Association of non-type b \textit{Haemophilus influenzae} with HIV

We were interested to read the article by von Gottberg et al. describing surveillance for \textit{Haemophilus influenzae} infections in South Africa and the impact of \textit{H. influenzae} type b (Hib) vaccine.\textsuperscript{1} The association of non-type b \textit{H. influenzae} with HIV in their report was striking: 94\% of isolates that were non-typable, and 100\% of isolates with serotypes other than b, were from HIV-positive children.

In our own evaluation of the effectiveness of Hib vaccine in children aged < 5 years in a district in Kenya,\textsuperscript{2} we saw a similar association between non-type b \textit{H. influenza} and HIV. Among 22 children with non-type b invasive \textit{H. influenza} infections, 10 were HIV-positive, while among 54 children with invasive Hib infections, 8 were HIV-positive (OR 4.8, 95\% confidence interval 1.3–17.1). The 22 non-Hib \textit{H. influenzae} isolates included 9 that were of other serotypes (5 type a, 1 type c, 1 type e, and 2 type f), 4 of which were from children with HIV, and 13 non-typable isolates, 6 of which were from children with HIV. The ORs for the association of other \textit{H. influenza} types and non-typable \textit{H. influenza} with HIV when compared to Hib were 4.6 and 4.9, respectively. It is unlikely that short-term replacement of Hib disease with non-type b \textit{H. influenzae} disease was occurring in Kenya because the surveillance at our study site was consistent over the study period and we did not detect an increase in non-type b \textit{H. influenzae} disease cases after vaccine introduction.

These data show that the association of non-type b \textit{H. influenzae} with HIV is approximately 5 times stronger than that between Hib and HIV. As the use of Hib vaccine spreads throughout Africa and other regions where HIV prevalence is high, HIV-positive children represent a sensitive population in which to monitor for replacement disease with \textit{H. influenzae} of serotypes other than type b.

\textbf{Karen Cowgill\textsuperscript{a} \& J Anthony G Scott\textsuperscript{b}}

\textsuperscript{a} Infectious Disease Research Institute, 1124 Columbia St., Seattle, WA 98104, USA. Correspondence to Karen Cowgill (e-mail: kdc29@cornell.edu).

\textsuperscript{b} Wellcome Trust/Kenya Medical Research Institute and University of Oxford.

\textbf{References}
