Bi-Regional Workshop on Improving Strategic Information for HIV and Hepatitis Elimination, focusing on Key Populations

New Delhi, India, 26-28 March 2019
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Western Pacific Region
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BACKGROUND:

WHO/SEARO along with WPRO and UNAIDS convened a workshop on “Improving strategic information (SI) for HIV and Hepatitis Elimination, focusing on the HIV and hepatitis response for key populations”, on 26 - 28 March 2019 in New Delhi. The meeting engaged delegations from 16 countries and representatives from partners: Joint United Nations Programme on HIV/AIDS (UNAIDS), the Global Fund for AIDS, TB, and Malaria and US Centers for Disease Control and Prevention (CDC).

This meeting built on recommendations developed as part of the Key Population “Think Tank meeting on key populations” held by WHO SEARO in February 2018, which identified keys issues on reinvigorating key population response and related Strategic Information (SI) as core to the effectiveness of the region’s response to HIV. Specific strategic information recommendations which emerged from the Think Tank meeting included shifting focus on using data for reporting purposes to being used for programme improvement. Toward this goal, countries in the region were encouraged to focus on local level analysis, making better use of routine data, and developing data systems which are flexible and provide “real-time” monitoring of service delivery.

The meeting sought to orient countries in the region to the WHO Strategic Information Framework (See Annexure 3), including a number of tools and guidelines recently released by WHO including the 2015 Tool to Set and Monitor Targets for HIV prevention, Diagnosis, Treatment and Care for Key Populations, the 2016 WHO Consolidated Guidelines for Key Populations, and the 2017 Person centered HIV patient monitoring and case surveillance guidelines. Given the integration and strategic linkages between hepatitis and HIV, SI for hepatitis was also integrated to the workshop’s agenda. This gave countries

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1 Key population groups included: sex workers (SW), men who have sex with men (MSM), transgender persons (TG), people who inject drugs (PWID), and prisoners.
2 Participating delegations include: Bangladesh, Bhutan, DPR Korea, India, Indonesia, Maldives, Myanmar, Nepal, Sri Lanka, Thailand, Timor-Leste, Cambodia, Lao PDR, Malaysia, Philippines, and Vietnam.
3 Are Key Populations really the KEY to ending AIDS in Asia? Putting Asia’s HIV response back on track. New Delhi: World Health Organization, Regional Office for South-East Asia; 2018. License: CC BY-NC-SA 3.0 IGO.
opportunities to review tools in the 2018 WHO Monitoring and Evaluation Framework for Hepatitis B and C and support the development of their action plans for prevention and control of hepatitis.

WORKSHOP OBJECTIVES:

The workshop objectives were:

- To enhance the knowledge about and hands-on experience using the updated WHO Guidelines on Person-Centered HIV Patient Monitoring and Case Surveillance;
- To orient participants on 2017 integrated Bio-Behavioral Surveillance (IBBS) Guidelines, and new Key Populations Monitoring and Evaluation (M&E) component of the updated (2019) Consolidated SI guidelines (under development);
- To orient participants on the WHO Monitoring and Evaluation for Viral Hepatitis B and C: Recommended indicators and framework (including 10 core indicators) and the new consolidated SI guidelines;
- To share country experiences using these SI tools and applying the results, and
- To promote further integration of global guidance into national programmes’ efforts to strengthen country SI systems.

A copy of agenda and list of participants are enclosed at Annexure 1 and 2 respectively.

OPENING SESSION:

Dr Pem Namgyal, Director, Programme Management (DPM), WHO SEARO inaugurated the workshop and read remarks by the Regional Director of the WHO SEARO, Dr Poonam Khetrapal Singh, citing both the significant progress in the region in the fight against HIV, and the importance of not being complacent as Asia-Pacific strives toward ending the AIDS epidemic as a public health threat by 2030. The region faces two challenges: Detecting cases through the adoption of newer testing approaches; and Reducing new infections by effectively reaching out to key populations. The region’s efforts must promote a people-centered approach, grounded in the principles of human rights, equity and the quest to leave no one behind, geographically, economically, or socially, under the umbrella of Universal Health Coverage (UHC).

Furthermore, the burden of hepatitis in the region require concerted efforts to find the missing millions suffering from the disease; and reduce the cost of drugs for treating hepatitis.

Representatives from various development partners and community based organizations shared their perspectives on the workshop objectives: Strategic information about key populations is needed to drive
an effective programmatic response (Tim Holtz, US CDC, India Program Director); A lesson learned from HIV, is the need to strengthen strategic information for hepatitis, especially due to the challenges in detection, which stymies efforts to establish reliable estimates that drive programme investments (Dr Henk Bekedam, WHO Representative, India). Effective use and interpretation of strategic information requires patient perspectives and community engagement (Daxa Patel, President, PLHIV Association – India. Strong integration and collaboration are key to an effective and efficient use of strategic information (Bilali Camara, UNAIDS Country Director – India).

The HIV epidemic in South-East Asia Region shows decline in new infections by 27% between 2010 and 2017. However, this pace is not fast enough to achieve the Fast Track Targets by 2020. The Fast Track treatment targets are also ambitious and require an increase from 1.77 million to 3.1 million on treatment by 2020.

The regional priorities for HIV include:

- Focus on KP to scale up newer prevention tools, such as Pre-Exposure Prophylaxis (PrEP) and HIV self-testing;
- Scale up viral load testing using Cartridge-based Nucleic Acid Amplification Tests (CBNAAT);
- Strengthen HIV-TB coordination and addressing latent TB among PLHIV
- Continued advocacy with governments to keep HIV in focus and integrate the response with TB and hepatitis
- Bridging the funding gap for full interventions

With respect to hepatitis, the region’s burden is high with 39 million people infected with hepatitis B and 10 million with hepatitis C. Trends from 2015-2020 declining incidence in hepatitis but less progress against hepatitis related mortality.
Key regional priorities for hepatitis control and prevention include:

- Obtaining better estimates of the burden of disease for planning and advocacy
- Early diagnosis in the face of asymptomatic infection
- Establishing a multi-sectoral response – to address Immunization, blood safety, stigma etc.
- Addressing hepatitis among KP; including assessing the burden in groups other than PWID
- Improving access to rapid diagnostic tests, laboratory capacity, cheap drugs
- Bridging the large gap in meeting financial resource needs

Increasing coverage of hepatitis prevention efforts: vaccination, injection safety, and Prevention of Mother to Child Transmission (PMTCT) of hepatitis

Within the Western Pacific Region, estimated new infections have increased by 7% from 2010-2017. This trend underscores a critical prevention gap in service delivery for key populations in the region, especially among MSM.

Critical regional priorities for the HIV epidemic include:

- Increasing access to PrEP with STI services
- Normalizing HIV testing services through community-based testing and self-testing programs
- Rolling out new and robust Antiretroviral (ARV) drugs (e.g. Dolutegravir)
- Strengthening TB/HIV collaboration
- Developing an operational guide for elimination through active case finding, partner notification, etc.

The burden of hepatitis B and C is disproportionately high with the Western Pacific Region comprising 40% of global infections. A key challenge in hepatitis elimination in the Region is the large gap in testing and treatment cascade for both hepatitis B and C.

Priority actions to address hepatitis elimination in the Region include:

- Developing the next 5-year Regional Action plan to address policy and set targets for testing and treatment
- Expanding and decentralizing testing and treatment services in the public sector.

Joint actions in HIV and hepatitis programming include implementation of a regional framework for triple elimination of mother to child transmission of HIV, hepatitis B, and syphilis; transitioning to sustainable financing mechanisms; revitalizing condom and sexual health promotion; and strengthening surveillance and programme monitoring.

WORKSHOP DOMAINS:

The workshop addressed six domains of strategic information: Case-based surveillance and patient monitoring; Cascade analysis; Key population survey-based surveillance; Key population size estimates; using data to improve programming, including triangulation; and Estimating Pre-Exposure Prophylaxis (PrEP) needs among key populations. As the approach for HIV and hepatitis was mostly identical (e.g., key population size estimates), the agenda did not make a difference between these two topics. When they differed (e.g., estimating incidence), precise differences on the specific approaches for hepatitis were added.
For each session, technical resource persons provided overview of available guidance and tools for strengthening SI systems. The country representatives presented their experience with implementing SI systems and using results for programming during each session. Participants also engaged in groupwork to discuss challenges, share good practices, and begin to apply available tools. Due to the focus on key populations, community representatives also provided important insights into how the collection and analysis of strategic information can be used to better engage key population communities, ensure the confidentiality of individuals and communities, and ultimately strengthen the effectiveness of services for key populations.

