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2459. Meningococcal ACWY (MenACWY) Vaccination of Adolescents in the United States: How Compliant Are We With the Advisory Committee on Immunization Practices (ACIP) Recommendations?

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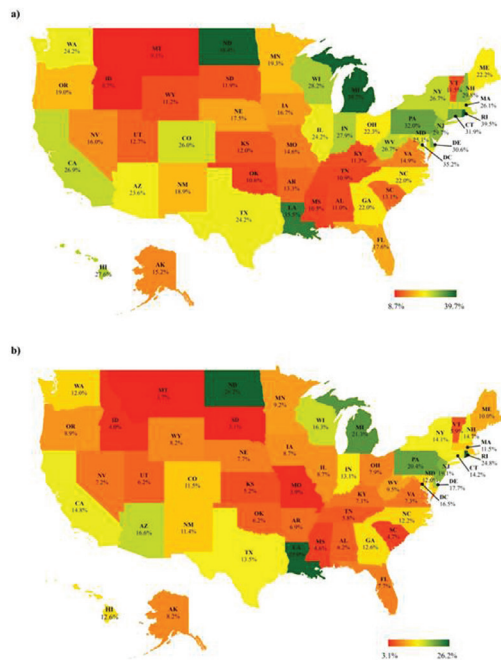
Background. Since 2011, ACIP guidelines for routine meningococcal ACWY vaccination (MenACWY) include a primary dose before age 16 (preferably at ages 11–12) and a booster dose (preferred age 16). Data on rates and drivers of meningococcal vaccination completion and compliance with ACIP recommendations down to state level are limited.

Methods. The 2011–2016 US National Immunization Survey-Teen data among adolescents aged 17 were used (GSK study identifier: HO-17-18202). National and state prevalence were estimated for MenACWY completion (receipt of primary dose at ages 11–15 and booster dose at age 16 or older) and compliance (receipt of primary dose at ages 11–12 and booster dose at age 16). Determinants such as state of residence, demographics, clinical/provider characteristics, vaccine mandates were assessed using multivariable logistic regression. Survey sampling weights were used to obtain population-based estimates.

Results. The estimated national average prevalence based on 2011–2016 data were 23.2% for MenACWY vaccine completion and 12.1% for compliance in US adolescents. Across states, prevalence varied from 8.7–39.7% for completion and 3.1–26.2% for compliance (Figure 1). Beyond state of residence, factors significantly associated with higher likelihood of both completion and compliance included being male, being up-to-date on other routine vaccines, having private or hospital-based vaccine providers (vs. public), and having >1 child in the household. Factors associated only with completion included having an 11- to 12-year-old well-child examination (OR [95% CI]: 1.5 [1.0–2.2]), >1 annual healthcare visit (2–5 vs. none) (1.4 [1.1–1.8]), and an existing state booster dose vaccine mandate (2.0 [1.5–2.8]) while factors associated with only compliance included history of asthma (1.3 [1.1–1.6]) and high-risk health conditions (1.4 [1.0–2.0]).

Conclusion. Adolescent completion and compliance rates for MenACWY vaccination in the United States are suboptimal, with significant variability across states. Determinants of completion and compliance with ACIP recommendations identified in this study may help guide clinical, policy, and educational interventions to promote healthcare access/utilization among adolescents in order to increase vaccine uptake.

Figure 1: MenACWY vaccination completion (a) and compliance (b). States with lowest and highest vaccination completion rates were Idaho and Michigan, respectively. States with lowest and highest vaccination compliance rates were South Dakota and North Dakota, respectively.



MenACWY, meningococcal vaccination against serogroups A, C, W and Y

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2460. Factors Associated With Uptake of Meningococcus B Vaccination After an ACIP Category B Recommendation

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Background. Two meningococcal vaccines (MenB) were licensed for 10–25 year olds in 2015 and given a Category B recommendation with a preferred window of 16–18 years old without high-risk comorbidity. Little is known about uptake of MenB after a Category B recommendation.

Methods. We conducted a retrospective cohort study of 16–23 year olds presenting to 31 primary care sites in a pediatric care network October 23, 2015–April 30, 2017. Using pivot tables and chi square analysis, we examined EHR data for associations between MenB receipt and patient/provider demographics (patient age, sex, race, insurance; provider years in practice), vaccinations, care site (urban vs. suburban), and high-risk comorbidity (asplenia, sickle cell, complement deficiency).

Results. Of 45,428 patients, 51% were female, 68% were 16–18 years old, and 21% received ≥1 MenB. 43% of those patients completed the 2-dose series. Rates of MenACWY booster receipt (32%) exceeded MenB, and 28% received both vaccines. A higher proportion of patients with ≥1 MenB were Asian, older, and privately insured (Table 1). More privately insured patients completed the series (48% vs. 26% Medicaid, $P < 0.001$). 22% of high-risk patients received MenB, similar to their peers. MenB receipt increased with provider years in practice but declined in those practicing >30 years (Table 1). MenB initiation varied widely between sites (1–45%).

Conclusion. MenB uptake in this cohort was low. Variation by site, provider years in practice, and potential sociodemographic disparity suggests that advice and acceptance in the setting of a Category B recommendation is not uniform. Further study is needed to clarify how these factors influence MenB receipt in teens.

Table 1: % 16–23 Year Olds With ≥1 MenB by Patient and Provider Characteristics

		Total (%) N = 45,428	% with ≥1 MenB N = 9,393	P-value
Sex	Female	23,167 (51)	21	0.31
	Male	22,261 (49)	21	
Age	16–18	31,307 (69)	18	<0.001
	19–23	14,121 (31)	28	
Race	White	26,280 (58)	27	<0.001
	Black	13,186 (29)	18	
	Asian	1,237 (27)	22	
Insurance	Medicaid	10,507 (23)	17	<0.001
	Private	34,854 (77)	22	
Vaccinations	MenACWY	14,753 (33)	28	
	HPV	10,007 (22)	21	
	Tdap	619 (1.4)	23	
Comorbidities	Sickle cell	543 (1.2)	22	
	Complement deficiency	3 (0.007)	33	
	Asplenia	19 (0.04)	42	
Prov. years in practice	≤10	7,564 (24)	16	<0.001
	11–20	9,205 (29)	18	
	21–30	9,330 (29)	19	
	>30	5,939 (17)	12	
Care site	Urban	9,845 (22)	21	0.09
	Suburban	35,583 (78)	20	

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2461. Safety of Quadrivalent Meningococcal Polysaccharide Diphtheria Toxoid-Conjugate Vaccine in Adolescents

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