GRADE Table 02. Efficacy of a two dose schedule of MenA conjugate vaccination in immunocompetent children (3 to 9 months of age) against serogroup A meningococcal disease

Population: Immunocompetent children aged 3–9 months
Intervention: Two doses of MenA conjugate vaccine (5 µg dosage)
Comparison: No MenA vaccination
Outcome: Serogroup A meningococcal disease

What is the scientific evidence concerning the efficacy of two doses of MenA conjugate vaccination (versus no Men A vaccination) against serogroup A meningococcal disease in immunocompetent children aged 3–9 months?				
			Rating	Adjustment to rating
Quality Assessment	No. of studies/starting rating		1/ RCT[1]	4
	Factors decreasing confidence	Limitation in study design	None serious	0
		Inconsistency	None serious	0
		Indirectness	None serious[2]	0
		Imprecision	None serious	0
		Publication bias	None serious	0
	Factors increasing confidence	Large effect	Not applicable	0
		Dose-response	Not applicable	0
		Antagonistic bias and confounding	Not applicable	0
	Final numerical rating of quality of evidence			**4**
Summary of Findings	**Statement on quality of evidence**			We are very confident that the true effect is close to the estimated effect on health outcome.
	Conclusion			We are very confident that the administration of two doses of MenA conjugate vaccine (5 µg dosage) in children aged 3–9 months prevents serogroup A meningococcal disease.

[1] The phase II double blind, randomized PsA-TT-004 clinical study in Ghana evaluated three dosages of the MenAfriVac vaccine (10 µg, 5 µg, and 2.5 µg) in 1200 healthy infants and young children. The MenA conjugate vaccine was co-administered with other vaccines routinely administered in this age group. The study was designed to assess non-inferiority of immunogenicity of lower dosages as compared to MenAfriVac (10 µg dosage). The study evaluated multiple schedules, including a 2-dose schedule at 14 weeks and 9 months of age. 99.4% of children seroconverted after 28 days following the second dose of MenAfriVac 5 µg under the 2-dose schedule. The MenAfriVac 5 µg was non-inferior to MenAfriVac 10 µg after the first and second doses in terms of seroconversion and there were no differences in antibody GMTs between the dosage groups.

[2] In the PsA-TT-004 trial, immunogenicity was measured instead of clinical endpoints. As the efficacy of MenAfriVac is well-established, the evaluation of efficacy in these trials was based on non-inferiority to bactericidal antibody levels induced by MenAfriVac. Serum capsular bactericidal antibodies correlate to protection and can be considered a valid surrogate marker of protection. Therefore, it was decided not to downgrade.

Reference List

1. PsA-TT-004 In Meningitis Vaccine Project and Partners. *Results from the MenA conjugate vaccine (PsA-TT) randomized controlled trials in infants and young children: Executive summary.* Geneva, World Health Organization, 2014 (http://www.who.int/immunization/sage/meetings/2014/october/3_MenA_vaccine_trials_SAGE_01Oct2014.pdf?ua=1, accessed November 2014).
2. Data to be published: Meningitis Vaccine Project. Protocol No. PsA-TT-004. Final version 1- 30 October 2007-Amendment 1- 15 May 2008- Amendment 2- 23 September 2010.