



Jeb Bush
Governor

John O. Agwunobi, M.D., M.B.A.
Acting Secretary

INTEROFFICE MEMORANDUM

DATE: September 7, 2001

TO: County Health Department Directors/Administrators

FROM: Annie R. Neasman, R.N., M.S.
Annie Neasman
Acting Deputy Secretary for Health

SUBJECT: Survey of Immunization Levels in Two-Year-Old Children (2001)

INFORMATION ONLY

In July, the Bureau of Immunization completed an annual immunization survey of 1,243 randomly selected two-year-old children in Florida. The survey provides estimated immunization levels for 12 selected counties as well as statewide figures (see Attachment 1).

The 2001 statewide coverage for the basic series of vaccines—4 DTP/DtaP, 3 polio, and 1 MMR (4/3/1)—by two years of age is 85.5 percent, which is statistically the same as last year's results. Coverage levels for 4 DTP/DTaP, 3 polio, 1 MMR, 3 Hib, and 3 hepatitis B (4/3/1/3/3) is 83.3 percent statewide for children two years of age.

The national goal for the year 2010 is 90 percent coverage level for each of the following individual vaccines: 4 doses of DTaP, 3 doses of polio, 1 dose of MMR, 3 doses of Hib, 3 doses of hepatitis B, and 1 dose of varicella. Attachment 4 indicates, with the exception of DTaP 4 and varicella, our success in meeting this goal.

The efforts of county health departments and private health care providers to expand and improve the delivery of immunization services are clearly reflected in these coverage levels. Local coalitions, Kiwanis International, and our other community partners have also contributed to these immunization efforts and deserve our recognition. The continuation of these collaborative efforts by the public and private medical community, as well as our community partners, will enable us to reach the year 2010 immunization coverage goals.

Coverage rates for the basic series (4/3/1) for the 12 largest counties ranged from 76.5 percent to 94.2 percent. Statewide progress from 1986 to 2001 is shown in Attachment 2.

Survey Purposes:

This survey has three primary purposes: (1) to determine the immunization levels among two-year-old children, (2) to evaluate our success in immunizing these children on schedule, and (3) to measure any changes in immunization levels of children at high risk for failing to receive immunization (by certain risk factors of the mother) so that we can evaluate the effectiveness of our targeted efforts toward this group.

Survey Method:

The survey was conducted by Bureau of Immunization field staff with the assistance of county health department staff, private physicians, and parents. The survey method included the following: (1) a random sample of birth records was selected from a list of all live births occurring in Florida residents for the month of January 1999, (2) birth records were screened to remove all death and adoption cases, and (3) the sample was further reduced by eliminating children whose parents were contacted but refused to participate in the survey. Despite intensive follow-up, 121 children, or 9.7 percent, were not located.

Survey Results:

- Table I, Attachment 3, indicates private sector children, once again, had a higher completion rate (88.2 percent) than public sector children (75.7 percent).
- Despite the fact that 91.7 percent of the children sampled started their immunizations on time, only 67.2 percent were still on schedule at age seven months. The difference in coverage between the DTaP1 and the DTaP3 represents a dropout rate of 24.5 percent. At 18 months of age, only 51.0 percent remained on schedule and the dropout rate increased to 40.7 percent. Attachment 4 provides antigen-specific coverage by provider.
- Of the 147 who were partially immunized at two years of age, 50 children were not up-to-date due to a missed opportunity to provide simultaneous administration of all vaccine doses for which a child is eligible at the time of each visit to a health care provider. Additionally, 65 of those tabulated as having partial immunizations had completed their immunizations by the time they were located.
- The survey confirmed that high-risk maternal factors shown in Attachment 5 continue to be associated with a lower chance for the child's completion of the required immunization series.

