IAS

Reaching the 95-95-95 targets: How can industry contribute?

Session 2: Ensuring linkage to and retention in care

Roundtable, 4 May 2023

IAS

Background

On 9 June 2021, United Nations Member States adopted a political declaration[i] calling on countries to provide access to people-centred and effective HIV combination prevention options for 95% of all people vulnerable to acquiring HIV within all epidemiologically relevant groups, age groups and geographic settings. The declaration also calls on countries to ensure that 95% of people living with HIV know their HIV status, 95% of people who know their status are on HIV treatment, and 95% of people on HIV treatment are virally suppressed. This declaration reinforces and accelerates the UNAIDS Fast-Track strategy to end the AIDS pandemic by 2030[ii], adopted on 18 November 2014, which included achieving the 90-90-90 testing and treatment targets by 2020.

Globally and at regional levels, the 90-90-90 testing and treatment targets were missed. However, progress has been steady and, at the end of 2020, 84% (67-98%) of people living with HIV knew their status; among those who knew their status, 87% (67-98%) were on treatment; and 90% (70-98%) of those on treatment were virally suppressed[iii]. At least eight countries in settings as diverse as Botswana and Switzerland[iv] had achieved the 90-90-90 targets on time, showing that with sufficient funding, political will, policies and evidence-informed interventions, the targets were not overly ambitious.

The 2025 95-95-95 targets extend the 90-90-90 targets to include meeting women's needs for HIV and sexual and reproductive health services, promoting the use of appropriate and prioritized person-centred combination prevention by people vulnerable to acquiring HIV, and adopting an integrated approach to well-being and healthcare, as well as addressing social and legal barriers that limit access to and use of HIV services.

Learning from both the successes and failures towards reaching the 2020 targets is essential to increase the chance of ending AIDS as a global public health threat by 2030. Success will require commitment from all stakeholders in the HIV response. The Industry Liaison Forum at IAS – the International AIDS Society – is organizing a series of online roundtables to explore important gaps and how the biomedical industry can actively contribute to achieving the 95-95-95 target by 2025.

The series will have three events, each focusing on one of the specific 95-95-95 targets.

Agenda

Welcome and introduction - Industry Liaison Forum Co-Chairs ***Nittaya Phanuphak,*** *Institute of HIV Research and Innovation, Thailand* ***Helen McDowell,*** *ViiV Healthcare, UK*
Presentations Closing the gaps in the HIV care continuum *Ruanne Barnabas, Chief of the Division of Infectious Diseases, Massachusetts General Hospital, USA* Challenges of linkage to care in low- and middle-income countries *Serena Koenig, Senior Advisor, GHESKIO, Haiti* ***Ensuring linkage & retention in HIV care in Botswana*** *Ava Avalos, Technical Advisor, Botswana National HIV Programme, Botswana* Red Carpet Programme in Kenya *Job Akuno, Technical Lead and Program Manager, Elizabeth Glaser Pediatric AIDS Foundation, Kenya* Digital solutions to improve access to care *Leon Essink, Senior Project Officer, Aidsfonds, The Netherlands*
Closing remarks and next steps ***Nittaya*** *provides final reflections on the roundtable and next steps*

Opening and welcome

Improving linkage to care and retention in the HIV care continuum is a priority to address the gap between knowledge of HIV status and treatment initiation. Not only is it essential for ART initiation towards viral suppression, but it also plays a vital role in the "treatment as prevention" strategy. While there has been significant progress in engaging people who know their HIV status in care, achieving the second 95 target requires a greater focus on retention in care. This event aims to present diverse and targeted strategies for enhancing linkage to and retention in care and working the industry in developing and implementing strategies, including engagement with legislators and healthcare implementers.

Summary of the presentations

Closing the gaps in the HIV care continuum

Ruanne Barnabas, Massachusetts General Hospital, USA

Ruanne Barnabas noted that partnerships between science and innovation have dramatically increased linkage to antiretroviral therapy, viral suppression, and retention in care. There is a need to think and act differently to reach priority populations that do not yet have access to continuous HIV care, with equity as a focus. There is a need to test and implement evidence-based interventions to support client-centred care and promote health equity for people with HIV and STIs.

Progress has been made in achieving viral suppression and linkage to care in eastern and southern Africa and other areas, with data showing an increase in the proportion of adults achieving viral suppression from 60% in 2017 to just over 70% in 2021. However, there is still a gap in reaching the 95-95-95 targets: global data shows that 84% of people living with HIV know their status, 73% are on treatment, and 66% are virally suppressed, which gives us an83% viral suppression.

