

Weather Emergencies and Their Human Impacts – Learning From the Past To Prepare for the Future



BOBBY BAKER, MS, MBA

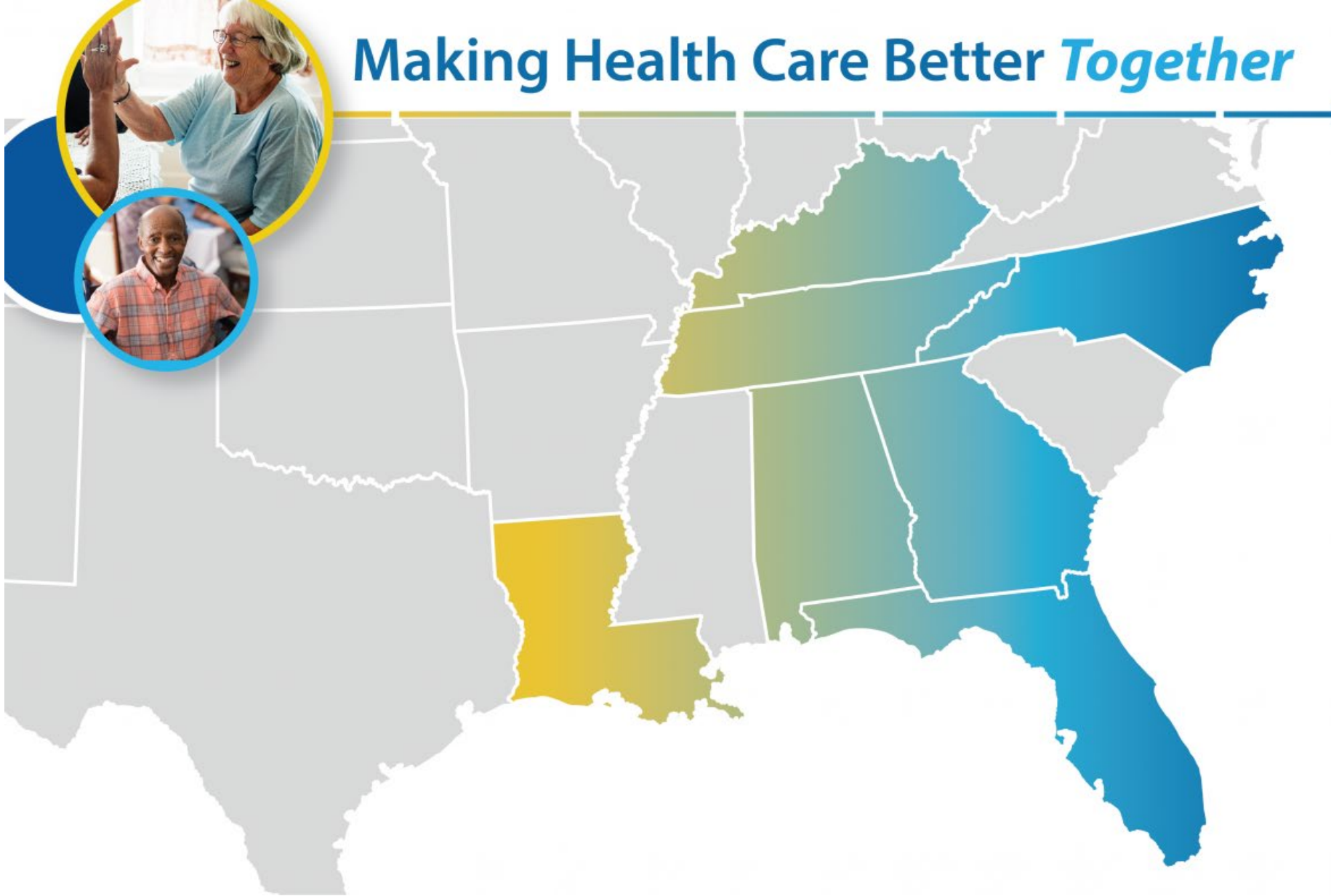
Service Line Leader – Healthcare + Emergency
Management Senior Consultant

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HEALTH SOLUTIONS

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Making Health Care Better *Together*



