

**COFFEE BREAKS 2019:**  
AN OVERVIEW OF STATE AND LOCAL  
SODIUM REDUCTION FOOD LAWS IN 2019

CENTERS FOR DISEASE CONTROL AND PREVENTION



Arielle Sloan, JD, MPH and Siobhan Gilchrist, JD, MPH | Applied Research and Translation Team  
May 14, 2019

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 **Arielle Sloan and Siobhan Gilchrist** as today's presenters. Both working in the space of legal epidemiology, Arielle is an ORISE Fellow and Siobhan is an IHRC Contractor. They both sit on the **Applied Research and Translation Team (ART)** within CDC's Division for Heart Disease and Stroke Prevention.

My name is **Lauren Taylor** and I am today's moderator. I am also on the ART team within the **ARE Branch**.

## 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](mailto: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](mailto: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.

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. **Arielle**, the floor is yours.

# AGENDA

## Background

- The role of policy surveillance in the policy research continuum
- The need for sodium reduction policy research

## Methods

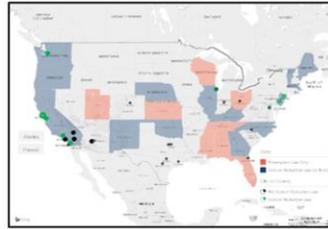
- Policy surveillance

## Results and Discussion

- State and local analysis
- Regional analysis

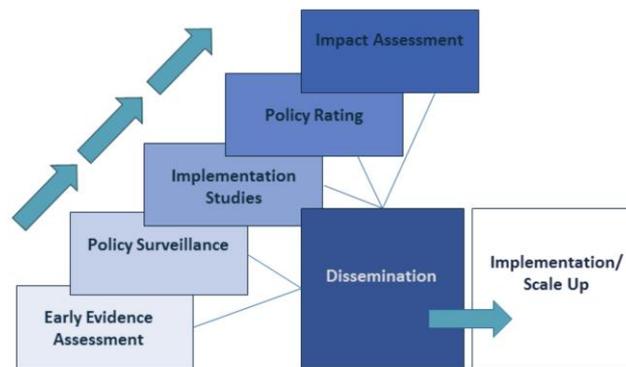
## Conclusion

## Questions



Thank you, Lauren. My name is Arielle Sloan, and today, I will be discussing sodium reduction policy across the country in 2019 with you. To begin, I will explain how policy surveillance helps our team answer some of our most pressing questions about cardiovascular health policy. I will then describe our team's sodium reduction policy surveillance project—why we did it, how we did it, and what we found. I will then conclude, and my colleague, Siobhan, and I, will have a few minutes to answer questions.

## THE ROLE OF POLICY SURVEILLANCE IN THE POLICY RESEARCH CONTINUUM



Our team works to understand which policies are most likely to improve cardiovascular health, and if so, why. Because this question is complicated and multi-faceted, we use a five-step process called the “policy research continuum” to gather relevant data.

We typically start this process by learning about policies that are emerging or becoming more widespread. We do this by researching National Academy of Health reports and policy recommendations by other organizations such as the American Heart Association, the Milbank Foundation, the Robert Wood Johnson Foundation, and others. Then we move to the steps you see at the bottom of this diagram, including a basic policy surveillance project that helps us understand what state and local policies look like across the country.

Today, we will show you how we conducted a policy surveillance project for our most recent policy continuum topic, which is sodium reduction in food.

## POLL QUESTION

How much sodium is in a typical cup of coffee?

- A) 5 mg.
- B) 80 mg.
- C) 135 mg.
- D) 160 mg.

*Note: The 2015-2020 Dietary Guidelines for Americans recommends that American adults consume 2300 mg. of sodium or fewer daily.*

To begin, I'd like to ask a question. How much sodium do you think a typical cup of coffee contains?

## POLL QUESTION

How much sodium is in a typical cup of coffee?

- A) 5 mg.
- B) 80 mg.
- C) 135 mg.
- D) 160 mg.

