Preliminary Analysis of Medical Records of Patients Seen by Operation Minnesota Lifeline Volunteers at Evacuation Shelters and Temporary Clinics in Region IV in the days following Hurricanes Katrina and Rita

**A Data Transcription and Analysis Project
of the Health Informatics Center of Acadiana
at The University of Louisiana at Lafayette**

coordinated by
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Submitted June 13, 2006

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FOREWORD:

Preparedness is a critical part of any disaster. With the informative information provided within the following report it is hoped that meaningful actions and precautions can be taken by individuals, families, communities, and officials should the state be faced with a future emergency. The overall goal desired for this report is to review the relevant data and utilize solutions that promote evacuee health and increase the overall preparedness of state and local emergency personnel.

The information for this report coincides with medical information gathered by Operation Minnesota Lifeline (OML) physicians, nurses, and support staff from evacuees relocated in Lafayette and Iberia Parishes as the result of Hurricane Katrina and Hurricane Rita in the fall of 2005. OML staff recorded approximately 2,000 paper medical records from the seven parishes within the Acadiana region with medical information gathered during patient triage and care encounters. To archive this medical information, an electronic database was created to assist the Louisiana Office of Public Health (OPH) in its attempt to improve the quality of service for emergency and primary care medical situations if and when another disaster affects the Acadiana region.

After the database was created, and all paper records obtained from OPH, the process then focused on keying in the information. Students within the Health Information Management department were asked to assist in the inputting of data into the database. When all data representing Lafayette and Iberia parishes was inputted, all of the data was pooled into one database. Queries were established and ran against all aggregate data. These queries support charts, percentages, and graphs that follow in the report.

Project OML Timeline

The following sequences aided in the completion of the Operation Minnesota Lifeline final report:

- Letter from Dr. Juliette (Tina) Stefanski, OPH Region IV Administrator/ Medical Director, introducing the Project Operation Minnesota Lifeline (OML) and requesting assistance from the Health Informatics Center of Acadiana (see appendix)
- Proposal to MBA Director for approval of Project OML to suffice as 3 hours credit for HCA 597 (see appendix)
- Project approved by MBA director.
- IRB application of review and research involving human subject submitted to University IRB (see appendix)
- IRB approval granted (see appendix)
- Creation of Microsoft Access Database
- Obtaining all paper medical records for the Acadiana region from Louisiana Office of Public Health (see appendix for copy of blank form used by OML staff)
- Introduction of the project to Health Information Students
- Submission of all HIM student's Human Participant Protection Education for Research Teams certificates to the University IRB
- Copying records from Lafayette and Iberia Parishes
- Developing a process to de-identify copied records of all sensitive evacuee information
- De-identifying of all 2,327 copied records from Lafayette and Iberia parishes
- Assigning each copied, de-identified record a control number and batching each in stacks of 50 to be assigned to HIM students
- Supervising HIM students during data entry process
- Data entry of 2,327 medical records into the OML database
- Pooling all data into one database table
- Establishing and running queries against pooled data
- Final Report

OML Data Entry Process:

Operation Minnesota Lifeline Volunteer Staff:

Operation Minnesota Lifeline (OML) volunteer staff included physicians, nurses, and support staff who spent a total of 60 days in the Acadiana region. During this time OML staff operated as a traveling health clinic providing evacuees with medial attention. Information from evacuees staying at various hurricane shelters, hotels, or private residences throughout the region was gathered in paper form.

Microsoft Access Database:

Before obtaining the medical records from Dr. Stefanski an electronic vehicle was needed to assist in keying in and storing data. To aid in the process a Microsoft Access database was created. To input evacuee information two electronic forms were created in Access. Because paper forms used by OML were two sided, two electronic forms were used. Electronic forms were created precise in appearance to the OML paper forms. The idea was to mimic the paper forms as closely as possible with the electronic form. It was decided that if the electronic forms resembled actual paper forms, data entry would be less tedious resulting in the lower likelihood of error. While keying in data individuals could easily follow in unison between electronic and paper form.

Paper Medical Records:

To guarantee the privacy of sensitive information, during the transfer from paper into electronic form, researchers first organized encounters on a one-record-per encounter basis. This eliminated multiple visits or follow-up visits from data entry. Second, each single encounter medical record was photocopied then filed back in the correct grouping [1] in which the documents were originally received. It was originally thought that the number of records for all seven Acadiana parishes was roughly 2,000 in number, however the magnitude of records received from the various locations surrounding Acadiana was much more. Due to time constraints the decision was made to focus and record data from locations in Lafayette and Iberia parishes only. The final count of copied one-record-per encounter entered into the OML database from Lafayette and Iberia parishes was 2,327.

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[1] Documents were organized by location of service

Health Information Management Students:
(Junior and Senior classification)

Due to the magnitude of data entry and limited time frame to complete the project, students in the Health Information Management (HIM) program at the University of Louisiana at Lafayette were asked to assist in data entry into the Access database. Previous preparations were made with HIM instructors on feasibility of using HIM students for data entry. Instructors agreed to allow the data entry to count towards the students' class participation grade.

Next the project was introduced to the HIM students at their monthly HIM meeting. Instructors then informed the students that entry of these records would be used as a portion of their overall participation grade. But before the students could input any data concerning human subjects they would have to fulfill the University IRB guidelines by taking the Human Participant Protection Education for Research Teams course. The Human Participant Protection Education for Research Teams course provides the researcher information on the rights and welfare of human participants in research. The course is a two hour tutorial designed for individuals involved in conduction research involving human participants. A deadline was established for the students to complete this on-line course. Once all students completed the course printed their certificate of completion, this certificate was submitted to the University IRB board. Data input occurred in the Health Information Management computer lab on the 5th floor of Wharton Hall. Each student was assigned to input fifty (50) paper records into an OML database saved to their workstation computer.

I. Evacuee Demographics:

This section of the report starts the focus of analysis gained from running queries against the pooled data. Material covered in this section is evacuee:

- Gender
- Race
- Primary Language
- Marital Status
- Age

Each topic on evacuee demographics is represented by a table showing the total number of evacuee answers that fall under each category and what percent they represent to the overall number of evacuees who answered the questions. Some topics will show a chart depicting the distribution of information represented in each table. On certain questions evacuees provided multiple answers to questions. Multiple answers were factored into the final number (N) representing each category. Topics that include situations where evacuees provided multiple answers to a single question are identified in the topics description.

Gender:

A total of *1,332* evacuees supplied information on gender. Of the *1,332* documented answers a total of *796* were female and *536* male. *Table 1:1* represents the data collected.

Table 1:1 Evacuee Gender

Gender	N=1,332	
	Total	% of N
Female	796	59.8%
Male	536	40.2%

Race:

Evacuees were asked to give information on their ethnic background. They selected from the following choices to best describe their background. The choices were:

- African American
- White
- Asian
- Hispanic
- American Indian, Native Alaskan
- Native Hawaiian
- Other Pacific Islander
- Other (to be chosen by evacuee)

A total of *1,621* evacuees provided the following information about their ethnic backgrounds. The majority of evacuees selected African American and White as their race. Evacuees who listed other as their race are represented as bi-racial in the following chart and table. *Table 1:2* visits the information collected on evacuee ethnic background.

Table 1:2 Evacuee Ethnic Background

Ethnic Background	N= 1,621	
	Total Number	**% of N**
African American	849	52%
White	592	37%
Asian	108	7%
Hispanic	39	2%
Bi-Racial (Other)	23	.014%
American Indian/ Native Alaskan	10	.006 %

Chart 1:1 represents the distribution of Evacuee Ethnic Background.

Chart 1:1 Distribution of Evacuee Ethnic Background
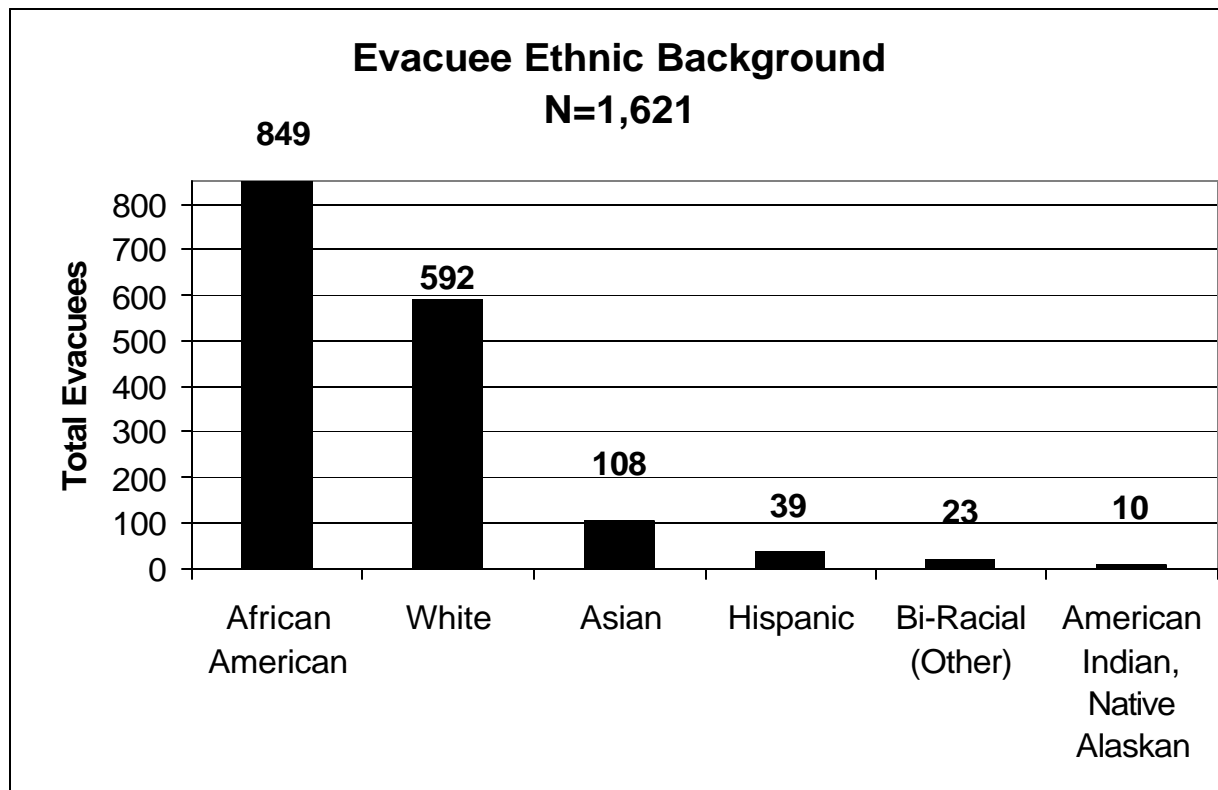
Primary Language Spoken:

There were a total of 11 different languages spoken by the *1,674* evacuees that provided information. Some evacuees choose two different languages as being their primary language spoken at home. The selection of two different languages is represented in the total number *1,674*. As shown below in the distribution of evacuee primary language *Table 1:3* shows that *93.8 % (1,570)* of evacuees chose English as their primary language. English speaking evacuees were able to communicate with the examine r; however several examiners did note they had trouble communicating with evacuees who spoke little or no English.

