Challenge:

• Define a 5-year agenda for HIV surveillance in the context of:
  – contributing to the achievement of 90-90-90 targets
  – using HIV surveillance data to strengthen programmes

A difference in perspectives

Global

Local
Using the data to tell the story: two extremes...

What is the problem?

What impact are we having?

Strategic information helps provide answers
How to evaluate the best option among different methods for key measures:

Bollywood-style = 7¢ on the dollar!!
# METRICS

## Denominators

<table>
<thead>
<tr>
<th>[Risk]</th>
<th>HIV infection</th>
<th>[Prevalence &amp; Diagnosis]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Census</td>
<td>Household surveys, STI case reporting/surveys</td>
<td>Routine testing data, HSS, HIV case reporting</td>
</tr>
<tr>
<td>Mapping, multiplier, CRC, NSU, SS-PSE, extrapolation, regional norms</td>
<td>TLS, RDS, Ego-linked ntwrk, ntwrk samp w memory, [STI case reporting/surveys, stigma measures, A/YKP, prtcptry approach]</td>
<td>[Routine testing data], HSS, HIV &amp; AIDS case reporting</td>
</tr>
<tr>
<td>Assay /RITA, Models (SPECTRUM), Proxy - Prev among young pops</td>
<td>Assay /RITA, Models (SPECTRUM, AEM); MOT; Proxy - Prev among new key pops</td>
<td>[Routine testing data], HSS, HIV &amp; AIDS case reporting</td>
</tr>
<tr>
<td>Routine testing data, HSS, HIV case reporting</td>
<td>Routine monitoring data</td>
<td>TLS, RDS, [Routine monitoring data]</td>
</tr>
<tr>
<td>Household surveys</td>
<td>Routine monitoring data</td>
<td></td>
</tr>
<tr>
<td>Routine testing data, HSS, HIV case reporting</td>
<td>Routine monitoring data</td>
<td></td>
</tr>
<tr>
<td>ART registries/patient management &amp; lab system</td>
<td>[ART registries/patient management &amp; lab systems]</td>
<td></td>
</tr>
<tr>
<td>Household surveys, drug resistance surveillance</td>
<td>TLS, RDS surveys, drug resistance surveillance</td>
<td></td>
</tr>
<tr>
<td>ART registries, Civil registration and vital statistics, Verbal autopsies, Community cohorts, Models</td>
<td>[ART registries], Models</td>
<td></td>
</tr>
</tbody>
</table>

Red font = routine data; [ ] = assumes data disaggregated by key pop
Priority Agenda

• Granular data: prevalence and facility data

• Metrics for key pops

• HIV case reporting and surveillance for health care cascade

• Reviewing incidence and mortality through modelling/impact exercises
Deconstructing granularity

• Geographic or sub-group ‘granularity’ enables
  – Characterization of a local risk context
  – Assessment of local programme performance

• Trade off of granularity is precision(costs being =)

• Some limits on granularity are methodological;
  – e.g. incidence assay measures in key pops & gen pops

• To improve programmes, granularity must relate to understanding the nuance of the measure/data
  – i.e. representativeness, precision
A useful exercise for updating SI/surveillance system design

<table>
<thead>
<tr>
<th>METRICS</th>
<th>METHODS</th>
<th>National/Regional</th>
<th>Local/Sub-groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominators</td>
<td>Mapping (45 programme priority districts) + extrap</td>
<td>Extrapolated national &amp; regional</td>
<td>Urban intervention areas (45)</td>
</tr>
<tr>
<td>[Risk]</td>
<td>IBBS surveys (PWID (3), MSM (10), FSW (2))</td>
<td>Crude pooled – national (MSM)</td>
<td>City level – PWID (3), MSM (10), FSW (2)</td>
</tr>
<tr>
<td>HIV infection</td>
<td>SPECTRUM (gen pop &amp; key pop)</td>
<td>National</td>
<td>1 Metro area</td>
</tr>
<tr>
<td>[Prevalence &amp; Diagnosis]</td>
<td>IBBS surveys + HSS (PWID (3), MSM (5), FSW (2))</td>
<td>A/YKP – pooled 6 priority districts</td>
<td>Districts - Urban areas PWID (3), MSM (10), FSW (2)</td>
</tr>
<tr>
<td></td>
<td>HTC @ 6 NGO clinics + 50 DHC</td>
<td>Crude pooled - national</td>
<td>Districts: Key pop (6); Gen pop (50);</td>
</tr>
<tr>
<td>Advanced HIV</td>
<td>ART center cohorts (25)</td>
<td>Crude pooled - national</td>
<td>Districts (25)</td>
</tr>
<tr>
<td>Death</td>
<td>SPECTRUM (gen pop &amp; key pop)</td>
<td>National</td>
<td>1 Metro area</td>
</tr>
</tbody>
</table>
“One number to rule them all!”

- Legitimate use of multiple numbers for different purposes
- Obscures the uncertainty inherent in the estimate
State of the art in survey biomarkers

A useful tool for measuring HIV infection and STI co-infections

Several considerations:
- Testing strategies
- HIV epidemic: prevalence level, STIs
- Available technology
- Sample size
- Ethics

phone home the result
Capacity Strengthening

If you want one year of good strategic information, fund a study.
If you want 10 years of good strategic information, fund data systems.
If you want sustained strategic information, fund a workforce.

Routine programme data & survey data collection: *Engagement should begin during planning and continue through implementation and data use*
Ethics and Human Rights

Considerations:
1. Informed consent
2. Confidentiality
3. Non-discrimination
4. Transparency

Principles are applicable to surveillance, as well as surveys.

Vulnerability
• Stigma & Discrimination
• Diagnostics & Results

Engagement: results of surveillance should be communicated back to stakeholders, but also to communities.
The need for technical guidance

Available Guidelines
• Strategic Information
• PMTCT programmes
• HIV Mortality Measurement
• ANC Surveillance
• STI Surveillance

Pending Guidelines
• National Population-Based Surveys
• HIV Testing Services
• Bio-Behavioral Survey (BSS) Guidelines
• Patient and Case-Reporting and Monitoring
• Impact Reviews and Prioritization
• RITA Application

And more on the flash drive!