

PA-154 **RUBELLA SEROPREVALENCE AMONG HIV-INFECTED AND UNINFECTED ZAMBIAN CHILDREN AND ADOLESCENTS**

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Background Congenital rubella syndrome remains a significant cause of morbidity and mortality among children in sub-Saharan Africa. A safe and effective vaccine is available and many countries, including Zambia, plan to introduce the measles-rubella vaccine by 2020. HIV-infected youths may be an important group to consider as they may remain susceptible to rubella virus due to waning immunity. More information is needed in this age group to guide policy on catch-up rubella vaccination campaigns after introduction.

Methods This cross-sectional study was nested within ongoing studies of HIV and malaria in Southern Province, Zambia. Dried blood spot cards from children and youths 5–15 years of age enrolled in these studies from 2009–2013 were selected and tested for IgG antibodies to rubella virus. Antibody levels among HIV-uninfected youth, HIV-infected treatment-naïve youth, and HIV-infected youth receiving antiretroviral therapy (ART) were compared.

Results 617 HIV-uninfected, 144 HIV-infected treatment-naïve, and 128 HIV-infected youth receiving ART were included in the study. The proportion seropositive for rubella virus was significantly higher among HIV-uninfected youth (54.7%) compared to HIV-infected treatment-naïve youth (41.7%) and HIV-infected youth receiving ART (49.6%). The proportion of youth with equivocal results was significantly higher for the two groups of HIV-infected youth (treatment-naïve=11.8%; receiving ART=7.9%) compared to HIV-uninfected youth (1.1%). Within groups, the proportion seropositive increased with age. Other than age, no demographic or clinical characteristics were associated with susceptibility among HIV-infected youth.

Conclusions Our results suggest that HIV-infected youth would benefit from vaccination against rubella virus. Half of all youth in rural Zambia were susceptible to Rubella virus. When rubella vaccine is introduced, failure to target older girls in immunisation campaigns could lead to an increase in congenital rubella cases.