About Alliant Health Solutions

Bobby Baker, MS, MBA

SENIOR EMERGENCY MANAGEMENT CONSULTANT

HEALTHCARE + EMERGENCY MANAGEMENT SERVICE LINE LEADER

Bobby joined the Jensen Hughes team in February 2019. He brings 30+ years of emergency and disaster services and response management experience, with more than 15 years specific to the health care industry. Bobby is a respected industry leader and educator with experience developing standards and requirements and managing cross-functional teams to analyze complex problems and generate solutions. He leads multi-disciplinary teams specializing in system preparedness, emergency response and recovery, program evaluation, Continuous Quality Improvement, and policy development.

Before joining Jensen Hughes, Bobby was a consultant for the Department of Homeland Security in Washington, D.C., where he supported leadership and major operating stakeholders within DHS through the development of key administrative and regulatory medical policy designed to standardize and validate the delivery of health care at one of the U.S. Government's largest, most complex organizations.

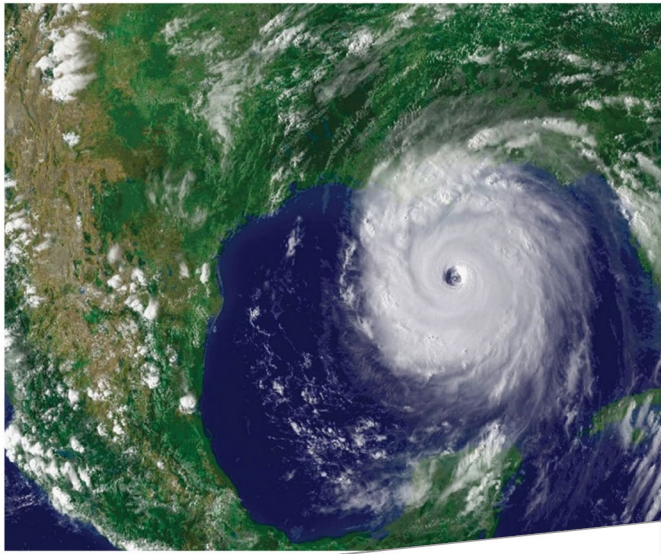
Bobby has a long history in the Southeast and is Jensen Hughes' Service Line Leader for Healthcare + Emergency Management.