Globally, 3.4 million people need to start treatment and an additional 4.9 million need to achieve viral suppression for the world to meet the UNAIDS goals. There is a need to identify who these people are and provide them with accessible care services. Despite progress, gaps in viral suppression persist, including in eastern and southern Africa, and also in the US where 81% of people who are diagnosed with HIV are linked to care within a month of diagnosis and overall viral suppression was 57% in 2019. Clinic-based care is limited by barriers, including logistics, waiting time and stigma, particularly for men and priority populations.

Ruanne noted the heterogeneity among those not linked and retained in care, in particular, priority populations and people outside existing healthcare services who have lower linkage and retention. There are significant gaps for children compared with adults and women compared with men at every stage of testing, treatment, and viral suppression.

In eastern and southern Africa, HIV prevalence is higher among certain priority populations, such as sexual minority men (33%), people who use or inject drugs (12.8%), trans people (21%) and prisoners (28%). In contrast, HIV prevalence among adults in the general population is 6.2%. However, data from South Africa show that viral suppression rates among these priority populations are improving, with female sex workers and women in the general population showing similar rates of suppression in Cape Town. There are ways to ensure viral suppression among both priority and general populations; a change in thinking is necessary.

Client-centred healthcare should promote equity by meeting people where they are and providing services tailored to their needs. There is a difference between equality and equity, and client-centred public health approaches can lead to better outcomes at lower costs and close gaps in care.

Differentiated service delivery (DSD) is a client-centred approach that simplifies and adapts HIV services across the care continuum. The approach uses different building blocks to tailor services and meet the needs of clients. The differentiatedservicedelivery.org platform is an excellent resource for information on DSD. Ruanne provided some examples, including three-monthly refills, drop-in centres, HIV/TB service integration, and the use of pharmacies, IT-based delivery service and telemedicine.

Flexibility, integration, efficiency and a slower pace are important for successful community-based interventions from the client's perspective. These factors ultimately lead to increased engagement and viral suppression. Additionally, there is an opportunity to integrate technology into these interventions. Ruanne summarized a few studies showing that integration of services has improved outcomes.

To achieve good retention and care, as well as viral suppression, it is important to maintain momentum in closing gaps in linkage to care and retention while focusing on equity and meeting people where they are.

These are the three main messages to take away. First, there is a need to align technological advancements with the needs of priority populations through their engagement and empowerment. Second, diversity in clinical

trial populations from both high-income countries and low- and middle-income countries is required to make real-time advances. And third, there is a need to access evidence-based technologies for implementation and surveillance in real time to achieve our goals.

Challenges of linkage to care in low- and middle-income countries

Serena Koenig, GHESKIO, Haiti

GHESKIO is a Haitian non-governmental organization founded and operated by local healthcare providers, with a mission of research, training and clinical care. One of the largest centres for HIV and TB care in the Americas, it is a partner of the Ministry of Health and has received support from the NIH since 1993. Bill Pape is the Director, and the focus of the organization is improving the care experience. The political situation in Haiti complicates the delivery of HIV treatment, but many clinical community-based organizations contributed to client safety and ART delivery.

GHESKIO focuses on ART initiation at the facility level, but its hybrid approach includes community-based and differentiated care. The organization works towards ensuring a positive experience for clients receiving their HIV diagnosis so that they leave the clinic feeling assured HIV is a treatable condition.

Initiating ART on the same day as HIV diagnosis has gained considerable attention in recent years to minimize barriers to ART initiation and enhance linkage to care. Eight randomized trials in Haiti, Kenya, Lesotho and South Africa evaluated the impact of same-day ART initiation on linkage to care and viral suppression. GHESKIO conducted two of these studies. Four studies found higher rates of engagement in viral suppression that persisted for at least one year, and four found no difference. One of the GHESKIO studies showed higher rates of engagement; the others did not. These are complex studies impacted by natural events (such as an earthquake and cholera outbreak).

Serena described the SDART study that showed that 80% retention in care after 12 months followed same-day ART initiation compared with 72% in the standard group, a result comparable in most studies. An unexpected result was that during the study period, mortality was lower in the adjusted analysis in the same-day group. This was because some clients who were lost early in care in the standard group could not be located; they died before being brought back to care.

Serena described same-day ART initiation for clients with TB symptoms. Same-day TB testing was organized to ensure that both TB and HIV

treatment was provided on the same day as diagnosis, which was difficult. In addition, the safety of starting ART when a TB diagnosis is not confirmed.

