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Organizational strategies for Meningococcal B vaccination in adolescents in Italy

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Background. Invasive Meningococcal Disease (IMD) is a severe and unpredictable condition associated with a substantial clinical, economic, and social burden, particularly among young children and adolescents. In adolescents, behavioral patterns and social interactions facilitate meningococcal transmission, making this age group a key epidemiological reservoir. Following the post-COVID-19 resurgence of IMD cases in Italy and the marked heterogeneity of regional vaccination policies, ensuring sustained protection has become increasingly important. This study aimed to analyze regional Meningococcal B (Men B) vaccination strategies for adolescents in Italy, including both vaccine-naïve individuals and those vaccinated during infancy, in order to identify organizational challenges and public health implications.

Materials And Methods. Official institutional documents, including Regional Vaccination and Immunization Plans, Regional Vaccination Schedules, and Regional Health Authority circulars, were reviewed for all Italian Regions to identify those that had implemented Men B vaccination for adolescents as of January 1, 2026. Data were geographically mapped to describe regional distribution. Two SWOT analyses were also conducted to compare vaccination strategies for adolescents previously immunized during infancy: homologous booster vaccination and heterologous revaccination.

Results. Men B vaccination for adolescents in Italy has progressively expanded but remains highly heterogeneous across Regions. Since 2019, Basilicata, Calabria, Campania, Lazio, Puglia, and Sicily have offered vaccination at 11–12 years of age. Following the National Immunization Prevention Plan (PNPV) 2023–2025, Lombardy, Marche, Molise, Sardinia, and Tuscany adopted the same target age, whereas Emilia-Romagna, Liguria, Trentino-Alto Adige, and Veneto introduced vaccination at 14 years. Several Regions still do not offer adolescent Men B vaccination. Among individuals vaccinated during infancy, Sicily has implemented heterologous revaccination, whereas six Regions recommend a homologous booster; the remaining Regions provide no additional dose. SWOT analysis identified organizational and immunological advantages for the homologous booster strategy despite its off-label use. Heterologous revaccination represents an on-label approach with the potential to broaden antigenic immune responses, although it requires a two-dose schedule and may reduce vaccine adherence.

Conclusions. Men B vaccination strategies for adolescents in Italy remain highly heterogeneous. The lack of a standardized national approach may compromise equitable access to vaccination and, consequently, vaccination coverage. National institutional coordination to harmonize vaccination schedules and booster policies would support more consistent and equitable protection across the country.

References. Italian Ministry of Health. National Immunization Prevention Plan (PNPV) 2023–2025. Rome: Ministry of Health; 2023. European Centre for Disease Prevention and Control. Invasive meningococcal disease. Annual Epidemiological Report. Stockholm: ECDC; 2024. World Health Organization. Defeating meningitis by 2030: global road map. Geneva: World Health Organization; 2021.