HPV vaccination in people living with HIV

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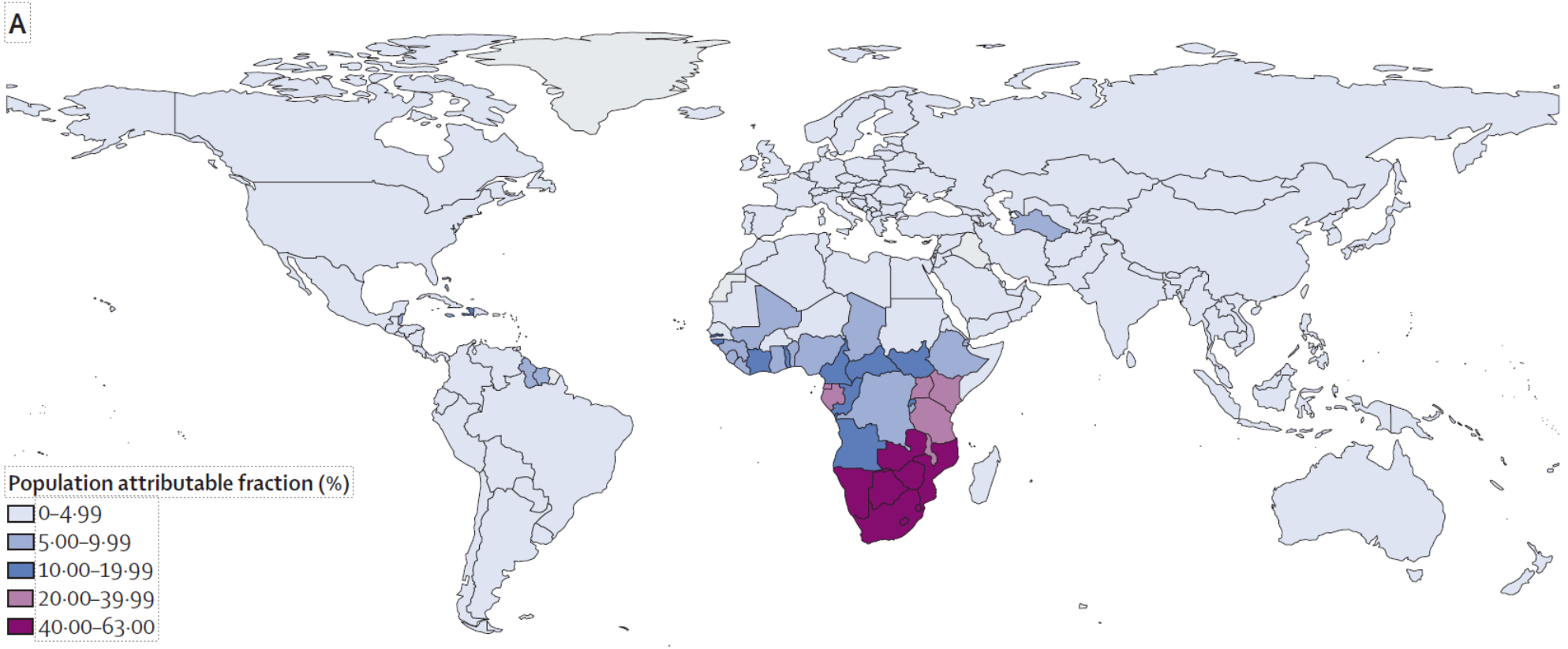
