

# AIDS 2022

## Highlights of the 24th International AIDS Conference

Produced by NAM aidsmap and IAS – the International AIDS Society

## Fifth person free of HIV after stem cell transplant

- ▶ The “City of Hope patient” is named after the cancer centre in Duarte, California, where he was treated.
- ▶ He received a stem cell transplant from a donor with the rare delta-32 CCR5 mutation to treat leukaemia.
- ▶ There have been four previous cases of cure following stem cell transplants: Timothy Ray Brown (Berlin); Adam Castillejo (London); “Marc” (Düsseldorf); the “New York patient”.



Jana Dickter of the City of Hope cancer centre at AIDS 2022.  
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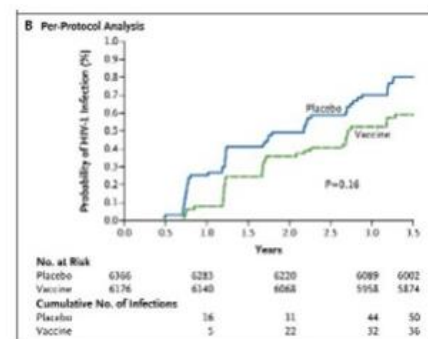
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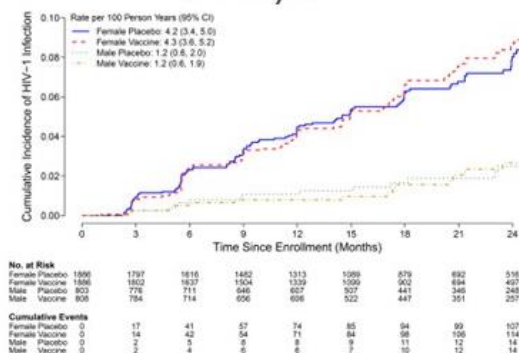
## HIV vaccine research

- ▶ Only one Phase III vaccine trial has found marginal efficacy (RV144).
- ▶ Only one Phase III trial is ongoing (Mosaico).
- ▶ Glenda Gray commented: "It takes 30-100 times more neutralizing antibodies to inhibit HIV than SARS-CoV-2."

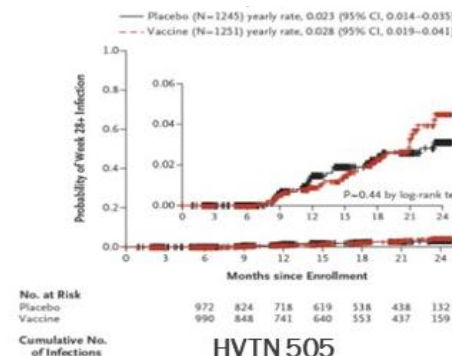
### Can correlates of protection from partially efficacious and non-efficacious HIV vaccines assist us?



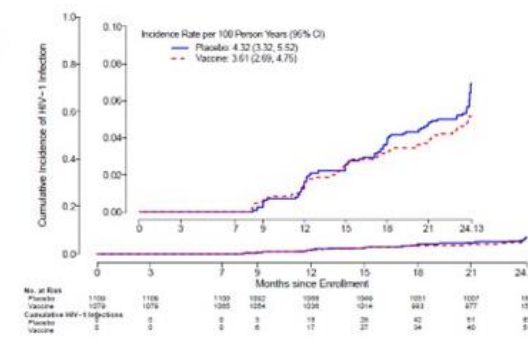
RV144/Thai



HVTN 702



HVTN 505



HVTN 705

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- ▶ New vaccine approaches involve different formulations: vectors, stabilized envelope trimers, virus-like particles, mRNA.
- ▶ And different strategies:
  - Lineage targeting: prime to induce *unmutated* antibody, then repeated boosts to induce mutations towards the development of bNAbs.
  - Germline targeting: directed at rare ancestral B-cells to get them to produce multiple bNAbs in response to repeat, evolving immunogens.
  - Immunofocusing: inducing broader and stronger responses to a particular epitope (immunogenic sequence in HIV envelope).

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# ART and co-infections

## Ending advanced HIV disease-related mortality

- ▶ 650,000 people died in 2021 due to advanced HIV disease-related causes: one every minute.
- ▶ Most people diagnosed with advanced HIV disease are re-engaging in care after treatment interruption.
- ▶ Mortality is high in people with advanced HIV disease in their first three months on HIV treatment.
- ▶ The most common causes of death are tuberculosis (TB) and cryptococcal meningitis.



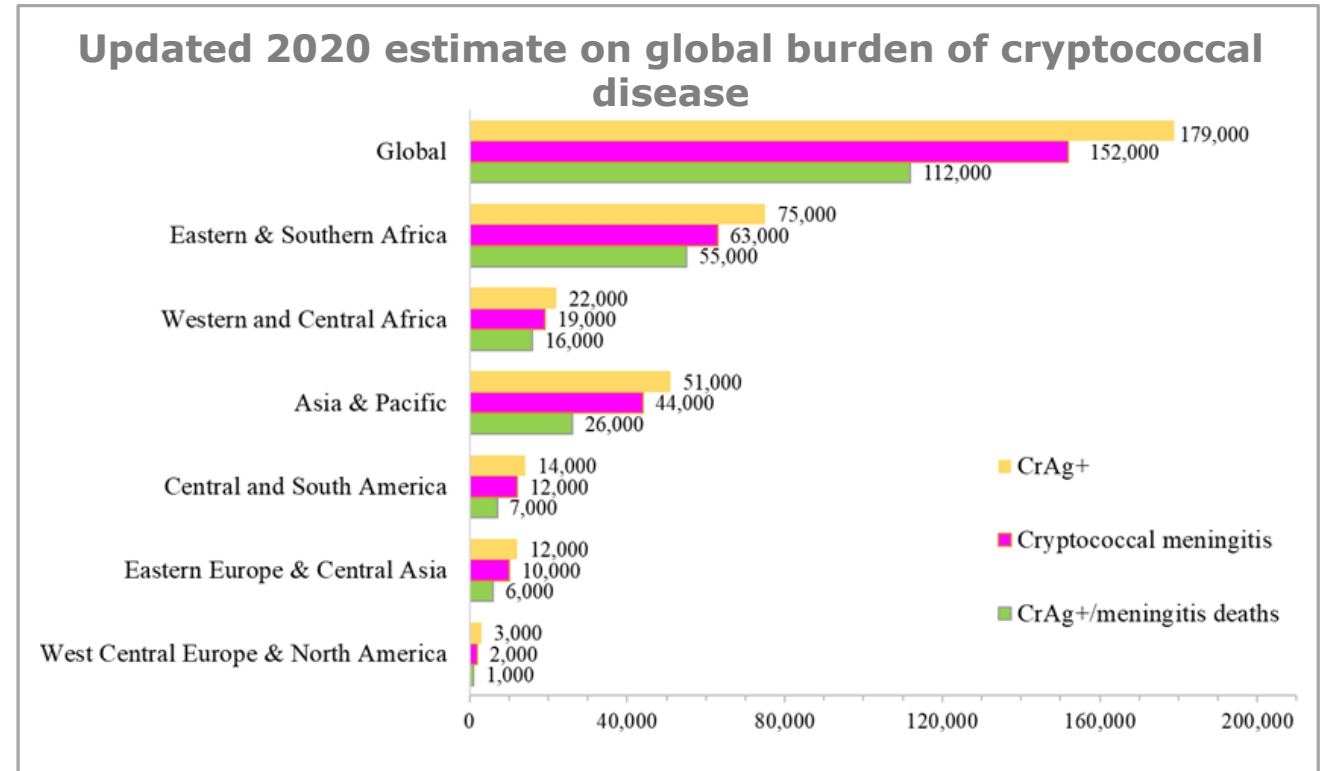
South African activist Vuyiseka Dubula protesting lack of action on tuberculosis and cryptococcal meningitis at AIDS 2022. Photo©Steve Forrest/Workers' Photos/IAS.

