

**Mortality in the Greater New Orleans Area,
Louisiana - Post Katrina - 5/29/2007
Updated 11/5/2007 (Previous update: 10/8/2007)**

Abstract

This report is a follow-up on the 'Report on a Comparison of Death Numbers' issued on 08/12/2006 and presents the death rates by months from 2002 to 2006. (Rates for the four months following Hurricane Katrina and the last two months of 2006 were not calculated due to limitations from incomplete data.)

It appears that there was no increase in death rates in the Greater New Orleans (GNO) area following Katrina. In the early months of 2006, there was no significant increase over the previous months. The only excesses are seen in Orleans Parish for the first six months of 2006. Age adjusted rates show no major difference with crude rates for the first quarters of 2004 and 2006 in Orleans Parish. For the rest of Louisiana, all rates seem to be well within expected ranges.

Causes of death showed no significant changes in the GNO. Mortality rates for septicemia and accidents temporarily increased in Orleans parish during the first half of 2006, but later fell to pre-Katrina rates.

Introduction

Concerns have been expressed about an excess post-Katrina mortality in the Greater New Orleans (GNO) area. An increase in death rates of 47% for the GNO area was claimed in an article entitled “Excess Mortality in the Aftermath of Hurricane Katrina: A Preliminary Report” (Disaster medicine and Public Health Preparedness 2007, Vol. 1 No. 1: 15-20. These claims were based on an analysis of obituaries placed in the local newspaper.

This current report is based on final data from the Section of Vital Statistics of the State Office of Public Health (OPH), Department of Health and Hospitals (DHH) for the years 2002 through 2006. It is a follow-up for the report on a “Comparison of Death Numbers” issued on 8/12/2006 which included only a summary comparison of death numbers of Orleans Parish residents, between a six month period after Katrina and a similar six month period in 2004. Rates were not calculated at that time because of the scarcity and unreliability of population data. As the vital statistics data became available, preliminary reports were posted on this website 5/29/2007, updated on 10/8/2007 and is finally presented here on 11/5/2007.

Population & Methods

The number of deaths reported to the Louisiana Vital records registry is presented for the ten parishes of the GNO area (Orleans, Jefferson, St. Bernard, Plaquemines, St. James, St. John, St. Charles, St. Tammany, Tangipahoa and Washington), for East Baton Rouge and the rest of Louisiana. To provide some background information, data from 2002 onwards are presented. Data are presented by months to deal with missing population data for September through December, 2005.

Estimates of population are now available so that crude rates can be calculated, although some of the estimates may not represent the actual population numbers. Population data for January, 2002 to August, 2005 are based on the ‘Annual Estimates of the Population for Counties (Parishes) of Louisiana’, Population Division, U.S. Census Bureau, released March 16, 2006 (<http://www.census.gov/popest/counties/tables/CO-EST2006-01.xls>). The population estimates for January, 2006 are those of the U.S. Census Bureau on ‘Population Estimates for Impacted Counties in the Gulf Coast Areas’. Whenever available, population data for June, 2006 onwards were those from the Louisiana Public Health Institute “2006 Louisiana Health and Population Survey Report” for Orleans, Jefferson, St. Bernard, Plaquemines, St. Tammany, Washington and Tangipahoa.

Annual rates per thousand population were calculated for each month. Rates were not calculated for the period September through December, 2005 since population estimates are too unreliable.

These numbers of deaths are based on the parish of residence. When calculating a rate it is imperative that the numerator (number of deaths) and denominator (parish population) are included in the same population. The denominator is the estimate of the number of people residing in the parish. The numerator must then be the number of deaths among parish residents. Included in the numerators are the parish residents who die in the parish or who die in another parish in Louisiana. Consequently this report does not address the death of those who had died out of state or those who had decided to relocate to another parish.

As the goal of this report being to determine whether there was an increase in mortality in 2006, it was important not to underestimate the number of deaths by parish of residence. It appeared that the raw data contained missing data on parish of residence (see Table 1). To prevent this type of error, an

adjustment was made using the following algorithm. This algorithm was applied to the variable “Parish of Residence”.

