



Tomorrow's Doctors, Tomorrow's Cures®

# **Group on Institutional Planning (GIP) and Group on Research Advancement and Development (GRAND) Joint Webinar**

## **Emergency Preparedness in the Research Enterprise At Academic Medical Centers**

*September 8, 2023*

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Learn

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Serve

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Lead



Association of  
American Medical Colleges

# Today's Panel



**Brian Smith, JD,  
MBA**

***Co-moderator***

Chief Ethics and Compliance  
Officer, Senior Associate  
Vice Chancellor – Research  
University of California, San  
Francisco



**Emma Meagher, MD**

***Co-moderator***

Senior Vice Dean, Clinical &  
Translational Research,  
Perelman School of Medicine  
Vice President, University of  
Pennsylvania Health System



**Kenira J. Thompson,  
PhD**

Vice President of Research,  
Ponce Health Sciences  
University  
President, Ponce Medical  
Foundation (dba Ponce  
Research Institute)



**William Myles**

Assistant Director, Safety &  
Emergency Preparedness,  
Keck School of Medicine of  
University of Southern  
California



**Deborah A. Lazzarino,  
PhD**

Associate Dean for Research,  
Administrative Director  
Research Core Facilities  
Assistant Professor, Dept. of  
Microbiology, Biochemistry, &  
Molecular Genetics  
Rutgers, New Jersey Medical  
School





# EMERGENCY PREPAREDNESS IN THE RESEARCH ENTERPRISE

William D. Myles

KSOM Assistant Director Safety & Emergency  
Preparedness

Keck School of Medicine of the University of  
Southern California

September 5, 2023



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The University promotes Emergency Preparedness with regular information updates and scheduled training and exercises for all schools and institutes

- Office of Fire Safety and Emergency Planning
- Office of Research
- Information Technologies
- Department of Public Safety
- Environmental Health & Safety Department
- Space Planning Department



# Assessing Emergency Preparedness Risks in the Research Enterprise

Research buildings on academic campuses can present special challenges to consistent operability

1. Emergency back-up power must be designed to protect refrigerators, HVAC systems, and building access in case of municipal power outages.
2. Timely delivery of supplies to researchers and labs must be dependable with alternate vendors at the ready, in case of disruption.
3. Maintaining safety policy compliance and emergency preparedness best practices requires regular, instructive engagement between PI's and their personnel.





An aerial photograph of an industrial facility, likely a chemical or petrochemical plant. The image shows several large, cylindrical storage tanks with white domes, interconnected by a complex network of pipes and walkways. A large, dark, rectangular structure, possibly a reactor or distillation column, is visible in the center. The facility is situated near a body of water, with a rocky shoreline in the foreground. The overall scene is industrial and well-maintained.

# KSOM Emergency Preparedness Programs

- KSOM Business Continuity Plan
- KSOM Lab Safety Ambassador Program
- KSOM Annual Disaster Exercise
- KSOM Disaster Preparedness Supplies
- KSOM Emergency Notification Communications
- KSOM CPR/AED Program



# Health Sciences Campus 2022 Earthquake Drill

- The 2022 Health Sciences Disaster Drill tested the readiness of USC schools and departments to stand up their Department Operations Centers.
- The drill scenario was a major earthquake occurring during a Spring semester weekday morning.
- Disaster response resources were fully activated utilizing University approved Disaster Plans for guidance.
- Research buildings remained operational in the mock disaster.



# KSOM BUSINESS CONTINUITY PLAN



The purpose of the business continuity plan is to support the university's central mission of teaching, research, and service by preparing the unit to resume critical operations rapidly following a disaster. Potential disaster situations include fire, earthquake, civil disturbance, technology outage, pandemic, or any other incident that could disrupt campus operations.



The plan is updated and reviewed annually.



At the onset of a disaster, the plan is activated on direction of the Dean. The plan directs the emergency protocols of departments and units with the goal of maintaining the critical functions of the school and returning the school for the resumption of the school's mission.



