Lessons Learned from the 2017 Hurricanes + Wildfires

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Hurricane Harvey

Rural Public Health Impacts
and Real-Time Innovation
Hurricane Harvey

106 people killed in the United States.

Total damage from the hurricane is estimated at $125 billion
An estimated 300,000 structures and 500,000 vehicles were
damaged or destroyed in Texas alone.

Throughout Texas, approximately 336,000 people were left
without electricity and tens of thousands required rescue.

An estimated 185,000 homes were damaged and 9,000
destroyed.

As of August 28, an estimated 30–40 people remained
unaccounted for across Aransas County, including 9 in
Rockport. Nearly every structure in Port Aransas suffered
damage.
Field Mission

To create cutting-edge disaster solutions with Hurricane Harvey survivors in the community of Rockport, where the category 4 storm made landfall.

Partners

Collaborated with Chamber of Commerce, Firefighter Department and Emergency Operations Center

Projects

Donations Management: Solution for distribution of donations to increase from 200 families/day to a 1,000/day

Public Health Information: Design and rollout a virtual map and SMS technical solution

Mobile Medical Unit: Create a just-in-time clinic

Mental Health: Green Cross Academy of Traumatology joined FIT providing services to survivors & responders
Tips and Lessons Learned

✓ Rapidly dedicate teams [can be from non-profit partners] to canvas, identify needs and design just-in-time solutions.
✓ Prepare for and leverage the resources that arrive. Volunteers and donations will show up no matter how much you ask the public not to.
✓ Begin recovery as soon as possible.
✓ Co-locate providers including mental health alongside responders. Note that many responders will have also experienced losses in the disaster.
✓ Leverage VOAD, MRCs, and other volunteers as soon as possible.
✓ Do not allow policies to create barriers to progress.
California Wildfires
October 2017
## Today’s Discussion

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Wildfires Burning During October 2017

- How many wildfires were there in October?
- Redwood Valley Fire (37,000 acres)
- Tubbs Fire (37,000 acres)
- Nuns Fire (57,000 acres)
- Atlas Fire (52,000 acres)
- Orleans Complex Fire (27,000 acres)
- Whittier Fire (18,000 acres)
- Canyon Fire (3,000 acres)
- Canyon Fire 2 (9,000 acres)
Southern California Wildfires
Canyon Fires

- Canyon Fire 1
  - September 25-October 4
- Canyon Fire 2
  - October 9-17

- Fast moving fires
- Major freeway closures
- 25 structures destroyed, 55 structures damaged
- >5,000 homes evacuated
Canyon Fires – KP Impacts

• Fire within 3 miles of Yorba Linda MOB; air handlers set to recirculating
• KP OC activated Hospital Command Center
• Air quality and traffic conditions monitored
• SCAL Leadership sent message to all staff with fire information and employee resources
• Patients with asthma, COPD, or other respiratory issues closely monitored and targeted with special messaging
• KP OC and Riverside microsites were updated with respiratory health messages
Northern California Wildfires
At 1:12 a.m., firefighters warned that the fire would reach eastern Santa Rosa within an hour.

Monté Kirven, 81, died at home.

Veronica McCombs, 67, died at home.

Carmen Berriz, 75, died in a backyard pool in the arms of her husband, who survived.

Sharon Robinson, 79, died at home.

Mike Grabow, 40, died at home.

Christina Hanson, 27, who used a wheelchair, died at home.

Arthur Grant, 95, and Suiko Grant, 75, died in their wine cellar.

Donna Halbur, 80, died in her garage.

Leroy Halbur, 80, died on the driveway.

Carmen McReynolds, 82, died in her garage.

Valerie Evans, 75, died while trying to save her dogs.

Carol Collins-Swasey, 76, died in her house.

Marilyn Ress, 71, died in her bedroom.
Northern California Wildfires

17 separate fires; 43 confirmed fatalities; 185 admissions

75,000 displaced with approx. 9,000 structures destroyed; 200,000 acres burned

Estimated losses approx. $3B

9 Counties included in Presidential Declaration

5% of Santa Rosa housing stock destroyed

Air quality throughout the North Bay severely impacted

Cell phone, Internet and PG&E service severely impacted

Ambulance strike teams and federal HHS teams deployed

Red Cross and NGO shelters set up in multiple counties
Northern California Wildfires

Northern California Fires (Broad Impacts)

