

# Revaccination could benefit HIV-infected children

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HIV-infected children receiving highly active antiretroviral therapy (HAART) may require revaccination to maintain immunity against preventable diseases. There remains no standard or official recommendation on revaccination of children receiving HAART, an effective intervention in reducing morbidity and mortality in HIV-infected children. Researchers at the Johns Hopkins Bloomberg School of Public Health reviewed published data to assess these children's immune responses to vaccines and found that most children treated with HAART remained susceptible to vaccine-preventable diseases, but responded well to revaccination. Their review was published in the September issue of the *Lancet Infectious Diseases*.

"Most children on HAART responded to revaccination, although immune reconstitution was not sufficient to ensure long-term immunity for some children," said William Moss, MD, MPH, senior author of the review and an associate professor with the Bloomberg School's Department of Epidemiology. "Because of the progressive effects of [HIV](#) infection on the ability of the immune system to mount an effective response, many infected children have poorer responses to vaccines than do uninfected children. In addition, fewer children infected with HIV achieve protective immunity, and those who do might experience greater and more rapid waning of immunity. These results suggest that children on HAART would benefit from revaccination, but levels of protective immunity might need to be monitored and some children may need additional [vaccine](#) doses to maintain protective immunity."

Researchers reviewed 38 published studies to establish whether children infected with HIV on HAART have protective immunity to vaccine-preventable diseases and to assess short-term and long-term immune responses to vaccination of children given HAART. Short-term was defined as less than or equal to 3 months, and long-term was

defined as greater than 3 months. They found that starting HAART in infancy, before receipt of routine childhood vaccines, might preserve immunity to vaccine-preventable diseases. Currently, the World Health Organization (WHO) recommends giving most routine childhood vaccines to children infected with HIV, but does not make recommendations on revaccination.

"Continued efforts are needed to identify and treat HIV-infected children at younger ages and at earlier stages of disease," said Catherine Sutcliffe, PhD, lead author of the review and a research associate with the Bloomberg School's Department of Epidemiology. "Vaccination policies and strategies for children infected with HIV on HAART should be developed in regions of high HIV prevalence to ensure adequate individual and population immunity. Without such recommendations, as treatment programs scale up and more children receive HAART and live into adolescence and adulthood, a larger proportion of these children could be susceptible to childhood diseases."

"Do children infected with HIV receiving HAART need to be revaccinated?" was written by Catherine Sutcliffe and William Moss.

Provided by Johns Hopkins University

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