

# LOUISIANA MONTHLY MORBIDITY LHSASA

**DISEASES REPORTED DURING THE MONTH OF**

**MAY, 1973**

**BY PARISH OF RESIDENCE**

## SEVERAL MEASURES OF THE FORCE OF MORTALITY FOR LOUISIANA AND HER PARISHES

James O. Gettys, Jr., Head  
Division of Tabulation and Analysis

Audrey P. Collins  
Research Statistician

The Crude Death Rate:

The crude death rate (number of deaths per 1,000 population) is the easiest to calculate of all measures of mortality. For this reason the crude death rate is one of the most widely quoted, misused, and misinterpreted of all health statistics. While the crude death rate is adequate for comparing a population with itself over short periods (several years), it is a relatively insensitive measure and should

**BUREAU OF VITAL STATISTICS**

**DIVISION OF HEALTH MAINTENANCE AND AMBULATORY PATIENT SERVICES**

**Prepared by:**  
**DIVISION OF TABULATION & ANALYSIS**  
June 13, 1973

	ASEPTIC MENINGITIS	DIPHThERIA	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIOUS	INFECTIOUS AND SERUM HEPATITIS	TUBERCULOSIS, PULMONARY	MENINGOCOCCAL INFECTIONS	PERTUSSIS	POLIOMYELITIS, PARALYTIC	RABIES IN ANIMALS	RHEUMATIC FEVER	RUBELLA *	SHIGELLOSIS	TYPHOID FEVER	OTHER SALMONELLOSIS	TETANUS	MEASLES	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
TOTAL TO DATE 1972	17	4	1	7	295	240	25	15	0	20	5	81	41	1	50	2	77	6927	356
TOTAL TO DATE 1973	35	0	10	3	353	277	25	9	0	20	12	93	95	3	65	2	80	9062	361
TOTAL THIS MONTH	9	0	4	0	90	42	7	1	0	7	5	19	16	3	10	0	27	2363	97
ACADIA					1	1	1								1			12	
ALLEN																		1	
ASCENSION																		1	
ASSUMPTION																		6	
AVOUELLES			1															7	
BEAUREGARD																		4	
BIENVILLE																		4	
BOSSIER																1		10	1
CADDO					1	4				5			2					132	5
CALCASIEU					1	2												64	
CALDWELL						1												3	
CAMERON																			
CATAHOULA																			
CLAIBORNE																		3	
CONCORDIA					5														
DESOTO										1									11
EAST BATON ROUGE					2	1						8			2		11	111	8
EAST CARROLL					2													6	
EAST FELICIANA																		2	
EVANGELINE					1	1												3	
FRANKLIN						1						1						3	
GRANT																		3	
IBERIA						1												9	4
IBERVILLE					2												14	8	

\*Includes Rubella, Congenital Syndrome.

generally not be used in gauging long term trends or in comparing one population with another for several reasons:

- The age distribution of a population plays an important role in determining the crude death rate of that population. For example, we would expect a higher death rate in a retirement community than in a college town. Not only do age distributions vary considerably from parish to parish and state to state, but the age distribution of a particular parish or state may change drastically over a ten year period.
- Demographic characteristics other than age distribution distort crude rates. For example, Louisiana has had a higher maternal death rate than the U.S. for years; yet the State's maternal death rates for both the white and non-white segments of her population are often lower than corresponding national statistics. Although this may seem impossible, it does result from a combination of higher maternal death rates among nonwhites in general and a higher percentage of nonwhites in Louisiana.
- Medical science cannot prevent death altogether, merely postpone it. Yet the crude death rate counts deaths; it does not take into account the factor of "age at death."

#### Adjusting for Different Age Distributions:

How, then, can we control inequalities in the age distribution of different populations in an effort to obtain comparable mortality rates for these populations? Fortunately, a measure suitable for this purpose has already been devised for us – the age-adjusted death rate. To obtain this measure, the age-specific rates for a community are applied to some population accepted as a standard of reference. This yields the probable number of deaths and the rate which would have resulted if the community had had the same age distribution as the population accepted as the "norm." Rates derived in this manner for different communities can then be compared without distortion from differences in the age distribution of their population. Age-adjusting death rates is not a cure all. The age-adjusted rates and, to a lesser degree, the relative ranking of populations depend upon the choice of "standard" population.

The table on page 5 lists both crude and age-adjusted death rates (CDR and AADR) for Louisiana and her 64 parishes. The 1970 Louisiana population was used as the standard of reference for the AADR. Even a cursory examination of the table reveals that many parishes "stigmatized" by high crude death rates actually had lower age-adjusted death rates than the state average! Their high CDR was often only a result of the high proportion of their population in the older age groups. Note Claiborne, for example. Although this parish had a CDR of 13.6, almost 48% higher than the state rate of 9.2, the AADR for the parish, 8.7, was lower than the Louisiana rate (over 17% of Claiborne's population was 65 and over in 1970, in contrast to 8.4% of the state population). On the other hand, a parish such as Plaquemines, with only 4.2% of its population over 65, showed a CDR of only 6.8 but an AADR of 9.7, somewhat higher than the state rate.