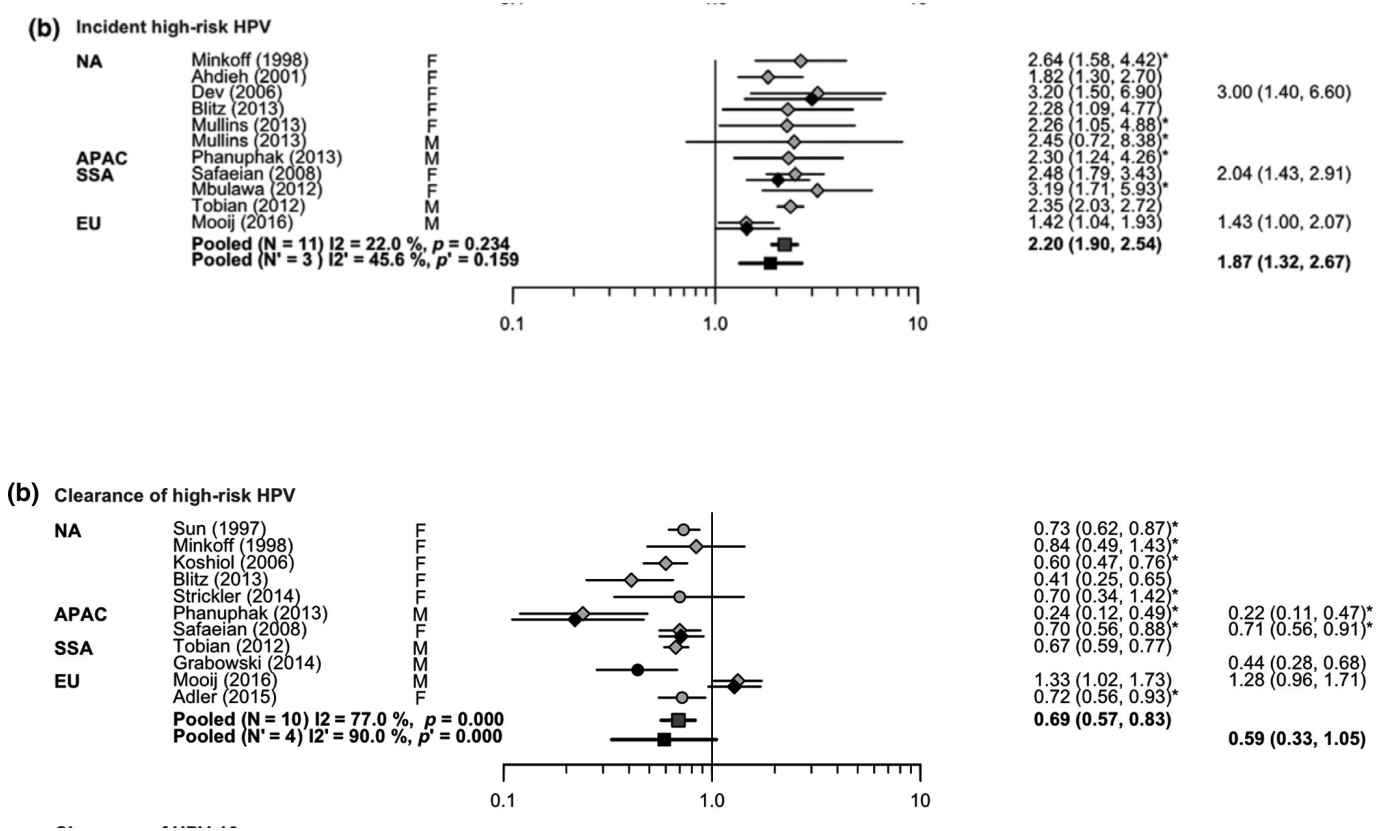
Women living with HIV have a 6-fold higher risk for cervical cancer



