ENA Virtual Symposium
Building Back Better:
Applying lessons learned from past disasters to the COVID-19 response

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"I wish it need not have happened in my time," said Frodo.

"So do I," said Gandalf, "and so do all who live to see such times. But that is not for them to decide. All we have to decide is what to do with the time that is given us."

J.R.R. Tolkien
Lord of the Rings
Organization

1) Introductions
2) COVID-19: Past, present and future, all in 100 days
3) The disaster response cycle applied to COVID-19
4) Learning from past responses
   1) Safety
   2) Self-care and wellness
   3) Data and research
   4) Advocacy and leadership
5) Building Back Better
300 doctors, nurses, and paramedics await takeoff on a C-17 before heading to Orlando for Hurricane Irma response

(Photo: U.S. Air Force)
Pneumonia of unknown cause – China

Disease outbreak news
5 January 2020

On 31 December 2019, the WHO China Country Office was informed of cases of pneumonia of unknown etiology (unknown cause) detected in Wuhan City, Hubei Province of China. As of 3 January 2020, a total of 44 patients with pneumonia of unknown etiology have been reported to WHO by the national authorities in China. Of the 44 cases reported, 11 are severely ill, while the remaining 33 patients are in stable condition. According to media reports, the concerned market in Wuhan was closed on 1 January 2020 for environmental sanitation and disinfection.

The causal agent has not yet been identified or confirmed. On 1 January 2020, WHO requested further information from national authorities to assess the risk.
The peak of new diagnoses is not yet the end of new diagnoses

The end of new diagnoses is not yet the end of new hospitalizations

The end of new hospitalizations is not yet the end of new intubations

The end of new intubations is not yet the last of the vent liberations
What is a Disaster?

A disaster is a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community’s or society’s ability to cope using its own resources. Though often caused by nature, disasters can have human origins.

\[(\text{VULNERABILITY} + \text{HAZARD}) / \text{CAPACITY} = \text{DISASTER}\]

A disaster occurs when a hazard impacts on vulnerable people.

(IFRC, 2014)
There’s no such thing as a Natural Disaster.
Hazards are natural. Disasters are human-made.
Test healthcare workers ‘as resources allow’
Disaster definition

\[
\frac{(Vulnerability + Hazard)}{Capacity} = \text{Disaster}
\]

Definition: International Federation of the Red Cross/Red Crescent
Disasters disproportionately affect vulnerable populations
Hurricane Katrina

- Forty-nine percent of victims were people 75 years old and older.
- 51% were black; and 42% were white.
- In Orleans Parish, the mortality rate among blacks was 1.7 to 4 times higher than that among whites for all people 18 years old and older.
- People 75 years old and older were significantly more likely to be storm victims than other age groups.
Disasters exacerbate economic inequality: Expected change in net worth for different demographics as a result of disasters, 1999 - 2013

COVID-19 disproportionately affects vulnerable populations

Characteristics Of Patients Hospitalized With COVID-19

A CDC study of multiple datasets offers insight into characteristics of COVID-19 patients in 14 states hospitalized in the month of March. Each characteristic has a different data size.

**RACE (FROM 580 PATIENTS)**

- White: 45.0%
- Black: 33.1%
- Hispanic: 8.1%
- Asian: 5.5%
- American Indian/Alaskan Native: 0.3%
- Other: 7.9%

Source: Centers for Disease Control and Prevention COVID-19 Response Team; US Census Bureau, 2018 population estimates
Chronic and Comorbid Disease

Racism

(Vulnerability + Hazard)

Capacity

Frailty  Social Isolation

Cognitive Impairment
Disaster Management Cycle

Prevention-Mitigation

Preparedness

Recovery

Response
Mitigation

"the reduction or elimination of future risk"
Funding 2005 - 2016, Public Health Emergency Preparedness and Hospital Preparedness Programs
COVID-19 Mitigation

• Investment in future pandemic preparedness
• Research into emerging threats and vaccines
• Mitigation strategies:
  – Household
  – Community
  – Healthcare provider
Preparedness

“Activities undertaken to address a disaster if it strikes”
Cover your mouth and nose with a cloth face cover when around others

- You could spread COVID-19 to others even if you do not feel sick.
- Everyone should wear a cloth face cover when they have to go out in public, for example to the grocery store or to pick up other necessities.
  - Cloth face coverings should not be placed on young children under age 2, anyone who has trouble breathing, or is unconscious, incapacitated or otherwise unable to remove the mask without assistance.
- The cloth face cover is meant to protect other people in case you are infected.
- Do NOT use a facemask meant for a healthcare worker.
- Continue to keep about 6 feet between yourself and others. The cloth face cover is not a substitute for social distancing.
COVID-19 Preparedness