#### Allowance for Age at Death:

As a major public health objective is to postpone death, a rate capable of measuring the degree of success in reaching this objective would be highly desirable. Again, we are fortunate that such a measure has been devised - namely, "life years lost" (LYL), which takes into account the factor of age at death. This measure was proposed as early as 1948 (reference 1), with a refined version suggested in 1950 by William Haenszel (reference 2).

The table on page 5, based on a variation of these methods, shows life years lost per 1,000 population for each parish. These rates were calculated by multiplying the number of years remaining to 75 at a given age by the number of people dying at that age in each parish, then adding the products for all ages and calculating the rate from this result. This method gives greater weight to deaths occurring at a younger age, as these deaths each account for a larger number of lost life years. It follows that causes such as "accidents", the leading cause of death in the younger age groups, are given greater weight in this measure than in a measure counting the number of deaths only. Looking at mortality statistics from this perspective, we note from the table that several parishes have lower LYL rates

MAY, 1973



LHSASA

BUREAU OF VITAL STATISTICS		DIVISION OF HEALTH MAINTENANCE AND AMBULATORY PATIENT SERVICES																		
Prepared by: DIVISION OF TABULATION & ANALYSIS		ASEPTIC MENINGITIS	DIPHtheria	ENCEPHALITIS	ENCEPHALITIS, POST INFECTIONOUS	INFECTIOUS AND SERUM HEPATITIS	TUBERCULOSIS, PULMONARY	MENINGOCOCCAL INFECTIONS	PERTUSSIS	POLIOMYELITIS, PARALYTIC	RABIES IN ANIMALS	RHEUMATIC FEVER	RUBELLA *	SHIGELLOSIS	TYPHOID FEVER	OTHER SALMONELLOSIS	TETANUS	MEASLES	GONORRHEA	SYPHILIS, PRIMARY AND SECONDARY
JACKSON						1													7	
JEFFERSON	1					14	3	4				1				5			163	3
JEFFERSON DAVIS						1													3	
LAFAYETTE						7	3						3		1				35	3
LAFourCHE	1						1						1						13	1
LASALLE																				1
LINCOLN													2						54	1
LIVINGSTON																			1	1
MADISON							1						1						21	1
MOREHOUSE																			16	2
NATCHITOCHES							1				1								24	
ORLEANS	6		2		27	15	1	1			2		14		2				1151	42
OUACHITA			1		9	2	1												114	6
PLAQUEMINES																			5	
POINTE COUPEE						1														
RAPIDES						1							2		1				82	1
RED RIVER																			2	2
RICHLAND						1													7	2
SABINE																				
ST. BERNARD						1	1						1				1		4	
ST. CHARLES											1								4	
ST. HELENA																			2	
ST. JAMES																			2	1
ST. JOHN																			3	2
ST. LANDRY						1	1												27	2
ST. MARTIN						2													4	
ST. MARY																			9	
ST. TAMMANY						4													27	
TANGIPAHOA						1													32	2
TENSAS																				
TERREBONNE	1										1								8	1
UNION						3													10	
VERMILION						1	2								1				7	1
VERNON																			48	3
WASHINGTON																			20	
WEBSTER																			8	
WEST BATON ROUGE																			1	1
WEST CARROLL																			2	
WEST FELICIANA																			38	
WINN																			6	
OUT OF STATE																				

From January 1 through May 31, the following cases were also reported: 1-Actinomycosis; 3-Brucellosis; 2-Malaria (contracted outside the U.S.A.)

than the state, although their CDR's are higher. Note Bienville, with a CDR of 12.4 in contrast to the state rate of 9.2 - but an LYL rate of 134.2, while the comparable state rate was 147.6. The reverse situation also appears, of course, with some parishes showing a lower CDR than the state but a higher LYL rate. Perhaps, if the reader's parish fits into this latter category, he will be prompted to reassess the forces of mortality in his community.

Haenszel suggests (reference 2):

"From the conventional death rates everyone now draws the conclusion that the most important public health problem of the day is the control of mortality from chronic diseases associated with old age. While this may be true, it should not be permitted to overshadow the fact that there is plenty of room for effecting savings of potential years of life at younger ages, particularly from deaths due to accidents."

\* \* \* \* \*

We hope this mini-dissertation will cause the reader to pause a few moments for reflection before placing too much emphasis on crude death rates. Although these rates can be useful, they are not infallible as measures of mortality.

