What we need to know:
The role of HIV surveillance in ending the AIDS epidemic as a public health threat

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2. 3rd Global HIV Surveillance meeting – progress since previous meetings

3. What answers do we need from surveillance

4. Objectives and agenda of the meeting

Partner Comments: why we need surveillance data
1. NEW PARADIGM: “Fast-Track. Ending the AIDS epidemic by 2030”
Number of people living with HIV, new HIV infections, and AIDS-related deaths, 1990–2013
Fast-Track: Rapid action = big benefits
Decline in new adult HIV infections
Fast-Track: Rapid action = big benefits
Decline in AIDS-related deaths
2. Progress since previous meetings
Key HIV Surveillance Data Points and the Course of HIV Infection, the Future

HIV infection

- Behavioral and STI
  - Population-based Surveys*
  - Most at risk group surveys
  - STI surveillance

Incidence
- Report early infant diagnosis
- RITAs applied to surveys

Prevalence, behaviors, morbidity
- HIV case reporting (or advanced HIV case reporting)
- ANC sentinel surveillance*
- Population-based Surveys with HIV testing*
- Most at risk group sero-surveys
- ART outcomes
- HIV drug resistance

Advanced HIV

Death

Mortality
- Vital registration and VA
- Surveys with VA

* Epidemics where infection is driven by the general population
### Recent Infections

<table>
<thead>
<tr>
<th>2004 Recommendations</th>
<th>Progress by 2009</th>
<th>Progress by 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational research of assays</td>
<td>Operational research with BED -- overestimation is problem</td>
<td>Multiple newer assays have been assessed including LAg</td>
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<td></td>
<td>Adjustment formula developed</td>
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<tr>
<td>Build capacity to select appropriate populations and interpret results</td>
<td>Multiple trainings on use of BED</td>
<td>UNAIDS/WHO technical update published February 2015</td>
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<td>International Working Group formed</td>
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<td></td>
<td>Multiple assays being considered</td>
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<td></td>
<td>Still don’t have ideal method</td>
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## National Population Based Surveys with HIV testing – 1

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<th>2004 Recommendations</th>
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<tr>
<td>• Use these surveys to fill gaps in HIV surveillance data</td>
<td>• Since 2000, 25 countries in Africa conducted these surveys</td>
<td>• Between 2000 and 2014, 39 countries in sub-Saharan Africa and 8 in other regions have conducted these surveys</td>
</tr>
<tr>
<td></td>
<td>• Data used to fill gaps and improve estimation process</td>
<td>• Expanding size and biological assays for more information with greater granularity</td>
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</table>
Countries with at least one national population based survey with HIV testing, 2000–2014

Viet Nam (Hai Phong province only)
Indonesia (Papua province only)
# National Population Based Surveys with HIV testing – 2

<table>
<thead>
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<th>2004 Recommendations</th>
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<tbody>
<tr>
<td>• Do not conduct on a regular basis but could do every five years.</td>
<td>• Some countries conducted more than one survey</td>
<td>• 2, 9, and 23 countries have conducted 4, 3 and 2 surveys, respectively.</td>
</tr>
<tr>
<td>• Do only in countries with relatively high HIV prevalence rates</td>
<td>• Countries with HIV prevalence &lt;5% conducted surveys</td>
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<tr>
<td>• Have protocols reviewed by a national ethical review board.</td>
<td>• Surveys reviewed by ethics board, new ethical challenges on returning HIV test results</td>
<td>• Recent surveys have asked participants about HIV and ART status, and included incidence assay algorithm, viral load test <strong>G July ‘15</strong></td>
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<tr>
<td></td>
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<td>• Ethical consensus that HIV test results be returned <strong>G ‘13</strong></td>
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Countries in Africa that have conducted multiple national population based surveys with HIV testing since 2000
## Use of PMTCT and VCT data – 1

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<tr>
<td>• Evaluate the utility of VCT data for surveillance and standardize protocols for analysis</td>
<td>• Several evaluations of PMTCT and ANC sentinel surveillance data but problem lies in quality of PMTCT data</td>
<td>• New emphasis on using routinely available data (e.g. new HIV diagnoses) – for surveillance and modelling G ‘13</td>
</tr>
<tr>
<td>• Expand use of PMTCT service data to complement ANC based surveillance</td>
<td></td>
<td>• Several assessments to compare HIV prevalence in ANC to HIV prevalence in PMTCT, showing issues with diagnostics, surveillance algorithms and data quality G ‘13</td>
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Use of PMTCT and VCT data – 2

