SESSION 1:

WHAT WE WANT: UNIVERSAL ACCESS TO DIAGNOSIS AND TREATMENT

MAGDALENA ANKIERSZTEJN-BARTCZAK
Goals of session 1

• Learn about universal access to diagnosis and treatment
• Learn how to achieve universal access
  – mechanisms
  – existing practices
  – country and regional levels
ABC HIV
Key facts:

- 34 million lives
- In 2014, 1.2 million people died from HIV-related causes globally
- There were approximately 36.9 million people living with HIV at the end of 2014 with
- 2.0 [1.9–2.2] million people becoming newly infected with HIV in 2014 globally
Key facts:

• ARV drugs can control the virus and help prevent transmission
• It is estimated that currently only 54% of people with HIV know their status
• Between 2000 and 2015, new HIV infections have fallen by 35%
• AIDS-related deaths have fallen by 24%

http://www.who.int/mediacentre/factsheets/fs360/en/
17.1 million people living with HIV do not know they have the virus
Diagnosis

• Serological tests:
  – detect the presence or absence of antibodies to HIV-1/2 and/or HIV p24 antigen

http://www.who.int/mediacentre/factsheets/fs360/en/
Diagnosis

• Most individuals develop antibodies to HIV-1/2 within 28 days

• Antibodies may not be detectable early after infection, the so-called window period

http://www.who.int/mediacentre/factsheets/fs360/en/
HIV testing services

• HIV testing should be voluntary

• Self-testing as an additional option
• What proportion of PLHIV does know their HIV status?

• Why are we not able to identify more PLHIV?

• Are we using the right strategies/approaches to create demand for HIV testing?
• Are our approaches to delivering HIV testing services conducive to increasing uptake?
• Are we testing the right people?
  – the right population groups
  – how big is the HIV testing gap
  – demand for client-initiated HIV testing among the right population groups
From testing to treatment

5Cs:

1. Consent
2. Confidentiality
3. Counselling
4. Correct test results
5. Connection to prevention, care and treatment

Treatment

• Combination ART consisting of 3 or more ARV drugs

• The guidelines (e.g. WHO) recommend that anyone infected with HIV should begin antiretroviral treatment as soon after diagnosis as possible

http://www.who.int/mediacentre/factsheets/fs360/en/
Treatment

• By mid-2015, 15.8 million people living with HIV were receiving ART globally

• By end of 2014, 40% of all people living with HIV were on ART

http://www.who.int/mediacentre/factsheets/fs360/en/
22 million people who need to be reached with antiretroviral therapy
Figure 3. HIV treatment coverage for adults and children, 2014

- Adults: 41%
- Children: 32%

Source: UNAIDS 2014 estimates.
3 Things To Know About HIV Treatment

HIV medicines can’t cure HIV, but they help people with HIV live longer, healthier lives.

People with HIV take a combination of HIV medicines every day. The HIV medicines prevent HIV from advancing to AIDS.

HIV medicines reduce the risk of HIV transmission. But people with HIV should still use condoms during sex.

For more information, visit: aidsinfo.nih.gov
## The treatment gap in low- and middle-income countries

<table>
<thead>
<tr>
<th>Region</th>
<th>Cases</th>
<th>% Population</th>
<th>% Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle East and North Africa</td>
<td>17,000</td>
<td>116,000</td>
<td>85%</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>158,000</td>
<td>510,000</td>
<td>75%</td>
</tr>
<tr>
<td>Asia and Pacific</td>
<td>1,100,000</td>
<td>2,400,000</td>
<td>54%</td>
</tr>
<tr>
<td>Sub-Saharan Africa</td>
<td>6,200,000</td>
<td>11,000,000</td>
<td>44%</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>380,000</td>
<td>850,000</td>
<td>32%</td>
</tr>
<tr>
<td><strong>Globally</strong></td>
<td><strong>8,000,000</strong></td>
<td><strong>14,800,000</strong></td>
<td><strong>46%</strong></td>
</tr>
</tbody>
</table>
Access to HIV treatment: a human right

- the right to health
- the right to life
- the right to non-discrimination
- the right to enjoy the benefits of scientific progress
Countdown to #HLM2016AIDS

43

Shiba Phuralatpam
Regional Coordinator APN+, Thailand

2016 High Level Meeting on Ending AIDS
One hundred reasons why ending the AIDS epidemic is important. Join the countdown to #HLM2016AIDS.
Coverage of people receiving ART - by age

- All sexes Adults (15+) estimate
- Children (0-14) estimate

Data ranges from 2010 to 2014.
• **Linkage to care**
  – Time between diagnosis and enrolment

• **Enrollement in care**

• **Retention in care**
  – Routine use of care-related services

• **Lost to follow-up**
  – Three months or more since last appointment
Linkage to HIV care

• Are we losing patients between an HIV positive diagnosis and enrolment in HIV care?