Table 1:3 Primary Languages Spoken by Evacuees

Primary Language	N= 1674	
	Total Number	**% of N**
English	1570	93.8%
Spanish	46	2.7%
Vietnamese	23	1.6%
French	14	.008%
Laotian	6	Less than .005%
Greek	4	Less than .005%
Cambodian	3	Less than .005%
Creole	2	Less than .005%
Korean	1	Less than .005%
Chinese	1	Less than .005%
Arabic	1	Less than .005%

Chart 1:2 represents the distribution of Primary Language spoken by evacuees.
Chart 1:2 Distribution of Primary Language

Primary Language
N=1,674
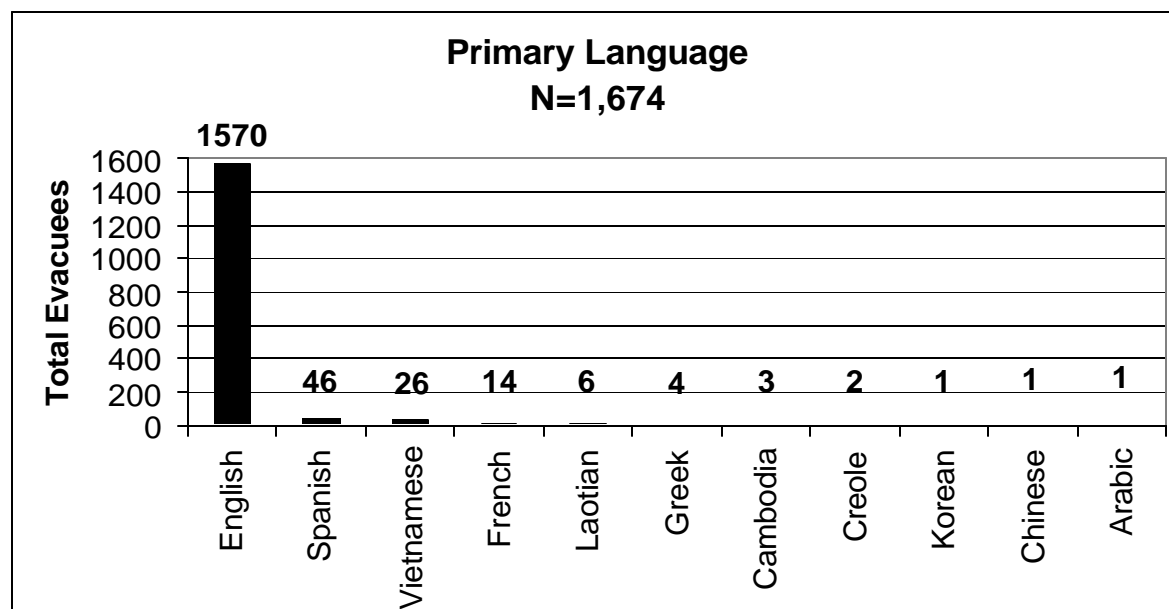
Marital Status:

The following information on evacuee marital status is viewed under two categories.

- Single
- Married

Some evacuees gave answers such as married (separated) or widowed. Although evacuees notified that they were separated from their spouse or widowed they were still categorized as single or married. The following are answers that evacuees gave other than single or married. Each additional answer given by evacuees other than single or married is categorized as follows.

Single:	Married:
S	M
Single	Married
Divorced	Married (separated)
Widowed	Yes

Table 1:4 reveals recorded information from the *951* evacuees who choose to give their marital status. Single status represents 60.9% (579) of evacuees who gave information on marital status.

Table 1:4 Martial Statuses

Marital Status	N=951	
	Total	**% of N**
Single	579	60.9%
Married	372	39.1%

Evacuee Age:

There was a wide distribution of evacuee age. The oldest evacuee recorded was 101 years old and there were 43 infants 1 year old or younger. Although evacuees were not directly asked their age they did have to option to give their date of birth. From their date of birth their age was calculated. Evacuee ages were categorized into five groups:

- 0-17
- 18-35
- 36-49
- 50-64
- 65-Above

A total of *2,147* dates of birth were recorded. The distribution of age by category is represented in *Table 1:5.*

Table 1:5 Evacuee Age by Category

Evacuee Age Category	N= 2,147	
	Total Number	**% of N**
0-17	261	12.2%
18-35	416	19.4%
36-49	578	26.9%
50-64	614	28.6%
65-Above	278	12.9 %

Chart 1:3 represents the distribution of Evacuee Age by Category

Chart 1:3 Evacuee Age Distributions by Category

Evacuee Age by Category
N=2147

Age Category	Total Evacuees
0-17	261
18-34	416
35-49	578
50-64	614
65-Above	278
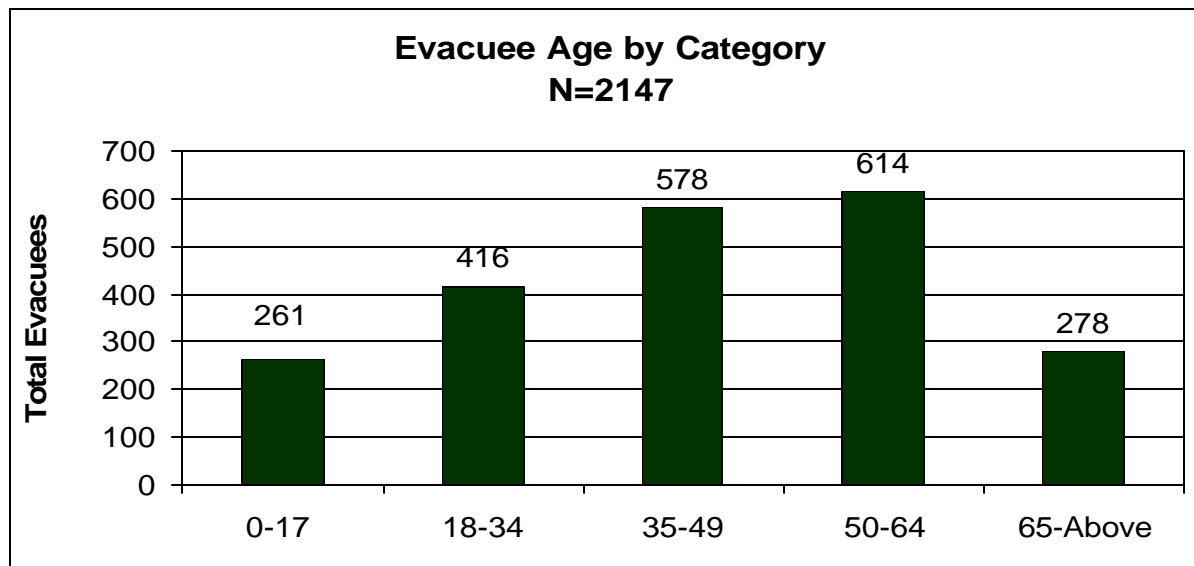
Extended Analysis on Evacuee Age:

Of the *216* evacuees in the 0-17 age category there were a total of *171* (65.5%) reported being ten years or younger. The most common evacuee age was 46 and 50 years old, 61 evacuees reported being this age.

Chart 1:6 represents all the Evacuee Demographic information previously introduced.

Chart 1:6 All Evacuee Demographic Information

Evacuee Demographics	Total Number	% of N
Gender	N = 1,332	100%
Female	796	59.8%
Male	536	40.2%
Race	N = 1,621	100%
African American	849	52%
White	592	37%
Asian	108	7%
Hispanic	39	2%
Bi-Racial (Other)	23	.014%
American Indian/ Native Alaskan	10	.006 %
Primary Language	N = 1,674	100%
English	1570	93.8%
Spanish	46	2.7%
Vietnamese	23	1.6%
French	14	.008%
Laotian	6	Less than .005%
Greek	4	Less than .005%
Cambodian	3	Less than .005%
Creole	2	Less than .005%
Korean	1	Less than .005%
Chinese	1	Less than .005%
Arabic	1	Less than .005%
** Information for final number N includes multiple answers for evacuees **		
Marital Status	N = 951	100%
Single	579	60.9%
Married	372	39.1%
Evacuee Age	N = 2147	100%
0-17	261	12.2%
18-35	416	19.4%
36-49	578	26.9%
50-64	614	28.6%
65-Above	278	12.9 %

II. EVACUATION STATISTICS:

This section of the report gives information on evacuation. Demographics given shows how evacuees evacuated, cities evacuated, areas of the state evacuated to and gives a distribution of dates of evacuation. The following section shows:

- How Evacuees Evacuated:
- Top 25 Cities Evacuated
- Dates of Evacuation (Overall Dates, New Orleans Dates, Lake Charles Dates)

Each topic on evacuation demographics is represented by a table showing the total number of evacuees who fall under each category and what percent they represent to the overall number of evacuees who answered the questions. All topics in this section will show a chart depicting the distribution of information represented in each table. On certain questions evacuees provided multiple answers to questions. Multiple answers were factored into the final number (N) representing each category. Topics that include situations where evacuees provided multiple answers to a single question are identified in the topics description.

How Evacuees Evacuated:

Evacuees were asked how they evacuated. They were given the following choices to choose from:
- Private Vehicle
- Bus
- Helicopter
- Airplane
- Other

Of the *1,505* evacuees that provided this information the majority *(89.64%)* used private vehicles to get away from threatened areas. *Table 2:1* shows how evacuee evacuated.

Table 2:1 How Evacuees Evacuated

How Evacuees Evacuated	N= 1,505	
	Total Number	**% of N**
Private Vehicle	1,350	89.64%
Bus	122	8.10%
Helicopter	22	1.46%
Airplane	5	0.33%
Other	5	0.33%
Boat	2	0.13%

Chart 2:1 represents the distribution of How Evacuees Evacuated.