- 1-Use “Parish of Residence” when present
- 2-When not listed use Parish of the City listed in the address of the deceased
- 3-When not listed use Parish of the Zip Code listed in the address of the deceased.
- 4-When not listed use “Parish of death”

With this algorithm, missing parish of residence was drastically reduced.

Table 1: Missing “Parish of Residence”

	Total	2002	2003	2004	2005	2006
Before adjustment	19	33	43	0	295	195
After adjustment	0	1	0	0	24	1

The age distribution of the population changed from 2000 to 2006. To ascertain whether the changes in age composition make a difference or not, the age adjusted rates for the first quarters of 2004 and 2006 were calculated and compared.

This report includes data on causes of death as listed on death records of Louisiana residents.

To address the hypothesis that there is an excess number of deaths in Louisiana due to the Orleans residents who have relocated outside of the GNO area, similar tables of number of deaths and death rates are presented for East Baton Rouge and the rest of Louisiana.

Results and Comments

The GNO area

It does not appear that there was a large increase in the number of deaths in the GNO area. Because of the post-Katrina population decrease, the 2006 reduction in the number of deaths is expected. (Table 2)

Table 2: Number of deaths in the GNO area - Louisiana, 2002-2006

GNO	2002	2003	2004	2005	2006
Jan	1,329	1,293	1,285	1,283	973
Feb	1,128	1,087	1,173	1,297	873
Mar	1,294	1,235	1,308	1,284	949
Apr	1,095	1,184	1,191	1,137	891
May	1,143	1,183	1,112	1,211	887
Jun	1,148	1,140	1,165	1,105	829
Jul	1,142	1,074	1,168	1,136	791
Aug	1,199	1,150	1,172	1,892	804
Sep	1,099	1,173	1,129	1,248	766
Oct	1,117	1,183	1,193	1,144	780
Nov	1,187	1,152	1,078	1,014	710
Dec	1,261	1,265	1,260	1,084	503
Total	14,142	14,119	14,234	14,835	10,400

The annual death rates per 1,000 population are much better at describing the mortality in the GNO area since there were large shifts in population. It does not appear that the early months of 2006 show any significant increase over the same time period in previous years. (Table 3)

Table 3: Annual death rates per 1,000 population in the GNO area – Louisiana, 2002-2006

GNO	2002	2003	2004	2005	2006
Jan	10.8	10.5	10.4	10.3	10.6
Feb	9.1	8.8	9.5	10.4	9.4
Mar	10.5	10.0	10.5	10.3	10.1
Apr	8.9	9.6	9.6	9.1	9.4
May	9.3	9.6	9.0	9.7	9.2
Jun	9.3	9.2	9.4	8.9	8.5
Jul	9.3	8.7	9.4	9.1	8.0
Aug	9.7	9.3	9.5	15.2	8.0
Sep	8.9	9.5	9.1	*	7.6
Oct	9.1	9.6	9.6	*	7.6
Nov	9.6	9.3	8.7	*	6.9
Dec	10.2	10.2	10.2	*	4.8
Total	9.6	9.5	9.6	*	8.8

A more detailed look at the same data by parish is warranted. In parishes where the 2006 population has rebounded close to the 2005 pre-Katrina levels (such as St. Charles, St. James, St. John, St. Tammany, Tangipahoa and Washington), the number of deaths (Table 4) does not show an unexpected difference in the first few months of 2006.