In conclusion, rapid ART initiation has demonstrated a significant improvement in linkage to care. However, there is a need to enhance capabilities to rapidly assess and determine the risk of TB in clients who require evaluation before initiating HIV treatment as this involves a considerable number of clients. It is also necessary to consider other opportunistic infections that may mimic TB, with the objective of optimizing ART initiation and ensuring sustained engagement in care.

Ensuring linkage & retention in HIV care in Botswana

Ava Avalos, Botswana National HIV Programme, Botswana

Numerous factors and countless individuals have contributed to the progress made in Botswana in the past 22 years, and Ava Avalos hopes that the lessons learnt are useful to all. The crucial role of full political support from the Botswana government cannot be overstated; it provided over 65% of the finances needed for the national HIV response from the start. President Festus Mogae, a Rhodes Scholar in economics, made the investment case to Parliament at the launch of the antiretroviral programme, and treatment optimization has continued since then to ensure that it makes economic sense. Botswana has been successful in convincing donor partners and the government to continue improving care.

This enabled Botswana to maintain consistent standards across all partnerships, implementing the same measures used in the United States and Europe, such as routine viral load testing and resistance testing. Botswana was an early adopter of test and treat and was the first country on the African continent to do so and also provide the latest HIV medications. Additionally, Botswana received significant funding from donors, including Merck, Gates Foundation, CHAI, PEPFAR, Mylan, ViiV and GSK. As the epidemic progressed, Botswana was able to bring these donor partners together, given that Botswana had the highest prevalence of HIV in the world in the early years of the pandemic. The country also had strong research partners that contributed to this success, including the Botswana Harvard Partnership, Baylor Pediatric Center of Excellence, UPenn and the University of Botswana.

Botswana is set to become the first country with a generalized epidemic to reach the 95-95-95 targets. Botswana has met the targets not only for eligible adults, but also for its entire adult population, including non-

nationals. The country is now shifting focus to sustaining long-term care and integrating many aspects of a previous vertical programme into primary care.

In addition, strong oversight of ART forecasting and procurement was implemented through the Drug and Costing Forecasting Technical Working Group. This group includes clinicians, central medical stores and supply chain development partners. It has met monthly since 2010 to examine stock levels, address any commodity issues, and ensure that clinical care guideline recommendations are feasible to implement.

Looking at the figures from the UN GAM report in 2022, Botswana has seen a decrease in prevalence among both adults and children. It is certain that epidemiological control will be achieved by 2030. Currently, around 345,000 people living with HIV are receiving treatment. The country's prevention of perinatal transmission programme has recently been awarded silver status; it has successfully reduced the number of new HIV acquisitions in children to less than 200.

To start off, Botswana will implement fourth-generation HIV testing and broaden the use of self-testing. The efforts will also focus on reducing gender-based and intimate partner violence, which are prevalent in the country. Additionally, the country aims to move beyond the current definition of key populations to raise awareness about determining one's risk for HIV acquisition. This includes middle-aged married women, as well as adolescent girls and young women.

Another important aspect is to encourage talking about sexual behaviours so that individuals can understand their risk and seek appropriate prevention measures. Botswana is expanding and improving PrEP access and has endorsed the use of long-term injectable cabotegravir once it becomes more affordable globally. The country is also expanding the use of PrEP for HIV-negative pregnant women and implementing event-driven PrEP for men who have sex with men.

ART is being optimized, transitioning to using TAF/ED-1 as the first-line regimen. The second-line regimen will consist of doravirine and darunavir/r. Additionally, clinically stable clients will be shifted from triple-therapy regimens to dual-therapy 3TC/DTG to prevent long-term toxicities. Once long-term injectables become affordable, they will be incorporated into the public sector. Furthermore, the use of DTG will continue to be expanded to children. New failure management protocols are also being introduced.

Diet, exercise and lifestyle changes are also prioritized due to an increase in co-morbidities among clients. Educating clients about preventing hypertension and cardiovascular disease is a challenge as these people are mostly impoverished. Another important area is expanding access to contraception. There are also plans to introduce a shorter, four-month treatment for tuberculosis and increase the use of 3HP.

Integration is crucial as new implementation methods for HIV care are explored. Moving forward, the entire healthcare system must be considered. If addressing basic client needs, such as cancer or hypertension, is a struggle, sharing resources from HIV to support the overall weak and tired healthcare system should be considered.