*Note: Sodium content estimates come from Google display of nutrition information linked to the USDA FoodData Central database (<https://fdc.nal.usda.gov/>).*

The correct answer is A: 5 mg. The amount of sodium in coffee is quite low. However, some of the foods that can be paired with coffee have high sodium content. Take, for example, a plain bagel, which contains 430 mg. of sodium. If you tack on the contents of a single-serve, 1 oz. packet of cream cheese, you get almost a fourth of your total daily sodium allotment.

## THE NEED FOR SODIUM REDUCTION FOOD LAW RESEARCH



Sodium consumption is linked to blood pressure (Eckel et al., 2014), which is a risk factor for heart disease and stroke. But, after hearing the amount of sodium in some common foods, it may not surprise you that American adults consume more sodium than recommended by the Dietary Guidelines for Americans (Cogswell et al., 2018). We can make some personal choices to limit our sodium consumption, but most of the sodium in our diet is put into our foods before we even buy them (CDC, 2017), including everyday items like bread, meat, and cheese.

Faced with these two realities, states and localities have taken a variety of approaches to regulating sodium in our food. However, it is unknown which of their approaches work best. In fact, we don't even have a current publicly-available list of state and local sodium reduction policies. So, our team started our continuum research there by collecting and coding state and local sodium reduction laws across the country.

Photo in public domain; later altered with MS Office picture tools. Content provider: CDC/ Mary Anne Fenley. <https://phil.cdc.gov/Details.aspx?pid=13090>

## SODIUM REDUCTION LAWS OF INTEREST

- **Reduce sodium content in:**
  - Vending machines
  - Institutional meals (such as those served in prisons, nursing homes, or hospitals)
  - Workplaces (events or meetings, cafeterias, workplace vending machines)
- **Place sodium labels on food products in:**
  - Restaurant menus/menu boards
  - Grocery stores, vending machines, etc. (product labeling)
- **Provide financial incentives for:**
  - Consumers (to purchase foods with less sodium)
  - Grocery, convenience, or corner store owners (to carry foods with less sodium)
- **Preempt local sodium reduction laws**

To begin our project, we conducted a preliminary search of literature and law and met with a team of subject matter experts. Our goal was to conceptually break down our research on “sodium reduction” generally into a manageable set of distinct themes, or interventions. We needed 6-7 interventions—this is the number that our evidence review team said would be most feasible based on their personnel and resources. Moreover, each of the 6-7 interventions we chose had to be found in at least one state law, narrow enough to have a distinct quantifiable impact on public health, and broad enough to have widespread reach among adults. Using these criteria, we identified the list you see here. I will now take a few minutes to talk about this list in more detail.

## SODIUM REDUCTION LAWS OF INTEREST

- **Reduce sodium content in:**

- Vending machines
- Institutional meals (such as those served in prisons, nursing homes, or hospitals)
- Workplaces (events or meetings, cafeterias, workplace vending machines)

- **Place sodium labels on food products in:**

- Restaurant menus/menu boards
- Grocery stores, vending machines, etc. (product labeling)

- **Provide financial incentives for:**

- Consumers (to purchase foods with less sodium)
- Grocery, convenience, or corner store owners (to carry foods with less sodium)

- **Preempt local sodium reduction laws**

**North Carolina:** "Agencies providing congregate nutrition or home delivered meal services must comply with the following menu planning requirements: . . . The sodium content shall not exceed 1,300 mg per meal." [10A N.C. ADMIN. CODE 6K.0203\(a\)](#) (2019).

Some of the most common laws we found in our preliminary law search fell into three settings—vending machines, institutional meal services (such as prisons or nursing homes), and workplaces. We also found research focusing on these subject areas and felt that these three categories combined covered most adults in the U.S. population. One example of this kind of law is North Carolina’s regulation requiring certain institutional meal providers to plan meals containing 1,300 mg. sodium or less.

