

GRADE table 1 on the use of a fractional dose 17DD YF vaccine via regular route of administration

Population : Immunocompetent individuals

Intervention : Fractional dose 17DD YF vaccine administered by subcutaneous or intramuscular route within a YF vaccination campaign

Comparison : Full dose of 17DD YF vaccine

Outcome : Cases of YF in outbreak settings

In immunocompetent individuals, does a fractional dose administered via regular route of administration prevent YF disease?				
		Rating		Adjustment to rating
Quality Assessment	No. of studies/starting rating		1/RCT 2/Observational ¹	4
	Factors decreasing confidence	Limitation in study design	Serious	0
		Inconsistency	None serious	0
		Indirectness	Serious ²	-1
		Imprecision	Not 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			3
Summary of Findings	Statement on quality of evidence			Evidence supports a moderate level of confidence that the true effect lies close to that of the estimate of effect on health outcome.
	Conclusion			In outbreak setting, using a fractional dose of 17DD YF vaccine via regular route of administration in vaccination campaign may be warranted to mitigate the risk of YF disease individuals and discontinue further spread of the virus.

References

- Martins RM, Maia MDLS, Farias RHG, Camacho LAB, Freire MS, Galler R, et al. A double blind, randomized clinical trial of immunogenicity and safety on a dose-response study 17DD yellow fever vaccine. *Human Vaccines & Immunotherapeutics* 2013; 9: 879–88.
- Campi-azevedo AC, Estevam PDA, Coelho-dos-reis JG, Peruhype-magalhães V, Villela-rezende G, Quaresma PF, et al. Subdoses of 17DD yellow fever vaccine elicit equivalent virological / immunological kinetics timeline. *BMC Infect Dis* 2014; 14: 391.
- Lopes O de S, Guimarães SDA, de Carvalho R. Studies on yellow fever vaccine. III-Dose response in volunteers. *J Biol Stand* 1988; 16: 77-82.
- Mihigo R. Feedback from the yellow fever mass vaccination campaign using fractional dose Kinshasa, Democratic Republic of Congo 17-26 August, 2016. Presented at SAGE, 20 October 2016. Available at <http://www.who.int/immunization/sage/meetings/2016/october/Session11-Part2-Feedback-from-the-yellow-fever-mass-vaccination-campaign-using-fractional-dose.pdf>

¹ Although numerical GRADing is based on the RCT, two observational studies also support the conclusion.

² Administered to healthy male volunteers only; Immunogenicity data only; Study results stem from one WHO prequalified YF vaccine and might not be extrapolated to the other WHO prequalified vaccines; Potency of the vaccine may vary by batch and time of administration.