Chart 2:1 Distributions of How Evacuees Evacuated

How Evacuees Evacuated
N= 1,505
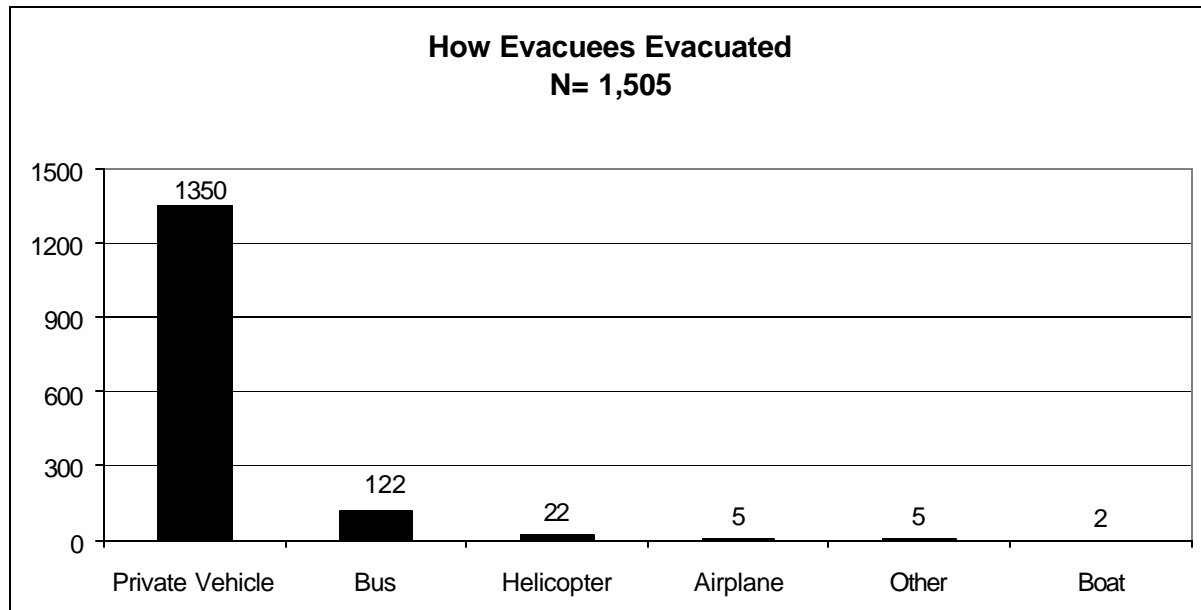
Top 25 Cities Evacuated:

A total of *1,658* evacuees supplied information on what city they evacuated from. After sorting this data the top 25 cities where evacuees evacuated were identified; *86% (1,418*) of the total evacuees came from these 25 cities. *Table 2:2* identifies the top 25 cities evacuated, the number of evacuees who reported evacuating that city, and what percentage of overall evacuees were from that city.

City	N=1,658	
	Total Number	% of N
New Orleans	652	39.32%
Lake Charles	204	12.30%
Port Arthur TX	64	3.86%
New Iberia	59	3.56%
Chalmette	50	3.02%
Beaumont TX	43	2.59%
St. Bernard	41	2.47%
Metairie	36	2.17%
Delcambre	31	1.87%
Kenner	29	1.75%
Cameron	18	1.09%
Arabi	18	1.09%
Erath	17	1.03%
Slidell	17	1.03%
Sulphur	15	0.90%
Lafayette	15	0.90%
Vinton	14	0.84%
Boothville/Venice	14	0.84%
Gretna	14	0.84%
West Lake	13	0.78%
Harvey	12	0.72%
Violet	12	0.72%
Buras	10	0.60%
Port Sulphur	10	0.60%
Iberia	10	0.60%

Chart 2:2 represents the distribution of the Most Evacuated Cities.

Chart 2:2 Distributions of Most Evacuated Cities

Most Evacuated 25 Cities
N= 1,658

15
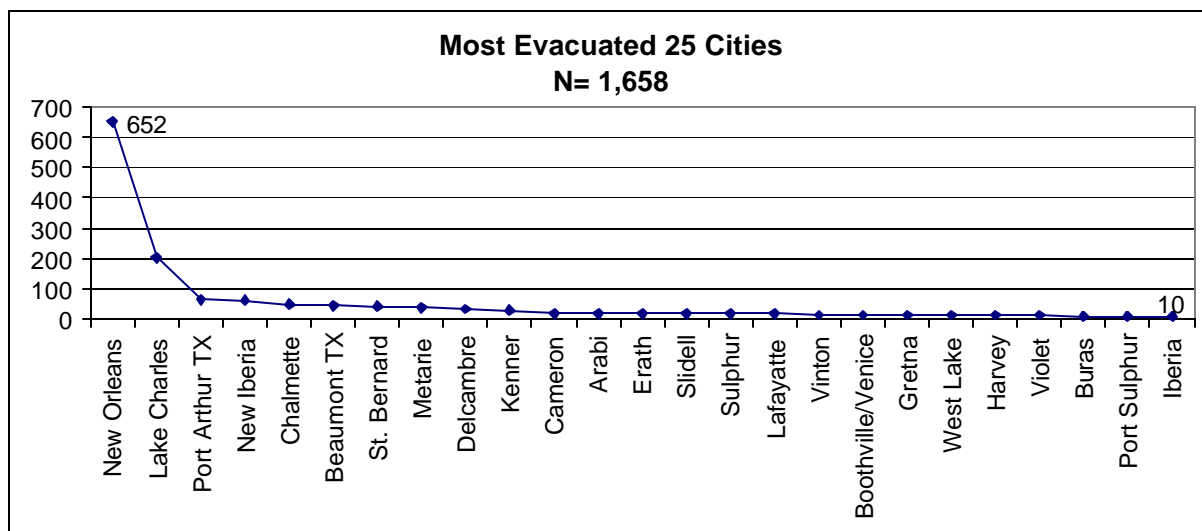
Distribution of Date Evacuated:

The following information on dates evacuated is based on the date evacuees noted they evacuated a region. The first column in *Table 2:3* shows all dates evacuees evacuated a region. The second column represents the *1,209* evacuees who recorded their evacuation date. Columns 3 and 4 give information on dates from the two most evacuated cities. Markers on each chart represent a value from *Table 2:3*. Only the markers on each chart are consistent with data.   *Chart 2:3* represents the distribution of date evacuated for all evacuees who supplied that information. *Chart 2:4* represents the distribution of dates from evacuees who are from New Orleans. *Chart 2:5* represents the distribution of dates from evacuees who are from Lake Charles.

Table 2:3 Distribution of Dates Evacuated

Dates Representing Data	Overall Evacuee Distribution	New Orleans Evacuee Distribution	Lake Charles Evacuee Distribution
8/20	4	3	
8/22	1		
8/23	1		
8/24	1	1	
8/25	7	4	
8/26	31	20	1
8/27	145	63	
8/28	293	190	2
8/29	126	82	1
8/30	34	29	
8/31	19	12	
9/1	18	14	
9/2	9	7	
9/3	10	7	
9/4	5	3	
9/5	7	4	2
9/6	4	3	
9/7	2	2	
9/8	3	2	
9/9	4	4	
9/10	1	1	
9/11	2		
9/13	1	1	
9/14	1		1
9/15	2		
9/16	2		
9/18	6		1
9/20	13	2	5
9/21	46		10
9/22	186	1	81
9/23	67	1	11
9/24	23	2	11
9/25	14		6
9/26	15	2	
9/27	26	8	5
9/28	42	17	6
9/29	15	7	1
9/30	6	6	
10/3	2	1	
10/5	2	2	
10/18	1		
10/22	8	1	2
10/24	1		
10/27	2	1	
10/28	1		1
Total	1209	503	147
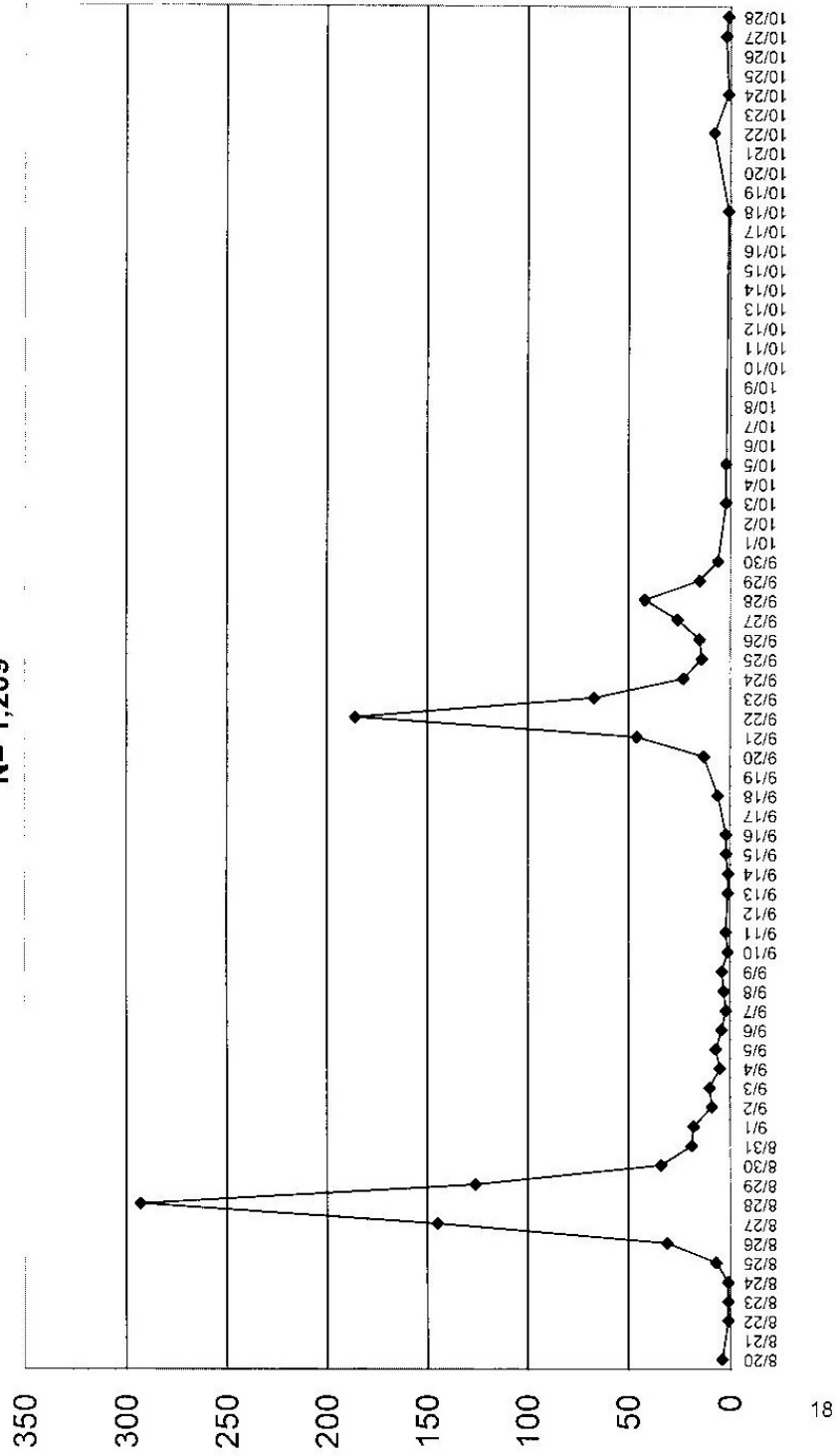
Chart 2.5 Distribution of Overall Dates Evacuated