• What system do we have in place to ensure that people who are diagnosed HIV positive are effectively linked and enrolled in HIV care?
Factors influencing linkage to care after HIV diagnosis in central Poland – Preliminary results from Test and Keep in Care (TAK) project

Magdalena Ankiersztejn-Bartczak, Ewa Firlag-Burkacka, Hanna Czeszko-Paprocka, Joanna Kubicka, Aneta Cybula, Alicja Wiercińska-Drapało, Andrzej Horban and Justyna D. Kowalska
Results

Flow chart lost to care

- Counselling
  - ELISA +
    - the result not received: $N=7, 6\%$
  - WB+
    - the result not received: $N=13, 12\%$
  - Decoding
    - not agree: $N=7, 6\%$
  - Clinic
    - not come: $N=20, 18\%$

Total: $N=47, 42\%$
TEST AND TREAT – HOW DOES IT LOOK LIKE IN YOUR COUNTRY?
SESSION 2: HOW DO WE GET UNIVERSAL ACCESS?

ADVOCACY FOR UNIVERSAL ACCESS TO HIV TREATMENT

MAGDALENA ANKIERSZTEJN-BARTCZAK
You will learn:

- methods of planning advocacy
- good practice and examples
- planning advocacy work
- key elements and stakeholders
- stress transparency, accuracy and monitoring
Fast-tracking HIV treatment: Parliamentary action and policy options
AIDS activism and civil society remain crucial for the AIDS response. Activism constitutes a global public good, deserving investment commensurate with the part it plays in improving health outcomes.

Some definitions from the WHO guide...
Viral suppression

• refers to the aim of ART to maintain viral load below the level of detection of available assays, generally less than 50 copies per ml
Universal access to ART

- move to a high level of access (≥80% of the eligible population) for the most effective interventions that are:
  - equitable
  - accessible
  - affordable
  - comprehensive
  - sustainable over the long term
• How effective is this system?
• What are the specific challenges for infants/children?
UNAIDS targets: By 2020...

- 90% diagnosed
- 90% on treatment
- 90% virally suppressed
• 90% of people living with HIV will know their HIV status
• 90% of people with diagnosed HIV infections will receive sustained antiretroviral therapy
• 90% of people receiving antiretroviral therapy will have viral suppression
TREATMENT CASCADE
The HIV test–treat–retain continuum of care
Monitoring the continuum of HIV care

- HIV Continuum of Care was first described in the United States in 2011

- Utilised as a tool to monitor the quality of HIV care for people living with HIV

- The idea is to assess the extent to which viral suppression is occurring at population level and contributing to efforts to reduce further HIV transmission

Adapted from Gardner et al., 2011
Step by Step

1. Identify where, along the steps of the continuum of care, programmes fail to engage and retain PLHIV in HIV testing, care and treatment
Step by Step

2. Determine the magnitude of the losses/gaps along the continuum
Step by Step

3. Identify and analyse causes of the losses/gaps, i.e. issues and challenges related to policies, health systems, community systems and beneficiaries
WHY DO WE HAVE TO UNDERSTAND TREATMENT CASCADES?
Spectrum of engagement in HIV care

HIV testing and diagnosis

• The only way to know HIV status

• Knowledge of status is precondition for access to care and treatment
Getting and staying in medical care

- Connect to an HIV healthcare provider
- They can offer treatment and prevention counseling
- It helps to stay as healthy as possible and prevent transmitting HIV on to others
Getting on antiretroviral therapy

• Everyone diagnosed with HIV receives treatment, regardless of their CD4 cell count or viral load

• It helps people with HIV live longer, healthier lives, and has been shown to reduce sexual transmission of HIV by 96 percent
Achieving viral suppression

• A very low level of HIV in blood
• There is still some HIV in your body
The HIV care continuum shows where improvements are needed. In the US, 1.2 million people are living with HIV. Of those:

- **Diagnosed:** 86%
- **Engaged in Care:** 40%
- **Prescribed ART**: 37%
- **Virally Suppressed:** 30%

**Sources:** CDC National HIV Surveillance System and Medical Monitoring Project, 2011.
Achieving Viral Suppression: More People with HIV Need to be in Medical Care

- 30% Virally suppressed
- 70% Not virally suppressed
- 66% Diagnosed but not in care
- 4% In care but not on ART*
- 10% On ART but not virally suppressed
- 20% Not diagnosed

Session 3:

Treatment Cascade of HIV and Care services

Kiromiddin Gulov
Objectives of the session

1. What is the treatment cascade?
   - definition
   - key components of the continuum of care
   - flowchart of services and barriers

2. How to use treatment cascade to monitor effectiveness of linking people to care?
Where are we now?

34 million people living with HIV
BUT:

✓ Only about 50% are aware of their HIV status
✓ 15 million people are now in need of treatment
✓ More than 8 million are treated in presently
✓ Every year more than 1 million starts treatment

BUT:

✓ While one person starts treatment, 2 new are infected
What is the HIV treatment cascade?