Red Carpet Programme in Kenya

Job Akuno, EGPAF, USA

The Red Carpet Programme was created to address the needs of adolescents in the age groups of 10-14 and 15-19 and, later, young people of 20-24 years. The programme was designed to provide early identification, ensuring that young people are aware of their status and linked to care early. The Red Carpet Programme aims to improve linkage and retention in care and involves various stakeholders to provide quality care for young people. It goes beyond health outcomes and includes a focus on creating a welcoming environment for young people. The programme sets certain conditions for facilities to ensure that they meet the needs of the young people they serve.

In addition to health facilities, the Red Carpet Programme includes a community and school component. This involves examining social factors in the community and schools that may create barriers for adolescents in care. The programme includes fast-track access to services with the aim of removing these barriers and empowering community and school stakeholders to better support young people in care.

It was designed with a focus on prioritizing the experiences of young people living with HIV, providing a supporting environment, with peer champions helping young people navigate their care beyond just the health facility. The programme also aims to strengthen bidirectional referrals between health facilities and other community resources, including schools, to better respond to the needs of young people living with HIV.

The programme provides convenient and comprehensive healthcare services for young people, prioritizing their needs with a VIP approach. The Red Carpet VIP Express card is a form of identification and allows for

expedited services, and a feedback mechanism ensures continuous quality improvement. Essential services are available with tracking to ensure their provision at each visit. The programme includes youth-driven adherence and support tools, with input from both the community and the health facility.

Through meaningful youth engagement, capacity gaps are identified among young people, and they are provided with training, including in advocacy, to champion the interests of other young people. This ensures improved engagement with their caregivers and enables them to receive support at every point.

Committees have been established at different levels of the healthcare system, including at facility, sub-county and county levels. These committees include Adolescent and Youth Peer Advisory Groups, which provide feedback to caregivers at the facility and other stakeholders at higher levels of the healthcare system.

The programme provides same-day linkage or physically escorts young people to receive necessary prevention, care and treatment services with the help of peer champions. Proactive follow up has been done to avoid defaulting, and multidisciplinary teams have visited households or schools to address barriers and encourage appointments. The multidisciplinary approach ensures that everyone knows the type of services needed when a young person comes in.

The one-stop shop approach ensures that a trained provider can offer the necessary services or bring in other providers as needed. This eliminates the need for young people to move to multiple service delivery points to receive quality care. Peer-driven communication supports this process.

The Red Carpet Programme was designed in the US and later adapted for the Kenyan context. Adolescents were meaningfully engaged from the design to the evaluation stage of the pilot study of the programme, which led to impressive outcomes. It showed that retention at three months improved from 66% pre-intervention to 90% post-intervention, and retention at six months from 54% pre-intervention to 98.6% post-intervention. This led to a significant improvement in linkage and early retention of care for adolescents and young people in Homa Bay, Kenya.

This success resulted in national scale up, with the support of partners, and recommendations for the development of national guidelines to support learners living with HIV in schools. The programme was also scaled up in Malawi through CDC support and integrated within their award. The programme is being scaled up in Lesotho as of 2023.

Three centres of excellence were established for other partners to learn from the intervention. Across these sites, 706 adolescents and young people living with HIV were enrolled. Retention at three months was 84%, and at six months, it was 88%. Despite COVID-19 lockdowns affecting service uptake, there was a significant improvement, with 96% viral suppression compared with the national average of 61.4% for 10-19 year olds.

Some of the best practices and lessons learnt from the Red Carpet Programme include the inclusion of youth champions in the multidisciplinary team, empowering and equipping the champions to identify and link eligible young people for testing, and coordinating efforts with multiple stakeholders, such as the Ministry of Education, to support young people living with HIV. Other important components of the programme's success are involving young people in every stage of programme design and implementation, structured documentation of services, and a focus on proactive case management and follow up with young people.

The Stepped Care Model

Leon Essink, Aidsfonds, The Netherlands

Leon Essink discussed the Stepped Care Model for sexual reproductive health, which focuses on increasing access and linkage to care, as well as retention in care. Leon is also involved in the Thandizo project to co-create a mobile app with young people in Malawi, aimed at improving retention to care, working with The Coalition of Women living with HIV in Malawi.

The Stepped Care Model is focused on providing young people with the appropriate information and services at the right time and place, using digital technology or by connecting them with the appropriate healthcare provider. This approach takes a systems-level perspective on both digital and non-digital health services. It is the largest digital health project of its kind.