## SODIUM REDUCTION LAWS OF INTEREST

- **Reduce sodium content in:**
  - Vending machines
  - Institutional meals (such as those served in prisons, nursing homes, or hospitals)
  - Workplaces (events or meetings, cafeterias, workplace vending machines)
- **Place sodium labels on food products in:**
  - Restaurant menus/menu boards
  - Grocery stores, vending machines, etc. (product labeling)
- **Provide financial incentives for:**
  - Consumers (to purchase foods with less sodium)
  - Grocery, convenience, or corner store owners (to carry foods with less sodium)
- **Preempt local sodium reduction laws**



N.Y.C. Health Code § 81.49(b) (2019)

We also saw several laws related to food labeling in our preliminary search. There has been discussion in the scientific literature both on menu labeling and on product labeling in grocery stores or other settings, so we were interested in both of these topics in our legal analysis. For example, we were curious to learn about laws like New York City's Health Code requiring the placement of a salt shaker label, shown here, next to certain high-salt menu items in chain restaurants.

## SODIUM REDUCTION LAWS OF INTEREST

- **Reduce sodium content in:**
  - Vending machines
  - Institutional meals (such as those served in prisons, nursing homes, or hospitals)
  - Workplaces (events or meetings, cafeterias, workplace vending machines)
- **Place sodium labels on food products in:**
  - Restaurant menus/menu boards
  - Grocery stores, vending machines, etc. (product labeling)
- **Provide financial incentives for:**
  - Consumers (to purchase foods with less sodium)
  - Grocery, convenience, or corner store owners (to carry foods with less sodium)
- **Preempt local sodium reduction laws**

**Illinois:** "The Department of Human Services shall establish a Healthy Local Food Incentives Program to double the purchasing power of Illinois residents . . . [to purchase] fruits and vegetables **without added sugars, fats, or oils, and salt** (i.e. sodium) . . ." 305 ILL. COMP. STAT. ANN. 5/12-4.50 (West 2019).

We also found a sprinkling of what I would call “financial incentives” laws in our preliminary law search--laws that provided direct financial incentives to either purchase or provide low-sodium food options. For example, we were interested in Illinois’ Healthy Local Food Incentives Program, which helps people buy no-salt-added vegetables.

Although these laws were less common, they also had potential for broad reach and a quantifiable impact on population health. With respect to consumers, we were interested in all purchasing environments—grocery stores, restaurants, cafeterias, etc. With respect to providers, we were only interested in grocery, convenience, or corner stores, because this is a niche area both in the law and science that we felt merited a specific investigation.

## SODIUM REDUCTION LAWS OF INTEREST

- **Reduce sodium content in:**
  - Vending machines
  - Institutional meals (such as those served in prisons, nursing homes, or hospitals)
  - Workplaces (events or meetings, cafeterias, workplace vending machines)
- **Place sodium labels on food products in:**
  - Restaurant menus/menu boards
  - Grocery stores, vending machines, etc. (product labeling)
- **Provide financial incentives for:**
  - Consumers (to purchase foods with less sodium)
  - Grocery, convenience, or corner store owners (to carry foods with less sodium)
- **Preempt local sodium reduction laws**

**Georgia:** “[N]o county board of health or political subdivision of this state shall enact any ordinance or issue any rules and regulations pertaining to the provision of food nutrition information at food service establishments.” GA. CODE ANN. 26-2-373(a).

Finally, we searched for preemption laws. Generally, preemption is when one jurisdiction reserves the right to enact certain policies to itself and blocks lower jurisdictions within it from enacting the same or similar laws. For example, the state of Georgia prohibits local policymaking (quote) “pertaining to the provision of food nutrition information at food service establishments.” (close quote) This is a kind of preemption that would affect menu labeling.

## INCLUSION AND EXCLUSION CRITERIA

- **Law:** Statute, Regulation, Executive Order, (some) Resolutions
  - No contracts
  - No internal administrative policies
- **Time:** Current as of 1/01/2019
- **Ages:** Applicable to ages 18+ or general population
- **Search Terms:** Law must expressly mention or reference salt or sodium or a dietary sodium requirement
- **Jurisdiction:** State or 20 most populous cities/counties (including Washington, D.C.)

Within these intervention areas of interest, we were looking only for what one would consider general “law”—statutes, regulations, ordinances, executive orders, and if specifying a sodium intervention—resolutions. We chose to focus only on laws affecting the general population or adults, because adults have higher hypertension rates than children and because we could not complete a comprehensive review of children’s laws in the timeframe allocated for the project.