# KSOM Lab Safety Ambassador - Encouraging a Culture of Safety in Labs



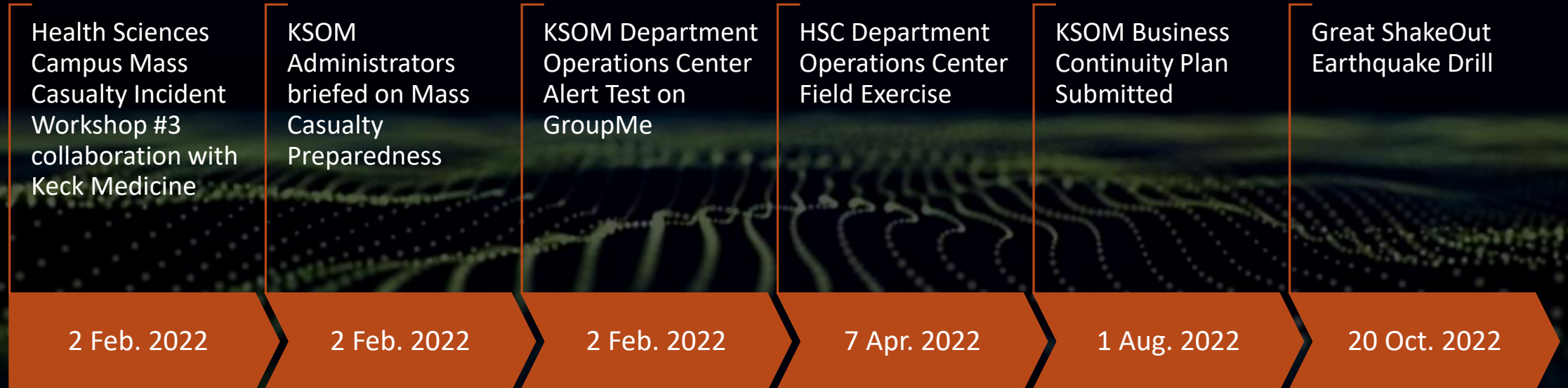
KSOM Lab Safety Ambassador daily rounding began in April 2022 to observe physical environments and operational safety in research laboratories on the Health Sciences Campus (HSC)



Lab Safety Ambassador areas of concern complement Environmental Health & Safety Inspections through regular visits to 292 KSOM research labs in stand-alone, and shared HSC research buildings.

# KSOM Emergency Preparedness 2022

## Scheduled Events





## Become Familiar With Local First Responders

Local Firefighters and Law Enforcement Officers should be welcomed to tour some of the premises.

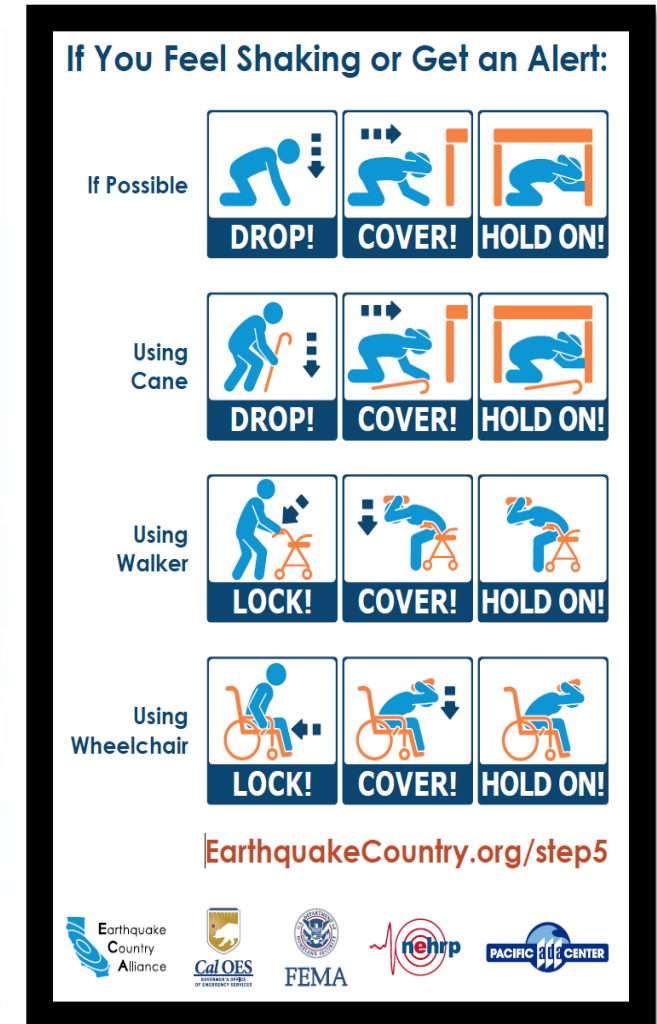
Researchers and first responders should recognize mutual safety protocols.