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<td>• Develop longitudinal record keeping be developed for better linkages to care</td>
<td>• Longitudinal record keeping developed in some clinics</td>
<td>• Longitudinal data: Will need to build electronic systems: large number of diagnoses, clinical status over time, &amp; unique identifiers</td>
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<td></td>
<td>• Service data still problematic for surveillance use</td>
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## Linking Biological and Behavioral data

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<td>• Ensure surveillance can contribute to understanding of epidemic dynamics</td>
<td>• Greater linkage of behaviors to HIV status through increased population based surveys and MARP surveys with HIV testing</td>
<td>• Consensus that household surveys and IBBS collect both behavioural data, and HIV and virological status</td>
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<tr>
<td>• Encourage data linkage for triangulation and integrated analysis</td>
<td>• Several countries have done triangulation and more are planned</td>
<td>• Only few countries have done triangulation</td>
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<tr>
<td></td>
<td>• Data use still limited</td>
<td>• Model-based evaluations of incidence reduction done in several countries, e.g. India; WB-coordinated project in 4 countries; planned in 5 countries</td>
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HIV/AIDS reporting and measuring impact of ART – 1

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<tr>
<td>• Develop one AIDS case definition</td>
<td>• One HIV case definition developed</td>
<td>• New interest in making use of HIV diagnoses data for surveillance – in all epidemic settings (e.g. Brazil moved from AIDS surveillance to HIV surveillance). Pilots conducted in Haiti, Senegal, Ethiopia, Kenya. Modeling of incidence based on case reports.</td>
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<tr>
<td>• Improve AIDS case reporting system</td>
<td>• Little HIV, advanced HIV or AIDS reporting done</td>
<td></td>
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<tr>
<td>• Expand existing TB surveillance system to capture data on HIV infection</td>
<td>• TB surveillance captures HIV status in some countries</td>
<td>• Increased number of TB/HIV surveys – programmatic data insufficiently captured G ‘15</td>
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## HIV/AIDS reporting and measuring impact of ART – 2

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<td>• Capture data from individual patient records at point of entry into care with determination of outcome</td>
<td>• ART outcomes being assessed using patient records in some facilities</td>
<td>• Much new research work on ART outcomes – insight re mortality among LTFU</td>
</tr>
<tr>
<td>• Improve overall and HIV-specific national-level mortality data in high-burden countries</td>
<td>• Better tools to measure causes of death by verbal autopsy but little improvement in overall mortality systems (e.g. vital statistics)</td>
<td>• Improved verbal autopsy tools for COD but only few national surveys (SAVVY) or sample systems – Strong movement for improving civil registration and vital statistics G ‘14</td>
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3. Consolidated Strategic Information

What answers do we need from surveillance?
Consolidating strategic information – agree on measures, data and how to use it

1. Consolidated strategic information guide – agree measures
   – Know your epidemic, HIV care cascade, Evaluate Impact: Incidence, Mortality
   – Clear results framework and cascade of measures

2. Global Surveillance Agenda – data
   – Granular HIV prev., outreach/KP, case reporting, Impact: incidence and mortality
   – Guidance on patient and case reporting

3. Impact reviews – use data
   – Global, National, Community programs use real data
   – Guidance on impact reviews and prioritisation
Why consolidation?

- TB/HIV M&E guide
- HTC M&E guide
- WHO, 2011 PSM M&E guide
- WHO, 2012 Drug resistance Surveillance, M&E
- WHO, 2013 PWID Target setting guide
- UNAIDS/WHO/UNICEF, 2012 GARPR core indicators
- WHO/UNAIDS, 2013 HIV surveillance bundle
- WHO/UNAIDS, 2010 Estimating the size of populations most at risk to HIV
- WHO, 2010 Health Systems Monitoring
- ART M&E guide
- PMTCT 2012 Impact measurement
- PMTCT 2010 IATT M&E Guide
- GFATM, 2011 M&E Toolkit
- PEPFAR, 2013 MER Guide
Consolidated Strategic Information Guidance: agreed cascade of strategic information

10 Global Indicators

- People with HIV: Number and % of people living with HIV (PLHIV)
- Domestic finance: % of HIV response financed domestically
- Prevention by key populations: % condom use among key populations or needles per PWID
- Knowing HIV status: % of PLHIV who have been diagnosed
- Linkage to care: Number and % in HIV care (including ART)
- Currently on ART: % on ART
- ART retention: % retained and surviving on ART
- Viral suppression: % on ART virally suppressed
- HIV deaths: Number and ratio of HIV-related deaths
- New infections: Number and % of new HIV infections
2. Global Surveillance Agenda – data

