

You May Be Prepared, But Are You Ready?

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Disclosures

- I have no disclosures pertinent to the material covered in this presentation.
- I will not be endorsing any commercial products or services in this presentation.

Today's discussion

1. What did we learn from past events?
2. People run hospitals
3. Resilient communities
4. Table top exercise
5. Parting advice

Before we get started



What did we learn from 2017?

- Hurricane Season
 - 3 hurricanes in four weeks
 - More than 260 deaths
 - Estimated \$300 billion in damages
- Hurricane Harvey
 - Five days to harden facilities, pre-position supplies, and plan patient evacuation (compared to Katrina)
 - Texas Hospital Association report:
 - In-house daycare
 - Chaplains and social workers to manage stress

Route 91 Harvest Music Festival (2017)

- Closest trauma center received few victims
- Nearly 200 victims were transported to Sunrise Hospital
- Approximately 90% of victims arrived by private vehicle
- Instant activation of plans and all-hands approach
- Victim unification and family notification required new methods
- It was a Sunday night

People run hospitals

- Impact on the people who take care of the people
- Family separation
- Loss of life and property
- Childcare
- Public transportation
- Burn out

Will they come to work?

- Survey of 6,428 health care workers from 47 NYC/metro health care facilities on ability and willingness to work during an event:

	Able to work	Willing to work
Weather emergency	48.9%	80.4%
Bioterrorism	68.6%	61.1%
Chemical terrorism	71%	67.7%
Mass casualty incident	82.5%	85.7%
Environmental disaster	80.6%	84.2%
Radiation terrorism	63.8%	57.3%
Untreatable infectious diseases outbreak	63.5%	48.4%

Qureshi et al, J Urban Health.
2005 Sep; 82(3): 378–388



Readiness and chronic disease

- Hospitals may be the only functional source of care in the community
- Hurricane Katrina (2005):
 - 21,673 visits to New Orleans ED's in immediate two months:
 - 24.3% chronic disease conditions
 - 7.2% for medication refills
 - 5.7% or routine care

Sharma et al, Disaster Med Public Health Prep. 2008 Mar;2(1):27-32

Sandy (2012) and vulnerable populations

New Jersey all-cause death rates for the month following the storm:

- 6% increase
- Impacted areas had higher rates, peak at 12%
- Elderly (76 y/o and older) increased by 10%

Kim et al, Am J Public Health. 2017 August; 107(8): 1304–1307

Community readiness

- Patients lose access to providers and pharmacies
- Loss of infrastructure can lead to unsanitary conditions
- Post-acute care facilities at increased risk of failure
- Home health workers during a pandemic:
 - 43% willing to care for current patients
 - 27% willing to care for new patients

