

1055. Antibody Response to Intradermal and High Dose Influenza Vaccine in 2012-13 Among Adults Who Did and Did Not Respond to Standard Dose Vaccine in 2011-12

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Background. We compared antibody responses to influenza vaccine in adults ≥ 50 years old in two consecutive seasons. In 2011-12, all participants received trivalent inactivated influenza vaccine (IIV3). In 2012-13, those age 50-64 received intradermal (ID) and those age ≥ 65 received high-dose vaccine (HD). In 2012-13, the WHO-recommended vaccine strains were modified for H3N2 and B.

Methods. Participants were recruited in 2011 and vaccinated in the fall of 2011 and 2012. In both years, pre- and post (21-28 days)-vaccination sera were tested for antibody response to vaccine [measured by hemagglutination inhibition (HI) titer]. We compared geometric mean titers (GMT) and titer fold rise from pre- to post-vaccination in 2012, among 2011-12 responders (≥ 4 -fold rise in HI titer from pre- to post-vaccination) and 2011-12 non-responders (< 4 -fold rise in HI titer) to the corresponding vaccine strain.

Results. 183 adults received IIV3 in 2011 and either HD (N = 82) or ID (N = 101) in 2012. For the 2011-12 vaccine, 56 (31%) responded to the H1N1 strain, 68 (37%) responded to H3N2, and 28 (15%) responded to B. Among HD recipients, post-vaccination GMT for H3N2 was higher among 2011-12 responders vs non-responders ($p = 0.04$). Fold rise did not differ significantly for any vaccine strains between responders vs non-responders.

Strain	2012-13 Response	HD recipients		ID recipients	
		2011-12 Non-responders	2011-12 Responders	2011-12 Non-responders	2011-12 Responders
H1N1	Post-vaccination GMT (IQR)	93 (57, 160)	128 (80, 320)	78 (40, 226)	105 (40, 160)
	Median fold rise (IQR)	4 (2, 8)	4 (1, 8)	2 (1, 4)	2 (2, 4)
H3N2	Post-vaccination GMT (IQR)	154 (80, 320)*	242 (160, 452)	120 (57, 320)	118 (40, 226)
	Median fold rise (IQR)	4 (2, 8)	4 (2, 11)	2 (1, 4)	2 (1, 8)
B	Post-vaccination GMT (IQR)	185 (80, 320)	180 (80, 320)	137 (80, 320)	163 (80, 320)
	Median fold rise (IQR)	3 (1, 8)	2 (2, 11)	2 (1, 6)	3 (1, 16)

* $p < 0.05$ for comparison of 2011-12 responders and non-responders.

Conclusion. Prior response to 2011-12 vaccine antigen was not associated with response to the new H3N2 or B antigens in 2012-13, nor was it associated with response to the H1N1 antigen used in both the 2011-12 and 2012-13 vaccines.

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