Table 4: Number of deaths by Parish in the GNO area – Louisiana, 2002-2006

Orleans	2002	2003	2004	2005	2006
Jan	490	469	436	428	208
Feb	385	396	427	431	190
Mar	482	425	460	408	196
Apr	395	410	376	394	174
May	407	421	396	407	194
Jun	410	391	405	352	168
Jul	419	404	430	369	186
Aug	415	376	411	972	180
Sep	399	413	406	421	165
Oct	406	404	396	314	176
Nov	411	389	408	250	164
Dec	432	466	457	270	194
Total	5,051	4,964	5,008	5,016	2,195
Jefferson	2002	2003	2004	2005	2006
Jan	399	361	368	382	345
Feb	359	305	332	392	296
Mar	419	363	387	423	328
Apr	326	335	380	322	338
May	357	367	319	373	307
Jun	334	345	338	348	303
Jul	321	306	313	344	254
Aug	361	356	323	349	275
Sep	328	347	326	378	313
Oct	305	336	351	378	322
Nov	348	347	304	334	321
Dec	384	373	368	360	314
Total	4,241	4,141	4,109	4,383	3,716
Plaquemines	2002	2003	2004	2005	2006
Jan	12	19	18	27	11
Feb	12	21	26	22	9
Mar	19	19	23	17	16
Apr	17	26	16	18	7
May	26	16	13	16	19
Jun	18	17	19	20	18
Jul	17	11	18	16	7
Aug	23	13	19	18	15
Sep	18	19	20	19	10
Oct	17	20	22	17	12
Nov	16	19	17	20	10
Dec	23	27	14	16	9
Total	218	227	225	226	143
St. Bernard	2002	2003	2004	2005	2006
Jan	72	79	82	65	29
Feb	55	68	61	71	21
Mar	61	73	80	73	17
Apr	78	64	61	82	12
May	52	65	72	68	24
Jun	69	70	72	62	11
Jul	68	49	57	63	25
Aug	60	72	59	180	16
Sep	59	63	66	60	22
Oct	63	61	60	51	18
Nov	59	67	63	35	15
Dec	71	68	64	30	20
Total	767	799	797	840	230
St. Tammany	2002	2003	2004	2005	2006
Jan	159	128	175	166	160
Feb	135	107	127	144	128
Mar	140	151	145	143	163
Apr	112	128	142	136	149
May	127	125	120	140	133
Jun	122	129	133	122	134
Jul	110	122	136	167	154
Aug	142	136	136	156	122
Sep	111	124	112	138	111
Oct	134	143	155	163	126
Nov	149	121	112	153	128
Dec	135	125	125	186	135
Total	1,576	1,539	1,618	1,814	1,643
St. James	2002	2003	2004	2005	2006
Jan	20	18	27	14	23
Feb	23	15	12	17	15
Mar	13	14	17	17	13
Apr	8	11	13	11	15
May	8	17	16	15	17
Jun	18	15	10	5	19
Jul	20	14	18	16	17
Aug	19	15	19	13	22
Sep	10	14	12	11	20
Oct	18	11	17	11	17
Nov	20	17	14	18	14
Dec	13	19	13	24	15
Total	190	180	188	172	207
St. Charles	2002	2003	2004	2005	2006
Jan	30	33	23	28	27
Feb	22	38	30	34	30
Mar	32	31	30	40	33
Apr	21	41	34	28	31
May	20	20	27	30	43
Jun	31	31	26	35	22
Jul	32	21	27	29	24
Aug	25	32	35	32	37
Sep	21	21	29	31	25
Oct	26	38	21	35	28
Nov	26	30	21	28	32
Dec	35	32	20	29	27
Total	321	368	323	379	359
St. John	2002	2003	2004	2005	2006
Jan	26	30	24	31	29
Feb	26	35	31	35	38
Mar	21	22	28	25	35
Apr	31	33	28	20	28
May	20	35	25	27	31
Jun	32	29	26	26	27
Jul	17	18	30	21	17
Aug	28	31	36	38	21
Sep	17	36	29	33	26
Oct	22	29	38	30	18
Nov	25	20	28	28	28
Dec	31	26	40	28	29
Total	296	344	363	342	327
Tangipahoa	2002	2003	2004	2005	2006
Jan	78	87	84	94	92
Feb	66	66	79	94	99
Mar	81	94	84	84	103
Apr	60	98	92	79	97
May	82	73	78	92	88
Jun	75	69	91	87	82
Jul	95	85	92	68	87
Aug	83	71	87	83	94
Sep	89	87	83	94	73
Oct	85	91	95	99	83
Nov	79	92	78	102	79
Dec	81	77	101	92	80
Total	954	990	1,044	1,068	1,057
Washington	2002	2003	2004	2005	2006
Jan	43	69	48	48	51
Feb	45	36	48	57	51
Mar	26	43	54	54	47
Apr	47	38	49	47	39
May	44	44	46	43	36
Jun	39	44	45	48	52
Jul	43	44	47	43	30
Aug	43	48	47	51	43
Sep	47	49	46	63	30
Oct	41	50	38	46	52
Nov	54	50	33	46	37
Dec	56	52	58	49	55
Total	528	567	559	595	523

However other parishes still have large differences in pre versus post Katrina population: Orleans Parish lost 66% of its population, St. Bernard 60%, Plaquemines 40% and Jefferson 10%. For these parishes it is imperative to look at the death rates (Table 5).

