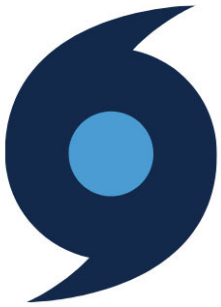

GILLINGS ON THE GROUND

Disaster Response Training Programs

UNC | GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

Welcome to Gillings on the Ground 2022!

Hannah Lineberger
hnbain@unc.edu

SESSION GUIDELINES

- **MICROPHONES:** Please keep your microphone muted unless you are actively asking a question, responding to a question, or participating in a breakout room with other attendees.
- **USING THE CHAT FUNCTION:** Please use the chat function or raise your hand to ask questions, share ideas, and engage with speakers/attendees throughout the sessions.
- **ENGAGEMENT WITH EXTERNAL TOOLS:** Some sessions may use interactive components such as polls and shared online boards. If that is the case, please participate by sharing your responses through the appropriate links instead of through the chat.
- **ENGAGING WITH SPEAKERS & ATTENDEES:** Always be constructive and respectful with your questions and comments. This is a shared space for learning together.

OPENING REMARKS

Elizabeth French, MA
Associate Dean for Strategic Initiatives, Dean's Office, UNC Gillings School of Global Public Health.

PRESENTERS

Amy Belflower Thomas, MHA, MSPH, CPH
Director, Community Assessment and Strategy

UNC | GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH
North Carolina Institute for Public Health

Quintana Stewart, MPA
Health Director

ORANGE COUNTY HEALTH DEPARTMENT
Improving health. Inspiring change.

Week One:
Emergencies in Public Health

UNC | GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

POLL

Who is in the "Zoom room"?

For all polls throughout this presentation, go to:
PollEv.com/amybelflower578

Who are you?

UNC Gillings Undergraduate

UNC Gillings Masters

UNC Gillings Doctoral

UNC Gillings Faculty/Staff

UNC Gillings Alumni

UNC (non-Gillings) undergraduate

UNC (non-Gillings) graduate

UNC-W student or staff

Other

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Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

If you are a student with UNC-Gillings, with which department do you associate or what concentration are you in?

Biostatistics
Environmental Sciences and Engineering
Epidemiology
Health Behavior
Health Policy and Management
Maternal and Child Health
Nutrition
Public Health Leadership
Central Administrative Unit
Applied Epidemiology
Environmental Health Solutions
Global Health
Health Behavior
Health Equity, Social Justice, and Human Rights
Health Policy
Leadership in Practice
Maternal, Child, and Family Health
Nutrition and Dietetics
Place-based Health
Population Health for Clinicians
Data Science

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POLL

How knowledgeable are you about public health preparedness and response?

For all polls throughout this presentation, go to: PollEv.com/amybelflower578

How knowledgeable are you about public health preparedness and response?

Not at all knowledgeable — 1

Somewhat knowledgeable -- 2

Neutral — 3

Quite knowledgeable -- 4

Totally knowledgeable — 5

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TRAINING OBJECTIVES

1. Understand the role and impact of public health in emergencies and crises

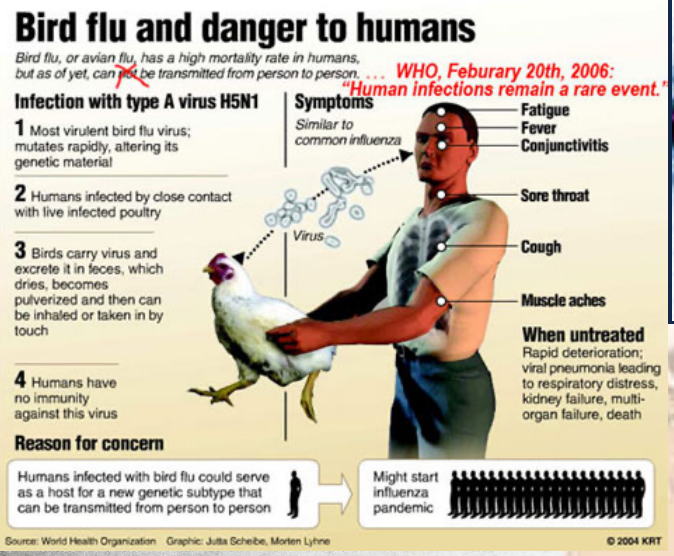
2. Demonstrate interactions with local public health stakeholders

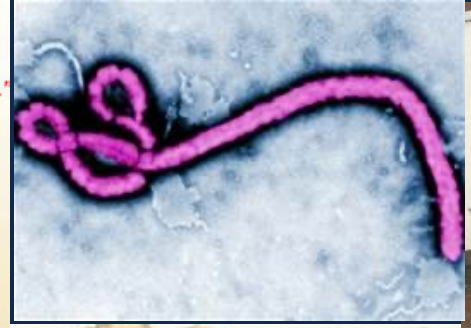
3. Build your interprofessional network of public health practitioners

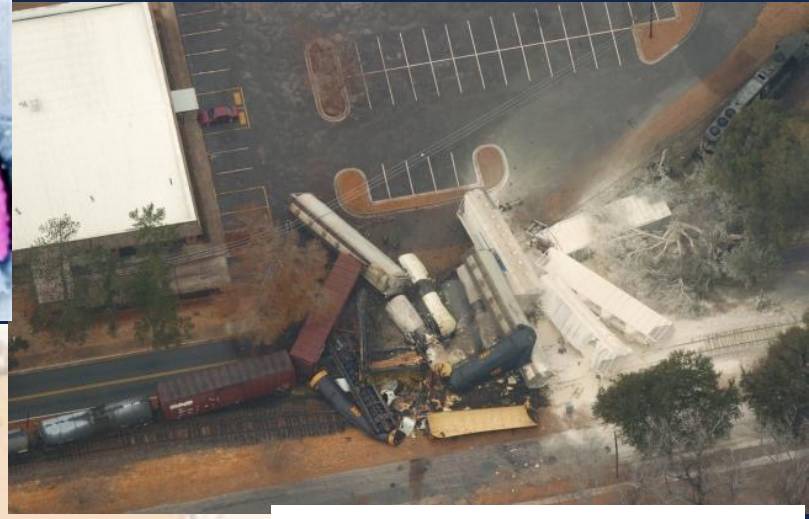
AGENDA

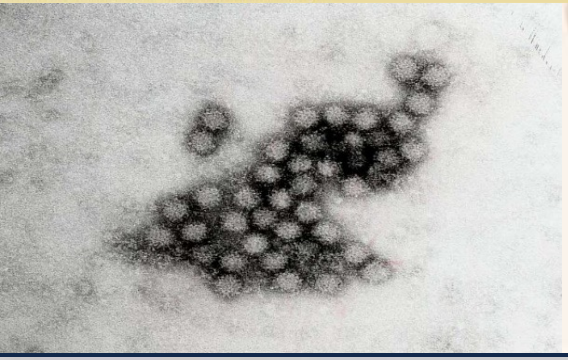
- Recent crises and why public health preparedness and response is important
- Emergency management phases
- Role of public health in emergencies
- Identifying and reaching vulnerable populations
- Systemic racism and equity considerations

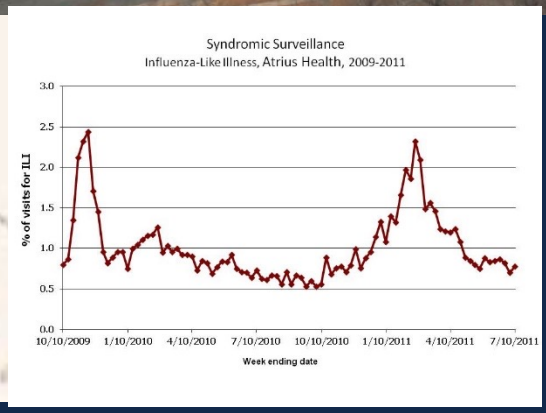
Recent crises and why public health preparedness and response is important


