

Healthcare in a Disaster: It's More than Just and Evacuation

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Hurricane Preparedness

- From 1851 to 2023
 - 44 Tropical Cyclones
 - Four Major (Cat 3 or Higher)
 - Last was Hugo in 1989
- Population change
 - Now 5.149 Million
 - In 1989 3.456 Million

Louisiana Data

- Louisiana has had 57 Hurricanes make land fall
- Average one major one every 3 years
- Response to Katrina...

MAP OF LOUISIANA PARISHES



Data on Gustav PMAC

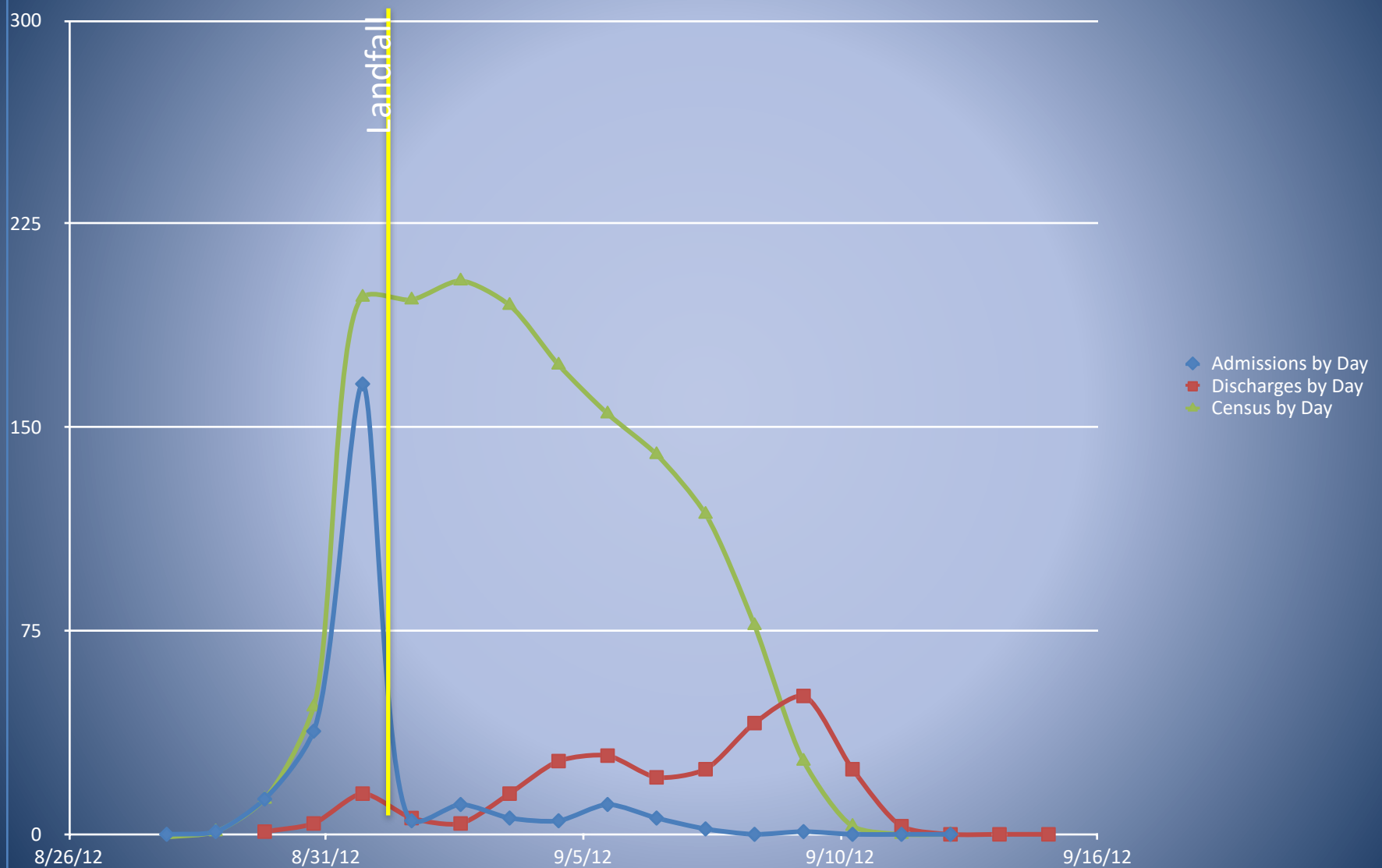
- The following slides come from data compiled from clients seen during Gustav
 - August 25, 2008 - September 4, 2008
- It was used during a presentation to the Committee tasked with working through the closure of a State Hospital