Table 5: Death Rates by Parish in the GNO area – Louisiana, 2002-2006

Orleans	2002	2003	2004	2005	2006
Jan	12.4	12.0	11.3	11.3	15.8
Feb	9.8	10.2	11.1	11.4	13.8
Mar	12.2	10.9	12.0	10.8	13.7
Apr	10.0	10.5	9.8	10.4	11.7
May	10.3	10.8	10.3	10.7	12.6
Jun	10.4	10.0	10.5	9.3	10.5
Jul	10.6	10.4	11.2	9.7	11.1
Aug	10.5	9.6	10.7	25.6	9.7
Sep	10.1	10.6	10.6	*	8.5
Oct	10.3	10.4	10.3	*	8.6
Nov	10.4	10.0	10.6	*	7.9
Dec	11.0	12.0	11.9	*	8.8
Total	10.7	10.6	10.9	*	10.7
Jefferson	2002	2003	2004	2005	2006
Jan	10.6	9.6	9.7	10.1	10.1
Feb	9.5	8.1	8.8	10.4	8.5
Mar	11.1	9.6	10.2	11.2	9.4
Apr	8.7	8.9	10.1	8.5	9.5
May	9.5	9.7	8.4	9.9	8.6
Jun	8.9	9.2	9.0	9.2	8.4
Jul	8.5	8.1	8.3	9.1	6.9
Aug	9.6	9.5	8.6	9.2	7.5
Sep	8.7	9.2	8.6	*	8.5
Oct	8.1	8.9	9.3	*	8.8
Nov	9.2	9.2	8.1	*	8.8
Dec	10.2	9.9	9.7	*	8.6
Total	9.4	9.2	9.1	*	8.6
Plaquemines	2002	2003	2004	2005	2006
Jan	5.3	8.2	7.5	11.2	6.5
Feb	5.3	9.0	10.8	9.1	5.2
Mar	8.3	8.2	9.5	7.0	9.1
Apr	7.5	11.2	6.6	7.4	3.9
May	11.4	6.9	5.4	6.6	10.3
Jun	7.9	7.3	7.9	8.3	9.6
Jul	7.5	4.7	7.5	6.6	3.7
Aug	10.1	5.6	7.9	7.4	8.0
Sep	7.9	8.2	8.3	*	5.3
Oct	7.5	8.6	9.1	*	6.4
Nov	7.0	8.2	7.0	*	5.3
Dec	10.1	11.6	5.8	*	4.8
Total	8.0	8.1	7.8	*	6.5
St. Bernard	2002	2003	2004	2005	2006
Jan	13.0	14.4	15.0	11.9	22.4
Feb	9.9	12.4	11.2	13.0	16.2
Mar	11.0	13.3	14.6	13.4	13.1
Apr	14.1	11.7	11.2	15.1	9.3
May	9.4	11.8	13.2	12.5	18.6
Jun	12.5	12.8	13.2	11.4	8.5
Jul	12.3	8.9	10.4	11.6	19.3
Aug	10.8	13.1	10.8	33.0	12.4
Sep	10.7	11.5	12.1	*	17.0
Oct	11.4	11.1	11.0	*	13.9
Nov	10.7	12.2	11.5	*	11.6
Dec	12.8	12.4	11.7	*	15.5
Total	11.6	12.1	12.1	*	14.8
St. Tammany	2002	2003	2004	2005	2006
Jan	9.5	7.4	9.8	9.0	8.7
Feb	8.0	6.2	7.1	7.8	6.9
Mar	8.3	8.7	8.1	7.8	8.7
Apr	6.7	7.4	8.0	7.4	7.9
May	7.6	7.2	6.7	7.6	7.0
Jun	7.3	7.5	7.5	6.6	7.0
Jul	6.5	7.1	7.6	9.1	8.0
Aug	8.4	7.9	7.6	8.5	6.6
Sep	6.6	7.2	6.3	*	6.1
Oct	8.0	8.3	8.7	*	6.9
Nov	8.9	7.0	6.3	*	7.0
