2013

After the Big One: Hurricane Katrina Response Evaluation

Emmanuel Fernandes  
*Worcester Polytechnic Institute*

Miranda Lawall  
*Worcester Polytechnic Institute*

Hope Shevchuk  
*Worcester Polytechnic Institute*

Kelley Slabinski  
*Worcester Polytechnic Institute*

Follow this and additional works at: http://digitalcommons.wpi.edu/gps-posters

Recommended Citation  
http://digitalcommons.wpi.edu/gps-posters/328

This Text is brought to you for free and open access by the Great Problems Seminar at DigitalCommons@WPI. It has been accepted for inclusion in Great Problems Seminar Posters by an authorized administrator of DigitalCommons@WPI.
After the Big One:
Hurricane Preparation and Health Relief
Miranda Lawell (BCH), Hope Shevchuk (BME), Manny Fernandes (CS), Kelley Slabinski (Aero),
Advisor: Professor Jill Rulfs (Biology) and Helen Vassallo (Management)

Abstract
In August of 2005, Hurricane Katrina impacted over 15 million people. Devastation through population displacement, poor preparation, and water contamination directly affected a significant portion of these people's physical and mental health. Through an in-depth evaluation of the social responses, we have developed a more adequate plan. We achieved this through an informational brochure, a post-distribution survey, and letters to companies to increase education and address regulations and policies; reducing health concerns for future hurricanes.

Problems
- Mold developed from standing water
- Generators brought inside produced a build up of carbon monoxide gas
- West Nile Virus increased due to the wet environment
- Over 11 million gallons of oil contaminated water due to poor regulations
- Lack of mental health resources

Health Effects
Mold
- Infections
- Respiratory illnesses
Carbon Monoxide Poisoning
West Nile Virus
Water Contamination
- Sewage
- Oil Spills
Mental Illness
- Depression
- Post-traumatic stress disorder (PTSD)
- Anxiety

22.5% of recorded illnesses due to acute respiratory infection
19.1% of recorded illnesses due to skin or wound infection
37.5% prevalence of mild-moderate or serious mental illness

Method
Informational pamphlet
- Post-distribution survey
Drafted letters to oil companies and FEMA
- Addressing regulations and policies
- Responsibility of responders

Anticipated Results
Increase:
Education among affected population
Water quality

Decrease:
Incidents of stated health problems
Oil spills

No Effect:
Immediate destruction
Weather damages
Drowning incidents

Maximizing Pamphlet Efficiency
In order to increase the number of individuals reading the pamphlet there needs to be:
- Repetitive encouragement from officials
- An incentive such as a coupon or certificate included
- Annually updated information
- A timely distribution
- Translate into multiple languages

References
8. "Increasing the Number of Individuals Reading the Pamphlet there needs to be:
- Repetitive encouragement from officials
- An incentive such as a coupon or certificate included
- Annually updated information
- A timely distribution
- Translate into multiple languages

8. "Increasing the Number of Individuals Reading the Pamphlet there needs to be:
- Repetitive encouragement from officials
- An incentive such as a coupon or certificate included
- Annually updated information
- A timely distribution
- Translate into multiple languages

8. "Increasing the Number of Individuals Reading the Pamphlet there needs to be:
- Repetitive encouragement from officials
- An incentive such as a coupon or certificate included
- Annually updated information
- A timely distribution
- Translate into multiple languages