

Understanding and Anticipating Health Risks of Wildfires

Session II. Risk Intelligence and Data Integration

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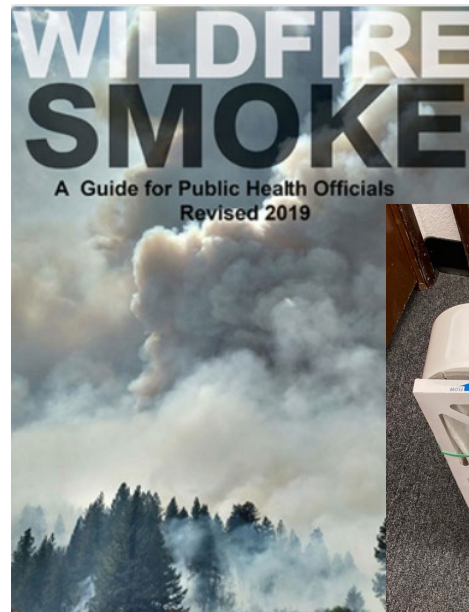
Centers for Disease Control and Prevention

What Public Health Activities Relate to Wildland Fire?

Wildfire Prevention



Preparation



Response / Recovery



Images from [Wildfire Smoke](https://www.airnow.gov/publications/wildfire-smoke-guide/wildfire-smoke-a-guide-for-public-health-officials/) guide: <https://www.airnow.gov/publications/wildfire-smoke-guide/wildfire-smoke-a-guide-for-public-health-officials/> [phil.cdc.gov](https://www.cdc.gov)
Colville Tribes YouTube video DIY box fan: <https://www.youtube.com/watch?v=ukyF2xm8cws>

ON FIRE: The Report of the Wildland Fire Mitigation and Management Commission



September 2023

Federal Wildland Fire Coordination

“At its core, the wildfire crisis is also a public health crisis. Solutions to both are wedded.”

**– Wildland Fire Mitigation and Management
Commission, September 2023**

- GAO report on “Wildfire Smoke: Opportunities to Strengthen Federal Efforts to Manage Growing Risks,” March 2023
- Wildland Fire and Air Quality Coordination Memorandum of Understanding, November 2023
- CDC-hosted Wildland Fire Leadership Council meeting, March 2024

Photo Credit: USDA

Supporting State, Local, Territorial, and Tribal Health Departments — Prevention & Preparation

- Support covers the full disaster management cycle (prevention, preparation, response, and recovery)
- Tools and guidance to aid wildfire preparation:
 - Ongoing updates to the Wildfire Smoke Guide for Public Health Officials
 - Messaging about the use of respirators
 - Online public education materials on preparation and response to wildfire smoke



Protect Yourself from Wildfire Smoke

Staying inside away from smoke is best.

If you must go outside, wear a snug respirator or mask to help filter smoke.

					
Respirator / Mask	N95® or P100® Respirator	KN95 Respirator	Surgical Mask	Cloth Mask	Scarf
Level of protection	✓✓✓✓	✓ – ✓✓✓✓*	✓✓	✓	Limited to None
Reusable?	Yes. Don't reuse if dirty or wet. May not fit well after five uses, affecting protection.		Yes. May provide some protection up to a few days of use. Don't reuse if dirty or wet.		Yes. Wash them after use to keep clean.

Respirators should not be used by children under 2.

* KN95 respirators may have variable performance.

