

# AIDS 2020: Virtual Conference Summary and Evaluation Report



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## Contents

Donors and sponsors
Table of contents
Acronyms and abbreviations5
Definitions of key terms
Introduction
Who was there?
AIDS 2020: Virtual scholarships
What was shared?
COVID-19 and impact on HIV care
Prevention: PrEP, vaccines and passive immunity 19
Treatment and cure
Stigma, rights and advocacy 22
Person-centred care and intersectionality 24
Targets, public health
and community engagement 27
Global Village and Youth Programme
How was it covered?
How did it go?
What did people get out of it?
Will it make a difference?
Conclusions
Did we achieve our objectives?
How can we do better next time?
References

### Acronyms and abbreviations

AIDS 2018	22nd International AIDS Conference
AIDS 2020: Virtual	23rd International AIDS Conference
AMP	Antibody Mediated Prevention (trials)
ART	Antiretroviral therapy
ARV	Antiretroviral
BMI	Body mass index
CAB-LA	Long-acting cabotegravir
CASAH	Child and Adolescent Self-Awareness and Health (study)
CCASAnet	Caribbean, Central and South America network for HIV epidemiology
CDC	Centers for Disease Control and Prevention
COVID-19	Coronavirus disease 2019
CREA	Creating Resources for Empowerment in Action
CQUIN	HIV Coverage, Quality, and Impact Network
DNP	Distal neuropathic pain
DSD	Differentiated service delivery
DSP	Distal sensory polyneuropathy
DTG	Dolutegravir
ECHO	Evidence for Contraceptive Options and HIV Outcomes (trial)
EFV	Efavirenz
FTC	Emtricitabine
GVYP	Global Village and Youth Programme
HPTN	HIV Prevention Trials Network
IAS	International AIDS Society
LGBTI	Lesbian, gay, bisexual, transgender and intersex
NGO	Non-governmental organization
PEPFAR	US President's Emergency Plan for AIDS Relief
PLHIV-RS	PLHIV Resilience Scale
PrEP	Pre-exposure prophylaxis
Q&A	Questions and answers
ТВ	Tuberculosis
SFOYF	San Francisco and Oakland Youth Force
SRHR	Sexual and reproductive health and rights
STI	Sexually transmitted infection
UNAIDS	Joint United Nations Programme on HIV/AIDS
U=U	Undetectable equals untransmittable
WHO	World Health Organization

### **Definitions of key terms**

**Key populations** refers to men who have sex with men, people who inject drugs, sex workers and transgender people.

**Vulnerable populations** refers to people living with HIV and groups outside of key populations who may be at increased vulnerability to acquiring HIV, for example, adolescents, indigenous people, migrants, refugees, internally displaced persons, migrants, people with disabilities, people in prisons and other closed settings, people of advanced age, refugees, women and girls.

**Trans** may refer to transgender, transsexual or any other non-binary identification of sex or gender.

# Introduction

On 6-10 July 2020, AIDS 2020: Virtual – the 23rd International AIDS Conference – made history by being the first completely virtual global AIDS conference. Amid the still-expanding crisis of the COVID-19 pandemic, IAS – the International AIDS Society – took the decision to forge into unchartered and unforeseen territory by taking the AIDS conference to participants instead of bringing them to the conference.





The conference organizers provided 24hour access for all participants. This not only helped overcome the challenge of differences in time zones, but also enhanced reach and participation, even for those who initially did not envisage attending. The conference featured 57 invited speaker sessions, 62 abstract sessions, 27 workshops, 10 pre-conferences and more than 70 satellite sessions. The latest advances in HIV science were presented at the conference, with emphasis on political commitment, resilience, multi-sectorality and advancement of research and implementation grounded in a human rights approach to effectively reduce the spread and burden of HIV and related illnesses.

The conference highlighted, among other things, studies on pre-exposure prophylaxis (PrEP) uptake among women in US President's Emergency Plan for AIDS Relief (PEPFAR) countries and the US, the real-world impact of PrEP use in East Africa, health outcomes of HIV-exposed but uninfected children in South Africa, weight gain and HIV, recent research on the global gag rule and its impact on communities most affected by HIV, and the latest findings on HIV vaccines and cure research.

The vivacity with which the HIV field embraced AIDS 2020: Virtual represents the resolve of scientists, researchers, policy makers, implementers and, especially, the people who are directly or indirectly affected by HIV to stand united in endeavours to reduce the transmission and burden of HIV. At a time when world attention was focused on the COVID-19 pandemic, it served as a reminder that the other global pandemic of our times, HIV/AIDS, must not be forgotten if all the gains made to date are not to be lost.

"These are remarkable times - and defining times - for the global HIV movement and for the world. Every conversation we have now sits at the confluence of the COVID-19 pandemic and a new global reckoning with systemic racism."

- Anton Pozniak, IAS President and AIDS 2020: Virtual International Scientific Chair

"Even before the onset of COVID-19, the new UNAIDS Global Report shows that the world was not on track to reach its goal of ending AIDS as a public health threat by 2030. We cannot drop the ball on HIV. We must double down and increase our efforts to hold governments and policy makers to account. Epidemics run along the fault lines of inequalities and we can and must close the gaps."

> - Winnie Byanyima, UNAIDS Executive Director



Ms Carey-Grant, AIDS 2020 Local Co-chair, Oakland

Dr Gandhi, AIDS 2020 Local Co-chair, San Francisco

Dr Pozniak, AIDS 2020 International Chair



13,000+ participants from 176 countries tuned into AIDS 2020: Virtual



Women represented the majority (54%) of delegates



55% of delegates were under 45 years old



The IAS awarded more than 2,000 scholarships to attend the conference and provided 916 scholarship recipients with data and/or hardware to ensure access to the virtual conference



86% of delegates agreed that the conference objectives were met



**Almost 85% of survey respondents were satisfied** with the choice and quality of the presenters



Almost 50% of speakers represented key and vulnerable populations



**50 million+** people were reached through **8,294** social media posts



Over 600 original news stories were generated



**96** pre-recorded and live sessions covered the full spectrum of HIV science and policy

# Who was there?

AIDS 2020: Virtual brought together 13,453 participants from all 176 countries, including 12,569 delegates. The remaining categories included exhibitor staff, media representatives and pre-conference participants.



### **Country and region**

The regions with the largest representation at AIDS 2020: Virtual were North America (42%), followed by Sub-Saharan Africa (20%), Western and Central Europe (16%) and Central and South America (10%). This compares with 27% for Western and Central Europe and 24% each for North America and Sub-Saharan Africa at AIDS 2018 – the 22nd International AIDS Conference.



### Figure 1: Delegates per region

### The top 20 countries





In total, 33% of delegates came from the United States, followed by 5% from South Africa, 4% from the United Kingdom and 3% from Argentina, Kenya, Mexico, Nigeria and Uganda. Other countries with strong representation included Brazil and India (2% each).

### Gender

There were 15% more women than men at AIDS 2020: Virtual. This shows an increase compared with AIDS 2018, where there was an almost even split between men and women.



### Figure 3: Delegates by gender

### Age group

More than 55% of all delegates at AIDS 2020: Virtual were younger than 45 years and, of these, more than half (26%) were younger than 35. The proportion of delegates younger than 45 years was similar to that in 2018.



### Figure 4: Delegates by age

### Affiliations and institutions

People from non-governmental organizations (NGOs), followed by academic institutions, made up the largest proportion of delegates. The next biggest category was made up of delegates who work in hospitals and clinics. The proportion of NGO delegates was about five percentage points lower than at AIDS 2018, while the proportion of delegates working in hospitals and clinics was more than six percentage points higher than in 2018.



### Figure 5: Delegates by affiliations and institutions

# AIDS 2020: Virtual scholarships

The IAS awarded 2,122 scholarships to attend AIDS 2020: Virtual through three programmes: IAS Educational Fund (advocates), IAS Educational Fund (clinicians) and AIDS 2020 Scholarships. All scholarships granted registration, including full online access to the conference, as well as connectivity support to those who needed it.

Scholarship recipients were from 132 countries across seven regions. The majority of recipients were 26 to 45 years of age. Around 9% were younger than 26 years and 4% were 56 years and older.