The HIV treatment cascade is a system to monitor the number of individuals living with HIV who are actually receiving medical care and the treatment they need.
What is the treatment cascade?

The treatment cascade is a way to show, in visual form, the numbers of individuals living with a disease who are actually receiving the full benefits of the medical care and treatment they need.
Why HIV treatment cascade?
HIV treatment cascade

was developed to recognize the various steps necessary for everyone who needs HIV care to remain engaged in it—from an initial stage of getting tested for HIV to being able to suppress the virus through treatment.
HIV treatment cascade

From the definition of cases to prevent HIV transmission

✓ Search for those who are at risk
✓ Offer them an HIV test
✓ Provision of medical care
✓ Initiation of antiretroviral therapy
✓ Engage them in treatment
✓ Monitoring to maintain a reduced viral load
Key Strategies for Closing Gaps in the HIV Treatment Cascade

- **HIV-positive**
  - **HIV TESTING**
    - Improved HIV rapid tests (oral fluids)
    - Home and community-based counseling and testing
    - HIV testing by community and lay health workers
    - Provider-initiated HIV testing and counseling and integration with primary care
    - Targeted mobile testing for hard-to-reach groups at schools, taxi ranks, homes, workplaces

- **HIV CARE (Pre-ART)**
  - **PRE-ART REGULAR CLINIC CARE**
    - Strong referral and linkage to care
    - Free HIV care and treatment
    - Point-of-care CD4 count testing
    - Rapid diagnostic and treatment of TB
    - Regular visits, TD and ETP prophylaxis
    - Support tools (mobile messaging, patient-held appointment cards)

- **ART eligible**
  - **EARLY ART RETENTION IN CARE**
    - Timely and/or earlier ART initiation
    - Adherent adherence support
    - Decentralization, primary care integration
    - Task shifting
    - Non-nucleoside/related daily fixed-dose combinations
    - Viral load monitoring
    - Out of clinic care

- **ART**
  - **ADHERENCE AND VIRAL SUPPRESSION**
    - Simplified clinical and refill schedules
    - Community-based, peer-supported ART
    - Viral load–triggered adherence support
    - Reliable drug supply, multiple month refills
    - Defaultor tracing

InfoGraf: AVAC 2013 priority of articulating and funding a retention science agenda that narrows the gaps in the treatment cascade
Flowchart of services and barriers

Global Estimates the Gap to reach

90% of all living with HIV will know their HIV status

90% of all living with HIV will receive antiretroviral therapy

90% of all receiving antiretroviral therapy will have viral suppression
HIV Treatment cascades and care

- People living with HIV
- HIV diagnosis
- Linkage and enrolment to care
- ART
- Viral suppression
- Population level impact

Network of Low HIV Prevalence Countries in Central and South East Europe
Loss to follow-up along the HIV care cascade

- People living with HIV: 100%
- Aware of status (Testing): 80%
- Linked to care: 55%
- Retained in care: 35%
- On ART: 27%
- VS: 23%
Treatment cascades examples in HIV services
Example 2

Any prescribing health care provider can deliver PrEP care.
What does the HIV Care Continuum show?

HIV Care Continuum Shows Where Improvements are Needed

In the US, 1.2 million people are living with HIV. Of those:

- **Diagnosed**: 86%
- **Engaged in Care**: 40%
- **Prescribed ART**: 37%
- **Virally Suppressed**: 30%

Sources: CDC National HIV Surveillance System and Medical Monitoring Project, 2011.

*Antiretroviral therapy*
What can you do?

Key questions to ask yourself and your organization are:

- What can you do in the treatment cascade with HIV data?
- What additional services could your organization provide to improve engagement in one or more steps of the cascade?
- Can you learn from what other agencies have done? Would it work in your region?
- What initiatives or partnerships could you develop to connect people living with HIV to your services? What initiatives or partnerships could you develop to connect your clients with other relevant services in your community?
- How can you evaluate whether your clients are entering the next step of the cascade?
Implementation barriers
Impact of Social Determinants of Health on the Care Cascade

Every step is affected by
- Stigma and discrimination
- Racism, homophobia
- Poverty
- Risk of criminalization
- High incarceration rates and difficulty with transition
- Housing instability
- Employment instability
- Co-existing conditions: substance use, mental health disorders
Increasing Diagnosis: Challenges

• Testing must be free and accessible
• Stigma deters testing
  – Fear of loss of job, loss of insurance or increased premiums,
  – Pre-existing conditions
  – Rejection by family and friends, effect on children
  – Domestic violence
• Mixed messages: high impact (targeted) testing vs “know your status”; funding streams dictate testing availability
• Home HIV testing: not inexpensive; how to track numbers and linkage?
• Fourth generation Ag-Ab testing will bring about increased need for surveillance and services for acute infection
Linkage and Retention: barriers

