



Imagining HIV in 2030: What's on the horizon?

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Towards elimination: Imagining the future of HIV prevention | 17 September 2019

Disclosures

- Research grants
 - Gilead Sciences (2016)
 - ViiV Healthcare (2016)
- Honoraria/travel for conferences/seminars
 - Gilead Sciences (2019)
 - Pharmaceutical Society of Australia (2018-19)

Implications of recent epidemiological trends

Recent trends in HIV epidemiology

- Overseas-born MSM:
 - Increasing diagnoses have overtaken Australian-born MSM
 - Late diagnosis
 - Navigating PrEP and ART for those ineligible for Medicare
- Location of residence:
 - Decreasing diagnoses in 'gay suburbs' Australia-wide, but increases in non-'gay suburbs'
 - Lower PrEP uptake in non-'gay suburbs'
- Age
 - Some suggestion of lower PrEP uptake among young men
 - Lower testing rates among young men
 - Lower proportion of young HIV-positive men on ART and with UVL

Making sense of these trends for **HIV in 2030**

- Difficult to predict how these trends will change over the next decade to 2030.
- HIV diagnoses likely to continue moving away from the gay men that most of our programs, services and research projects reach.
- HIV diagnosis is likely to occur in men who have sex with men who are:
 - Less connected to the gay community
 - Less connected to health services
 - Experiencing more challenging life circumstances
 - Who may be more marginalised from mainstream Australian life.

Upcoming developments in HIV testing, treatment and prevention

Potential options: **HIV treatment and PrEP**

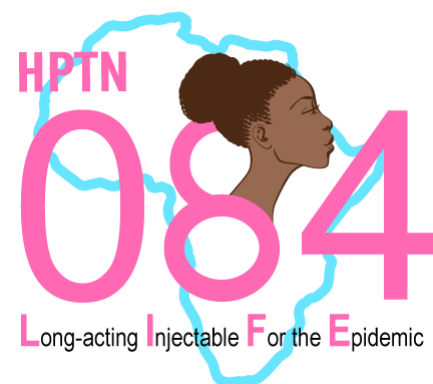
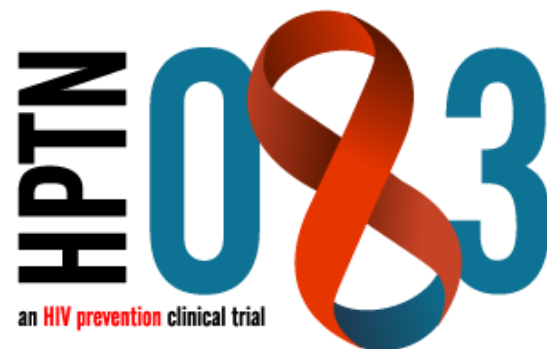
- **New drugs and dosing regimens**
 - On-demand PrEP (2-1-1)
 - Two-drug formulations for HIV treatment
 - Once-a-week oral pill or capsules
 - Better drugs with fewer side effects

Potential options: **HIV treatment and PrEP**

- Long-acting formulations

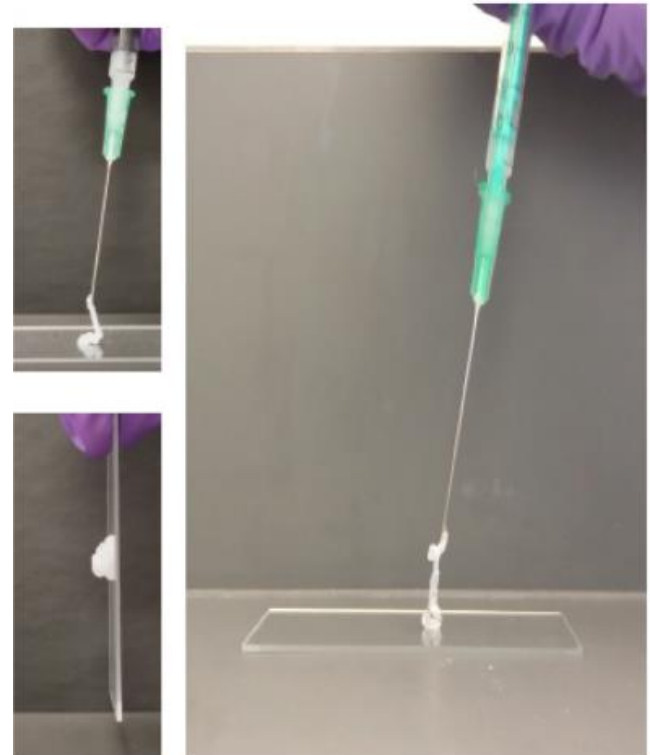
Potential options: HIV treatment and PrEP