### Figure 6: Scholarship recipients by region









# What was shared?

COVID-19 and impact on HIV care

Prevention: PrEP, vaccines and passive immunity

Treatment and cure

Stigma, rights and advocacy

Person-centred care and intersectionality

Targets, public health and community engagement



The COVID-19 pandemic had already made a huge global impact when the conference started. Apart from the devastation and loss of life caused by the virus, there were concerns about its effect on access to prevention, testing and treatment for many conditions, including HIV. Although COVID-19 was a key subject of the conference, things have evolved rapidly since it was held.

At the conference, the World Health Organization (WHO) presented data about the risk of treatment disruptions for people living with HIV: 73 countries reported being at risk of antiretroviral stock-outs, of which 23 had less than three months of stock remaining.

Several groups reported on the impact of COVID-19 on people vulnerable to or living with HIV from different perspectives, including service delivery, PrEP access and COVID-19 outcomes.

Researchers presented results of a survey of men who have sex with men conducted in eight countries to assess the relationship between intensity and breadth of COVID-19 mitigation strategies and interruptions to HIV prevention and treatment services [1]. The results showed that stringent government responses were associated with decreased access to HIV services. The findings suggested that innovative strategies, such as mobile-service delivery or telehealth, may be needed to minimize service interruptions.

COVID-19 was also associated with disruptions in PrEP care despite high use of telehealth, according to a study conducted at a Boston community health centre specializing in sexual healthcare [2]. From January to April 2020, PrEP initiations among its clients, 92% of whom were men, decreased by 72.1%, refill lapses increased by 278%, the number of people on PrEP decreased by 17.9%, and the number of HIV tests decreased by 85.1%.

COVID-19 spurred rapid changes in national differentiated service delivery (DSD) programmes, according to the results of a survey of a network of experts based in 14 Sub-Saharan African countries (CQUIN) [3]. Two components of DSD - multi-month dispensing of antiretroviral therapy (ART) and community-based delivery of services - were accelerated during the COVID-19 pandemic to ensure uninterrupted treatment supply and reduce unnecessary contact with the health facility.

Another session highlighted how DSD for PrEP could be adapted during the pandemic through options such as multi-month dispensing and decentralized delivery and testing, as well as adherence support from peers, community health workers and healthcare professionals [4]. The full impact of these changes on health outcomes and their sustainability has yet to be observed and will be of continuing interest.

The authors of a study from South Africa looked at the impact of COVID-19 among 3.5 million adults receiving public sector healthcare in the Western Cape province [5]. They estimated that around half the deaths from COVID-19 were mainly associated with diabetes, 19% with hypertension, 12% with HIV, 9% with chronic kidney disease and 2% with current tuberculosis (TB). The proportion of COVID-19 deaths associated with HIV in both public and private health was estimated to be around 8%, although the team noted that this modest effect could be overestimated if impacts of socioeconomic status, co-morbidities and other factors had been missed.

However, evidence from people hospitalized with COVID-19 in the Bronx in New York, US, showed that people living with HIV had the same outcomes as HIV-negative people [6]. The study of more than 4,500 patients (100 were people living with HIV) showed similar COVID-19 death rates and time in hospital for people living with HIV who had suppressed viral loads and those who were HIV negative.

Researchers reported the results of surveys that showed decreased sexual activity and use of PrEP in the US and Australia during the COVID-19 pandemic [7,8]. Although deliberate lapses were the main cause of reduced PrEP uptake, loss of health insurance was also cited in the US study.

### Prevention: PrEP, vaccines and passive immunity

PrEP has the potential to be a gamechanger. It has been proven to be highly effective in reducing the risk of, and protecting against, HIV transmission. Many reports at the conference advanced our knowledge in this area, including the use of long-acting PrEP modalities.

PEPFAR implemented PrEP mostly in African countries from 2017 to 2019. Researchers reported that among women, 51% of PrEP initiations were in adolescent girls and young women, among whom they found a 2.5-fold increase in PrEP use from 2018 to 2019 [9]. Barriers to implementation were addressed through outreach efforts, as well as the use of technology to educate and assist the target population, with media campaigns and peer support.

To address the shortage of data on HIV incidence among PrEP users in generalized epidemic settings, researchers studied a populationlevel PrEP offer in rural Uganda and Kenya from 2016 to 2019 [10]. They found that PrEP was associated with 79% lower HIV incidence among PrEP initiators compared with a matched control population.

Data showing the impact of PrEP on HIV incidence were also announced at the meeting. Women in the Evidence for Contraceptive Options and HIV Outcomes (ECHO) trial had been randomly assigned to one of three licenced contraceptive methods [11]. The introduction of PrEP into the protocol reduced HIV incidence by 55%. Although uptake was 25%, the impact on HIV incidence was considerably higher as the women were thought to have a higher risk of HIV transmission.

#### PrEP adherence

Data from Lesotho highlighted the disproportionate impact of HIV on adolescent girls and young women, who have an annual incidence more than 10-fold higher than their male counterparts [12]. Despite its effectiveness, 78% of girls and young women discontinued PrEP in the first month of use, citing negative experiences with providers, side-effects and, to a lesser extent, partner disapproval and stigma.

Researchers also reported on how PrEP use in Australia was rapidly scaled up from 2018 to 2019 when it was subsidized and promoted, particularly to men who have sex with men [13]. More than 10 million PrEP doses were dispensed. The researchers observed that the reasons for many people to stop taking PrEP or use it inconsistently most likely reflected an individual's HIV risk assessment, but could also be affected by social determinants. Among women, uptake was very low and discontinuation high, suggesting appropriate adherence to guidelines (for example, pregnancy) or a failure to identify a role for PrEP in this population.

Data on long-term use of PrEP in San Francisco since 2012 were presented at the conference [14]. No new HIV infections were diagnosed among the 12,810 people adhering to PrEP. Over five years of follow up, PrEP was used for an average of 1.9 years. Nearly three-quarters of people remained on PrEP a year after initiation, falling to 64% after two years, after which the decline slowed; 37% restarted PrEP, suggesting that it should be linked to the care continuum.

In another San Francisco-based study, researchers looked at an alternative to daily PrEP, where two pills are taken 2-24 hours before anal sex, one 24 hours after the initial dose, and a final pill 24 hours later [15]. Providing this event-driven "2-1-1" dose regimen increased PrEP uptake, proved popular and preserved high rates of effective use.

### Long-acting PrEP

Among the most exciting announcements at the conference were the interim results from the HIV Prevention Trials Network (HPTN) 083 clinical trial. They showed that PrEP injected at eight-weekly intervals was more effective at preventing HIV than daily oral PrEP among gay and bisexual men and transgender women [16]. The study, conducted across three continents, was halted early due to the superiority of long-acting PrEP in preventing transmission.

#### Vaccines and passive immunity

To end the HIV epidemic, additional prevention tools, such as HIV vaccines or passive immunity delivered through monoclonal antibodies, are needed. There was disappointment about the discontinuation of the Uhambo (HVTN 702) trial earlier in the year because the experimental vaccine had no efficacy. The trial showed no difference in the HIV infection rate between people receiving the vaccine or the placebo.

A digest of the research results presented at the end of the conference linked the discussions from AIDS 2020: Virtual with the anticipation of more promising results from several trials that are still ongoing [17]. These include the Imbokodo vaccine trial being conducted in the Americas and Europe and the linked Mosaico trial being conducted in Africa. Both are due to report in the next two years. Another trial, PrEPVacc (a combination efficacy study in Africa of two DNA-MVA or DNA-Env protein HIV-1 vaccine regimens with pre-exposure prophylaxis), being conducted in Sub-Saharan Africa, aims to evaluate the effectiveness of two different HIV vaccine candidates, in combination with an offer of PrEP to participants during the periods of vaccine injection.

There was anticipation about the results of the Antibody Mediated Prevention (AMP) trials. These two linked passive immunity trials of the impact of broadly neutralizing monoclonal antibodies on HIV transmission involved men who have sex with men participants in North and South America and female participants in Africa.

### **Treatment and cure**

There was much discussion at the conference about the potential of long-acting injectable ART to address challenges of adherence to both treatment and prevention and the enduring challenges posed by HIV stigma. However, a presentation at the conference highlighted the need for products to be fit for purpose to ensure user acceptance and to meet criteria for funding investment [18]. It was proposed that such requirements include medium- to longterm treatment cycles and products that can be self-administered or have dual or multiple purposes (such as family planning), alongside appropriate referral and community support. The researchers highlighted the need for ongoing education and community dialogue before new products are developed and marketed in order to build trust and support. Consideration of the diverse needs of children, adolescents and young people and women of childbearing potential, as well as key and highly mobile and displaced populations, will help prioritize those who may benefit most.