• Barriers include eligibility requirements for indigent populations
  – Identity, income, residency, HIV status
• Transportation, child care
• Clinics only open when patients are at work; taking off work costs money, risks job
• Co-morbidities require seeing different doctors
• Frequent doctor visits = disclosure
• Co-pays
• Other life priorities, lack of education about why care is important
• Depression, substance use mental health disorders
ART and Viral Suppression: Challenges

- Fear of toxicity
- Cost: high co-pays, high deductibles,
- Medicare donut hole
- Meds = disclosure
- Drugs for co-morbidities
- Potential drug interactions
- Lack of education about benefits
How to use treatment cascade as a powerful tool to monitor effectiveness of work linking people to care?
Use treatment cascade as a powerful tool to monitor effectiveness of work linking people to care
HIV Treatment
Cascade video tool

https://www.youtube.com/watch?v=Ggc0u_aI-co
Recourses

http://www.cdc.gov/
http://www.amfar.org/
http://www.catie.ca/
www.korbelreport.wordpress.com/2013/09/03/understanding-hivaids-the-treatment-cascade/
http://www.capitalcityaidsnetwork.org/
http://www.searo.who.int/
Thank you and
Session 4:

Conceptual framework of metrics for monitoring the cascade of HIV testing, care and treatment services

Kiromiddin Gulov
Objectives of the session 4

- how to identify and analyze gaps and/or leaks in the HIV care cascade
- how to monitor HIV services throughout the continuum of care
- how to get from diagnosis to viral suppression
- how to focus indicators on access to services retention within services
- metrics for monitoring the cascade of HIV testing, care and treatment service
Why do we need Monitoring?
Why we need monitoring in HIV Treatment Cascade?

Monitoring and evaluation helps us develop the needed frameworks to track the entire cascade of HIV care services, focusing on linkages and retention to care.
The HIV Care Continuum or “Gardner Cascade”

Was created by Edward Gardner and consists on the following steps:

• HIV diagnostics
• Linkage to care
• Staying (retention) in care
• Getting ARV to viral suppressions
What is the HIV care continuum?

is a model that outlines the sequential steps or stages of HIV medical care that people living with HIV go through from initial diagnosis to achieving the goal of viral suppression (a very low level of HIV in the body), and shows the proportion of individuals living with HIV who are engaged at each stage.
Step 1: HIV diagnostics

Sources of Data:

1. Total number of persons living with HIV in the country:

2. Number of persons diagnosed with HIV in the country:
Step 2: Linkage to Care

Sources of Data:

- The % in HIV care within 1 year after HIV diagnosis
- The % in care within 3 months of new HIV diagnosis
- The % receiving only passive referrals to care linked to HIV care within 6 months
Step 3: Staying(Retention) in care

Sources of Data:

• Three population-based studies from the country: the % of fail to receive HIV care during any year
• Multiple cohort studies: the % of HIV-infected individuals are lost to follow-up
But it is important to know.

ENTRY INTO/RETENTION IN CARE

- Systematic monitoring of successful entry into HIV care is recommended for all individuals diagnosed with HIV.
- Systematic monitoring of retention in HIV care is recommended for all patients.
- Brief, strengths-based case management for individuals with a new HIV diagnosis is recommended.
- Intensive outreach for individuals not engaged in medical care within 6 months of a new HIV diagnosis may be considered.
- Use of peer or paraprofessional patient navigators may be considered.
Step 4: Getting ARV to viral suppressions

Sources of Data:

• Persons living HIV should be offered ART regardless of CD4 cell count

• Therefore the number of persons “in need” of ART is the same as the number of persons living with HIV, whether diagnosed or undiagnosed

• % of HIV-infected persons in care were eligible for ART depend of the country (CD4 cell count <350 cells/µL)

• % of individuals in care that required ART

• % declined or failed to initiate therapy
The "Gardner Cascade"

Gardner E, et al. CID 2011:52 (Mar 15)
CDC Treatment Cascade (July, 2015)

- Diagnosed: 82%
- Linked to Care: 66%
- Retained in Care: 37%
- Prescribed ART: 33%
- Virally Suppressed: 25%
HIV Care Cascade in Georgia, 2012

Diagnosed 1,970 with HIV disease
Estimated 2,375 individuals with HIV disease (1,970 + 20%)
Linked 1,026 (51%) to care within 3 months of HIV diagnosis
How to focus indicators on access to Services, retention within services?

The Continuum of Engagement in Care

- Not in Care
  - Unaware of HIV status (not tested or never received)
- In and out to HIV care or infrequent user
- Fully engaged in HIV primary medical care
- Fully engaged

- Aware of HIV status (not referred to care: don’t keep referral)
- Maybe receiving other medical care not HIV care
- Entered HIV primary medical care but dropped out (lost to follow up)
What is the Metrics?