Comments:

In recent years, there has been a shift in the delivery of immunization services from the county health department to the private sector with the private providers and managed care organizations administering 75 percent of the childhood immunizations. Immunization program priorities are changing dramatically. Other factors impacting immunization programs include cutbacks in federal funding for county health department immunization programs and the addition of new school immunization requirements. These changes mandate the need to focus our energy and resources on the following key areas if we are to reach the year 2010 goal of 90 percent immunization coverage levels for each of the vaccines administered to children by two years of age.

- Identify and target interventions toward geographic areas with populations at high risk for underimmunization (pockets of need).

- Continue linkage with the WIC and WAGES programs.
- Conduct semi-annual audits in county health department clinics using the Clinic Assessment Software Application (CASA) to assess immunization coverage levels as part of ongoing quality assurance reviews.
- Implement automated reminder and recall using the Immunization Module of the Health Clinic Management System (HCMS).
- Implement the Reduction of Missed Immunization Opportunities Policy of the County Health Department Guidebook.

Also, county health departments should increase their partnerships with managed care organizations and private health care providers in order to reach the year 2010 goal. Collaborative efforts should include the following:

- Promotion of *Standards for Pediatric Immunization Practices*.
- Promotion of the statewide immunization registry currently under development by the Department of Health.

If you have any questions or comments about the survey or if you have found other successful methods of improving your community's immunization levels, please contact Frances Dennard, Bureau of Immunization, at (850) 245-4342 or SunCom 205-4342. We are eager to share any best practices that improve immunization rates with other county health departments.

ARN/cha/fhd
Attachments

cc: Terence P. McCoy, M.D., President,
Florida Medical Association
Louis B. St. Petery, Jr., M.D., Executive Vice-President
Florida Pediatric Society
Martha J. Moores, C.A.E., Executive Vice President
Florida Academy of Family Physicians
Stephen R. Winn, Executive Director
Florida Osteopathic Medical Association
John O. Agwunobi, M.D., Acting Secretary
Landis K. Crockett, M.D., M.P.H., Director
Division of Disease Control
Meade Grigg, Director
Office of Planning, Evaluation and Data Analysis
Annette Phelps, A.R.N.P., M.S.N., Acting Director
Division of Family Health
Annie Neasman, R.N., M.S., Director
Office of Performance Improvement
Charles H. Alexander, Chief
Bureau of Immunization
County Health Department Nursing Directors
Bureau of Immunization Field Staff

Immunization Levels in Two-Year-Old Children By Selected Counties and State, Florida 2001