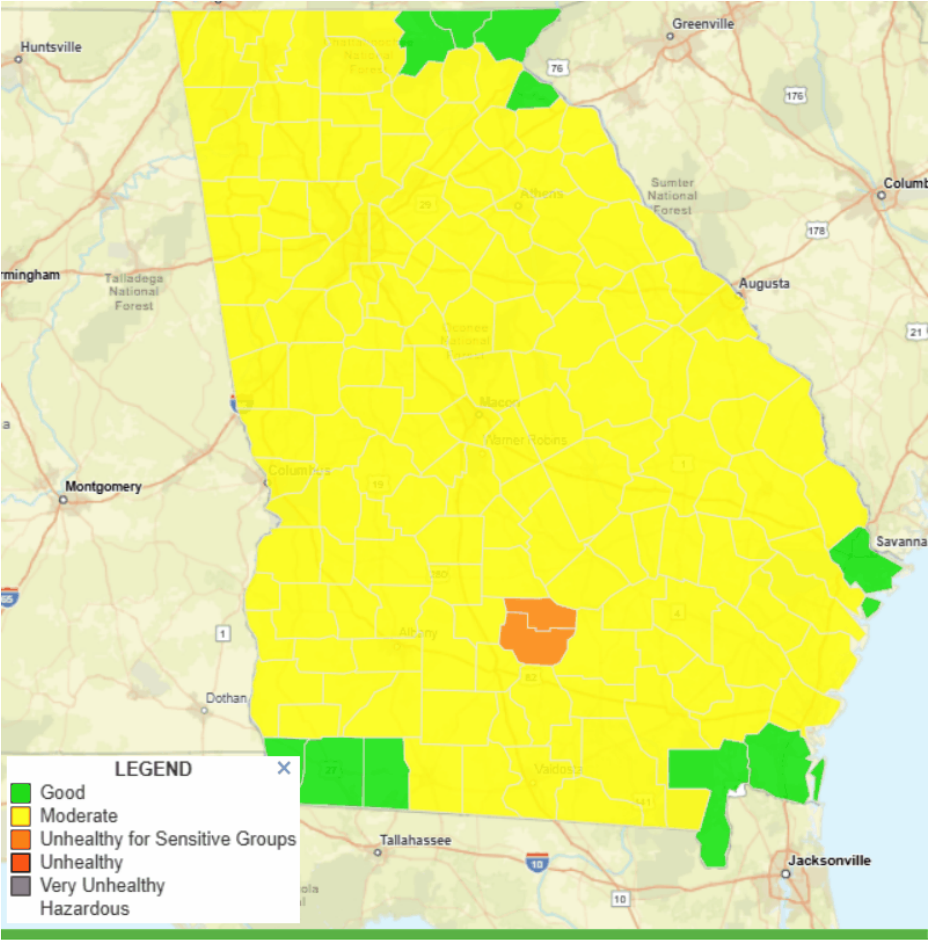


Source USDA: <https://fire.airnow.gov/>

A key tool for addressing wildland fire smoke information for the public is EPA-USFS Fire and Smoke Map, which is where the Air Resource Advisor Smoke Outlooks are also posted for the affected public.

[EH Nexus Webinar - Overview of Wildland Fire and Wildland Fire Smoke for Public Health Agencies - YouTube](#)