Training and orientation opportunities should be explored to avoid misinformation.



## Emergency Preparedness in the Research Enterprise Enjoys a Broad Range of Resources

- Southern California Earthquake Center
- California Earthquake Authority
- Earthquake Engineering Research Institute
- United States Geological Survey
- National Earthquake Conference
- Earthquake Warning California
- Great ShakeOut Earthquake Drill
- Campus Emergency Response Teams
- Building Emergency Response Teams





# Emergency Preparedness with tales and lessons from Rutgers University, New Jersey Medical School

**Deborah A. Lazzarino, Ph.D.** (*she/her/hers*)

Associate Dean for Research

Administrative Director, Research Core Facilities

Assistant Professor, Dept. of Microbiology, Biochemistry, & Molecular Genetics

Rutgers, The State University of New Jersey

School of Medicine, New Jersey Medical School

September 8, 2023

# Introduction



FACILITIES AND  
LOCATION



CHALLENGES



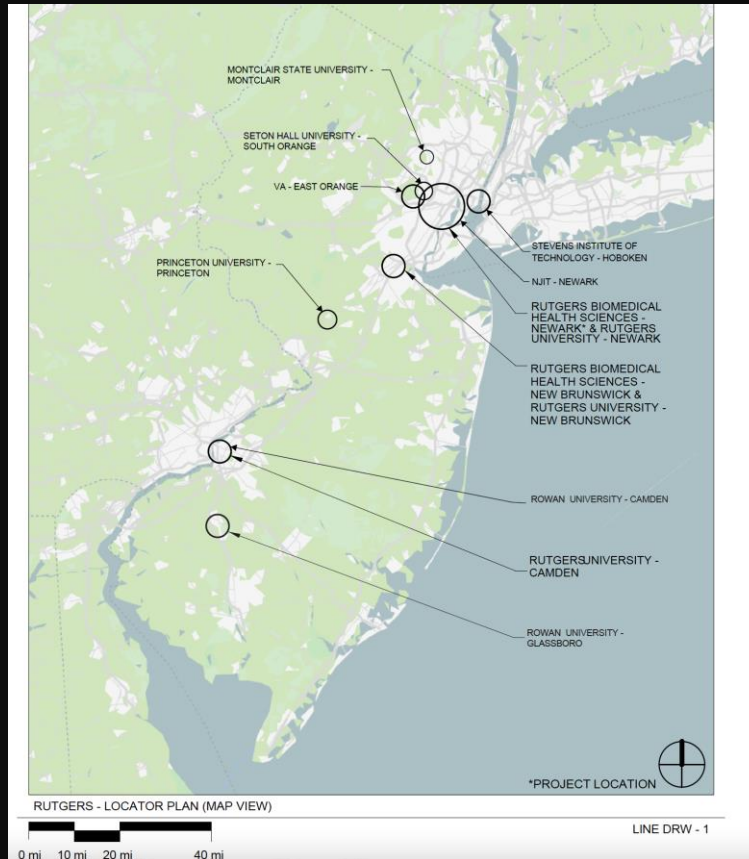
LESSONS  
LEARNED



FUTURE  
DIRECTIONS



# Rutgers New Jersey Medical School (NJMS) Research Facilities



Cancer Building, Newark (67,600 ft<sup>2</sup>)



ICPH-RBL (228,066 ft<sup>2</sup>)

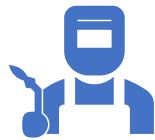


Medical Sciences Bldg (153,677 ft<sup>2</sup>)