Our searches are updated through January 1, 2019. Due to search string limitations, any laws we found had to include the word “sodium” or “salt.” We also did not include therapeutic or modified diets, or laws that referenced Dietary Guidelines for Americans unless there was an additional sodium-specific component involved in the law. This is because these laws are very common and often tangential to specific population sodium reduction interventions.

Our jurisdictions of interest included states and the 20 most populous cities and 20 most populous counties in the U.S. To give you an idea of which cities and counties we were looking at...

## TOP 20 CITIES AND COUNTIES

Cities		Counties	
New York City	New York	Los Angeles County	California
Los Angeles	California	Cook County	Illinois
Chicago	Illinois	Harris County	Texas
Houston	Texas	Maricopa County	Arizona
Phoenix	Arizona	San Diego County	California
Philadelphia	Pennsylvania	Orange County	California
San Antonio	Texas	Miami-Dade County	Florida
San Diego	California	Kings County	New York
Dallas	Texas	Dallas County	Texas
San Jose	California	Riverside County	California
Austin	Texas	Queens County	New York
Jacksonville	Florida	Clark County	Nevada
San Francisco	California	King County	Washington
Columbus	Ohio	San Bernardino County	California
Fort Worth	Texas	Tarrant County	Texas
Indianapolis	Indiana	Bexar County	Texas
Charlotte	North Carolina	Santa Clara County	California
Seattle	Washington	Broward County	Florida
Denver	Colorado	Wayne County	Michigan
Washington	District of Columbia	New York County	New York

The 20 most populous cities according to 2017 census estimates are on the left, and the 20 most populous counties are on the right. You can see that many of these cities and counties are concentrated in states like Texas, New York, Florida, and California, so note that our city and county analyses are limited in that respect.

## POLICY SURVEILLANCE METHOD

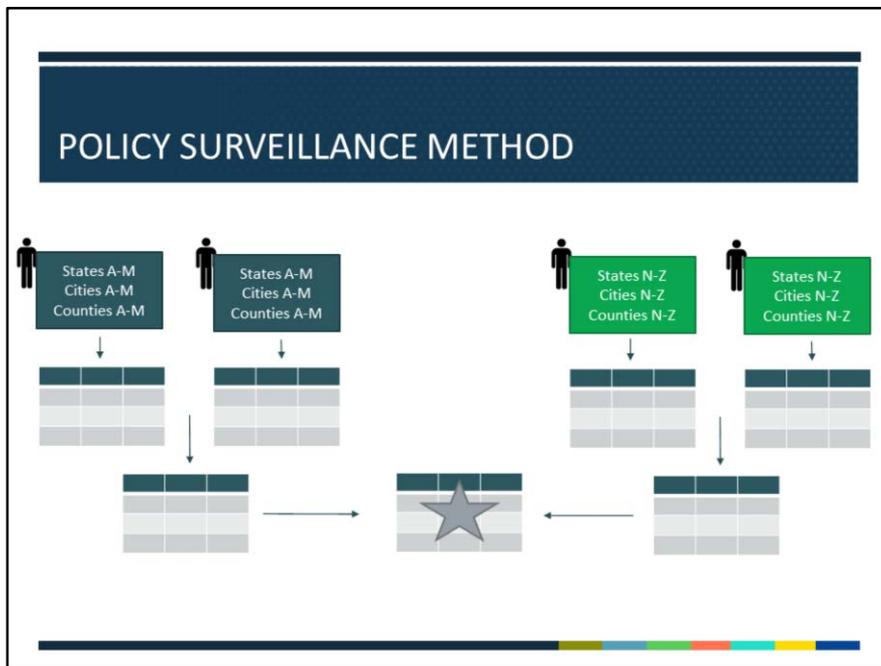
### Databases used

- States: Westlaw
- Counties or cities: Local websites (Municode, eCode360, Sterling, ALP, city websites) and Google
- Both: Topical databases

### Search string examples

- Westlaw: *adv: (salt or sodium) /p (diet or meal or sugar or fat or food or beverage or drink or nutrition or intake or consum!)*
- City websites: *sodium OR salt*

To find state laws, we searched a legal database called Westlaw. To find local laws, we used city websites or local law databases, such as Municode and American Legal Publishing, and Google. We also used topical nutrition policy databases to spot laws that we could not find elsewhere. Our search strings became more or less restrictive based on how many laws were in each database we looked at. In Westlaw, we really had to refine our search because there were so many results. Conversely, some city websites had so few laws that we were able to run broader searches.