**SESSION 1. CASE SURVEILLANCE AND PATIENT MONITORING**

In 2017, WHO published consolidated guidelines for person-centered HIV patient monitoring and case surveillance. These guidelines build on case reporting systems long established in many countries used in first generation HIV surveillance systems to assess the characteristics of new diagnoses with basic analysis of person, place, and time. By expanding its scope to identifying and tracking six sentinel events (diagnosis, 1<sup>st</sup> CD4 test, initiation on ART, 1<sup>st</sup> VL test, VL suppression, and death in the course of care for people living with HIV and AIDS, case surveillance allows national programmes to assess the effectiveness of patient care and overall progress toward reducing AIDS-related mortality. Hepatitis programmes employ a similar approach of tracking sentinel events as recommended in the recently published SI guidelines section on cascade monitoring.

Effective analysis of case surveillance data benefits from individual level patient data being entered into electronic data systems and the use of patient unique identification codes (UIC) to enable tracking of patients over time, across geographic areas within a country, and through a cascade of services from prevention to testing, diagnosis, and treatment. Countries must balance the resource intensity required by individual data entry and the difficulties of implementing a UIC system. Many countries have been unable to implement an effective and feasible UICs for HIV programmes due to the stigma and discrimination faced by people who are identified as infected leading to reluctance to link other forms of nationally recognized identification numbers to HIV status.

Session 1 included presentations by countries sharing their experience in implementing case surveillance for both HIV and hepatitis. Sri Lanka described its efforts to develop a robust UIC for monitoring key population patients that maintains patient confidentiality. Thailand presented its national patient

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4 CASCADE DATA USE MANUAL TO IDENTIFY GAPS IN HIV AND HEALTH SERVICES FOR PROGRAMME IMPROVEMENT JUNE 2018
monitoring system which employs and links multiple ids across programme areas (e.g. testing to treatment). A community-based organization working with PLHIV and key populations from Nepal shared success in patient monitoring through a one-stop shopping service delivery model for treatment. Based on their experience, the lack of a robust UIC or individual level patient data results in poor data analysis that misinforms programming. Experiences implementing components of case surveillance in Myanmar were shared. Myanmar has recently begun using a system of individual databases for monitoring the hepatitis cascade and has considered a tiered approach to entering some data elements at individual level and some data in aggregate in their Health Management Information System (HMIS) to balance workload and utility of the data for different purposes. The use of DHIS2 as the platform for entering both individual level and aggregate data allows the integration of these data for analysis and interpretation.

### Key points from the session on Case Surveillance and Patient Monitoring:

- Countries have HIV case reporting but use a variety of ID codes/numbers to track individuals across the six sentinel events. A Unique Identifier Code (UIC) needs to be implemented across continuous of care.

- One country described their functioning national health Identification (NHID) system, others reported that such a system is in progress.

- Community perspectives shared during the session indicate concerns with implementing UIC as it could identify individuals with stigmatized labels. Nevertheless, community representatives are interested engaging with planning and designing systems which respect individuals’ privacy and offer security of data.

- Another challenge faced by countries adopting a NHID is the lack of coherent vision across the health sector of how this type of ID should function and how to establish safeguards for privacy, etc.

- Implementing these types of systems requires investment and consistent medium-term effort which is hindered by high turnover of staff and lack of funding/capacity.

### SESSION 2. KEY POPULATION SURVEILLANCE

Surveys are critical to provide measures of HIV and hepatitis prevalence, behavioral data and service coverage in key populations. Since the most recent WHO/UNAIDS guidelines for conducting second generation surveillance guidelines were published in 2013, countries in Asia have used a variety of surveys methods to measure seroprevalence, key risk behaviors, and programme coverage, including treatment cascade measures. The choice of methods varies due to availability of resources and technical capacity. For example, many countries adapted an HIV sentinel surveillance (HSS) model for sampling KP at KP service sites, and some have added a limited behavioral survey component, creating an HSS+ protocol. The development of probability-based sampling of key populations led to wider adoption of behavioral surveillance surveys (BSS) that eventually evolved into Integrated Bio-behavioral surveys (IBBS). To support best practices in conducting IBBS, WHO and its partners, US CDC, UNAIDS, and FHI360 published *Biobehavioral survey guidelines: For population at risk for HIV* in 2018. The high resource intensity of
conducting probability-based surveys, including IBBS, have led countries to experiment with rapid behavioral surveys and IBBS-lite protocols.

*Trends and Periodicities of HIV surveillance surveys in SEARO and WPRO*

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*Source: Prepared by www.aidsdatahub.org based on Serological and Behavioral Surveys*

To the extent that specific key population groups have different hepatitis prevalence compared to the general population, the addition of hepatitis biomarkers into planned IBBS is recommended as a cost-effective method for obtaining hepatitis prevalence measures. This is very relevant for key populations in which the prevalence of hepatitis is higher than the general population (e.g., HCV / prisoners and PWIDs). However, in groups where there is no difference (e.g., SW and HCV), monitoring prevalence on a regular basis may not be the best use of resources. (See Annexure 4 & 5 for overviews of KP and hepatitis surveillance systems)
Country presentations in this session included India’s efforts to lighten the structure of its IBBS activities by limiting the number of simultaneous surveys conducted and reducing the behavioral questionnaire from nearly 1 hour in length to 10 minutes. Together these protocol changes have created a more manageable cycle of surveys to implement.

A panel of stakeholders representing Ministry of Health, community-based organizations, and development partners discussed the future of key population surveillance methods.

Key points from the Session on Key Population Surveillance:

- Using the data from KP surveillance requires the inputs of community and understanding the impact of the results on how services are delivered, for example focusing on those who are at greatest risk rather than trying to achieve broad coverage.

- Surveillance data must be interpreted with those who implement the programme (which is the purpose for collecting surveillance data) and to turn this feedback to the global community who develop guidelines.

- Triangulating many sources of data is important to have a full picture of the epidemic and impact of services; however strong communication is needed to explain the take home message from multiple sources of data.

- While attention must be paid to data quality and using standardized methods, stakeholders recognized that there are no “bad data” just “bad analysis” and poor interpretation.

SESSION 3. CASCADE ANALYSIS

Cascade analysis forms the core of HIV programme monitoring recommended by WHO and its development partners. The primary testing-treatment cascade focuses on the proportion of PLHIV who are diagnosed, linked to treatment, and achieve viral load suppression. However, the specific form of the cascade, including the choice of denominators, the spectrum of services included, and the sub-population represented varies depending on the programmatic purpose for which the cascade is used. Increasingly, countries are interested in measuring the “prevention cascade” for those people who are HIV negative. For prevention, the concept of a cascade is most useful in emphasizing coverage of services. The use of cascade analysis is also core to hepatitis programme monitoring and follows a similar flow from prevention, testing, diagnosis, and treatment, specifically, HBV uses a care cascade, like HIV; while HCV uses a cure cascade, like tuberculosis. (See Annexure 6)

In session 3, countries shared experiences with using cascade analysis to improve services. In the context of a declining epidemic, Cambodia shared the routine cascade analysis conducted in country, including the analysis focused on KPs. For sex workers, men who have sex with men and transgender people, a cascade starting with prevention coverage, testing, and treatment enrollment can be constructed. The country also shared efforts to examine co-morbidity of hepatitis among ART patients as part of new national guidelines for management of HIV-HCV co-morbidity. Cascade analysis showing measures of HCV screening through to Sustained Virological Response at 12 weeks (SVR12) were shared. Vietnam shared their experience implementing a comprehensive hepatitis strategic information system that includes: case reporting, hospital-based sentinel surveillance, household seroprevalence surveys for HBV and HCV, and
cascade analysis for both HBV and HCV. These strategic information efforts are perceived as critical for achieving hepatitis elimination in the country. Finally, the FHI 360 Sunrise project demonstrated their efforts to use KP specific cascades in the context of a programme which focuses on people who inject drugs. This presentation focused on the triangulation of data sources needed to construct KP cascades and the challenges for tracking individuals’ service experience across prevention to testing and treatment for both HIV and HBV/HCV. A key observation from this experience was that efforts to improve individual tracking has mutual benefits for both programme monitoring and patient management.

Through small group discussions, participants explored the feasibility and utility of doing more extensive cascade analysis. On the issue of prevention cascades, participants perceived that the data needed to construct prevention cascades were available but would require routine efforts to triangulate these data. For KP-specific testing-treatment cascades, the group shared that for programme monitoring purposes cascades for KP-specific services were most useful. And to assess equity in service experience among KP seeking treatment in general population facilities, different methods looking at characteristics of drop outs, rather than specific cascade analysis would be effective. Efforts to construct nationally representative KP cascades could use a data triangulation approach rather than depend only on routine facility data. The use of cascade analysis for hepatitis programme monitoring was also discussed and participants saw the advantages in learning from the HIV experience with cascade analysis and keeping these efforts as simple and streamlined, especially since the burden of collecting and reporting cascade data at the facility level is often done by non-specialized health care providers. As a first step, use of aggregated data seems to be a more efficient use of resources.

Key points from the Session on Cascade Analysis:

- Cascade analysis beyond the 90-90-90 treatment cascade is particularly relevant for key populations and can be extended to understand access and uptake of prevention services.