# Scenario



**weather**



**Repairs, routine and  
unanticipated**



Public health emergencies

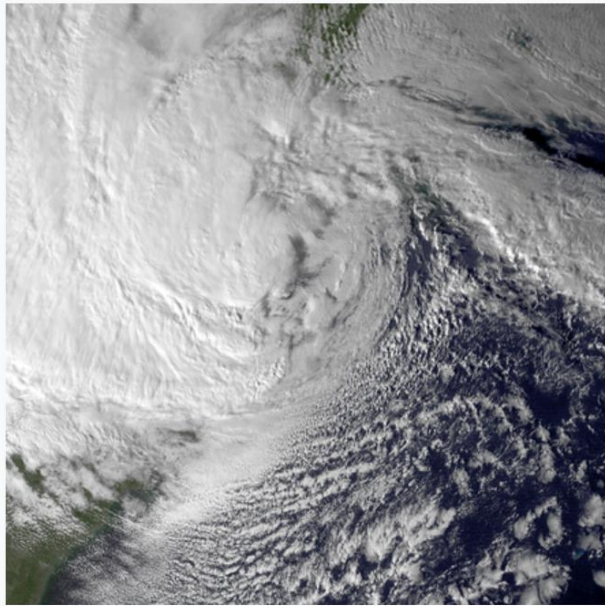


**Diminishing work force**



# Superstorm Sandy in New Jersey

[https://en.wikipedia.org/wiki/Hurricane\\_Sandy](https://en.wikipedia.org/wiki/Hurricane_Sandy)



Satellite image of Sandy at 4:15 p.m. EDT on October 29 as it was about to make landfall on the [Jersey Shore](#)

<https://www.fema.gov/blog/remembering-hurricane-sandy-10-years-later>  
and <https://www.cnbc.com/2014/05/23/Scenes-From-Hurricane-Sandy.html>



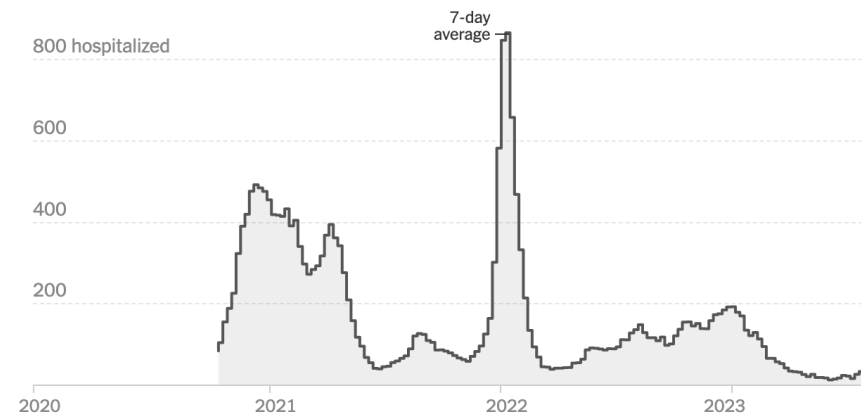
2012 Hurricane Sandy or 'Superstorm Sandy' hit the northeast, heavily impacting on areas not experienced in hurricanes of that magnitude

Public health  
and safety  
emergencies

# Center for COVID-19 Response and Pandemic Preparedness

Rutgers University is leading the fight against COVID-19 with groundbreaking innovations in clinical, biomedical and social science research. The Center for COVID-19 Response and Pandemic Preparedness (CCRP2) serves as a Rutgers-wide institutional hub for COVID-19 research and innovation.

**Hospitalized Covid-19 patients in the Essex County area**





# Organized resources established and new

- NJ PIES-poison control center and urgent response call center
- Rutgers NJMS Regional Biocontainment Facilities
  - Biosafety Level-3 facilities for research and public health of infectious diseases with *in vivo* and *in vitro* labs
- Expertise- Institute for Infectious & Inflammatory Diseases (i<sup>3</sup>D)
  - The Center for Emerging Pathogens, Public Health Research Center and Center for Immunity & Infection
- Created the Center for COVID-19 Response and Pandemic Preparedness (CCRP2)
- Central offices and cross university programs are extensive, including initiative on climate control monitoring, education and research
- Many others

# Solutions for Animal care facilities

- New monitoring systems for facility utilities and systems with updated and additional SOPs for best practices, expanded early notification to key stakeholders, including animal care staff and leadership at all units within the assigned schools
- Replaced aged valves and switches throughout the university animal care facilities to current standards for better environmental control
- Emergency supplies on hand, e.g. Hydropaks routinely supplied; 50% feed on hand at any one time
- Early response planning and organization



# Future plans

- Improve capital planning with stronger cost projections for preventative maintenance and lifespan replacement planning- infrastructure and essential and specialized research support equipment
- Advance the insurance coverage and process for assessing loss to research
- Ongoing review, update and improve communications-introduce more formal change management procedures

# Challenges remain

- Power
- Capital management
- Communications
- Education
- Workforce development
- Cost and other hardships
- Climate change



