Public Health Matters: Hurricane Harvey Response

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Local Health Department’s Biggest Advocate.
Harris County

Harris County, TX:
- Third most populous county with over 4.5 million people (ranking between Kentucky & Oregon, #27)
- Geographically spread over 1,778 square miles (size of Rhode Island)
- Home to 4th largest city (Houston), world’s largest medical center, and one of world’s busiest ports.

Harris County Public Health:
- County public health department with 700 public health professionals and $100 million budget
- Annually, see over 100,000 patients in 16 wellness clinics & WIC sites, inspect 7,500 food establishments, handle 20,000 animals in shelter.
- Provide refugee health screening, mosquito control, chronic disease outreach, Ryan White HIV/AIDS services for entire community.
Our Premise: LLWWP

**LLWWP**: Health is a complex equation based on a number of inputs not limited to the clinic setting. Health takes place:

- Where people *Live*
- Where people *Learn*
- Where people *Work*
- Where people *Worship*
- Where people *Play*
Hurricane Harvey - 2017
Hurricane Harvey – U.S./Texas*

- **Category 4 Hurricane** (August 17-September 3, 2017)
- Made Texas landfall on Saturday August 26 at Rockport, TX
- Fatalities – 83 confirmed
- **Damage** – estimated $70-200 billion (3rd costliest in U.S. history)
- Four day period – many areas >40 inches of rain
- **Peak accumulations 51.88 inches of rain** (wettest hurricane on record in the contiguous United States)
- Texas: 300K without power, 300K displaced, 13K rescued, 185K homes damaged, 700 businesses

*Open source, estimates and information subject to change*
Hurricane Harvey – Harris County*

- **Largest community impacted** by Hurricane Harvey (or Irma)
- All-time high in daily rainfall, 8/26 & 8/27 – 14.4 /16.1” (9.92” in 90 mins)
- Estimated **69% of annual rainfall in 4 days** in Harris County
- Made August 2017 **wettest month in Houston since recordkeeping in 1892** at 39.11 inches (doubling June 2001 with TS Alison)
- Estimated 25-30% of Harris County (444 mi²) land submerged
- Large-scale evacuation sheltering –
  - GRB Convention Center – peak 8,000 evacuees (closed 9/18)
  - NRG Center – cumulative 8,000 evacuees (closed 9/23)
- **3rd 100 year flood in 3 years** (2015, 2016, 2017 – Harvey = 1000 year flood)
- Only 15% of homes in Harris County with flood insurance policies by NFIP
- Fatalities – 35 confirmed

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HCPH Priority Public Health Issues for 2013-2018

Selected for the magnitude of the issue and our ability to make progress in Harris County
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The Rule of 10’s

- 4 days of response
- 40 days of restoration
- 400 days of repatriation
- 4000 days of total recovery
Devastation & Inspiration

- CNN’s Anderson Cooper, interviewing Houston Texans football player JJ Watt – what is the first word that comes to mind when you see all this...?

  ... The first word is “Devastating”

  ... but the second word is “Inspiring ...”

First do what is necessary, then do what is possible... and *suddenly* you are doing the impossible.

- Kareen & Johnathon Eichberger (Friendswood, TX)
Hurricane Harvey – HCPH Response

- Coordination with hospital and healthcare systems
- Disease surveillance within community, healthcare, area shelters, etc.
- Health and medical operations at NRG mega-shelter
- Mosquito control including surveillance, ground/aerial spraying
- Environmental health (e.g., food establishments, water systems, etc.)
- Mass health education campaign & community engagement
- Large-scale disaster animal coordination
- Mobile service delivery – “Taking Public Health to the Public”
Hurricane Harvey – Public Health Challenges

**Ongoing**
1. Health-related **interventions** including linkage to healthcare system, addressing basic needs (housing, transportation, employment, etc.), immunizations, etc.
2. Addressing **neighborhood conditions** including debris removal
3. Community-wide **monitoring** of diseases and health-related conditions

**Long-term**
1. Need for **investment** in public health infrastructure and capacity
2. View of long-term recovery through monitoring of **physical/mental health impacts**
3. Working with partners in ensuring **community resilience** for future emergencies
HCPH Priority Public Health Issues for 2013 - 2018

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Public Health Makes “Common Sense”

... And It Takes A Village ...

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