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Background
- The emergence of HIV drug resistance (HIVDR) is inevitable, given HIV’s high mutation rate and high replication rate and the need for lifelong antiretroviral treatment (ART).
- WHO recommends that countries develop a public health strategy to minimize the risk of resistance development and that ART programs are monitored for resistance-related endpoints.
- The Ministry of Health and WHO recommend that ART programs should be implemented with specific strategies to scale up ART coverage, increase patient retention, detect HIVDR, and provide treatment adherence support.

The HIV Drug Resistance Prevention and Assessment Strategy

The WHO HIV Drug Resistance Prevention and Assessment Strategy (HIVDR-PAS) is a comprehensive approach to monitor and assess HIV drug resistance in resource-limited settings. It comprises several components, including the development of national HIVDR strategies, monitoring of ART adherence, and the implementation of early warning indicators (EWIs) to detect emerging resistance patterns.

Methodology

The National HIV Drug Resistance Monitoring Working Group involves clinicians, epidemiologists, pharmacists, laboratory staff, ART initiating units, community representatives, and representatives of ART programs at the national, regional, and local levels to ensure a comprehensive approach to monitoring ART programs and HIV drug resistance.

Results

- Evaluation of ART programs and HIV drug resistance monitoring in resource-limited settings
- Identification of ART programs and HIV drug resistance monitoring in resource-limited settings
- Use of remnant diagnostic specimens and information already being collected
- Target group: Individuals infected with HIV within the past 3 years who remain ARV-drug naive
- Monitoring of ART programs and HIV drug resistance monitoring in resource-limited settings
- Use of remnant diagnostic specimens and information already being collected

Survey to evaluate HIVDR transmission

The HIVDR threshold survey (HIVDR-TS) assesses transmitted HIVDR, focusing on geographic areas in the country where resistance is most likely to emerge first.

<table>
<thead>
<tr>
<th>Country</th>
<th>% of ART patients attending all clinic appointments on-time (6)</th>
<th>% of patients initiating ART who are initially prescribed an appropriate first-line regimen (2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Africa</td>
<td>70</td>
<td>90</td>
</tr>
<tr>
<td>Malawi</td>
<td>65</td>
<td>85</td>
</tr>
<tr>
<td>Uganda</td>
<td>80</td>
<td>90</td>
</tr>
</tbody>
</table>

Surveys to evaluate HIVDR transmission

- Collection of data on transmitted HIVDR
- Analysis of transmitted HIVDR patterns
- Identification of risk factors for HIVDR

Art Site Surveys to monitor HIVDR prevention

- Cohorts of approximately 100-150 patients starting ART for 12 months at representative ART sites.
- Baseline assessment of HIVDR potential risk factors.
- 12-month assessment of HIVDR.
- ART monitoring and evaluation.
- Surveillance of HIVDR-related factors in all ART units, or at regional ART units.

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Conclusion

- The HIVDR-PAS is a comprehensive approach to monitor and assess HIV drug resistance in resource-limited settings.
- It is essential to implement strategies to detect early resistance to ART.
- Collaboration between ART programs and HIV drug resistance monitoring units is crucial to ensure effective implementation.

References