With limited access to these services affecting 400 million young people globally, current digital health solutions often address only one aspect of health, suffer from limitations, or fail to meet the needs of young people. In addition, a lack of collaboration among donors and implementers results in unsustainable and isolated solutions.

The Stepped Care Model for sexual and reproductive health provides a comprehensive digital health ecosystem that promotes collaboration among stakeholders, placing young people at the centre. It integrates offline and online services for young people, delivering non-judgemental,

age-appropriate and sex-positive services, just as young people like it. The web-based platform offers general health information, while chatbots and interactive games provide automated online advice for personal counselling. Young people can talk on a helpline, chat or email, consult with a healthcare professional, or see a medical doctor. As users progress through the model, they are referred to services at higher or lower steps based on their needs. The lower the step, the higher the focus on self-care and the lower the cost of services.

The approach varies depending on the context, and the model acknowledges that young people have diverse needs, problems and preferences. As seen in previous presentations on differentiated service delivery, some young people may not mind going to a health centre while others may prefer to receive treatment at home. The Stepped Care Model recognizes this and offers different ways for young people to access information and services.

Digital health has the potential to complement traditional services by adequately addressing the needs of young people. With more and more people having access to the internet and mobile phones, simple questions and stories can easily be digitized, giving young people online access to them. A concerted approach is essential as the digital health intervention landscape appears disjointed, with even large NGOs pursuing their own initiatives. Furthermore, investments in digital health are frequently compartmentalized.

Leon discussed the challenges in providing digital health interventions and how they often fail to scale up or be sustainable. Collaboration and partnerships are crucial in addressing these issues; Leon described how the Stepped Care Model, developed in The Netherlands, has been implemented in several countries to map out services available and ensure that they are linked and comprehensive in supporting the different needs of young people. Leon also discussed the various ways in which Aidsfonds works with coalitions to support the implementation of this model and presented some of their successes, such as the development of websites for sexual and reproductive health in Indonesia, Kenya, Mozambique and South Africa.

Panel discussions

Helen McDowell extended a warm welcome to the panellists and indicated that the central theme of the conversation would be strategies for motivating individuals who have tested positive for HIV to access and stay in care.

Helen pointed out that a universal approach may not be suitable for all circumstances. As evidenced by the diverse presentations, it has become clear that tailored approaches in various geographical areas and for different populations have yielded successful outcomes. The significance of a differentiated approach to care cannot be overstated. To begin the discussion, Helen said that it may be useful to connect the first two roundtables in this series. She asked how fragmented testing services could hinder the linkage to care and how best to address this issue.

How can we ensure that the advantages of a broad range of testing services are effectively linked to and translated into retention and care? There are instances where partnership arrangements have facilitated this process. Can we explore such examples further?

Ava Avalos, *Technical Advisor, Botswana National HIV Programme, Botswana*

Ava Avalos described Botswana's approach as a medicalized vertical model that has been highly effective. However, sustainability is a concern, and there is a need to provide affordable and long-lasting options to ensure choice. Implementation science is crucial, and it is necessary to analyse the outcomes and gather feedback from the community to determine the most effective strategies. In what areas is the programme currently lacking in implementation science, and where are the gaps that must be addressed?

When the epidemic struck, Botswana had an existing healthcare system in place, which made it easier to implement the necessary measures. Additionally, the government is benevolent and citizens trust it implicitly. In Botswana, people respect what doctors say and follow through with their recommendations.

Moupali Das, *Executive Director, HIV Clinical Research, Virology Therapeutic Area, Gilead Sciences, USA*

Moupali Das said that Gilead's three priorities are partnerships, people and pipelines. The knowledge and experience gained over the past 25 years must be leveraged to inform current and future endeavours. Regarding testing and linkage to care, there is a need to first determine who is being diagnosed late and why. What are the reasons for delays in testing, and how do we ensure that these individuals are connected to and engaged in appropriate care? This can be viewed as a spectrum with two extremes. At one end are those who may not identify as being vulnerable to HIV and who fail to recognize what makes them vulnerable.

At the other end are individuals with competing priorities, such as housing, job security or food security, which take precedence over HIV testing.

One approach to tackle the fragmented HIV testing system, for example, like in the US, is routine opt-out testing in emergency departments. Gilead has launched a programme to work with community-based organizations and non-traditional partners, like barbershops, hair salons and churches, to reach those who may not identify as being vulnerable or may avoid HIV testing due to stigma. The aim is to identify people who are diagnosed late and face challenges in accessing care, and address those issues by going to where they are and using partnerships with trusted providers.

