



Brief Report: Influenza Vaccination Coverage Among Children Aged 6--23 Months --- Six Immunization Information System Sentinel Sites, United States, 2005--06 Influenza Season

Beginning with the 2004--05 influenza season, the Advisory Committee on Immunization Practices (ACIP) recommended that all children aged 6--23 months receive influenza vaccinations annually ([1](#)). Other children recommended to receive influenza vaccinations include those aged 6 months--18 years who have certain high-risk medical conditions, those on chronic aspirin therapy, those who are household contacts of persons at high risk for influenza complications, and, since 2006, all children aged 24--59 months ([1](#)). Previously unvaccinated children aged <9 years need 2 doses administered at least 1 month apart to be considered fully vaccinated ([1](#)). This report assesses influenza vaccination coverage among children aged 6--23 months during the 2005--06 influenza season by using data from six immunization information system (IIS) sentinel sites. The findings demonstrate that vaccination coverage with 1 or more doses varied widely (range: 6.6% to 60.4%) among sites, with coverage increasing from the preceding influenza season in four of the six sites. However, <23% of children in five of the sites were fully vaccinated, underscoring the need for increased measures to improve the proportion of children who are fully vaccinated.

This report is based on data from IISs, which are confidential, computerized systems that maintain vaccine administration information and have other important capabilities (e.g., vaccine management, adverse event reporting, assistance in disease surveillance activities, and linkages with electronic data sources). CDC collaborates with IIS sentinel sites in five states (Arizona, Michigan, Minnesota, Montana, and Oregon) and the District of Columbia to promote population-based analysis of IIS data for immunization program assessment and evaluation. The sites represent geographically contiguous counties or census tracts for which IIS data are collected on $\geq 10,000$ children aged <6 years, representing >95% of the population in that age group in that area. Sentinel sites also have approximately 90% of the vaccine provider locations in the geographic area as IIS participants.

Vaccination coverage was estimated for September 1, 2005--March 31, 2006, among children who were aged 6--23 months during the entire period (i.e., children born during April 1, 2004--March 1, 2005). Two measures of vaccination coverage were reported: 1) receipt of 1 or more doses of influenza vaccine during September 2005--March 2006 and 2) receipt of 2 or more doses of influenza vaccine (i.e., fully vaccinated). Children were considered fully vaccinated if they had 1) received no dose of influenza vaccine before September 1, 2005, but then received 2 doses during September 1, 2005--March 31, 2006, or 2) received 1 or more doses of influenza vaccine before September 1, 2005, and then received 1 or more additional doses during September 1, 2005--March 31, 2006.

Vaccination coverage with 1 or more doses among children aged 6--23 months ranged from 6.6% to 60.4% in the sentinel sites ([Table](#)). Percentages of children who were fully vaccinated ranged from 2.3% to 43.4%. Compared with the 2004--05 influenza season ([2](#)), vaccination coverage with 1 or more doses increased at four sentinel sites and decreased at two sites ([Table](#)). The percentage of children who were fully vaccinated remained the same at one sentinel site, decreased at

one site, and increased at four sites.

National Immunization Survey (NIS) estimates for the 2005--06 influenza season are not yet available; however, previous IIS estimates of influenza vaccination coverage among children have been similar to NIS results ([Table](#)) ([3](#)). During the 2005--06 season, the disparity in vaccination coverage among the IIS sentinel sites was likely a result of the degree of vaccine promotion in each locale and the likelihood of reporting the administered doses to the IIS. For example, health-care workers at Site F indicated that anecdotal evidence and previous NIS estimates suggest that the low reported vaccination coverage likely reflects underreporting of influenza vaccination to the IIS rather than the actual coverage.

Although limitations exist regarding the use of IIS data, state health departments should consider the IIS as a means for rapidly assessing influenza vaccination coverage. Prompt reporting of influenza vaccinations to the IIS can enable local or statewide assessments during the current influenza season, aiding measures to increase the proportion of fully vaccinated children.

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References

1. [CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices. MMWR 2006; 55\(No. RR-10\).](#)
2. Zimmerman L, Bartlett D, Gosney K, Enger K, Williams W. Influenza vaccination coverage among children aged 6--23 months, 2004--2005: data from immunization information system sentinel site projects [Abstract 47]. Proceedings and abstracts of the 40th National Immunization Conference; March 6--9, 2005; Atlanta, GA.
3. [CDC. Childhood influenza-vaccination coverage---United States, 2004--05 influenza season. MMWR 2006;55:1062--5.](#)

Table

TABLE. Influenza vaccination coverage levels among children aged 6--23 months — six immunization information system (IIS) sentinel sites (2004--05 and 2005--06 influenza seasons) and National Immunization Survey (NIS) (2004--05 influenza season), United States

IIS sentinel site	2004--05 influenza season						2005--06 influenza season	
	1 or more doses of influenza vaccine			Fully vaccinated			1 or more doses of influenza vaccine	Fully vaccinated
	IIS sentinel sites	NIS		IIS sentinel sites	NIS		IIS sentinel sites	IIS sentinel sites
	%	%	(95% CI)*	%	%	(95% CI)	%	%
A	30.0	26.7	(21.0--32.4)	13.1	12.4	(8.4--16.4)	38.5	22.6
B	34.5	33.9	(26.4--41.4)	15.4	18.7	(12.9--24.5)	38.9	20.4
C	26.5	32.5	(24.4--40.6)	11.4	16.9	(10.4--23.4)	33.4	17.9
D	47.6	50.6	(41.1--60.1)	18.5	25.1	(16.9--33.3)	42.9	5.7
E	35.6	30.3	(22.0--38.6)	18.5	13.1	(7.3--18.9)	60.4	43.4
F	8.2	31.1	(23.3--38.9)	2.1	12.2	(7.1--17.3)	6.6	2.3

* Confidence interval.

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Date last reviewed: 12/13/2006

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