- There are data sources available to construct cascades for key populations, but in some settings, these may be limited due to the lack of disaggregated data. Data triangulation will often be required to construct cascades.

SESSION 4. KEY POPULATION SIZE ESTIMATES

Key population size estimates inform effective geographic prioritization, programme planning, and assessing effectiveness. Numerous methods for obtaining size estimates have been developed to address key challenges in obtaining reliable estimates. These challenges include highly mobile populations, a wide spectrum and changing pattern of risk behavior practiced by individuals, and the stigma and discrimination faced by key populations which disincentivize people from openly identifying as KP in both social and service settings. (See Annexure 7)

Country presentations in this session sought to demonstrate efforts to apply adjustments to the results of direct size estimate methods to transform the figures to represent the risk population of interest (Nepal); efforts to estimate the size of key populations who are reachable only in the virtual space, i.e. online (Linkages Project); the triangulation of data sources to obtain more reliable estimates (Malaysia); the use of regression models to extrapolate direct size estimates in selected districts to a large number of
areas without direct size data (Indonesia); and an example of how mapping and routine updating of Population Size Estimation (PSE) can be integrated into programme implementation scopes of services (India).

Participants engaged in group work to examine the overlap between the key populations who are accessible at physical venues, those who are most at risk, and those represented by current population size estimates used in country. Understanding these gaps are essential for countries to apply appropriate adjustments to their PSE results depending on the intended programmatic use.

A presentation was also shared by Fellow Statistics, Inc.: a group offering epidemiologic tools online, including those for key population size estimates. These tools are produced using Shiny web app tools. The ‘Shiny Applications for Epidemiology’ website currently offers a consensus building app to reconcile results from multiple PSE methods in the same location; a statistical tool to build a hierarchical model for extrapolation of PSE results to areas without data; an analytical tool for multi-source capture-recapture; and a tool for developing incidence estimates from cross-sectional surveys using testing history information. This site is maintained by Fellows Statistics Inc, and is a collaboration between multiple agencies and statistical researchers.

Key points from the Session on Key Population Size Estimates:

- Participants recognized the importance of consistently describing data with appropriate labels, i.e. definitions of populations represented by the data cited.
- To make the best use of KP size estimate data available, the use case must be well articulated so the operational definition of the population of interest is clear and matches to the group whom the size estimates method captures.

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5 https://shiny.rstudio.com
6 http://epiapps.com
SESSION 5. USING DATA TO IMPROVE PROGRAMMING

Given the orientation to collect and analyze strategic information primarily for the purposes of programme improvement, this session provided tools and examples of countries applying their data to improve programme outcomes. In the area of analyzing and using routine health facility data, WHO has developed module-based curricula for analyzing routine health data for a broad array of programme areas, including HIV. These tools focus on a minimum set of data elements available in most facility HMIS and provide recommended dashboards for the interpretation and use of these data.

Accompanying these guidelines are training exercises. Due to the increasing number of countries which are adopting DHIS2 as the national HMIS platform, additional DHIS2 specific resources (e.g. HIV App, Data Quality App), and instructions for navigating the recommended HIV dashboards in DHIS2 have been developed. A similar effort to develop standardized dashboards and analytics for hepatitis have also been developed in DHIS2 and is available for adaptation through WHO. Although these dashboards and training materials are intended for general population use, they can also be used in facilities which provide KP-specific services. In most facility registers for ART or testing, KP identity is not included due to concerns about privacy and breaches in data security. This prevents KP-specific cascades from being generated for data from facilities serving general populations. (See Annexure 8)

Data triangulation is an important method for making better use of data for programme improvement. Due to the limitations of any data source, combining data from complementary sources extends the utility of any one piece of strategic information. Routinizing mechanisms to conduct data triangulation and building local capacity to engage in this activity routinely requires investment. India shared efforts to improve capacity for data triangulation at district level, showcasing the technical resources available at national and state level to enable this to take place.

Key points from the Session on Using Data to Improve Programming:

- Routine analysis of programme data can be facilitated through automating production of dashboards using core programme indicators and developing tools for users to review data easily.
- Building capacity at the local level to use and interpret data is a critical step in improving programming locally and empowering managers.

SESSION 6. MOVING AHEAD ON PRE-EXPOSURE PROPHYLAXIS (PREP)

While the first WHO recommendations on use of pre-exposure prophylaxis (PrEP) was made in 2012, implementation of PrEP has only gained momentum in the region relatively recently. WHO recommends PrEP for all people at substantial HIV risk. (See Annexure 9)

To support country-level implementation of PrEP, WHO has released a monitoring and evaluation module of the PrEP Implementation Tool, specifying core indicators and considerations for strategic information.

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7 The DHIS2 HIV App is available at: https://www.who.int/healthinfo/tools_data_analysis_routine_facility/en/. The DHIS2 Data Quality App is available at: https://play.dhis2.org/appstore/app/rFDeB5LLQmi
Four indicators have been identified as a minimum set for the routine monitoring of PrEP programs to assess uptake, continuation and safety.

A key component of the strategic information recommendations has to do with target setting and procurement planning. Targets for PrEP help to strategize the direction of a PrEP program and budgets. An essential first step in target setting is to estimate the size of the population at substantial risk of HIV who would benefit from PrEP. Data can be derived from a variety of sources and should be assessed for strengths and weaknesses. Estimates and targets should be updated over time as factors change. This type of estimate is a starting point for further analyses, such as program targets and cost-effectiveness analyses, and decision-making. Program targets for example, could take into consideration the number of people who could be reached by a PrEP program and would use PrEP, service capacity and other factors.

A guidance document and tools on PrEP target setting have been developed to assist countries in determining which segments of the population, including sub-groups of key populations should be the target of PrEP roll out, with respect to engaging in high risk behavior.

Groupwork in this session involved a simplified exercise to estimate the population at substantial risk of HIV infection. Countries used a tool with their actual data (where available) and engaged in discussion about the data requirements and decision points for determining the population at ‘substantial HIV risk’. The exercise sparked robust discussion. Challenges for estimating the population at substantial risk included definitions of risk, combining risk groups, lack of accessible data for some steps, and reconciling data from different geographical areas.
Key points from the session on Pre-Exposure Prophylaxis (PrEP):

- Estimating needs for PrEP benefits from discussion on specific criteria to define who is at most risk for acquiring HIV/who can benefit most from PrEP by a wide range of stakeholders, including community representatives.
- PrEP planning requires an understanding of who is at risk, who can be reached, and what are the likely use cases by potential beneficiaries (e.g. daily use vs. event driven use, etc.)

COUNTRY SELF-ASSESSMENT OF SI STATUS

At the end of the workshop, country delegations conducted a brief self-assessment of the status of their strategic information systems for HIV and hepatitis, answering four questions:

- An area of strength
- An area of learning from the workshop
- A way to do things differently upon return
- An area requiring assistance

Areas of strength identified:

- Scaling up comprehensive HIV programmes in the public sector in progress (Bangladesh)
- Developing treatment guidelines, action plan for prevention, and conducting surveillance for hepatitis B & C (Bhutan)
- Success in progress toward HIV elimination (Cambodia)
- Systems to support data triangulation & integrating mapping into targeted interventions for KP (India)
- Approach to applying adjustments to PSE at multiple levels (Indonesia)
- Completing recent PSE exercise (Laos PDR)
- Complete and confidential case management (Maldives)
- Cascade analysis for hepatitis C (Myanmar)
- Scale up of DHIS2 use at district level (Nepal)
- Availability of UIC to identify KP patients (Sri Lanka)
- Use of Real-time cohort monitoring (Thailand)

Areas of learning:

- Focus on data for decision making (Bangladesh)
- Similarities and differences in surveillance system for HIV and hepatitis among key populations (Bhutan, Nepal)
- Optimizing the data available through adjustment and data triangulation (Cambodia, India, Nepal, Sri Lanka)
- Country’s experience using the WHO hepatitis patient card at facility level (Indonesia)
- Cascade analysis for hepatitis (Laos PDR, Thailand)
- Multiple uses of cascade analysis beyond HIV care and treatment (Maldives)
- Innovative approaches for KP prevention, treatment, and care cascades (Myanmar)
Doing things differently:

- Improving the analysis and interpretation of surveillance data (Bangladesh)
- Using DHIS2 to monitor the treatment cascade for hepatitis (Bhutan, Myanmar)
- Strengthening treatment cascades for KP (Cambodia, India)
- Integrating HIV and hepatitis sentinel surveillance (Indonesia)
- Establishing a reporting system for hepatitis in DHIS2 (Lao PDR)
- Availability of less resource intensive sero-prevalence survey methods (Maldives)
- Applying virtual mapping and data triangulation for PSE (Nepal)
- Planning district level surveys to complement national level data (Sri Lanka)
- Streamline data systems to minimize duplication of effort (Thailand)