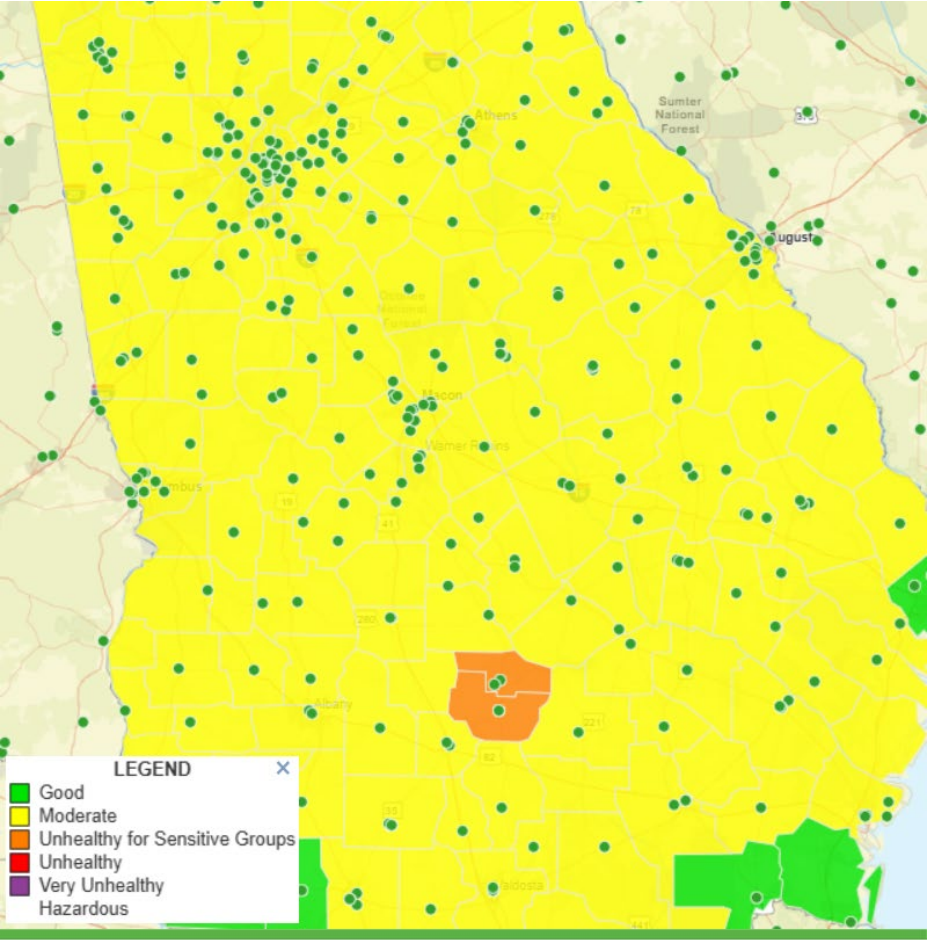
Environmental Public Health Tracking Network Air Quality Data Visualizations



 AIR QUALITY | FORECASTED AIR QUALITY | PM2.5: DAILY FORECAST | GEORGIA | NASA GEOS-CF [research-grade] | 04/23/2026

Explore more data at ephtracking.cdc.gov/DataExplorer

Forecasted air quality for PM2.5 for April 23-27, 2026 during South GA wildfires



 AIR QUALITY | FORECASTED AIR QUALITY | PM2.5: DAILY FORECAST | GEORGIA | NASA GEOS-CF [research-grade] | 04/23/2026

 Nursing Homes

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PM2.5 data on April 23, 2026 during GA wildfires mapped with nursing homes (green dots)



STEP 1: CONTENT ?

Air Quality



Wildland Fires



Areas and Populations Vulner

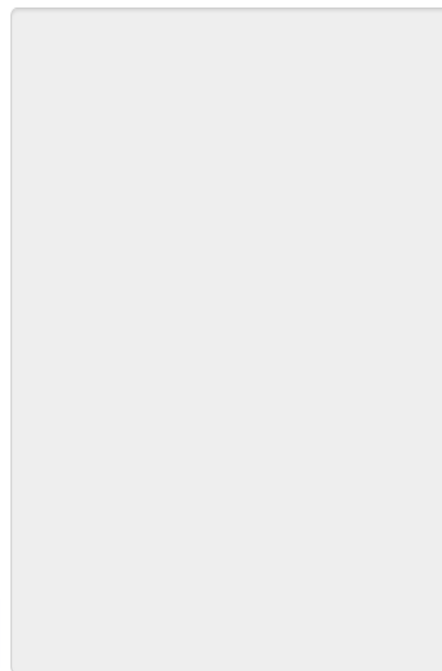


STEP 2: GEOGRAPHY TYPE ?

Select Geographic Type



STEP 3: GEOGRAPHY ?