Bird flu and danger to humans
Bird flu, or avian flu, has a high mortality rate in humans, but as of yet, can not be transmitted from person to person. . . . WHO, Feburary 20th, 2006: "Human infections remain a rare event."
Infection with type A virus H5N1
1 Most virulent bird flu virus; mutates rapidly, altering its genetic material
2 Humans infected by close contact with live infected poultry
3 Birds carry virus and excrete it in feces, which dries, becomes pulverized and then can be inhaled or taken in by touch
4 Humans have no immunity against this virus
Symptoms
Similar to common influenza
Virus
Fatigue
Fever
Conjunctivitis
Sore throat
Cough
Muscle aches
When untreated
Rapid deterioration; viral pneumonia leading to respiratory distress, kidney failure, multi-organ failure, death
Reason for concern
Humans infected with bird flu could serve as a host for a new genetic subtype that can be transmitted from person to person
Might start influenza pandemic
Source: World Health Organization Graphic: Jutta Scheibe, Morten Lyhne
© 2004 KRT





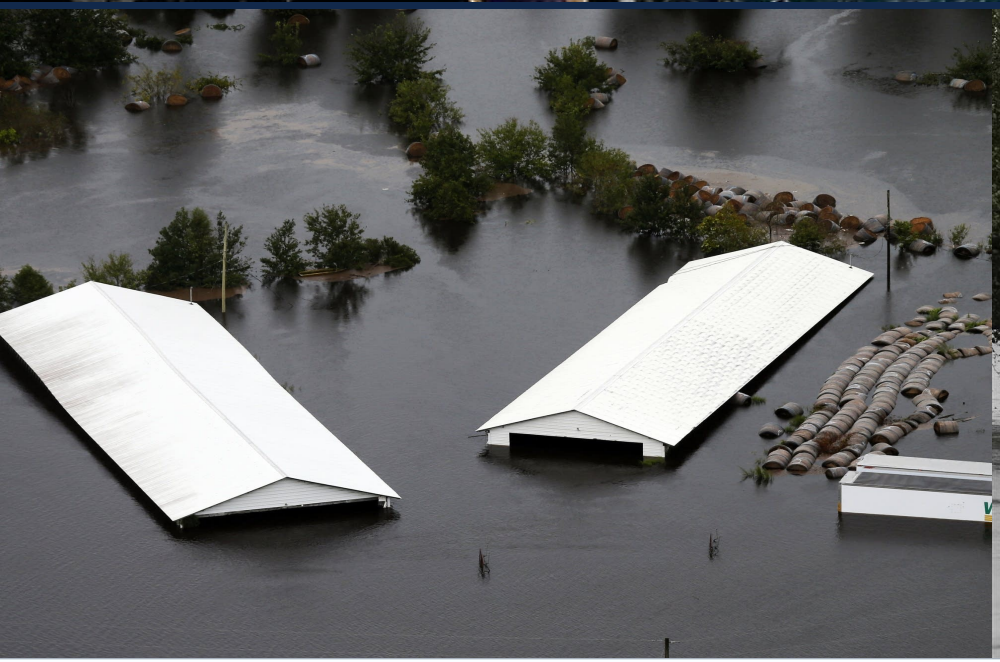



Syndromic Surveillance
Influenza-Like Illness, Atrius Health, 2009-2011
% of visits for ILI
3.0
2.5
2.0
1.5
1.0
0.5
0.0
10/10/2009
1/10/2010
4/10/2010
7/10/2010
10/10/2010
1/10/2011
4/10/2011
7/10/2011
Week ending date

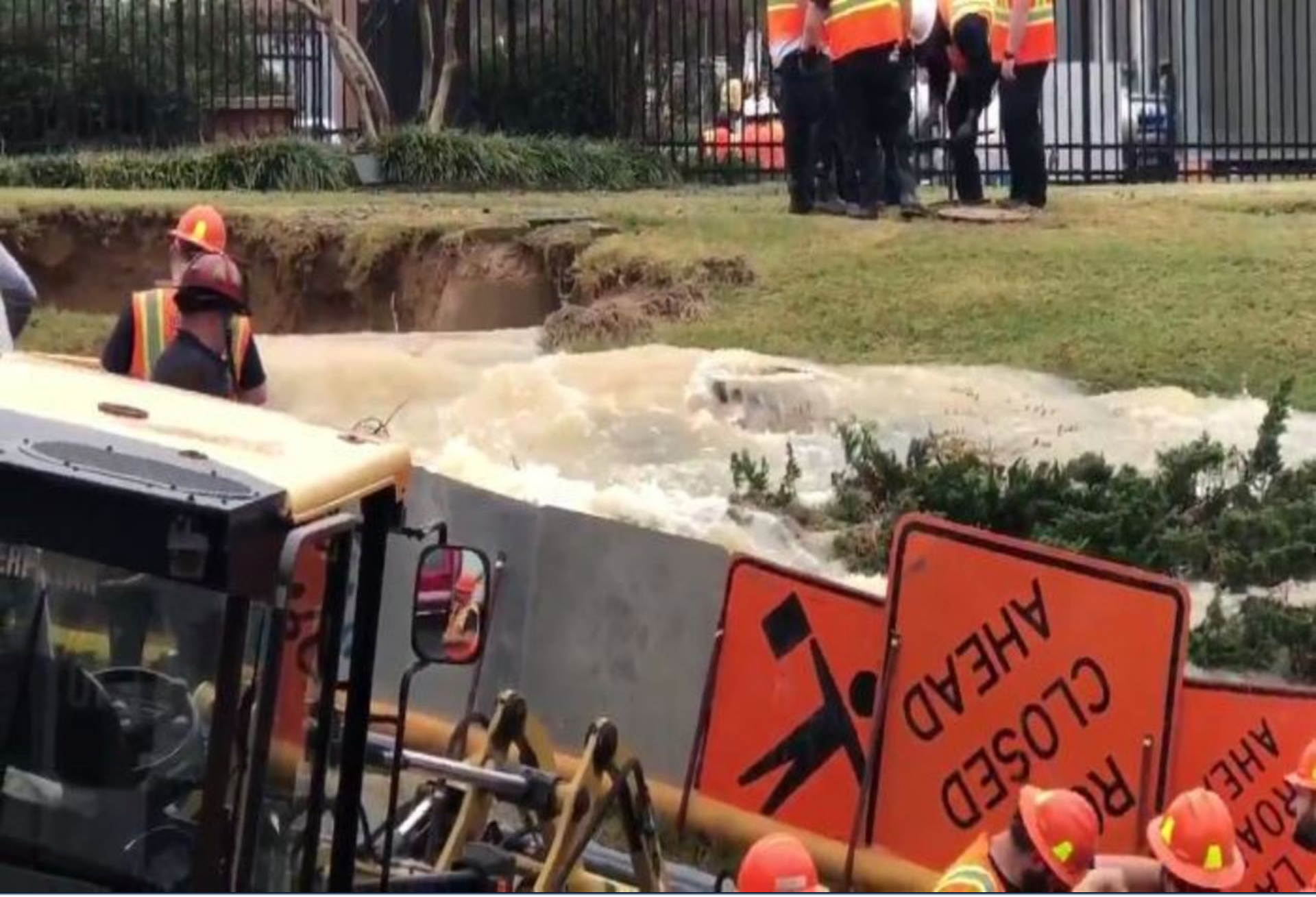
4TH GRADE
GREENDALE SCHOOL
FRANKLIN PARK NJ 08852
SENATOR DASCHLE
509 HART SENATE OFFICE BUILDING
WASHINGTON DC 205

H1N1

SALMONELLA



UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH


CLOSED
AHEAD

Definition of a “Disaster”…

An occurrence causing widespread destruction and distress; a catastrophe.

Depending on place, population, time much like a disease “outbreak” or “cluster.”

A cluster of COVID-19 cases on campus is defined as 5 or more cases within a certain geography (Source: WRAL)

POLL

What public health emergencies or disasters are on-going right now?

For all polls throughout this presentation, go to:
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Current Public Health Emergencies

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What does Monkeypox look like?