All disasters are local

• Personal preparedness
  – For nurses
  – For patients and the community

• Departmental and health system preparedness
  – Identifying and filling immediate gaps
  – Long-term strategies
Response

"an immediate reaction or relief that saves lives"
DIVISION OF STRATEGIC NATIONAL STOCKPILE
AMERICA’S EMERGENCY MEDICAL SUPPLIES TO PROTECT THE PUBLIC’S HEALTH

SNS HAS THE ABILITY TO RESPOND TO:
- Bacterial and viral diseases
- Pandemic influenza
- Radiation/nuclear emergency
- Chemical attacks
- Natural disasters

THE STRATEGIC NATIONAL STOCKPILE

- Managed Inventory: Includes specific medicines, vaccines, and supplies for a defined need.
- CHEMPACK: Forward placed containers of nerve-agent antitoxins that can be used to respond to a chemical attack.
- Federal Medical Station: Rapidly deployable reserve of beds, supplies, and medicines to accommodate 250 people with health-related needs and low-acuity care.
- 12-hour Push Package: 50 tons of emergency medical resources that can be delivered anywhere in the U.S. within 12 hours.

The SNS holds medical supplies unavailable from other sources and specially designed for unusual or rare threats.

90% of the U.S. population is within one hour of a CHEMPACK location.

PARTRNERSHIPS IN PREPAREDNESS

CDC’s Division of Strategic National Stockpile works with state and local health departments, as well as the private sector, to ensure that medicine and supplies get to the people who need them most during an emergency.

HOW?
- Practice: Leading training courses and exercises to prepare state and local partners to receive, distribute and dispense SNS resources during an emergency.
- Send in the SNS Experts: If needed, multiple teams of experts are prepared to deploy to locations receiving SNS resources.
- Community Resilience: Create relationships between public health and community partners for distributing and dispensing SNS resources in an emergency.

Centers for Disease Control and Prevention
Office of Public Health Preparedness and Response
Response and COVID-19

- Putting past training to work
- Adaptability
- Addressing current and potential surge
- Staffing issues
- Ensuring safety
Recovery
"the process of repair and restoration"
Recovery from COVID-19
This map denotes the approximate location for each of the 14 separate billion-dollar weather and climate disasters that impacted the United States during 2019.
Recovery from COVID-19

• Tapped out healthcare systems—and providers
• Unknown future surge
• Long-term social distancing
• Using testing and surveillance to identify cases
• Economic recovery
• Vaccine development
Safety
ENA Statement on Emergency Nurse Protection During COVID-19 Pandemic

ENA believes emergency nurses and other health care workers (HCWs) providing direct care for suspected and confirmed COVID-19 patients should be provided the appropriate personal protective equipment (PPE) necessary to safely care for these patients, including PPE that meets National Institute for Occupational Safety and Health (NIOSH) standards.

ENA also believes recommendations for PPE should be evidence-based and not downgraded based on supply chain. ENA supports emergency nurses and other HCWs in obtaining and using self-supplied PPE that meets NIOSH standards when, in their professional opinion, hospital-supplied PPE supplies are inadequate.

ENA supports emergency nurses and other HCWs in obtaining and using self-supplied PPE that meets NIOSH standards when, in their professional opinion, hospital-supplied PPE supplies are inadequate.
What Emergency Nurses Should Know about Caring for Patients with Confirmed or Possible COVID-19 Infection

Your Safety is the Priority

1. MINIMIZE CHANCES FOR EXPOSURE
2. MONITOR CDC GUIDELINES FOR LATEST UPDATES
3. MANAGE VISITOR ACCESS AND MOVEMENT
4. ADVOCATE FOR YOUR SAFETY

Source: https://www.cdc.gov/coronavirus/2019-ncov
Prepared by Sue Anne Bell, PhD, FNP-BC, NHDP-BC

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Strategies for Optimizing PPE

**Prioritize HCP Safety:**

**EXCLUDE:** High-risk HCP from contact with COVID-19 positive patients

**DESIGNATE:** HCP recovered from COVID-19 to care for known or suspected COVID-19 patients

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**NONE AVAILABLE:**
- Disposable lab coats
- Reusable patient gowns
- Disposable aprons
- Combinations of clothing (open back gowns with lab coats, etc.)

