Mississippi State Department of Health

Mississippi Morbidity Report

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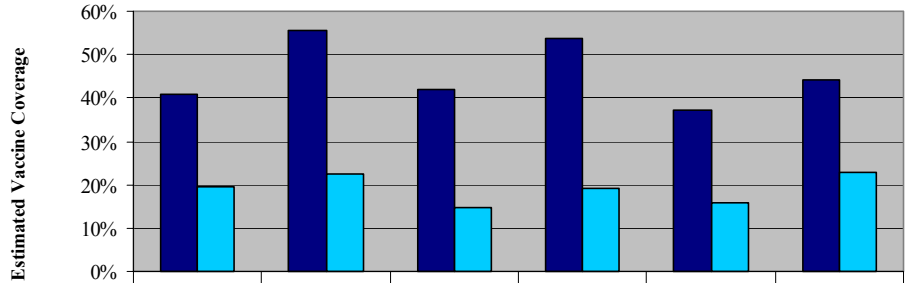
Adolescent Vaccines in Mississippi—An Opportunity for Improvement

Introduction: Since 2006, the Centers for Disease Control and Prevention (CDC) has conducted the National Immunization Survey—Teen (NIS-Teen) in order to estimate vaccine coverage in adolescents aged 13-17 years. The survey highlights the three routinely administered adolescent vaccines: meningococcal conjugate vaccine (MenACWY, 1 dose); tetanus, diphtheria, acellular pertussis (Tdap, 1 dose); and for females, human papillomavirus (HPV, 3 doses).

On August 20, 2010, the CDC issued a report discussing the most recent adolescent vaccine rates in the United States for 2009. The report illustrates the wide variability among vaccine coverage estimates for each of the 50 states. Mississippi had the lowest rates in the 2009 survey for Tdap, MenACWY and HPV coverage for this age group. However, increases in coverage estimates were noted in Mississippi in 2009 when compared to the estimates in 2008 (Figure).

Figure

Estimated Vaccination Coverage Among Adolescents for Selected Vaccines, US and Mississippi: 2008 and 2009 NIS-Teen Survey



	≥1 Tdap		≥1 MenACWY		≥1 HPV	
	2008	2009	2008	2009	2008	2009
US	40.80%	55.60%	41.80%	53.60%	37.20%	44.30%
Mississippi	19.60%	22.60%	14.80%	19.30%	15.80%	22.90%

The low coverage estimates for Mississippi present an opportunity for both the Mississippi State Department of Health (MSDH) and primary care physicians caring for adolescents. In the upcoming school year, MSDH is initiating an "Adolescent School Based Immunization Program" to increase the opportunity for and availability of these three vital immunizations. Personnel from each of the nine Public Health Districts in the state will be working with selected schools in each county to schedule school based vaccine clinics to provide all adolescents the three recommend vaccines (with consent from their parents), plus influenza vaccine during the fall and winter. The vaccinations will be given free of charge. Primary care physicians are invited tocontact their local District Health Office to volunteer and assist with this important initiative. Interested clinicians may also contact the MSDH Immunization Program at 501-576-7751.

An excerpt of the report and editorial notes is provided below. The full report may be accessed at: National, State, and Local Area Vaccination Coverage among Adolescents Aged 13--17 Years --- United States, 2009

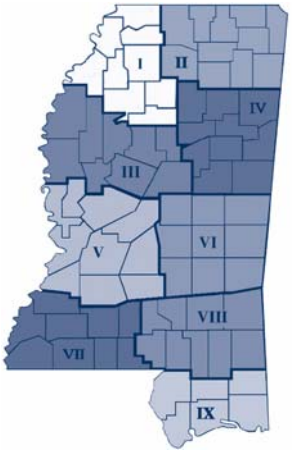
National, State, and Local Area Vaccination Coverage among Adolescents Aged 13--17 Years --- United States, 2009