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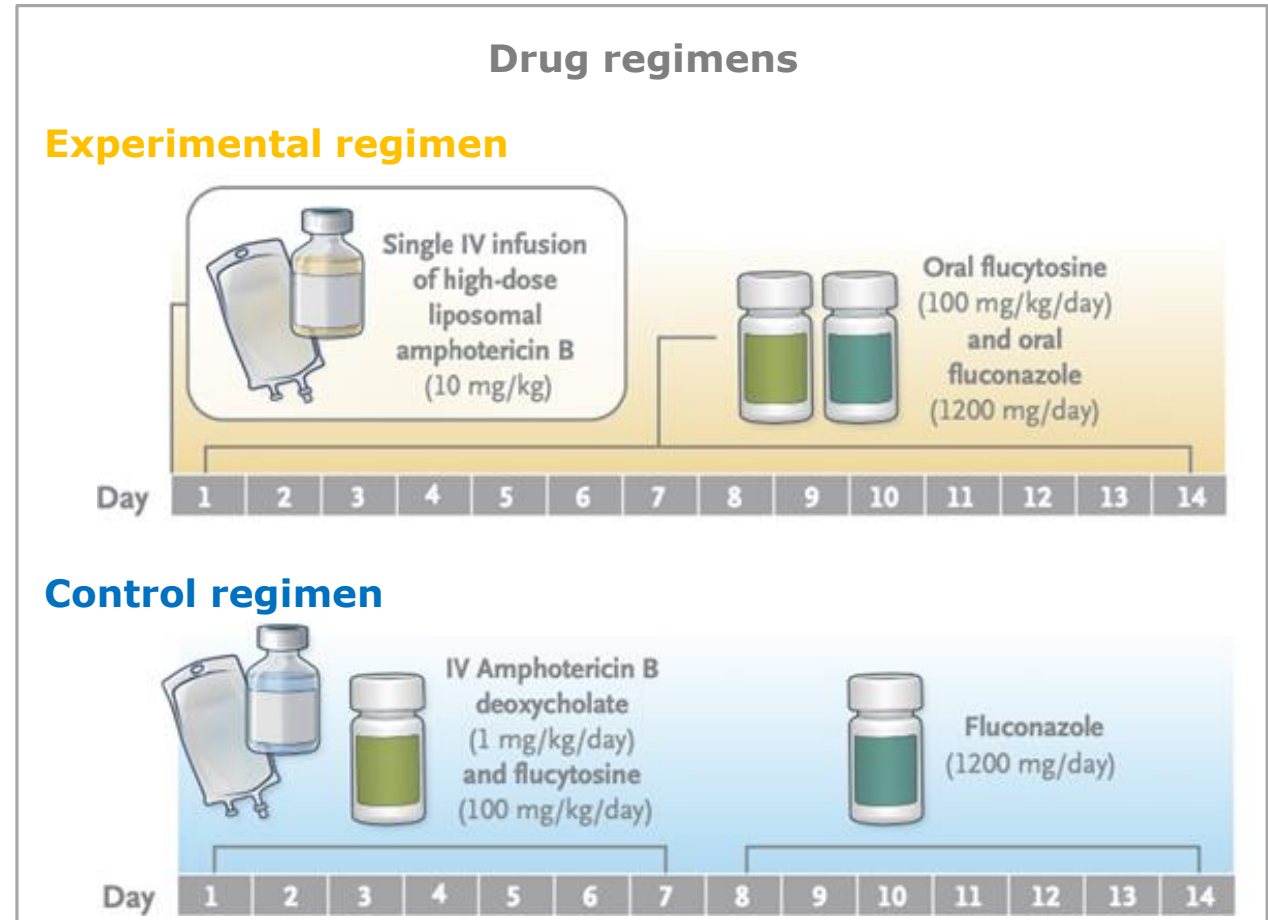
## Treatment of cryptococcal disease

- ▶ Cryptococcal meningitis accounts for 15% of AIDS-related deaths.
- ▶ Revised WHO guidelines on treatment of cryptococcal disease were launched at AIDS 2022.

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- ▶ Results from the AMBITION-cm trial contributed to the updates to the WHO guidelines.
- ▶ In the trial, a single high dose of liposomal amphotericin B infusion followed by oral flucytosine and fluconazole was non-inferior to the standard of care.
- ▶ There were fewer side-effects in the intervention arm and it was preferred by patients and healthcare workers.



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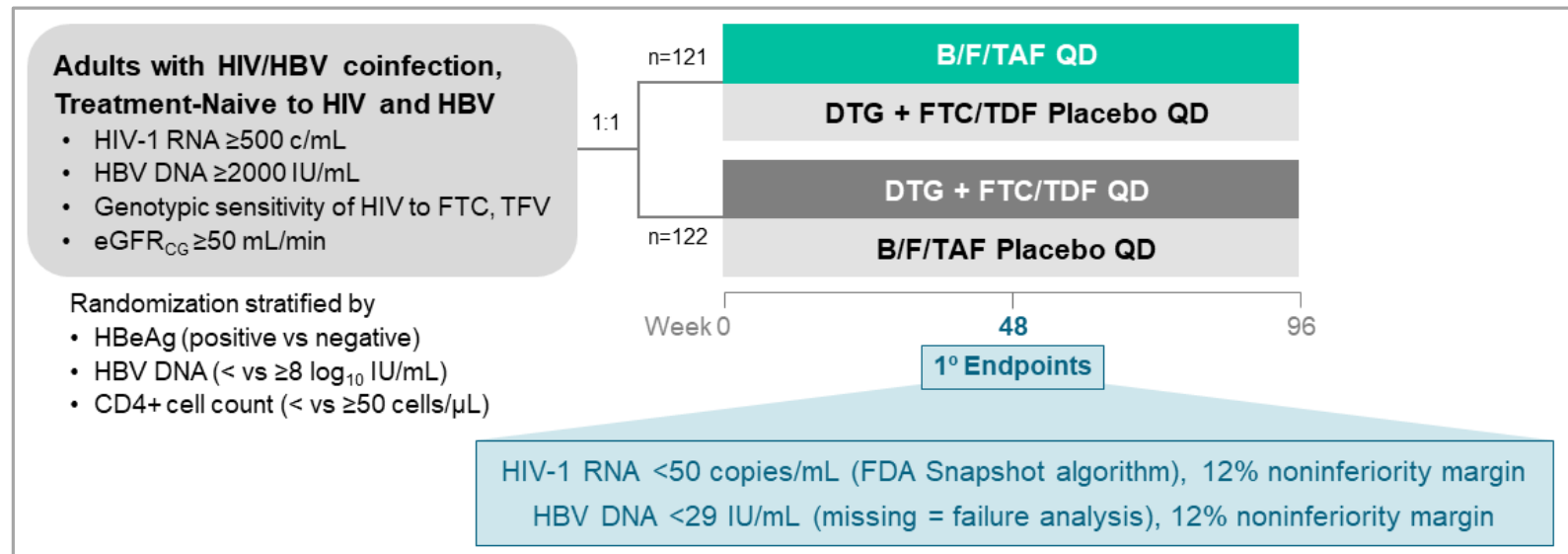
- ▶ WHO recommended treatment of cryptococcal meningitis in people living with HIV:
  - Single high-dose (10mg/kg) liposomal amphotericin B
  - 14 days of flucytosine (100mg/kg per day divided into four doses per day)
  - 14 days of fluconazole (1,200mg/daily for adults or 12mg/kg per day for children and adolescents up to a maximum of 800mg daily).
- ▶ Recommended monitoring is also simplified.
- ▶ The new regimen could reduce cost and time in hospital.