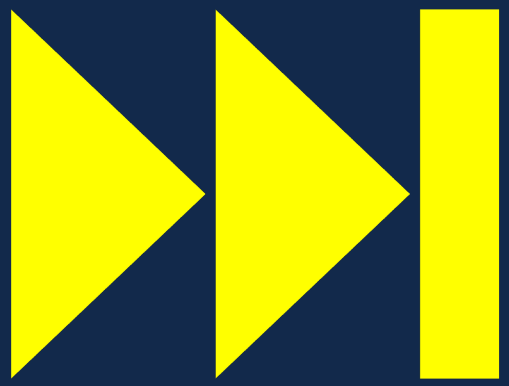
Photo Credits: Centers for Disease Control and Prevention, National Center for Emerging and Zoonotic Infectious Diseases (NCEZID), Division of High-Consequence Pathogens and Pathology (DHCPP) • NHS England High Consequence Infectious Diseases Network, The National Archives, contains public sector information licensed under the Open Government Licence v3.0.

UNC GILLINGS SCHOOL OF GLOBAL PUBLIC HEALTH

Flu
Season
Ahead

RACISM IS A
PUBLIC HEALTH
CRISIS

Emergency management phases



EMERGENCY MANAGEMENT PHASES

- Federal Emergency Management Agency (FEMA)
  - State Emergency Management
    - County Emergency Management
      - Municipal Emergency Management Programs

US EMERGENCY MANAGEMENT SYSTEM

PHASES – MITIGATION

This phase includes actions taken to prevent or reduce the cause, impact, and consequences of disasters. Examples of hazard mitigation include:

- Tying down homes or barns with ground anchors to withstand wind damage
- Digging water channels to redirect water and planting vegetation to absorb water
- Constructing levees or permanent barriers to control flooding
- Reinforcing fencing to prevent animal escapes
- Buying insurance policies

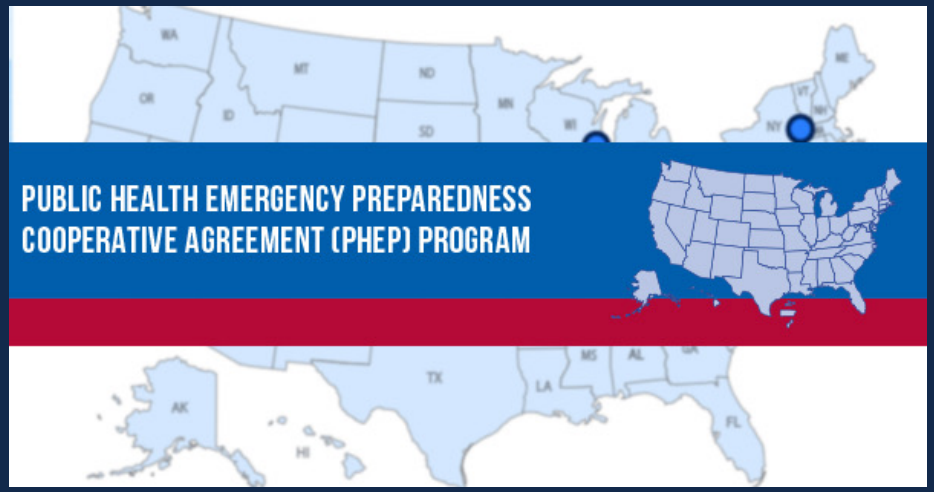
Breached levees in Princeville, NC after Hurricane Matthew

FEMA

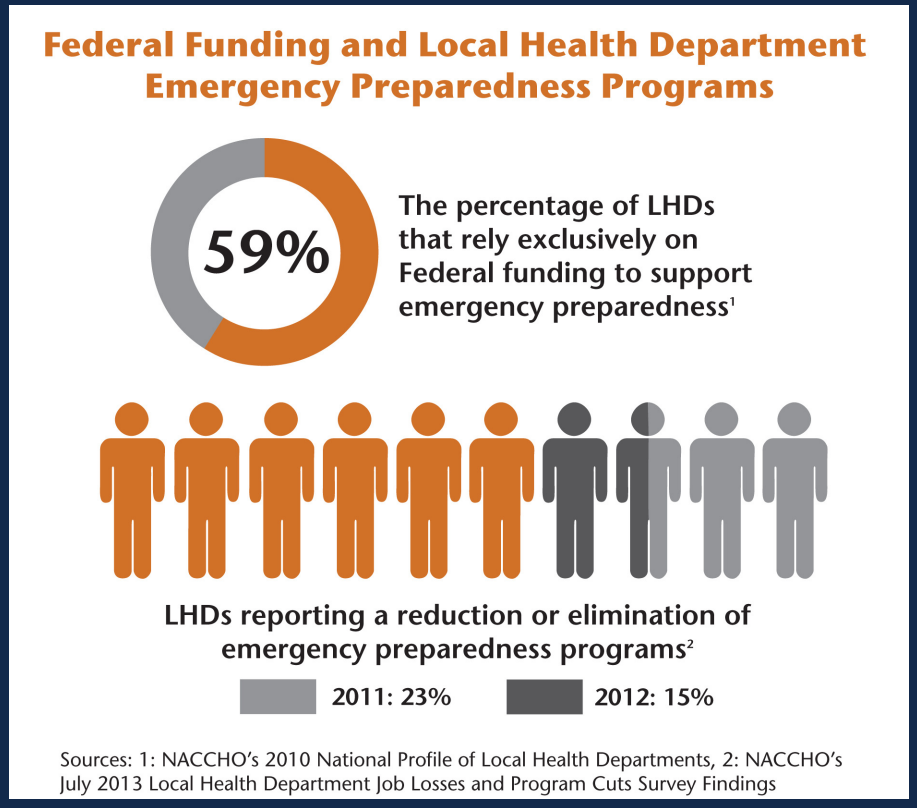
Funding Mechanism

Funding for public health preparedness through CDC Public Health Emergency Preparedness grant

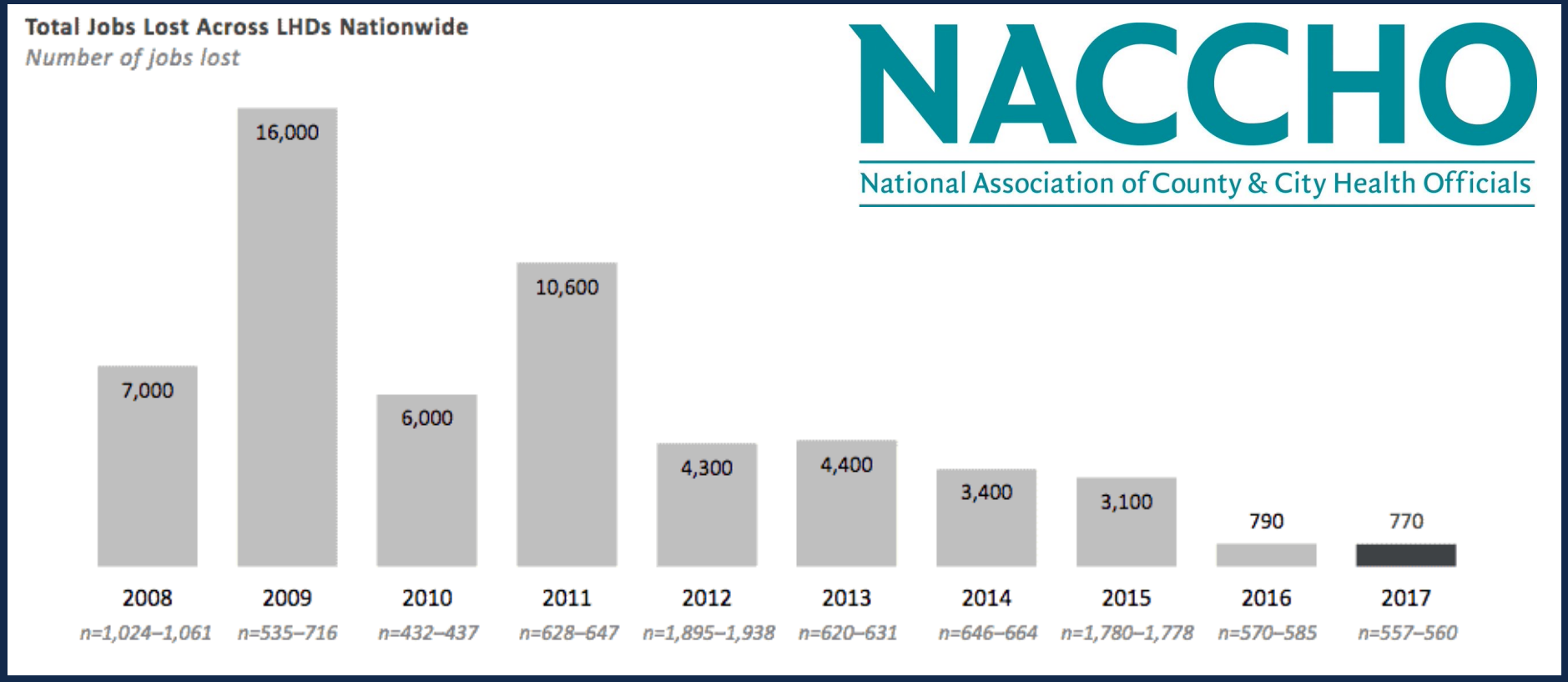
Portion of funding goes to local health departments through Agreement Addendum