Objectives

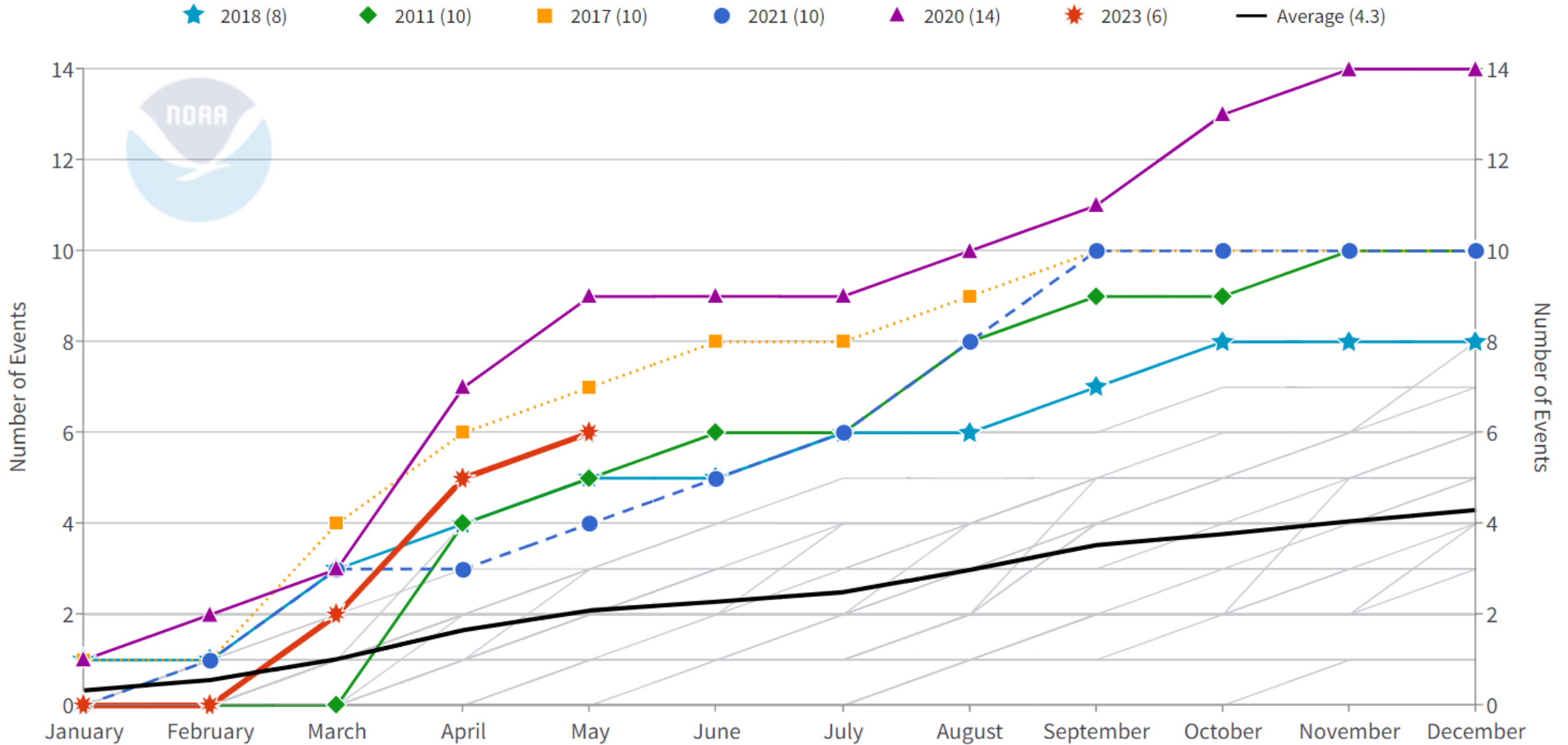
- + Understand trends in weather events and predicted changes impacting the Southeast.
- + Recognize the impact of disaster-related trauma incurred by residents, patients, staff, and others.
- + Learn how risk assessments may need to be modified to address predicted changes.
- + Differentiate planning for consequences vs. causes.





1980-2023 Southeast Billion-Dollar Disaster Event Count (CPI-Adjusted)