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## Treatment for people with HIV and hepatitis B

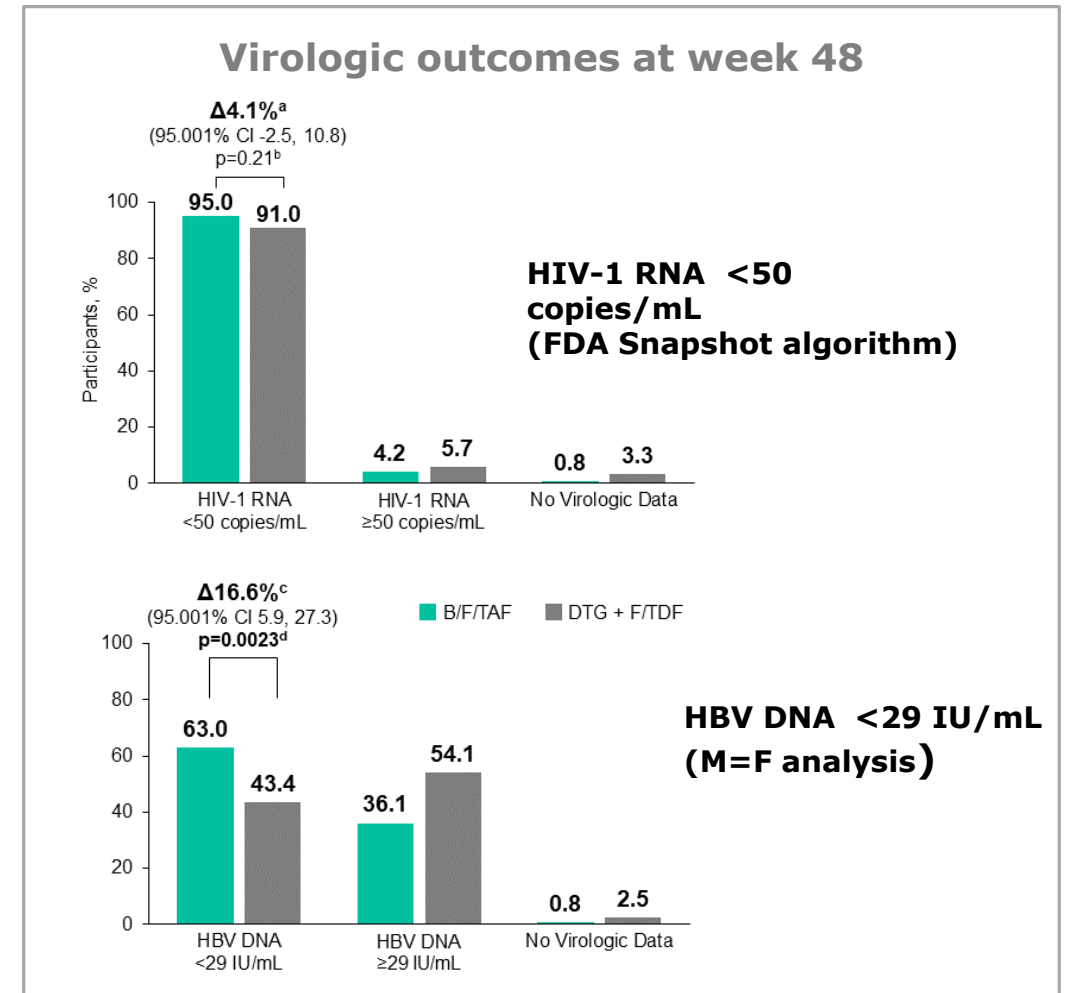
- ▶ A study compared two options for people living with HIV and hepatitis B virus who are starting ART.
- ▶ Bictegravir, emtricitabine and tenofovir alafenamide (B/FTC/TAF or *Biktarvy*).
- ▶ Dolutegravir (DTG) plus emtricitabine and tenofovir disoproxil fumarate (FTC/TDF).



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- ▶ The two regimens were similarly effective at suppressing HIV, but the *Biktarvy* combination was better at suppressing hepatitis B virus.
- ▶ At 48 weeks, 95% of people taking B/FTC/TAF and 91% of those taking dolutegravir plus FTC/TDF had an HIV viral load below 50.
- ▶ 63% of people taking B/FTC/TAF and 43.4% of those taking dolutegravir plus TDF/FTC had hepatitis B virus DNA below 29.


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# HIV prevention and sexual health

## Taking antibiotic after sex to reduce STIs

- ▶ The DoxyPEP study recruited 501 gay and bisexual men and trans women.
- ▶ 327 were HIV-negative people using PrEP (regular medication to prevent HIV) and 174 were people living with HIV.
- ▶ Two-thirds were given doxycycline to take after sex as post-exposure prophylaxis (PEP).
- ▶ They were told to take a single dose of doxycycline (200mg) as soon as possible and no more than 72 hours after condomless sex.



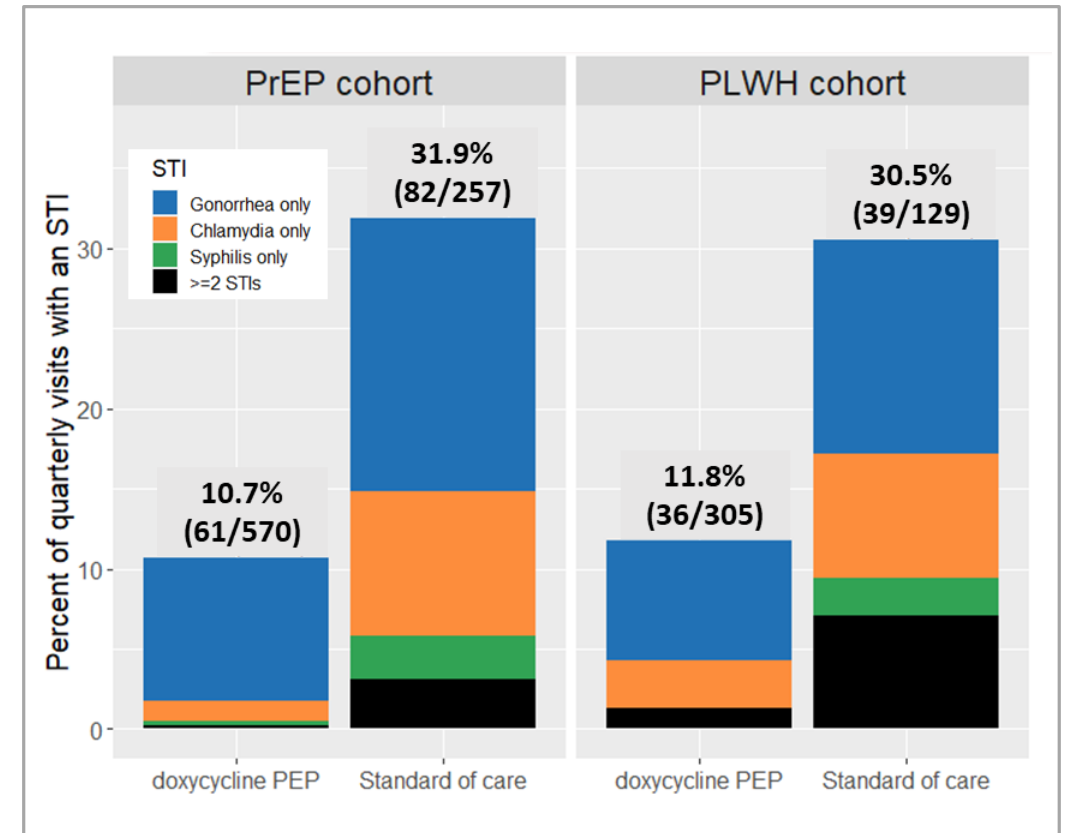
Annie Luetkemeyer of the University of California San Francisco at AIDS 2022.

