Abstract title: Exploring the effect of PCV-10 on otitis media hospitalisation in New Zealand

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Background: Otitis media is a common cause of hospitalisation among young children. Between 2006 and 2012 there were 20,569 otitis media related hospitalisations among children born during the same interval in New Zealand. Among these children, the median age at time of first otitis media hospitalisation was 21 months (IQR: 13, 35). Otitis media hospitalisation occurs most commonly among Pacific and Maori children and the rate of otitis media hospitalisation increases with increasing deprivation. Conjugate pneumococcal vaccines have the potential to reduce the burden of hospitalisation.
Methods: We performed a retrospective cohort study by linking data from three national administrative health data sets. Infants born between July 2011 and June 2012 were followed until the first of hospitalisation for otitis media or turning one year of age. Poisson regression was used to compare rates of otitis media hospitalisation among infants who received various combinations of the conjugate pneumococcal vaccines PCV-7 and PCV-10.
Results: Preliminary results showed that among infants born between July-December 2011, the rate of hospitalisation for otitis media was greater than 1,100 per 100,000 person-years. Those infants who received three doses of PCV-7 were 1.56 (95% CI: 1.08, 2.27) times as likely to be hospitalised for otitis media compared to infants who received three doses of PCV-10. We will present updated results from an expanded infant cohort.