AL, FL, GA, NC, SC, VA



Map: Frequency 

Begin Year: 2003 

End Year: 2023 

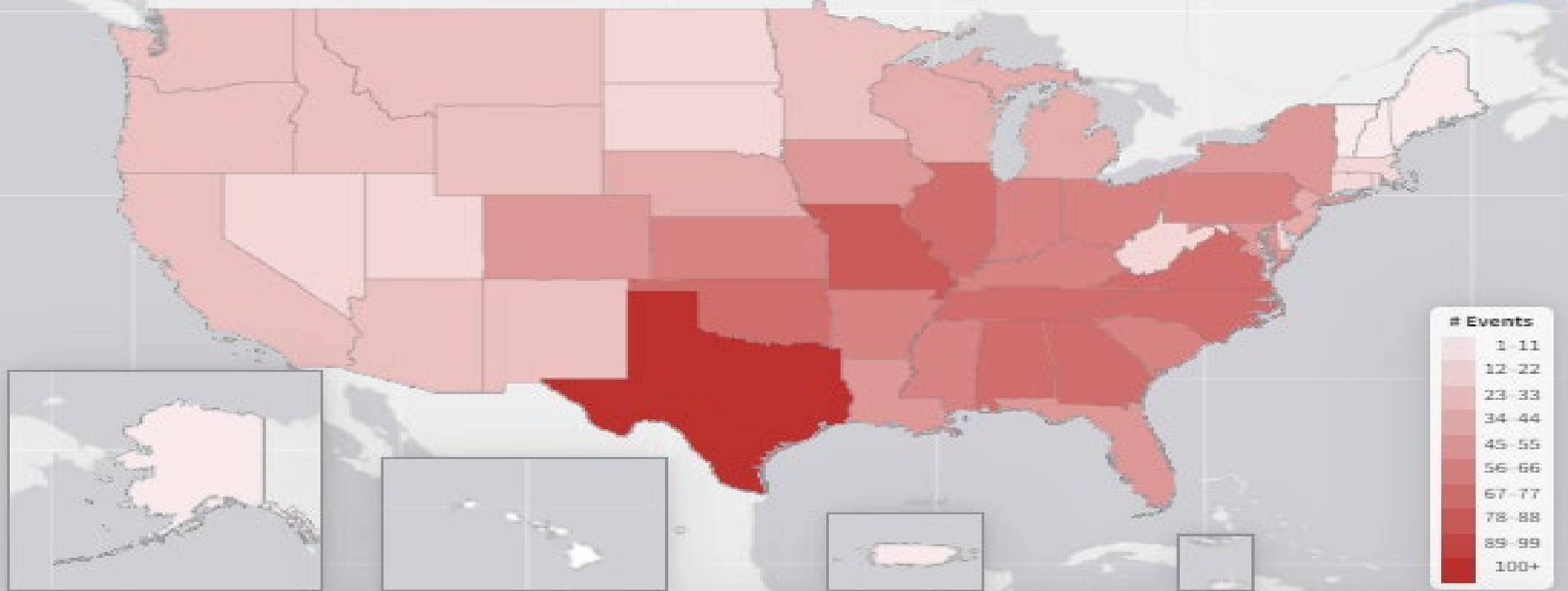
Event: All Events



Update

CPI-Adjusted Unadjusted

2003-2023* Billion-Dollar Weather and Climate Disasters (Unadjusted)



Seems To Be a Pattern Here...

“About half of all U.S. counties have had at least 10 federally declared disasters. Here are the counties with the most:”

- Lawrence County, Kentucky (30)
- Caddo County, Oklahoma (30)
- Johnson County, Kentucky (28)
- Perry County, Kentucky (28)
- Magoffin County, Kentucky (28)
- Logan County, Oklahoma (27)
- Breathitt County, Kentucky (26)
- Lafourche Parish, Louisiana (26)
- Floyd County, Kentucky (26)
- Owsley County, Kentucky (26)
- Canadian County, Oklahoma (26)
- Okmulgee County, Oklahoma (26)



Changing Weather Patterns

- + Extreme weather events and long-term changes in climate are making hazards more frequent and/or intense, and physical hazards are compounded by existing stressors and inequities.
- + EPA 8/2022 – “Scientific studies indicate that extreme weather events such as heat waves and large storms are likely to become more frequent or more intense.”



Why the U.S. Is Leading the World in Extreme Weather Catastrophes

PBS News – 4/2023

- + The United States is Earth's punching bag for nasty weather.
- + "If the United States as a whole has it bad, the South has it the worst," said University of Georgia meteorology professor Marshall Shepherd.
- + **"We drew the short straw (in the South) that we literally can experience every single type of extreme weather event," Shepherd said. "Including blizzards. Including wildfires, tornadoes, floods and hurricanes. Every single type... There's no other place in the United States that can say that."**



The Risk Assessment

What Are We Assessing?

- + Probability
- + Impact
- + Preparedness
- + Internal Response
- + External Response

The Challenges of Change

- + Probability
 - + Historical vs. Predictive
- + Careful of “that won’t happen here”
- + Consult the widespread data available

Hazard Vulnerability Assessment							RISK	PROBABILITY	SEVERITY
NATURAL HAZARDS							#DIV/0!	#DIV/0!	#DIV/0!
HAZARD	PROBABILITY (0-4)	SEVERITY					Relative Risk		
		HUMAN IMPACT	PROPERTY IMPACT	BUSINESS IMPACT	PREPARED- NESS	MITIGATION			
		Possibility of death or injury	Physical losses and damages	Interruption of services	Preplanning	INTERNAL RESPONSE Time, effectiveness, resources	EXTERNAL RESPONSE Community/Mutual Aid staff and supplies		
Avalanche									
Blizzard									
Coastal Tsunami / Erosion									
Dam Failure									
Drought									
Dust / Sand Storm									
Earthquake									
Flooding / Flash (External)									
Flooding (Internal)									
Damaging Winds									
Hail Storm									
Hurricane									
Ice Storm									
Infection Disease (SARS, Flu, etc)									
Landslide									
Severe Thunderstorm									
Snow / Ice Storm									
Subsidence / Sink hole									
Temperature Extremes									
Tornado									
Volcanic Eruption									
Wild Fire									
Other 1 (provide hazard name)									
Other 2 (provide hazard name)									
							Instructions	Scoring Scale	
							Natural	Technological	Human
							Facility Summary	Top 10 Hazards	Top 10 Mitigation Plans