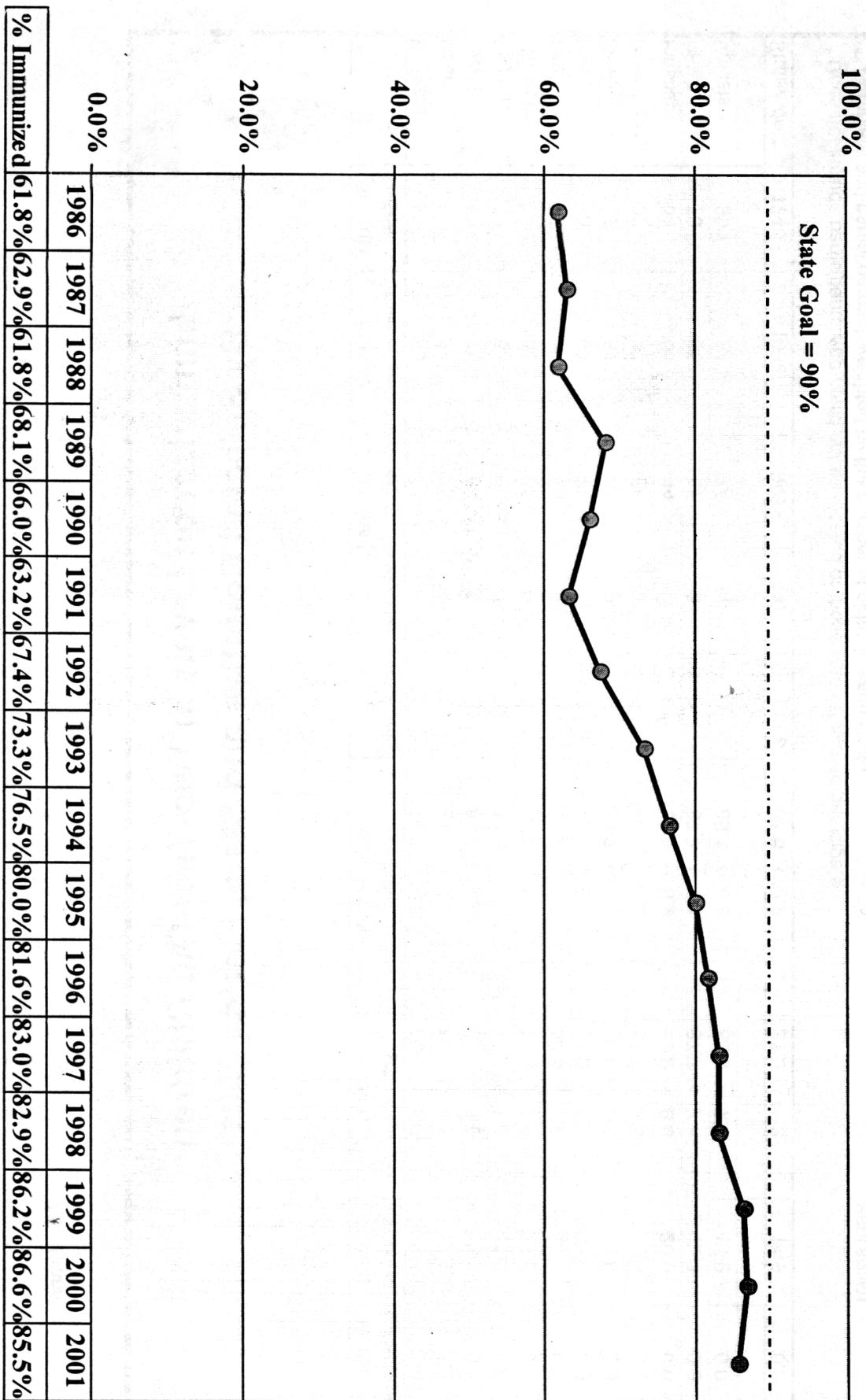
County	Sample Size	Survey Participants*	Complete		Partial	No Shots	Completion Percent Plus or Minus ***		Partial Percent	No Shots Percent
			4/3/1	4/3/1			4/3/1/3/3	4/3/1/3/3		
Broward	92	85	65	20	0	76.5 ± 8.8	68.2 ± 9.7	23.5	0.0	
Dade	81	74	65	9	0	87.8 ± 7.3	86.5 ± 7.6	12.2	0.0	
Duval	85	75	66	9	0	88.0 ± 7.0	88.0 ± 7.0	12.0	0.0	
Escambia	78	63	55	7	0	87.3 ± 7.5	85.7 ± 7.9	11.1	0.0	
Hillsborough	77	68	52	16	0	76.5 ± 9.7	75.0 ± 9.9	23.5	0.0	
Lee	76	69	65	4	0	94.2 ± 5.4	92.8 ± 5.9	5.8	0.0	
Leon	75	67	62	5	0	92.5 ± 6.1	91.0 ± 6.6	7.5	0.0	
Orange	77	57	48	9	0	84.2 ± 8.3	78.9 ± 9.3	15.8	0.0	
Palm Beach	90	77	65	12	0	84.4 ± 7.6	80.5 ± 8.4	15.6	0.0	
Pinellas	65	55	44	11	0	80.0 ± 9.9	80.0 ± 9.9	20.0	0.0	
Polk	79	65	57	8	0	87.7 ± 7.4	87.7 ± 7.4	12.3	0.0	
Volusia	90	84	74	10	0	88.1 ± 6.8	86.9 ± 7.1	11.9	0.0	
Statewide**	1243	1092	943	147	2	85.5 ± 2.2	83.3 ± 2.3	14.9	0.2	

* Does not include participants who could not be located or those who refused to participate.