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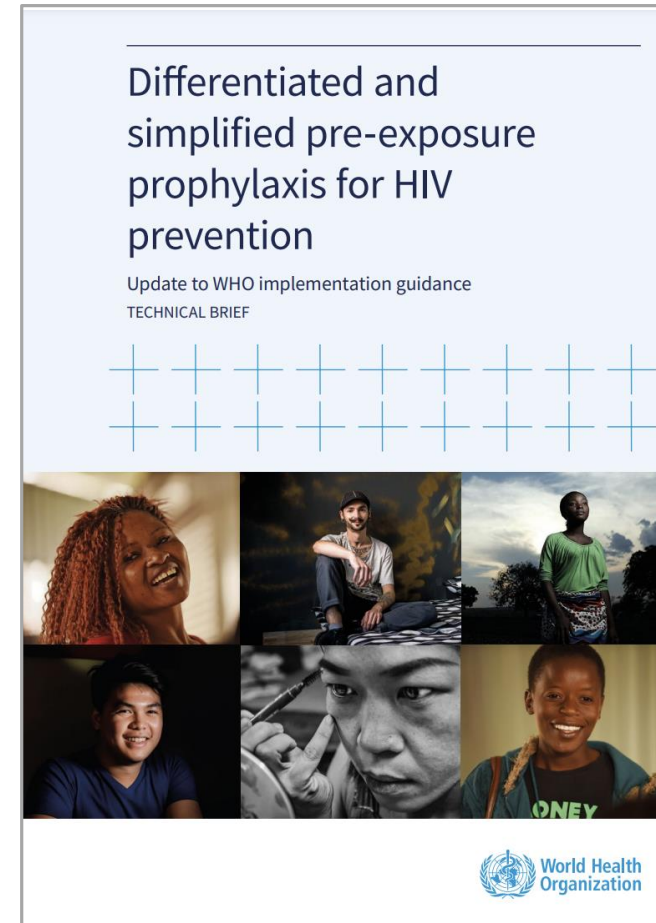
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- ▶ The incidence of gonorrhoea, chlamydia and syphilis was measured and a significant reduction was seen in all three STIs compared with the standard of care.
- ▶ Overall, doxycycline taken after sex reduced STIs by 66% in HIV-negative participants (PrEP cohort) and by 62% in participants with HIV.



## Improving PrEP service delivery

- ▶ WHO launched a technical brief on differentiated and simplified PrEP.
- ▶ Differentiated service delivery means adapting services to the client's needs and preferences, including:
  - When – the frequency of visits
  - Who – the service provider
  - Where – the location of services
  - What – the package of services.

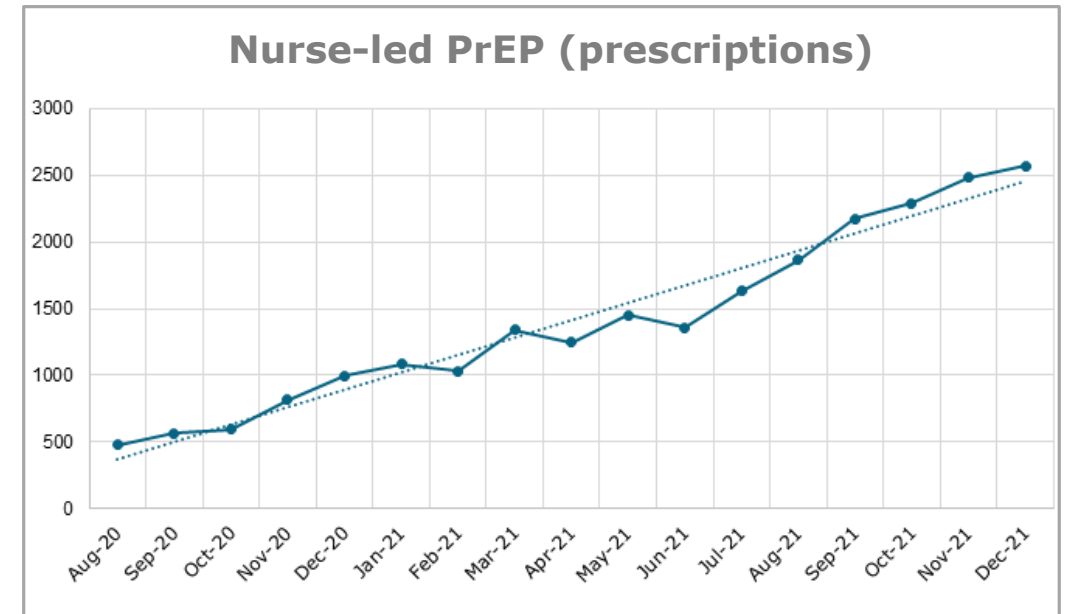


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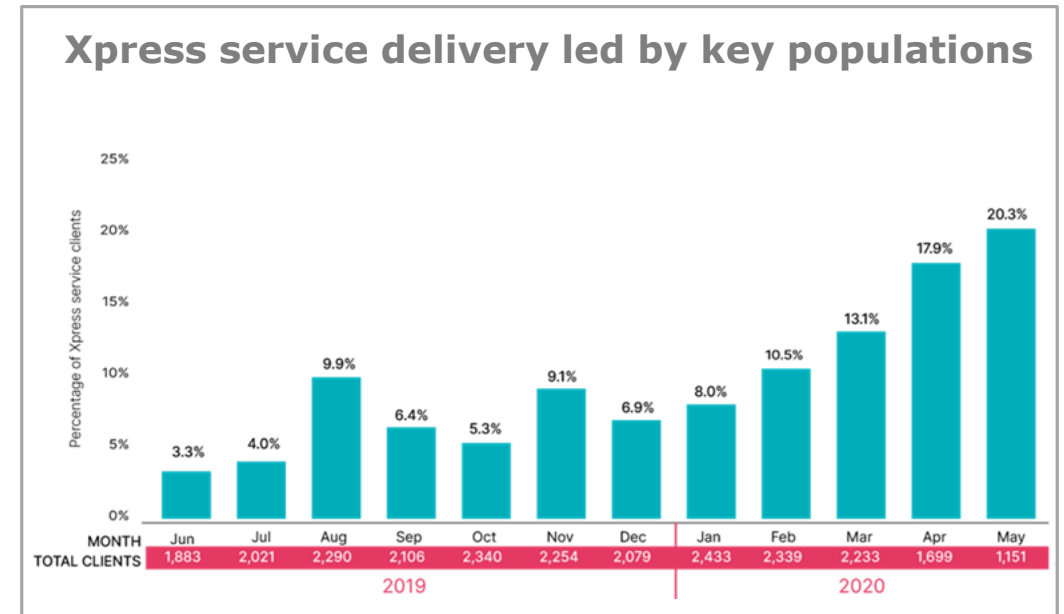
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- ▶ In Brazil, in 2020, nurses were trained and supported to prescribe PrEP.
- ▶ Nurse-led prescriptions have significantly increased access for vulnerable populations.
- ▶ 2.1% of nurses' prescriptions were for sex workers compared with 0.8% of doctors' prescriptions.
- ▶ 13% of nurses' prescriptions were for people who use drugs compared with 7% of doctors' prescriptions.