#### Dolutegravir

A study from the Centers for Disease Control and Prevention (CDC) found that the risk of neural tube defects (birth defects of the brain and spine) among children of pregnant women living with HIV was similar among those treated with the integrase inhibitor dolutegravir or other ARVs and among the general US population, providing reassurance about the use of dolutegravir during pregnancy [19].

Several other studies of dolutegravir were presented at AIDS 2020: Virtual. Data from a study in Eswatini of adolescents living with HIV treated with dolutegravir or other ART regimens showed that the rate of change in body mass index (BMI) tripled – from 0.316 to 0.941 kg/m2 per year – when the periods before and after dolutegravir initiation were compared [20]. In another model, the odds of becoming overweight or obese before dolutegravir was unchanged, but increased by approximately 1% every day after dolutegravir initiation.

#### **HIV** cure

The announcement at the conference that a Brazilian man may be the first person to be "cured" of HIV after receiving intensive experimental drug therapy created international media interest [21]. In addition to his standard three-drug regimen, the 35-year-old received dolutegravir and maraviroc, a drug that blocks entry of HIV into cells.

After a closely monitored treatment interruption in March 2019, the man had undetectable HIV RNA and HIV DNA even 15 months later. Although the finding may represent the first case of a functional cure without the risks associated with a bone marrow transplant, experts urged caution against overinterpreting the results.

### Person-centred care, including HIV co-infections and co-morbidities

Attention to the holistic health, care and wellbeing of people living with and most vulnerable to HIV is an essential aspect of an effective HIV response (find further details in the section, "Person-centred care and intersectionality"). The presence of co-infections and co-morbidities for people living with HIV – including those resulting from immunosuppression, such as TB – highlights the crucial importance of easy accessibility throughout the HIV care continuum.

Data from six resource-poor Latin American countries showed that the risk of opportunistic infections in people living with HIV remains, even after long-term use of ART [22]. In another study, researchers found that the Framingham risk score and two other assessments used to evaluate an individual's risk of cardiovascular disease performed poorly in people living with HIV, with all underestimating the risk [23]. The researchers, who studied 10,000 people (2,185 in Boston, 7,938 in California), found that the risk was underestimated by approximately a third in the Boston cohort and a quarter in the California cohort. In both, the predictive accuracy of the tools was especially poor among women. Knowledge that these cardiovascular risk prediction tools are not uniformly transportable to people living with HIV will have important implications for HIV care, the researchers said.

In a report of a study of hospitalized patients in KwaZulu-Natal, South Africa, systematic screening for HIV, TB and an enhanced TB diagnostic package significantly improved the TB diagnosis rate, with 7.9% diagnosed with TB in the pre-intervention phase of the study and 15% in the intervention phase [24].

PEPFAR reported on a study of more than 550,000 children living with HIV across 16 countries in Sub-Saharan Africa [25]. The results presented at the conference showed that although TB screening coverage was high, positivity was lower than expected, suggesting a poor quality of screening. Low initiation of TB preventive therapy and completion underscored the need for national paediatric-specific plans, the researchers said. Sadly, the study could not be conducted in six of the 21 PEPFAR countries because TB diagnosis data had not been disaggregated by age, highlighting the need for better data in the future.

In another study, conducted in South Africa, investigators reported that a simplified,

shortened all-oral regimen for multidrugresistant TB showed sustained high efficacy and manageable safety, irrespective of HIV status [26].

Researchers studied the nature and risk factors associated with late-onset opportunistic infections (occurring after six months of starting ART) among 8,776 participants (77% men and 23% women) in data provided to the Caribbean, Central and South America network for HIV epidemiology (CCASAnet). One in 10 (899) had a late-onset opportunistic infection, among which primary tuberculosis was the most common (affecting 40%), followed by oesophageal candidiasis (13%). There was a higher risk of developing such infections among women and those starting ART at a younger age or with a lower CD4 cell count, indicating the need for closer monitoring of these groups. The researchers said that further investigation was needed to determine whether these findings were attributable to virologic failure and/or poor adherence.

Data from a study of distal sensory polyneuropathy (DSP) and distal neuropathic pain (DNP) in older people with HIV, conducted at six US centres, was presented at the conference [27]. Study participants underwent standardized clinical and laboratory evaluations at baseline - soon after the roll out of combination ART and again 12 years later. The 262 participants had a mean baseline age of 43.6, 22.5% were women and 58.0% were black. The researchers found that DSP prevalence increased from 25.9% at baseline to 43.5% at 12 years, and 21.1% had incident DSP. Of 183/262 individuals without pain at baseline, 45 (24.9%) had incident DNP. Of 81 with DNP at baseline, 23 (28.4%) worsened and 14 improved.

People who were employed at baseline (a proxy for socioeconomic factors and favourable risk reduction strategies) were much less likely than unemployed people to have incident DNP at 12 years. In addition, participants with DNP at follow up had significantly worse physical and mental health than those without and were more likely to have become dependent. DNP, but not DSP, was associated with substantially reduced quality of life. Neither neuropathic pain nor diabetes were predictors of incident DSP or DNP, but increased BMI heralded later DNP. The researchers concluded that DSP and DNP in people living with HIV should be re-examined, particularly with the availability of novel therapeutic approaches.

Sadly, stigma, discrimination and social exclusion continue to undermine the considerable progress in reducing new HIV infections and AIDS-related deaths, impacting the diagnosis, treatment and care of people living with and most vulnerable to HIV.

A presentation from the Joint United Nations Programme on HIV/AIDS (UNAIDS) highlighted findings from population surveys (2014-2019) that more than 25% of respondents in most regions reported discriminatory attitudes towards people living with HIV, resulting in avoidance of healthcare [28].

UNAIDS explained its intention to focus on expanding and better defining the social enablers of the response to HIV services from 2021 to 2030 and set out three programmatic strategies: a society free of HIV-related stigma and discrimination; a supportive legal environment and access to justice; and gender equality.

### **HIV** resilience

The theme of AIDS 2020: Virtual was Resilience. The Stigma Index team presented a new HIV Resilience Scale (PLHIV-RS) that had been developed with people living with HIV and validated for use in the next iteration of the widely used Stigma Index survey [29]. Resilience was defined as "positive adaptation within the context of significant adversity".

The PLHIV-RS will assess whether HIV status has had a positive, neutral or negative effect on meeting needs. Respondents involved in its development said that being asked and responding to resilience questions was therapeutic, allowing them to reflect on the positive ways they are coping with, and even benefiting from, their HIV-positive status.

#### Human rights

"Numerous" and "severe" were descriptions of human rights barriers in a baseline assessment of 20 countries conducted by the Global Fund to Fight AIDS, Tuberculosis and Malaria from 2017 to 2019, presented at the conference [30]. The Global Fund reported that key populations faced marginalization by criminalization and inadequate access to justice. This was compounded by stigma associated with HIV, TB and other factors, such as gender inequality, and continued to hamper access to care. The Global Fund also noted that many programmes aimed at addressing these barriers had been poorly funded and executed. Its major \$78 million investment in catalytic funding and matched funds from governments represents a dramatic increase in support for scaled-up programmes to reduce rights-related barriers.

The Humsafar Trust, an Indian lesbian, gay, bisexual, transgender and intersex (LGBTI) rights organization, described how its advocacy and awareness-raising work helped 38 corporate and educational institutions develop antiharassment policies and support networks to enable workplace environments that are friendly to men who have sex with men and transgender people [31].

ICW Latina described an inspiring project that used GIPA (Greater Involvement of People Living with HIV/AIDS) principles to empower women living with HIV in seven countries in Latin America [32]. Its project, conducted from 2016 to 2018, helped strengthen its technical and political advocacy capacity, which is now being deployed to design guidelines for addressing violence.

Research from Kenya evaluating the country's human rights-based approach to HIV was presented at AIDS 2020: Virtual. Focus groups and interviews showed that while rates of HIV testing and notification were increasing, challenges remained in building trust and confidence among key populations. The study identified improvements that could be made by identifying opportunities for key populations to collaborate with healthcare professionals, expanding the reach of community-based organizations and raising legal literacy.

