	
Limited Liability	Law provides civil immunity (or limits liability) for lay rescuers and others involved AED purchase, acquisition and placement without AED use training applying an AED to suspected CA victims, excludes AED manufacturers and non-PAD specific Good Samaritan laws.	46	

From these maps you can see how the authorization of each of the 4 "promising" classified QuIC component varied across state laws.

Our examination of the association between the "promising" PAD QuIC classified components and the state law data found that **22** states authorized an Emergency response plan by an AED program facilitator or other in response to actual or suspected cardiac arrest occurrence, **40** states authorized routine maintenance and testing of AEDs, **12** states authorized PAD programs to develop and implement a quality improvement plan to evaluate PAD program effectiveness and **46** states provide civil immunity or limit liability for expected users of AEDs.

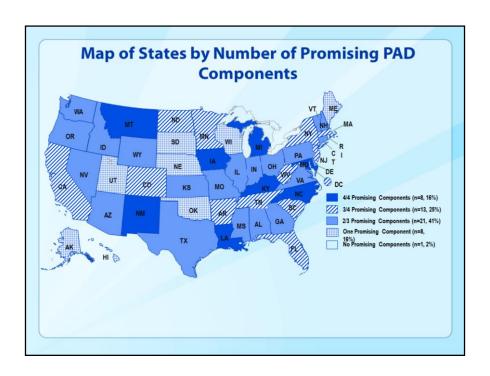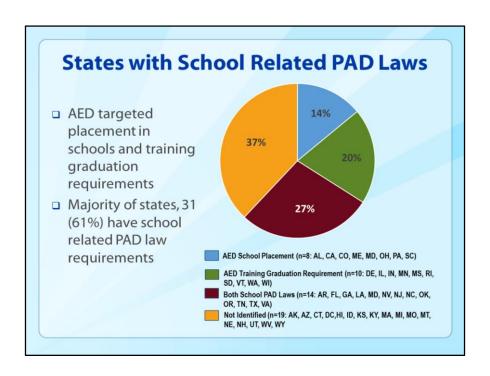**Map of States by Number of Promising PAD Components**

From this map you can see the variation in the **total** number of "promising evidence" QuIC PAD classified components authorized across state laws.

Our study found that 8 state's laws authorized all 4 "promising" components, 13 states authorized 3 of 4, 21 states authorized 2 of 4, 8 authorized 1 of 4 and 1 state authorized no "promising" components within their PAD laws.

States with School Related PAD Laws

- AED targeted placement in schools and training graduation requirements
- Majority of states, 31 (61%) have school related PAD law requirements

Pie chart values: 14%, 20%, 27%, 37%

- AED School Placement (n=8: AL, CA, CO, ME, MD, OH, PA, SC)
- AED Training Graduation Requirement (n=10: DE, IL, IN, MN, MS, RI, SD, VT, WA, WI)
- Both School PAD Laws (n=14: AR, FL, GA, LA, MD, NV, NJ, NC, OK, OR, TN, TX, VA)
- Not Identified (n=19: AK, AZ, CT, DC, HI, ID, KS, KY, MA, MI, MO, MT, NE, NH, UT, WV, WY)

During our PAD QuIC evidence assessment we also found AHA recommendations on the importance of AED placement in schools and on training students on AED use as part of their required curriculum. For this reason, we also assessed state laws for school AED targeted placement and AED use training graduation requirements.

As seen from this pie chart, a majority of states, 61%, for a total of 31, included some school related requirement with 8 states only authorizing targeted school site placement, 10 states only authorizing an AED training graduation requirement and 14 states authorizing both school AED targeted site placement and graduation requirements.

Summary Findings

- 51 jurisdictions authorized at least 1 of the 7 QuIC classified PAD policy components (maximum: 7; median: 5).
- Most common components were limited liability (46), training anticipated responders (43), EMS coordination (40) and routine maintenance and testing (40)
- 3 states authorized all 7 components (6%)
- 3 states authorized only lay bystander limited liability.

In summary, all 51 jurisdictions had PAD laws in effect as of December 31, 2015, authorizing at least 1 of the 7 evidence-informed PAD policy components with a median of 5 components.