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- ▶ In Thailand, many PrEP services are led by key populations.
- ▶ These services include the offer of testing for syphilis, gonorrhoea, chlamydia and hepatitis C.
- ▶ In the Xpress model of care, a risk assessment is done online, with counselling by video or telephone call. The client attends only to take a specimen for testing.
- ▶ The model has demonstrated very high client satisfaction.

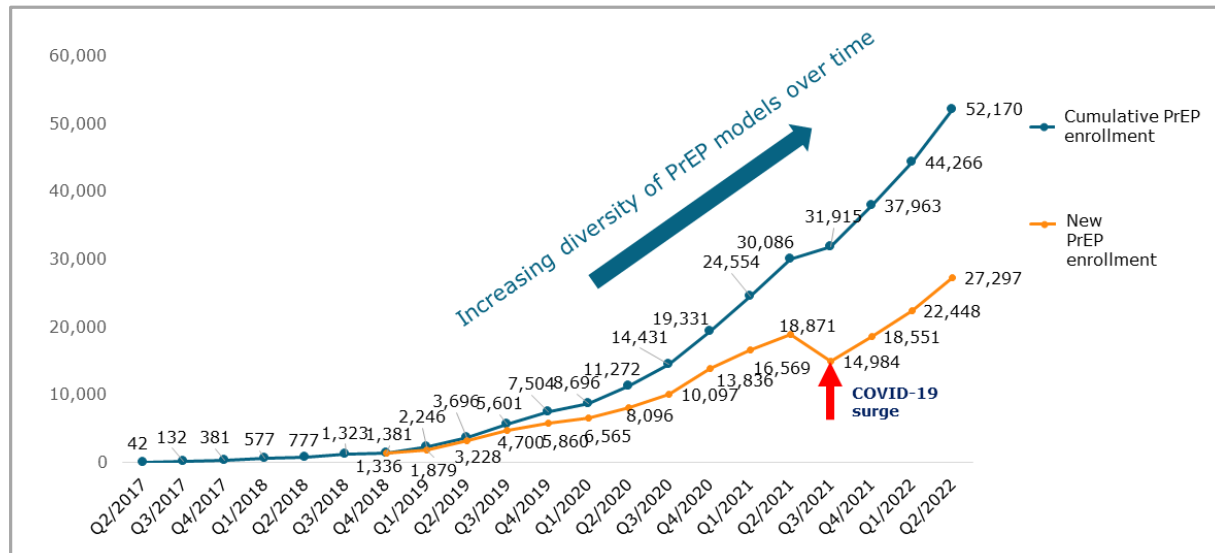


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- ▶ In Vietnam, differentiating where PrEP is offered has led to increased scale up.

- ▶ In one province, 32% of clients started PrEP at public HIV clinics, 32% at key population-led clinics, 23% through telehealth, 10% at private clinics, and 2% at mobile services.



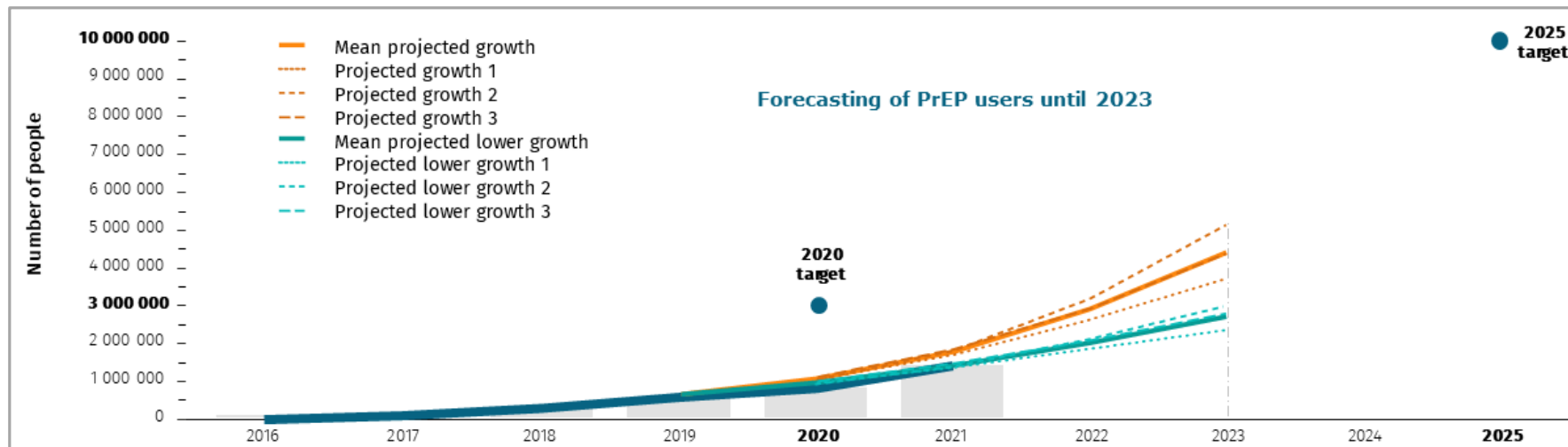
Quarterly growth in PrEP uptake nationwide

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## Introducing long-acting PrEP

- ▶ Many people who could benefit from oral PrEP do not have access to it.
- ▶ In 2020, the number of people using oral PrEP was just 28% of the target of 3 million in low- and middle-income countries.
- ▶ Daily PrEP is not feasible for everyone. Long-acting PrEP has the potential to address some of the challenges.