The Advisory Committee for Immunization Practices (ACIP) recommends that adolescents routinely receive the following vaccines: meningococcal conjugate (MenACWY, 1 dose); tetanus, diphtheria, acellular pertussis (Tdap, 1 dose); and (for females) human papillomavirus (HPV, 3 doses). Adolescents also should receive the following recommended vaccinations they missed during childhood: measles, mumps, rubella (MMR, 2 doses); hepatitis B (HepB, 3 doses); and varicella (VAR, 2 doses). Since 2006, CDC has conducted the National Immunization Survey--Teen (NIS-Teen) to estimate vaccination coverage among adolescents aged 13--17 years. This report summarizes results from 2009 NIS-Teen and updates data from 2008 NIS-Teen. Comparing 2009 with 2008, vaccination coverage among adolescents for the three routinely administered adolescent vaccines increased for Tdap (from 40.8% to 55.6%), MenACWY (from 41.8% to 53.6%), ≥1 dose of HPV (from 37.2% to 44.3%), and ≥3 doses of HPV (from 17.9% to 26.7%). Vaccination coverage varied widely among states; four states (Connecticut, Massachusetts, New Hampshire, and Rhode Island) had coverage of >60% for all three of the routinely administered adolescent vaccines (Tdap, MenACWY, and HPV). Nationally, *Healthy People 2010* vaccination objectives of 90% coverage among adolescents aged 13--15 years were met for ≥3 doses of HepB and ≥1 dose of VAR. Coverage with routine adolescent vaccines is increasing; however, more effort, including identification and dissemination of successful state-based practices, is needed to continue to increase the number of adolescents vaccinated according to ACIP recommendations.

Coverage estimates varied by state and local area with rates ranging from 22.6% (Mississippi) to 76.6% (Colorado) for ≥1 doses of Tdap, from 19.3% (Mississippi) to 78.3% (District of Columbia) for ≥1 dose of MenACWY, and from 22.9% (Mississippi) to 69.0% (Massachusetts) for ≥1 dose of HPV. Four states (Connecticut, Massachusetts, New Hampshire, and Rhode Island) had coverage of >60% for all three routinely administered adolescent vaccines (Tdap, MenACWY, and HPV). Many states had a ≥15 percentage point increase from 2008 to 2009 in coverage for ≥1 dose of Tdap, ≥1 dose of MenACWY, or ≥1 dose of HPV.

Editorial Note: In 2009, vaccination coverage among adolescents aged 13--17 years increased substantially. As in 2008, adolescent vaccination coverage in 2009 also continued to vary widely among states and local areas, a variation that might be explained, in part, by different vaccination-promoting initiatives. Some of these initiatives include communication campaigns, strong partnerships with local professional organizations, universal funding of adolescent vaccinations, and middle school entry vaccination requirements. During the 2009--10 school year, for entry to middle school, 27 states required Tdap, seven required MenACWY, and two had requirements for HPV with opt-out provisions. Evaluation of vaccination-promoting initiatives, vaccine financing policies, and school requirements regarding Tdap, MenACWY, and HPV are ongoing and are needed to understand their impact on adolescent vaccination to promote effective state-based practices.

Although ≥1 dose HPV coverage was higher among Hispanics compared with whites in 2008, no racial/ethnic differences for HPV initiation were observed in 2009. However, whites had higher completion rates compared with blacks and Hispanics, emphasizing that efforts are needed to ensure administration of 3 doses. Similar to 2008, a higher percentage of adolescent females living below the poverty level had initiated the HPV series than those living at or above poverty level. Although the ACIP-recommended age for HPV vaccination is 11 or 12 years, HPV coverage was higher among older compared with younger adolescent females in 2009. Some studies have found that parents and physicians prefer vaccinating older adolescent females, making education regarding HPV infection and the benefits of vaccination at the recommended age, before sexual activity begins, an important public health endeavor. Because of the complexity of factors associated with HPV vaccination, including sociodemographic characteristics, local vaccination funding and policies, and parental attitudes, further analyses are needed to understand how these factors affect HPV coverage. **(continued on back flap)**