Our legal epidemiology team consisted of four JD researchers. Each researcher independently searched for and coded laws in assigned jurisdictions and then cross-referenced their findings with another lawyer assigned to the same jurisdictions. The results of these searches and reconciled coding sessions were combined in a large, filterable spreadsheet.

## SNAPSHOT OF SPREADSHEET

	A	B	C	D	G	H	I	J	L	M
	For St	Reasoning	Brief Summary	FD No	Food Type	Citation	Date Enacted	Date Repealed	Description	Control Measure
1	Yes	Fits	Preemption of 'nutrition labeling' found on <a href="http://grassrootschange.net">grassrootschange.net</a>	Alabama	State	<a href="#">Ala. Code 1972 20-1-2</a>	6/9/2011	1/23/2019	The subject matter of the regulation of nutrition labeling of food that is a menu item in restaurants, retail food establishments, and vending machines is reserved to the Legislature and may be regulated only by an act of the Legislature of statewide application enacted after June 9, 2011.	Vending machines; Restaurants, bakeries, or cafes; Grocery, corner, or convenience stores; Farmer's markets or on-site food; Cafeterias; Concessions
2	Yes	Fits	Matches federal food labeling requirements and fines non-compliers	California	State	<a href="#">West's Ann. Cal. Health &amp; Safety Code 114094.6</a>	1/1/2012	1/25/2019	Matches federal requirements Found on map on CSFINet (see bottom), specific citation found at <a href="https://www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/RetailFood/RMLRequirements.pdf">https://www.cdph.ca.gov/Programs/CEH/DFDCS/CDPH%20Document%20Library/FDB/FoodSafetyProgram/RetailFood/RMLRequirements.pdf</a>	Restaurants, bakeries, or cafes; Some (for chain restaurants, specific government agencies, etc.) (specify in notes)
3	Yes	Fits	Local Detention Facilities food service standards	California	State	<a href="#">15 Cal. Code Regs. sec. 1741</a>	8/19/2011	1/25/2019	Minimum diet provided in local detention facilities must meet the nutritional and caloric requirements found in the DRIs; and facility diets shall consider recommendations and intentions of the 2015-2020 Dietary Guidelines of Americans of reducing overall sugar and sodium levels.	Hospital, prison
4										

That spreadsheet looks like this. Each row contains information about a single law. We catalogue both background information about the law and detailed information about the interventions that law contains. Laws contain one intervention or all six of the interventions we are studying.



Now that we've covered how we conducted this policy surveillance assessment, we'd like to show and discuss our preliminary results with you.

## SODIUM REDUCTION BY THE NUMBERS (2019)

Component	Number of Laws	States & D.C. Represented	Cities or Counties Represented	Preemption Laws
Restricting Sodium in Institutional Meal Services	17	10 (NM and NC have 2 each)	5	2
Restricting Sodium in Workplaces	15	4	9 (Philadelphia and San Francisco have 2 each)	2
Menu or Product Labeling	12	4	5 (Philadelphia has 2, New York City has 3)	9
Grocery, Corner, or Convenience Store Offerings	2	1 (Oklahoma)	1 (San Francisco)	0
Restricting Sodium in Vending Machines	13	3	9 (San Francisco has 2)	6
Consumer Incentives	7	3	4	1
<b>TOTAL</b>	<b>39</b>	<b>15</b>	<b>11</b>	<b>10</b>