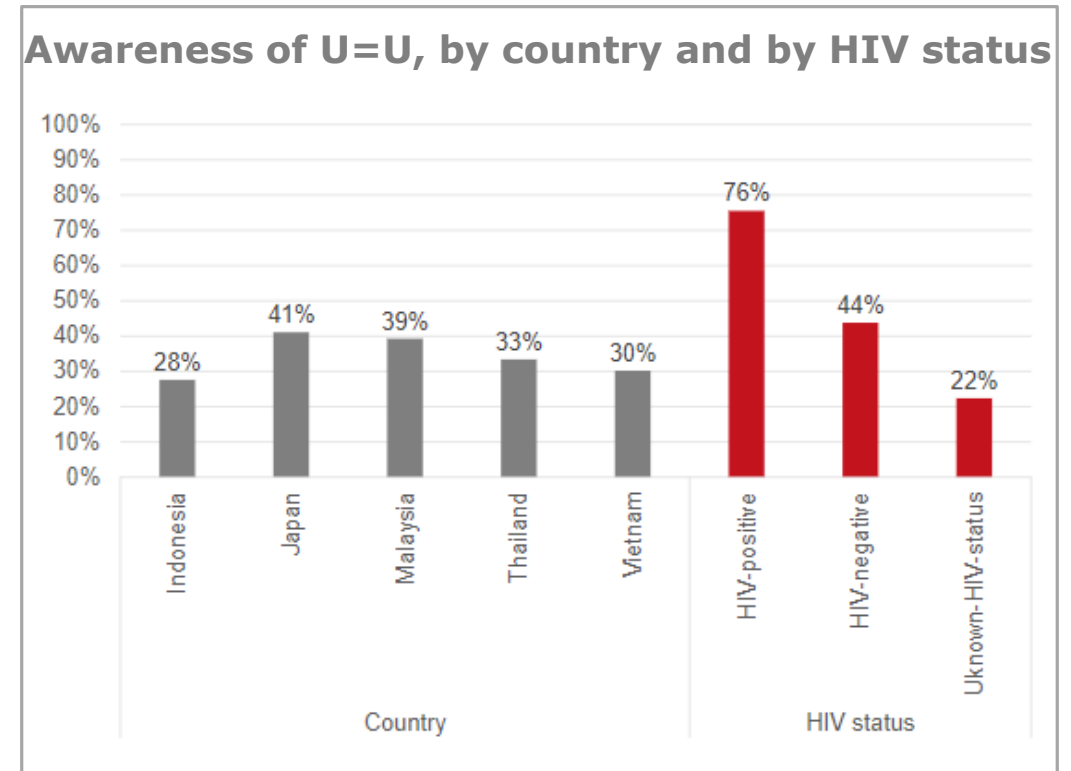
PrEP  
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## Integrating U=U into HIV care

- ▶ An online survey investigated awareness of Undetectable = Untransmittable (U=U) among gay, bisexual and other men who have sex with men in Asia.
- ▶ From May 2020 to January 2021, it recruited 15,872 participants.
- ▶ 6.8% were living with HIV, 46.2% HIV negative, and 47% of unknown status.
- ▶ 35.9% were aware of U=U, 44.8% had never heard of it, and 19.3% were not sure.



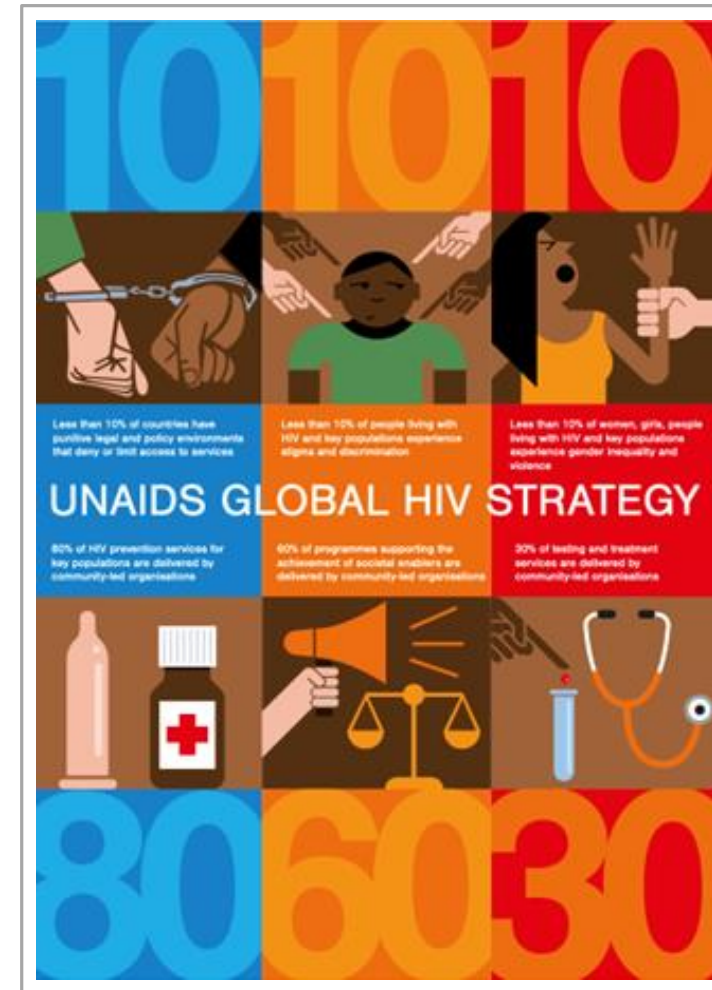
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# Communities at the centre

## Key populations

- ▶ Epidemics thrive along the fault lines of inequity.
- ▶ New global goals include explicit targets for key populations and a focus on inequalities and societal enablers.
- ▶ Political will and resources determine success or failure.
- ▶ No matter how good the latest biomedical advances, they won't get into the right hands without the right laws, policies, people and practices.



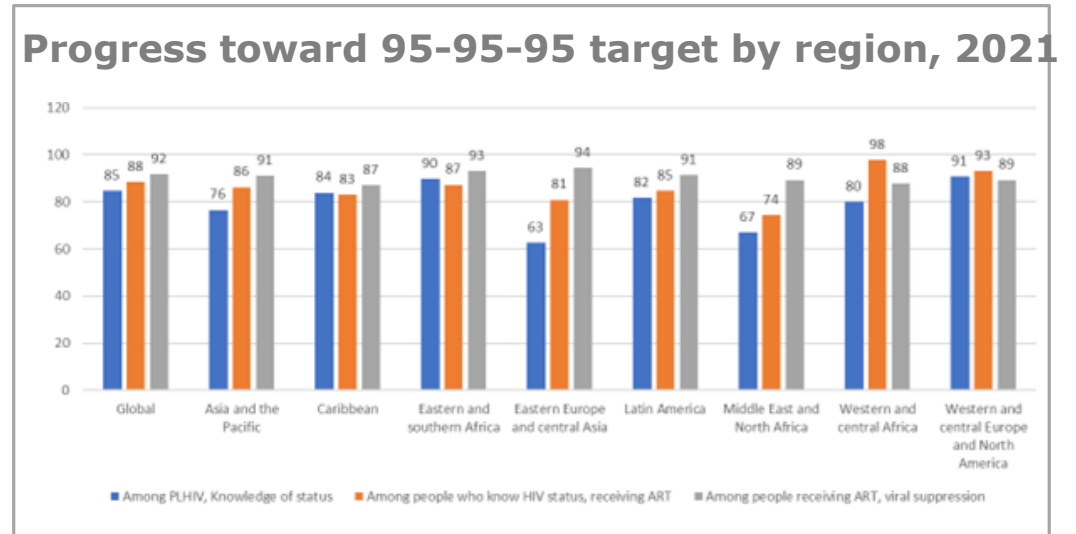
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## Priority actions to end the HIV epidemic

- ▶ When scaling up HIV prevention and treatment, we also have to look at gender equity, human rights, community leadership, integration and investment.
- ▶ There have been successes, but there are serious gaps where we are missing key targets.
- ▶ No region has so far achieved the 95-95-95 targets or, indeed, the 90-90-90 targets.



