

Research news in clinical context

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VOLUNTARY MEDICAL MALE CIRCUMCISION CONTINUES TO BE A COST-EFFECTIVE HIV PREVENTION STRATEGY IN SUB-SAHARAN AFRICA

With increasing availability of antiretroviral treatment and HIV pre-exposure prophylaxis (PrEP), it was unclear whether male circumcision would continue to provide a cost-effective HIV prevention strategy in sub-Saharan Africa. Investigators used mathematical modelling to assess the cost-effectiveness from a healthcare provider perspective of continuing male circumcision for 5 years in men aged ≥ 15 years versus no further use in any age. The models examined regions and setting scenarios across sub-Saharan Africa, with a particular focus on Malawi, Zimbabwe and South Africa. HIV incidence in men was lower with the continuation of circumcision for 5 years in all settings and over 5, 20 and 50 years. Continuing circumcision was cost-effective in 68% of all settings considered, ranging from 62% of settings with HIV incidence >0.1 per 100 person-years in men aged 15–49 years to 95% of settings with incidence >1.0 per 100 person years. Circumcision maintains a role as a HIV prevention intervention.

Bansi-Matharu L, Mudimu E, Martin-Hughes R, *et al.* Cost-effectiveness of voluntary medical male circumcision for HIV prevention across sub-Saharan Africa: results from five independent models. *Lancet Glob Health.* 2023;11:e244–e255. Erratum in: *Lancet Glob Health.* 2023 Apr;11:e504.

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PUBLISHED IN *SEXUALLY TRANSMITTED INFECTIONS*, THE EDITOR'S CHOICE: SELF-COLLECTION OF SAMPLES FOR HPV DETECTION TO FACILITATE ACCESS TO TESTING AMONG MEN WHO HAVE SEX WITH MEN (MSM)

Investigators in China analysed HPV DNA detection among 211 HPV-unvaccinated MSM (median age 31 years; $n=4$ living with HIV), comparing results obtained with self-collected oral, penile and rectal swabs with those of clinician-collected samples. Overall, 103 HPV infections were detected by molecular testing, across all participants and anatomical sites, comprising 81/103 (79%) detected in self-collected samples and 91/103 (88%) detected in clinician-collected samples ($p=0.1227$). The level of agreement between self-collected and clinician-collected samples was assessed as moderate (kappa coefficient=0.67). Self-sampling provides an acceptable strategy to promote uptake of HPV testing.

Ni Y, Lu Y, He X, *et al.* Self-sampled specimens demonstrate comparable accuracy and consistency to clinician-sampled specimens for HPV detection among men who have sex with men in China. *Sex Transm Infect.* 2023;99:104–109.

THE 4CMENB MENINGOCOCCAL SEROGROUP B VACCINE HAS A GREATER IMPACT ON THE INCIDENCE OF GONORRHOEA THAN THE MENACWY VACCINE

The 4CMenB vaccine is made of detergent-extracted outer membrane vesicles of *Neisseria meningitidis* combined with three recombinant proteins (factor H binding protein, heparin-binding antigen, adhesin A), which might confer mucosal immunity against different *Neisseria* species, including *N. gonorrhoeae*.¹ In contrast, MenACWY conjugate vaccines are made from capsular polysaccharides of *N. meningitidis* groups A, C, W and Y. This study reviewed the electronic health records of young adults (15–30 years) attending an integrated healthcare organisation in the USA, comparing the incidence of gonorrhoea between recipients of 4CMenB ($n=6641$) and MenACWY ($n=26471$) matched by age, sex and year

of vaccination. The incidence of gonorrhoea per 1000 person-years was 2.0 (95% CI 1.3 to 2.8) among 4CMenB recipients vs 5.2 (4.6–5.8) among MenACWY recipients, with an adjusted HR of 0.54 (95% CI 0.34 to 0.86). Incidence of chlamydia did not differ by vaccine group. 4CMenB vaccine appears to confer partial protection against gonorrhoea.