Distribution of Overall Dates Evacuated
N= 1,209

350
300
250
200
150
100
50
0

8/20 8/21 8/22 8/23 8/24 8/25 8/26 8/27 8/28 8/29 8/30 8/31 9/1 9/2 9/3 9/4 9/5 9/6 9/7 9/8 9/9 9/10 9/11 9/12 9/13 9/14 9/15 9/16 9/17 9/18 9/19 9/20 9/21 9/22 9/23 9/24 9/25 9/26 9/27 9/28 9/29 9/30 10/1 10/2 10/3 10/4 10/5 10/6 10/7 10/8 10/9 10/10 10/11 10/12 10/13 10/14 10/15 10/16 10/17 10/18 10/19 10/20 10/21 10/22 10/23 10/24 10/25 10/26 10/27 10/28

Chart 2:5 Distrubution of Reported Date Evacuated: New Orleans
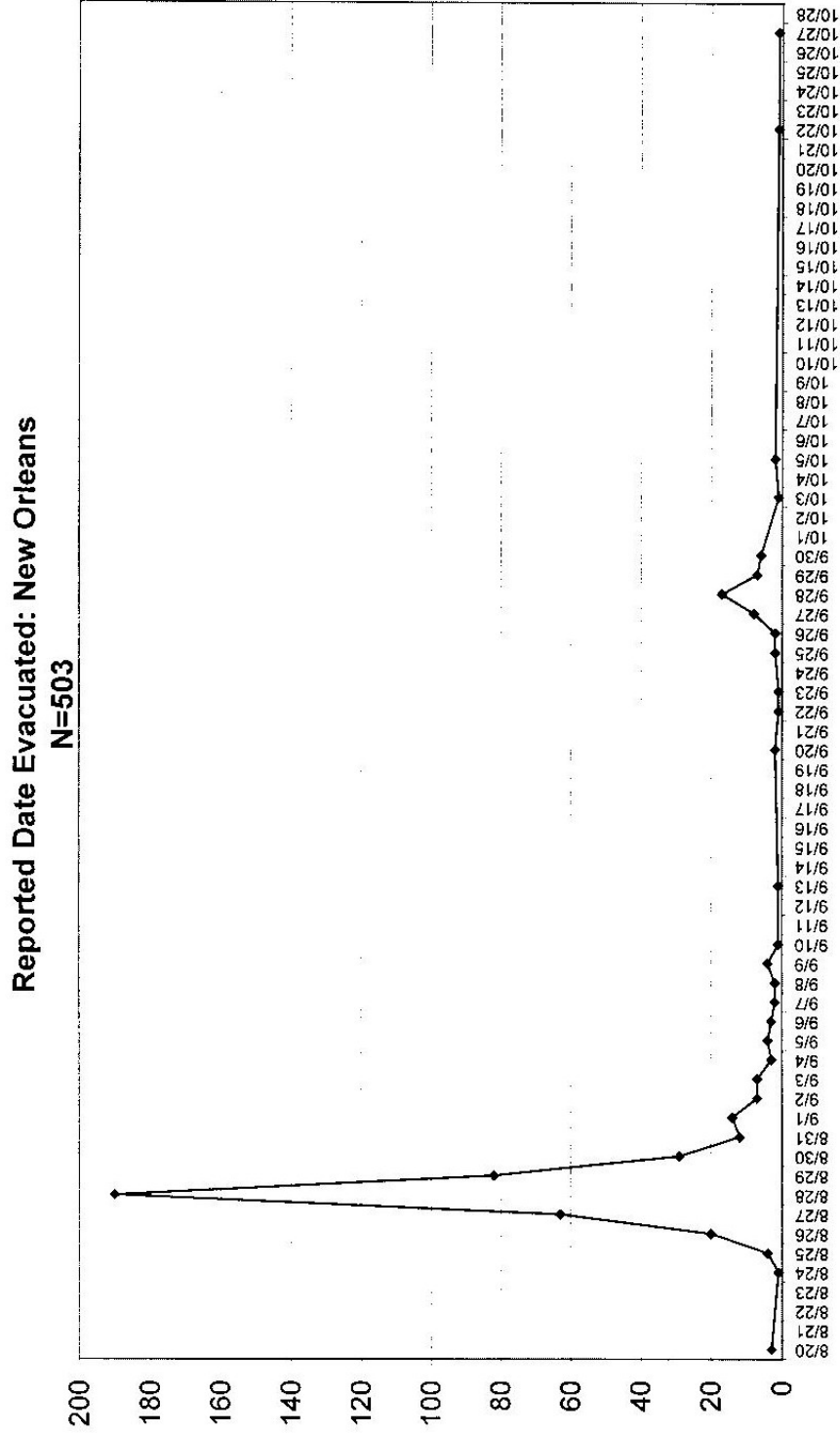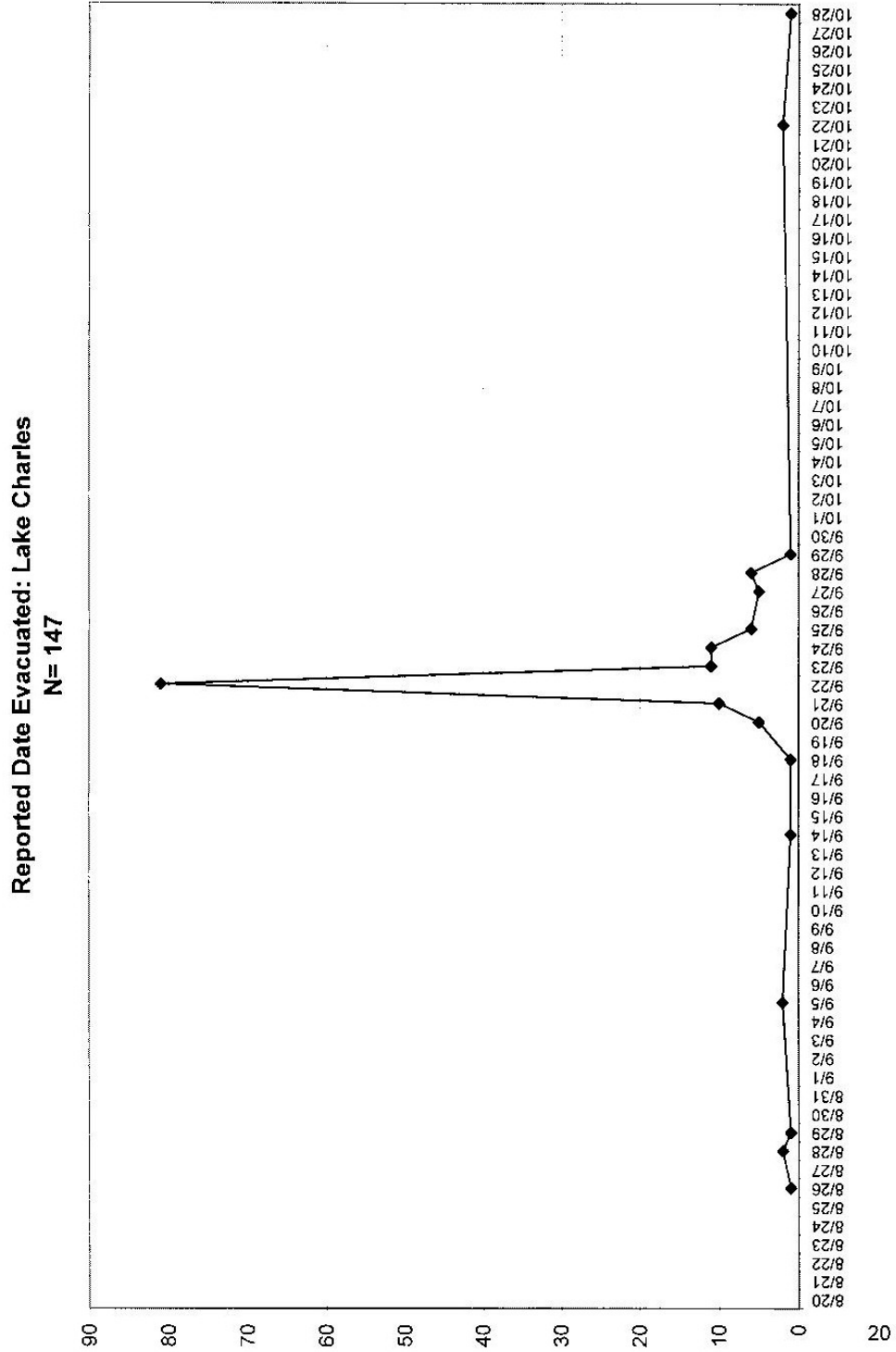
**Reported Date Evacuated: New Orleans
N=503**

Reported Date Evacuated: Lake Charles
N= 147

III. MEDICAL CARE INFORMATION:

The final section of the report represents medical information, provided by evacuees through a series of questions asked during the medical evaluation. The data is consistent with medical conditions before and after evacuation. Chronic or pre-existing medical conditions are identified as well as hurricane related injuries. The following is the medical information reviewed in this section:

- Where Evacuees Received Their Medical Care Before Evacuation
- Lafayette and Iberia Parishes Clinic and Shelter Distribution
- Past Medical History
- Injuries as a Direct Cause of the Hurricanes

For each topic evacuee medical care information is represented by a chart showing the total number of evacuee answers that fall under each category and what percent they represent to the overall number of evacuees who answered the questions. All topics will show a chart depicting the distribution of information represented in each table. On certain questions evacuees provided multiple answers to questions. Multiple answers were factored into the final number (N) representing each category. Topics that include situations where evacuees provided multiple answers to a single question are identified in the topics description.

Where Evacuees Received Their Medical Care:

Evacuees were asked where they would usually receive medical care. Each could select one or more of the following choices:

- Public Health Clinic
- Emergency Room
- LSU/ Charity Hospital
- Private Doctor or Clinic
- Urgent Care

There were a total of *1,829* answers recorded. Some evacuees noted that they received medical from two or more of the given choices. Multiple answers from one evacuee record are recorded in the final *1,829*. From the information *60.9% (1,113)* of evacuees noted that they receive their medical attention from a private doctor or clinic. *Table 3:1* visits the information on where evacuees got their medical care.

Table 3:1 Where Evacuees Receive their Medical Care

Medical Care Choices	N= 1,829	
	Total Number	**% of N**
Private Doctor/ Clinic	1,113	60.9%
LSU/ Charity Hospital	281	15.4%
Public Health Clinic	255	13.9%
Emergency Room	128	7%
Urgent Care	39	2.1%
VA Hospital	8	.4%
Other	5	.3%

Chart 3:1 represents the distribution on where evacuees received their medical care.