Areas requiring assistance:

- Developing strategic and action plans for hepatitis programming (Bangladesh, Indonesia, Lao PDR)
- Support to set up hepatitis treatment cascade and establishing sequelae surveillance with DHIS2 (Bhutan, Myanmar, Thailand)
- Support on applying adjustments to PSE and developing virtual mapping methods (Cambodia)
- Person-centered monitoring and case surveillance (India)
- Peer-review expertise for 2019 PSE extrapolation exercise (Indonesia)
- Establishing hepatitis B surveillance systems (Maldives)
- Developing capacity in data triangulation (Sri Lanka)

CROSS-CUTTING THEMES

Other than the topics discussed during thematic sessions at the workshop, the following cross-cutting themes also emerged:

- **Strong interest in strengthening hepatitis SI systems** – Several countries in the regions shared their progress in implementing hepatitis surveillance, and cascade monitoring using case-based or individual data. Many countries expressed eagerness to make use of the tools provided in the hepatitis strategic information guidelines to ease the process of introducing new SI activities in country (e.g. patient card, sample DHIS2 app). There was general recognition that depending on where hepatitis programming sits in the public health system, hepatitis SI activities may need to be compatible with integrated communicable disease surveillance and reporting systems, rather than be designed as a stand-alone system such as HIV. Participants also discussed the importance of monitoring access to hepatitis treatment for some key populations while recognizing the need to work with a broader population for prevention coverage and addressing their country’s treatment needs.

- **The design of SI system must be responsive to country needs and KP communities** – The emphasis placed on using SI for strengthening KP programmes rather than for reporting purposes means that methodologies, operational definitions, and data collection and analysis tools should be customized to meet national and sub-national contexts. This includes building SI systems which are flexible enough to adjust to changes in the epidemic (which KPs and sub-groups of KPs are most affected), resource envelope, programme strategy (including modes of service delivery appropriate for different KP groups), available technology, and socio-economic-political context (e.g. sensitive to the impact of
stigma and discrimination on the hidden nature of some KP sub-groups). Standardization plays a role in improving quality and allows assessment against established benchmarks. But standardization must be balanced with collecting data useful for local programme managers to best serve the KP communities in their areas.

- **Key population data collection should be integrated across diseases and funding sources** – Participants identified different opportunities for integration of KP SI systems to improve cost efficiency, ease the burden of data collection or management, and to provide a more comprehensive view of epidemic impact on key populations. Examples of integration discussed include: integrating HIV data systems into national HMIS systems; including Hepatitis prevalence measures into key population or general population surveys; integrated analysis HIV, Hepatitis, and STI surveillance data for key populations.

- **Strengthening use of SI for KP programming by recognizing the complementarity of data sources** – Many methods used to collect SI for key populations have limitations. This is partly due to the complexity of key population movement and the social factors which influence health seeking behavior. However, rather than perceiving data as being imperfect and unusable; identifying the complementarity of different data sources can extend the utility of the data collected and provide more reliable answers to key programmatic questions. Key examples explored during the workshop were how to construct KP testing-treatment cascades using a combination of routine facility data and survey data; and how to apply adjustments to direct size estimate data from surveys and other sources to develop more robust estimates of PrEP need. Countries were encouraged to use a parallel approach of making strategic plans to collect new data as well as optimize the use of existing sources of data through more intensive analysis and triangulation.

**NEXT STEPS**

Participants identified a number of next steps for regional and global level support to countries to strengthen their SI systems, especially for key populations. These recommendations are summarized below:

- **Promote regular sharing of best practices, tools and templates, and foster cross-learning:** Participants appreciated WHO HQ and Regional office efforts to support best practices and requested continued publication and dissemination of practical tools for countries to adapt KP SI good practices easily, quickly, and at lower cost. Examples of such tools include templates for a hepatitis patient card that includes recommended essential information consistent with patient monitoring and strategic information guidelines; standard operating procedures (SOPs) included as annexes in the hepatitis SI guidelines; and population size estimation and extrapolation tools available through [http://epiapps.com](http://epiapps.com). Requests for new tools include mechanisms for sharing country protocols for IBBS-lite or HSS+ for key populations to provide starting points for other countries to adopt for their own contexts and sharing examples of SI dashboards for reviewing KP programme data. Platforms for sharing work in progress may also help countries to be aware of new developments and consider these for their own use and foster inter-country collaboration and learning.
• **Adopt ‘lighter’ and sustainable methodologies for Strategic Information:** As resources for strategic information decline, countries request technical support from WHO, UNAIDS, and their partners to develop and disseminate “lighter” (i.e. less resource intensive) methodologies for the recommended KP SI components. Lighter methodologies may improve the feasibility, quality, frequency, and timeliness of use of these data. Examples of these include KP-specific HSS+ protocols to replace the need for frequent high cost IBBS, limited sets of recommended core indicators, approaches to a tiered approach to collecting individual level and aggregate level data for KP programmes and Hepatitis case-based surveillance. The group recognized that lower resource methodologies may have additional limitations for use and interpretation (e.g. less generalizability) but if accompanied by strong guidance may provide value added and more sustainable options to countries.

• **Encourage better use of existing data; Strengthen capacities for data analysis and triangulation:** Doing more with existing data remains an area with great potential for using data to improve programming. Many countries are interested in building capacity at sub national levels for data analysis and triangulation. Tapping into local expertise to better interpret and use data is an important aspect for better utilization of strategic information. At the same time KP data are complex and are not easily analyzed in a simple formulaic manner. Capacity building in this area requires development of conceptual skills and critical thinking. Technical partners can invest in developing case studies to demonstrate how data need to be transformed in order to be used for different purposes. For example, calibrating HSS+ with IBBS results to use for epidemic modeling vs. tracking trends in specific areas; interpreting cascade analysis in KP-specific sites as a proxy for KP’s experience in treatment, in lieu of investing heavily in comprehensive national KP-specific cascade analysis; target setting based on adjusted local PSE results that match operational definitions of beneficiaries reachable through existing service delivery modes and points of service. By selecting important applications and useful scenarios for these case studies, WHO and its partners can facilitate cross-country learning and develop materials that can be adapted for training and self-learning.
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   Consultant  
   WHO HQ  
   Email: ginialoo@gmail.com
## ANNEXURE 2 - AGENDA