Client Flow by Day

Admissions by Day		Discharges by Day		Census by Day	
8/27/08	0	8/29/08	1	8/27/08	-1
8/28/08	1	8/30/08	4	8/28/08	1
8/29/08	13	8/31/08	15	8/29/08	13
8/30/08	38	9/1/08	6	8/30/08	47
8/31/08	166	9/2/08	4	8/31/08	198
9/1/08	5	9/3/08	15	9/1/08	197
9/2/08	11	9/4/08	27	9/2/08	204
9/3/08	6	9/5/08	29	9/3/08	195
9/4/08	5	9/6/08	21	9/4/08	173
9/5/08	11	9/7/08	24	9/5/08	155
9/6/08	6	9/8/08	41	9/6/08	140
9/7/08	2	9/9/08	51	9/7/08	118
9/8/08	0	9/10/08	24	9/8/08	77
9/9/08	1	9/11/08	3	9/9/08	27
9/10/08	0	9/12/08	0	9/10/08	3
9/11/08	0	9/13/08	0	9/11/08	0
9/12/08	0	9/14/08	0	9/12/08	0

Landfall

Admissions and Discharges per Day

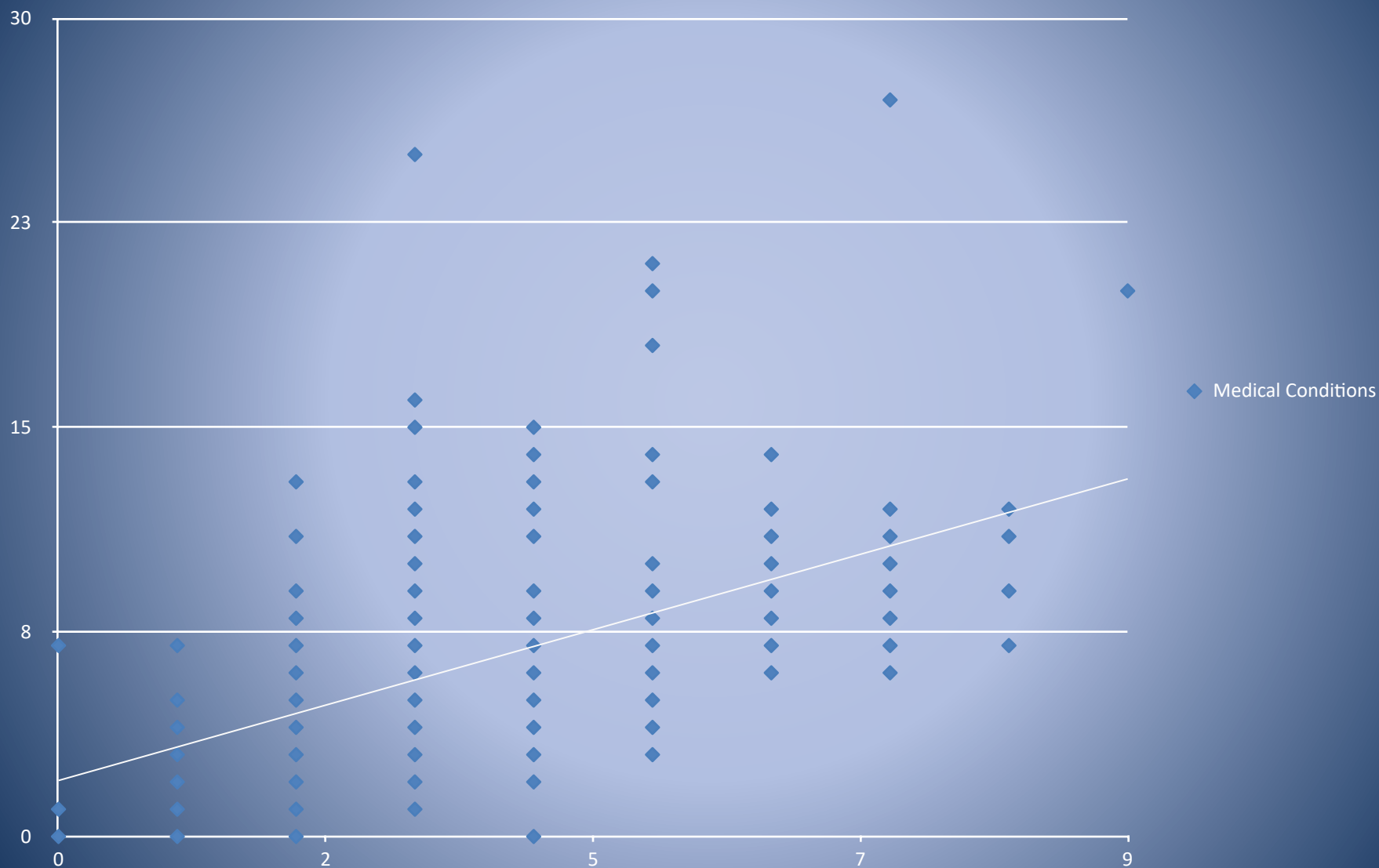


Total Census

Gender		
Female	149	
Male	116	
Total	265	
AGE		
Min/Max	1	101
Mean	65.7	
Median	67.5	
Mode	54	

LOS		
Min/Max	0	11
Mean	5.8	
Median	6	
Mode	9	
Medical Problems		
Min/Max	0	9
Mean	3.5	
Median	3	
Mode	3	
Medications		
Min/Max	0	27
Mean	6.3	
Median	6	
Mode	4	

Medical Conditions vs. Medications



Diabetes, HTN and O₂ Dependent

Gender		
Female	6	
Male	8	
Total	14	
AGE		
Min/Max	45	89
Mean	66.9	
Median	68	
Mode	60	

LOS		
Min/Max	1	10