“We need to look at metrics? I never learned the metric system!”
Metrics

Provides measuring units to depict values, thresholds, constraints, scope, duration, maximums and minimums, averages, etc.
Using the Metrics

- Improve performance throughout the cascade of HIV services.
- Transitions between services in a timely manner.
- Pre-ART care and lifelong ART, as well as access to and retention within services.
- We can assist country programmes in prioritizing key indicators to assess.
To better evaluate performance along the cascade of HIV testing, care and treatment services we have to find the answers for the questions, such as:

IOM – Institute of Medicine
• What proportion of the target population is covered by HIV testing programmes?
• How many PLHIV are aware of their status (tested and diagnosed)?
• How many of the PLHIV who know their status are enrolled in care?
• How many PLHIV are retained in care?
• Are all eligible PLHIV receiving ART?
• How many of the PLHIV on ART are virologically suppressed?
Recourses

http://www.cdc.gov/
http://www.amfar.org/
http://www.catie.ca/
www.korbelreport.wordpress.com/2013/09/03/understanding-hiv-aids-the-treatment-cascade
http://www.capitalcityaidsnetwork.org/
http://www.searo.who.int/
Thank you and
Session 5:

HIV test–treat–retain and cross-sectional cascade – data requirements and analysis

Kiromiddin Gulov
Objectives

• Participants will learn how to use HIV test–treat–retain and cumulative cross-sectional cascade

• Learn about data requirements to construction of the cascade of HIV services for the cohort of newly diagnosed people living with HIV

• Learn to develop HIV cascade indicators
What is this HIV test–treat–retain?
HIV test–treat–retain

shows, in visual form, the number of PLHIV who actually receive the full benefits of HIV testing, care and treatment at each step along the continuum of care for PLHIV
HIV test–treat–retain

Is used identify where, along the steps of the continuum of care, programs fail to engage and retain PLHIV in HIV testing, care and treatment. Also to determine the magnitude of the losses/gaps along the continuum, identify and analyze causes of the losses/gaps, issues and challenges related to policies, health systems, community systems and beneficiaries.
How to carry out HIV test–treat–retain cascade analysis?
The following implementation process is proposed:

1. establishment of steering committee
2. establishment of technical working group (see terms of reference in and recruitment of a national consultant if needed)
3. collection of data to design the HIV test–treat–retain cascade; design the cascade and identifying the main gaps along the steps of the cascade
4. determination further needs for quantitative and qualitative data that can explain the causes for the gaps
The following implementation process is proposed: (2)

5. identification and selection of key stakeholders for interviews/discussion and of sites to be visited to fill the information gaps
6. development of tools for collection and compilation of data
7. collection of relevant data
8. data analysis: quantification and description of the PLHIV engagement along the HIV test–treat–retain cascade; and interpretation and summary of findings related to the losses/gaps in the treatment cascade
9. presentation and discussion of the main findings with the steering committee
The following implementation process is proposed: (3)

10. national stakeholders meeting:
   • presentation, discussion and validation of the assessment findings;
   • development of recommendations for action to be taken to accelerate HIV testing and treatment scale-up

11. development of report (see Annex 2) summarizing:
   • assessment process and implementation
   • main findings and discussion
   • conclusions and recommendations

12. steering committee meeting to agree on planning process for implementation of recommendations
What is this cumulative cross-sectional cascade?

The cumulative cross-sectional cascade is a view of programme progress to date, and identifies the major areas of leakage across the cascade with a bigger picture.

CSC can be shown separately for each key population, and/or divide them by age and gender when data are available. Data includes information on all persons infected living with HIV who are alive at a specific point in time.
Data requirements for construction of the cumulative cross-sectional cascade of HIV services for people living with HIV
Indicator 1: HIV cascade indicators

1.1 Percentage of people living with HIV who are diagnosed
1.2 Ratio of patients newly enrolled in care to people who test positive for HIV
1.3 Percentage of adults and children with HIV enrolled in HIV care
1.4 Percentage of adults and children with HIV retained in pre-ART care
1.5 Percentage of adults and children currently receiving antiretroviral therapy
1.6 Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy
1.7 Percentage of people on antiretroviral therapy who are virologically suppressed
Indicator 2: TB/HIV cascade indicators

2.1 Percentage of tuberculosis patients with known HIV status
Indicator 3: TPMTCT cascade indicators

3.1 Percentage of pregnant women with known HIV status
3.2 Percentage of HIV-positive pregnant women who received antiretroviral drugs to reduce the risk of mother-to-child transmission
3.3 Percentage of infants born to HIV-infected women provided with antiretroviral prophylaxis to reduce the risk of early mother-to-child transmission
3.4 Percentage of tested HIV-exposed infants who are HIV-positive
### Drawing the cascade: information required