### Tuesday, 26 March

<table>
<thead>
<tr>
<th>Duration</th>
<th>Session/Activity</th>
<th>Speaker(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0830 - 0900</td>
<td>Registration</td>
<td>Tjandra Aditama, WHO SEAR</td>
</tr>
<tr>
<td></td>
<td>Welcome remarks</td>
<td>Poonam Khetrapal Singh, WHO SEAR (read by Pem Namgyal, DPM)</td>
</tr>
<tr>
<td></td>
<td>Regional Director’s Address</td>
<td>Henk Bekedam</td>
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<tr>
<td></td>
<td>Address by WR India</td>
<td>Timothy Holtz, FHI 360</td>
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<td></td>
<td>Address by CDC</td>
<td>Daxa Patel, NCPI</td>
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<tr>
<td></td>
<td>Community representative’s perspective</td>
<td>Bilali Camara</td>
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<tr>
<td></td>
<td>Address by UNAIDS</td>
<td>Mukta Sharma, WHO SEAR</td>
</tr>
<tr>
<td></td>
<td>Objectives of the workshop</td>
<td>All participants</td>
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<tr>
<td></td>
<td>Introduction of participants</td>
<td></td>
</tr>
<tr>
<td>1000 - 1030</td>
<td>Healthy break and Group photo</td>
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</tr>
<tr>
<td></td>
<td><strong>Introductory Session – setting the stage</strong></td>
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<tr>
<td></td>
<td>Chairs: Md Belal Hossain (Bangladesh) and Tran Dai Quang (Vietnam)</td>
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<tr>
<td></td>
<td><strong>Moderator: Nicole Seguy</strong></td>
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</tr>
<tr>
<td>1030 - 1100</td>
<td>Regional updates on strategic information for HIV and hepatitis</td>
<td>Mukta Sharma - SEAR &amp; Linh-Vi Le - WPRO</td>
</tr>
<tr>
<td></td>
<td>Summary of recommendations related to Strategic Information from Think Tank meeting</td>
<td>B B Rewari</td>
</tr>
<tr>
<td>1100 - 1145</td>
<td>Introduction to WHO HIV strategic information Frameworks</td>
<td>Virginia Macdonald, WHO HQ</td>
</tr>
<tr>
<td></td>
<td>Approach to viral hepatitis strategic information and its application to Key Populations</td>
<td>Yvan Hutin, WHO HQ</td>
</tr>
<tr>
<td></td>
<td>A critical look on strategic information among Key Populations (KP) in Asia and Pacific</td>
<td>Taoufik Bakkali, UNAIDS RST</td>
</tr>
<tr>
<td></td>
<td>Plenary discussion</td>
<td></td>
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<tr>
<td>Time</td>
<td>Session</td>
<td>Details</td>
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<td>-------------------</td>
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<tr>
<td>1145 - 1300</td>
<td>Thematic Session 1: Person centered patient monitoring and case-based surveillance</td>
<td>Txema Calleja, Global Fund&lt;br&gt;Guidelines on person centered HIV patient monitoring including case-based surveillance (CBS) and unique identifier codes (UIC)&lt;br&gt;Measures for strengthening CBS and concrete examples on application of UIC&lt;br&gt;Case study from Myanmar: Hepatitis patients’ databases within a broader integrated system monitoring the cascade with aggregated data&lt;br&gt;Community perspectives on unique identifier codes&lt;br&gt;Plenary Discussion</td>
</tr>
<tr>
<td>1300 – 1345</td>
<td>Lunch</td>
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<tr>
<td>1345 - 1500</td>
<td>Thematic Session 2: Strengthening surveillance for Key Populations in Asia Pacific region</td>
<td>Keith Sabin&lt;br&gt;Yvan Hutin&lt;br&gt;Khin Cho Win Htin&lt;br&gt;Mariyam&lt;br&gt;Ian Fellows (video)&lt;br&gt;All</td>
</tr>
<tr>
<td>1500 - 1530</td>
<td>Healthy break</td>
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<tr>
<td>1530 - 1645</td>
<td>Panel discussion on way forward for strengthening KP surveillance in the region</td>
<td>Arvind Pandey&lt;br&gt;Tara Nath Pokhrel&lt;br&gt;Martin Choo&lt;br&gt;Keith Sabin&lt;br&gt;Yujwal Raj&lt;br&gt;Vietnam&lt;br&gt;Philippines&lt;br&gt;Sheela Godbole&lt;br&gt;Suman Jain</td>
</tr>
<tr>
<td>1645 – 1700</td>
<td>Wrap up</td>
<td></td>
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<tr>
<td>Duration</td>
<td>Session/Activity</td>
<td>Facilitators</td>
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<tr>
<td>0830 - 0845</td>
<td>Recap of Day 1</td>
<td>B B Rewari</td>
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<tr>
<td>0845- 0900</td>
<td><strong>Thematic Session 3: Strengthening KP Prevention-testing-treatment cascades</strong></td>
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<td></td>
<td>Chair: Raman R Gangakhedkar and Sheena Dias Viegas (Timor Leste)</td>
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<td><strong>Moderator: Virginia Macdonald</strong></td>
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<tr>
<td></td>
<td>More than just 90-90-90: a brief introduction to hepatitis and prevention cascades</td>
<td>Virginia Macdonald</td>
</tr>
<tr>
<td>0930 - 1045</td>
<td>Group work: Using existing data to construct different cascades (90-90-90, hepatitis and prevention) Identifying challenges and solutions</td>
<td>Country teams</td>
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<tr>
<td>1045 - 1115</td>
<td><em><strong>Healthy break</strong></em></td>
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<tr>
<td>1115 - 1230</td>
<td>Group work feed back Summary discussion</td>
<td>Facilitators</td>
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<tr>
<td>1230 - 1330</td>
<td><strong>Thematic Session 4: Key Populations Size Estimates</strong></td>
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<td></td>
<td>Chair: Yujwal Raj and S Khanthanouvieng (Lao PDR)</td>
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<td></td>
<td><strong>Moderator: Virginia Ioo</strong></td>
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<tr>
<td>1330 - 1415</td>
<td>KP size estimates overview of definitions and methods: Key considerations Perspective of a community representative on size estimates</td>
<td>Taoufik Bakkali Arif Iryawan, Indonesia</td>
</tr>
<tr>
<td>1515 - 1545</td>
<td><em><strong>Healthy break</strong></em></td>
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<tr>
<td>1545 - 1645</td>
<td>Group work: Identifying gaps and issues in KP size estimates in country. Discuss necessary adjustment for different uses.</td>
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<tr>
<td>1645 - 1730</td>
<td><strong>Group feedback and plenary</strong></td>
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<tr>
<td>Duration</td>
<td>Session/Activity</td>
<td>Facilitators</td>
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<tr>
<td>0830 - 0845</td>
<td>Recap of Day 2</td>
<td>Mukta Sharma</td>
</tr>
<tr>
<td>0845 - 0900</td>
<td>Admin announcement</td>
<td>Linh Vi Le</td>
</tr>
<tr>
<td></td>
<td><strong>Thematic Session 5: Using Programme and Surveillance data for decision making</strong> &lt;br&gt;Chair: Yvan Hutin and Indri Oktaria Sukmaputri (Indonesia) &lt;br&gt;<strong>Moderator: Linh Vi Le</strong></td>
<td></td>
</tr>
<tr>
<td>0900 - 0915</td>
<td>Data triangulation for district categorization - India</td>
<td>Mariyam Zainab</td>
</tr>
<tr>
<td>0915 - 0930</td>
<td>Tools for Strengthening Routine Facility Analysis</td>
<td>Virginia Loo</td>
</tr>
<tr>
<td>0930 - 0945</td>
<td>Use of DHIS2 and other mechanisms to monitor the cascade using aggregated data.</td>
<td>Yvan Hutin</td>
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<tr>
<td></td>
<td><strong>Thematic Session 6: Moving ahead on Pre-Exposure Prophylaxis (PrEP)</strong> &lt;br&gt;Chair: Fabio de Mesquita and Walairat Chaifoo (Thailand) &lt;br&gt;<strong>Moderator: Heather Marie</strong></td>
<td></td>
</tr>
<tr>
<td>0945 - 1015</td>
<td>Strategic information for PrEP: WHO guidance, indicators, monitoring tools</td>
<td>Shona Dalal</td>
</tr>
<tr>
<td>1015 - 1045</td>
<td>Overview of PrEP target setting, data required, limitations, and synergies with other approaches</td>
<td>Heather-Marie Schmidt</td>
</tr>
<tr>
<td>1045 - 1100</td>
<td><strong>Health Break</strong></td>
<td></td>
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<tr>
<td>1100 - 1230</td>
<td>Practical exercise: Estimating key population needs for PrEP</td>
<td>Country teams and facilitators</td>
</tr>
<tr>
<td>1230 - 1300</td>
<td>Group work feedback</td>
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<tr>
<td>1300 - 1400</td>
<td><strong>Lunch Break</strong></td>
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<tr>
<td>1400 - 1500</td>
<td>Clinics/Market place</td>
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<tr>
<td>1500 - 1530</td>
<td><strong>Health break</strong></td>
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<tr>
<td>1530 - 1600</td>
<td>Feedback from postcards</td>
<td>Yvan Hutin</td>
</tr>
<tr>
<td>1600 - 1630</td>
<td>Summary and close</td>
<td></td>
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</tbody>
</table>
World Health Organisation
Strategic Information:
A consolidated framework
Virginia Macdonald
Key populations and innovative prevention team
HIV and Hepatitis Department
WHO Geneva

M&E Framework for the Health Sector Response to HIV

Criteria for selection of the 10 global indicators
Taken together, the 10 global indicators summarise the performance of the health sector response to RTI.

The following criteria guided their selection:
1. Validity
2. Relevance to a particular step and linkage along the result chains and the health services cascade
3. Feasibility of measurement and availability of data
4. Usability in HIV monitoring at both the national and the aggregate global levels
5. Widespread applicability and comparability

- National level indicators
- Additional indicators

Key population indicators

GLOBAL INDICATORS
- KPDP:1. Needle-syringes distributed per person who injects drugs
- KPDP:2. Condom use among sex workers
- KPDP:3. Condom use among men who have sex with men

NATIONAL INDICATORS
- KPDP:1. HIV testing coverage of key populations
- KPDP:2. Key population ART coverage

ADDITIONAL INDICATORS
- KPDP:3. Key population ART coverage
- KPDP:4. Mentorship in key populations
- KPDP:5. Key population HIV prevalence
- KPDP:6. Key population experience with discrimination by health workers
Thank you

Annette Verster
Rachel Baggaley
Key population and innovative prevention team (KPP)
What do we know and when do we need to know it?

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevalence of infections</td>
<td>Annual</td>
</tr>
<tr>
<td>Incidence of infections</td>
<td>Annual</td>
</tr>
<tr>
<td>Populations size Estimates</td>
<td>Every 5 years</td>
</tr>
<tr>
<td>Health promotion behaviours</td>
<td>Biennial</td>
</tr>
<tr>
<td>Antiretroviral therapy (with viral suppression)</td>
<td>Annual</td>
</tr>
<tr>
<td>Health risk behaviours</td>
<td>Biennial</td>
</tr>
<tr>
<td>Stigma and discrimination</td>
<td>Biennial</td>
</tr>
</tbody>
</table>

New HIV Infections in 2017: Asia-Pacific

- Duration of some risk behaviours is not lifetime
- 40-75% of men living with HIV labelled “low risk” are former drug injectors
- Prevention and response mix should follow data, not political expedience.