Consequences vs. Causes

Consequence management occurs through the consideration of the wider ramifications of an emergency event.

- + This approach moves the focus from a specific hazard to broader consequences affecting a community, regardless of the hazard source.

Causes (specific hazards)

- + Fire
- + Tornado
- + Hurricane
- + Flooding
- + Snow / Blizzard

Consequences

- + Evacuation
- + Loss of use of a building/area
- + Utility failure (Power, Water, Sewer, etc.)
- + Loss of supply chain
- + Loss of Systems (nurse call, Care record, etc.)

Impacts of Events on People and Facilities

The Light on the Hill

- + Utility outages are likely to occur during significant weather events.
- + People may seek shelter in hospitals and other air-conditioned public facilities with backup generators whether they are sick or not. This puts additional strain on health care facilities.
- + PBS 4/2023 – “Safety can be bought. Those that are well-to-do and who have resources can buy safety and will be the most resilient when disaster strikes... Unfortunately, that isn’t all of us. Poverty makes it hard to prepare for and bounce back from disasters, especially in the South.” - Northern Illinois meteorology professor Walker Ashley



Impacts of Events on People and Facilities

- + Staff and their families are not immune to the impacts of an event. Plan for how to help your staff so they feel safe and confident enough to come to work.
- + Workers may be at increased risk due to temperature extremes within facilities due to loss of utilities.
- + And don't forget, we should probably think about the people we provide care for:
- + Patients and Residents



Trauma and Weather Emergencies

Impacts of Events on People and Facilities

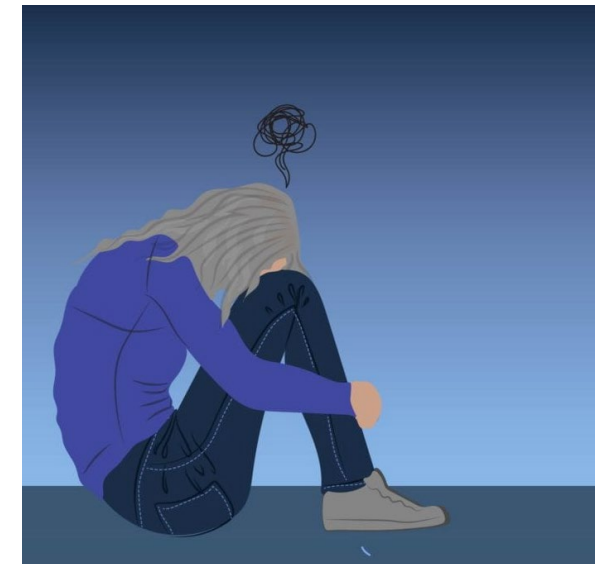
- + It has been shown that there is a **relationship between heat and violence**, especially after heat waves.
- + Studies have found that **extreme weather may also lead to PTSD** for some. PTSD in flood and storm settings are among the top three most common combinations of mental health outcomes. There is an increased frequency in people residing in low and middle-income areas.
- + Weather-related disasters are often followed by **secondary stressors**, including financial strain, displacement, and disruptions in social support networks, that can exacerbate risks, especially for individuals and groups with preexisting vulnerabilities or highly exposed.
- + **Vulnerable groups at risk** = the economically disadvantaged, elderly, disabled, prisoners, substance abusers, and children.