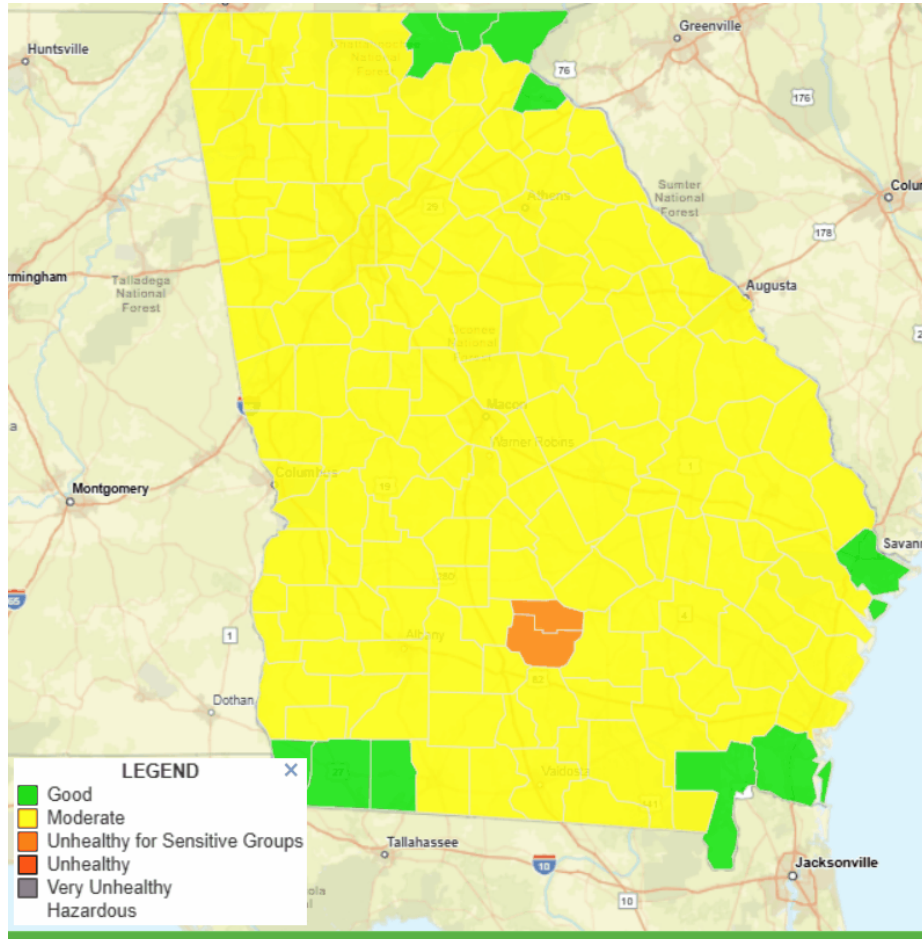


Disclaimer

STEP 5: ADVANCED OPTIONS ?

- ☐ # of people without health insurance
- ☐ % of pop. without health insurance
- ☐ # of hospitals per 100,000 pop
- ☐ # of people aged ≥ 5 years with a disability
- ☐ % of pop. aged ≥ 5 years with a disability
- ☐ # of people aged ≥ 65 years living alone
- ☐ % of pop. aged ≥ 65 years living alone
- ☐ # of people with limited English-speaking at
- ☐ % of pop. with limited English-speaking abili
- ☐ # of people aged ≥ 25 years with H.S. diplc
- ☐ % of pop. aged ≥ 25 years with H.S. diplom
- ☐ # of people living in povertv