The most common components authorized were limited liability, a promising component, followed by training anticipated responders, a best component, then, EMS coordination, a best component, and lastly routine maintenance and testing, a promising component.

Overall, 27 states authorized all 3 "best" components and 8 states authorized all promising components. There were 3 states that authorized all 7 components and also 3 states that only authorized lay bystander limited liability.

Limitations

QuIC Assessment

- Not a systematic review
- Does not estimate public health impact
- Does not weighs benefits v. harm
- Limited to U.S. studies only.

PAD state law assessment:

- State level only
- Exclusive focus on codified law and regulation
- Need for further examination to understand local implementation

It is important to note this study's several methodological limitations based on the scope and limits of the assessments conducted.

The limits of the QuIC assessment include that it is not a systematic review, does not make predictions or estimates of actual potential public health impact of evidence-informed policies, does not weighs benefits v. harm and is limited to U.S. studies only.

The limits of our PAD state law assessment include that it only examines statutes and regulations at the state level and does not include internal state policies, county or municipal laws or informal practices used for regulating the AED use locally.

Due to the diversity of PAD laws, further examination of other policy components and practices is needed to understand local implementation of AED programs.

In conclusion, their is strong evidence of potential public health impact for targeted AED placement, user training, and EMS coordination. Despite evidence, only 47% of states have enacted all 3 best policy components and only 6% have authorized all 7 components.

To improve cardiac arrest outcomes, The Institute of Medicine recommends developing policy strategies that address legal barriers to bystander CPR and defibrillation. To meet state needs and contexts, further research is needed evaluating the role of PAD law in cardiac arrest response and associated health outcomes to identify the best policy approaches.

Together we can impact policy and public health

Thank you for attending our Coffee Break today. Hopefully you are now more familiar PAD state law as well as methods you might use to support the implementation of evidence-based policy interventions.

By putting the different pieces together, we can facilitate the translation of research into public health practice and work towards mitigating the burden of cardiovascular disease.
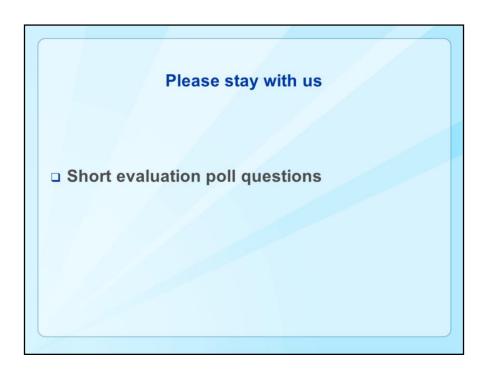
Any Questions?

MODERATOR: At this time, we'll take any questions that the audience may have. You may submit questions through the Q&A box.

Here we have a few questions.

ADD 2-3 MOCK QUESTIONS

1. How can I get more information about QuIC?
There is an archived coffee break presentation from June 14, 2016 that included Collen Barbero, one of the key developers of QuIC. It provides a broad overview of the method. Additionally, Colleen, working with several other ART Team members have developed a detailed, step-by-step handbook for QuIC. If you'd like a copy, please just email me at efulmer@cdc.gov and I will make sure you receive a copy.

2. Does the ART team ever consider policies other than those at the state level?
Currently, all of the ART Team's policy surveillance focuses at the state level. There are instances where we may scan for innovative practices at the local level and times when we work with partners to determine how federal policy may influence state-level action. However, the focus of our ongoing policy surveillance is at the state level.

Thank you Erika and Andrew.

Please stay with us

□ Short evaluation poll questions

MODERATOR: Please stay with us for a three short poll questions.

*NOTE (**don't read**) Pull up on polls and pause for 15 seconds after each poll question.*

Poll 1. This coffee break was worthwhile for me.
Yes, very worthwhile
Somewhat
A little
No, not at all

Poll 2. The level of information fit my needs.
Yes
Somewhat
No not at all

Poll 3. The information presented was helpful to me.
Yes
Somewhat
No not at all

ADD Three EVAL questions

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

MODERATOR:

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 have any questions, please contact us at the listed email address on this slide.

MODERATOR:

Our next Coffee Break is scheduled for Tuesday, September 12th , 2017 and is entitled **"Arriving at Actionable Evaluation Findings".**

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