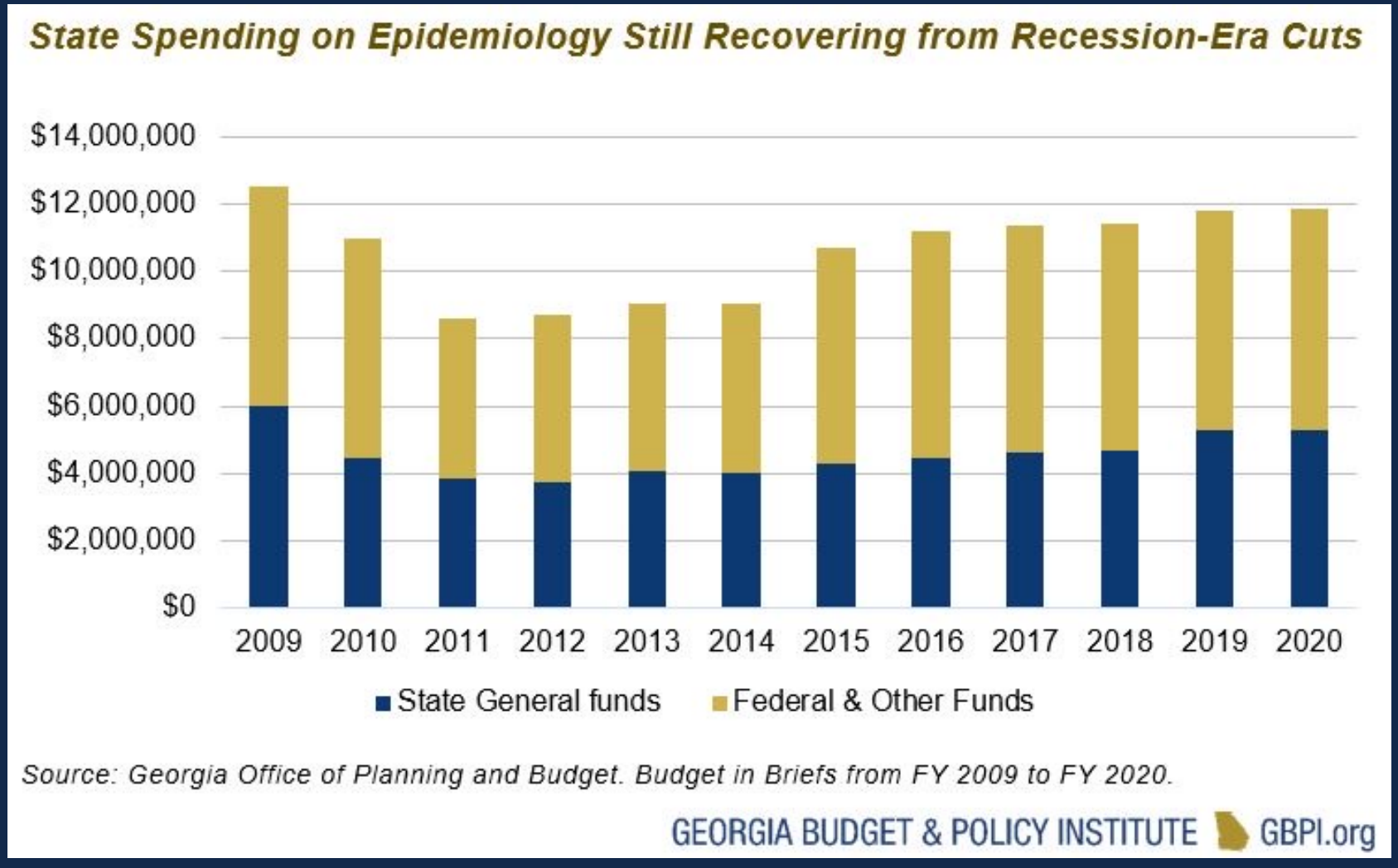
PHASES – MITIGATION



PHASES – MITIGATION



PHASES – MITIGATION



PHASES – MITIGATION

HEALTH AFFAIRS BLOG

RELATED TOPICS:
COVID-19 | CORONAVIRUS | PUBLIC HEALTH | PANDEMIC PREVENTION | LOCAL ISSUES | HEALTH EQUITY

In The Fight Against COVID-19, It's Not Too Late to Fix America's Public Health System

Oxiris Barbot

MAY 12, 2020 10.1377/hblog20200510.485086

astho NACCHO APHL CSTE

Impact of the Redirection of Public Health Emergency Preparedness (PHEP) Funding from State and Local Health Departments to Support National Zika Response

May 2016

THE MILBANK QUARTERLY CURRENT ISSUE ARCHIVE NAVIGATION

JUNE 2020 (VOLUME 98)

COVID-19 and Underinvestment in the Public Health Infrastructure of the United States

PERSPECTIVE

PHASES – PREPAREDNESS

This phase includes planning, training, and educational activities for events that cannot be mitigated. Examples include:

- Developing disaster preparedness plans for what to do, where to go, or who to call for help in a disaster
- Exercising plans through drills, tabletop exercises, and full-scale exercises
- Creating a supply list of items that are useful in a disaster
- Walking around a farm and identifying possible vulnerabilities to high winds

Drive-thru vaccination clinic in Caldwell County, NC

FEMA

Local Health Department Activities

Home › Government › Departments G - Z › Health Department › Emergency Preparedness

ORANGE COUNTY HEALTH DEPARTMENT

Emergency Preparedness

Is your family prepared for a tornado, hurricane, flood, or other disaster?

Emergency Supply Checklist

See what you need to make your own emergency supply kit in English (PDF) or Spanish (PDF).

Make a Plan

Disasters rarely strike on your schedule so it is important to have a plan in advance. Your plan should include things like:

- What are the safe places to seek shelter in your home?
- How will you contact your family, friends, neighbors?
- What should you do in various disaster situations (hurricane, tornado, fire, flood, etc...)?

Preparedness Videos

This video, which is available in many languages, will help you to make sure that you and your family are ready for Orange County hazards, such as snow storms or hurricanes.