Chart 3:1 Distribution on Where Evacuees Received their Medical Care
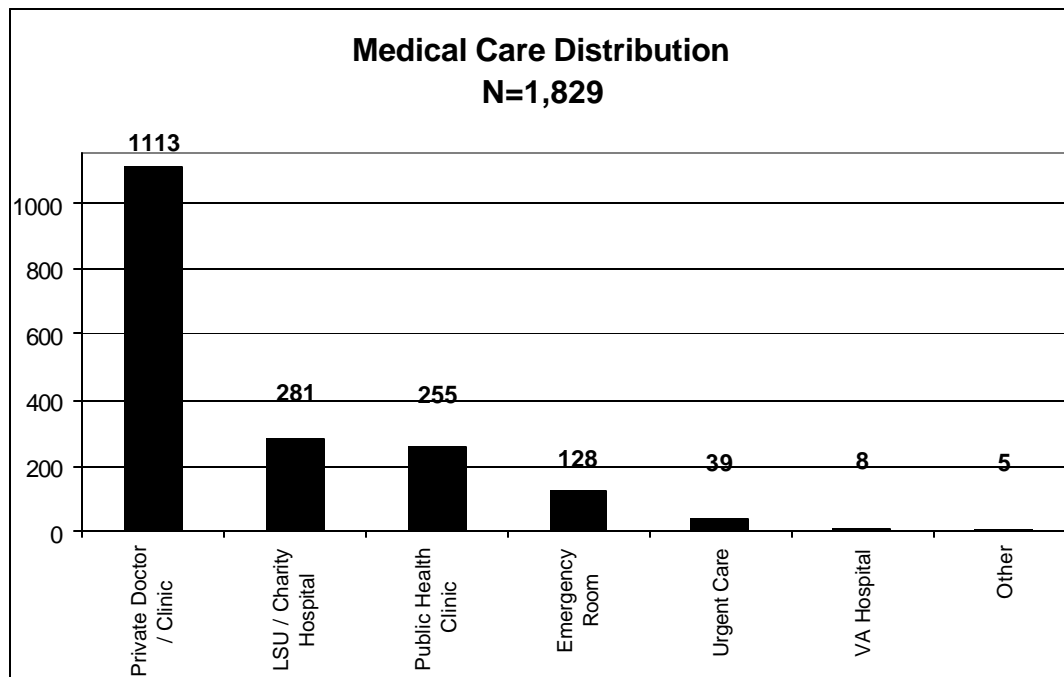
Lafayette and Iberia Parishes Clinic / Shelter Distribution:

Evacuees were treated at various areas throughout Lafayette and Iberia parishes. The following charts and graphs show a distribution of reported clinics and shelters where evacuees received medical attention.

Lafayette Parish:

A total of *818* evacuees provided answers to what clinic they were being evaluated at or what shelter they were housed. The Lafayette Public Health Unit treated the most number of evacuees (507) for medical conditions. *Table 3:2* shows the recorded answers for Lafayette Parish.

Table 3:2   Clinic – Shelter Lafayette Parish

Clinic - Shelter (Lafayette Parish)	N= 818	
	Total Number	**% of N**
Lafayette PHU	507	62.0%
Hotel / Motel / Inn	121	14.8%
Cajun Dome	60	7.3%
Lafayette FEMA	58	7.1%
Other	37	4.5%
Private Residence	23	2.8%
Clifton Chenier	12	1.5%

Chart 3:2 shows the distribution of recorded answers for clinic – shelter in Lafayette parish

Chart 3:2 Distribution on Clinic – Shelter for Lafayette Parish

Clinic-Shelter Lafayette Parish
N = 818
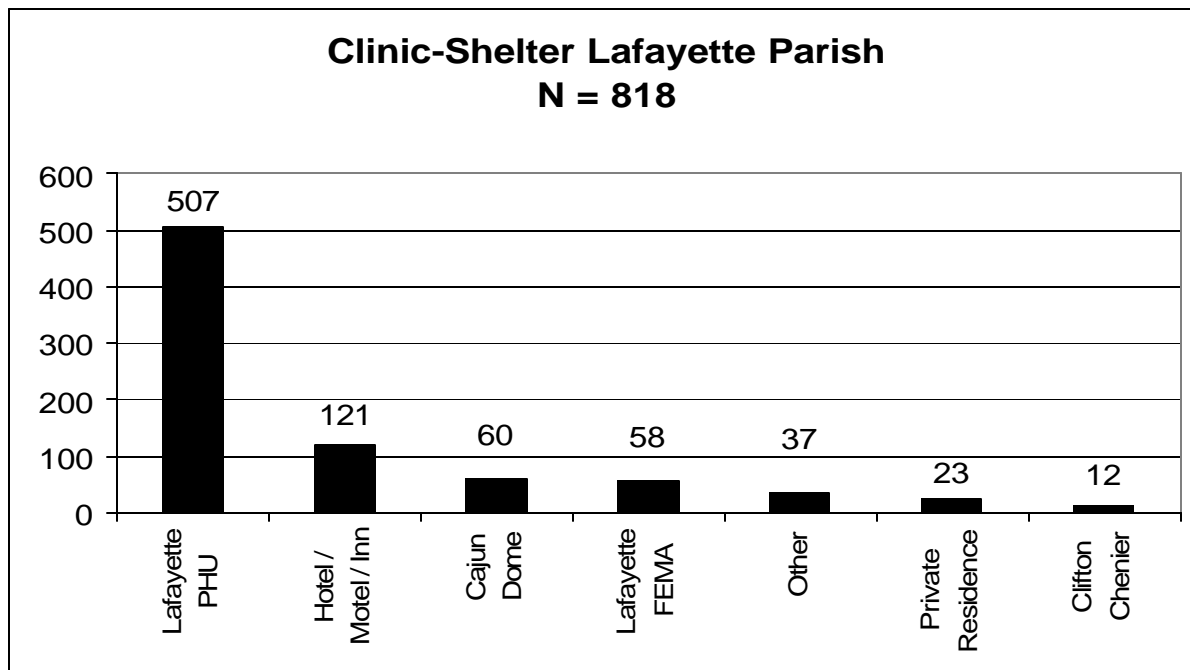
Iberia Parish:

A total of 242 answers from Iberia parish were recorded. The majority of evacuees (78) noted that they were receiving shelter or being examined at the Sacred Heart Catholic Church. *Table 3:3* examines the information provided for Iberia Parish.

Table 3:3   Clinic- Shelter Iberia Parish

Clinic - Shelter (Iberia Parish)	N= 242	
	Total Number	**% of N**
Sacred Heart Catholic Church	78	32.2%
New Iberia PHU	67	27.7%
Bell Place Estates	23	9.5%
FEMA New Iberia	20	8.3%
Other	17	7.0%
City Park	13	5.4%
Laotian Temple	9	3.7%
Chase RV Park	8	3.3%
New Iberia High School	7	2.9%

Chart 3:3 shows the distribution of clinic – shelter for Iberia Parish

Chart 3:3 Distribution on Clinic – Shelter for Iberia Parish
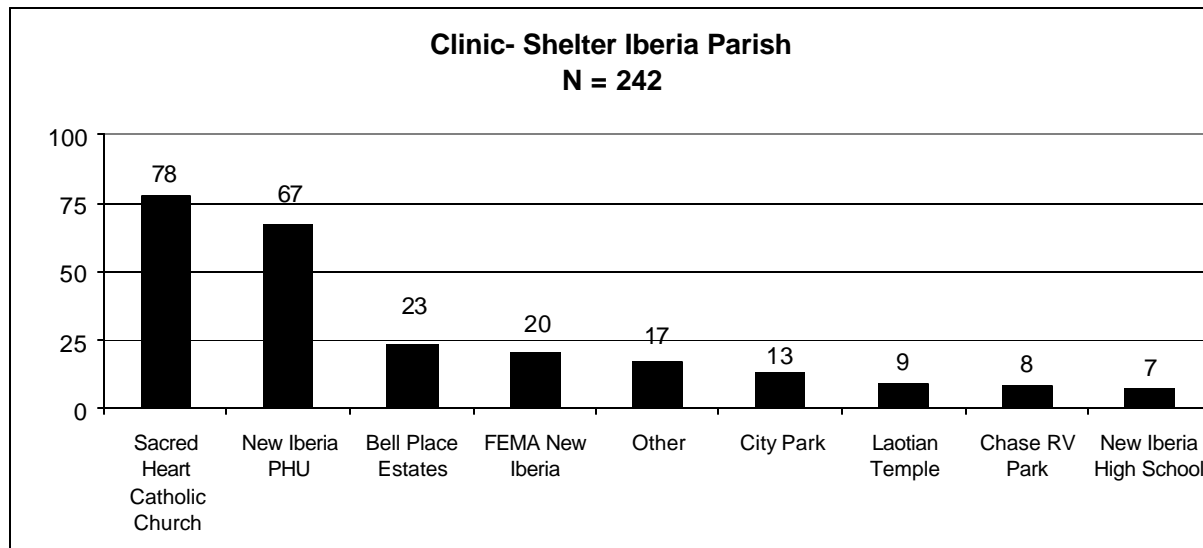
Past Medical History:

Evacuees were given a list of chronic and pre-existing medical conditions and asked to notify if they suffered from any of these conditions. The medical conditions were as follows:

- Hypertension
- Diabetic
- Heart Disease
- Lung Disease
- Anxiety
- Depression
- Chronic Infection
- Chronic Pain
- Mobility Problems

A total of *3,334* answers were given for medical history. Evacuees who had multiple pre-existing conditions notified examines by selecting all the conditions they had. The final total of *3,334* represents all answers given by evacuees. Hypertension was the most common past medical condition with *23.2% (773)* of evacuees notifying that they have hypertension. The second most common medical history condition was Anxiety at *17.1% (569 evacuees)* followed by Depression *15.8% (528 evacuees)*. *Table 3.4* shows all evacuee past medical history.

Table 3:4 Evacuee Past Medical History

Past Medical History	N= 3,334	
	Total Number	**% of N**
Hypertension	773	23.2%
Anxiety	569	17.1%
Depression	528	15.8%
Chronic Pain	361	10.8%
Diabetic	358	10.7%
Mobility Problems	251	7.5%
Heart Disease	218	6.5%
Lung Disease	175	5.2%
Chronic Infection	101	3%

Chart 3:4 represents the distribution of evacuee past medical history.