# Acknowledgements & Questions

## Rutgers Biomedical & Health Sciences

School of Medicine, Newark

Dean Robert Johnson

Rutgers Biomedical & Health Sciences

Bishr Omary, SVCRAA

## New Jersey Medical School

Rutgers Regional Biocontainment Facility

David Alland, Padmini Salgame, Preeti Bharaja

NJMS NJ PIES Poison Control Center

Diane Calello and Bruce Ruck

NJMS Dean's Office of Research and the Chief Operating Officer and

- Bill Gause (Snr. Associate Dean for Research  
Giovanna Comer, Project Manager
- Michael Petti (COO) and James Boyce, Deputy COO),  
Pamela Edwards, Exec. Director of Facilities &  
Logistical Services and Mike Del Valle, Research  
Facilities Management

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Office for Research, Michael Zwick (SA-VPR), and Animal Care team, Jeetu Eswaraka, VPR

Institutional Projects & Organization (IP&O)

**Environmental Health & Service:** Alex Ruiz, Ryan McAllister and Tracy Pfromm

**Local facilities:** James Campoli, Gary Formisano,

**Project management:** Ann Walker and Matt Peterson



# Resilience After The Storm

Kenira J. Thompson, Ph.D.  
Vice President of Research  
Ponce Health Sciences University





# Our Main Goal

To strengthen and expand research activities that diversify the scientific workforce and reduce Hispanic health disparities.







Puerto Rico

**5** Major Events in **6** years

An island changed forever...





2017: Hurricane María





## 2019: Political Turmoil





## 2020: Earthquakes

3





# 4

**2020: Pandemic**

**Sorry!  
we're**

**CLOSED**

coronavirus



## 2022: Hurricane Fiona

5







Each experience  
makes us more  
Resilient!



## LESSONS LEARNED

# Pre-Storm Prep: Research

- Back-Up data/Pictures of labs/equipment
- MTA's/MOU's to include transfer of samples/tissue if needed
- Protect equipment
- Assess all patients in clinical trials (printed lists with contact info)
- Provide 2/3 days of food and water to animals in vivarium
- Process pending requisitions and orders/Activate phone trees
- Ongoing lab inventory (for insurance)



# Infrastructure

- Process Payroll
- Storm Windows
- Remove floor items
- Generator Maintenance
- Diesel Tanks
- Cash
- Process pending requisitions and activate phone trees





# Personnel

- Send staff/students home at least 48 hours prior
- Food and Water for 3-5 Days (including pets)
- Fill cars with gas
- Refill prescriptions
- "To go" bag per family unit
- Cash





# After the Storm...



# Post-Storm Survival Mode

- Initial assessment of facilities (Day 1)
- Coordinate diesel delivery (for indefinite time period)
- Assess status/location of all staff (HR/Division Chiefs/PI)
- Assess status/location of all students  
(Student Affairs/Deans/Department Directors)
- Coordination with local hospitals/airport/Department of Health
- Implement counseling/mental health services for staff and students
- Inventory of damages







# Clean Up and Regrouping







EDUCATE  
RESEARCH  
SERVE





# We are Leaders in Relief Efforts!





# Bringing Health to the most Vulnerable Communities













# Research that serves our Community

***One of the goals of Ponce Medical School Foundation, Inc. is to continue to strengthen communities in Ponce and southcentral Puerto Rico.***

- Relief Efforts Division created post-hurricane Maria in order to have continued involvement in communities always, not only when disasters strike.
- Foster strong ties to community-based leaders to develop research projects from the bottom up (community needs)
- Established *Clinica del Sur* (free clinic for uninsured patients, training for students from all programs)