Trauma and Weather Emergencies

Impacts of Events on People and Facilities

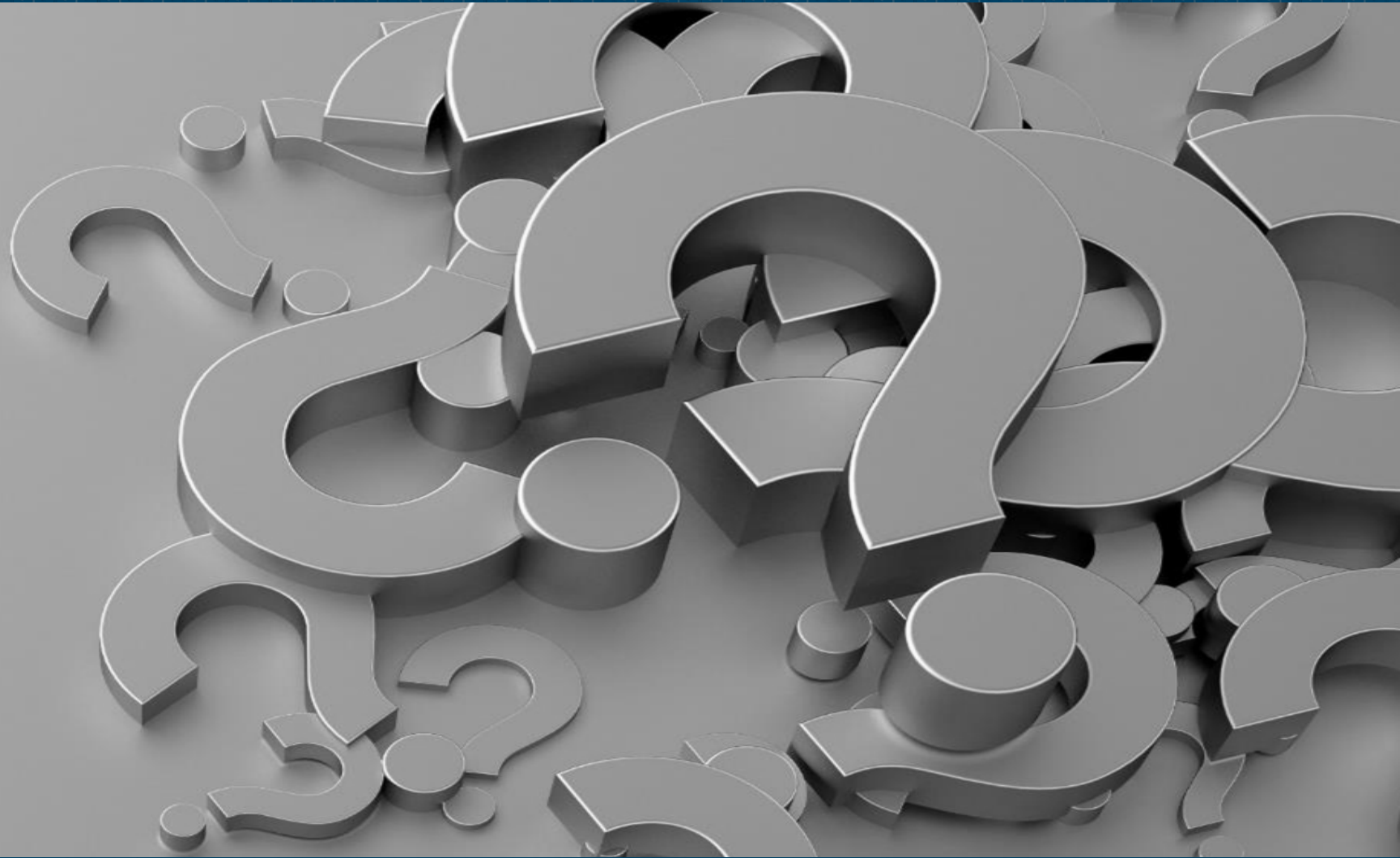
- + **Transfer Trauma or Relocation Stress Syndrome** - Can occur when an individual moves from one location to another. It can lead to a decline in their physical and emotional well-being, leading to significant health complications and even premature death.
- + The University of California and California State University analyzed existing EEG scans of **California's 2018 Camp Fire survivors**. They then compared the group to a control population that had never been exposed to the fire, finding that **those who survived the fire showed significant differences in brain activity and cognitive function**.
- + The University of Rochester found that **trauma can be life-changing for an individual, physically altering the brain**, which appears to re-wire after these experiences.