<table>
<thead>
<tr>
<th>Information required</th>
<th>Value (add values in this column)</th>
<th>Operational definition</th>
<th>Data sources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated number of PLHIV</td>
<td></td>
<td>Most recent country/ UNAIDS estimate</td>
<td>Country and UNAIDS published estimates</td>
</tr>
<tr>
<td>Number/percentage of PLHIV who know their HIV status</td>
<td></td>
<td>Definition to be agreed upon at the start of the cascade analysis&lt;sup&gt;a&lt;/sup&gt;</td>
<td>HIV case registry, death registry</td>
</tr>
<tr>
<td>Number/percentage of PLHIV who have ever been enrolled in care</td>
<td></td>
<td>Definition to be agreed upon at the start of the cascade analysis&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Health facility records and reports</td>
</tr>
<tr>
<td>Number of PLHIV currently in care (pre- ART and ART)</td>
<td></td>
<td>Definition to be agreed upon at the start of the cascade analysis&lt;sup&gt;a&lt;/sup&gt;</td>
<td>ART site records/registers</td>
</tr>
<tr>
<td>Number of PLHIV on ART</td>
<td></td>
<td>Definition used in GARPR</td>
<td>GARPR, ART site records/registers</td>
</tr>
<tr>
<td>Number of PLHIV with suppressed VL (early warning indicator)</td>
<td></td>
<td>Definition used in WHO global strategy for the surveillance and monitoring of HIV drug resistance 2012</td>
<td>Patient records/registers</td>
</tr>
</tbody>
</table>
Program Indicator

✓ Percentage of key populations who received an HIV test and know their results
✓ Percentage of individuals aged >15 years newly enrolled in care whose sexual partner was tested for HIV
✓ Percentage of HIV-positive pregnant women attending antenatal care services whose male partner was tested for HIV to reduce the risk of early or late mother-to-child transmission
✓ Percentage of infants born to HIV-positive women receiving a virological test for HIV within 2 months of birth
✓ CD4 at time of enrolment in HIV care
✓ Percentage of adults and children starting antiretroviral therapy within 30 days of eligibility determination
✓ Percentage of patients who pick up antiviral drugs no more than two days late at the first pick-up after the baseline pick-up
✓ Percentage of months in the reporting period in which there were no antiretroviral drug stock-outs
Recommendations

• Base cascades on real data: build systems to collect
• Need to coordinate with databases outside of public health: Medicare/Medicaid, Vital Statistics, pharmacy databases
• Need standard definition of each indicator
• Need resources and guidance to assist local jurisdictions in creating their own care cascades
  – Use cascade to monitor specific targeted populations over time: race/ethnicity, age, risk, gender
  – Use local outcomes to build cascades of geographic areas: states, local jurisdictions, clinics, zip codes, census tracts
  – Use cascade to educate and advocate
FUTURE RESEARCH RECOMMENDATIONS:
ENTRY INTO/RETENTION IN CARE

- Operational research to optimize / standardize measurement
- Comparative evaluation of monitoring strategies in conjunction with intervention studies
- Comparison of retention measures with one another
- Comparative evaluation of case management in community settings
- Comparative evaluation and cost effectiveness for best practices for implementation of case management interventions
- Comparative evaluation of other intervention approaches: peer support, patient navigation, health literacy, life skills
- Prospective evaluation of pay for performance interventions
Recourses

http://www.cdc.gov/
http://www.amfar.org/
http://www.catie.ca/
www.korbelreport.wordpress.com/2013/09/03/understanding-
 hivaids-the-treatment-cascade/
http://www.capitalcityaidsnetwork.org/
http://www.searo.who.int/
Thank you and
How to use national/regional data to calculate the total number of people living with HIV (PLHIV)?

ITACA Training, Warsaw
14 May 2016
HIV in Europe

• HIV has changed from a lethal infection into a chronic illness needing lifelong treatment.

• HIV remains a major public health problem.

• Number of people diagnosed with HIV as well as those treated for their infection continue to increase.

• Number of people diagnosed is not the same as total number of people infected.
What are the current trends in the epidemic?

- How many people are living with HIV?
- How many are newly infected each year?
- How many are unaware of their infection?
- What is the corresponding need for treatment?

90% diagnosed
90% on treatment
90% virally suppressed
• Globally, key data on HIV incidence is derived from UNAIDS Spectrum (requires many data inputs not available in Europe)

• EU countries have surveillance systems for notification of HIV cases.

• ECDC project adapted/developed and evaluated two methods which only need routinely collected surveillance data on HIV and AIDS (1) to estimate:
  • number of people living with HIV
  • annual number of new infections
  • time between infection and diagnosis
  • size of undiagnosed population

(1)Sweeting 2005; Birrell 2013; Supervie 2014; Lodwick & Nakagawa 2015; Van Sighem 2015
ECDC HIV modelling tool

- Launch on ECDC website
- Desktop application (downloadable/no registration)
Incidence Method – underlying model

Primary HIV infection

Undiagnosed

Diagnosed

\[ I(t) \]

\[ P(t) \]

\[ q_P \]

\[ U_1(t) \rightarrow U_2(t) \rightarrow U_3(t) \rightarrow U_4(t) \rightarrow U_5(t) \rightarrow M^u(t) \]

\[ D_1(t) \rightarrow D_2(t) \rightarrow D_3(t) \rightarrow D_4(t) \rightarrow D_5(t) \rightarrow M^d(t) \]
London Method