PHASES – RESPONSE

The response phase occurs in the immediate aftermath of a disaster. During the response phase, business and other operations do not function normally. Personal safety and well-being in an emergency and the duration of the response phase depend on the level of preparedness. Examples of response activities include:

- Implementing disaster response plans
- Conducting search and rescue missions
- Taking actions to protect yourself, your family, your animals, and others
- Addressing public perceptions about food safety

FEMA

PHASES – RECOVERY

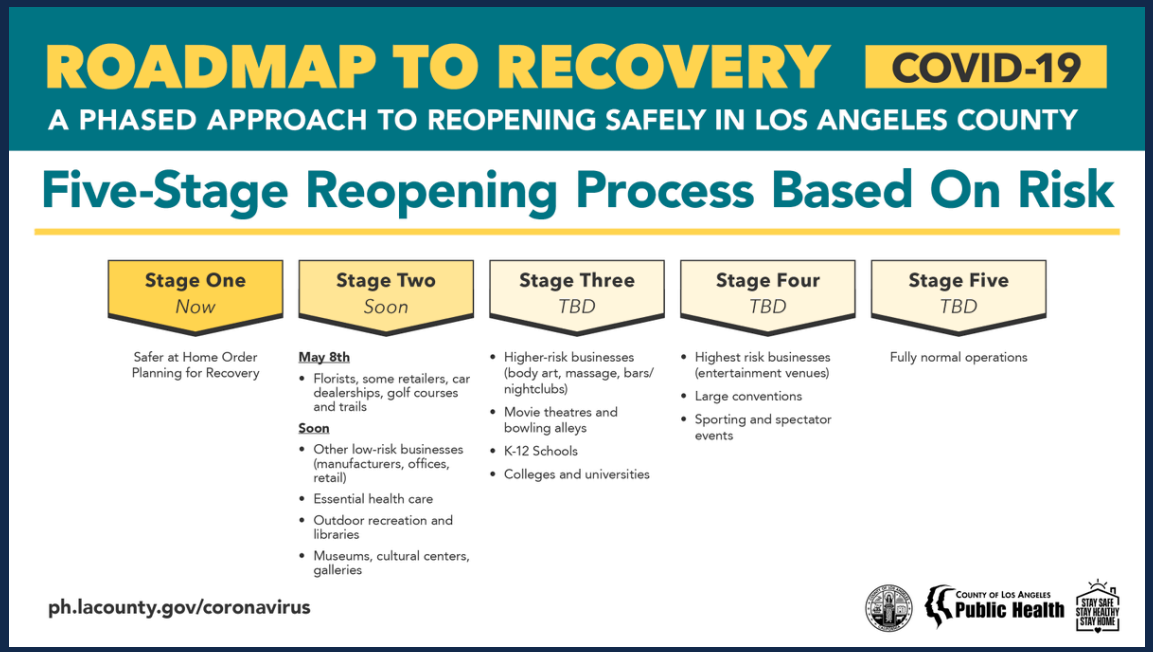
During the recovery period, restoration efforts occur concurrently with regular operations and activities. The recovery period from a disaster can be prolonged. Examples of recovery activities include:

- Preventing or reducing stress-related illnesses and excessive financial burdens
- Rebuilding damaged structures based on advanced knowledge obtained from the preceding disaster
- Reducing vulnerability to future disasters

FEMA

PHASES – RECOVERY

- ✓ Identify and monitor community recovery needs.
- ✓ Support recovery operations for public health and related systems for the community.



POLL

What COVID-19 pandemic recovery issues might public health *still* need to address?

For all polls throughout this presentation, go to:
PollEv.com/amybelflower578

What COVID-19 pandemic recovery issues might public health need to address?

Powered by Poll Everywhere

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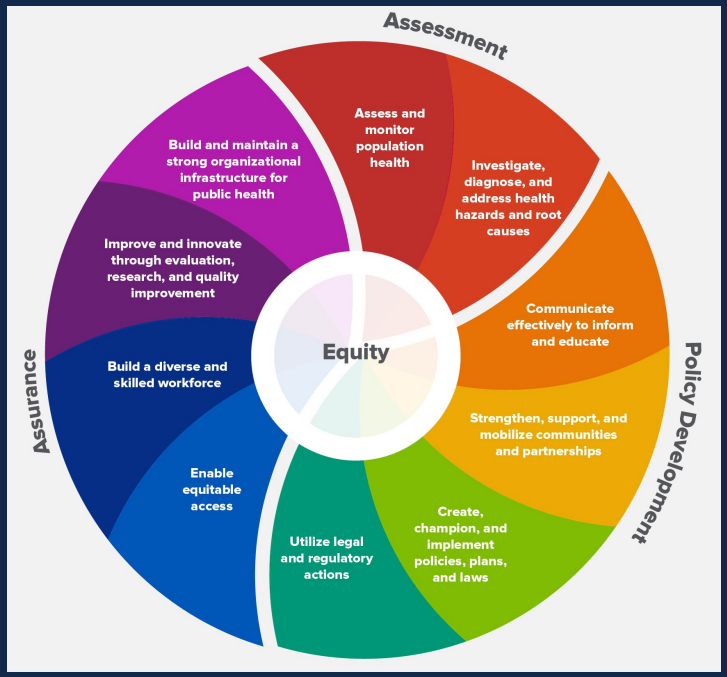
Role of public health in emergencies

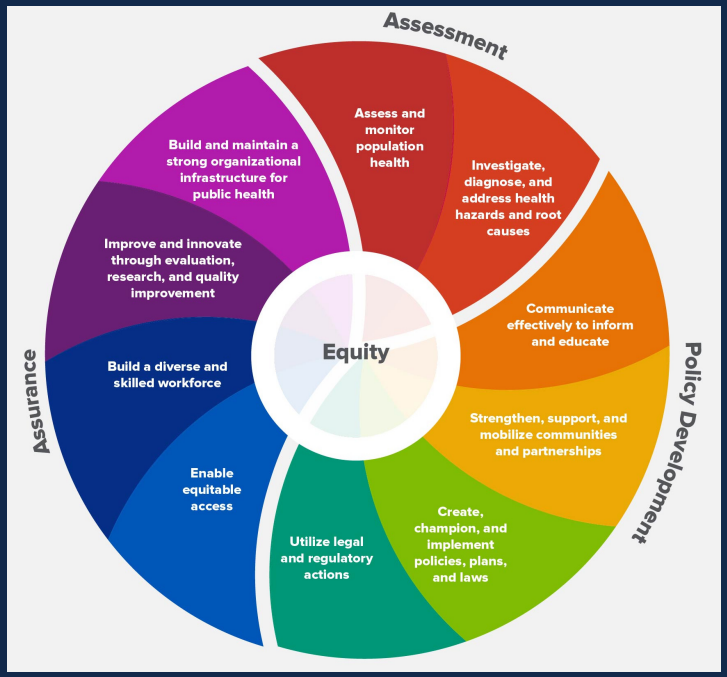
Essential Public Health Preparedness & Response Services

- Monitor health status before, during and after PH emergencies
- Diagnose and investigate urgent health conditions and health hazards in the community
- Inform, educate and empower people about PH preparedness
- Mobilize community partnerships to prepare for and respond to PH crises
- Develop policies and plans that support individual and community preparedness



Essential Public Health Preparedness & Response Services

- Enforce laws and regulations that protect health and ensure safety
- Link people and assure equitable access to preparedness and response efforts
- Assure a competent multidisciplinary, diverse PH preparedness workforce
- Evaluate effectiveness and quality of preparedness and response programs and innovate new solutions
- Build and maintain infrastructure



ROLE OF PUBLIC HEALTH IN EMERGENCIES

Foundational Public Health Services

PHAB Advancing public health performance

phnci

February 2022

ROLE OF PUBLIC HEALTH IN EMERGENCIES

Public Health Functions

Public health coordinates through local emergency management

ALL disaster response starts **locally**

ALL resources/assets/assistance goes through emergency management first (even if for public health)

State General Responsibilities

Coordinate planning for events and partnering/networking

Coordinate state-wide guidance and resource distribution during events

Provide citizen communications and education

LHD General Responsibilities

Help to coordinate "on-the-ground" all-hazard emergency planning and response that involves a public health threat

- Natural disasters
- CBRNE exposures
- Disease outbreaks

Are acutely aware of local resources and partnerships

Coordinate emergency preparedness education for the community and public health staff

Rowan County Health Department practicing mass vaccination in fall of 2019

ROLE OF PUBLIC HEALTH IN EMERGENCIES

GRANVILLE VANCE
public health

GVPH Staff at Oxford location

GVPH Staff at Henderson location

Since March 2020, our District Communicable Disease team has been:

- Conducting tele-health visits in primary care daily
- Managing nurse triage lines in both sites daily
- Testing patients – approximately 450 sample collections taken across the district
- Managing case investigation and contact tracing for more than 1200 cases
- Managing inordinate amounts of data in NCEDSS, CCTO, and Excel
- Connecting food resources to those isolating or quarantining with food needs
- Following, documenting, training, and communicating through 9 outbreaks and 6 clusters across long term care facilities (LTCF), a federal prison, state facilities, hospital rehabilitation, child-care centers, and businesses
- Communicating with the public, the media, and local leaders with press releases, **daily data highlights and web site updates** (https://gvph.org/COVID-19/)
- Providing outreach testing events in vulnerable population neighborhoods
- Providing guidance memos and control measures to facilities, businesses, health care facilities, child-care centers, court system, school system, etc
- **Hosting weekly calls for LTCF, w/our medical director and med serv fellow**
- **Communicating internally with a new sense of urgency and standardization**

ROLE OF PUBLIC HEALTH IN EMERGENCIES

Stakeholders

Individuals

Community & faith-based organizations

Nonprofits

Businesses

All levels of government

POLL

What type of specific partners do you think public health most often works with in disaster preparedness and response efforts?