# PHSU and PRI: Leaders in Post-Hurricane Maria Relief efforts (Sept-Dec 2017)

**6,010 patient  
visits in rural  
areas**

**46  
shelters/communities  
assisted**

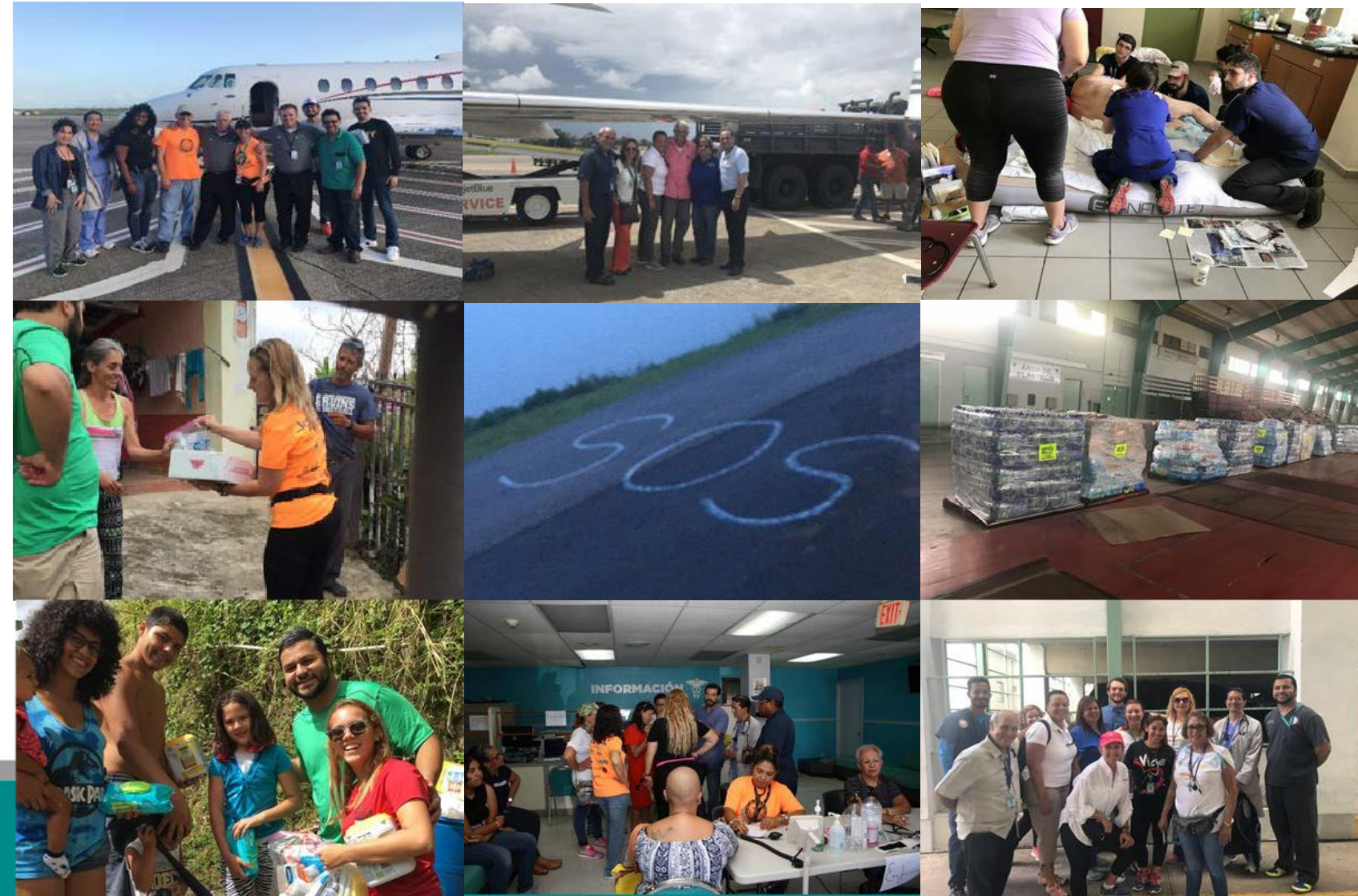
**320+ volunteers  
(faculty, staff,  
students)**

**~200,000lbs medical  
supplies received**

**100+ new donors  
and collaborators**

**125 medical  
evacuations**

**9,500 mental health  
visits on campus**





# PHSU and PRI: Leaders in Earthquake Relief efforts (January-March 2020)



**600 patient  
visits**

**60+ student  
volunteers**

**40+ communities  
impacted**

**~20,000lbs  
supplies  
distributed**

**\$130K in  
donations  
received**

**Established Tent High  
School in Guanica (365  
students)**

**30+ new  
collaborators/donors**



# PHSU and PRI: Leaders in COVID-19 Relief efforts (March 2020-December 2021)

99% of staff and students fully vaccinated!