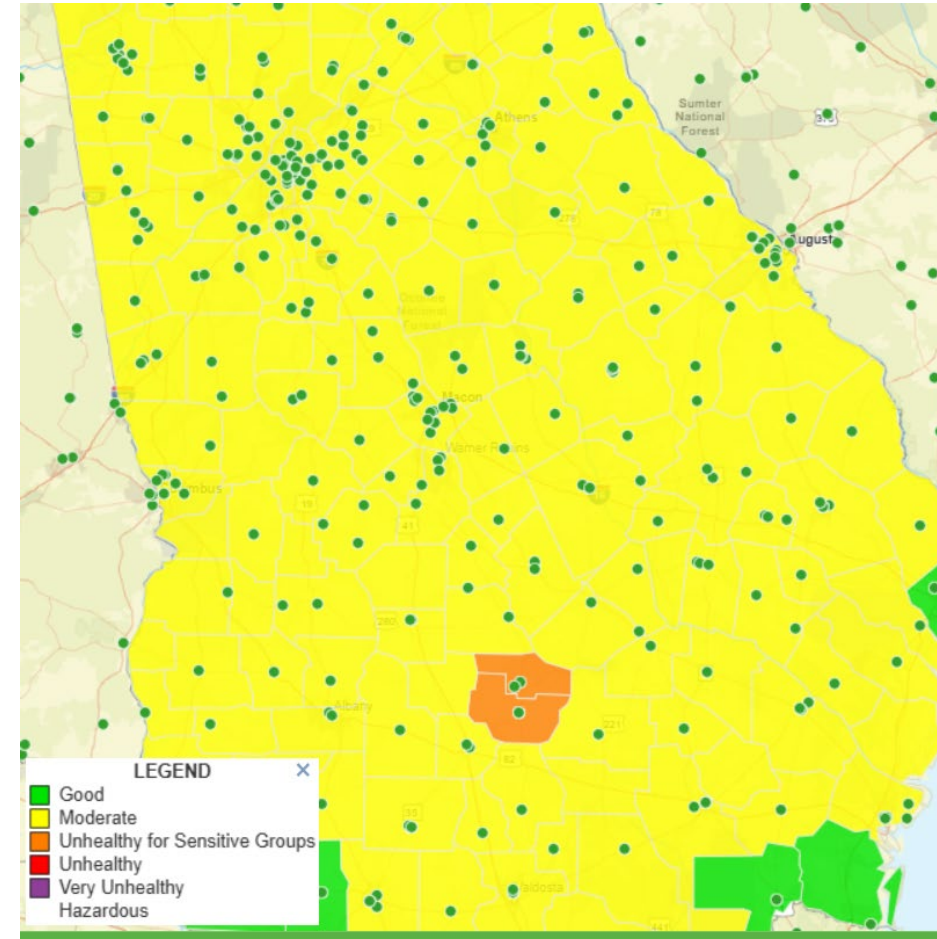
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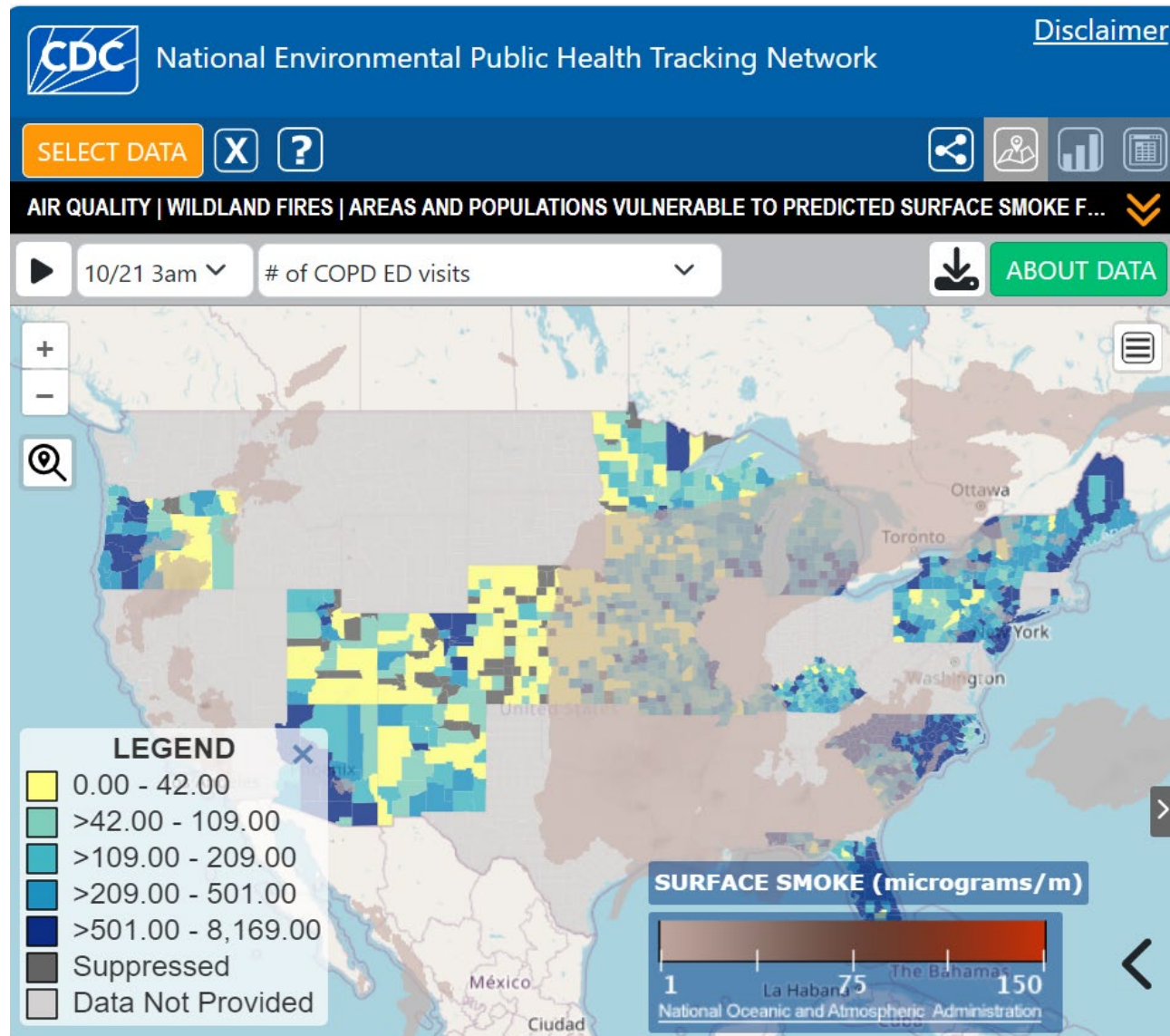


