Florida Morbidity Statistics

1997-2006



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Florida Morbidity Statistics Report 1997-2006: http://www.doh.state.fl.us/disease_ctrl/epi/Morbidity_Report/amr_1997to2006.pdf

Published March 2008

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Acknowledgments

This publication is produced through the combined efforts of many within, as well as outside, the Florida Department of Health. Many thanks to the professionals in the Bureau of Epidemiology, Bureau of Immunizations (Charles Alexander, Bureau Chief), Bureau of HIV/AIDS (Tom Liberti, Bureau Chief), Bureau of Sexually Transmitted Diseases (Karla Schmitt, Bureau Chief), Bureau of Tuberculosis Control and Refugee Health (Jim Cobb, Bureau Chief), and the Bureau of Community Environmental Health (Eric Grimm, Bureau Chief) for their important contributions to this publication. Additional appreciation is extended to all physicians, nurses, laboratorians, information systems professionals, and health department staff who participated in reportable disease surveillance during 2006. Tracking these diseases is a cooperative effort involving professionals involved in individual healthcare as well as public health agency staff.

Individual cases are reported so that:

- Public health action can be applied to individual cases;
- Outbreaks can be recognized and controlled;
- Risk factors and areas of high activity for disease can be identified to provide direction for disease control efforts; and,
- Trends in disease over time can be monitored to assess the need for, and effectiveness of, control measures.

We hope readers will find this document useful when setting priorities and directions for action at the individual and community levels to prevent and control disease.

Sincerely,

Julia Juli

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Introduction

Purpose

The Florida morbidity report is compiled to:

- Summarize annual morbidity from notifiable acute communicable and environmental diseases, and cancer in Florida;
- 2. describe patterns of disease as an aid in directing future disease prevention and control efforts; and,
- 3. provide a resource to medical and public health authorities at county, state and national levels.

Data Sources

Data presented in this report are based on notifiable disease information received by county and state health department staff from physicians, hospitals, and laboratories throughout the state. Data on occurrence of communicable diseases in Florida were obtained through passive, and sometimes active, surveillance. Reporting suspect and confirmed notifiable diseases or conditions in the State of Florida is mandated under Florida Statute 381.0031, Chapter 64D-3, *Florida Administrative Code* (F.A.C.). Persons in charge of laboratories, practitioners, hospitals, medical facilities, schools, nursing homes, state institutions, or other locations providing health services are required to report diseases or conditions and the associated laboratory test results listed in the Table of Notifiable Diseases or Conditions, Chapter 64D-3 F.A.C. Reporting test results by a laboratory does not nullify the practitioner's obligation to also report the disease or condition. These data are the basis for providing useful information on notifiable diseases and conditions in Florida to healthcare workers and policymakers, and this would not be possible without the cooperation of the extensive network involving both private and public sector participants. Note that Chapter 64D-3 F.A.C. was extensively revised at the end of 2006.

- 1. Passive surveillance relies on physicians, laboratories, and other healthcare providers to report diseases of their own accord to the Florida Department of Health using a confidential morbidity report form, electronically, by telephone, or by facsimile.
- 2. Active surveillance entails Florida Department of Health staff regularly contacting hospitals, laboratories, and physicians in an effort to identify all cases of a given disease.

Interpreting the Data

This report should be interpreted in light of the following limitations:

1. <u>Under-reporting</u>

Evaluations of infectious disease reporting systems have, in general, indicated that the completeness of reporting varies by disease: the less common, more severe reportable diseases such as bacterial meningitis, diphtheria, polio, botulism, anthrax, tuberculosis, and congenital syphilis are more completely reported than the more common, but (individually) less severe, diseases such as hepatitis A or campylobacteriosis. Variation in reported disease incidence at the local level most likely reflects both differences in the true incidence of disease and differences in the vigor with which surveillance is performed.

2. Reliability of Rates

All incidence rates in this report are expressed as the number of reported cases of a disease per 100,000 population unless otherwise specified. Animal rabies is only reported as the number of cases, because no reliable denominators exist for animal populations. Rates for diseases with only a few cases reported per year can have unstable rates, and should be interpreted with caution. The observation of zero events is especially hazardous. To account for these instabilities, all rates in the report based on less than 19 events are considered unreliable. This translates into a relative standard error of the rate of 23% or more, which is the cut-off for rate reliability used by the National Center for Health Statistics.