**PRIORITIZE USE FOR**

- Anticipated splashes/sprays
- Prolonged face-to-face contact

**REUSE AND REPROCESS**

- Wipe INSIDE to OUTSIDE with disinfectant
- Wipe OUTSIDE with water or alcohol to remove residue

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**NONE AVAILABLE:**
- Ventilated headboards
- HEPA portable fan devices
- Home-made masks (last resort)

**PRIORITIZE USE**

- by patient care activity-type

**EXTEND USE**

- beyond manufacturer-designated shelf-life

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**NONE AVAILABLE:**
- Face shields
- Home-made masks (last resort)

**PRIORITIZE USE**

- by patient care activity-type

**LIMITED RE-USE**

- Fold outer surface inward, store in clean sealable paper bag in between uses


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Self-care and Wellness

SELF-CARE
ISN'T
SELFISH
Self Care for Emergency Nurses During COVID-19

**Daily Self-Care**
- Practice a Daily Routine
  - Daily Exercise
  - Adequate Sleep
- Minimize Social Media Use
- Healthy Nutrition

**Workplace Self-Care**
- Prioritize Your Safety
- Prioritize Regular Breaks
- Maximize Opportunities for Support
  - Ask for Help
  - Debrief with Care Team

**After-Care**
- Healing is Different for Everyone
  - Emotions May Vary
  - Talking Helps Some, but Not Everyone
  - Lean on Friends and Family
  - Make Time for Yourself

Adapted by Sue Anne Bell, PhD, FNP-BC, NHDP-BC from: “The Well Nurse,” 2015 ENA topic brief

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Data and research
Living Through a Disaster Leads to Less Healthy Behaviors
Sue Anne Bell (@sueannebell) et al (2018) Prehospital & Disaster Medicine, PubMedID: 30642407

In a national longitudinal cohort

20,671 individuals
59,450 interviews

comparing those who experienced a disaster versus not

1,451 unique disasters
60% of respondents exposed

16% less likely to be physically active

21% more likely to gain weight

adjusted odds ratio looking at change over time in health risk behaviors adjusting for many potential confounders

Health and Retirement Study (@HRSiar) led by University of Michigan Institute for Social Research (@UMisr) funded by National Institute on Aging

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Living through a disaster decreases long-term cancer survival

Katrina-Exposed Group

Unexposed Group

15% increase in mortality among adults with breast and lung cancer

Lower mortality in the unexposed group

Conclusion:

Disruption in access to healthcare associated with cancer-related mortality

Bell, SA; Banerjee, M; Griggs, J; Iwashyna, TJ & Davis, MA (in press @JournalGIM)

@sueannebell

Matched Sample: 164 counties across 9 SEER registries outside of Louisiana with no hurricane or tropical storm during the study period
COVID-19 Data and Research

• Balancing needs vs opportunity
• Research agendas
• Collaboration
• Interdisciplinary
Advocacy and Leadership
Nurses on Boards Coalition

www.nursesonboardscoalition.org/i-want-to-serve/
VOTE!
Build Back Better

• “Disaster recovery must promote fairness and equity.”
• “Governments must enhance preparedness for future disasters.”
• “Good recovery planning and effective coordination depend on good information.”
From a Reactive to a Proactive Approach

The way we currently mitigate, prepare for, respond to and recover from disasters—pandemics included-- is not working.

We must work together to shift from a reactive approach to one that works to mitigate these effects.
Community resilience is the ability to prepare for anticipated hazards, adapt to changing conditions, and withstand and recover rapidly from disruptions.

- National Institute of Standards and Technology

Source: RAND Corp, LA resilience
Building back better

Building back stronger
Building back faster
Building back more inclusively
Build Back Better for Nurses

- Implementing self-care practices at work and at home
- Advocating for safety at all levels
- Changing organizational culture
- Nursing-focused design of processes, organizations and facilities
We have an opportunity to make the future better.

Disaster Services
Questions?

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After the Regional Symposium Event…

You will receive two separate emails:

1. ENA Regional Symposium Attendee Survey

2. Continuing Nurse Education (CNE) Evaluation
   a. Be sure to sign-in at the registration table
   b. Complete evaluation based on event day(s) attended
   c. Upon receipt of completed evaluation, your CNE certificate will be emailed to you.
   d. All day attendance is required to claim CNE for the specific day.