Resources

- + HHS ASPR, Technical Resources, Assistance Center, and Information Exchange (TRACIE)
<https://asprtracie.hhs.gov/>
- + U.S. Climate Resiliency Tool Kit
<https://toolkit.climate.gov/regions/southeast>
- + International Society for Traumatic Stress Studies
<https://istss.org/home>

Questions?



Thank You!



JENSEN HUGHES



(i)

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Take a Proactive Approach to Emergency Preparedness Planning

Don't Wait Until an Emergency Happens:

Our Alliant Health Solutions State Quality Managers and Quality Advisors are here to provide coaching and resource support when:

1. Creating or revising your emergency preparedness plans
2. Planning tabletop or full-scale exercises
3. Executing your plans during a disaster
4. Debriefing after a disaster
5. Incorporating your EPP plans into your QAPI program

Please reach out to us at:

nursinghome@allianthealth.org

[Emergency Preparedness Plans \(EPP\) – A Guide to Resources and Templates for Nursing Homes](#)

Trauma-Informed Training Modules for Frontline Staff

Learning Objectives

- Learn about trauma-informed care and why we are on this journey
- Describe the signs of trauma reactions
- Learn how our own experiences affect how we respond to people
- Understand ways to respond to residents' needs
- Identify how and when to report signs of trauma

Trauma-Informed Care Learning Modules

FACILITATOR GUIDANCE AND INSTRUCTIONS

Alliant Health Solutions has developed two resources for providing trauma-informed care training to frontline staff.

Use the Trauma-Informed Care: Training for Frontline Staff PowerPoint presentation with facilitator talking points to maximize the benefits of interaction in a live forum and to discuss case examples with your team.

When in-person training is not feasible (e.g., to reach all per diem or contracted staff), utilize the Trauma-Informed Care for Frontline Staff 30-minute online learning module.

Use either or both modules as one component of a facility-wide initiative to establish and maintain

Custom facility reports track participation and assessment results. Complete this brief form to set up custom reporting for your facility: <https://bit.ly/AHS-TIC-reports>. Once your custom report has been developed, the form submitter will be sent a link to access your facility reports.

A screenshot of a web-based form titled "Trauma-Informed Care" with various input fields and checkboxes for facility reporting.

a culture of wellness and trauma-informed care by training nurse aides and other frontline staff—such as dietary aides, activity aides or housekeepers—to understand, recognize and respond to signs of trauma. Both formats have pre- and post-learning assessments to evaluate knowledge and pinpoint where your team may benefit from additional education.

Preview the online module here: <https://bit.ly/AHS-TIC>. To preview, complete the brief pre-learning assessment to transition to the learning content. This is also the link your individual staff will use to complete the training. Share the link when you are ready to have an individual employee complete the training. Providing your staff with specific instructions on how to enter your facility name is highly recommended. Facilities can either set individuals up on any computer with Internet access or provide the link.

Page 2 of this document can be given as a handout and provides instructions on how to complete the training and can be modified for your facility.

Contact nursinghome@allianthealth.org for questions or support in implementing the modules in your facility.

Nursing Home and Partnership for Community Health: CMS 12th SOW GOALS



OPIOID UTILIZATION AND MISUSE

- Promote opioid best practices
-
- Reduce opioid adverse drug events in all settings



PATIENT SAFETY

- Reduce hospitalizations due to c. diff
-
- Reduce adverse drug events
-
- Reduce facility acquired infections



CHRONIC DISEASE SELF- MANAGEMENT

- Increase instances of adequately diagnosed and controlled hypertension
-
- Increase use of cardiac rehabilitation programs
-
- Reduce instances of uncontrolled diabetes
-
- Identify patients at high-risk for kidney disease and improve outcomes



CARE COORDINATION

- Convene community coalitions
-
- Reduce avoidable readmissions, admissions to hospitals and preventable emergency department visits
-
- Identify and promote optimal care for super utilizers



COVID-19

- Support nursing homes by establishing a safe visitor policy and cohort plan
-
- Provide virtual events to support infection control and prevention
-
- Support nursing homes and community coalitions with emergency preparedness plans