200 person-years observed with CD4 count <200

Lodwick et al. EACS 2009

AIDS rate in people with CD4 count <200 is ~0.25 per year

50 people expected to develop AIDS over a 1 year period

200 person-years undiagnosed with CD4 count <200

50 HIV/AIDS diagnoses in people with CD4 count <200
Data requirements from national surveillance systems

<table>
<thead>
<tr>
<th>Incidence Method</th>
<th>London Method</th>
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Selection of the methods

- **CD4 count available at HIV diagnosis?**
  - yes
    - **multiple years of data?**
      - yes
        - Indidence Method + London Method
      - no
        - London Method
  - no
    - multiple years of data?
      - yes
        - Incidence Method
      - no
        - Tool cannot be used.
Preparation of datasets

- HIV
  - all HIV diagnoses

- AIDS
  - all AIDS diagnoses

- HIVAIDS
  - HIV and AIDS

- HIV_CD4_1
  - CD4 ≥ 500

- HIV_CD4_2
  - CD4 350-499

- HIV_CD4_3
  - CD4 200-349

- HIV_CD4_4
  - CD4 < 200

- HIV, no AIDS

- no CD4 available
EPIDEMIOLOGICAL OVERVIEW OF HIV IN EUROPE
142 000 people newly diagnosed with HIV in the WHO European Region in 2014

Rate per 100 000 population
West 6.4
Centre 2.6
East 43.2

Rate of New HIV diagnoses, by year of diagnosis and geographical area, 2005-2014

Data from Bosnia and Herzegovina, Turkmenistan and Uzbekistan excluded due to inconsistent reporting during the period.
New HIV diagnoses, by year of diagnosis and transmission category, East, 2005-2014

- Men who have sex with men
- Injecting drug use
- Heterosexual contact
- Mother-to-child
- Haemophiliac/transfusion on recipient
Rate of New AIDS diagnoses, by year of diagnosis and geographical area, 2005-2014

Data from Bosnia and Herzegovina, Russia, San Marino, Sweden, Turkmenistan, Uzbekistan excluded due to inconsistent reporting during the period.
New AIDS diagnoses, by year of diagnosis and transmission category, East, 2005-2014
New HIV diagnoses, by transmission mode and year of diagnosis, Albania, 1993-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Austria, 1980-2015
New HIV diagnosis, by transmission mode and year of diagnosis, Bulgaria, 1986-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Bosnia Herzegovina, 1986-2013
New HIV diagnosis, by transmission mode and year of diagnosis, Cyprus, 1986-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Croatia, 1985-2013
New HIV diagnosis, by transmission mode and year of diagnosis, Czech Republic, 1985-2015
New HIV diagnosis, by transmission mode and year of diagnosis, Greece, 1981-2014
New HIV diagnoses, by transmission mode and year of diagnosis, Macedonia, 1993-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Montenegro, 1989-2014
New HIV diagnosis, by transmission mode and year of diagnosis,
Poland, 1984-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Romania, 1985-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Serbia, 1984-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Slovenia, 1985-2014
New HIV diagnosis, by transmission mode and year of diagnosis, Turkey, 1985-2014
New HIV diagnosis, by transmission mode and year of diagnosis, UK, 1981-2013
ECDC TESSY HIV DATASET
Data availability to calculate undiagnosed fraction (TESSy data/ECDC tool)

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Data availability ≠ Data completeness

- **HIV/AIDS cases**
  - Underreporting. Not reported to national systems
  - Delayed reporting. Reported later than year of diagnosis

- **CD4 count data**
  - Not reported together with HIV or AIDS case
    - Have to rely on assumptions

- **Country of origin**
  - Emigration pattern
  - Different diagnosis probabilities
CD4 Count Completeness, participating countries, 2014
## Number of tests, participating countries, 2005-2014

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COUNTRY EXAMPLES AND USE OF THE TOOL
Greece

- **Available data:** Database file-October 31st 2015 (14523 obs. but 266 obs. excluded – very likely to be duplicates)
- **Surveillance data:**
  - HIV diagnoses: 1981 - 2014
  - AIDS diagnoses: 1981 - 2014
- **Groups:** MSM, IDUs, HET, HET_SUB (sub-Saharan Africa), Perinatal/ Transfusion-related and Unknown
- **CD4 count at HIV diagnosis:** 1983 - 2014
- **Optional data:** Deaths 1983 - 2014
### Transmission group

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<th>Cum.</th>
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### CD4 count availability over time

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<td>1997-2005</td>
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## CD4 count by categories

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100.00  | 100.00| 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |
Understanding your HIV epidemic