- Long-acting formulations
 - Injectable treatment and PrEP



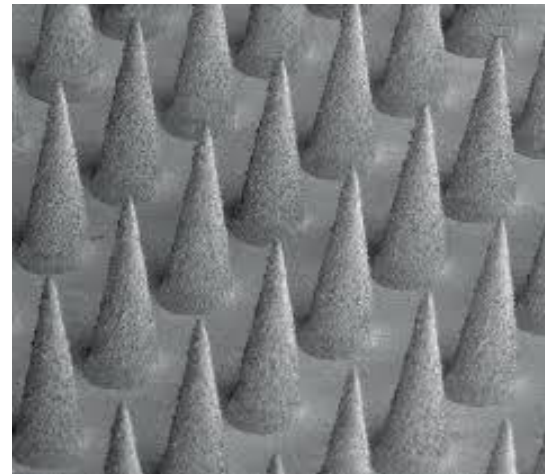
Potential options: HIV treatment and PrEP

- Long-acting formulations
 - Injectable treatment and PrEP
 - **Insertable and injectable implants**



Potential options: HIV treatment and PrEP

- Long-acting formulations
 - Injectable treatment and PrEP
 - Insertable and injectable implants
 - Patches



Potential options: **HIV treatment and PrEP**

- **Microbicides (vaginal and rectal)**
(Topical PrEP)



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- **Microbicides (vaginal and rectal)**
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- **Vaginal rings**
(PrEP)



HOPE
Out of ASPIRE, there is HOPE

Potential options: HIV treatment and PrEP

- **Microbicides (vaginal and rectal)**
(Topical PrEP)



- **Vaginal rings**
(PrEP)



HOPE
Out of ASPIRE, there is HOPE

- **Broadly neutralising antibodies**
(treatment and prevention)



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Current strategies to increase HIV testing

- Strategies have been implemented across parts of Australia:
 - Text message appointment reminders¹
 - Provision of HIV test results by phone/email/SMS and removing the need for formal pre- and post-test counselling²
 - Rapid HIV testing³
 - 'Express clinics' in publicly-funded sexual health centres⁴
 - Peer-led, community-based testing sites⁵⁻⁸
 - Online-facilitated home sampling (e.g. dried blood spot)⁹
 - Social marketing to increase demand for testing¹⁰
 - Introduction of HIV self-test kits for purchase online¹¹
- These strategies have not been implemented evenly across Australia.
- Some of these strategies may be implemented in new places in the next decade.

¹ Bourne et al., 2011, STI; ² National HIV Testing Policy, 2011; ³ Conway et al., 2015, PLOS One; ⁴ Knight et al., 2013 STD; ⁵ Lee et al., 2019, AIDS Behav; ⁶ Leitinger et al., 2018, AIDS Behav; ⁷ Selvey et al., 2018, Sex Health; ⁸ Minas et al., 2015, Sex Health; ⁹ NSW HIV Data Report, Q4 2018; ¹⁰ Pedrana et al., 2012, STD; ¹¹ TGA, 2018

Potential options: **HIV and STI testing**

- Expansion or extension of existing strategies.
 - Greater availability of home testing – more places, cheaper, with different types of tests
 - Community-based sites are only in certain areas now – could see this expand
 - Could use peers in non-community-based settings
 - Expansion of in-language clinics and services.
- The future may see the development and licensing of new home STI testing or sampling kits.

Potential options: PrEP programs

- For daily PrEP-users, PrEP requires four visits to a doctor each year to get tests and prescriptions.
- A new option in the future may be to use home sampling for HIV, STI and eGFR tests.
 - Reduce clinic visits and burden on clinics (e.g. one clinic visit per year plus three at-home tests)
 - Potentially more convenient for patients
 - Patients could be mailed/emailed their prescriptions after test results returned
- Expansion of **telemedicine** or **e-medicine** for PrEP visits and home testing (e.g. some use of this in the Hunter region, WA, Philippines, Thailand).

Potential options: PrEP programs

- As oral PrEP becomes more familiar and normalised, there may be greater appetite for more radical options for ‘**demedicalising**’ PrEP programs.
 - PrEP dissemination by peers?
 - PrEP and HIV/STI test vending machines?
 - Over-the-counter PrEP without a prescription (e.g. California)?
 - Changes in guidelines to reduce the number of HIV tests and eGFR tests recommended per year?

Surveillance and monitoring

Surveillance and monitoring

- There will be new challenges for surveillance systems over the next decade.
- Some of these may include:
 - Estimating the number of PrEP users, their chosen dosing regimens, and adherence
 - Estimating the number of HIV tests performed
 - Defining ‘preventable infections’ and applying this criteria to surveillance reports
 - Surveillance systems mostly track those who are connected to clinics or research

Concluding remarks

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- The HIV epidemic is changing, and our responses must keep up.
 - Important to retain the investment in programs for gay community-connected men, while...
 - Increasing programs and services for men who have sex with men who are less connected or born overseas.
- More work is needed to address HIV stigma, continue to inform the community about U=U, and address stigma/discrimination against sexuality and gender diverse people.
- Many new prevention and treatment options may be proven effective between now and 2030.
 - We need to ensure such options become available quickly after they are proven effective.
 - We will need to work at ensuring they are accessible to all people who need them.

Thank you