Helen asked how those factors contribute to the accessibility and acceptability of linkage and access to care.

Immaculate B Owomugisha, *HIV Justice Network*

Immaculate Owomugisha expressed her gratitude to previous presenters for their insightful presentations and for providing a comprehensive overview of what is happening in various regions and which models are proving effective. She said it was encouraging to see the results of the work and the different models being implemented across the globe. However, as someone who supports grassroots communities at various levels, Immaculate was concerned about sustainability. While different models, such as peer-to-peer support and age-friendly services, are working, the critical question is: how can we sustain these efforts? Can we maintain the momentum?

Most of these interventions are very good and well-intended. But partners come and go, and when good interventions are identified, government's willingness is needed to adopt these effective models. The sustainability of these interventions remains a challenge. A conversation on how to seamlessly integrate these models into government programming without disrupting the community-based approach is needed. Governments can sometimes be difficult to work with in terms of engaging with communities and civil society organizations at the grassroots level.

Another important issue is community-led monitoring and how communities can be involved in monitoring the interventions. The investment that PEPFAR has made in community monitoring has yielded positive results. Communities can track healthcare clients who have missed their medication refills or follow-up appointments, and they take proactive measures to monitor service delivery at the grassroots level. This

information is then fed back to the government for tracking purposes. It is important to empower communities to monitor and ensure retention at the grassroots level and use this information to inform government programming.

The community drug delivery model is a highly effective approach, but unfortunately, it does not receive enough investment. During the COVID-19 pandemic, the HIV Justice Network witnessed its success as partners provided medication delivery to people's homes, ensuring that they remained in care. However, there has been a lack of investment in this model after the pandemic. Challenges remain, such as young people being required to leave school to collect their medication. Is there a more friendly model that could be implemented? Immaculate thinks that the Kenyan approach of providing services quickly and in a friendly manner, such as the Red Carpet, is interesting. However, this has only been implemented in a few pilot countries. How can we ensure that such effective models of delivering medicine to those in need continue to be implemented in a convenient and timely manner?

Immaculate suggested revisiting the idea of implementing community-level strategies that provide access to healthcare services at a minimum cost, beyond facility-based options. This could involve innovative solutions that are both accessible and affordable to individuals, especially those who live far from the nearest facility. Although there is a general interest in investing in innovations, the necessary support from government leaders is lacking. While most of these interventions are funded by partners, there is a need for stronger partnerships with government. As the conversation continues, there is a need to also explore the potential role of industries in supporting these efforts.

Immaculate suggested that industries hold governments accountable and negotiate bilateral agreements for sustainable community healthcare practices. The challenge of access to affordable medicine is important, with questions about patent rights and how countries can ensure that low- and middle-income countries can provide highly effective medicine. There is a need to address issues of adherence and access to high-quality medicine for all, regardless of brand or origin.

Nittaya Phanuphak asked whether different tools and innovations can be used to empower individuals to get tested and treated and remain in care. Are there messages to prepare people before they enter into care or to keep them engaged in care?

Todd Pollack, *Harvard University, USA*

Todd Pollack described the Undetectable = Untransmittable (U=U) message as a powerful tool for reducing internal and community-based stigma and motivating people living with HIV to adhere to ART. Despite its effectiveness, there are still gaps in people's understanding of the message more than 12 years after the HPTN 052 study proved the concept of treatment as prevention. Therefore, efforts must be doubled to ensure that people vulnerable to or living with HIV understand the message.

In Vietnam, a consortium of partners collaborated with the government to officially adopt the U=U message and use various means to disseminate it to healthcare workers and the community. Despite being a successful effort, knowledge gaps persist. As linkage to and retention in care is discussed, Todd emphasized that this message is often used to hold healthcare clients accountable for adherence, but it can also be applied in other scenarios. In Vietnam, the use of the U=U message is being explored as part of a "three moments of U=U counselling".

Healthcare workers, including community counsellors, should discuss U=U with clients at three moments. The first moment is at the time of a positive HIV test to encourage linkage to care. The second is during the initiation of ART to encourage adherence and achieve an undetectable viral load. The third is during the annual visit to review viral load to encourage ongoing adherence and retention in care. By engaging healthcare workers in these three moments, it is possible to ensure that the message reaches clients and reaches its full potential.