- **Changes in probability of HIV diagnosis**
  Time intervals - defining HIV epidemic/testing patterns
  - **Start - 1991** (First period): CD4 availability <50%
  - **1992 - 1996** (Establishment of KEELPNO): CD4 availability <50%
  - **1997 - 2005** (Start of cART and, 2 years later, start of HIV reporting; Preparation for Olympic games – spending on public health rises):
    - CD4 availability >50%
  - **2006 - 2010** (Post-Olympic era – Start of economic crisis):
    - CD4 availability <50%
  - **2011 - 2014** (Outbreak of HIV among IDUs in crisis years)
    - CD4 availability >50%
### Total PLHIV

#### RISK GROUP: ALL

#### A. HIV diagnoses, total

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### Total new HIV infections IDU

#### RISK GROUP: Group 2

**A. HIV infections per year**

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RISK GROUP: Group 1

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NextPageSoft
Daniel Lewandowski
THANK YOU
SESSION 7:

ENGAGEMENT OF COMMUNITY AND CSO ON TREATMENT CASCADE

MAGDALENA ANKIERSZTEJN-BARTCZAK
A COMMUNITY-BASED SERVICE DELIVERY MODEL TO EXPAND HIV PREVENTION AND TREATMENT

Community systems are essential in increasing the access and uptake of HIV testing and treatment.
The HIV treatment cascade - patching the leaks to improve HIV prevention

By James Wilton and Logan Broeckaert
Key questions to ask yourself and your organization are:

• How can your organization better engage people living with HIV in the treatment cascade?
Community mobilization

• reevaluated to better meet the needs of a new generation
• focus on better use of the tools
Refining Your Role as an HIV/AIDS Advocate:

Your main objectives:

1. Strive to become a source of information for law and policy makers

2. Develop one-to-one relationships with the people you elect to represent

3. Strive for a degree of professionalism and sophistication that sets you apart from the crowd
Key questions to ask yourself and your organization are:

- What additional services could your organization provide to improve engagement in one or more steps of the cascade?
- Can you learn from what other agencies have done?
- Would it work in your region?
Key questions to ask yourself and your organization are:

- What initiatives or partnerships could you develop to connect people living with HIV to your services?
- What initiatives or partnerships could you develop to connect your clients with other relevant services in your community?
Key questions to ask yourself and your organization are:

• How can you evaluate whether your clients are entering the next step of the cascade?
Funding effective advocacy

• needs and deserves strategic financial support
• have specified a variety of issues
• a clear analysis of how a given change by a decision-maker may affect HIV service access
• a realistic analysis of how this might be achieved
The IFRC and GNP+ are promoting the seek-test-treat-succeed model
SEEK:

- Mobilize and engage affected communities in the HIV response, facilitate (early) access to HIV testing and counselling; improve treatment and rights literacy; support health-seeking behavior
TEST:

- Optimize the treatment cascade by bringing HIV testing and counselling services closer to people, increase demand for it and improve the quality of these services, i.e. accessibility, acceptability, affordability, coverage and linkages
TREAT:

- Facilitate early ART initiation at primary level facilities and shift antiretroviral therapy-related tasks, such as drug dispensing, treatment adherence and helping people living with HIV to navigate through the health system, to community health workers and volunteers.
SUCCEED:

• empowering communities to provide support for retention and re-engagement into care
• integrating HIV testing and counselling and antiretroviral therapy services with other health and social services
SUCCEED:

• development issues and addressing structural barriers through optimizing positive health

• dignity and prevention throughout the treatment cascade
How contribute to overcoming HIV service-related barriers by:

- linking services
- bringing them closer to home
- integrating them to reduce loss to follow-up
How contribute to overcoming HIV service-related barriers by:

• expanding the work force to cope with increasing demand and greater numbers of people eligible for antiretroviral therapy

• reaching out to those hardest to reach and engaging them to remain in prevention, care and treatment
Optimizing the treatment cascade through a mix of community-based approaches and services
SEEK
- Community mobilization and engagement
- Demand creation
- Facilitation of early HTC access
- Targeted treatment and rights literacy
- Support health-seeking behaviour

TEST
- Provide community-based HTC
- Link HTC through partnerships and integrated referral systems
- Integrate HTC with other services
- Support facility-based HTC

TREAT
- Facilitate an early ART initiation
- Maintain ART
- Monitor PLHIV on ART between visits
- Refer people on ART to other services
- Support adherence
- Help PLHIV to navigate the system
- Home-based care and support

SUCCEED
- Take on new tasks within the healthcare team
- Link HIV with other health services
- Supporting the decentralization of HIV services
- Support retention and re-engagement into care

ART: Antiretroviral therapy – HTC: HIV testing and counselling – PLHIV: People living with HIV
1. The community-based services of community health volunteers jointly with networks of people living with HIV are formally recognized, supported and resourced for their invaluable contribution to expanding access to prevention, treatment and care services.
2. More research is undertaken on how community models can support key affected populations
3. Further investigation is carried out in regard to the costs of these models to inform and advocate for national budgets to include those costs.
GOOD PRACTICES