Research news in clinical context

Joseph D. Tucker,1,2\* Monica Desai,3 Heather L. Armstrong4

1University of North Carolina at Chapel Hill, Chapel Hill, NC, USA

2Faculty of Infectious and Tropical Diseases, London School of Tropical Medicine and Hygiene, London, UK

3National Institute for Health and Care Excellence, London, UK

4School of Psychology, University of Southampton, Southampton, UK

\*Correspondence to Joseph D. Tucker, 130 Mason Farm Road, UNC Bioinformatics Building, Chapel Hill, NC 27599-7030, USA; Tel: 919-966-2536; Fax: 919-966-6714; jdtucker@med.unc.edu

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**Universal HIV test and treat intervention in African correctional settings**

While people who are incarcerated have a higher burden of HIV and other STIs, delivering sexual health services in correctional settings is difficult. A mixed methods cohort study examined the implementation of a universal test-and-treat intervention at ten correctional units (six for men, three for women, one for youth) in South Africa and Zambia. Same-day ART initiation, training and support, ensuring ART supply, and viral load monitoring among 975 inmates living with HIV. Median time from enrolment to ART initiation was zero days (IQR 0-8) and the proportion of people retained in care with viral load monitoring was high (94%, 327/346) among those still incarcerated at six months. This study demonstrates the feasibility of implementing comprehensive HIV interventions in selected settings.

Herce ME, Hoffmann CJ, Fielding K, et al. Universal test-and-treat in Zambian and South African correctional facilities: a multisite prospective cohort study [published online ahead of print, 2020 Aug 4]. *Lancet HIV*. 2020;S2352-3018(20)30188-0. doi:10.1016/S2352-3018(20)30188-0

**Therapeutic HIV vaccine sheds light on HIV remission in humans**

ART does not eliminate the HIV reservoir completely, suggesting the need for innovative therapies to achieve HIV remission. Several HIV remission studies have focused on people with acute HIV infection who have a smaller reservoir. A double blind two-arm placebo-controlled RCT of 27 people with acute HIV infection in Thailand gave a modified vaccinia therapeutic vaccine to examine safety and duration of viremic control after treatment interruption. The vaccine was well-tolerated and created strong immune responses. However, time to viral rebound was only moderately increased in the vaccine group (median 21 days, range 8-44 days) compared to the placebo group (15 days, range 10-164 days). Further research is needed to inform future study designs in HIV remission research.

Colby DJ, Sarnecki M, Barouch DH, et al. Safety and immunogenicity of Ad26 and MVA vaccines in acutely treated HIV and effect on viral rebound after antiretroviral therapy interruption. *Nat Med*. 2020;26(4):498-501. doi:10.1038/s41591-020-0774-y

**Pharyngeal gonorrhoea testing among heterosexual men**

Although pharyngeal gonorrhoea testing is no longer recommended in the UK for heterosexual men with urethral infection or those who are known contacts, one sexual health service continued this practice, testing 232 heterosexual men over two years. Of those with urethral gonorrhoea, 33% (35/106) tested positive for pharyngeal gonorrhoea, including one who retained pharyngeal positivity after treatment that cleared the urethral infection. Among asymptomatic contacts, 20% (17/86) had pharyngeal infection, the majority of whom (10/17) did not have concurrent urethral infection. Had pharyngeal testing not occurred in asymptomatic contacts, more than 10% of infections would not have been diagnosed or treated, potentially leading to onward transmission through kissing or orogenital/rectal contact. These results indicate that pharyngeal testing is warranted and should be considered in future guidelines.

Dresser, M., & Hussey, J. (2020). Testing for pharyngeal gonorrhoea in heterosexual men: Should we revisit national guidelines? *International Journal of STD & AIDS*, *31*(6), 593-595.

**HIV risk behaviours, STI testing, and PrEP uptake among Australian MSM**

The HIV prevention landscape has significantly changed with the implementation of pre-exposure prophylaxis (PrEP), Treatment as Prevention (TasP) programs, and campaigns to increase testing. To assess the impact of these strategies and determine prevalence of undiagnosed HIV, two large cross-sectional studies among men who have sex with men (MSM) were conducted in Sydney, Australia in 2014 (n=2222) and 2018 (n=2158). Prevalence of undiagnosed HIV was low (13.8% [2014] vs. 5.3% [2018], ns). HIV and STI testing increased significantly (from 49.6% to 56.3%, and from 61.7% to 69.2%, respectively), as did PrEP uptake (from 2.1% to 23.0%). However, in 2018, MSM were more likely to report behaviours associated with HIV/STI risk and past-year STI diagnosis. Results indicate that despite increasing risk behaviour, prevalence of undiagnosed HIV remains low suggesting the combined effectiveness of treatment and prevention strategies.

Keen, P., Lee, E., Grulich, A. E., Prestage, G., Guy, R., Stoove, M. A., ... & Duck, T. (2020). Sustained, low prevalence of undiagnosed HIV among gay and bisexual men in Sydney, Australia coincident with increased testing and pre-exposure prophylaxis use: Results from repeated, bio-behavioural studies 2014-2018. *JAIDS*. Online ahead of print.

**Rapid gonorrhea and chlamydia results**

Rapid point of care (POC) tests for gonorrhea and chlamydia could enable testing and treatment to occur in a single visit, reducing complications of untreated infections, attendance burden and risk of onward transmission. In a prospective cross-sectional study, swabs from 1523 women and first catch urine from 922 men were tested by non-laboratory-trained staff using a POC assay and compared to laboratory assay results. Sensitivities and specificities for chlamydia and gonorrhea using the POC test were greater than the target of 95% in both women and men, except for sensitivity of the chlamydia test in men (92.5%, 95%CI, 86.4%- 96.0%). Further assessment of these tests is needed in rectal and oropharyngeal samples and cost-effectiveness analyses will be helpful to understand their utility.

Van Der Pol B, Taylor SN, Mena L, et al. Evaluation of the Performance of a Point-of-Care Test for Chlamydia and Gonorrhea. *JAMA Netw Open*. 2020;3(5):e204819. Published 2020 May 1. doi:10.1001/jamanetworkopen.2020.4819

**Role of syphilis partner notification in ending the HIV epidemic**

Syphilis partner notification is an opportunity to case find newly diagnosed syphilis and HIV in known contacts. A retrospective record review of 984 syphilis cases found that 1,457 cases and partners received HIV/STI prevention counselling, 400 partners were tested and treated for STIs (including 63 new syphilis diagnoses) and 168 PrEP referrals were made. 352 partners were tested for HIV, 22 received new HIV diagnoses, 68% were retained in care and 60% were virally suppressed. Previously undiagnosed HIV positivity was 14% and 3.5% among partners of co-occurrent HIV and syphilis cases and among partners to HIV-negative cases respectively. Partner notification for syphilis provides a key opportunity to deliver combination prevention with behavioural counselling for STIs and HIV, early testing, and treatment.

DiOrio D, Collins D, Hanley S. Ending the HIV Epidemic: Contributions Resulting From Syphilis Partner Services. Sex Transm Dis. 2020;47(8):511-515. doi:10.1097/OLQ.0000000000001201