Dec	8.0	7.2	7.0	*	7.3
Total	7.8	7.4	7.6	*	7.3
St. James	2002	2003	2004	2005	2006
Jan	11.3	10.2	15.4	7.9	12.7
Feb	13.0	8.5	6.8	9.6	8.3
Mar	7.3	7.9	9.7	9.6	7.2
Apr	4.5	6.2	7.4	6.2	8.3
May	4.5	9.7	9.1	8.5	9.3
Jun	10.2	8.5	5.7	2.8	10.4
Jul	11.3	7.9	10.3	9.1	9.3
Aug	10.7	8.5	10.8	7.4	12.0
Sep	5.6	7.9	6.8	*	10.9
Oct	10.2	6.2	9.7	*	9.3
Nov	11.3	9.7	8.0	*	7.6
Dec	7.3	10.8	7.4	*	8.2
Total	8.9	8.5	8.9	*	9.5
St. Charles	2002	2003	2004	2005	2006
Jan	7.3	8.0	5.5	6.6	6.4
Feb	5.4	9.2	7.2	8.1	7.1
Mar	7.8	7.5	7.2	9.5	7.8
Apr	5.1	10.0	8.2	6.6	7.3
May	4.9	4.9	6.5	7.1	10.1
Jun	7.6	7.5	6.2	8.3	5.1
Jul	7.8	5.1	6.5	6.9	5.6
Aug	6.1	7.8	8.4	7.6	8.6
Sep	5.1	5.1	7.0	*	5.8
Oct	6.4	9.2	5.0	*	6.5
Nov	6.4	7.3	5.0	*	7.4
Dec	8.6	7.8	4.8	*	6.2
Total	6.5	7.5	6.5	*	7.0
St. John	2002	2003	2004	2005	2006
Jan	7.1	8.0	6.3	8.0	7.2
Feb	7.1	9.3	8.2	9.1	9.4
Mar	5.7	5.9	7.4	6.5	8.7
Apr	8.4	8.8	7.4	5.2	6.9
May	5.4	9.3	6.6	7.0	7.7
Jun	8.7	7.7	6.9	6.7	6.7
Jul	4.6	4.8	7.9	5.4	4.2
Aug	7.6	8.3	9.5	9.8	5.3
Sep	4.6	9.6	7.6	*	6.6
Oct	6.0	7.7	10.0	*	4.5
Nov	6.8	5.3	7.4	*	7.0
Dec	8.4	6.9	10.5	*	7.3
Total	6.7	7.6	8.0	*	6.8
Tangipahoa	2002	2003	2004	2005	2006
Jan	9.1	10.1	9.6	10.6	10.1
Feb	7.7	7.7	9.0	10.6	10.8
Mar	9.5	10.9	9.6	9.5	11.2
Apr	7.0	11.4	10.5	8.9	10.5
May	9.6	8.5	8.9	10.4	9.5
Jun	8.8	8.0	10.4	9.8	8.8
Jul	11.1	9.9	10.5	7.7	9.3
Aug	9.7	8.2	9.9	9.4	10.0
Sep	10.4	10.1	9.5	*	7.8
Oct	10.0	10.6	10.9	*	8.9
Nov	9.3	10.7	8.9	*	8.4
Dec	9.5	8.9	11.5	*	8.5
Total	9.3	9.6	9.9	*	9.5
Washington	2002	2003	2004	2005	2006
Jan	11.8	18.8	13.1	12.9	14.1
Feb	12.3	9.8	13.1	15.3	14.0
Mar	7.1	11.7	14.7	14.5	12.8
Apr	12.9	10.4	13.3	12.6	10.6
May	12.0	12.0	12.5	11.6	9.7
Jun	10.7	12.0	12.2	12.9	13.9
Jul	11.8	12.0	12.8	11.6	8.0
Aug	11.8	13.1	12.8	13.7	11.5
Sep	12.9	13.4	12.5	*	8.0
Oct	11.2	13.7	10.3	*	13.9
Nov	14.8	13.7	9.0	*	9.9
Dec	15.3	14.2	15.8	*	14.7
Total	12.0	12.9	12.7	*	11.7