#### REFERENCES

1. Dickinson, Frank G., and Welker, Everett L. What is the Leading Cause of Death? Two New Measures. American Medical Association, 1948. Bulletin 64.
2. Haenszel, William. A Standardized Rate for Mortality Defined in Units of Lost Years of Life. American Journal of Public Health, January, 1950.



**MORTALITY RATES: CRUDE, AGE ADJUSTED, AND LIFE YEARS LOST  
3 YEAR AVERAGE, 1969 - 1971  
LOUISIANA AND HER PARISHES  
(BY RESIDENCE)**

PARISH	CRUDE DEATH RATE PER 1,000 POPULATION	AGE ADJUSTED DEATH RATE* PER 1,000 POPULATION	PERCENT OF POPULATION 65 AND OVER IN 1970	LIFE YEARS LOST PER 1,000 POPULATION
TOTAL	9.2	9.2	8.4	147.6
ACADIA	9.4	8.9	9.2	137.3
ALLEN	10.3	9.1	10.2	152.3
ASCENSION	7.9	8.9	7.3	132.2
ASSUMPTION	9.1	9.3	8.2	137.5
AVOYELLES	10.8	8.7	11.4	142.7
BEAUREGARD	10.2	9.2	9.4	156.3
BIENVILLE	12.4	8.3	14.6	134.2
BOSSIER	6.6	8.2	6.0	126.8
CADDO	10.1	8.7	10.3	144.8
CALCASIEU	7.8	8.8	6.7	140.1
CALDWELL	10.9	7.9	13.6	145.5
CAMERON	5.9	6.3	7.5	92.2
CATAHOULA	10.6	9.3	10.5	161.9
CLAIBORNE	13.7	8.5	17.1	159.8
CONCORDIA	9.6	10.0	8.0	155.5
DESOTO	13.6	9.3	14.7	160.3
EAST BATON ROUGE	7.1	8.7	6.0	125.3
EAST CARROLL	11.8	10.1	10.9	196.3
EAST FELICIANA	10.4	8.1	13.4	163.5
EVANGELINE	11.3	10.5	9.6	197.0
FRANKLIN	10.4	8.5	11.4	149.2
GRANT	11.9	8.6	13.2	131.6
IBERIA	8.4	8.8	7.7	144.4
IBERVILLE	11.1	10.4	9.5	181.3
JACKSON	11.8	8.9	12.3	171.5
JEFFERSON	6.0	8.4	4.9	111.7
JEFFERSON DAVIS	9.7	9.3	8.7	140.8
LAFAYETTE	6.4	8.1	5.9	119.5
LAFOURCHE	7.0	8.8	5.9	129.9
LASALLE	12.2	9.3	12.6	169.3
LINCOLN	8.5	8.2	9.3	116.2
LIVINGSTON	7.5	8.5	7.0	131.7
MADISON	13.7	11.1	12.8	235.3
MOREHOUSE	10.4	8.8	10.9	150.6
NATCHITOCHE	10.5	8.7	11.3	148.5
ORLEANS	12.2	10.4	10.6	177.5
OUACHITA	9.1	8.9	8.7	137.6
PLAQUEMINES	6.8	9.7	4.2	164.6
POINTE COUPEE	9.9	8.9	10.1	149.8
RAPIDES	9.9	9.3	9.2	161.2
RED RIVER	12.3	9.2	13.4	166.8
RICHLAND	11.3	8.9	12.1	147.3
SABINE	10.9	7.9	13.6	151.9
ST. BERNARD	5.9	8.6	4.4	117.5
ST. CHARLES	6.0	8.0	5.6	122.9
ST. HELENA	9.1	8.9	8.7	185.0
ST. JAMES	8.7	9.3	8.0	155.5
ST. JOHN	7.4	9.0	6.5	133.8
ST. LANDRY	9.6	9.8	8.3	161.4
ST. MARTIN	8.3	9.1	7.4	148.1
ST. MARY	8.1	9.9	6.1	159.8
ST. TAMMANY	8.6	9.5	7.5	141.1
TANGIPAHOA	11.1	10.8	8.9	181.2
TENSAS	12.7	9.2	13.0	141.7
TERREBONNE	7.0	9.2	5.1	161.0
UNION	11.9	8.5	13.6	145.7
VERMILION	9.2	8.1	10.2	123.4
VERNON	5.5	9.8	4.2	103.7
WASHINGTON	12.0	10.5	10.3	178.1
WEBSTER	10.8	8.6	11.4	136.3
WEST BATON ROUGE	8.7	9.8	6.9	155.0
WEST CARROLL	10.9	8.4	11.5	132.5
WEST FELICIANA	6.2	8.7	5.4	108.2
WINN	13.0	9.5	13.0	183.3

\* Adjusted on the Louisiana 1970 census distribution by age.