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- ▶ The Global AIDS Strategy emphasizes communities being at the centre of the AIDS response.
- ▶ UNAIDS also introduced the 30-80-60 targets around community leadership.
- ▶ By 2025, ensure that community-led organizations deliver:
  - 30% of testing and treatment services
  - 80% of HIV prevention services for populations at high risk of HIV infection
  - 60% of programmes to support the achievement of societal enablers.

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- ▶ Ending AIDS- and HIV-related inequalities will require political courage.
- ▶ Legal reform is happening, but too slowly.
- ▶ Stigma and discrimination still block the way forward.
- ▶ We need:
  - A new push for HIV prevention
  - To realize human rights and gender equality
  - To support and effectively resource community-led responses
  - To ensure sufficient and sustainable financing.



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## Community-led responses in Thailand

- ▶ The Tangerine Clinic in Bangkok provides trans-led and gender-affirming health services for trans women living with and at risk for HIV.
- ▶ It implemented peer-led depression screening and linkage to care to test the feasibility of integrating mental health services.
- ▶ 86% of 205 trans women agreed to depression screening.
- ▶ Those with minimal symptoms received psychosocial support from trained trans counsellors or nurses.
- ▶ Those with more severe symptoms were all successfully linked to psychiatric evaluation and treatment.

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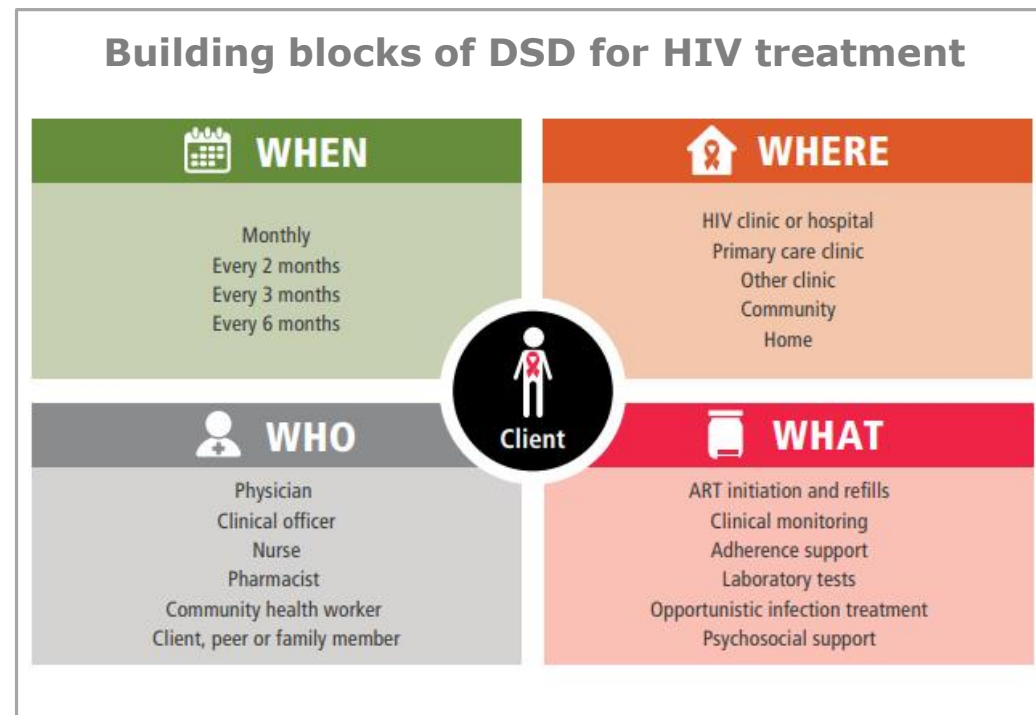
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# Improving HIV care

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## Differentiated service delivery for HIV treatment

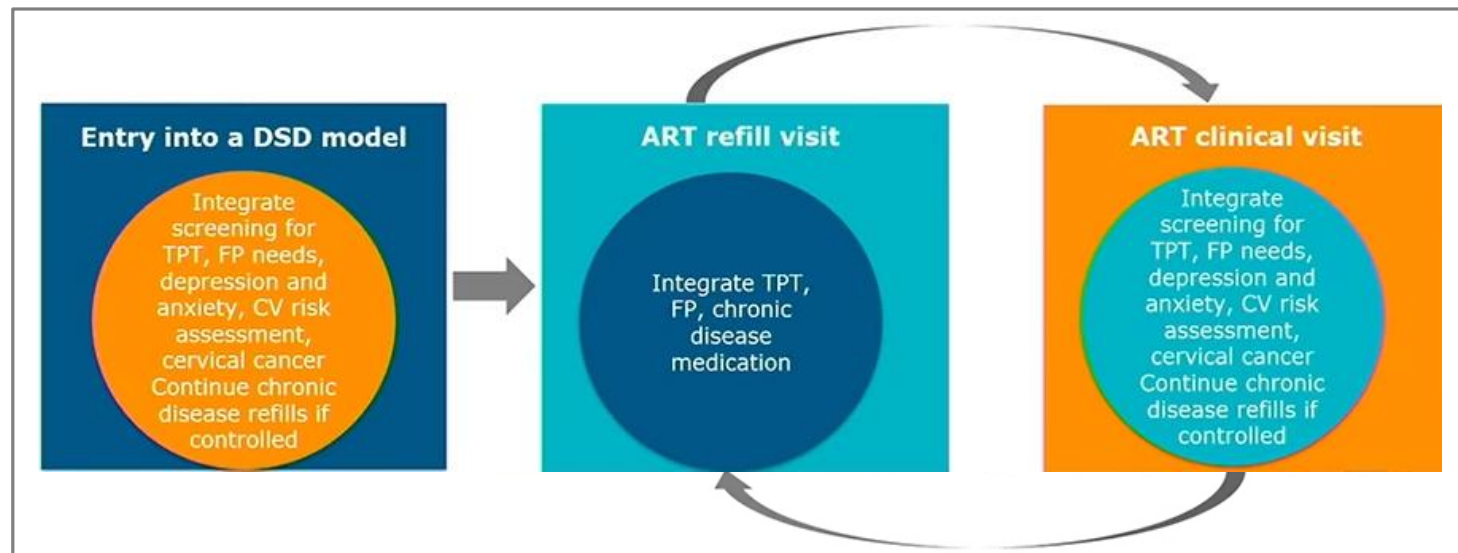
- ▶ WHO recommends differentiated service delivery (DSD) for HIV treatment.
- ▶ This means targeting care approaches for people with different clinical needs.
- ▶ DSD also considers the needs of specific populations, such as children and key populations.
- ▶ DSD models for HIV treatment include group models managed by healthcare workers; group models managed by clients; individual models based at facilities; and individual models not based at facilities.



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- ▶ To achieve person-centred care, DSD for HIV treatment models should also look to integrate other health needs.
- ▶ For example: TB treatment, contraception, screening for physical and mental health problems.
- ▶ The goal should be integrated care at the same facility, on the same day, with the same healthcare worker.