But we must have the data!
Surveys: a critical component of surveillance systems

1. HIV sentinel surveys
2. HIV sentinel surveys + behaviours
3. Bio-behavioural surveys

Survey Attributes

<table>
<thead>
<tr>
<th>Attribute</th>
<th>HSS</th>
<th>HSS+</th>
<th>BBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV prevalence</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Hepatitis prevalence</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Behaviours (Actionable)</td>
<td>+</td>
<td>++</td>
<td></td>
</tr>
<tr>
<td>Size Estimates</td>
<td>+</td>
<td>+</td>
<td></td>
</tr>
<tr>
<td>Implementation Costs</td>
<td>$</td>
<td>$$</td>
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</tr>
<tr>
<td>Representative</td>
<td>+</td>
<td>+</td>
<td>+++</td>
</tr>
</tbody>
</table>

Surveys Defined

1) HIV sentinel surveys (HSS)
   Consecutive samples from people attending service provision sites – no behavioural questions

2) HIV sentinel surveys + behaviours (HSS+)
   Consecutive samples from people attending service provision sites – with behavioural questions

3) Bio-behavioural surveys (BBS)
   Community sample of respondents with behaviors and biological testing

HIV Among male PWID 1996-2009: MoH Sentinel Surveillance (40 provinces)

Typical results from Sentinel surveillance

HIV Among CSW 1996-2009: Sentinel Surveillance (40 provinces)

Risks Overlap: CSW-PWID

- 1-17% of CSWs reported IDU in 2006 IBBS (highest in Hanoi and Can Tho)
- Odds ratio of HIV among IDU/CSW: 3.5-31.4
HSS + behaviours

- Piloted in Vietnam in 2010
- Expanded to 20 sites in 3 years
- Instrument had consent + 18 questions
- No incentives paid
- Average interview < 5 minutes

RESULTS - HIV PREVALENCE AMONG THOSE INJECTING VS NON-INJECTING FSW

Denominators, data sources, and double counting

Program monitoring provides total number of people receiving a service at a clinic, but key populations may receive services elsewhere and not all KP access services

Using Program and Population Cascades

- Program cascade to learn about those accessing services and gaps among this population
- Population cascade to learn about all KP and progress toward 90-90-90

BBS-derived Cascade

Service-derived Cascade
ANNEXURE 5 – PRESENTATION: SOME SPECIFICITIES OF VIRAL HEPATITIS SURVEILLANCE

Some specificities of viral hepatitis surveillance

1/3: Acute hepatitis reflects incidence

Acute hepatitis surveillance: enhanced case reporting for trends, risk factors

<table>
<thead>
<tr>
<th>syndromic surveillance: Usually there</th>
<th>Enhanced case reporting: Needed</th>
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</thead>
<tbody>
<tr>
<td>Case definitions</td>
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</tr>
<tr>
<td>Clinical</td>
<td>Type specific – IgM diagnosis</td>
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<tr>
<td>Data collection</td>
<td></td>
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<tr>
<td>Basic demographics</td>
<td>Risk factors</td>
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<td>Objectives</td>
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<td>Outbreak detection</td>
<td>Trends, risk factors</td>
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<td>Scale</td>
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<tr>
<td>Nationwide</td>
<td>Mostly sentinel</td>
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</tbody>
</table>


Hepatitis surveillance describes an hepatitis epidemic over > 30 years

Annexes: template protocols and SOPs rather than manuals

Case definitions for acute hepatitis

<table>
<thead>
<tr>
<th>Level</th>
<th>Acute hepatitis</th>
</tr>
</thead>
<tbody>
<tr>
<td>suspect case: clinical criteria</td>
<td>Discrete onset of an acute illness with signs or symptoms of</td>
</tr>
<tr>
<td>(a) acute viral illness and (b) hepatic injury (liver enzymes)</td>
<td></td>
</tr>
<tr>
<td>confirmed case: clinical criteria</td>
<td>IgM anti-HAV + OR</td>
</tr>
<tr>
<td>AND epidemiological criteria or biomarker criteria</td>
<td>IgM anti-HEV + OR</td>
</tr>
<tr>
<td>confirmed case: epidemiological link with a confirmed case</td>
<td>IgM anti-HBC +</td>
</tr>
<tr>
<td>confirmed case: epidemiological link with a confirmed case</td>
<td>Anti-HCV + AND</td>
</tr>
<tr>
<td>confirmed case: epidemiological link with a confirmed case</td>
<td>All IgM – for HAV, HEV, and anti-HBc OR</td>
</tr>
<tr>
<td>confirmed case: epidemiological link with a confirmed case</td>
<td>RNA + Anti-HCV – OR</td>
</tr>
<tr>
<td>confirmed case: epidemiological link with a confirmed case</td>
<td>Seroconversion Anti-HCV</td>
</tr>
</tbody>
</table>

Acute hepatitis less common than chronic hepatitis: Definitions must be as specific as possible
Data collection form for enhanced case reporting of acute hepatitis

Case definition, IgM biomarkers and exposures
- Identification
- Signs and symptoms (acute hepatitis?)
- Biomarker criteria (IgM)
- Potential general exposures
- Potential exposures 2-6 weeks before onset
- Potential exposures 2-6 months before onset

Surveillance of prevalence of infection in specific population groups
- Commonly done in the field of HIV
  - Integrated Behavioural and Biological Surveillance (IBBS)
  - Extension to HBV/HCV infection possible
- Some HIV key population are at high prevalence of HBV / HCV infection (e.g., persons who inject drugs for HCV infection)
  - Prevalence ratio in these groups guides focus testing
- In some cases, the prevalence of HBV / HCV infection in these population will not differ from the general population
- New HBV infection in adults do not lead to chronic infection
- HCV uncommonly transmitted through sex
- Stop monitoring in these groups after an initial run

Prevalence of HBV infection in various population group, Bangladesh

Admissions for hepatocellular carcinoma, Aga Khan University, Karachi, Pakistan, 1988 -2008

2/3: Biomarker surveys to estimate prevalence

Template protocol + adaptation workshop

Template survey protocol
- Key questions to address
- Generic protocol
- Template language

Stakeholders engagement / protocol writing workshop
- Day one: Answer key questions and address major issues
- Day two: Agree on ethics, budget, work plan
- Pilot tested in 2 countries

Prevalence of HCV infection in various population group, Thailand

3/3: Sequelae surveillance

Estimating mortality from the envelope and attributable fractions

Hepatitis surveillance:
Summary
1. Enhanced case reporting of acute hepatitis can point to mode of transmissions if incidence is high
2. Integrate biomarker surveys, but no needs to repeated surveillance in key populations for which the prevalence does not differ from the general population
3. Implement sequelae surveillance to carve out the part of cirrhosis / hepatocellular carcinoma mortality that comes from HBV and HCV infection
Thank you

ANNEXURE 6 – PRESENTATION: STRENGTHENING KP CASCADES FOR HIV AND HEPATITIS

Thematic session 3
Strengthening KP prevention, testing, treatment and care cascades for HIV and Hepatitis

The three 90s
DENOMINATOR DIFFERS FOR EACH TARGET: Success is >89% on each

Three targets:
• The first 90: The percentage of all people living with HIV who know their HIV status
• The second 90: The percentage of people who know their HIV-positive status and are accessing treatment
• The third 90: The percentage of people on treatment who have suppressed viral load

The HIV testing and treatment cascade
• Numbers on treatment and numbers virally suppressed expressed as a percentage of all people living with HIV
• Success is:
  • >89% PLHIV know their status
  • 81% coverage of antiretroviral treatment
  • 73% of people achieving viral suppression
HIV care cascade for key populations

- Issues which may affect data analysis and interpretation
  - Programmatic data (i.e. ART facility) often does not include information for KP disaggregation
  - Data available only for those already accessing a service
  - Survey data may not include viral load measurement
  - Case surveillance – mode of transmission data only as a proxy?

Botswana (LINKAGES)

South Sudan

Prevention cascades

Basic HIV Prevention Cascade Model

Basic combination prevention FSW Cascade - Condoms (2018)
Hepatitis B cascade of care: people stay on treatment and HBV replication is suppressed
- Lifelong treatment suppresses replication (similar to HIV)
- Cascade indicators:
  - People tested and diagnosed (C6)
  - Treatment coverage (C7)
  - Those receiving treatment with suppressed viral loads (C8)

Hepatitis C cascade of cure: the number of people infected progressively declines
- Short, curative treatment (similar to tuberculosis)
- Cascade indicators:
  - People tested and diagnosed (C6)
  - Treatment initiation rate (C7)
  - Proportion cured among the people finishing treatment (C8)

ANNEXURE 7 – PRESENTATION: CONSIDERATIONS ON KP MAPPING AND SIZE ESTIMATES

The connections
- Could we have a size estimate without mapping?
- Could we have a programme without size estimate?
- Could we have a programme without mapping?
KP Size Estimates are very Inconsistent

- 18 countries,
- 21 Definitions for size estimates ranging from very vague to very precise

MSM SE as % of Adult males

What is wrong?
The estimate? or the interpretation and use?