For all polls throughout this presentation, go to: PollEv.com/amybelflower578

What type of specific partners do you think public health most often works with in disaster preparedness and response efforts?

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ROLE OF PUBLIC HEALTH IN EMERGENCIES

Partnership

- animal services and agencies
- childcare organizations
- chronic disease programs
- communicable disease programs
- community coalitions
- emergency management agencies
- emergency medical services (EMS)
- environmental health agencies
- fire and rescue departments
- groups representing and serving populations with access and functional needs
- health care coalitions
- health care organizations (private and community-based)
- health care systems and providers
- health care associated infection control programs
- housing and sheltering authorities
- human services providers
- immunization programs
- jurisdictional strategic advisory councils
- law enforcement
- media organizations
- mental/behavioral health providers
- public health preparedness programs
- schools and education agencies
- social services
- state office of aging or its equivalent
- surveillance programs
- volunteer organizations

Identifying and reaching vulnerable populations

VULNERABLE POPULATIONS

Vulnerable populations are groups and communities at a higher risk for poor health as a result of the barriers they experience to social, economic, political and environmental resources, as well as limitations due to illness or disability.

They are also referred to as at-risk groups or special groups.

POLL

Name some types of vulnerable populations and then vote your agreement with each other.

For all polls throughout this presentation, go to: PollEv.com/amybelflower578

Name some types of vulnerable populations.

Top

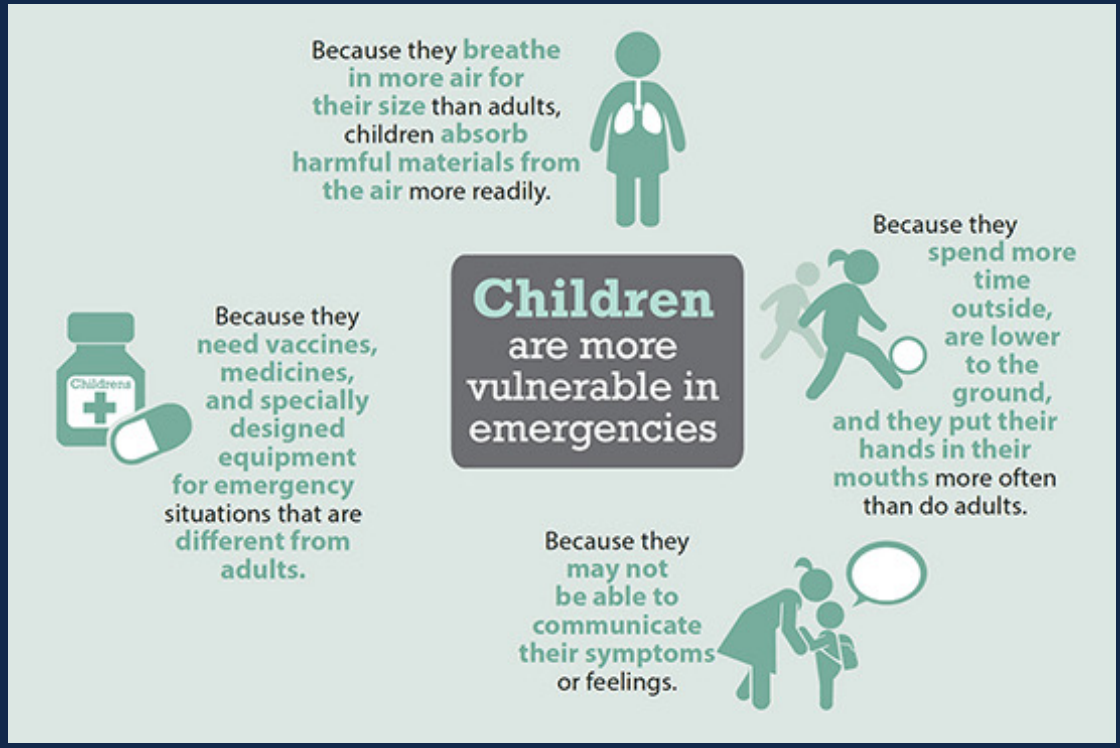
Powered by Poll Everywhere

Start the presentation to see live content. For screen share software, share the entire screen. Get help at **pollev.com/app**

VULNERABLE POPULATIONS

In general, persons with vulnerabilities before a disaster are even more at-risk during/after the disaster.

However, some people who would not be considered "vulnerable" on a day-to-day basis, may become so during a disaster- and depending on the type of disaster.



Source: CDC

Consider Pregnant Women….

- Sheltering
- Emergency Kits
- Breastfeeding Support
- Access to health care
- Exposures
- Behavioral Health

Source: CDC

Sheltering

Not set-up for families or privacy

Must bring all needed supplies

Types of provided food are limited

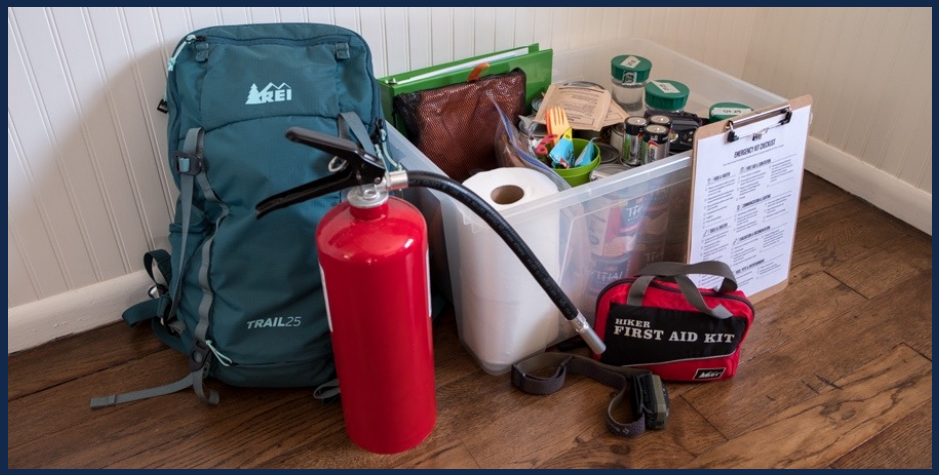
* During COVID-19, NC was not planning on opening congregate shelters, instead trying to use available hotel rooms

Emergency Kits

Pregnant women should include clothes, medications (including prenatal vitamins), blankets, etc.

Families with infants should include vaccination records, thermometer, feeding supplies, baby carrier, etc.