Mean	5.5	
Median	4.5	
Mode	9	
Medical Problems		
Min/Max	4	8
Mean	3.5	
Median	5	
Mode	5	
Medications		
Min/Max	4	27
Mean	11.0	
Median	9	
Mode	6	

Heart Disease

Gender		
Female	5	
Male	2	
Total	7	
AGE		
Min/Max	49	89
Mean	70.4	
Median	72	

LOS		
Min/Max	2	10
Mean	6.0	
Median	5	
Mode	3	
Medical Problems		
Min/Max	3	9
Mean	6.0	
Median	6	
Medications		
Min/Max	7	20
Mean	11.4	
Median	10	
Mode	10	

Bed Ridden

Gender		
Female	9	
Male	9	
Total	18	
AGE		
Min/Max	9	101
Mean	70.3	
Median	76	
Mode	90	

LOS		
Min/Max	0	10
Mean	6.6	
Median	8	
Mode	9	
Medical Problems		
Min/Max	1	8
Mean	3.7	
Median	3	
Mode	3	
Medications		
Min/Max	0	16
Mean	6.0	
Median	5	
Mode	4	

Top Ten Conditions Seen in Shelters

Condition	Incidence per 1,000 residents
Hypertension/ Cardiovascular	108.2
Diabetes	65.3
New Psychiatric Conditions	59.0
Pre-existing Psychiatric Conditions	50.0
Rash	27.6
Asthma/ COPD	27.5
Flu-like/severe respiratory symptoms or Pneumonia	26.3
Toxic exposure	16.0
Other infections*	15.6
Diarrhea	12.8

*TB, hepatitis, pertussis, varicella, rubeola, encephalitis, meningitis, other serious communicable illness of outbreak concern