Review of the death rates shows that all rates are within expected rates based on previous years. The only slight excesses are seen in Orleans Parish for the first six months of 2006 with an average of 13.0 per 1,000 population versus 10.8 per 1,000 population for the similar six-month period for the years 2002-2005. The rates decreased in the second half of 2006; from July through December 2006, the average death rate was 9.1 per 1,000 versus 12.7 for a similar period for the years 2002-2004. Age adjusted rates show no major difference with crude rates.

The Rest of Louisiana

All rates seem to be well within expected ranges except for slightly higher rates for the first quarter of 2006 in East Baton Rouge. (Tables 6 and 7)

Table 6: Number of deaths in other parishes - Louisiana, 2002-2006

E.Baton Rouge	2002	2003	2004	2005	2006	Other	2002	2003	2004	2005	2006
Jan	335	301	278	271	341	Jan	2183	2335	2227	2305	2241
Feb	313	271	296	268	300	Feb	2184	2043	2137	2264	2084
Mar	292	274	253	309	343	Mar	2236	2145	2101	2270	2152
Apr	258	250	293	266	306	Apr	1965	2105	2066	2029	1983
May	289	253	276	303	289	May	2013	1944	2011	2103	2035
Jun	254	272	287	268	255	Jun	1868	1953	1927	1944	1945
Jul	268	268	308	277	257	Jul	1946	1990	1985	2038	1957
Aug	276	263	260	298	269	Aug	1851	2004	1961	1944	1835
Sep	256	262	248	297	268	Sep	1883	1822	1945	1999	1866
Oct	274	287	295	316	296	Oct	1930	2015	1934	2276	1884
Nov	295	301	282	297	289	Nov	2010	2124	1941	2215	1899
Dec	309	320	272	305	306	Dec	2160	2361	2125	2461	2012
Total	3,419	3,322	3,348	3,475	3,519	Total	24,229	24,841	24,360	25,848	23,893

Table 7: Death rates in other parishes - Louisiana, 2002-2006

E.Baton Rouge	2002	2003	2004	2005	2006	Other	2002	2003	2004	2005	2006
Jan	9.8	8.8	8.1	7.9	9.9	Jan	10.1	10.8	10.2	10.5	10.3
Feb	9.1	7.9	8.6	7.8	8.7	Feb	10.1	9.4	9.8	10.3	9.6
Mar	8.5	8.0	7.4	9.0	9.9	Mar	10.4	9.9	9.6	10.3	9.9
Apr	7.5	7.3	8.5	7.8	8.9	Apr	9.1	9.7	9.5	9.3	9.1
May	8.4	7.4	8.0	8.8	8.4	May	9.3	9.0	9.2	9.6	9.4
Jun	7.4	7.9	8.4	7.8	7.4	Jun	8.7	9.0	8.8	8.9	8.9
Jul	7.8	7.8	9.0	8.1	7.5	Jul	9.0	9.2	9.1	9.3	9.0
Aug	8.1	7.7	7.6	8.7	7.8	Aug	8.6	9.2	9.0	8.9	8.4
Sep	7.5	7.7	7.2	*	7.8	Sep	8.7	8.4	8.9	*	8.6
Oct	8.0	8.4	8.6	*	8.6	Oct	8.9	9.3	8.9	*	8.7
Nov	8.6	8.8	8.2	*	8.4	Nov	9.3	9.8	8.9	*	8.7
Dec	9.0	9.3	7.9	*	8.9	Dec	10.0	10.9	9.7	*	9.2
Total	8.3	8.1	8.1	*	8.5	Total	9.3	9.5	9.3	*	9.2

Out of State Deaths Among Pre-Katrina Orleans Residents Who Moved Out of State

The DHH has no data on this population. It is certainly a question that warrants some analysis. It will be a very difficult task to reach definitive conclusions given that it will be impossible to collect

accurate number of deaths and number of population. If data collected on the displaced out-of-state population is not accurate, it will lead to speculative conclusions. It is reasonable for DHH to analyze the data at hand as it becomes available.