### Stigma, rights and advocacy



### Sexual and reproductive health and rights

At AIDS 2018, WHO launched a call to action to address sexual and reproductive health and rights (SRHR) and HIV prevention, treatment and care [33]. Two years later, researchers presented findings from Sub-Saharan Africa and the Americas that highlighted the adverse effects of laws and policies on SRHR, as well as the need to target strategies and combine programmes of sexual and reproductive health [34]. The researchers, funded by the UN Population Fund, reported on a major review of laws and policies affecting adolescent SRHR in 23 East and Southern African countries. Their research found that no countries had clear laws for a minimum age of consent to sexual activity or access to HIV services (although there are policies for the latter in some). Most still had laws that criminalize sexual activity between men; only a handful had comprehensive sex education in line with international standards.

It was encouraging to see the range of positive outcomes for sexual and reproductive health emerging from Zimbabwe's Sista2Sista programme [35]. Data from 91,612 vulnerable adolescent girls and young women, collected from 2013 to 2019, revealed that 64% of women graduating from Sista2Sista were significantly more likely to have an HIV test and less likely to marry or drop out of school.

The authors of a study of 1,275 gay and bisexual men enrolled in a PrEP pilot in US-based community health centres reported that nearly half had intentions to have a child. Black people were more likely to report intentions to have a child [36]. The researchers concluded that healthcare professionals offering PrEP should assess such intentions and incorporate family planning counselling into healthcare when indicated.

Meanwhile, researchers described the results of a survey in Argentina of transgender men, a population historically understudied and neglected by prevention programmes and policies [37]. A high proportion said they engaged in unprotected sex with high HIV-prevalence populations, leading the researchers to call for specific prevention strategies targeted at this group.

### Person-centred care and intersectionality

Understanding key population groups and different life stages, as well as addressing intersectionality (multiple layers of identity, such as race and gender), will inform the approach to many issues, including prevention, treatment and stigma.

### Gender

Colleagues from Creating Resources for Empowerment in Action (CREA) explored genderaffirming and transformative approaches in an illuminating conference session [38]. Gender analysis was shown to be of significant value in highlighting how laws, policies and practices can: reinforce or counteract gender imbalances and marginalize trans and non-binary people; highlight gender-specific advantages and disadvantages in different contexts; reveal links between gender and other identity factors (intersectionality); and help identify gaps in programming and service provision.

CREA shared good-practice examples and then highlighted four strategic priorities for promoting gender equality and addressing barriers: using strategic data to enhance action, voice and leadership; taking action to challenge harmful social norms, prevent violence and provide equitable treatment and care; having policies that ensure that programming and services meet differing needs; and ensuring investment in and advocacy for programmes that remove barriers to access.

At the plenary session on women's resilience, calls were made for a "data revolution" to help respond to the priority needs of women and girls, who, as well as being disproportionally affected by HIV, are experiencing the adverse impacts of COVID-19, including treatment interruptions and partner violence [39]. There were also calls for funding bodies to better appreciate the lived experience of people living with HIV rather than being tied to a top-down approach that, given capacity constraints, may never meet expectations.

Researchers reported missed opportunities for HIV testing among men visiting health facilities in Malawi [40]. Of the 1,187 men surveyed, 80% of all men and 66% who were in need of testing had attended health facilities in the previous 12 months. Visits to outpatient departments represented 83% of the most recent visits for all men and 96% for men in need of testing. The lack of an offer for HIV testing was a major reason why men did not test, suggesting that HIV testing at routine facility visits should be improved.

#### Transgender

Working with transgender leaders in Viet Nam, researchers described their combined efforts that increased PrEP enrolment among transgender populations 7.6-fold from preintervention until the end of 2019 [41]. Although HIV prevalence among transgender women who have sex with men is high (18%), awareness and uptake of PrEP had been very limited since it was introduced. The research findings are now being used to inform national guidelines.

In another study, researchers found that a racially and ethnically diverse group of transgender women used social networking technologies for social support and to exchange healthrelated information and advice, highlighting the promise of these approaches for HIV prevention and care [42].

### Young people

Research involving young people living with HIV was a major theme of the conference, ranging from data on the psychological impact of HIV infection through effective prevention for this age group to engagement of young people in advocacy for better services.

Preliminary data from a study conducted in Cape Town, South Africa, showed that exposure to low to moderate trauma was associated with cognitive problems among children aged 12-15 years with perinatally acquired HIV [43].

Data from the New York-based Child and Adolescent Self-Awareness and Health (CASAH) longitudinal study had previously shown that young people living with HIV were significantly more likely to attempt suicide than those who were exposed but did not acquire HIV [44]. CASAH researchers presented new findings showing that among young people living with HIV, suicide attempts were associated with greater HIV stigma, lower self-esteem and less spirituality, leading the researchers to call for urgent integration of routine suicide risk assessment into treatment. In a study conducted in Thailand, young men who have sex with men and transgender women aged 15-19 years were given daily oral PrEP and condoms [45]. They were then randomized to receive either youth-friendly services alone or combined with an app (whose features included HIV risk assessment, rewards and appointment reminders). The researchers found that PrEP adherence, at 49.1% overall, was similar in both groups. No HIV seroconversions occurred during follow up. Young men who have sex with men were 3.6 times more likely to be adherent to PrEP than transgender women.

Two reports from the San Francisco and Oakland Youth Force (SFOYF) highlighted the importance of people living with HIV leading advocacy for improved HIV-related services that meet their diverse needs [46]. In the first, the researchers presented a cycle of actions to support advocacy efforts, including gathering evidence, developing strategies, planning and implementation, evaluating success and making changes. To better support youth-led advocacy, they called for strengthened capacity to take up leadership roles, funding, platforms to support participation and engagement, and adult support.

In the second study, SFOYF advocates spoke to 395 young people living with HIV in five countries about their needs and expectations [47]. They concluded that there should be options for how support is given, with convenient hours, dedicated time slots, clear information on what is available and multi-month prescriptions. The advocates said that services should include safe and confidential peer counselling and innovative approaches to share information and support, as well as information and counselling on sexual and reproductive health, harm reduction, drug use and prevention of mother-to-child transmission.

#### Older people

Preliminary analysis from UNAIDS estimates that just over 7 million people globally have lived with HIV for more than 20 years; that is one in five of the total number of people living with HIV. In 2019, these "long-term survivors" made up a third of all deaths in the East and Southern African region compared with almost 90% in high-income regions of West and Central Europe and North America.

Researchers presented data from a needsassessment survey of mainly African-American people living with HIV aged over 60 years in Chicago. In the group (median age 64 years), there was a high rate of co-morbidities, social isolation and polypharmacy [48]. This, the researchers said, would likely increase the risk of falls, morbidity and other adverse outcomes; it also highlighted the need to go beyond viral suppression to optimize quality of life.

On co-morbidities, a study in Kampala, Uganda, showed the benefits of offering an integrated care package on screening and management in reducing morbidity due to diabetes and hypertension among elderly clients living with HIV [49].

A series of 200 interviews conducted over three years with people living with HIV in Queensland, Australia, found that for many, social isolation and loneliness, limited social and interpersonal resources and fragile social networks led to reliance on formal networks for social support [50]. Despite extreme social suffering, there was resilience among this diverse population. The researchers said that to support healthy ageing, services should urgently move beyond the biomedical to address the social aspects of health.

#### Intersectionality

The intersection of gender with other characteristics, such as race, ethnicity, language, migrant status and health status, was a major thread at AIDS 2020: Virtual. Many of the presentations highlighted the importance of identifying the specific needs of groups and the heterogeneity within groups so that communications and services can be tailored accordingly.

In the US, black men who have sex with men are disproportionately affected by HIV, with one in two expected to acquire HIV in their lifetimes. Racial disparities in PrEP awareness and uptake suggest a need to prioritize this group in marketing initiatives. However, researchers studying the responses to different PrEP advertising propositions found that 40% of black men who have sex with men rated adverts featuring that group exclusively to be "very" or "extremely" stigmatizing [51]. These and other findings suggested that showing diversity in adverts - including black men who have sex with men with people of other races, genders and sexual orientations - could enhance their relatability and reach.