Should not be too heavy to carry

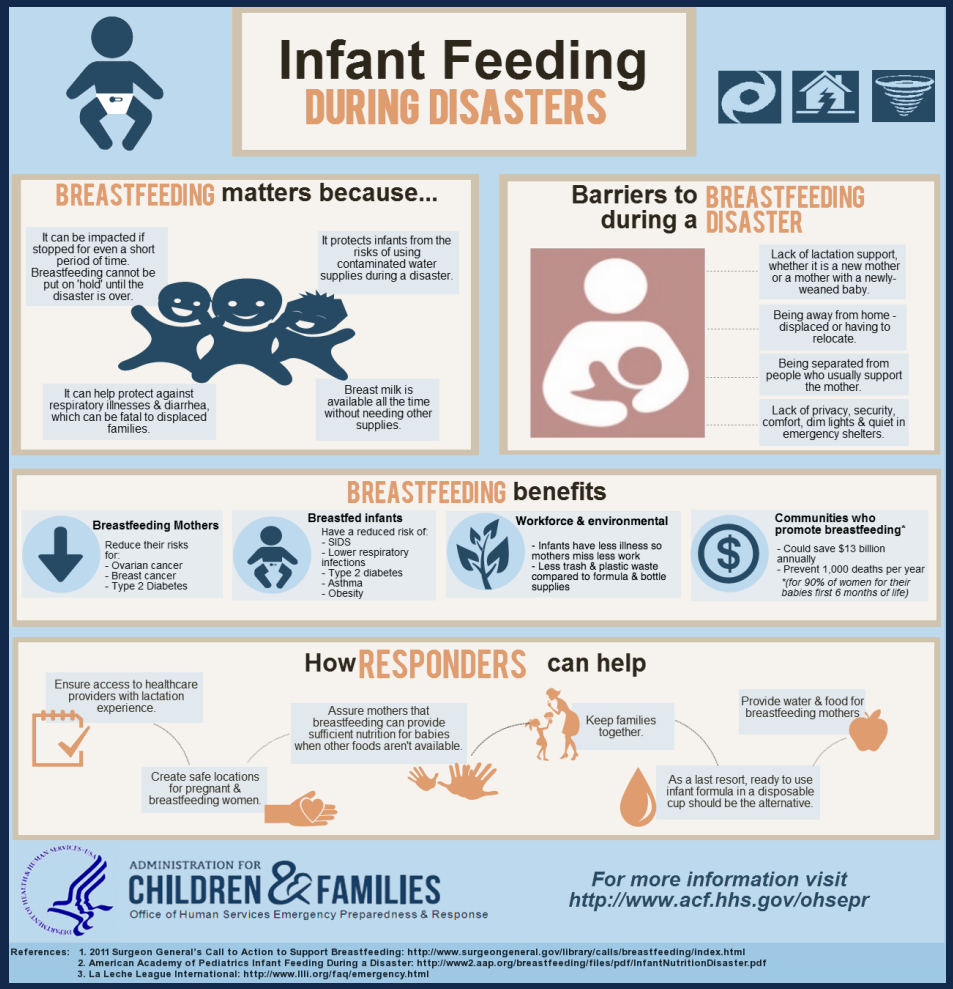


VULNERABLE POPULATIONS

Feeding

Clean water may not be available, so ready-to-feed formula is best

Breastfeeding support may be hard to access and refrigeration may not be available



VULNERABLE POPULATIONS

Access to Healthcare

- Hospitals may be overrun with acute cases
  - Or may be highly affected themselves
- Primary care offices and community clinics may be closed
- Extra assistance like Disaster Medicaid and WIC may take time to be set-up and available

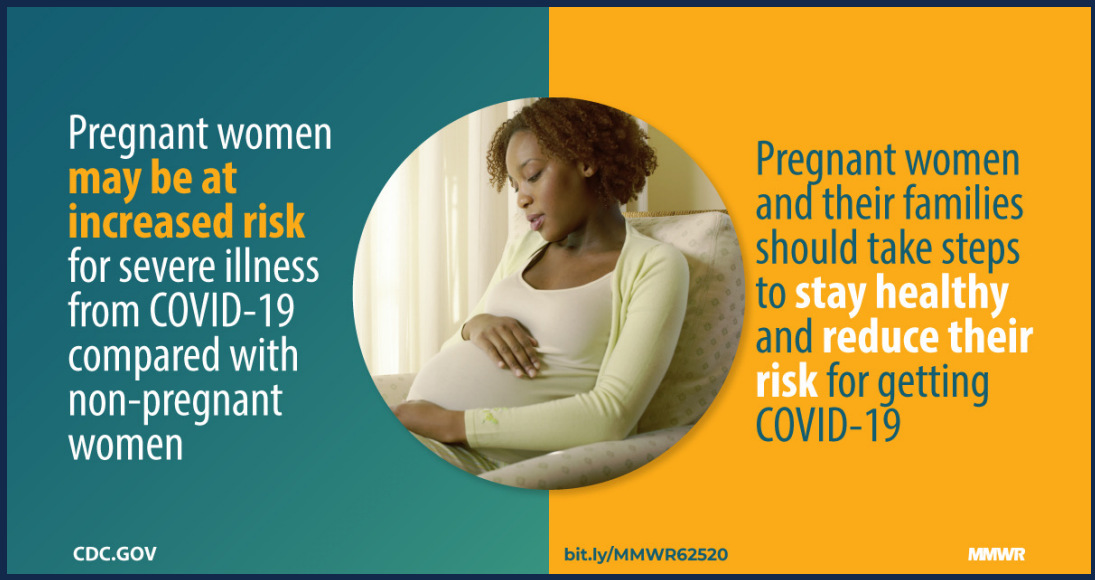
Behavioral Health

- Postpartum depression may be exacerbated by the stresses of a disaster
- Stress may be heightened during times of quarantine and resource limitations
  - As natural caregivers, women often have increased pressures
- Access to care may be limited
- Intimate partner violence is often heightened after disasters

Source: American Red Cross

Exposures

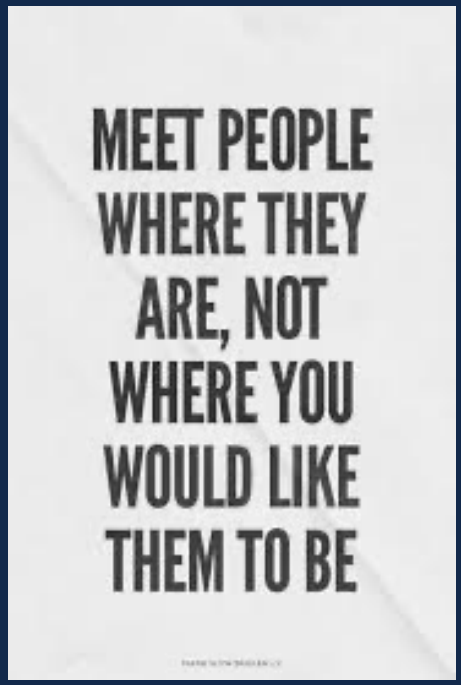
- Chemical, radiological, and nuclear agents
- Biological agents
  - Vaccines
  - Ebola
  - Zika
  - Influenza
  - COVID-19
- Others
  - Smoke from wildfires
  - Mold



VULNERABLE POPULATIONS

Engaging with special populations means:

- being flexible,
- developing trusting relationships,
- meeting persons where they are,
- not applying stereotypes,
- being compassionate, and
- understanding that our public health priorities may not align with their own priorities due to their lived experience



VULNERABLE POPULATIONS

It is also important to take an assets-based approach when working with vulnerable populations.

Do not only face challenges and have special vulnerabilities, but also have great strengths

They are often very resilient due to their lived experience

They have networks and connections to friends, family and other persons on whom they rely, but also help

They establish and nurture their own communities

They can contribute great insight into how to address disaster issues within their groups

Systemic racism and equity considerations

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

Disasters don't often create inequality, they just exacerbate them.

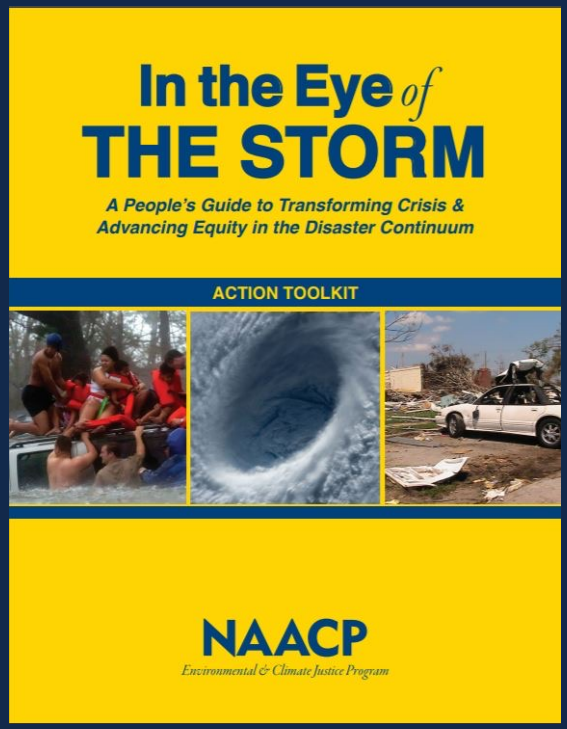
A study by Junia Howell from the University of Pittsburgh found :

Her study showed that "holding disaster costs constant, the more Federal Emergency Management Agency money a county receives, the more whites' wealth tends to grow, and the more Blacks' wealth tends to decline, all else equal. In other words, how federal assistance is currently administered seems to be exacerbating rather than ameliorating wealth inequalities that unfold after costly natural hazards."