Causes of Death

Causes of death did not change significantly in the GNO post-Katrina. Rates in Orleans increased during the first seven months of 2006. (Table 8)

Table 8: Common Causes of Death, United States, Louisiana, Orleans Parish and GNO

January- July Causes of Death (per 1000 population)						
	USA all 2003	Louisiana all 2002**	Orleans 2002-2005	Orleans 2006	GNO 2002-2005	GNO 2006
Diseases of the heart	2.36	2.48	2.08	2.76	2.03	2.25
Malignant neoplasms	1.92	2.10	2.03	2.33	1.88	2.01
Cerebrovascular diseases	0.54	0.57	0.63	0.72	0.51	0.52
Chronic lower resp. diseases	0.44	0.47	0.31	0.34	0.32	0.40
Accidents	0.38	0.40	0.27	0.51	0.40	0.61
Diabetes mellitus	0.26	0.38	0.52	0.62	0.41	0.37
Influenza and pneumonia	0.22	0.21	0.14	0.17	0.15	0.16
Alzheimer's disease	0.22	0.25	0.21	0.35	0.22	0.25
Nephritic diseases	0.15	0.22	0.25	0.28	0.21	0.26
Septicemia	0.12	0.18	0.19	0.38	0.16	0.20
Intentional self harm (suicide)	0.11	--	0.08	0.12	0.10	0.11
Chronic liver diseases/ cirrhosis	0.09	0.38	0.09	0.10	0.08	0.09
Essential hypertension and hypertensive renal disease	0.08	--	0.07	0.15	0.06	0.10
Parkinson's disease	0.06	--	0.06	0.08	0.06	0.06
Assault (homicide)	0.06	--	0.47	0.57	0.20	0.18

**Source: National Center for Health Statistics/ CDC.*
***Source: Louisiana Office of Vital Statistics*

August- December Causes of Death (per 1000 population)						
	USA all 2003	Louisiana all 2002**	Orleans 2002-2004	Orleans 2006	GNO 2002-2004	GNO 2006
Diseases of the heart	2.36	2.48	2.37	1.96	2.33	1.95
Malignant neoplasms	1.92	2.10	2.32	1.76	2.16	1.78
Cerebrovascular diseases	0.54	0.57	0.63	0.54	0.54	0.43
Chronic lower resp. diseases	0.44	0.47	0.32	0.23	0.34	0.27
Accidents	0.38	0.40	0.26	0.30	0.44	0.41
Diabetes mellitus	0.26	0.38	0.64	0.23	0.48	0.33
Influenza and pneumonia	0.22	0.21	0.13	0.13	0.14	0.14
Alzheimer's disease	0.22	0.25	0.28	0.23	0.27	0.21
Nephritic diseases	0.15	0.22	0.34	0.20	0.27	0.18
Septicemia	0.12	0.18	0.24	0.09	0.19	0.13
Intentional self harm (suicide)	0.11	--	0.08	0.11	0.10	0.10
Chronic liver diseases/ cirrhosis	0.09	0.38	0.12	0.06	0.09	0.08
Essential hypertension and hypertensive renal disease	0.08	--	0.08	0.10	0.08	0.09
Parkinson's disease	0.06	--	0.08	0.04	0.07	0.06
Assault (homicide)	0.06	--	0.53	0.60	0.25	0.21

**Source: National Center for Health Statistics/ CDC.*
***Source: Louisiana Office of Vital Statistics*

The increase in mortality in New Orleans was observed proportionally across all categories of causes.

Conclusion

There was no increase in death rates in the GNO area post Katrina. The only excesses were seen in Orleans Parish for the first six months of 2006. For the rest of Louisiana, all rates seem to be well within expected rates.