The results of a study of young indigenous people who had used drugs showed that they were more than 75% less likely to be virally suppressed if they had been separated from their parents as children or if their own children had been separated from them [52]. The study, conducted by the Cedar Project in two Canadian cities, concluded that support for parenting and family connections was essential to ensure culturally safe, healing-centred HIV care.

A study of urban refugees aged 16-24 years in Kampala, Uganda, found that 26.5% of females and 21.4% of males reported transactional sex in the previous year [53]. Transactional sex was associated with increased condom use in females, reduced HIV testing in males and psychosocial vulnerabilities in both. The researchers call for tailored HIV strategies in this intersectional group.

An inspiring report from Southern Africa described the impact of the Aidsfonds Hands Off Programme on reducing violence against sex workers, a strategy already known to be effective in preventing HIV [54]. The team set up 65 community-led crisis response systems, including drop-in centres and helplines directly operated by police and multidisciplinary local teams. Independent evaluation showed that the approach led to: more than 81,000 sex workers accessing healthcare, psychosocial and legal services; adoption of an advocacy strategy; more than 235 cases coming to court; and a decrease in illegal arrests.

Researchers presented the results of a study comparing the effectiveness of peer-recruitment and voluntary testing clinics in identifying undiagnosed HIV-positive men who have sex with men in Kenya, where homosexuality is illegal [55]. This is consistent with several studies in the US that have already shown that peer recruitment improves HIV diagnoses in men who have sex with men and sex workers. The researchers found that at peer-recruitment sites, the percentage of people newly testing positive for HIV was almost four-fold greater than at voluntary testing sites.

### Targets, public health and community engagement

Two presentations focused explicitly on progress toward the first UNAIDS target to end the HIV epidemic: that 90% of people living with HIV know their status by 2020. Researchers from the Ghana AIDS Commission reported on 2017 data from surveys of more than 4,000 men who have sex with men, showing that only 24.3% had reported accessing HIV testing in the previous 12 months [56]. They also reported stark differences in testing levels across regions, which varied up to three-fold, leading the authors to call for a targeted effort to reach men who have sex with men in Ghana.

Contributing to achieving the second UNAIDS target [57] (that by 2020, 90% of all people with diagnosed HIV infection will receive sustained antiretroviral therapy), research from Brazil highlighted the success of a national information system of people living with HIV to monitor their progression and ensure appropriate treatment services. From December 2013 to December 2019, the system identified 210,000 people who had not started ART, 74% of whom went on to initiate treatment. Time from linkage to care to ART initiation decreased from 182 to 33 days. The authors concluded that the system played an important role in the national strategy to improve access to treatment, and they plan to expand it.

The third UNAIDS HIV target, that 90% of all people receiving antiretroviral therapy will achieve viral suppression by 2020, was the subject of a presentation by PEPFAR [58]. From 2017 to 2019, PEPFAR found a significant improvement in the number of people living with HIV with documented viral load tests in 17 of 21 countries studied; the remaining four (Burundi, Democratic Republic of Congo, Namibia and Viet Nam) saw no change. PEPFAR said that measuring the viral load of all people on ART and acting on the results remained a challenge in many countries. Although PEPFAR works with countries to improve demand for testing, the authors called for more demand-creating activities, such as treatment literacy training and promoting awareness.

#### **Community engagement**

There were many inspiring accounts of community engagement at the conference, including its power to transform the policy environment for key populations and help create a culture of collective problem solving.

Researchers described the work of a regional community treatment observatory established to increase accountability for UNAIDS targets in West African countries, where progress on 90-90-90 targets was obstructed by low demand, stock-outs, weak health systems and poor quality of care [59]. In this study, networks of people living with HIV were trained and supported to collect and analyse data from health centres in 11 countries from January 2018 to June 2019. The authors reported that the frequency of antiretroviral stock-outs decreased from 23.6% in the first six-month period to 15.2% in the third. In that time, the number of viral load tests more than doubled, from 16,532 to 33,376, and viral suppression increased dramatically, from 48.3% to 77.4%. However, while quality of care improved, young women were twice as likely as their peers to cite unfriendly healthcare professionals as a barrier to services. The observatory changed perceptions and created a culture of collective problem solving among patients, healthcare workers and policy makers.

USAID and PEPFAR described how partnerships and programme data from their LINKAGES project were used to transform the policy environment for key populations, leading to immediate improvements in service uptake; they were also likely to have a sustained impact on epidemic control efforts and quality of life [60]. In more than 35 countries, the project has delivered HIV services by providing grants to more than 200 local partners to engage key populations. It also contributed to enabling policy environments in 23 countries, facilitating updates of national HIV and/or sexually transmitted infection (STI) policies and guidelines to better address the needs of key populations and incorporate evidence-based recommendations. In 20 countries, data showing the effectiveness of LINKAGES interventions led to endorsement of these approaches in government strategies, operational plans or grants. In Botswana, Kenya, Lesotho and Malawi, government approval was gained for ART provision at community-led centres. Other highlights of the LINKAGES project included the strengthening of national data systems to include key population-specific data in 19 countries and successful decriminalization efforts in Angola, Botswana and Malawi.

# Global Village and Youth Programme

The Global Village and Youth Programme (GVYP) provided a diverse and vibrant space where communities from all over the world could gather virtually to connect, share and learn from each other. The free virtual gathering remained open to conference delegates, as well as members of the public. Intersecting with the main conference programme, the GVYP featured 220 activities, including workshops, panel discussions, debates and presentations in live and on-demand formats. The programme also offered virtual booths for NGOs to showcase their work, art exhibits and film screenings, along with cultural performances and networking zones. The GVYP provided the opportunity for communities to demonstrate the application of science and good leadership, and conference participants were invited to see how science translates into community action and intervention.







Main highlights of the GVYP were:

### **Networking zones**

In these virtual networking spaces, local and international groups could propose thematic discussions using live chats. Participants could join the networking zones at varying times throughout the day. Captioning and translation services were made available to allow for greater accessibility by all participants. Networking zones included spaces for youth, long-term survivors and key populations. The IAS also provided a zone that focused on its programmatic work.

### NGO booths

Virtual booths (55) enabled NGOs to distribute information about their HIV-related non-profit work, show short videos and engage with the public. Each day, each NGO selected one hour to staff its booth so that visitors could interact live with representatives of the organization. Captioning and translation services were available to allow for greater accessibility for all participants.

### Sessions

GVYP sessions included workshops, panel discussions, debates, presentations with Q&A and meet the expert sessions. The 30- to 45-minute sessions were pre-recorded and published at specific times during the conference week. Timeslots were allocated to allow viewers to ask questions in real time. Sessions were hosted on-demand following their release, allowing access to content at a time that suited the attendee's schedule. Translation was available to allow for greater accessibility for participants. GVYP sessions covered a multitude of topics that focused on key populations from around the world. Sessions looked at topics that included political engagement, HIV advocacy and stigma linked to HIV.

#### Cultural performances, art exhibits and film screenings

On-demand 30- to 45-minute cultural performances were made available for viewers to enjoy throughout the conference, and captioning was offered as a service for all.

Art exhibits were placed within an online e-gallery in the Global Village and Youth Programme: people could browse through different exhibits while listening to a two- to three-minute audio guide recorded by the artist, sharing an overview of the artwork.

A dedicated channel housed all films in the programme, available for watching on-demand throughout the week.

"The Global Village and Youth Programme forced me to think outside of my 'box'. It pulled me out of what I do on a typical day and made me think wider/broader and I think that is really important for anyone working in an HIV-dedicated field."

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How was it covered?



AIDS 2020: Virtual generated over 600 original news stories, which is an 80% increase in coverage from AIDS 2018. Of these stories, over 450 were original articles in top-tier, wire and trade outlets and 150 were on-air segments in local, regional and national broadcast outlets. The media coverage was global, with stories shared in Croatian, Dutch, English, French, Hindi, Italian, Spanish and Turkish. Notably, the New York Times published eight articles – three original and five wire pieces – within one week, and Associated Press and Reuters released multiple stories, generating significant global pick-up.

Stories quoting Anthony Fauci and Deborah Birx were the highest-scoring drivers of enhanced coverage. The major attractors of attention in the breaking science area included the first adult to experience long-term remission of HIV without a bone marrow transplant, and evidence that long-acting injectable PrEP is superior to daily oral PrEP. As in previous years, host country outlets accounted for a significant proportion of media coverage.