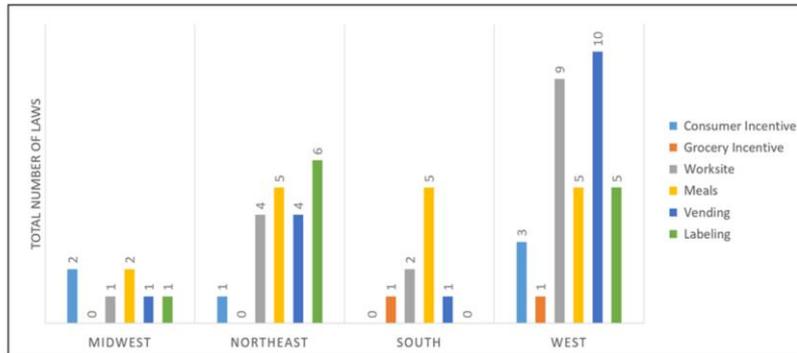
Overall, we found 39 sodium reduction laws across 15 states and D.C. and 11 cities or counties. We also found 10 preemption laws. So, in total, we found 49 laws, including 5 executive orders, 20 regulations, 2 resolutions, and 22 statutes or ordinances.

You will notice by comparing columns 2 and 3 on this chart that some laws are more common in states and others are more common in cities or counties. For example, 10 states have sodium restrictions for food served in institutional meal services, whereas only 5 cities do. And workplace sodium restriction is the opposite—4 states compared to 9 cities or counties. The differences here might stem from a few things. For example, if you are a city and your state has passed a law on a public health item of interest, you may not have the ability or interest needed to pass your own law. Conversely, a state might feel that a city or county is best equipped to pass certain laws (like workplace vending laws) and leave localities to pass them at their discretion.

Institutional meal services and worksite wellness laws were both the most common and least-often preempted laws. Menu and product labeling laws and vending machine sodium restrictions were more commonly preempted, and grocery/corner/convenience store offerings and consumer incentives laws were least common.



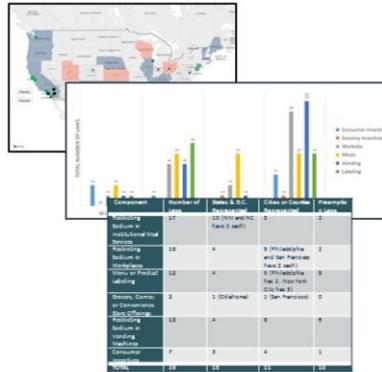
## SODIUM REDUCTION INTERVENTIONS, STATE AND LOCAL COMBINED, BY U.S. CENSUS REGION (2019)



Breaking down laws by census region, we find that sodium reduction laws are generally more common in the Northeast and West. And as you may recall from previous slides, a lot of that is driven by specific cities and states. We may be seeing larger numbers in these regions not only because these areas are passing more laws, but that the laws that are passed often include more than one intervention in our study. Conversely, in the South and Midwest, we have more preemption action happening, and we also have laws that include just one or a few interventions at a time.

## A FEW TAKEAWAYS...

- State-level sodium reduction policies have been implemented in **all four U.S. regions**;
- **Several major urban cities and counties also have sodium reduction laws**
- Laws are **more common in the West and Northeastern United States**
- Laws impacting sodium content of food served in **government workplaces and institutional meal services are most common and least-often preempted**



Although there are many lessons we can learn from this project, I'd like to sprinkle just a few for consideration here. First, sodium reduction laws are relatively uncommon but can be found across the country—especially if we're talking about institutional meal services laws. Second, sodium reduction laws are generally more concentrated in the West and Northeast, with more preemption in the South and Midwest. Finally, the most common laws in our study were also widely represented geographically and were not often preempted.

## WHAT'S NEXT FOR US?



- QuIC Team currently working to determine **which of these types of laws have the strongest evidentiary support**
- **Objective:** Compare strength of evidentiary support to commonality in law, and identify gaps in research or policymaking
- **Dissemination:** Paper and published report

Our next step in our research continuum is to merge our work with that of the evidence team, also known as QuIC. The QuIC Team has gone through the scientific literature to determine which types of laws in our study are supported by the evidence, and they are currently finalizing their results. By comparing our findings to theirs, we will be able to understand whether the most common laws have the strongest evidentiary support, or not. And if not, we will work to understand why those discrepancies exist and how the science and law can align better. We will disseminate our findings through a paper and published report, both of which are currently being written.