Bruxvoort KJ, Lewnard JA, Chen LH, *et al.* Prevention of *Neisseria gonorrhoeae* with meningococcal B vaccine: A matched cohort study in Southern California [published correction appears in *Clin Infect Dis.* 2023 Jan 11]. *Clin Infect Dis.* 2023;76:e1341–e1349.

REASSURING EVIDENCE ON THE SAFETY OF STARTING ORAL HIV PREP IN THE SECOND TRIMESTER OF PREGNANCY

To generate safety data on oral HIV PrEP, an open-label trial in South Africa randomised healthy pregnant women (gestational week 14–28; median 19 weeks), to start daily tenofovir disoproxil fumarate (TDF) and emtricitabine (FTC) either immediately ($n=271$) or after completion of breast feeding ($n=269$). Based on pill counts, mean adherence in the immediate PrEP arm ranged between 87% at 4 weeks and 95% at 16 weeks after initiation. Four maternal HIV seroconversions occurred between randomisation and delivery (immediate arm $n=3$; deferred arm $n=1$). Among 500 women with reported pregnancy outcomes, the immediate PrEP arm did not have increased occurrence of preterm birth, small for gestational age infants or a composite adverse pregnancy outcome (any of preterm birth, low birth weight, stillbirth or small for gestational age) relative to the deferred arm. The study provides further reassurance on the safety of TDF/FTC in pregnancy. Oral HIV PrEP is now endorsed in South Africa.

Moodley D, Lombard C, Govender V, *et al.* Pregnancy and neonatal safety outcomes of timing of initiation of daily oral tenofovir disoproxil fumarate and emtricitabine pre-exposure prophylaxis for HIV prevention (CAP016): an open-label, randomised, non-inferiority trial. *Lancet HIV.* 2023;10:e154–e163.

HUMAN T LYMPHOTROPIC VIRUS TYPE 1 (HTLV-1) IS UNCOMMON AMONG HIV PREP USERS IN ENGLAND

HTLV-1 can be transmitted sexually and may cause adult T-cell leukaemia/lymphoma and myelopathy. Infection is associated with an increased risk of

all-cause mortality.² Prevalence is typically focal, but there are gaps in the epidemiological data, including for England. An anonymous seroprevalence study tested left-over serum or plasma samples collected for routine STI testing across eight HIV PrEP clinics in England. Among 2015 participants with documented PrEP use (95% male, 76% white, 8% born in an HTLV-endemic country, 39% with any bacterial STI in the previous year), there were no cases of HTLV-1 seropositivity. The findings are reassuring. In England, additional data are needed for other groups of PrEP users, individuals born in HTLV-endemic countries and people who inject drugs.

Bradshaw D, Khawar A, Patel P, *et al.* HTLV seroprevalence in people using HIV pre-exposure prophylaxis in England. *J Infect.* 2023;86:245–247.

MPOX HAS THE FEATURES OF A SEVERE OPPORTUNISTIC INFECTION IN PEOPLE WITH ADVANCED HIV INFECTION

People living with HIV accounted for 38%–50% of those affected by Mpox in the 2022 multicountry outbreak. This analysis of data from 19 countries reported on the features of Mpox among 382 people (96% men) with advanced HIV infection (CD4 count <350 cells/

mm³ or AIDS diagnosis). The occurrence of complications was higher at CD4 count <100 cells/mm³ (n=85) vs CD4 count >300 cells/mm³ (n=75), including necrotising skin lesions (54% vs 7%), lung involvement (29% vs 0%) and secondary infections and sepsis (44% vs 9%). Of the 107 (28%) hospitalised patients, 27 (25%) died and all deaths occurred in patients with CD4 count <200 cells/mm³. Among 85 people who started or restarted antiretroviral therapy, 21 (25%) experienced a suspected immune reconstitution inflammatory syndrome. A total of 62 (16%) patients received tecovirimat and 3 had laboratory confirmation of tecovirimat resistance. Mpox can present as a severe and even fatal necrotising form in the context of advanced immunosuppression.

Mitjà O, Alemany A, Marks M, *et al.* Mpox in people with advanced HIV infection: a global case series. *Lancet.* 2023;401:939–949.

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