Opportunities for integration

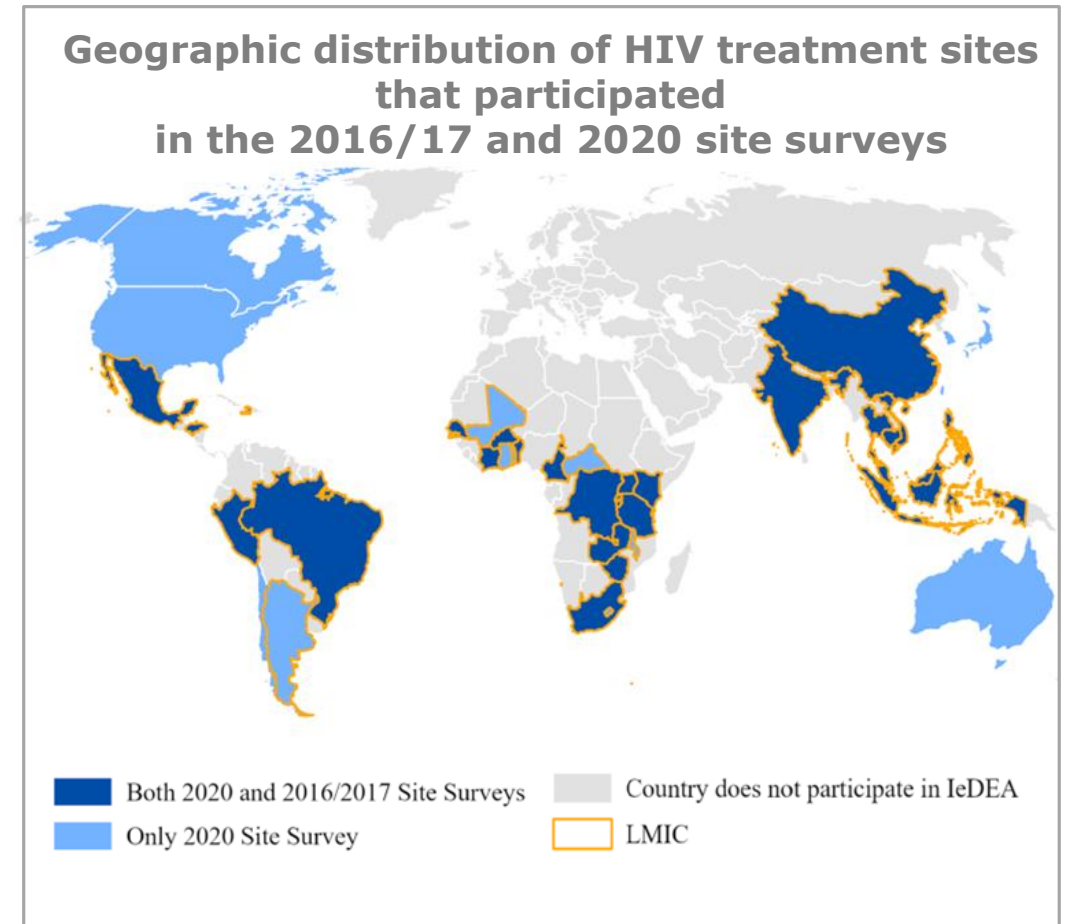
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## Mental health screening and treatment

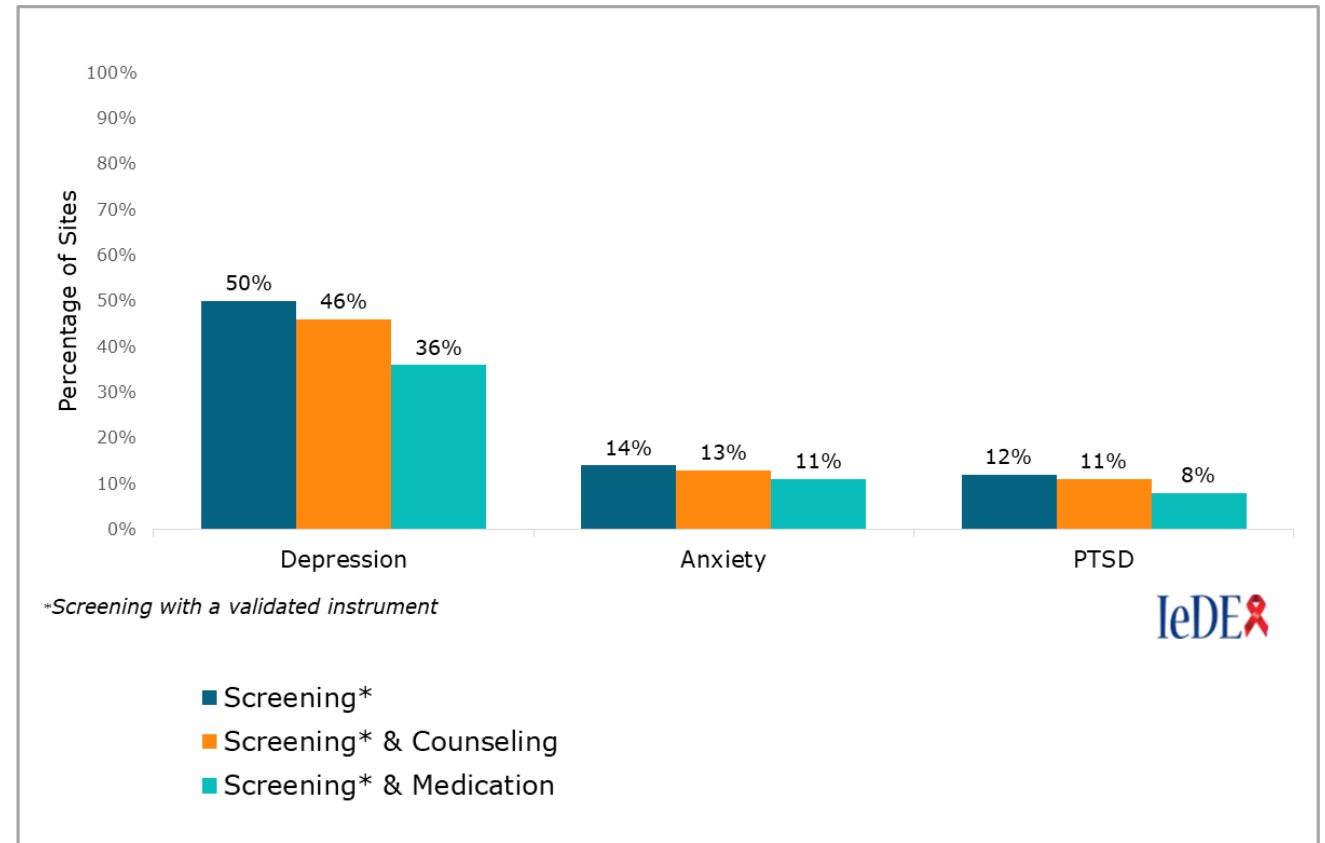
- ▶ A study examined the proportion of HIV treatment clinics screening for depression, anxiety and post-traumatic stress disorder (PTSD).
- ▶ Of 223 clinics surveyed in 41 countries, 67% were in urban settings and 78% were in low- or middle-income countries.



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- ▶ The proportion of HIV clinics screening for depression, anxiety and PTSD was 50%, 14% and 12%, respectively.
- ▶ Both screening and medication were available only at 36%, 11% and 8% of sites.
- ▶ Urban clinics and clinics in high-income countries were more likely to offer mental health services.



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# Thank you

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