Chart 3:4 Distribution of Past Medical History

Past Medical History
N=3,334
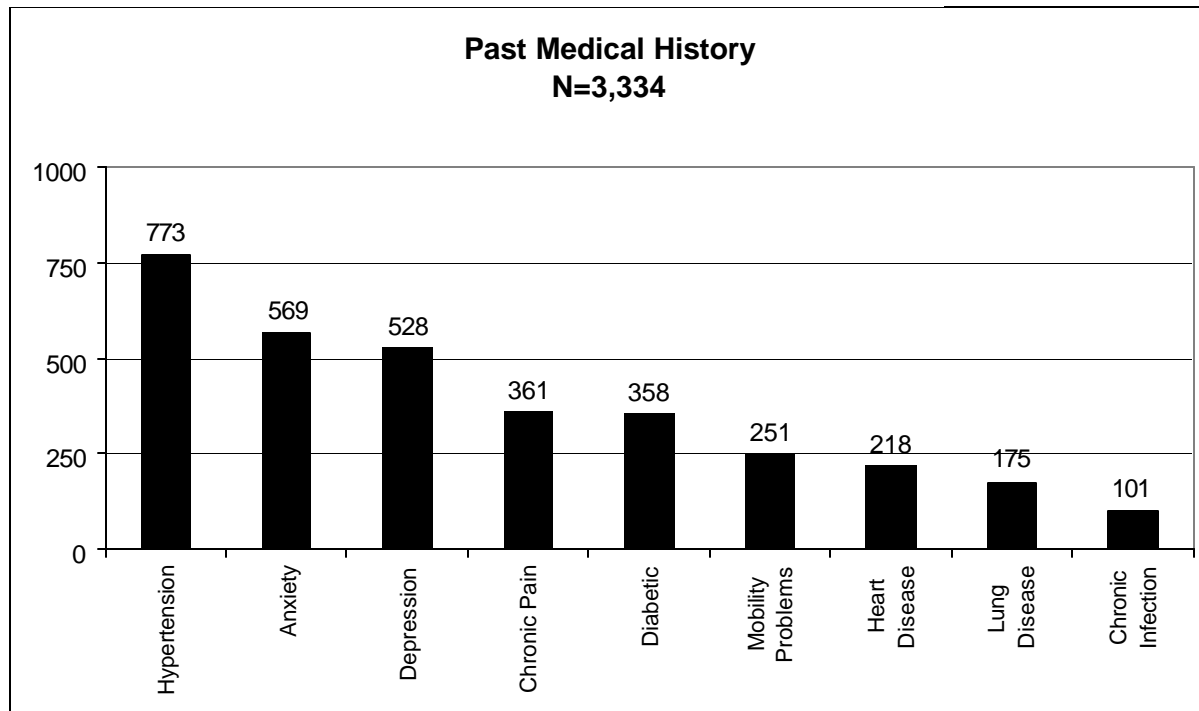
Hurricane Related Injuries:

During the screening process evacuees were asked, since the hurricane if they had an open sore or wound. If the evacuee answered yes then they were asked where on their body and were given the following choices to notify how they got injured:

- Injury by accident
- Gunshot/stab wound
- Insect Bite
- Animal Bite
- Other

A total of *312* hurricane related injuries were recorded. Multiple answers were given by evacuees and are reflected in the *312* total. Some injuries reported by evacuees were pre-existing and were re-aggravated during evacuation. The most common injury was inflicted by insect bites from mosquitoes, ants, and fleas. *Table 3:5* represents these Hurricane Related Injuries. A list of reported injuries other that those named in *Table 3:5* and *Chart 3:5* is available in the appendix.

Table 3:5 Hurricane Related Injuries

Hurricane Related Injuries	N= 312	
	Total Number	% of N
Insect Bite	114	36.54%
Other	105	33.65%
Injury by Accident	77	24.68%
Animal Inflicted	15	4.81%
Gunshot/Stab Wound	1	0.32%

Chart 3:5 represents the distribution of Hurricane Related Injuries.

Chart 3:5 Distribution of Hurricane Related Injuries

Hurricane Related Injuries
N=312
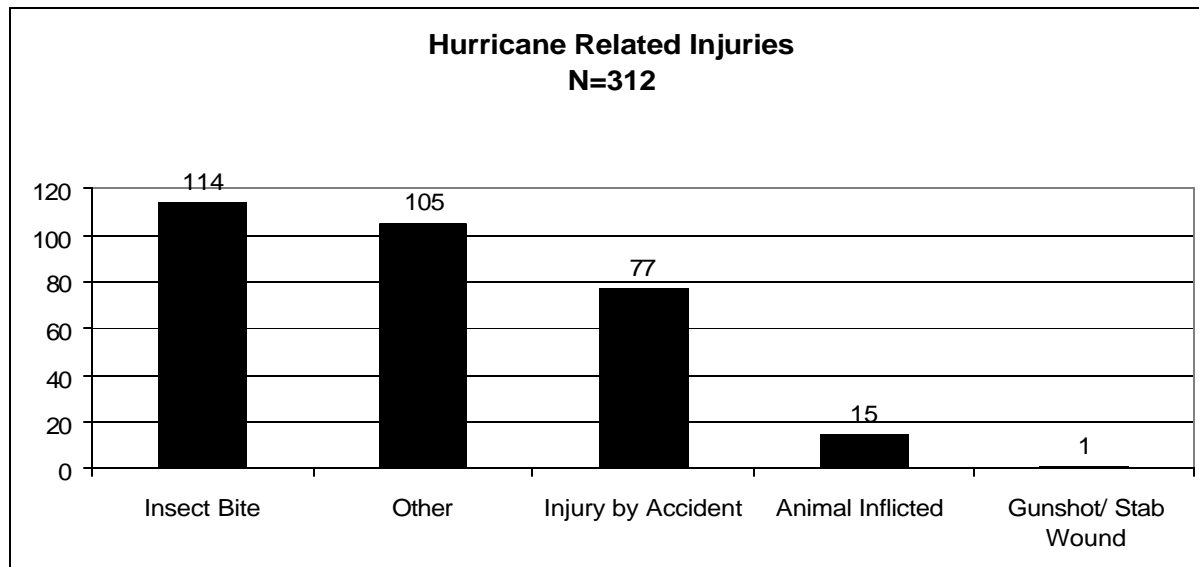
Hurricane Risk Factors:

Evacuees were asked since the hurricane, how many days did you:
- Touch Sewage
- Touch Flood Water
- Drink water that might have gone bad
- Eat food that might have gone bad
- Breathe in something bad (smoke, chemicals, dust, mold)

These risk factors were faced by evacuees who had to be rescued from houses, bridges, and roof tops. Also, evacuees who returned to their homes to salvage their personal belongings were at risk to various health hazards. *Table 3:6* shows how many evacuees *(980)* reported contact with the above named health hazards.

Hurricane Risk Factors	N= 980	
	Total Number	**% of N**
Breath in Something Bad	378	38.57%
Touch Flood Water	308	31.43%
Touch Sewage	177	18.06%
Drink Bad Water	73	7.45%
Eat Bad Food	44	4.49%

Chart 3:6 represents the distribution of Hurricane Risk Factors.

Chart 3:6 Distributions of Hurricane Risk Factors
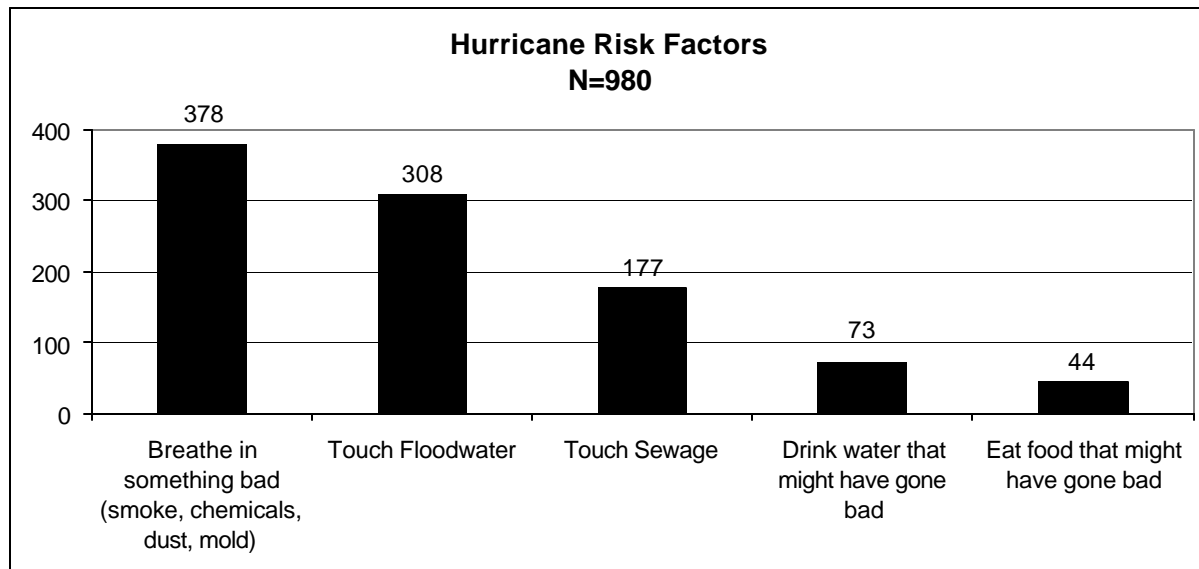
Letter from Dr. Stefanski:

STATE OF LOUISIANA
DEPARTMENT OF HEALTH AND HOSPITALS

Department of HEALTH and HOSPITALS

Kathleen Babineaux Blanco
GOVERNOR

Frederick P. Cerise, M.D., M.P.H.
SECRETARY

December 21, 2005
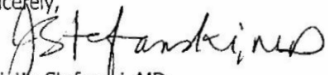
L. Philip Caillouet, PhD
Director, Health Informatics Center of Acadiana
University of Louisiana at Lafayette
PO Box 41007
Lafayette, Louisiana 70504-1007

Dear Dr. Caillouet,

On behalf of the Acadiana Region Office of Public Health, I would like to request the assistance of the ULL Health Informatics Center. Immediately following Hurricane Katrina, we had a team of medical volunteers respond to our region. This team, *Operation Minnesota Lifeline*, provided medical care to evacuees for period of 60 days. Medical records were opened on patients treated and these records are in the custody of the Office of Public Health. We believe that there is useful information that can be gathered from these records, but need assistance in entering and analyzing the data. We will work through our DHH HIPAA officer and IRB process to meet the necessary requirements of our agency.

Thank you for your consideration of this request for assistance. If you have any questions, please feel free to call me.