- The global AIDS meeting, the Woodstock of science gatherings, goes virtual amid COVID-19 – sciencemag
- Global AIDS Conference, overshadowed by a new pandemic, return to SF – virtually – San Francisco Chronicle
- International AIDS Conference 2020: How the coronavirus crisis is hitting the fight against HIV/AIDS – Euronews
- Patient Is Reported Free of H.I.V., but Scientists Urge Caution
  New York Times
- AIDS 2020: Researchers describe a possible case of HIV remission and a new method to prevent infection - CNN



#### Figure 8: Coverage drivers

### AIDS 2020: Virtual digital highlights



### 50+ million

people reached though 8,294 social media posts.



### 2+ million

people reached from a record 263 official *AIDS 2020: Virtual* tweets, a 9% increase from AIDS 2018.



### 275,220 minutes

of *AIDS 2020: Virtual* videos watched throughout the conference, a 40% increase on AIDS 2018.



### 92,263 people

visited the *AIDS 2020: Virtual* website during the conference, a 43% increase on AIDS 2018.



### A record 420 posts

from official *AIDS 2020: Virtual* channels were seen over 2.5 million times.

How did it go?



The data and quotations presented in this section are drawn from a survey sent to all delegates, key informant interviews and focus group discussions. The quotations have been minimally edited for clarity and brevity where needed.

### Key informant interviews

Fifteen stakeholders (including the local co-chairs, track chairs, pre-meeting chairs, conference donors, corporate sponsors, key actors in the HIV sector and community representatives on the Conference Coordinating Committee) provided in-depth feedback on the scientific content of the conference, its organization, expected outcomes and recommendations for maximizing impact.

#### Focus group discussions

Two focus group discussions involving 38 conference attendees provided feedback on conference organization, content and structure, the virtual conference experience and networking.

### Online delegate and Global Village and Youth Programme surveys

Of the 13,453 total participants, 2,349 (17.5%) responded to a 23-question online survey, with 100% completion, on the virtual platform, content, usefulness of the conference, engagement, the Global Village and Youth Programme, and post-conference plans. Half of the respondents to the delegate survey had attended an International AIDS Conference for the very first time and an overwhelming majority (77.22%) had never attended a virtual conference with more than 1,000 participants.

A separate survey was sent to those visitors of the Global Village and Youth Programme – the part of the conference that is traditionally open to members of the public, in addition to conference delegates – who were not registered for AIDS 2020: Virtual. Feedback obtained through this survey is integrated, where relevant, in the "What did people get out of it?" section below.



#### Figure 9: Survey respondents by region

Survey respondents were broadly representative of all delegates with respect to region, age, gender and organizational affiliation.

Responses were received from delegates in 126 of the 195 countries represented at the conference. Most respondents were from the United States, Uganda, South Africa, Mexico, United Kingdom, Nigeria, Brazil, Argentina and Kenya, in that order.

- Of survey respondents who shared their gender, 54.2% identified as female and 42.9% as male. Non-binary or gender non-conforming, transgender male and transgender female each made up less than 1% of respondents.
- Less than 5% of respondents who completed the delegate survey were younger than 26 years. The highest percentage (32.4%) of respondents were in the 26-45-year age range. Only 0.28% of respondents were older than 76 years.

### Figure 10: Delegates and survey respondents by age



The majority of respondents work in NGOs (25%), hospital/clinics (21%) or academia (20%). Few were from the private sector (1%), other organizations/affiliations (2%) or grassroots community-based organizations (3%).

### Figure 11: Delegate and survey respondents by affiliation



Just over half of the respondents (52%) had been working in the field for more than 10 years, 22.3% for 6-10 years and 17.7% for 2-5 years. Only 7.8% were newcomers (0-2 years in the field).

### Figure 12: Respondents by years in the field of HIV



What did people get out of it?



Being held completely online, AIDS 2020: Virtual was a learning experience in many ways for everyone who contributed to and/or attended the conference. Working on a virtual platform across time zones was one of the most talked about conference experiences. However, the key informant interviews, focus group discussions with participants and the delegate and GVYP surveys gave insights into what mattered the most at the conference for various people.

### Latest HIV science and innovation

Almost all respondents agreed that the conference programme captured the state of the art in the HIV response. In all, 45.38% of respondents confirmed that they learned to a great extent about the latest research findings in HIV prevention, support, treatment and care; an additional 30.67% mentioned new learning to a moderate extent.

Dolutegravir-related science, PrEP with injectable cabotegravir and vaccines were seen as the main drivers for future work. The most appreciated study provided evidence from the US that dolutegravir was not associated with neural tube defects in newborns when administered to pregnant women. Most of the key informants were also enthused by the evidence from HPTN 083, which confirmed the safety and effectiveness of long-acting alternative agents that will increase prevention choices and help those who find taking a daily pill challenging. The key informants highlighted additional scientific evidence that provided hope for enhanced ability to prevent and/or treat HIV; this included the vaginal ring U=U study and experiences of adolescent girls and young women related to the barriers they face in successful treatment management.

"I think [from] what I saw, there were a lot of advances, innovations and what's new, but also reflecting on what still has to be done." - Key informant

#### New challenges, new responses

### Future directions, policy and funding

The completely online nature of AIDS 2020: Virtual featured in all key informant interviews and focus group discussions.

Almost all respondents found that the virtual experience of a conference of this magnitude was both fascinating and difficult. However, all highly lauded the conference being held on the actual dates it was planned and with its rich agenda.

### "I don't think anyone could've pulled this off. I don't know what I would've done differently, to be honest." - Key informant

The majority of respondents recognized that there was a lot of room for improvement in the virtual platform; face-to-face interaction and networking opportunities were intensely missed. However, most key informants suggested holding a hybrid conference in future, maintaining most, if not all, features of the virtual conference and, if circumstances permit, limited in-person participation. They pointed to reductions in cost, increased participation by people who normally would not be able to attend, a truly global reach, environmental protection associated with a reduced carbon footprint, and high accessibility of content. The COVID-19 pandemic took centre stage and attracted unprecedented media coverage, and it is hoped that the deployment of HIV infrastructure and expertise to contain COVID-19 will bring attention back to HIV as challenges (of COVID-19 and HIV) are linked and so are the solutions. The conference witnessed a major push in HIV prevention: heightened interest and drive in providing choices for prevention that are not so dependent on behaviour has awakened the community and is an important area for countries and ministries to focus on. A total of 31.87% of respondents to the delegate survey learned to a great extent and 31.57% to a moderate extent about how to address gaps in HIV prevention among young people. Similarly, 30.75% learned to a great extent and 32.95% to a moderate extent about how to integrate HIV prevention services in a range of healthcare settings, including primary, private and community.

Key informants were of the view that funding opportunities for HIV would decrease because of COVID-19 and, therefore, mobilization should continue after the conference. While attention to paediatric HIV was seen to be lagging, key informants appreciated high levels of investment into finding long-acting solutions (injectables), which promise increased adherence.

More than 30% of respondents to the delegate survey noted that attending the conference would enable them to both raise awareness among community, policy and/or scientific leaders and strengthen their advocacy or policy work. More than 300 respondents to the delegate survey confirmed that they were aware of policy announcements made at the conference. For example, respondents recalled, as one of the main policy announcements, the UNAIDS 2025 AIDS Targets announced by Executive Director Winnie Byanyima: "the 10s, the 95s and the Integration". Will it make a difference?



### **Renewed commitments**

AIDS 2020: Virtual enabled participants to experience a global conference in an entirely new manner. The experience of connectedness for a common cause despite being thousands of miles apart led to a renewed sense of purpose and commitment from participants to bring about positive change at the global, organizational and personal levels.

"I have to be resilient in all the aspects of life, no matter being born and lived HIV positive. I'll share with the rest of the community that being born HIV positive is not a crime. But one can still become great. And I will educate ... especially [young people] and elder people about HIV/AIDS, how they can overcome stigma and also how to accept their status."

- Delegate

In total, 42.7% of respondents to the delegate survey reported that attending the conference would lead them to change the way they think about or implement their work. Almost the same percentage (42.9%) committed to seeking further training or education to enhance their abilities. An even larger percentage (47.2%) would refine or improve their existing work/research practice or methodology based on what they learned at the conference. A third (33.3%) would initiate a new project, activity and/or research or scale up existing projects and/or programmes as a consequence of their enhanced knowledge and motivation.