Reporting Period

The data in this report are aggregated by the date the case was reported to the Bureau of Epidemiology for each of the years presented, beginning January 1 and ending December 31. Frequency counts included only cases reported during this time. In some cases, diseases reported in 2006 may have onset dates in 2005.

4. Case Definition

For the purposes of this report, confirmed and probable cases have been included for all diseases. No suspected cases have been included. Uniform reporting criteria for the diseases and conditions in this report have been defined in the Surveillance Case Definitions for Select Reportable Diseases in Florida.

5. Place of Acquisition of Disease or Condition

The distribution of cases among Florida counties was determined by the patient's reported county of residence. Cases were allocated to their county of residence regardless of where they became ill or were hospitalized, diagnosed, or exposed. Individuals whose official residence was outside the state of Florida, but who became ill or were hospitalized or diagnosed in Florida, were not included in Florida morbidity. These cases were referred through an interstate reciprocal notification system to the state where the patient resided.

6. Population Estimates

All population estimates are from the Community Health Assessment Resource Tool Set (CHARTS). The CHARTS system receives its estimates from the Florida Legislature's Office of Economic and Demographic Research (EDR). Estimates are updated once per year in the CHARTS system.

7. <u>Incomplete Case Information</u>

Certain analyses depicting specific demographic variables may not include all reportable cases of a specific disease due to incomplete case information. For graphs denoting month of onset, it is important to note that only those cases of disease for which an onset date could be determined are included.

Report Format

This report is divided into six sections:

Section 1: Summary of Selected Notifiable Diseases and Conditions

Section 2: Selected Notifiable Diseases and Conditions

Section 3: Summary of Foodborne Disease

Section 4: Summary of Notable Outbreaks and Case Investigations

Section 5: Summary of Cancer Data

Section 6: Summary of Revisions to Florida's Notifiable Disease Reporting Statute (Chapter 64D-3 F.A.C.).

List of Reportable Diseases/Conditions in Florida, 2006

Any disease outbreak

Section 381.0031 (1,2), Florida Statutes provides that, "Any practitioner licensed in Florida to practice medicine, osteopathic medicine, chiropractic, naturopathy, or veterinary medicine, who diagnoses or suspects the existence of a disease of public health significance shall immediately report the fact to the Department of Health." Local county health departments serve as the Department's representative in this reporting requirement. Furthermore, this Section provides that, "Periodically the Department shall issue a list of diseases determined by it to be of public health significance...and shall furnish a copy of said list to the practitioners..." **Note:** this list was revised in November 2006; Annual Morbidity Reports for subsequent years will reflect the new list.

Children through 12 years of age]

Any grouping or clustering of disease Lead Poisoning Acquired Immune Deficiency Syndrome (AIDS) Legionellosis Animal bite to humans Leptospirosis Anthrax Listeriosis **Botulism** Lyme Disease Lymphogranuloma venereum Brucellosis Malaria Campylobacteriosis Cancer (except non-melanoma skin cancer) Measles Chancroid Melioidosis Chlamydia trachomatis (diseases caused by) Meningitis (bacterial & mycotic) Meningococcal Disease (due to Neisseria Ciguatera Congenital anomalies meningitidis) Mercury Poisoning Creutzfeldt-Jakob Disease (CJD) Mumps Cryptosporidiosis Cyclosporiasis Neurotoxic Shellfish Poisoning Pertussis Dengue Fever Diphtheria Pesticide-Related Illness and Injury Ehrlichiosis, human Plague Encephalitis Poliomyelitis Eastern Equine **Psittacosis** Non-arboviral Q Fever Other arboviral Rabies St. Louis Ricin Toxin Venezuelan Equine Rocky Mountain Spotted Fever West Nile Rubella (including congenital) Western Equine Salmonellosis Enteric diseases due to: Saxitoxin Poisoning (paralytic shellfish poisoning) Escherichia coli, O157:H7 Shigellosis Escherichia coli, Other (known serotypes) Smallpox Epsilon toxin of Clostridium perfringens Staphylococcus aureus, Vancomycin nonsusceptible Giardiasis (acute) Staphylococcus enterotoxin B Glanders Streptococcal Disease (invasive Group A) Gonorrhea Streptococcus pneumoniae (invasive disease) Granuloma inquinale Syphilis Haemophilus influenzae (invasive disease) Primary Hansen's Disease (Leprosy) Secondary Hantavirus infection Early latent Hemolytic Uremic Syndrome Congenital syphilis Hepatitis (viral) Late latent Hepatitis A Neurosyphilis Hepatitis B Tetanus Hepatitis C Toxoplasmosis (acute) Hepatitis non-A, non-B **Trichinosis** Hepatitis, Other (unspecified) Tuberculosis Hepatitis B surface antigen (HBsAg) Tularemia positive in a pregnant woman or a Typhoid Fever child <= 24 months of age Typhus Fever Herpes Simplex Virus (HSV) [in neonates and Vaccinia Disease Infants to six months of age] Vibrio infections Human Immunodeficiency Virus (HIV) Viral hemorrhagic Fever Human papillomavirus (HPV) [in neonates and Yellow Fever