- Sutter and KP Hospitals evacuated
- Memorial, Queen of the Valley and Sonoma Valley Hospitals remained open
- Air scrubbers and HEPA filters were in high demand and short supply
- Statewide shortage of epinephrine
- Mental Health major concern in the impacted areas
- Flu vaccination deliveries delayed to Napa and Sonoma counties
- 200/1,200 physician homes destroyed in Santa Rosa (KP=77; Sutter=37; Memorial=54)
Northern California Wildfires

Northern California Fires (KP Impacts)

- 122 patients safely evacuated from Santa Rosa
- First KP hospital to totally evacuate during a crisis
- Immediately impacted but opened over time (Santa Rosa MOB’s 1,2,4,5, Round Barn and Fountain Grove closed)
- San Rafael doubled normal census to accommodate transfers
- San Rafael Rohnert Park closed
- Napa MOB’s 1&2 closed
- Petaluma MOB limited services
- Limited water, power and communication access throughout region
Northern California Fires (KP Impacts)

- HR Command Center and Hotline established
- Major staffing issues (approximately 230 lost homes)
- Pharmacy Plan activated
- Successful PlaniTrak implementation
- Limited housing options; two RV’s brought to San Rafael
- Air scrubbers and HEPA filters mobilized
- Poor air quality throughout region; guidance published and distributed
- High demand for respirator’s
Northern California Wildfires

Northern California Fires (KP Impacts)

- Napa Data Center
  - Fires within 1.6 miles
  - Late 3 am wind direction shift moved fire in different direction
  - Sprinklers on and building continuously soaked with water
  - Staff remained on site until threat had passed
  - Applied fire retardant gel
  - Access to helicopter services if needed
KP Response Structure
KP’s National Response Framework ............and National Workgroups

- National Command Center
- Regional Command Centers
  - Medical Center Command Centers
  - Regional Building Command Centers
- Nat’l Business Unit Command Centers
  - Site Specific Command Centers
  - Functional Area Command Centers

- National Incidents
  - Oversight
  - Clinical
  - Pharmacy
  - Supply
  - IT
  - Com & Ed
  - Policy
  - People
  - Legal
Northern California Wildfires

KP Response Coordination

KP National Command Center (Standby)

Northern California Regional Command Center (Active)

SCAL Regional Command Center (Active)

18 KP Hospital Command Centers (Active)

KP National Business Units (Active)
Recovery
NCAL Fires (Short-Term Recovery)

• Santa Rosa Hospital reopened on Thursday, October 26 after 17 days (Oct 9-26)
• KP provided immediate support to impacted employees through temporary lodging and grants
• Approx. 230 physicians & employees homes destroyed
• Pre-fire housing availability in Santa Rose +2%; now -3%
• A massive cleaning effort deployed
• Dedicated FEMA Local Assistance Center on our Santa Rosa campus
• BCD Travel provided >190 rooms, 24/7 support to KP physicians and employees and coordinated with >70 hotels with direct billing to ease access
Northern California Wildfires

Restocking Santa Rosa

- B2P team delivered >25X the normal daily product volume in 4 days
- >9,000 lines received within 48 hours
- >2,500 additional lines delivered within 96 hours
- >20 B2P team members provided 24/7 on site support for 10 days leading up to the opening
- >50 additional B2P resources provided 24/7 virtual support – including: Demand Planning, Product Implementation, Sourcing, Logistics, Supplier Management (expediting), and all California med center supply chain teams
- >400 critical items were delivered from both NCAL and SCAL medical centers, with local teams pulling product between 8pm to 4am
- >10,000 invoices reconciled by a team of 10
NCAL Fires (Long-Term Recovery)

- HR
  - $500 immediate grant, $5k housing grant, $10k interest free loans
  - Hotel costs (BCD and self reserved)
- Finance
  - Tracking insurance and FEMA related reimbursements
  - Partnering with Marsh
  - Extending financial assistance policy to reduce co-pays and deductibles
- MSSA
  - 90 day payment deferral
  - Reinstatement of coverage
- Community Benefit
  - $250K donation to ARC to support shelters
  - Coordinating employee giving and volunteerism
Sheltering and Community Care

Long ago the four nations lived together in harmony. Then, everything changed when the fire nation attacked.
My House
Tips and Lessons Learned

✓ Evacuees will need the materials being delivered to donations center. Establish a process for identifying needs and allowing evacuees to “shop”.
✓ Allow evacuees to volunteer. Consider that many may also be residents and responders. Provide a just-in-time training/orientation.
✓ Prepare to serve all populations including undocumented immigrants, homeless, medically fragile and families with pets.
✓ Prepare to serve evacuees facing pre-existing challenges including those impacted by domestic violence or battling alcohol or drug addiction.
✓ Consider the complexity of rescue and care of livestock/horses.
Questions

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