Mississippi
Provisional Reportable Disease Statistics
July 2010

		Public Health District									State Totals*			
		I	II	III	IV	V	VI	VII	VIII	IX	July 2010	July 2009	YTD 2010	YTD 2009
Sexually Transmitted Diseases	Primary & Secondary Syphilis	1	2	2	3	12	1	0	2	5	28	27	124	119
	Total Early Syphilis	3	4	3	4	34	5	0	5	8	66	57	332	286
	Gonorrhea	53	40	63	27	149	54	25	48	43	502	707	3,575	4,388
	Chlamydia	191	116	213	137	426	146	143	153	183	1,708	2,084	12,806	14,015
	HIV Disease	6	5	5	0	11	0	2	3	9	41	45	273	336
Myco-bacterial Diseases	Pulmonary Tuberculosis (TB)	1	0	1	1	4	0	1	1	0	9	10	52	52
	Extrapulmonary TB	0	0	0	0	2	0	0	1	0	3	0	7	10
	Mycobacteria Other Than TB	1	3	4	3	11	1	1	2	7	33	30	249	187
Vaccine Preventable Diseases	Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0	0
	Pertussis	3	0	0	0	0	2	0	0	0	5	4	35	50
	Tetanus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0	0
	Measles	0	0	0	0	0	0	0	0	0	0	0	0	0
	Mumps	0	0	0	0	0	0	0	0	0	0	0	0	1
	Hepatitis B (acute)	0	0	0	0	1	0	0	0	1	2	5	20	17
	Invasive *H. influenzae* b disease	0	0	0	0	0	0	0	0	0	0	0	0	0
	Invasive Meningococcal disease	0	0	0	0	0	0	0	0	0	0	1	3	3
Enteric Diseases	Hepatitis A (acute)	0	0	0	0	0	0	0	0	0	0	1	0	7
	Salmonellosis	10	23	0	24	39	14	8	13	15	147**	160	416	431
	Shigellosis	1	0	1	1	1	2	0	0	2	8	7	25	25
	Campylobacteriosis	2	3	1	1	3	0	1	1	5	17	18	75	75
	E. coli O157:H7/HUS	0	0	0	0	0	0	0	0	0	0	0	9	6
Zoonotic Diseases	Animal Rabies (bats)	0	0	0	0	0	0	0	0	0	0	1	0	2
	Lyme disease	0	0	0	0	0	0	0	0	0	0	0	0	0
	Rocky Mountain spotted fever	0	0	0	0	1	0	0	0	0	1	1	2	9
	West Nile virus	0	0	0	0	0	0	0	0	0	0	14	1	15

*Totals include reports from Department of Corrections and those not reported from a specific District.

**Address unknown for one case.

Because adolescents are thought to be an important source of pertussis transmission, recent increases in pertussis cases exemplify the need to increase adolescent vaccination rates. In 2007, CDC launched a national campaign to promote parental awareness of adolescent vaccines and developed a program called It's Their Turn to support state health departments in their vaccination campaigns. The Vaccines for Children program provides free vaccine for children aged ≤18 years for families who might not be able to afford vaccine. However, additional strategies are needed to increase coverage among adolescents. Evaluation of vaccination policies and practices associated with higher coverage in certain states and areas can help characterize effective methods. Patient reminders by health-care providers can promote preventive health-care visits and vaccinations among adolescents. Urging the public and health-care providers to view every health visit as an opportunity for vaccination will decrease missed opportunities to provide vaccines. Additionally, exploration of using nontraditional settings to increase vaccination coverage (e.g., schools) should continue.

Coverage with Tdap and MenACWY differed by age. Lower Tdap coverage among older adolescents might be attributed to several factors. For example, many older teens had received Td before licensure of Tdap. Because a 5-year interval is recommended between receipt of Td and Tdap, these adolescents were not yet eligible to receive Tdap . Lower MenACWY coverage among older adolescents can be attributed to at least two factors: limited availability of the vaccine during the first 2 years of MenACWY production and fewer preventive health visits by adolescents as they get older, thus limiting the opportunities for catch-up vaccination.

The findings in this report are subject to at least three limitations. NIS-Teen is a landline telephone survey; although studies have shown no evidence of bias after adjusting sampling weights for noncoverage of households with no landline telephones in NIS-Teen, nonresponse and noncoverage bias might remain, leading to underestimation or overestimation of coverage rates . Second, underestimates of vaccination coverage might have resulted from the exclusive use of provider-verified vaccination histories because completeness of these records is unknown. Finally, estimates for particular states and local areas and for racial/ethnic populations should be interpreted with caution because of smaller sample sizes and wider confidence intervals. (References on request).