6 countries accounted for half of all women living with HIV who developed cervical cancer

Stelzle, Lancet Global Health 2021

HPV infection and HIV



Pe le li ing i h HIV ha e
- ↑HR HPV incidence
- ↓HR HPV clea ance
- M l i le HR HPV infec i n
- ↑ g e i n ne la ia
- Y nge age a e en a i n
- ↑ ec ence

Looker, JIAS 2018; Stelzle Lancet Global Health 2021; Kelly, AIDS 2017

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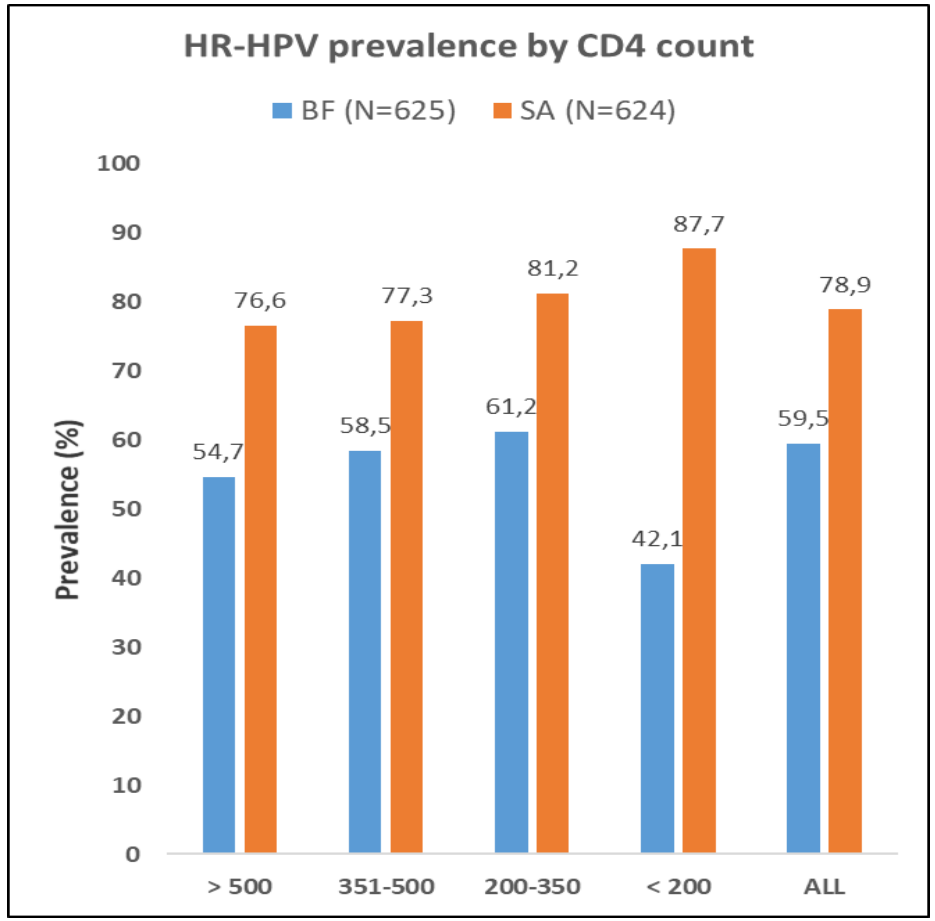
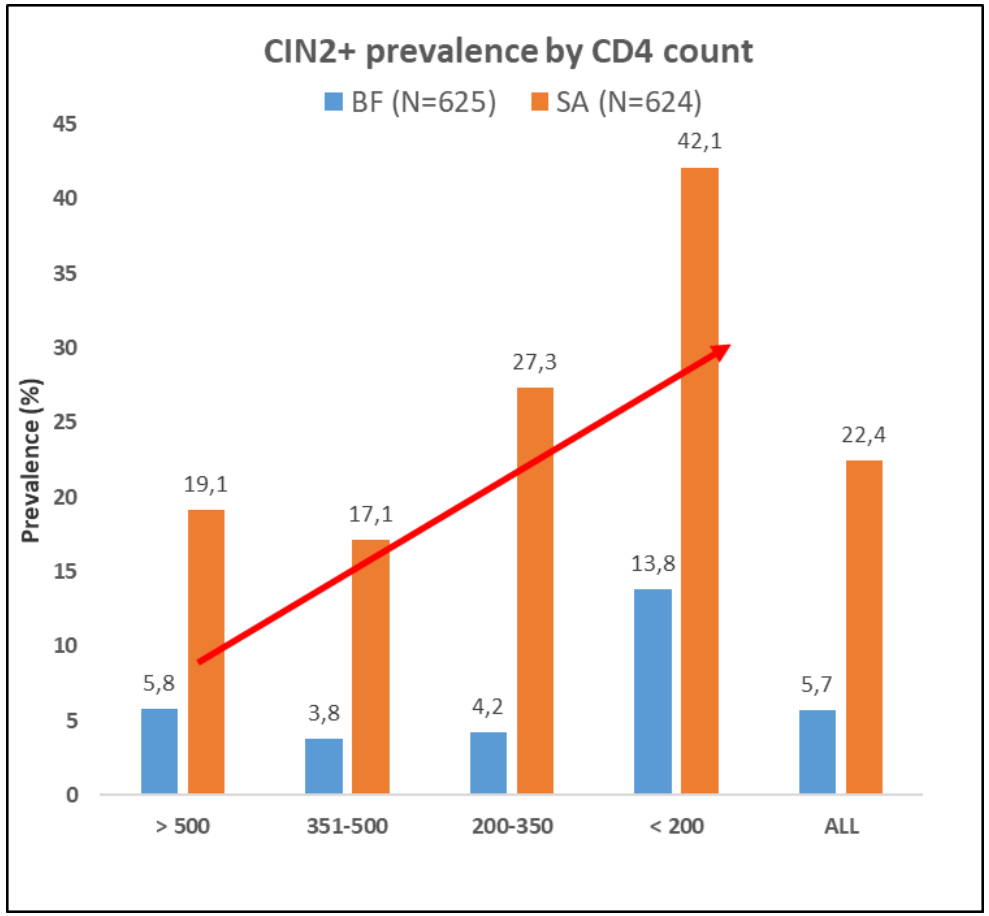
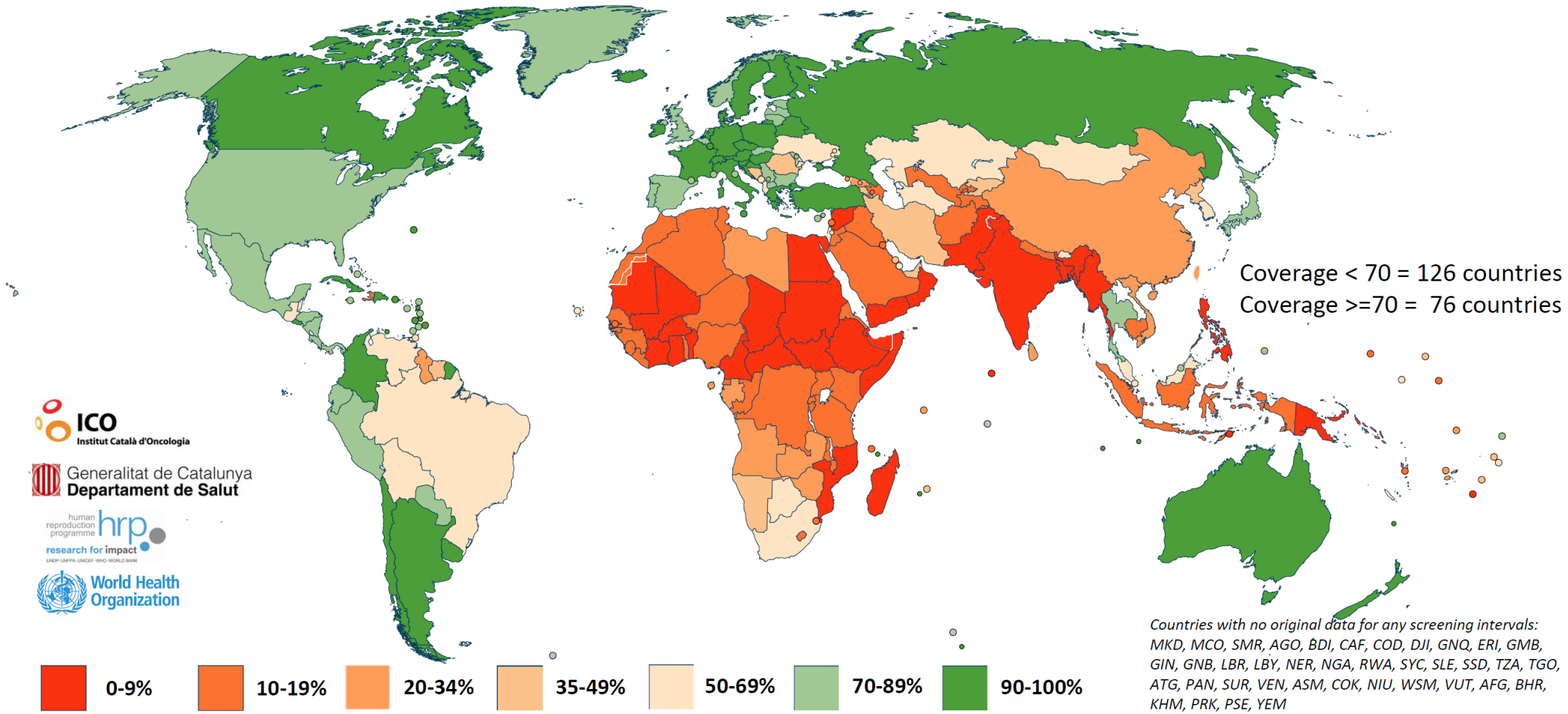