Serena Koenig said the situation in Port-au-Prince is extremely distressing. It is currently one of the most challenging places in the world to work and holds the title of the world's murder and kidnapping capital. This has caused a significant shift in service provision as clients and providers must work together as partners. Clients must often flee their homes urgently when gangs arrive and take over their houses. There has been a lot of movement, and this has changed the conversation.

One crucial aspect has been the culture of person-centred and dignified care, where providers make clients feel welcome. Communication is also critical, with updated communication at every visit or contact with clients. Providers try to ensure that clients have access to phones or phone cards since communication is vital. The community is located in some of the most dangerous slums in Port-au-Prince, and clients are included in discussions on how to help them thrive.

Providers must ensure that clients have access to their medications, diagnostic evaluations and viral load testing, with clients involved in things

like rapid pathway adolescent clinics, community sites and home ART. It is all about partnerships. If someone has just lost their home to a gang and needs their medications, they can call the clinic and feel welcomed or they can come to the clinic. The question then becomes: how can we help you get your medications?

Respect, communication and client involvement in service development are essential. There are significant economic barriers for clients that must be addressed. Motivational interviewing is a key approach to talk to clients and identify barriers. If a client says they have no food and so cannot take their medication, then it means working together with the client to solve that problem.

Nittaya Phanuphak added that this approach can be applied to other regions, particularly in Asia and the Pacific where there is a strong paternalistic medical culture. Shifting towards a more equal partnership between providers and clients may seem unimaginable to many healthcare providers in the region, but it should be the guiding principle for the future of HIV services. It is important to challenge power imbalances and prioritize person-centred care.

Christopher Hoffmann, *Johns Hopkins University, USA*

Christopher Hoffman said that it is important to take a step back and consider that most people don't focus on their health unless they are sick. Understanding messaging, goals and values from that standpoint can be more powerful than simply stating the consequences of not taking medications. For example, the U=U concept can be very powerful, and differentiated models of care for testing and service delivery can also be important in understanding individual priorities. While we are focused on the health ecosystem and its various components, it is essential to consider the bigger picture and individual perspectives.

Understanding the context of individuals is crucial. Whether it is a young man or woman, someone who has just come out of a correctional facility, or someone struggling with a substance use disorder, it is important to know their current key priorities and values in life. This knowledge can help provide the appropriate messaging and support each individual's needs.

Although different players, such as industry and NGOs, can be seen as working in different lanes, it is important to view them as intersecting and overlapping lanes to provide context-specific services. Academic research sets up globally what the right thing to do is, such as extending ART or differentiated models of care, and industry can support programmes within countries to fit this context. There is a need to focus on person-

centred care and consider several billion people in the world with different needs that can be addressed through appropriate differential care.

Helen McDowell said that we have learnt about digital solutions used mainly in higher-income countries. Helen said it would be great to get the views of the panel, particularly from Todd and Job Akuno, on the role of digital or eHealth tools in low- and middle-income countries, what works, what the limitations are, and what has failed. Learning from these experiences is essential to advance in the field.

Todd Pollack said that narrowing down the topic to telemedicine, it is more appropriate to discuss provider-to-client technology-assisted care. The COVID-19 pandemic catalysed the growth of telemedicine to ensure that clients could still receive care during lockdowns and other pandemic-related restrictions.

Telemedicine has great potential to assist in achieving the 95-95-95 goals. It can enhance client access, promote confidentiality, and reduce the stigma and discrimination often associated with in-person medical consultations. Additionally, telemedicine can play a critical role in supporting long-term retention and care for medicalized clients who require clinic appointments and medication.

Currently, in low- and middle-income countries, long-term data to confirm that the potential of telemedicine will be realized are lacking. However, Todd is confident that many individuals in this roundtable are working on well-designed studies to provide evidence. From the data available on PrEP, it appears that telemedicine for PrEP is more advanced and promising. However, there is a need to be cautious and aware of the limitations of telemedicine.

Telemedicine has the potential to exacerbate disparities, particularly for populations with lower socioeconomic status or limited digital access and literacy. Therefore, models must be designed with these factors in mind. Going forward, partnerships with local tech companies can help scale up these models.

Job Akuno, *Technical Lead and Program Manager, Elizabeth Glaser Pediatric AIDS Foundation, Kenya*

Job Akuno said that during the COVID pandemic, EGPAF made sure that young people continued to receive care by using various platforms, such as phone assessments to determine their access and control of phones. Based on these assessments, it used text messaging or social media platforms like WhatsApp to engage with those who had limited or full

access to data bundles. EGPAF also utilized toll-free lines to provide support for young people to follow up with their case managers.