Sincerely,

Juliette Stefanski, MD
Regional Administrator/Medical Director
Acadiana Region 4 Office of Public Health

OML Paper Form Page 1

Disaster Relief Medical Service: Clinic/Shelter_____

Patient Name_____DOB_____Soc Sec #_____

Do you know where your family members are since the hurricane? ___Yes ___No____
Do you have concerns about your family? ___Yes ___No please comment_____

Where do you usually get your medical care? ___Public Health Clinic ___Emergency Room
____LSU/Charity Hospital ____Private doctor/clinic ____Urgent Care
When was the last time you saw a doctor or nurse?_____
The reasons I came into the clinic today are_____

Past Medical History:
Hypertension ___Yes ___No   Diabetic ___Yes ___No Heart Disease ___Yes ___No Lung Disease ___Yes ___No
Anxiety ___Yes ___No   Depression ___Yes ___No   Chronic infection ___Yes ___No
Chronic Pain ___Yes ___No   Mobility Problems ___Yes ___No   Other?_____

_____

Vital Signs: B/P _____HR _____RR _____TEMP _____Pain [0-10]_____

Immunizations: **Td**___ **DTaP**_____ **HAV** 1 2 ___ **HBV** 1 2 3 **MMR** _____ **Flu**____

Current Medications: Allergies:
                                            Pregnant? ____Yes ___No

Physical Assessment/Current Problems:

Diagnosis:

Treatment Plan: Rx only; specify meds_____

Other:

Provider_____Date_____ Nurse _____ rev 9-20-05

1

Katrina Evacuee Demographics and Risk Factors: Whenever Possible, Ask Evacuee To Complete

Name (First MI Last)_____DOB_____

Permanent Address_____Phone/cell_____

Email _____ Emergency Contact _____Phone/cell_____

City you evacuated_____ Date evacuated_____ City you went to_____

1. Since the Hurricane, how many days did you (put 0 if none)
___Touch sewage for ___ days
___Touch floodwater _____ days
___Drink water that might have gone bad ___ days
___Eat food that might have gone bad ____ days
___Breath in something bad (smoke, chemicals, dust, mold) ____days

2. Since the Hurricane, did you have an open sore or wound?
___NO
___Yes, where on body _____
_____injury by accident
_____gunshot/stab wound
_____insect bite
_____animal bite
_____Other, please list_____

3. Since the hurricane, have you been around someone who might have tuberculosis (fever, cough, weight loss, chills)?
___No ___Yes Name of person if known_____

4. How did you evacuate?.
____Private vehicle ____Bus ____ Helicopter____Airplane____ Other, please list_____

5. Since the hurricane, how long did you stay in any of the following? Put 1 if ≤one day
___Own residence _____ days   ___Other private residence _____days
___New Orleans Superdome _____ days   ___New Orleans Convention Center _____days
___New Orleans Airport _____days   ___ Cajun Dome _____ days
___Nursing home or group home _____ days : Name of place, city_____
___Shelter _____days   Name of shelter, city state if known_____
___Shelter _____days,   Name of shelter, city, state if known_____
___Other _____

Race (to be chosen by evacuee): ___African American ___White ___Asian ___Hispanic
___American Indian, Native Alaskan: ___Native Hawaiian ___Other Pacific Islander ___Other, list_____

Primary Language spoken at home ___English ___Spanish ___French ___Creole ___Chinese ___Korean
___Vietnamese ___Other, please list_____

Are you under18 and not with an adult? ___Yes ___No   Gender ___Female ___Male   Marital status_____

Do you have a history of receiving one or more of the following: ___Medicaid ___Medicare ___food stamps ___WIC
___subsidized housing ____other   If you have insurance please list_____
rev 9-20-05

2

Proposal submitted to the MBA Director:

HCA 597
Proposal (3 Hours Credit)

Purpose of Study:
Compile and statistically analyze medical information gathered by Operation Minnesota Lifeline for the Office of Public Health (*see attached letter*).

Sequence of Activities

1. Seek approval from the University of Louisiana at Lafayette Institutional Review Board.
    1.1 Create proposal based on the outline presented on the UL Lafayette Institutional Review Board web site.
    1.2 Submit prepared proposal to the UL Lafayette Institutional Review Board for review and approval.

2. Create working database for entry of data gathered by Minnesota Lifeline staff.
    2.1 Create database in Microsoft Access. Database will serve as an electronic point of entry for each paper medical record gained by the staff of Minnesota Lifeline (*see attached copy of medical record used by Minnesota Lifeline*).
    2.2 Contact the Department of Health Information Management at Louisiana Lafayette for assistance in entering the gathered medical data into created database.

3. Use database to satisfy Office of Public Health objectives:
    3.1 Recap of provider statistics by profession, by professional, by location of service
    3.2 Recap of patient demographic statistics by gender, by age, by zip code.
    3.3 Recap of patient encounter statistics by encounter type and by location of service
    3.4 Recap of diagnostic services statistics by Current Procedure Terminology (CPT) code

    3.5 Recap of ancillary order statistics by laboratory procedure, by imaging procedure
    3.6 Recap of diagnostics by International Classification of Diseases (ICD) code
    3.7 Recap of therapeutic services by CPT code
    3.8 Recap of medication order statistics by drug category, by drug

4. Submit a final report of findings to the Office of Public Health. Accepted report denotes completion of the DIS project.

The database prepared for this study *is not* to be used for billing purposes or to have continuing emergency health records available for future evacuees. The purpose of the study is to create an archive of information to be available for research purposes and to recognize and improve the quality of service for emergency medical situations should another disaster effect the Acadiana region.

The aftermath of hurricane Katrina left many evacuees in Acadiana without any available medical record. A volunteer team from Minnesota, Operation Minnesota Lifeline, responded to the region and provided medical care for many Acadiana evacuees. For a period of 60 days

Operation Minnesota Lifeline compiled medical information leaving medical records for approximately 2000 evacuees. The records are currently in the possession of the Louisiana Office of Public Health. The Louisiana Office of Public Health and Acadiana Region Office of Public Health feel that information from these records can prove to be valuable and has requested the assistance of the ULL Health Informatics Center to enter and analyze the gathered data.

University IRB Application:

Proposal Number -

**The University of Louisiana Lafayette Institutional Review Board
APPLICATION FOR REVIEW OF RESEARCH INVOLVING HUMAN SUBJECTS**

For IRB approval, submit your proposal to: Evelyn Wills, Chair, U.L. Lafayette IRB in the College of Nursing and Allied Health Professions, V.L.Wharton Hall. If you have questions or wish to check the status of your proposal, please call the Chair of the IRB, Dr. Wills at 482-5607
Please fill in this application form completely. **[Do not state, "refer to pages in proposal" for requested information.]** Attach additional information to this form only after the space available for response to a given question has been used. All proposals and applications are to be typed or word processed.

**RESPONSIBLE FACULTY OR STAFF   NAME OF
INVESTIGATOR(S):** (if different)
SUPERVISOR/INVESTIGATOR:

  Philip Caillouet PHD._____   P. Joseph Paul

**DEPARTMENT AND CAMPUS ADDRESS: DEPARTMENT AND CAMPUS
ADDRESS:**
Health Informatics Center of Acadiana   Health Informatics Center of Acadiana
V.L. Wharton Hall RM. 453   V.L. Wharton Hall RM. 453
P.O. Box 41007, Lafayette, LA 70504   P.O. Box 41007, Lafayette, LA 70504
Phone: (337) 482-6160   **Phone:** _____(337)-482-1379
email: caillouet@louisiana.edu   **email**: pjosephpaul@yahoo.com

This Application is for a :

_____	**Thesis**
_____	**Dissertation**
X	**Research Project**

TITLE OF PROPOSAL/PROJECT:

O.P.H / Operation Minnesota Lifeline Medical Record Data Entry and Analysis
In making this application, I certify that I have read and understood the guidelines and procedures developed by The University of Louisiana Lafayette for the protection of human subjects and that I will comply with both the letter and the spirit of the University's policies. I further acknowledge my responsibility to report any significant changes in the protocol involving human subjects and to obtain written approval from the Institutional

Review Board for these changes prior to making these changes. I understand that IRB approval extends for one year, and if the project continues beyond the date of approval, then I will notify the IRB and request a renewal.

_____

Signature(s): Principal Investigator(s)/Faculty Sponsor

_____

Student   Date Signed

For Thesis/Dissertation: _____

 Signature, Dean of Graduate School   Date Signed

This proposal has been reviewed and approved by The University of Louisiana Lafayette Institutional Review Board for compliance with the Code of Federal Regulations 45 CFR 46, Protection of Human Subjects and as amended.

Approved: Chair, U. L. Lafayette -IRB   Date Approved

Proposal Number _____

Project/Proposal Title:
O.P.H / Operation Minnesota Lifeline Medical Record Data Entry and Analysis

1. **IS THIS A:**

   New Project __**X**__   Continuation _____   Renewal
   Change in Procedure for a Continuing Project

2. **FUNDING:**
Funding Agency
        Externally Funded _____
        Internally Funded _____
         No internal funds or external funds are requested   __**X**____

3. **DATE ON WHICH YOU PLAN TO BEGIN DATA COLLECTION:**
   N/A
   (The Operation Minnesota Lifeline staff previously collected data at various hurricane relief shelters throughout Acadiana. Data was collected for a period of 60 days following Hurricane Katrina.)

4. **STATUS OF PRINCIPAL INVESTIGATOR:**
   Faculty __**X**__   Staff _____Graduate Student __**X**__ Undergraduate Student
   (Students, be sure to include the required letter from your supervising professor--see checklist page 10.)

5. **EXEMPT/EXPEDITED REVIEW:** If you are applying for Exempt or Expedited status, indicate the category by which the study qualifies for exempt or expedited status in the Rationale section below. (SEE GENERAL GUIDELINES - A. EXEMPT/ EXPEDITED REVIEW, p. 3)

Exempt __**X**__   Expedited _____   Uncertain ___

RATIONALE (see CATEGORIES of exempt/expedited review in "Guidelines"):

The application requests an *exempt review* status according to guideline (4) on page 5 of "Specific Guidelines." Research project involves database creation and analysis of existing data collected in paper form by Operation Minnesota Lifeline staff. Information will be recorded in such a manner that subjects cannot be identified.

6. **ABSTRACT:** Summarize the research in abstract form; include the purpose(s) of the study, hypotheses/research questions, sampling procedure, subjects, data collection tools/procedures, and interventions/treatments as appropriate. The abstract can be identical or similar to the summary required when submitting to the funding source. Briefly outline, in particular, what will be done to research subjects.

The purpose of this study is to supply the O.P.H with requested computation and statistics on the medical information gathered by Operation Minnesota Lifeline.
Operation Minnesota Lifeline staff previously gathered medical information from evacuees who were staying at various hurricane shelters throughout the Acadiana region. Information was gathered on paper form. In order to analyze information, a database will be created in using Microsoft Access. Undergraduate students in the Health Information Management department will assist by electronically keying hard copy records into the database. To establish the confidentiality of each subject the paper record will be copied so that identifying information is non-traceable. The database prepared for this study *is not* to be used for billing purposes or to have continuing emergency health records available for future evacuees. The purpose of the study is to create an archive of information to be available for research purposes and to recognize and improve the quality of service for emergency medical situations should another disaster effect the Acadiana region. The database will contain non-identifying information about evacuees and will serve as a useable to satisfy the following objectives set forth by the Office of Public Health:
Recap of provider statistics by profession, by professional, by location of service
Recap of patient demographic statistics by gender, by age, by zip code.
Recap of patient encounter statistics by encounter type and by location of service
Recap of diagnostic services statistics by Current Procedure Terminology (CPT) code
Recap of ancillary order statistics by laboratory procedure, by imaging procedure
Recap of diagnostics by International Classification of Diseases (ICD) code
Recap of therapeutic services by CPT code
Recap of medication order statistics by drug category, by drug

A final report of findings will be submitted to the Office of Public Health.

