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Hurricane Preparedness: Lessons Learned from Harvey, Irma & Maria

**Presented by Chris Crabtree, DrPH, CEM
Director
Hawaii Healthcare Emergency Management**

August 15, 2018
10:00 – 11:00 a.m.



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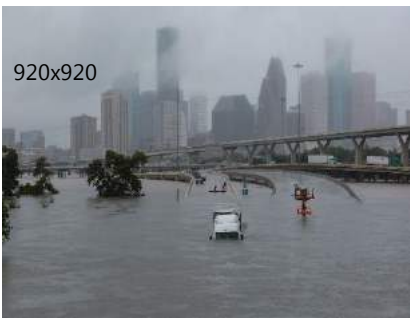
Healthcare Lessons Learned from Hurricane Harvey, Irma, Maria

August 15th, 2018

**Chris Crabtree, DrPH, CEM
Director**

Hawaii Healthcare Emergency Management





Background



* Hurricane Harvey

- Category 4
- August 25th – 29th
- Made landfall 3 times
- More than 25 trillion gallons of water
- \$125 Billion in Damage
- 58 declared counties declared disasters
 - * 776 Assisted Living Facilities
 - * 422 Nursing Facilities
 - * 100+facility evacuations



Background



★ Hurricane Irma

- Category 4
- September 10th, 2017
- Made landfall twice Florida
- \$45 Billion in damage
- More than 435 healthcare facilities evacuated
 - ★ 36 hospitals
 - ★ 61 nursing homes and 280 ALFs



Background



★ Hurricane Maria

- Category 4 (Strong Cat 4)
- September 20th
- \$102 Billion in damage
- 11% of CHC closed
- Many hospitals closed
- Most facilities did not have electricity and water.



Lessons Learned

- ★ Lack of contingency communication
 - Phone lines down
 - Cell service and internet down
 - Lack of depth in comms and contingencies



Lessons Learned

*Back Up Power (Generators)

- * Generators not used to running for that period of time.

- * Many broke down and did not have backup.

- * Parts difficult to get

- * Lack of generators at facilities forced evacuations, and resulted in heat illness.

- * Not enough fuel on hand and fuel hard to get

*Medical Gases

- Lack of Electricity



Lessons Learned

- ★ Transportation challenges
 - Unable to access locations due to high water levels.
- ★ Sheltering in place
- ★ Lack of medical shelters.



Lessons Learned from Hurricane Harvey, Irma and Maria

- ★ External Water System Failure – Resulted in evacuations and closure of medical facilities.
 - Lack of emergency water storage tanks
- ★ Waste management System
 - Lack of contingency waste management system or protocol.



Lessons Learned from Hurricane Harvey, Irma and Maria

- ★ Lack of paperwork to follow patient
 - Electronic Medical Records System were down.
 - ★ Resulting in the lack of available patient records for transfers and evacuations.
- ★ Staff
 - Family accommodations facilitated staff returning.
 - Lack of access to return resulted in staffing shortages.



Lessons Learned from Hurricane Harvey, Irma and Maria

★ Dialysis Patients

- Lack of food for specialized diet
- Lack of open acute or non-acute dialysis centers.



★ Chronic Medications refill

- Lack of refrigeration (Insulin)
- Pharmacies closed
- Lack of adequate supply



Relocation Capacity

- ★ Lack of Beds availability
 - Other facilities in anticipated impact area evacuated earlier resulting in the lack of beds.
 - The Coalition played a significant role in coordinating the placement and relocation of the patients, etc.



Lessons Learned

★ Security Challenges

– Looting

- ★ Pharmaceuticals
- ★ Fuel
- ★ Food and Water



★ Social Media

– Controlling staff and volunteers



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Hawaii Hospital Education and Research Foundation



Questions?

Type your questions into the Questions tab of your Control Panel.

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On behalf of the Healthcare Association of Hawaii and
Hawaii Healthcare Emergency Management,
thank you for attending today's webinar:

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