** Complete and partial percent weighted by the number of births in each strata.

*** Estimates are accurate within plus or minus with 95 percent confidence.

Immunization Coverage Levels of Children at 24 Months of Age, Florida, 1986-2001



IMMUNIZATION LEVELS OF 1092 TWO-YEAR-OLD CHILDREN BY VACCINE PROVIDER FLORIDA 2001

STATUS	TOTAL	PERCENT OF		CHD	PERCENT	CHC	PERCENT	PRIVATE		PERCENT	MILITARY	PERCENT	NO	PERCENT
		SAMPLE	SAMPLE					PHYSICIAN	NO SHOTS					
COMPLETE*	943	86.4%	140	75.7%	31	93.9%	726	88.2%	8	88.9%	38	95.0%		
PARTIAL	147	13.5%	45	24.3%	2	6.1%	97	11.8%	1	11.1%	2	5.0%		
NO SHOTS	2	0.2%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		

TABLE II IMMUNIZATION STATUS OF SURVEYED TWO-YEAR-OLD CHILDREN, FLORIDA SELECTED YEARS 1979 - 2001

YEAR	TOTAL SAMPLE	COMPLETE* (%)	PARTIAL (%)	NO SHOTS (%)	PRIVATE PROVIDER (%)	CHD (%)	CHC (%)	MILITARY (%)	NO SOURCE (%)	4+ DTP (%)	3+ POLIO (%)	MMIR (%)	3 HIB** (%)	3 Hep B (%)	Varicella (%)
***2001	1092	85.5	14.3	0.2	75.4	16.9	3.0	0.8	3.7	87.9	93.6	95.2	96.7	95.2	75.5
***2000	1113	86.6	12.5	0.9	69.0	22.3	2.9	1.8	3.1	88.8	93.5	95.2	96.9	96.1	57.7
****1999	1064	86.2	13.4	0.4	68.4	24.5	2.8	1.2	2.6	87.1	94.5	94.0	97.9	94.1	31.3
****1998	1498	82.9	16.6	0.5	66.2	27.9	2.8	0.9	1.7	86.6	95.0	92.4	94.8	93.0	N/A
****1997	942	83.0	16.5	0.5	65.9	31.2	N/A	1.5	1.4	84.3	94.3	92.5	94.6	87.3	N/A
1996	1493	81.6	18.0	0.5	55.4	41.7	N/A	1.8	1.0	83.6	93.1	91.1	94.5	79.4	N/A
1995	1463	80.0	19.1	0.9	52.8	42.7	N/A	1.7	2.8	82.3	87.9	90.2	72.1	61.2	N/A
1994	553	76.5	22.4	1.1	55.8	41.7	N/A	2.2	0.3	78.1	86.3	88.5	77.5	N/A	N/A
1993	591	73.3	26.2	0.5	50.9	46.9	N/A	2.0	0.2	75.5	80.0	88.5	91.0	N/A	N/A
1992	549	67.4	31.0	1.6	50.2	45.9	N/A	2.6	1.3	69.0	77.0	89.3	83.9	N/A	N/A
1991	497	63.2	35.6	1.2	55.3	40.6	N/A	2.2	0.6	65.4	75.4	86.2	55.1	N/A	N/A
1990	532	66.0	32.7	1.3	51.3	44.2	N/A	3.2	1.3	75.9	82.0	89.7	59.2	N/A	N/A
1989	571	68.1	30.8	1.1	52.5	43.6	N/A	2.8	1.1	73.4	79.2	88.8	42.0	N/A	N/A
1988	531	61.8	35.6	2.6	52.0	41.8	N/A	3.6	2.6	69.2	74.5	85.1	23.5	N/A	N/A
1987	512	62.9	36.8	0.8	58.5	36.8	N/A	3.9	0.8	65.0	72.3	82.6	N/A	N/A	N/A
1986	505	61.8	38.2	1.6	53.2	41.5	N/A	3.7	1.6	64.2	74.9	83.8	N/A	N/A	N/A