Top Ten Conditions Seen in Shelters

Condition	Incidence per 1,000 residents	% Shelters with Unmet Need for Drugs & Supplies to Treat this Category
Hypertension/ Cardiovascular	108.2	43 – 71
Diabetes	65.3	14 – 25
New Psychiatric Conditions	59.0	50 - 70
Pre-existing Psychiatric Conditions	50.0	60 - 70
Rash	27.6	
Asthma/ COPD	27.5	70
Flu-like/severe respiratory symptoms or Pneumonia	26.3	50 (all antibiotics for all conditions)
Toxic exposure	16.0	
Other infections*	15.6	
Diarrhea	12.8	20 (rehydration, anti-motility)

*TB, hepatitis, pertussis, varicella, rubeola, encephalitis, meningitis, other serious communicable illness of outbreak concern

Other Unmet Material Needs From State Shelters

Item	# of Shelters Using Item	% of Shelters With Unmet Need for different drugs in this category
Has pharmacy refrigerator	9	30
Vaccines (Td, Hep A, Pneumococcal, MMR)	12 - 18	42 – 93
Analgesia (Acetaminophen, aspirin, NSAIDs)	55 - 74	14 - 17
Seizures / Anticonvulsants	10 - 12	71 – 91
Allergy (Benadryl)	35	21

Other Unmet Material Needs In State Shelters

Item	# of Shelters Using Item	% of Shelters With Unmet Need for different drugs in this category
Bacitracin	56	21
Soap	53	6
Hydrocortisone	36	26.5
Infant formula	52	8
Bottle/ Nipples	40	7
Bandages	39	8.3

What is the EPAP?

- A joint FEMA-HHS program that processes prescription drug and Durable Medical Equipment (DME) claims for eligible participants
- Allows community pharmacies to dispense medications to individuals who:
 - Are from an affected area
 - Have a valid prescription
 - Have no private prescription drug or DME coverage

EPAP Activation

Processor Activities

- Upon being activated, ACS shall:
 - Notify pharmacies of program activation by fax, e-mail or call with geographic locations and billing information
 - Activate call center for patients and pharmacies
 - Provide status reports (\$\$\$) as required

Coverage and Limitations

- Coverage is limited up to a **one-time 30 day** supply of drugs
- Pharmacy Participation
 - Over 55,000 community pharmacies can fill claims under this program
 - Non-participating pharmacies can sign-up during an emergency

Drug Depot

- The prior slides describes the state response at local pharmacies – not necessarily at the shelters themselves
- As we found from the data on Gustav – the average length of stay was almost 6 days and the average number of medical problems was 3.5.
- With the information provided from the multi-shelter data and Gustav specifics – what drugs would be beneficial to have in the formulary?

Emergency Formulary

Disease	Drugs
Hypertension/ Cardiovascular	Pravastatin Propranolol Metoprolol Lisinopril Hydrochlorothiazide
Diabetes	Insulin Metformin Glyburide
Psychiatric Conditions	Fluoxetine Haloperidol Lithium Carbonate Prochlorperazine
Rash	Triamcinolone 0.1% Hydrocortisone 1% Prednisone Tab Nystatin/Triamcin

Disease	Drugs
Asthma/ COPD	Albuterol Tab Albuterol Soln Ipratropium Soln
Flu-like/severe respiratory symptoms or Pneumonia	Amoxicillin 250mg Doxycycline 100mg Cephalexin 250mg Ciprofloxacin
Toxic exposure	Chlorhexadine Soap Prednisone Tab
Other infections*	Bactrim Penicillin VK 250mg Penicillin VK Soln
Diarrhea	Metronidazole 250mg Oral Rehydration Solution Loperamide
Pediatric Infections	Amoxicillin Soln

Rx's – What is the cost

- Attempted to reduce the price
- These drugs were on the Wal-Mart \$4 list
 - These low cost lists are feasible due to the fact that the drugs are never handled by the pharmacist at the store
 - The drugs are vacuum sealed at the manufacturer in predetermined doses and durations
 - Could the state contract directly with the company to create its own “\$4 dollar formulary?”

Future Efforts

- With contacts at EM residencies within the State
 - Expand the ADLS training to residents
 - Create a group of residents that could help train and assist in disaster responses across the country
 - Utilize the increased medical education system in Baton Rouge
- \$4 Dollar Formulary
 - Could the state create its own?