Selected Florida Department of Health Contacts

Division of Disease Control

Bureau of Epidemiology	(850) 245-4401
Bureau of Immunization	(850) 245-4342
Bureau of HIV/AIDS	(850) 245-4334
Bureau of Sexually Transmitted Diseases	
Control and Prevention	(850) 245-4303
Bureau of Tuberculosis and Refugee Health	(850) 245-4350

Division of Environmental Health

Bureau of Community Environmental Health (850) 245-4277

Florida County Boundaries



Table A. Florida Population by Year and County, 1997-2006. (Source - Florida CHARTS; accessed June 2007)

County	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
- - - - -	1									
State Total	15,011,697	15,309,968	15,679,606	16,074,896	16,412,296	16,772,201	17,164,199	17,613,368	18,018,497	18,422,450
Alachua	205,414	208,156	213,346	219,239	224,397	229,524	232,110	237,374	241,858	246,151
Baker	20,801	20,782	21,498	22,388	22,641	23,105	23,472	24,069	23,980	24,179
Bay	141,889	144,693	147,075	148,692	150,748	152,818	155,414	159,108	162,499	165,520
Bradford	25,368	25,496	25,767	26,110	26,136	26,649	27,084	27,865	28,195	28,562
Brevard	454,738	461,493	469,515	478,541	487,131	497,429	510,622	524,046	534,596	545,113
Broward	1,515,711	1,551,039	1,590,361	1,631,445	1,654,923	1,673,972	1,706,363	1,730,580	1,746,603	1,772,958
Calhoun	12,538	12,611	12,863	13,038	13,101	13,286	13,491	13,636	14,011	14,264
Charlotte	133,308	135,610	139,032	142,357	145,481	149,486	152,865	158,006	153,788	154,513
Citrus	111,629	113,914	116,208	118,689	121,078	123,704	126,475	129,822	133,472	136,707
Clay	128,654	133,044	137,357	141,331	144,161	151,746	157,325	164,868	171,118	177,033
Collier	217,914	229,929	242,408	254,571	267,632	281,148	295,848	309,369	320,859	333,761
Columbia	53,088	54,314	55,446	56,683	57,354	58,537	59,218	60,821	61,744	63,005
Desoto	29,333	30,389	31,436	32,404	32,741	32,959	33,912	34,220	32,391	32,090
Dixie	12,946	13,152	13,559	13,883	14,154	14,530	14,768	15,054	15,482	15,857
Duval	746,515	758,691	767,860	782,691	797,566	813,817	829,937	843,772	865,965	884,004
Escambia	285,819	288,240	292,937	294,911	297,321	300,421	304,165	308,068	303,240	303,578
Flagler	42,474	44,897	47,559	50,620	53,881	58,004	62,511	71,004	80,559	87,384
Franklin	9,626	699'6	9,710	9,871	9,974	10,250	10,530	10,682	10,909	11,260
Gadsden	44,582	45,011	45,312	45,070	45,419	46,073	46,600	46,965	47,883	48,554
Gilchrist	12,937	13,554	13,980	14,533	14,759	15,140	15,637	16,016	16,303	16,727
Glades	9,867	10,090	10,407	10,595	10,624	10,675	10,759	10,763	10,743	10,844
Gulf	13,201	13,204	13,559	14,785	15,101	15,290	15,691	16,235	16,543	16,790
Hamilton	12,187	12,472	12,831	13,457	13,792	13,952	14,039	14,346	14,319	14,405
Hardee	25,601	26,215	26,543	26,952	27,021	27,474	27,434	27,898	27,277	27,260
Hendry	33,687	34,533	35,608	36,300	36,256	36,174	36,739	37,800	38,610	39,558
Hernando	123,377	126,176	128,733	131,298	133,497	137,613	141,574	146,118	152,049	156,683
Highlands	82,484	84,012	85,892	87,676	88,373	89,343	90,770	92,456	93,807	95,342
Hillsborough	934,544	950,947	978,079	1,005,808	1,034,164	1,062,140	1,085,318	1,114,774	1,137,583	1,162,616
Holmes	17,934	18,011	18,371	18,620	18,713	18,746	18,983	19,027	19,189	19,348
Indian River	105,148	107,231	110,142	113,755	116,291	118,884	121,887	127,831	130,849	134,199
Jackson	45,244	45,734	46,050	46,998	47,534	47,963	49,218	48,891	49,883	50,679