IMMUNIZATION

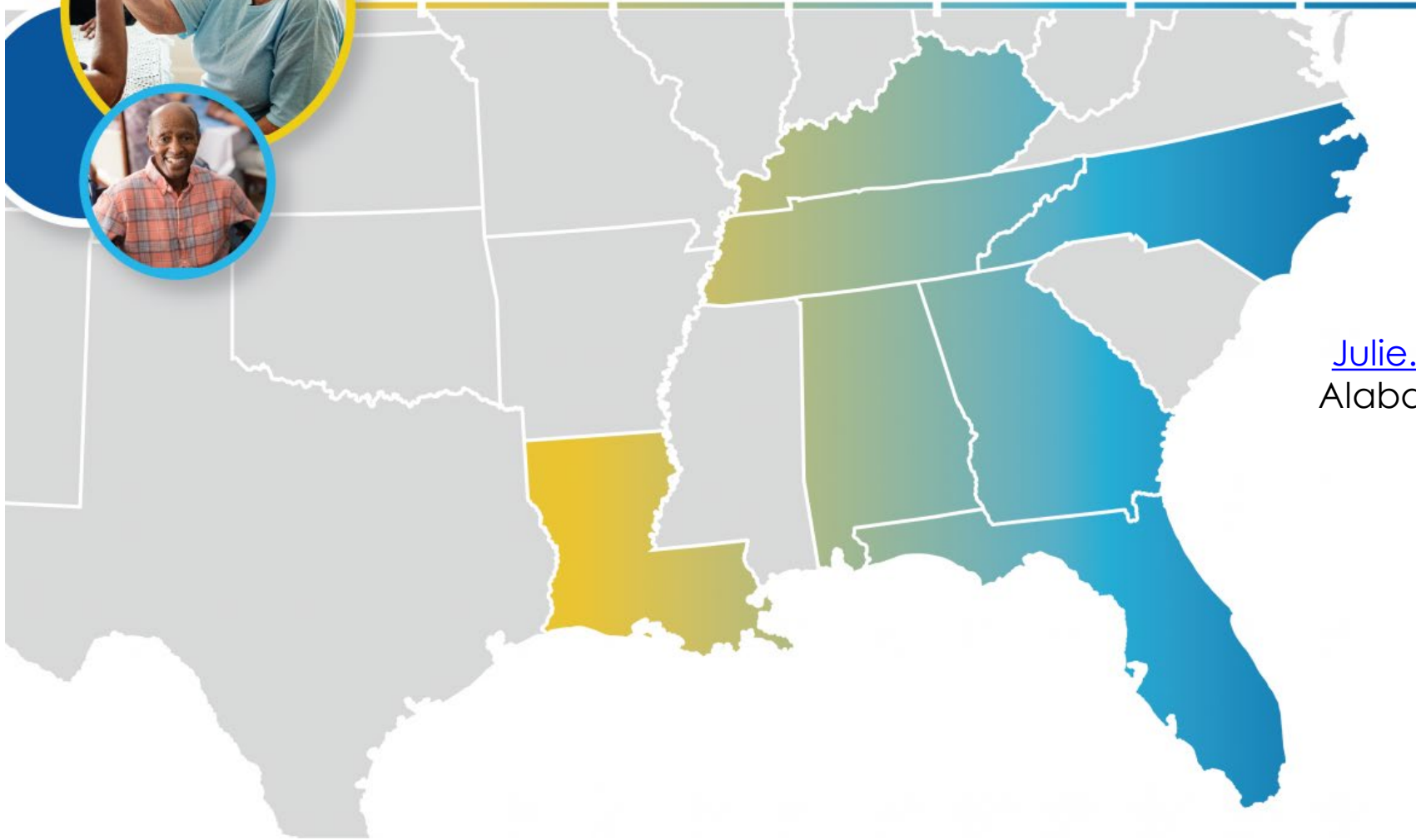
- Increase influenza, pneumococcal, and COVID-19 vaccination rates



TRAINING

- Encourage completion of infection control and prevention trainings by front line clinical and management staff

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