* COMPLETION OF BASIC SERIES (4 DTP, 3 OPV, 1 MMR) BY 24 MONTHS OF AGE
 ** DATA PRIOR TO 1994 AT LEAST ONE DOSE
 *** COMPLETE AND PARTIAL PERCENTAGE WEIGHTED BY NUMBER OF BIRTHS IN EACH STRATA

**Immunization Levels of Two-Year-Olds
Percent Immunized by Specific Antigen and By Type of Provider
Florida 2001**

Provider	Total* Clients	Percent of Popula- tion	DTP 1	DTP 2	DTP 3	DTP 4	Polio 1	Polio 2	Polio 3	MMR	HIB 3	Hep 3	Varicella
CHD	185	17.0%	100.0%	95.1%	88.6%	74.1%	100.0%	95.1%	84.9%	86.5%	88.6%	93.0%	50.3%
PRIVATE PHYSICIAN	823	75.5%	99.5%	100.4%	101.5%	93.1%	97.3%	100.2%	97.4%	99.5%	100.6%	97.8%	84.4%
CHC	33	3.0%	100.0%	106.1%	97.0%	90.9%	103.0%	106.1%	90.9%	97.0%	93.9%	93.9%	57.6%
MILITARY	9	0.8%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	77.8%
NO SOURCE	40	3.7%	97.5%	82.5%	60.0%	40.0%	97.5%	82.5%	55.0%	45.0%	55.0%	52.5%	22.5%
TOTAL OR AVERAGE	1090	100.0%	99.5%	99.0%	97.6%	87.9%	98.0%	98.9%	93.6%	95.2%	96.7%	95.2%	75.5%

*Does not include 2 children with no shots

Table I

**IMMUNIZATION STATUS OF TWO-YEAR-OLD CHILDREN
BY HIGH RISK CHARACTERISTICS
FLORIDA 2001**

	Education of Mother							
	<12		12		>12			
Complete*	179	79.6%	307	85.0%	457	90.3%		
Incomplete**	46	20.4%	54	15.0%	49	9.7%		

	Age of Mother							
	<20		20-24		25-29		30+	
Complete*	122	84.7%	230	81.6%	243	85.6%	348	91.1%
Incomplete**	22	15.3%	52	18.4%	41	14.4%	34	8.9%

	Siblings in Family							
	3+		2		1		0	
Complete*	73	74.5%	132	84.1%	314	86.0%	424	89.8%
Incomplete**	25	25.5%	25	15.9%	51	14.0%	48	10.2%

	Marital Status			
	No		Yes	
Complete*	331	82.8%	612	88.4%
Incomplete**	69	17.3%	80	11.6%

	Trimester of Initiation of Prenatal Care					
	3rd		2nd		1st	
Complete*	33	86.8%	118	82.5%	792	86.9%
Incomplete**	5	13.2%	25	17.5%	119	13.1%

* 4 DTP, 3 OPV, 1 MMR

** Includes 2 children with no shots

Table II

**IMMUNIZATION LEVELS OF TWO-YEAR-OLD CHILDREN
HIGH-RISK VS NON HIGH-RISK GROUP
FLORIDA 2001**

	Total	Complete*		Partial		No Shots	
		#	%	#	%	#	%
High-Risk	531	436	82.1%	95	17.9%	0	0.0%
Non-High-Risk	561	507	90.4%	52	9.3%	2	0.4%

* 4 DTP, 3 OPV, 1 MMR