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● Nursing Homes

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**PM2.5 data on April 23, 2026 during GA wildfires
mapped with nursing homes (green dots)**



[National Environmental Public Health Tracking Network Data Explorer](#)

How is data used

- **Public health preparedness**
 - Identify communities likely to experience smoke and assess which populations may be more vulnerable
- **Emergency response**
 - Combine smoke overlays with asthma, COPD-related proxies, age, disability, social vulnerability, health care access, hospitals, schools, shelters, or nursing homes
- **Risk communication**
 - Target alerts, clean-air guidance, respirator messaging, school guidance, and outreach to higher-risk communities
- **Resource allocation**
- **Health surveillance**
- **Program planning and evaluation**

Supporting State, Local, Territorial, and Tribal Health Departments — Response & Recovery

- **CDC and ATSDR Emergency Response Teams available 24 hours a day**
 - Staff includes emergency coordinators, public health practitioners, toxicologists, physicians, and other scientists
- **Virtual and field support following a disaster**
- **Broad range of capabilities:**
 - Environmental Health Science & Practice
 - Epidemiology & Health Surveillance
 - Medical Toxicology
 - Data & Geospatial Science
 - Health Communication
 - Laboratory Sciences



Recent Wildfire Response Examples

CDC provided support to states for reducing harm from wildfires and wildfire smoke. Support included:

- Providing communication about who is most at-risk and wildfire preparation and response
- Developing interactive geospatial tools and guidance documents for public health and healthcare practitioners
- Providing direct consultation to state health departments
- Analyzing syndromic surveillance data in real time to assess changes in healthcare use, especially related to asthma



Key Challenges & Future Directions



Need for stronger integration of environmental and health intelligence



Protection of vulnerable populations remains a challenge



CDC support relies upon a strong evidence base to bridge the gap from research to practice

Some CDC sources

- [Wildfires and Your Safety | Wildfires | CDC](#)
- [National Environmental Public Health Tracking Network Data Explorer](#)
- [EH Nexus Webinar - Overview of Wildland Fire and Wildland Fire Smoke for Public Health Agencies](#)
- **June 15 session on RECOVERY: Wildfire Recovery, Adaptation, and Long-Term Health Impacts**



**Thank you!
Questions?
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For more information, contact NCEH
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

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.

