The generic tools and recommendations for HIV patient monitoring in the WHO Consolidated guidelines on person-centred HIV patient monitoring and case surveillance should be adopted and customized to fit the specific setting of each country and programme; most importantly, to provide essential, quality patient care.

**ASSESS THE PATIENT MONITORING SYSTEM USING A SITUATION ANALYSIS TOOL (ANNEX 3.5.2)**

- Understand the gaps in current patient monitoring systems (tools, standardization, simplification, integration and linkages, data quality and use) across facilities at different levels;
- Understand the gaps in key indicator collection and reporting, and links to the national health management information system (HMIS);
- Understand where the country is in transitioning to “treat all” people diagnosed with HIV (1); and
- Understand where the country is in transitioning from paper to electronic patient information systems and networking with national reporting databases (e.g. HMIS, district health information software [DHIS] 2).

**STRENGTHEN, LINK AND USE INFORMATION SYSTEMS**

[1] Establish a minimum, standardized set of reportable national HIV indicators from the 18 key indicators presented in the guidelines, considering the stage of transition to “treat all”. Any additional indicators should be selected from the 2015 Consolidated strategic information guidelines (2) and have strong justification for their adoption.
[2] Update and standardize minimum datasets and (paper-based and electronic) tools

- Update core paper-based patient monitoring tools – HIV patient card, antiretroviral therapy (ART) register, cross-sectional and cohort reports.

- Develop – or update as appropriate – ART community monitoring tools, transfer/referral form, patient-held card, appointment book.

- Update HIV data elements in maternal, newborn and child health (MNCH), tuberculosis (TB) and other relevant programme or service delivery monitoring tools.

- Update data elements in electronic medical record, register and report systems.

- Adopt a tiered approach to when and how patient monitoring data from paper tools will be entered electronically, based on resource availability, site and setting (see Table 1) (3).

[3] Harmonize systems across programme areas

- Harmonize HIV data elements, patient monitoring tools and indicators collected across facilities and programmes (TB, MNCH, other).

- Use HIV patient cards and ART registers at TB and MNCH sites.

- Cross-check HIV, TB and MNCH programme registers to avoid double-counting and ensure complete capture of patients when compiling joint programme indicators (e.g. TB/HIV, PMTCT).

- Integrate service delivery at the facility.

- Integrate HIV data into the HMIS.

- Collaborate with other national programmes and outside institutions.

**IMPROVE AND SUSTAIN PROGRAMMES**

[1] Analyse, use and feed back quality data collected via key indicators

- Carry out periodic (six-monthly or annual) reviews of patient monitoring data to assess data quality and collect additional key indicators.

- Improve national and global reporting through simplified disaggregation categories, standardized and clear reporting forms and tally tools, and regular feedback loops.

[2] Improve patient monitoring, supervision, mentoring and quality of care

- Allow data collection and reporting by lay health workers to reduce the burden on clinical staff.

- Strengthen routine clinical mentoring and supportive supervision to ensure the quality of care and data.

- Use available data to develop dashboards and other tools to help identify current quality-of-care gaps that need to be addressed, and carry out routine analysis using the periodic (annual) review process.
Ensure improved linkages, retention and outcomes along the HIV cascade of services

- Ensure that an HIV patient card is created for all patients who enrol in HIV care, regardless of the service delivery point.
- Assign or develop unique patient identifiers, and use patient appointment systems or link pharmacy and clinical records to identify and follow up missing patients.
- Use patient-held cards or passports and transfer/referral forms to facilitate tracking of patients between service delivery points.
- Integrate patient records for families or an individual within a single setting across disease programmes (e.g. TB, antenatal care (ANC), HIV).

Ensure sustainability of improvements

- Provide evidence of patient and programme benefits from patient monitoring data (indicators).
- Draw up short-, medium- and long-term plans for the patient monitoring system.
- Include patient monitoring in programme budgets, funding proposals (e.g. the Global Fund to Fight AIDS, Tuberculosis and Malaria), strategic planning and policy documents.

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**TABLE 1. ELEMENTS REQUIRED WITHIN A THREE-TIERED PATIENT MONITORING SYSTEM**

<table>
<thead>
<tr>
<th>Element</th>
<th>Paper-based register</th>
<th>Electronic register</th>
<th>Networked online system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proper folder flow and successful filing system</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Standardized clinical stationery and reporting form</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Protected time for transcribing data</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Ample working space for capturing data</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Electricity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Computer, printer, UPS, memory stick or CDs</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Computer skills of person capturing data</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Basic information technology (IT) strategy to limit computer viruses, send dispatches and update versions</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Stable network and cabled facilities</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Network points within facility</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>Central network team</td>
<td></td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>IT technicians to support sites with responsive turnaround time</td>
<td></td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

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