County	1997	1998	1999	2000	2001	2002	2003	2004	2002	2006
	0	7000	000	7000	0.7	000	0.7	7	2.4	7
Jerrerson	13,003	13,237	13,307	12,874	13,107	13,329	13,618	14,110	14,265	14,432
Lafayette	6,649	6,653	6,703	7,061	7,076	7,245	7,394	7,559	8,064	8,305
Lake	190,097	196,543	204,152	212,823	222,988	233,622	242,919	254,246	265,716	276,302
Lee	405,640	417,030	430,644	444,151	459,278	481,014	499,387	526,157	555,874	579,506
Leon	227,612	232,476	236,658	240,631	245,070	249,744	256,921	265,258	272,749	278,789
Levy	31,713	32,845	33,759	34,626	35,325	36,197	36,856	37,691	38,136	38,860
Liberty	908'9	6,772	6,967	7,045	7,145	7,165	7,248	7,372	7,623	7,771
Madison	18,182	18,370	18,596	18,775	18,878	18,974	19,183	19,564	19,738	19,936
Manatee	246,838	252,397	259,039	265,701	272,342	279,366	288,888	297,037	306,557	315,050
Marion	238,739	244,918	253,235	260,407	265,629	273,602	284,232	295,550	307,646	317,981
Martin	119,230	122,482	124,952	127,430	129,415	132,009	135,280	138,329	141,871	145,137
Miami-Dade	2,152,720	2,179,945	2,219,329	2,262,902	2,292,316	2,320,465	2,354,404	2,388,138	2,432,276	2,471,798
Monroe	79,850	79,738	79,875	79,721	80,850	81,030	80,473	81,336	82,628	83,364
Nassau	52,308	53,727	56,022	58,037	59,452	61,643	63,523	65,478	66,019	67,381
Okaloosa	161,597	164,531	167,880	171,264	174,228	178,036	182,020	186,744	189,766	193,298
Okeechobee	34,562	34,932	35,452	35,998	36,211	36,715	37,377	38,153	37,752	37,851
Orange	816,075	835,119	864,197	906,000	936,749	962,531	989,962	1,021,215	1,050,939	1,081,393
Osceola	148,603	154,021	166,024	174,107	182,202	197,901	213,723	228,755	237,659	248,270
Palm Beach	1,051,581	1,077,422	1,107,053	1,137,532	1,160,977	1,190,653	1,218,508	1,249,598	1,272,335	1,299,853
Pasco	322,705	329,192	337,348	346,882	354,196	364,900	378,085	392,507	410,758	424,722
Pinellas	901,901	909,434	917,331	923,308	930,602	935,274	941,435	944,966	948,925	954,185
Polk	455,930	464,207	475,268	487,183	498,011	504,381	514,247	531,472	545,064	557,467
Putnam	69,091	69,527	70,029	70,532	70,929	71,481	72,114	73,435	73,897	74,506
Saint Johns	109,055	113,097	118,249	124,613	129,880	135,467	141,216	151,114	159,168	166,476
Saint Lucie	181,316	185,250	189,330	194,062	199,390	205,396	213,614	228,480	243,061	253,772
Santa Rosa	106,800	111,025	115,333	118,605	122,252	125,947	129,842	134,761	137,245	140,988
Sarasota	309,333	314,418	319,980	328,135	335,428	341,784	350,664	360,214	370,123	378,764
Seminole	340,527	347,636	357,714	368,231	380,763	389,549	396,934	405,565	413,937	423,101
Sumter	44,533	47,684	50,539	54,203	58,083	61,979	63,522	67,221	75,660	81,100
Suwannee	32,591	33,423	34,226	35,091	35,744	35,815	37,479	37,863	38,319	38,974
Taylor	18,887	19,102	19,264	19,297	19,594	19,878	20,794	20,977	21,395	21,735
Union	12,716	13,071	13,335	13,473	13,660	13,786	13,793	14,752	15,135	15,482
Volusia	420,574	427,865	436,218	445,676	453,840	462,377	473,185	486,874	497,224	507,521
Wakulla	19,417	20,787	21,917	23,150	23,936	24,340	25,141	25,692	27,193	28,556
Walton	35,830	37,275	39,387	40,990	43,270	46,052	47,472	51,167	54,218	26,900
Washington	20,068	20,508	20,850	21,069	21,516	21,702	21,987	22,534	23,255	23,980