170,000+ COVID PCR tests/variants identified

Call center with 40+ student volunteers

1000+ psychiatry telemedicine interventions

~100,000 lbs. medical supplies and PPE received

\$400K cash donations received

Storage hub for 2.5 million COVID vaccines

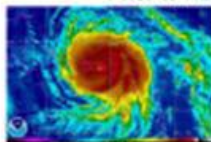
Dr. Thompson chair of Scientific Advisory Board to the Governor



## Hurricane Preparedness

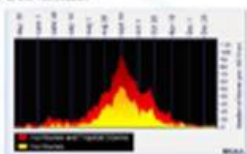


### Disaster Preparedness Checklist "Prior to Hurricane Season"



Subsiding life's work, personal and laboratory is vital for continued research. Hence, the Principal Investigator (PI) is responsible for time spent preparing the research area and employees for a potential disaster. This checklist will help ensure that all personnel and work areas are suitably prepared in the event of a disaster.

Tropical storms and hurricanes usually start in May and end by December, with a peak of storm activity between the months of August and October as observed in the figure below. As we are able to predict when a disaster may strike, each PI should complete this checklist annually prior to this wet season.



Although this checklist focuses on the preparation of all work areas, employees and lab equipment prior to the hurricane season, the steps carried out upon completion of this document will better prepare you for the various potential disaster situations that could occur at Ponce Health Sciences University. This checklist is the first in a series of three, also includes the Disaster Preparedness Checklist: Post-Disaster.

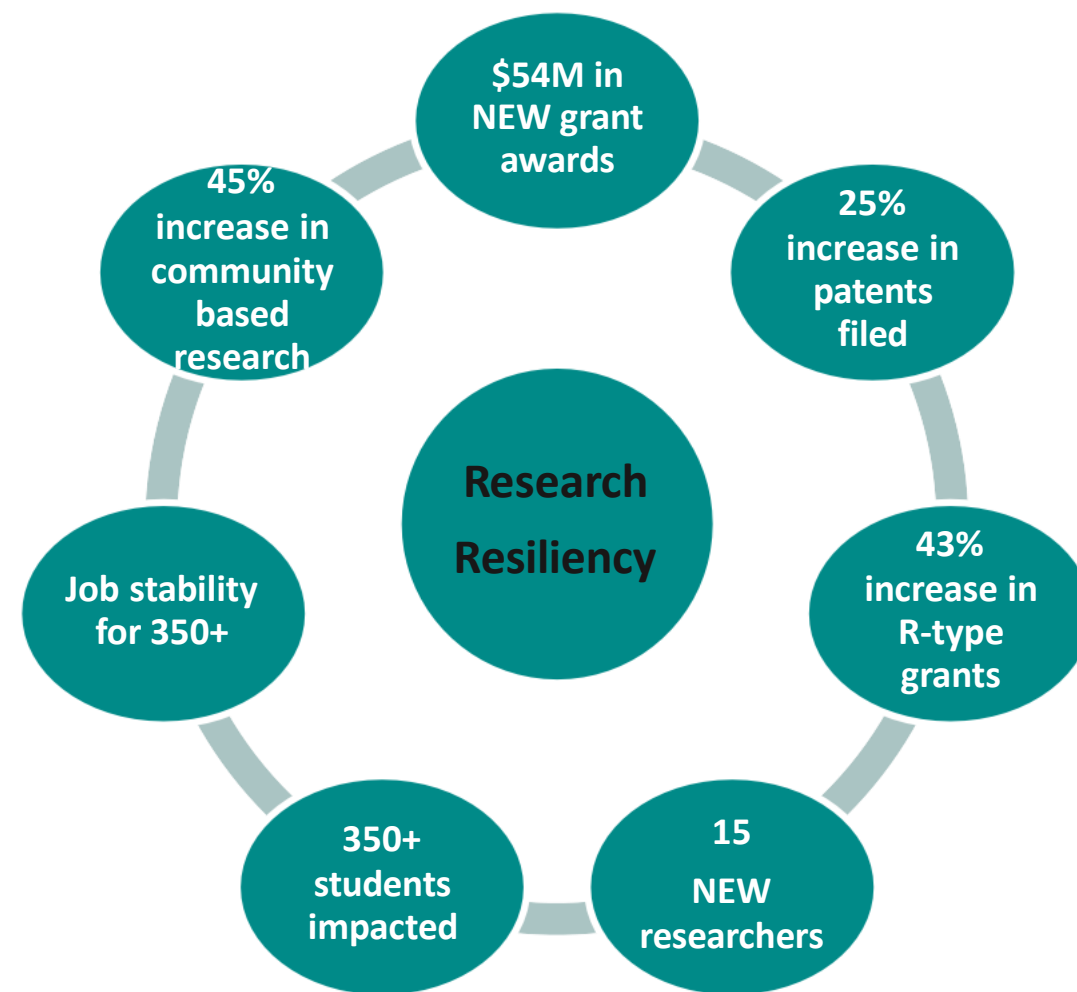
PI Name:

Location (Building):

Lab/Room(s):



# Six Years Post-Maria, post pandemic



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Biomedical PI

Biosafety and Biosecurity (BSB)

Clinical Research Coordinator (CRC)

Clinical Trial Billing Compliance (CTBC)

### Disaster Planning for the Research Enterprise (DPRE)

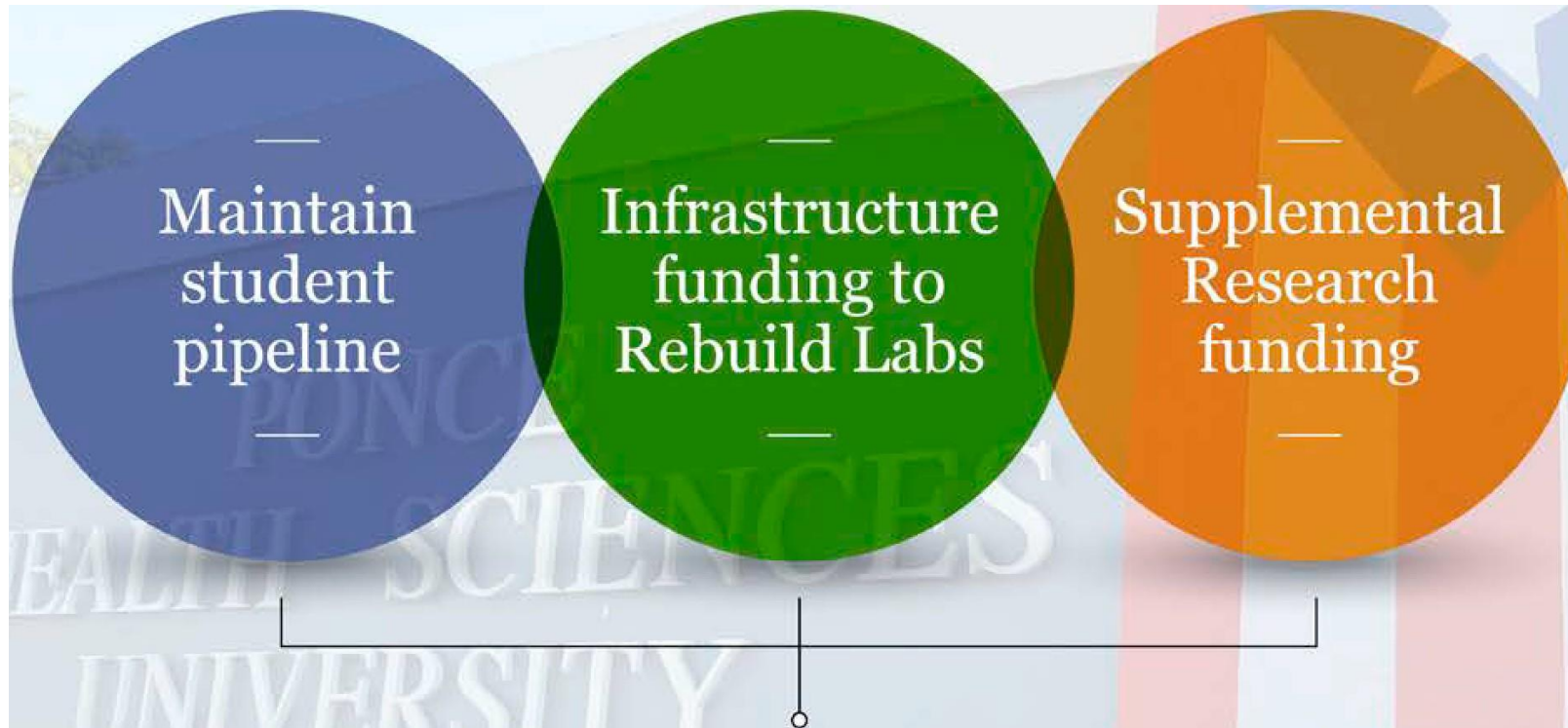
This course offers information about disaster planning and business continuity to those responsible for research oversight.

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Sustained workforce stability  
for research enterprise





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INSTITUTE

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Tamdiu Discendum Est. Quamdiu Vivas