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated size</th>
<th>Definition</th>
<th>% of males (15-49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan (2010)</td>
<td>15,710</td>
<td>Men 15-49 yrs, both active and passive</td>
<td>88.1</td>
</tr>
<tr>
<td>Australia (1998)</td>
<td>17,400</td>
<td>Men 15-49 yrs</td>
<td>81.5</td>
</tr>
<tr>
<td>Bangladesh (2009)</td>
<td>7,000</td>
<td>Men 15-49 yrs, who are men who have sex with men</td>
<td>87.0</td>
</tr>
<tr>
<td>Botswana (2003)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>87.0</td>
</tr>
<tr>
<td>Cameroon (2000)</td>
<td>20,003</td>
<td>Information not available</td>
<td>8.0</td>
</tr>
<tr>
<td>China (2010)</td>
<td>2,000,081</td>
<td>Males 15-49 yrs with sex with men in recent 3 months</td>
<td>80.6</td>
</tr>
<tr>
<td>India (2004)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>8.0</td>
</tr>
<tr>
<td>Indonesia (2009)</td>
<td>18,611</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>8.0</td>
</tr>
<tr>
<td>Japan (2002)</td>
<td>3,000</td>
<td>Information not available</td>
<td>8.0</td>
</tr>
<tr>
<td>Laos (2005)</td>
<td>13,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>Malaysia (2007)</td>
<td>12,500</td>
<td>Information not available</td>
<td>8.0</td>
</tr>
<tr>
<td>Maldives (2007)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>Nepal (2002)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>New Zealand (2002)</td>
<td>4,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>Pakistan (2005)</td>
<td>7,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>South Africa (2007)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>Thailand (2004)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
<tr>
<td>Zambia (2007)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men</td>
<td>8.0</td>
</tr>
</tbody>
</table>

Source: UNAIDS (2014), Global Health Observatory Database. The 2015 Revision

Male sex workers (MSW) size estimates, countries where data is available, 2015-2016

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated size</th>
<th>Definition</th>
<th>% of males (15-49)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cameroon (2010)</td>
<td>30,719</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Eritrea (2010)</td>
<td>15,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Ghana (2009)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>India (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Malaysia (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Nigeria (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Pakistan (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>Senegal (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
<tr>
<td>South Africa (2006)</td>
<td>25,000</td>
<td>Men 15-49 yrs, who have sex with men in the last 12 months</td>
<td>87.0</td>
</tr>
</tbody>
</table>

Source: UNAIDS (2014), Global Health Observatory Database. The 2015 Revision
Consideration 2: who does this estimate represent?

- All population actually at risk?
- High risk / low risk?
- Reachable / not reachable?
- Programme target?

- Does it really represent who we think it does?

What is the use of this size estimate?

- Estimate for Epidemiological analysis / profiling
  - Help understand the epidemiological dynamics
  - Particularly important for concentrated epidemics
  - Help understand the modes of transmission
  - Can be disaggregated by different levels of risk
  - Leads to large numbers

- Estimate for Programme target setting
  - Considers factors of reachability, practicability
  - High levels of risk
  - May be representative of sub populations
  - Could have several estimates for several sub categories of the population (e.g. MSM)
  - Helps proper reporting on programme performance
  - Leads to smaller numbers

Definitions for targeting interventions

- Size estimate for epidemic analysis considers the total population regardless of level of risk
- Size estimate for programme targeting may consider the smaller population at risk

Consideration 3: Validation

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated size</th>
<th>Definition</th>
<th>Notes (19-16)</th>
<th>% of total (15-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bangladesh</td>
<td>112,991 (1625)</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>15,777,412</td>
<td>0.8</td>
</tr>
<tr>
<td>Cambodia</td>
<td>3,986</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>21,510</td>
<td>0.1</td>
</tr>
<tr>
<td>Kenya</td>
<td>75,939</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>385,295,350</td>
<td>0.1</td>
</tr>
<tr>
<td>Indonesia</td>
<td>26,203</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>71,596,154</td>
<td>0.1</td>
</tr>
<tr>
<td>Malaysia</td>
<td>26,149</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>14,605,906</td>
<td>0.3</td>
</tr>
<tr>
<td>Nepal</td>
<td>21,989</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>3,005,906</td>
<td>0.3</td>
</tr>
<tr>
<td>Tanzania</td>
<td>12,041</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>3,204,906</td>
<td>0.1</td>
</tr>
<tr>
<td>Philippines</td>
<td>122,010</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>24,432,754</td>
<td>0.5</td>
</tr>
<tr>
<td>Thailand</td>
<td>62,089</td>
<td>Transgender: 60+ yrs, who identifies themselves as belonging to a biological sex different from that assigned at birth. They may identify as: Gay, Straight, Bisexual, Transgender, or Other</td>
<td>17,009,406</td>
<td>0.4</td>
</tr>
</tbody>
</table>

Consideration 4: the Methods

- Source of information and method of coming up with the estimates is very determinant:
  - From Surveys
  - From mapping
  - Consensus among experts
  - Triangulation of data from different sources

Physical vs Virtual Mapping

- 2 stages and 14 steps for Physical Mapping

- Virtual Mapping
  - Access to virtual databases,
  - geographical mapping of users
  - Big data approach

Conclusion

- The size estimates are not only numbers, but they represent individuals that the programme is concerned about. The aim is to help us to:
  - know how and where to reach them
  - Or Know how many of them we can reach, how and where
- That is the only way we can have good and useful size estimates
Analysis and use of facility data for action
Comprehensive curriculum for national, district and programme managers

https://www.who.int/healthinfo/tools_data_analysis_routine_facility/en/

The Dashboards

- Translated for national, district and facility level
- Denominators imported from Spectrum: hivcoppa

The Exercises

b. The same map can have different uses for managers at different levels. Look at the first map in the HIV 2.0 dashboard when generated for a user at a regional/SNUJ level, ART Coverage Rate – last month (by district):

How can a district manager use this map to help her with programme management?

[District managers can compare their county’s performance to other similar or nearby geographic areas to judge their performance in relative terms. If the district is performing poorly compared to other areas, seeing what other counties have been able to achieve may help motivate under-performers to do better.]

HIV 2.0 Package

DHIS2 training instance

Guidelines / Module

Dashboard

Exercises +

The Guidance

A: HIV Cascade

Data elements & Indicators Needed
- PLHIV newly diagnosed
- Newly on ART
- Number of PLHIV retained on ART – 12 months

How do Managers Use it
- Summary of performance against key cascade measures
- Gender comparison identifies trends in linkage between services

Person, Place, Time, Alternate Views
- All and by gender
- National, last 12 months (relative to data dashboard generated)
- Generated for specific sub-national units, especially low performing areas
- Useful to generate for fixed periods corresponding to planning/budget cycle or for more recent time periods (e.g., last 3 months)
- Cascades can be constructed for specific subgroups, such as ANC/PMTCT, key populations, or by implementation partners

Targets - Chart can appear as stacked columns showing achievements as a portion of targets. Or as a set of "shadow" columns side by side, if they are color coded in a corresponding way, e.g., same colored outlines but not filled.

DHIS 2 Health Apps

Based on international standards

Ex 1: Introduction to HIV dashboards

2. Using the dashboard tools to navigate between dashboards

The initial view features a selected default dashboard. In this case, the dashboard is the name of the dashboard appears at the top of the page. To switch the view to a different dashboard, click on the title at the top of the page. To see more dashboards available, click "Show More" and choose the desired dashboard.
Guiding Principles

Developing the HIV 2.0 Dashboards

- Consistent with global guidance re: routine facility data
- Dashboards speak to multiple perspectives (national/SNU1, SNU2, facility)
- Agnostic to HMIS platform
- Balance what is ideal and what is feasible
- Focus on use of aggregate data

Implications for KP specific products

- Display KP treatment cascades at facility level or for KP specific services
- Translate exercises to address KP-specific issues for interpretation
- Needs to address both community based and facility based service data (e.g. community based testing, outreach services v DIC, etc.)
- Develop dashboards for KP prevention services (e.g. harm reduction services)

ANNEXURE 9 – PRESENTATION: STRATEGIC INFORMATION FOR PREP

Outlook

- WHO guidance & current situation
- PrEP cascade and cyclical nature of risk
- Setting targets for PrEP
- Country snapshots
- Core monitoring indicators for PrEP

Strategic Information for PrEP: Complicated But Doable!

Shona Dalal, PhD
28 March, 2019
Rapid Evolution of WHO PrEP Recommendations

Countries With PrEP Policies, March 2019

Number of People Who Used PrEP at Least Once

Declines in New HIV Diagnoses

EPIC-NSW: HIV diagnoses in MSM in NSW, Australia Before & After PrEP, by Recency of Infection

What do WHO recommendations mean in practice?