Table B. Florida Population by Age Group, 2006

Age Group in Years	Population
<1	220,259
1-4	881,034
5-9	1,129,142
10-14	1,184,737
15-19	1,206,406
20-24	1,194,283
25-34	2,215,347
35-44	2,582,019
45-54	2,601,203
55-64	2,098,654
65-74	1,498,972
75-84	1,174,408
85+	435,986
Total	18,422,450

Table C. Florida Population by Gender, 2006

Gender	Population
Male	9,017,194
Female	9,405,256
Total	18,422,450

Table D. Florida Population by Race, Aggregated to White and Non-White, 2006

Race	Population
White	14,855,732
Non-White	3,566,718
Total	18,422,450

A History of Disease Reporting in Florida

Florida was in many ways a frontier state far longer than the typical tourist, or even longtime resident, might think. Towns, cities, and the population in general remained relatively small until well after World War II.

Studying the historical record, there is not only a sense of the frontier mentality, but a feeling of impermanence; towns bloom, and then, die. A few towns in the panhandle, a region that once seemed destined for greatness, or at the very least longevity, are today small or nonexistent. These include Magnolia, a city with banks, its own currency, and newspapers in the 1830s, now no more than a small overgrown palmetto cemetery and brick fragments scattered amongst the piney woods south of Tallahassee. Port Leon, also south of Tallahassee, had saloons, newspapers, a hotel, and warehouses all wiped away by a massive storm surge in the early 1800s. Cedar Key, once a large transshipment point with factories and the first cross-state railhead, is now a quaint fishing village and tourist town. Finally, St. Joseph, site of Florida's first constitutional convention in 1838 and a bustling port, is now a small paper mill town. Disasters such as hurricanes, wars, and epidemics of disease can all be blamed.

Due to a small and widely dispersed population (see Table 1), it was difficult for the fledgling understaffed, under-budgeted public health system to track disease. It was also difficult to collect vital statistics. Finally, after placing staff in key areas around the state, the U.S. Census Bureau, in October 1919, recognized Florida as meeting the National Standards for Death Statistics, and birth records were accepted shortly thereafter.

Table 1. Florida Population by Census Year (source of data through 1935: Florida Department of Agriculture 1935).