Also, more than 57% of respondents to the GVYP survey were satisfied with the knowledge they acquired, including how that knowledge could be translated to community action and intervention.

### "My take-home message is to continue the fight, work with other partners [and] engage the community in programming and implementation." - Delegate

AIDS 2020: Virtual was successful in supporting renewed commitments from the scientific community to push for better and faster solutions, as well as from the large proportion of participants who represented programmatic areas of work for improving the HIV response globally. This was evident in the advancements in science related to prevention, treatment and care presented at the conference, the engagement of a diverse range of scientists, researchers, implementers, community representatives and policy makers, and their collective desire to take the agenda forward despite COVID-19-related challenges.

## The "hyper-conference" mode

Going virtual was not easy for either the organizers or participants. The IAS had very limited time to create an online platform for AIDS 2020: Virtual. All participants in key informant interviews and focus group discussions and respondents to the delegate and GVYP surveys appreciated the decision to move forward with the conference in an online format in response to the COVID-19 pandemic. Almost all respondents appreciated the virtual experience despite several glitches in the platform at the start of the conference, which were promptly resolved.

Most respondents to the delegate survey were satisfied with the web accessibility, the programme structure (live and on-demand content, 24-hour access), the presenters (quality and choice) and the knowledge acquired, including recent developments in the field. However, they also felt that the networking and partnership opportunities made available were not satisfying.

Most respondents (84%) to the delegate survey were also satisfied with the quality of the sessions and other conference areas. They often visited the live prime sessions and on-demand sessions. They sometimes visited the live opening sessions, live and on-demand satellites and on-demand oral abstract sessions. Regarding the user experience, most (70%) of the delegate survey participants reported that the conference log-in, navigation on the online platform, online programme, conference app and helpdesk functions were easy to use. While interactivity was considered important, many respondents reported that the chat and messaging functions and the chat during live sessions (Q&As) were difficult to use.

### "Virtual meetings can be held for large audiences while keeping them safe in a pandemic setting." - Delegate

On the GVYP, most respondents to the delegate survey did not express specific appreciation of nor dissatisfaction with the different sessions, with the exception of on-demand sessions, which they were satisfied with. They also said that they rarely visited any of the sessions/areas of the GVYP. This contrasts with the views of most (76%) GVYP survey participants, who were satisfied with the opportunity afforded by this space to meet new people.

Also, almost half the respondents (48%) to the GVYP survey expressed satisfaction with the opportunities provided to them to share their views and experiences with a broader audience and to forge partnerships at the GVYP. Most respondents to the GVYP survey were satisfied with the quality of the sessions/areas. The GVYP survey respondents often visited on-demand sessions, and sometimes they visited networking zones, NGO booths, cultural performance, art exhibits and films screenings.

## Conclusions

A total of 86% of survey respondents agreed that AIDS 2020: Virtual was successful in achieving its stated objectives.



### Did we achieve our objectives?

### Conference Objective 1

### Accelerate progress in the response by advancing HIV science, research and policy

The objective of increasing knowledge among delegates about the latest in HIV science, research and policy was largely achieved.

A majority of participants in key informant interviews thought that the conference was successful in providing an innovative and interactive platform to influence discussions on HIV science, research and policy. Almost all key informant interview participants agreed that the conference programme captured the state of the art in the HIV response. It was, however, recognized that due to COVID-19, a lot of research had been halted and the rate at which new HIV science was being introduced had slowed down. As examples, respondents mentioned studies related to neural tube defects thought to be linked to dolutegravir, injectable cabotegravir and weight gain on newer nucleoside reverse transcriptase inhibitors or tenofovir alafenamide.

The delegate survey provided robust evidence related to this immediate outcome. More than 84% of delegate survey respondents were satisfied with the presenters (choice and quality). Some 80% of respondents were satisfied with the knowledge they acquired at the conference, including updates regarding recent developments in HIV science, research and policy; 63% agreed that they learned about the lived experience of people living with HIV. In all, 94.68% of delegates agreed to at least some degree that they had learned about the latest HIV policies, including progress towards and challenges in reaching the 90-90-90 targets. A total of 83.74% of delegates reported that they had obtained new knowledge to some extent on how HIV informs and intersects with other co-infections, co-morbidities, ageing, sexual and reproductive health rights, gender-based violence and social justice.

### Conference Objective 2

### Shine a spotlight on the needs of populations left behind

Almost 50% of speakers at AIDS 2020: Virtual represented key and vulnerable populations, and most key informant interview participants acknowledged that the IAS prioritizes these populations. However, participants believed that the main issue was the translation of discussions into programming and measurable action for key and vulnerable populations following the conference.

### Conference Objective 3

### Renew and strengthen political commitment and resolve

The conference aimed at fostering political commitment and resolve from governments, donors and the private sector for a more comprehensive HIV response. In total, 35.3% of delegate survey respondents thought that AIDS 2020: Virtual enhanced to a great extent global leadership and strengthened human rights-based and evidence-informed approaches to HIV; 30.9% of respondents thought that the enhancement was moderate.

Almost a third (30.3%) of respondents reported that the conference had raised awareness among community, policy and/or scientific leaders, and 30.6% felt that the conference had resulted in the strengthening of their advocacy/policy work.

Also, conference delegates reported increased understanding of opportunities and success factors for collaboration across different health and development sectors. A total of 32.47% of delegates reported ease of access to opportunities for building new partnerships, and 33.93% reported developing new collaborations or strengthening existing ones (such as the creation of a partnership and/or network).

### Conference Objective 4

### Promote and support the next generation

In total, 63% of respondents to the delegate survey felt that they learned how to address gaps in HIV prevention among young people

Focus groups stressed the critical importance of the IAS Abstract Mentor Programme and scholarships to promote early-career involvement in the conference. Several participants pointed out that for many junior researchers, scholarships were often the only way to fund their attendance, especially for those from Iow- and middle-income countries. In all, 50% of recipients of IAS scholarships were 16 to 35 years of age, and they came from Eastern Europe and Central Asia (27%), Sub-Saharan Africa (22%), Latin America and the Caribbean (19%) and East Asia and Pacific (17%).

### Conference Objective 5

### Strengthen the commitment to an equitable HIV response

In all, 67% of respondents to the delegate survey agreed that they had learned about the needs of key and vulnerable populations in the context of different local epidemics and social determinants at AIDS 2020: Virtual.

Key informants agreed that the conference reflected the need of key and vulnerable populations to have access to appropriate services, including healthcare and social protection.

### How can we do better next time?

The key informant interviews, focus group discussions and delegate survey findings shed light on how the conference can be improved. Because it was the first time that a virtual platform was used for hosting the entire AIDS conference, not surprisingly, most respondents' suggestions pertained to the virtual experience.

### Streamline and enhance virtual experience

Most respondents thought that the conference virtual platform was not as intuitive as it could or should have been. A lot of effort and time had to be spent on learning to effectively navigate the conference site. Therefore, the main suggestion was to customize the platform for easier use and access.

Most respondents missed the opportunity to network, meet and interact with others; they felt a sense of community, connection and excitement lacking, with the conference seemingly being one-directional. Most felt the limitations on interactivity due to the virtual platform and suggested a hybrid future AIDS conference to observe physical distancing and also allow for limited in-person interaction.

It was further suggested that the duration of presentations be limited to less than 10 minutes because experience showed high attention and sharper messaging with shorter presentations.

### Include live Q&A

Many respondents missed having more live sessions with questions and answers (Q&A) in AIDS 2020: Virtual and proposed including live Q&A across any future virtual or hybrid conference. They also noted that the time allocated for Q&A in some sessions was insufficient (10 minutes) and that the success of interactivity largely depended on the facilitator.

### **Enrich the content**

While all respondents recognized that AIDS 2020: Virtual covered a comprehensive range of topics, some suggested including more content on HIV cure and paediatric HIV and more debates around metabolic and weight gain research, as well as ethical engagement, management of HIV and COVID-19 in the context of HIV, alongside integrated sessions on basic and social sciences. Respondents also wanted to see re-thinking about the distribution of biomedical and social science, as well as more focus on youth-led activities.

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24. Bulti AB. Enhanced tuberculosis screening and diagnosis for hospitalized individuals in a high HIV prevalence setting in KwaZulu-Natal, South Africa: A before and after study. E-Posters: PEB0131. AIDS 2020: Virtual.