## QUESTIONS?



You may also contact us by email after this presentation:

Arielle Sloan: [olp4@cdc.gov](mailto:olp4@cdc.gov)

Siobhan Gilchrist: [smg0@cdc.gov](mailto:smg0@cdc.gov)

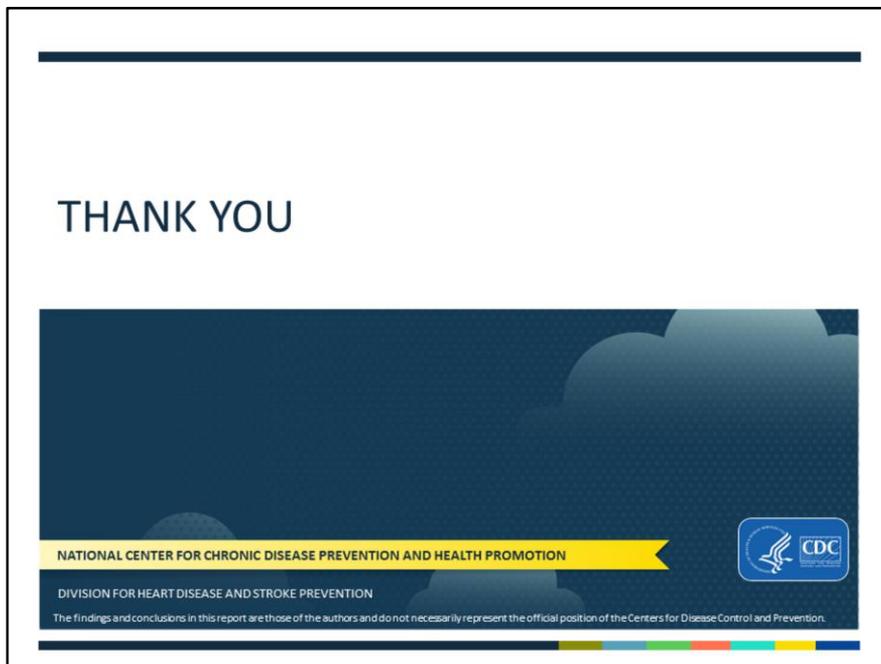
Thank you for your time!

### References:

Cogswell ME, Loria CM, Terry AL, et al. Estimated 24-hour urinary sodium and potassium excretion in US adults. *JAMA*. 2018;319:1209–1220.

Eckel RH, Jakicic JM, Ard JD, et al. 2013 AHA/ACC guideline on lifestyle management to reduce cardiovascular risk: a report of the American College of Cardiology/American Heart Association Task Force on practice guidelines. *Circulation*. 2014;129:S85–S87.

Centers for Disease Control & Prevention. *Get the Facts: Sources of Sodium in Your Diet*. Atlanta; 2017. Available at: <https://www.cdc.gov/salt/pdfs/Sources-of-Sodium.pdf>. Accessed May 30, 2019.



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\***

**\*If we do not have questions, proceed with the script below\***

Since it appears that we have no questions at this time from the audience, we have some questions that we wanted to ask that might be insightful to our participants.

Questions:

*(1) I would like to learn how to conduct a policy surveillance project on my team. Where can I start?*

The Public Health Law Program here at CDC and Temple University have training videos, workshops, and seminars on policy surveillance that you can participate in. If you would like more information about those trainings, feel free to email Siobhan or me and we can provide you with some web links and contact emails.

*(2) Where can I find state or local laws that interest me?*

State laws can be found on paid subscription databases like Westlaw and Lexis. They can also be found on individual state websites. Local laws can be found on local websites, and they can sometimes also be found on local law databases, too. The most popular local law databases are Municode and American Legal Publishing. Feel free to email us if you'd like more information about the databases and search strategies we used for our project.



MODERATOR:

Next, please stay with us for two short poll questions.

Please allow a few seconds for the poll to pop up on your screen. We will pause for a few moments after the question is presented to give you time to answer. One moment everyone.

**\*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/dhdsdp/pubs/webcasts.htm>
- If you have any questions, comments, or topic ideas send an email to [AREBheartinfo@cdc.gov](mailto:AREBheartinfo@cdc.gov)

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, June 11, 2019
- **Topic:** Data Visualization
- **Presenter:** Nicole Dickerman, MPH



MODERATOR:

Our next Coffee Break is scheduled for Tuesday, June 11<sup>th</sup> and will be focused on Data Visualization.

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