Year	Population
1830	34,730
1840	54,477
1850	87,445
1860	140,424
1870	187,748
1880	269,493
1890	391,422
1900	528,542
1910	752,619
1920	968,470
1930	1,468,211
1935	1,606,842
2006	18,422,450

State health officers decried the lack of morbidity data from early on and lobbied continually for the collection of such information. The following is quoted from State Health Officer Dr. J.Y. Porter's opening remarks in the 1911 State Board of Health Annual Report which highlights the problem:

General Health Conditions

"It is gratifying to be able to state that on the whole the health of the state for the past twelve months has been good and above the average. This statement, however, cannot be verified by figures and must be accepted in a very general way, because the executive office has no means by which it can glean such information except from the correspondence, which is always apt to be faulty and to deal only in generalities. Almost daily requests come from distant states, principally from the northwest, where companies are organized for the sale of Florida lands, asking about the health conditions of certain sections of Florida; whether malarious, or whether detrimental or advantageous to sufferers from certain chronic ailments. Information of this kind, which should be at the command of the executive office, cannot always be given for the reason that no system of morbidity statistics which have hitherto been devised so far has met with success, although several have been attempted. It may be asked why this necessary information has not been secured for the Board. Most certainly the failure is not due to lack of persistent efforts on the part of the State Health Officer, for the records are in evidence of earnest pleading and in suggesting simple methods for obtaining facts of this nature."

Again in the 1912 report the problem is explained and in yet another dimension:

In the absence of any morbidity reports it is impossible to say just how much sickness there was in the State during the past year. Looking at the subject of sickness from the viewpoint of business it is believed that a full knowledge of the extent and character of sickness occurring each week or each month in the State with a statement of length of time lost as a consequence, would be of very material value, for the reason that every day's sickness means a monetary loss to the individual and to the commonwealth...

Finally in 1917 action was taken:

The recent inauguration of a plan requiring the reporting of communicable disease is going to prove an invaluable aid, the more thorough and the more complete the cases reported, in the control of the communicable disorders throughout the State. As has been repeatedly remarked, "No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring." With this information which is

being gathered constantly, an accurate index is at hand of health conditions and by studying the tabulations of the reported diseases one can see at once the kind of health work demanded and the particular field in which the efforts should be made.

Programs got underway in 1918, but problems occurred, problems that sound very familiar even today:

The value of morbidity reports can hardly be estimated and we are looking forward to the time when every physician in the state will give hearty cooperation. The number of cases and deaths by county has been shown in the "Health Notes" covering a period of nine months. This information is compiled by quarters and according to information received has been used to advantage by many of the health officers and others in the state. In addition to this a morbidity report has been issued each week to all the local health officers and newspapers throughout the state. This weekly report has been watched by many with interest, especially since the so-called influenza became so prevalent.

The morbidity reports for the year were not as complete as we had desired. While a few physicians are reporting cases faithfully, very many are not and for this reason the morbidity tables do not mean so much as a health index in this state as in some others. However, we have every reason to believe that the physicians will cooperate when brought to a full realization of the need of reports so that more complete returns may be expected in the future. The city health officers in a few of our cities have stimulated the reporting of notifiable disease, as the reports to this Bureau will show. The district and local health officers should be commended for work done along this line and they certainly have a warm place in the hearts of those who are trying to put Florida on the map for morbidity. During the year we received reports of 24,884 cases of notifiable diseases...

Morbidity was recorded by hand each month in a ledger. This ledger, begun in 1918, with numbers written in with pencil and pen, became the standard for decades. Data on 32 diseases (Table 2) were collected in that first year.

Table 2. Florida Reportable Diseases and Corresponding Case Totals for the Year 1918 (source: Florida Board of Health).

Typhoid	485	Diphtheria	329	Anthrax	1
Paratyphoid	6	Influenza	11,631	Rabies	(
Typhus	1	Dysentery	264	Tetanus	7
Malaria	931	Leprosy	8	Pellagra	67
Smallpox	59	Mumps	2,133	Tuberculosis	522
Measles	2,197	German Measles	501	Syphilis	1,640
Scarlet Fever	138	Chicken Pox	232	Gonococcus	1,709
Whoop Cough	557	Dengue	12	Cancer	34
Trachoma	181	Pneumonia	982	Epidemic Meningitis	75
Ophthalmia Neonatorum	9	Hookworm	173	Acute Poliomyelitis	(
Trichinosis	4	Chancroid	0		

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