1. HIV prevalence data: Granular and Disaggregated (and costing data)

2. Key Population and Outreach

3. Case Reporting
   - Patient, Testing, PMTCT
   - Individual and linked

4. Impact: Mortality and Incidence
3. Next steps – using the cascade of data

1. **Dissemination of consolidated strategic information**
   - Surveillance meeting: global and regional sessions
   - Afro regional meeting in June, Euro June, Asia in October

2. **Cascade workshops – convene 26 countries**
   - 90% of countries have real data on their cascades and impact
   - November 2015 and September 2016
   - Consistent data, surveillance needs, program implications

3. **Supporting guidance**
   - Patient and case reporting
   - Impact reviews and prioritisation
   - Consolidated Surveillance Agenda

90% of countries have consistent data on SI cascade:
Granular HIV prevalence, Outreach and KP, cascade and case reporting, incidence and mortality
1. HIV prevalence: granular and disaggregated
2. Linking our interventions to the epidemic – Uganda within district surface of impact
3. Case reporting and linkage to care

Case reporting and linkage to community care (TASO) and to death records and funerals
Services without a real data cascade – community and clinics

Clinic

TLB: How many of your patients are affected by HIV
IS: About 1/3rd of patients in gastroenterology have HIV

TLB: Do you talk to the patient about their condition
IS: No, although both the patient and doctor may know that he or she has HIV, we do not mention it, or mark HIV on the medical records. Partly this is due to insurance but also mistrust

TLB: So how do patients know what condition they have
IS: Often they do not, often they do, but we don’t talk about it. For the doctor there is so much paperwork in mentioning AIDS compared to other conditions’

Community

- My mother-in-law asked her, ‘How did the funeral go?’
- The neighbour said, ‘It went well.’
- What did she die from?’
- She had piles.’
- ‘Oh shame she had piles. Why didn’t she consult a doctor?’
- The neighbour said, ‘She went to the doctor but she still died.’
- ‘Shame now who will look after the child, at least the grandmother is still alive’

Then the neighbour went.
- That’s when my mother-in-law said, ‘AIDS is killing children.’”
4. Impact reviews – using data in programs
Thailand impact review

Focus program on impact

70% of new HIV infections happen in 27 provinces

Composite index based on surveillance data

Before: Program response focused evenly across provinces

Link local services

December 2011 – December 2012, based on survey data

After: Focus and coverage, package from information to linked services
Measuring impact

Incidence – New infections
• Direct measures of incidence
• Using prevalence and incidence data with modelling

AIDS-related mortality
• Measurement
  – reported AIDS-related deaths (facility, cohorts)
  – Vital registration with cause of death
  – Modelling using prevalence, survival with and without ART, ART coverage

Impact Evaluation: modeling, program reviews, evaluations
Surveillance data used strategically is a key intervention in ending AIDS

- Global, national to community level
  - Response focused on the epidemic or not
- Thailand, Uganda, Cambodia – used surveillance data actively
- Kenya, Zimbabwe – basis of national program
- Community frontier of surveillance data – Avahan, key populations, case reporting, key barriers to put data back in community

Cascade of services requires the cascade of data
4. Objectives of this meeting

Goal: To map out a consolidated global agenda for collecting high quality, relevant HIV surveillance data to prove and improve global and national responses to the HIV epidemic.

Specifically,

1. Discuss and Identify surveillance needs including innovations – help to focus services, contribute to measurement of service cascade, measure impact

2. Priority gaps to generate and use quality data

3. Consolidate a surveillance agenda for the next 5 years: few, common priorities
Overview of this meeting: thematic sessions – 1

1. HIV surveillance: country perspectives on sustainable measurements
2. HIV incidence surveillance
3. Mortality surveillance
4. Household-based general population surveys
6. HIV Surveillance among adolescents at higher risk of HIV
Overview of this meeting: thematic sessions – 2

1. Strengthening routine case surveillance (1) and (2)
2. Biological and Laboratory markers: HIV and links to STI, hepatitis
3. Data use and modelling, sharing, and dissemination
4. What next: Building sustainable capacity
5. STI & Hepatitis: Opportunities for integration
6. Ethics

A. Surveillance for informing the HIV cascade workshop
B. Parallel regional meetings (5)
Expected outcomes

1. Share **progress and innovations** in surveillance — identify data and methods, how generated, how used, best practices and barriers

2. Identify **priority gaps** to generate and use data — document 2-4 priorities per area and how best to close gaps in countries

3. Share **vision of the way forward** — how fits into an overall surveillance agenda for next 5 years
Partner comments – demand for surveillance data

- Partners’ view on need for surveillance data
- Partners’ view on surveillance priorities?
- Partners’ view on use of surveillance data?
- How will partners fund and support the future surveillance agenda?