Integration with mental health was crucial because it allowed for young people to discuss issues beyond HIV and address anxiety. This is an important lesson learnt. Todd's suggestion for telehealth is also an attractive option for engaging with young people. Other stakeholders have created platforms that allow for access to other drugs for people living with HIV. It is important to segment the audience and determine which platform works best for them. Context-specific responses are crucial as not all settings are appropriate for bulk messaging.

Nittaya Phanuphak agreed that telemedicine and eHealth have various applications in HIV beyond testing and prep. An example from Thailand over the past year is the successful use of telehealth for doctor consultations in key population-led clinics. This allows for teleconsultations with physicians or clients without the need for the physical presence of doctors or nurses. Telehealth has been implemented in clinics serving men who have sex with men, trans women and sex workers, with more than 500 clients benefiting from this technology. Such technologies can also be applied in HIV test-and-treat settings and possibly beyond the HIV field.

Nittaya Phanuphak asked how long-acting agents can help with engaging people into treatment or retaining them in treatment.

Moupali Das said that long-acting agents hold great potential for the treatment and prevention of HIV, particularly for individuals who struggle with adhering to daily medication regimens. The system set up for these programmes must be intentional to avoid exacerbating gaps and, instead, address them. In the Purpose studies, the community is engaged and locations were chosen to include historically underrepresented populations. Community advisory groups have been established, and trials are conducted in various locations, including a study of a six-month long-acting subcutaneous agent for prevention among diverse-gender populations.

In South Africa and Uganda, people are being supported in their reproductive choices, including pregnancy, to ensure maximal impact on the communities that are most disproportionately affected. Inclusion of pregnant people is also being prioritized in clinical trials to ensure maximal impact. This requires a shift in attitudes and perceptions to ensure that pregnant individuals can participate in clinical trials, and Gilead is implementing this change in its current trial. This way, if and

when the drug is approved, it can have the greatest impact in the communities that are most affected by HIV.

Ava Avalos said a key factor is cost, particularly in low- and middle-income countries, where healthcare systems are fragile. It is simply not feasible to pay more for a treatment when generic dual therapy is both affordable and effective. In such a healthcare system, where essential medications for co-morbidities may already be in short supply, it is difficult to justify spending such exorbitant amounts of money. Ava has a great deal of respect for everyone in the industry and the valuable assistance they have provided to the Botswana National HIV Programme. However, there is a need to act collectively to demand a decrease in prices and the release of patents, including technological patents. COVID-19 has demonstrated our ability to distribute vaccines effectively, but we must prioritize equitable access and affordability for all.

Implementation science has shown that we can achieve amazing things, but this cannot be at the expense of losing economic support from development partners or in the current state of the global economy. We must collectively demand that we prioritize accessibility and affordability of essential medications, including injectables, for all populations affected by HIV. Activism is crucial to ensure that this message is continuously heard. As demand for injectables grows, it is important to reflect on our past successes, such as obtaining cheap DTG, and work together with industry to find solutions. The necessary changes can only be achieved by speaking with one voice.

Christopher Hoffmann said that industry has been a great supporter of contextual innovation. It is important to note that even when there is a high demand for a product, such as PrEP, it is crucial to consider the delivery system. In South Africa, over 60% of pregnancies are unintended, and many result in abortions. Therefore, it is important to understand how to deliver these products based on individual needs and the context. Once clinical trials demonstrate the effectiveness of the products, implementation science at the country level, with support from industry, academia and organizations, can help deliver these products to those who need them the most. While not everyone may have access to these products, they can still play a vital role in specific populations who are unable to use other methods for various reasons. This will help control the HIV epidemic and work towards achieving the goal of 95% coverage.

Concluding remarks

On behalf of the IAS Industrial Liaison Forum and her Co-Chair, **Nittaya Phanuphak** thanked all the presenters and panellists for their valuable contributions. The roundtable had insightful conversations about the importance of community leadership in designing, delivering and monitoring services, as well as the effective use of the U=U message to improve retention in care. Participants also discussed the significance of respecting the autonomy of clients, utilizing differentiated service delivery, eHealth and long-acting antiretrovirals. Furthermore, they addressed the potential benefits and challenges associated with these technologies, and emphasized the need for collaborative partnerships among researchers, implementers, communities, industry and funders. Together, participants can optimize efforts to control the pandemic of HIV.

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