Kelly, AIDS 2017; Chikandiwa, Plos One 2018

Ever in lifetime screening coverage (2019), women aged 30-49y by country



ICO Institut Català d'Oncologia

Generalitat de Catalunya Departament de Salut

human reproduction programme hrp research for impact UNDP-UNFPA-UNICEF-WHO-WORLD BANK

World Health Organization

Countries with no original data for any screening intervals: MKD, MCO, SMR, AGO, BDI, CAF, COD, DJI, GNQ, ERI, GMB, GIN, GNB, LBR, LBY, NER, NGA, RWA, SYC, SLE, SSD, TZA, TGO, ATG, PAN, SUR, VEN, ASM, COK, NIU, WSM, VUT, AFG, BHR, KHM, PRK, PSE, YEM

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Vaccination of immunocompromised and/or HIV-infected individuals

Limited information is available about the immunogenicity of HPV vaccines in people who are immunocompromised and/or HIV-infected. Data on the use of HPV vaccines in a 3-dose schedule in HIV-infected females,[95, 96] males,[97] and children (aged 7–12 years)[98] are reassuring in terms of safety.[99]

Seroconversion against HPV types included in the vaccines, as well as non-vaccine types, was observed in HIV-infected children given HPV vaccines in a 3-dose schedule.[98, 100] In HIV-infected women, 3 doses of the bivalent vaccine induced lower GMTs than in HIV-uninfected women; however, the rate of seroconversion was the same in both groups.[101] The bivalent vaccine in a 3-dose schedule has similar immunogenicity to HPV-16 as the quadrivalent vaccine, but results in higher GMTs and higher rate of seroconversion to HPV-18 in HIV-infected adults.[102, 103, 104]

No data are available on use of the 2-dose schedule for bivalent, quadrivalent or nonavalent vaccines in persons infected with HIV.

WHO position paper, May 2017

Effectiveness of 7-Valent Pneumococcal Conjugate Vaccine Against Invasive Pneumococcal Disease in HIV-Infected and -Uninfected Children in South Africa: A Matched Case-Control Study

Cheryl Cohen,[1,2] Claire von Mollendorf,[1,2] Linda de Gouveia,[1] Nireshni Naidoo,[1,2] Susan Meiring,[3] Va

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Table 2. Effectiveness of 7-Valent Pneumococcal Conjugate Vaccine Against Invasive Pneumococcal Disease in HIV-Infected and -Uninfected Children by Pneumococcal Serotype

Outcome (No. of Cases/No. of Controls)	Unadjusted VE% (95% CI)	Adjusted VE% (95% CI)[a]
HIV-uninfected, ≥16 wk, ≥2 doses vs 0 doses		
PCV7 serotypes (48/194)	77 (40–91)	74 (25–91)
PCV7 serotypes plus 6A (71/289)	71 (35–87)	70 (28–88)
All serotypes (187/752)	35 (–13 to 63)	29 (–27 to 60)
Nonvaccine serotypes (101/403)	–56 (–315 to 41)	–76 (–384 to 36)
HIV-uninfected, ≥41 wk, ≥3 doses vs 0 doses		
PCV7 serotypes (23/86)	57 (–100 to 91)	90 (14 to 99)
PCV7 serotypes plus 6A (31/122)	47 (–109 to 87)	78 (–15 to 96)
All serotypes (89/353)	47 (–37 to 79)	63 (–1 to 87)
Nonvaccine serotypes (48/195)	2 (–433 to 82)	21 (–390 to 87)
HIV-infected, ≥16 wk, ≥2 doses vs 0 doses		
PCV7 serotypes (43/137)	15 (–145 to 71)	–12 (–449 to 77)
PCV7 serotypes plus 6A (60/188)	34 (–94 to 78)	29 (–174 to 81)
All serotypes (109/347)	31 (–42 to 67)	6 (–194 to 70)
Nonvaccine serotypes (44/136)	20 (–197 to 79)	–190 (–2997 to 73)
HIV-infected, ≥41 wk, ≥3 doses vs 0 doses		
PCV7 serotypes (28/86)	43 (–108 to 85)	57 (–371 to 96)
PCV7 serotypes + 6A (37/116)	53 (–49 to 85)	76 (–87 to 97)
All serotypes (68/223)	26 (–84 to 70)	46 (–122 to 87)
Nonvaccine serotypes (26/87)	–72 (–966 to 72)	76 (–166 to 318)

CID 2014