7. **SUBJECT POPULATION:**

a. Will any of the following be <u>primary</u> subjects (subjects selected specifically for their status indicated below):

	Yes	No		Yes	No
Minors	( )	(**X**)	Minorities	( )	(**X**)
Institutionalized Persons	( )	(**X**)	Low Income Persons	( )	(**X**)
Pregnant Women	( )	(**X**)	Physically Disabled	( )	(**X**)
Women of Childbearing Age	( )	(**X**)	Emotionally Disabled,		
UL Lafayette Students	( )	(**X**)	Incompetent, or Those		
University Students-Non-U.L.			with Diminished Capacity	( )	(**X**)
Lafayette Students	( )	(**X**)			

b. Number of subjects, including controls:
   Approximately 2,000

c. Are you associated with the subjects (e.g., your students, employees, subordinates, or patients)?

   ( ) Yes   (**X**) No   If yes, explain the nature of the association.

d. How will subjects be contacted and selected?

   Information regarding subjects will come from previously gathered paper medical records supplied by the Office of Public Health. After use, original paper records will be returned to the possession of the Office of Public Health. This study will not interact with the subjects of these records.

e. Will research subjects be compensated: ( ) yes (**X**) no
   If yes, all information concerning payment, including the amount and schedule of payment, must be set forth in the informed consent form   (see Question #8).

f. Will you be advertising for research participants: ( ) yes (**X**) no
   If yes, attach a copy of the advertisement you will use. (SEE INSTRUCTIONS - B. SUBJECT POPULATION: Advertising, p. 5)

g. Describe your procedures and safeguards for insuring confidentiality or anonymity of the research subjects. (SEE INSTRUCTIONS - C. SUBJECT POPULATION: Anonymity and Confidentiality, p. 6) Include how data will be secured, reported, and when identifiable raw data will be destroyed.

   Once the records are received from O.P.H., any identifying information (names, social security numbers, addresses or phone numbers) will only be seen by the investigators performing the research. Photocopies of original records will be made in such a way as to

exclude any personal identifying information. All original records received from the O.P.H. will be returned to the O.P.H. once all de-identifiable copies have been made. After de-identifiable copies have been recorded into a database they will be kept in a locked file cabinet in the Health Informatics Center of Acadiana.

8. **VOLUNTARY PARTICIPATION/INFORMED CONSENT:** Describe your method or procedures for assuring that subject participation is voluntary. If subjects are children and they are capable of assent, describe provisions or provide copies of protocols for soliciting their assent as well as provisions for soliciting permission of their parent(s) or authorized representative.

Describe how and where informed consent will be obtained.

A copy of the consent form to be signed by the subject or authorized representative (if applicable) and/or protocols for any explanation to be given to the subjects should be attached to this application.

If no consent form is to be used, explain the procedure to be used to assure that participation is voluntary. If any information is withheld from subjects, identify and justify the withholding and describe debriefing plan, if any. (SEE INSTRUCTIONS - D. VOLUNTARY PARTICIPATION/ INFORMED CONSENT, p. 6)

N/A (See attached letter from Juliette Stefanski, MD OPH)

9. **RISK:** At what level of risk will the subjects be placed? (SEE INSTRUCTIONS - E. RISK/BENEFIT RATIO. p. 8)
Minimal Risk__**X**__   More than Minimal Risk _____   Uncertain ___

RISK/BENEFIT RATIO: Describe and assess any potential risks (physical, psychological, social, legal, economic or other) and assess the likelihood and seriousness of such risks. The concept of "risk" includes risks to the subject's dignity and self respect. Justify the risks by assessing the potential benefits to be gained by the individual subjects, as well as benefits which may accrue to society in general as a result of the planned work. Describe your procedures for protecting against or minimizing potential risks and an assessment of the likely effectiveness of these procedures.

The level of risk for the subjects will be minimal. However there is a potential risk of inadvertent release of confidential information gathered from subjects. To offset the risk of confidential information becoming known measures will be taken to prevent possible breach of confidentiality. Procedures to protect confidential information are as follows:
Minimize the number of investigators who see the original records, sent by the Office of Public Health, that contain identifying information. All identifying information not traceable when photocopying records. Have students involved complete NIH Protection of Human Research Subjects Training course and submit completed certificates to the University IRB

before any students is allowed to key in data. After original records have been used they will be returned to Office of Public Health

Photocopied records containing de-identified information will be stored in a locked file at the Health Informatics Center

10. **CHECKLIST:** Check off the items that you have included for the IRB review. If not applicable, state N/A.

ONE OF THESE:

A1. ( ) Six (6) copies of the completed IRB application form if applying for full review including all informed consent forms, questionnaires, tests, and other data collection tools to be used. (See below for specific items included with each form.)

OR

A2. (**X**) Three (3) copies of the completed IRB application form if applying for exempt or expedited review, including all informed consent forms, questionnaires, tests, and other data collection tools to be used. (See below for specific items included with each form.)Of these copies, one remains on file with the IRB chair, one is sent to your academic Dean, and the rest are returned to you.

OR

A3. ( ) Email Copy of the completed IRB application form if applying for any level of IRB review including all informed consent forms, questionnaires, tests, and other data collection tools to be used. (See below for specific items included with each form.) Email Applications are preferred.

AND BOTH OF THESE:

B. (**X**) One (1) complete copy of the full research proposal. Graduate students should furnish one copy of the "Methods" section of their thesis/dissertation (if available) in lieu of a research proposal. A proposal is a document explaining the purpose and procedures to be used in the study.

C. (**X**) For graduate and undergraduate student research proposals: a signed statement from the student's major professor/thesis committee chair stating that he/she has reviewed and approves the proposed project.

Each completed form includes:

(**X**) 1. Complete answers to questions #1 through #9.

( )   2.   A copy of your consent form and/or protocols for eliciting consent or assent, if needed (see questions #7e and #8).

( )   3..   A copy of your advertisement for subjects, if needed (see question #7f).

(**X**)   4.   A copy of any questionnaires, tests, or interviews to be used as data collection tools. If a data collection tool exists only as a computer program, videotape, audio tape etc., a full and complete description of the tool is needed.

(**X**)   5.   Copy of Certificate of education in responsibilities of researchers to protect human subjects (NIH intramural investigator education certificate is acceptable).

D.   (**X**)   Signed and dated copy of the front page of the application has been sent to IRB Chair.

MEMORANDUM   **The University of Louisiana at Lafayette**
█████████████████████████   **Institutional Review Board**
IRB 00001474   **FWA00000758**

to: **Dr. L. Phillip Caillouet**

from: **Evelyn M. Wills, Ph.D., R.N., Professor, IRB Chair**

re: **Approval of Proposal (SP06-005HICA)** <u>LA Office of Public Health /</u>
             <u>Operation Minnesota Lifeline: Medical Record Data Entry and Analysis</u>

date: **January 20, 2006**

Your application for IRB review of the study at the
Level of: Exempt: X   has been approved by the U.L. Lafayette Institutional
Review Board. Congratulations, you may begin collecting data.

Exempt studies do not require yearly review.
If, however, there are any changes in your data collection procedures,
treatments, or subject population, please inform the IRB Chair in writing since
substantive changes in the project will need to be reviewed (Form accompanies
this approval.)

All Pi's and Data collectors must have a certificate of education on file in the
I.R.B. office. The website to obtain the education is:
http://cme.cancer.gov/clinicaltrials/learning/humanparticipant-protections.asp

If there is any type of injury to any participant of this research you must notify
the IRB within 24 hours. Failure to inform the IRB of injury to participants is
grounds for suspension of the research.
When your project is complete, please contact the IRB chair to document the
completion of the study using the enclosed form.

We wish you well with your project. If you have any questions about revisions
and the need for re-review, please call me at 482-5607.

                         from the desk of...Evelyn M. Wills, Ph.D., R.N.
                                             Professor, Nursing
                                    University of   Louisiana at Lafayette
                                                  P.O. Box 43810
                                          Lafayette, LA 70504-3810
                            (337) 482-56078 email: ewills@louisiana.edu

IRB EXEMPT APPROVAL

MEMORANDUM	**The University of Louisiana at Lafayette**

██████████████████████

IRB 00001474   **Institutional Review Board**
                   FWA00000758

to: **Dr. L. Phillip Caillouet**

from: **Evelyn M. Wills, Ph.D., R.N., Professor, IRB Chair**

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**from the desk of...Evelyn M. Wills, Ph.D., R.N.
Professor, Nursing
University of   Louisiana at Lafayette
P.O. Box 43810
Lafayette, LA 70504-3810
(337) 482-56078 email: ewills@louisiana.edu**

OTHER "HURRICANE-RELATED" INJURIES, AS RECORDED

"bite my finger nails"	hot finger wire
"bite my finger nails"	impetigo nose
? infection	ingrown toenail
a pus bump hat got infected	injured by kicking out roof
accident/fell	injury by accident, animal bite
aggravated pre existing injury of left hip a vascular neucrosis left femur head	injury by accident, mva 09/25 7pm
all	insect bite, herpes
allergic to salt in the water (maybe)	knee replacement 6/14/05
ambulance took to hospital to cajun dome	lesion on left foot
animal bite arms and legs	lesion on right abdomen; right inner thigh bump
blister	llungal
blister from water logged shoes	mosquitoes, fleas
blister on back of foot	mosquitos
boil	moving furniture
boots	nose broke already x-rayed
briar patch	not sure
bubbed on log	object
bumped into something here in lafayette	other
burn	pain from surgery
burn on arm	paper cut
burn on right hand	penetrated by nail
burns on 2nd and 3rd fingers on right hand	poison ivy 1 week
car	possible ut infection
cardiac stints	r leg swelling, bumps
cellulites	rash
clean up	rash on leg, was scratched and bleed
cleaning up	rash on my breast on the inside
cold sores	rash then sores
cut	scratch
cut by glass on saturday	scratch from stick
cut on cable in dirty h20	scratching
cut on door	scratching
cut on table in new orleans	skin infection
cut with glass	skin-allergy
cut/burn	slow to heal
cuts from broken glass. also sustain insect bites.	small cuts on hands from picking up items from hurricane
dental problem	sores
dermatitis	sprang wrist
dry feet	stepped on nail
ear infection	stuck by rusty nails, insect bite
falling	surgery
fell hit head, back and rib cage approx 3 weeks ago	surgery
fever blister	surgery
fleas, mosquito	surgery before felling pain
foot surgery	tattoo
from car window in flood	thrombosis
from glass	unknown
fungal	upper arm body
high blood sugar, sores do not heal	walking

EXAMPLE OF EVACUATION ANECDOTE, AS RECORDED

"[a 53-year-old female] was on bridge trying to flee N. O. for 4 days. She was separated from her family because she was the shortest & the water was over her head so she was taken to another road. She eventually got to safety in a stolen truck. She has a lot of ... [unintelligible] & difficulty sleeping since the storm."