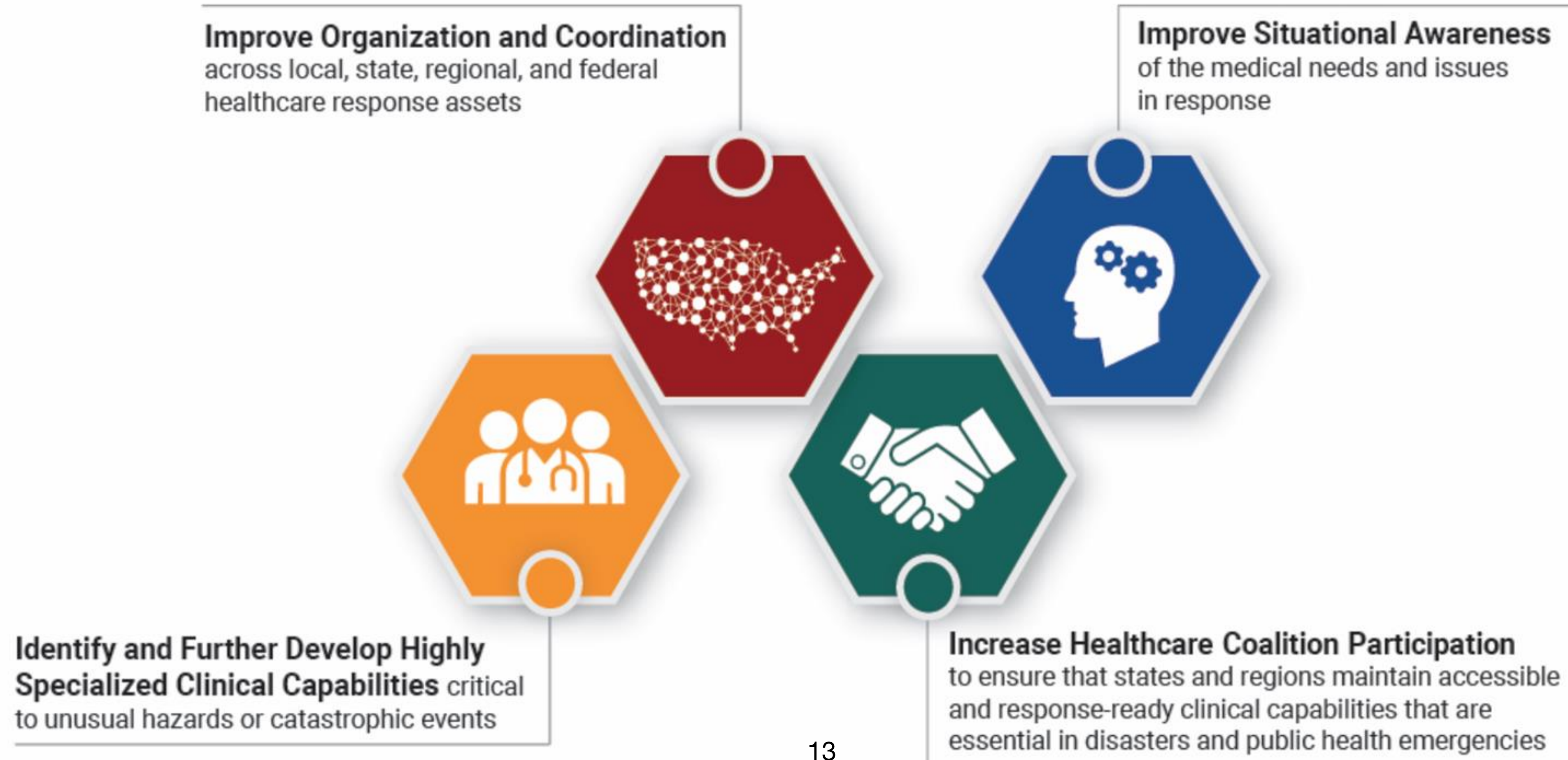
Gershon et al, Am J Disaster Med. 2010 Jan-Feb;5(1):15-26

Increase community readiness

- Plans need to include strategies to build a more resilient community
- EMR/registries can identify vulnerable populations
- The role of Community Health Needs Assessments (CHNA)
- Identify partners in the community

ASPR Regional Approach

Regional Disaster Health Response System Goals



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Questions before we discuss your readiness?

Table Top Exercise

- The following discussion is an exercise.
- All details are fictional, but based on real-world possibilities (no zombies)
- The goal is to quickly pressure test your assumptions about your readiness to respond to a novel infectious disease threat.

Situation

- During the past 2 months a new influenza-like virus has been rapidly spreading throughout the US.
- The first cases were seen in Asia, then the west coast, and within 6 weeks cases were seen in the Lehigh Valley.
- Symptoms are rapid onset of runny nose and cough, fever and headache.
- Viral shedding occurs 24hrs before onset of URI symptoms and lasts for 48hrs after fever has subsided.
- The illness tends to last 3-5 days in the least severe cases.

Situation

- The novel virus has a mortality rate as high as 30%, highest in susceptible populations (infants, elderly, pregnant moms, and chronically ill).
- Death is usually from respiratory failure.
- A diagnostic test and vaccine are under development and antivirals seem to have some effect if started in the first 1-2 days.
- The key to survival in severe cases seems to be supportive care, usually mechanical ventilation, some cases ECMO.

Today in the US

- It is February and the “regular flu” is present in lower numbers than usual, but all hospitals are near or at capacity.
- The CDC expects at least 33% of the population will contract the new virus.
- It is clear that densely populated areas have higher rates of infection and people are fleeing cities.



Today in this region

- Your ED and inpatient facilities are at capacity
- Area school districts, colleges, and employers are discussing closing schools/businesses.
- Only 15% of your workforce has been infected
- The CDC and PA-DOH are developing guidelines for infection control, anti-viral treatment, and return to work/guidance materials that need to be communicated/adopted.



Let's discuss your readiness

For the next 5 minutes turn to the person(s) next to you and discuss:

1. What are your biggest concerns?
2. What are your priorities?

Partners

- Southwest Airlines model
- Families
- Linens
- Food
- Cleaning
- Facilities
- Outpatient practices
- Pharmacies
- Dialysis units

What would improve your readiness?

For the next 3 minutes turn to the person(s) next to you and discuss:

1. What is your role in improving readiness?
2. What is your next step?
3. When are you going to discuss this with your team/supervisor?

Parting advice

- Continue the conversation
- Treat every flu season as a disaster
- Every disaster has a lesson...look for novel challenges and solutions
- Prioritize maintaining business continuity
- Build a resilient community
- Develop relationships to engage other partners



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