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

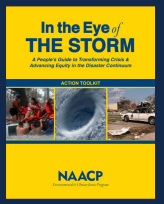
According to the NAACP's *In the Eye of the Storm* report, some of the ways frontline communities experience emergencies include:

- Discriminatory/racist housing policies
- Marginalized groups tend to be clustered in floodplains
- Houses in lower-income communities of color are often not built with materials strong enough to withstand disaster impacts
- Lower income areas are usually last to get power reconnected



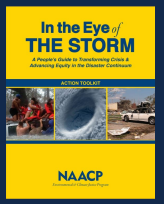
SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

According to the NAACP's *In the Eye of the Storm* report…(cont)



- Groups that tend to be the most severely impacted by disasters are also excluded from emergency planning processes
- People who are undocumented and/or people whose first language is not English often do not receive the same resources
- Women of color and youth are at higher risk for sexual assault
- Many shelters deny transgender or gender non-conforming people

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS



Real-life examples are:

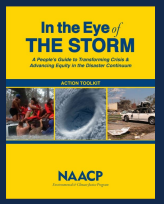
- In preparation for future disasters in New Orleans, strengthening of levees prioritized areas where the economic impact would be greatest without consideration of human impact, particularly in lower income areas.

- A lack of evacuation infrastructure in New Orleans resulted in loss of lives for those with mobility challenges—who were largely African American—during and after Hurricane Katrina.

- The establishment of service centers in Katrina-stricken Gulfport, MS initially left out the needs of hard-hit lower income African American communities.

Lower Ninth Ward during Hurricane Katrina

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS



Other real-life examples are:

- One in three of the people risking their lives to fight California's wildfires are incarcerated persons, who are disproportionately people of color.
- After Hurricane Andrew, which struck Florida and Louisiana, African Americans and Latinos were more likely than whites to receive inadequate settlement amounts.
- When Hurricane Harvey hit Houston, floodwaters in black and brown neighborhoods (with aging stormwater and flood management infrastructure) were contaminated with four times the level of bacteria and toxins that is considered safe by the EPA.
- After severe flooding in South Carolina, multiple lower income households had no option but to move back home without mold abatement.

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

How about with COVID? What are some systematic racism and equity considerations that played out?

https://debeaumont.org/outbreak/

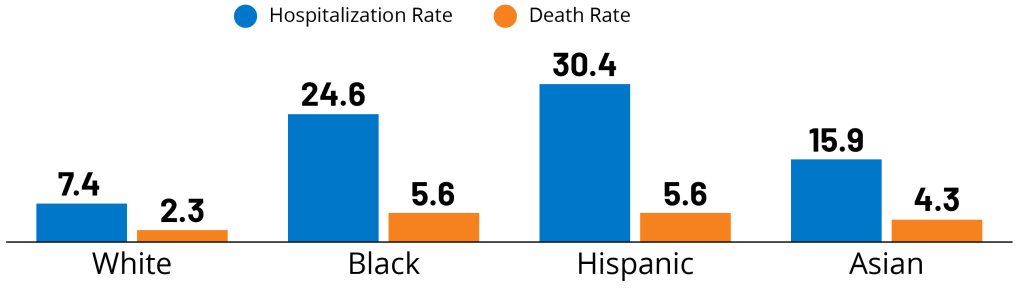
de Beaumont
BOLD SOLUTIONS FOR HEALTHIER COMMUNITIES

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

According to the CDC, persons of color are more likely to become affected with COVID-19, experience more severe COVID-19-associated illness (including requiring hospitalization) and have a higher risk of death.

COVID-19 Hospitalization and Death Rates among Active Epic Patients by Race/Ethnicity

Rate per 10,000, as of July 2020



	White	Black	Hispanic	Asian
Total Active Patients (millions)	34.1	7.0	5.1	1.4

NOTE: Rates for Black, Hispanic, and Asian patients are statistically significantly different from White patients at the p<0.05 level.
Persons of Hispanic origin may be of any race but are categorized as Hispanic; other groups are non-Hispanic.
Data for other racial groups not shown due to insufficient data.
SOURCE: Epic and KFF analysis of Epic Health Record System COVID-19 related data as of July 2020.

KFF

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

According to the CDC, social and economic conditions (including institutionalized racism in the healthcare system) are likely to be the biggest contributor to the disproportionate burden of illness and death with COVID-19 among persons of color:

- Types of work and policies where overrepresented can contribute to risk for getting sick.
  - Critical workers (often employed in service industry, agriculture, LPN nurses)
  - Lack of paid sick leave

Source: NPR

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

Source: Pixabay

Living conditions may contribute to underlying health conditions and make it difficult to follow steps to prevent getting sick or seek treatment if sick.

- More likely to live in densely population areas due to housing segregation and residential segregation
- Live far from grocery stores/medical facilities to stock up on supplies and seek care
- Often live in multi-generational households which makes isolation difficult
- Overrepresentation in jails, prisons, and detention centers

SYSTEMIC RACISM AND EQUITY CONSIDERATIONS

Existing health disparities, such as poorer underlying health and barriers to getting health care make people of color more vulnerable during emergencies.

- Not having health insurance
- Long-standing distrust of health care system, language barriers, and financial implications associated with missing work
- Serious underlying medical conditions
- Stigma and systemic inequalities

Source: Pixabay

Monkeypox Response Update:

Equity Data Report on Cases, Vaccines and Testing

NCDHHS | AUGUST 10, 2022

KEY TAKEAWAY: While anyone can get monkeypox, nearly all of North Carolina's monkeypox cases are currently in men who have sex with men. And while 70% of cases are in Black men, Black North Carolinians are receiving less than a quarter of the vaccinations.

DATA SNAPSHOT AS OF 8/8/2022

CASES OVERVIEW

- **111** confirmed cases
- **Nearly all** cases are in men who have sex with men
- **70%** of cases are in Black men
- **19%** of cases are in White men

VACCINATIONS OVERVIEW

- **3,048** people have received the vaccine
- Black residents have received **24%** of vaccinations
- White residents have received **67%** of vaccinations

Thank You!

Questions and Comments?

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qstewart@orangecountync.gov

FALL 2022 DIDACTIC SCHEDULE

Week 1: Emergencies in Public Health (Wednesday, October 12, 5:30-7 PM)
- Quintana Stewart: Orange County Health Director
- Amy Belflower Thomas: Director of Community Assessment and Strategy at NCIPH

Week 2: Disaster Preparedness (Monday, October 17, 5:30-7 PM)
- Ashley Stoop: director of Policy, Planning and Preparedness at Albemarle Regional Health Services

Week 3: Disaster Response (Monday, October 24, 5:30-7 PM)
- Kimberly Clement: program manager of the Healthcare Preparedness Program at the NCDHHS
- Bill Gentry: director of the Community Preparedness and Disaster Management Certificate Program

Week 4: Disaster Recovery (Wednesday, November 2, 6:30-8 PM)
- Pastor Anthony Gibson: senior pastor of Peletah Ministries
- Dr. Dawn Baldwin-Gibson: executive pastor of Peletah Ministries and superintendent of Peletah Academic Center for Excellence

Week 5: Disaster Mitigation (Wednesday, November 9, 6:30-8 PM)
- Sheila Davies: Dare County Public Health Director

Week 6: Lactation & Infant Feeding in Emergencies (Monday, November 14, 5:30-7PM)
- Malaika Ludman: program administrator, Infant Ready Program, New Orleans Breastfeeding Center; Birth Doula, Certified Lactation Counselor, Birthmark Doula Collective

SESSION ATTENDANCE

Remember to fill out the attendance form!

- If you attend 4 out of the 5 sessions either live or virtually, you will receive a certificate of completion at the end
- Your feedback is incredibly valuable!

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