25. Patel M. Assessment of the tuberculosis clinical cascade among children living with HIV on antiretroviral therapy, 16 Sub-Saharan PEPFAR-supported programs, October 1, 2018 to March 31, 2019. Oral abstract session: OAB0504. AIDS 2020: Virtual.

26. Olugbosi M. Efficacy and safety outcomes (HIV subgroup analysis) in the Nix-TB Trial bedaquiline, pretomanid and linezolid for treatment of extensively resistant, intolerant or nonresponsive pulmonary multidrug-resistant tuberculosis. Oral abstract session: OAB0502. AIDS 2020: Virtual.

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28. Triant VA. Cardiovascular risk estimation is sub-optimal across two HIV cohorts. E-Posters. PEB0187. AIDS 2020: Virtual.

29. Ellis R. Predictors of sensory neuropathy and neuropathic symptom worsening after 12 years in aging people with HIV. E-Posters. PEA0088. AIDS 2020: Virtual.

30. Ghys P. Defining new metrics for HIV prevention, treatment, and stigma. On-demand session. AIDS 2020: Virtual

31. Friedland B. Living with HIV does not mean you should lose hope: The importance of assessing resilience within the PLHIV Stigma Index 2.0. Oral abstract session: OAD0102. AIDS 2020: Virtual.

32. Jurgens R. Breaking down human-rights related barriers to HIV and TB services in 20 countries. Soon everywhere? Oral abstract session: OAF0402. AIDS 2020: Virtual.

33. Chopade T. Enabling policy development to create a friendly workplace environment for vulnerable MSM and Trans individuals in corporate and educational institutions. E-Posters: PEF1821. AIDS 2020: Virtual.

34. Luciano D. Greater involvement of people living with HIV in research: The experience of the regional study on violence and women living with HIV in Latin America. Oral abstract session: OAF0104. AIDS 2020: Virtual.

35. The World Health Organisation. Call to Action to attain universal health coverage through linked sexual and reproductive health and rights and HIV interventions. https://www.who.int/reproductivehealth/universal-health-coverage-srhr-hiv-interventions/en/

36. Tallarico R. Harmonization of the legal environment on adolescent sexual and reproductive health and rights in East and Southern Africa. Oral abstract session: OAF0106. AIDS 2020: Virtual.

37. Hanisch D. Effectiveness of the Sista2Sista program on improving HIV and other sexual and reproductive health outcomes among vulnerable adolescent girls and young women in Zimbabwe. Oral abstract session: OADLB0104. AIDS 2020: Virtual.

38. Jones JT. Reproductive intentions among gay and bisexual men initiating PrEP in the Sustainable Health Center Implementation PrEP Pilot Study, United States, 2014-2016. E-Posters: PED1003. AIDS 2020: Virtual.

39. Zalazar V. Sexual behaviours and exposure to HIV and other STIs in transgender men in Argentina. Oral abstract session: PED1095. AIDS 2020: Virtual.

40. Fried ST. What are the best practices and success cases in devising/designing gendertransformative and gender-diverse approaches within the HIV response? Bridging session. AIDS 2020: Virtual.

41. Wanjiku Njenga L. Plenary: Still we rise: The power of resilience among women living with HIV. Plenary session. AIDS 2020: Virtual.

42. Dovel K. 'Missing men' or missed opportunity? Men's frequent use of health services in Malawi. Oral abstract session: OAE0503. AIDS 2020: Virtual.

43. Green K. Trans-forming PrEP in Vietnam: Rethinking service delivery to enhance access among transgender women. Oral abstract: OAD0603. AIDS 2020: Virtual.

44. Holloway IW. Leveraging social networks and technology for HIV prevention and treatment with transgender women. Oral poster discussion session: PDD0302. AIDS 2020: Virtual.

45. Phillips N. Youth perinatal HIV-associated cognitive impairment: Associations with childhood trauma. Oral poster discussion session: PDA0107. AIDS 2020: Virtual.

46. Kreniske P. Predictors of attempted suicide among youth living with perinatal HIV infection and perinatal HIV exposed uninfected peers. Oral abstract session: OAD0802. AIDS 2020: Virtual.47. Songtaweesin WN. Youth-focused strategies to promote adherence to pre-exposure

prophylaxis among adolescent men who have sex with men and transgender women at-risk for HIV in Thailand. Oral poster discussion session: PDC0106. AIDS 2020: Virtual.

48. San Francisco and Oakland Youth Force (SFOYF). Walking the line: Experiences of adolescents and young adults living with HIV (AYALHIV) disclosing their status to their sexual partners. Global Village – On-demand channel. AIDS 2020: Virtual.

49. San Francisco and Oakland Youth Force (SFOYF). Walking the line: Experiences of adolescents and young adults living with HIV (AYALHIV) disclosing their status to their sexual partners. Global Village – On-demand channel. AIDS 2020: Virtual.

50. Adeyemi O. Challenges faced by a population aging with HIV: Baseline data from the CORE healthy aging initiative (CHAI). Oral abstract session: OAD0902. AIDS 2020: Virtual.

51. Elizabeth N. An integrated health care package to improve the well-being of elderly clients with hypertension and diabetes receiving antiretroviral therapy at Aids Information Centre (AIC) Kampala, Uganda. Oral abstract: PED0788. AIDS 2020: Virtual.

52. Howard C. 'Is it HIV or just old age?': Uncertainties of 'successful' ageing with HIV. Oral abstract session: OAD0906. AIDS 2020: Virtual.

53. Calabrese SK. The stigmatizing effect of 'targeting' US black men who have sex with men in the social marketing of PrEP: A mixed methods study. E-Posters. PED0973. AIDS 2020: Virtual. 54. Jongbloed K. The Cedar Project: Intergenerational child apprehension and HIV health and wellness among young Indigenous people who have used drugs in two Canadian cities - a mixed methods study. Oral poster discussion session: PDD0106. AIDS 2020: Virtual.

55. Okumu M. Transactional sex and associations with psychosocial and HIV prevention engagement outcomes among urban refugee and displaced youth in Kampala, Uganda. E-Poster: PED0915. AIDS 2020: Virtual.

56. Bouwmeester S. Creating communities of emergency responders to reduce violence against sex workers and increase access to justice and HIV services: Lessons learned from the Hands Off programme. Oral poster discussion session: PDD0304. AIDS 2020: Virtual.

57. Nyaga M. Approaches to identify unknown HIV positive men who have sex with men. E-Posters: PED0971. AIDS 2020: Virtual.

58. Abbey D. Low HIV testing among men who have sex men in Ghana: Implications for achieving the first 90 treatment target. E-Posters. PED1000. AIDS 2020: Virtual.

59. Vianna Brizolara R. A national electronic system to support antiretroviral (ART) initiation of people living with HIV in Brazil at site level. Oral poster discussion session. Oral poster discussion session: PDE0407. AIDS 2020: Virtual.

60. Alemnji G. Need for improved demand creation and accelerated viral load testing coverage to meet UNAIDS HIV treatment targets. E-Posters: PEB0113. AIDS 2020: Virtual.

61. Oberth G. Improving access to quality HIV services in 11 West African countries: Impact of a regional community treatment observatory. Oral poster discussion session: PDE0402. AIDS 2020: Virtual.

62. Wilcher R. Programs shaping policies: How partnerships and program data were used to transform the policy environment for key populations. Oral abstract session: OAF0103. AIDS 2020: Virtual.

### International AIDS Society

IAS – the International AIDS Society - leads collective action on every front of the global HIV response through its membership base, scientific authority and convening power. Founded in 1988, the IAS is the world's largest association of HIV professionals, with members in more than 170 countries. Working with its members, the IAS advocates and drives urgent action to reduce the impact of HIV. The IAS is also the steward of the world's most prestigious HIV conferences: the International AIDS Conference, the IAS Conference on HIV Science, and the HIV Research for Prevention Conference. For more information, visit www.iasociety.org.

#### International AIDS Conference

The International AIDS Conference is the premier global platform to advance the HIV response. As the world's largest conference on HIV and AIDS, it sits uniquely at the intersection of science, advocacy and human rights, bringing together scientists, policy makers, healthcare professionals, people living with HIV, funders, media and community. Since its start in 1985, the conference continues to serve as an opportunity to strengthen policies and programmes that ensure an evidence-based response to HIV and related epidemics.