- MSM (and transgender women) - all regions
- SDC - all regions
- Sex workers – in East and southern Africa
- People who inject (and use) drugs
- AGYW – specific geography in ESA
- Others who asks for PrEP


Note: Preliminary analysis, 2019
Sources: USA: Sullivan et al., 2019; WHO Regional & Country Offices: Ministries of Health.
**Cyclical Nature of PrEP Use**

**The Oral PrEP Cascade**

- Identify high risk potential PrEP candidates
- Determine eligibility and interest
- Initiate PrEP
- Achieve adherence
- Continue on PrEP
- Stop PrEP

---

**UNAIDS PrEP Targets**

- **Global Fast Track target**: 3 million enrolled in/protected by PrEP in 2020
- Assumption that 3 million represents:
  1. 10% of SW, MSM
  2. Serodiscordant couples in high prevalence settings
  3. Adolescents in hyperepidemic settings

---

**Setting PrEP Targets**

- Targets help to strategize the direction of a PrEP programme and to assess the budgetary allocation for PrEP.
  - Motivating
  - Likely slow initial uptake – PrEP is still relatively new
- Priority populations depend on epidemiologic context/location:
  - Key populations
  - Serodiscordant couples
  - Women and pregnant women in high incidence areas in Africa
  - Adolescents and young adults in high incidence areas in Africa

---

**Defining Eligibility**

Three criteria that are universally essential before offering an individual PrEP (see clinical module):

1. Confirmed HIV-negative status **and**
2. No signs and symptoms of acute HIV infection **and**
3. Determined to be at substantial risk for HIV as defined by national guidelines (countries may define this differently).

---

**Estimating Need (and benefit)**

- Uncertainty in the estimated “population in need”
  - Size of key population groups difficult to estimate
    - May not self-identify, criminalization, stigma and discrimination
  - Understanding differential underlying risk
    - Which risk factors to use?

- Use the most recent available epidemiologic data from surveys or programmes to make rough estimates of the numbers of people who:
  - may benefit from PrEP
  - could be reached
  - who may decide to use PrEP
Focus of Targets

- Targets can be set by
  - National or sub-national levels
  - Population type
  - Age
- Coverage – how much, how fast?
- Programmatic projections over time are complicated by continuation
  - Need to revise regularly
  - Costs change over time

What Can Modeling Tell Us?

- Modelling can help
  - Estimating impact of different strategies for implementation and scale up
    - E.g., calculating the number needed to be on PrEP to avert one infection
    - Identifying populations in whom to offer PrEP as a priority
- Carefully consider the inputs
  - Availability of good information
  - Comparison scenarios
    - Few interventions are cheaper than a condom, but use remains low and those who don’t use them are people who could benefit from PrEP
    - Duration of PrEP use is often short
  - Cost-effectiveness isn’t the only consideration
    - Human rights approach to those who would benefit
    - Private sector

PrEP Uptake: USA, France

Country Snapshots

Targets for KP

- Option 1: start with the estimated size of key population groups
  - Surveys, regional, global averages, or programme data
    - Apply the estimated % who are HIV-negative
    - Among negatives, the % at substantial risk
    - Among those the % who may be reached with services
    - Among those reached, the % who may take PrEP
- Option 2: More conservative approach is to start with estimated numbers known to be reached settings with high HIV prevalence/incidence
  - Apply the % HIV-negative, at risk, and who may take PrEP as above
- PrEP uptake among those offered may differ considerably between different groups, and might experience growth as awareness and demand for PrEP grow.
Continuation on PrEP, Thailand (n=1,697)

Cumulative PrEP Uptake, Viet Nam
(March 2017 – January 2019)

Viet Nam: Most PrEP Users Are MSM & Aged 20-35 yrs

Demographics & Risk Factors of Fee for Service PrEP Users in Thailand (n=1,500)

Viet Nam - PrEP Continuation at Month 3

South Africa - Number of People Tested for HIV, Offered and Initiated on PrEP
Kenya – Who is Accessing PrEP?

- 45,000 persons have ever started PrEP
  - 22,809 on PrEP at October 2018

Continuation on PrEP by AGYW, LVCT sites, Kenya

Routine Monitoring Requires

- Systems for the collection and analysis of standardized data
- Balance between the need to obtain the information required while minimizing reporting burden
  - Harmonize monitoring nationally and globally
  - Facilitate integration of systems
  - Reduce excessive data collection
  - Enhance the availability and quality of data

Core Indicators

- The following 4 core indicators are a minimum set suggested for the routine monitoring of PrEP programmes to assess uptake, continuation and safety.

Core PrEP Indicator 1: Uptake

<table>
<thead>
<tr>
<th>Indicator definition</th>
<th>Percentage of eligible people who initiated oral antiretroviral PrEP in the last 12 months.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>The number of people who initiated oral PrEP in the last 12 months.</td>
</tr>
<tr>
<td>Denominator</td>
<td>Number of people who were newly offered PrEP in the last 12 months.</td>
</tr>
</tbody>
</table>

Note: Regular PrEP users who are continuing on PrEP should be excluded from both the numerator and denominator.
An individual should only be counted once in a given reporting period even if they were screened and offered PrEP more than once.
2. Continuation on PrEP

<table>
<thead>
<tr>
<th>Indicator definition</th>
<th>Percentage of PrEP users who continued on oral PrEP for three consecutive months after having initiated PrEP in the last 12 months.</th>
</tr>
</thead>
</table>

**Numerator**
Number of people who continued on PrEP for three consecutive months after having initiated PrEP in the last 12 months.

**Denominator**
Number of people who initiated oral PrEP in the last 12 months.

*Note: People who initiated PrEP includes people who received PrEP for the first time, and those who had previously discontinued PrEP and restarted PrEP in the reporting period. Regular PrEP users who are continuing on PrEP should be excluded from both the numerator and denominator.*

3. PrEP Associated Toxicity Prevalence

<table>
<thead>
<tr>
<th>Indicator definition</th>
<th>Percentage of people who have received oral PrEP who have discontinued or interrupted PrEP due to a serious ARV-associated toxicity in the last 12 months.</th>
</tr>
</thead>
</table>

**Numerator**
Number of people who received oral PrEP and have discontinued or interrupted PrEP due to a serious ARV-related toxicity in the last 12 months.

**Denominator**
Number of people who received oral PrEP at least once in the last 12 months.

*Note: Denominator includes those who initiated PrEP for the first time those restarting PrEP and those who are continuing on PrEP.*

*Defined as a life-threatening illness, death, hospitalization or disability or any adverse drug reaction that resulted in PrEP discontinuation or interruption.*

4. HIV Positivity Among People Who Have Been Prescribed PrEP

<table>
<thead>
<tr>
<th>Indicator definition</th>
<th>Percentage of people who test HIV-positive among people who received PrEP at least once in the last 12 months and had at least one follow up HIV test.</th>
</tr>
</thead>
</table>

**Numerator**
Number of people who had a positive HIV follow-up test among people who received oral PrEP at least once in the last 12 months.

**Denominator**
Number of people who received oral PrEP at least once in the last 12 months, and who had at least one follow up HIV test.

Disaggregations

- First time, current PrEP users
- Key populations
  - Need for data protections
  - Reassessment of KP status as it may change
- Gender (male, female, transgender)
- Age (15–19, 20–24, 25–49 and 50+ years)

PrEP Services Facilitate Referral

STIs In PrEP Users - Australia

- High prevalence of STIs at baseline
- Very high STI incidence rates found in the trials (EPIC-NSW: >100 per 100 PY; PrEPX: 91 per 100 PY)
- Per year: STI diagnoses in EPIC-NSW and PrEPX were concentrated in half of the PrEP users (i.e., repeated diagnoses)
**Event-driven ("On Demand") PrEP for MSM**

- 2 tablets 2-24 hours before sex
- 1 tablet 24 hours later
- 1 tablet 48 hours after first intake

4 pills of TDF/FTC taken over 3 days to cover one sexual intercourse

- 86% reduction in HIV risk in the placebo-controlled randomised phase
- 91% reduction in open-label extension, including in infrequent users


**Implementation Challenges**

- **Availability**
  - Policies, licensing, regulation, informal use
- **Lack of awareness**
  - Demand creation
- **Continuation**
  - Low risk perception
  - Structural, provider, social
- **Service delivery approaches**
  - Integration and link to related services (STIs, contraception, partner notification, mental health, others)
- **Cost**
  - Focusing service for those who would benefit most

**What Next From WHO?**

- Event-driven PrEP
- Creatinine testing frequency
- STI and PrEP
- Barriers to uptake/continuation
- Assess informal use
- Keep watch on
  - Long-acting PrEP products
  - ECHO trial on contraceptive use and HIV
  - BNAbs

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