HIV-HYPERTENSION SERVICES INTEGRATION

Surviving with HIV; dying from hypertension

- Survival in people living with HIV (PLHIV) in Sub-Saharan African countries has improved markedly in the past decade, largely due to rapid scale-up of antiretroviral therapy (ART).
- This aging population is at higher risk of cardiovascular disease (CVD) than HIV-negative adults, owing to higher prevalence of traditional CVD risk factors, side-effects of some ART medications, and HIV-related chronic inflammation.1–7
- Higher CVD risk persists even in PLHIV on ART with suppressed viral load.
- About 6 million PLHIV in Sub-Saharan Africa (25%) are estimated to have co-morbid hypertension; evidence suggests that less than 25% receive hypertension treatment.
- Treating PLHIV for hypertension could prevent at least 600,000 CVD events and 87,000 CVD deaths over the next 10 years.8

Translating successes from HIV control to hypertension

Resolve to Save Lives supports ongoing pilot projects focused on developing and testing models of HIV-hypertension services in four countries, with 10,276 PLHIV enrolled to date. All projects employ differentiated service delivery (DSD) models for HIV and hypertension management in stable patients—including facility fast-track, facility group, and community medication refill models. The projects have demonstrated that HIV control can be maintained to a high standard while delivering hypertension services based on the World Health Organization's HEARTS technical package.

Table: Summary outcomes of Resolve to Save Lives-supported HIV + Hypertension projects

<table>
<thead>
<tr>
<th>Project</th>
<th>Description</th>
<th>Among PLHIV engaged in HIV care and with stable viral suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Screened for HTN</td>
<td>HTN diagnosed</td>
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<tr>
<td>Makere Joint AIDS Program (MJAP) Uganda</td>
<td>One large clinic in Mulago, Eastern Uganda</td>
<td>15,953</td>
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<tr>
<td>ITECH India</td>
<td>20 facilities in Mumbai</td>
<td>36,392</td>
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<tr>
<td>PATH Kenya</td>
<td>Three pilot facilities in two counties in Western Kenya: Kisumu and Nyamira</td>
<td>3,193</td>
</tr>
<tr>
<td>FHI 360 Nigeria</td>
<td>30 health care facilities in Akwa Ibom state</td>
<td>50,472</td>
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Pilot evidence generated in Uganda MJAP program was integral in the country adopting HTN services as part of PEPFAR COP21 and led to a U.S. NHLBI-funded scale up project (PULESA-Uganda; NHLBI UG3HL154501).
The future of HIV survival is hypertension control

As life expectancy for PLHIV continues to increase, hypertension will likely become the leading risk factor for premature mortality. Preventing and treating hypertension is simply part of ensuring long, healthy lives for all PLHIV. Now is the time to scale up HIV-hypertension integration to sustain the population health impact of PEPFAR, and to use the PEPFAR platform to help partner countries develop person-centered treatment for other conditions as PLHIV age.

Five steps to HIV-hypertension service integration

1. **Expand scope of HIV programmes** to offer high quality services for management of hypertension and other non-communicable diseases (NCDs), including diabetes

2. **Opportunistically screen for hypertension and diabetes among all adult PLHIV**
   - Measure blood pressure of all adult PLHIV at every visit to a health facility using a validated digital automated blood pressure monitor by a trained staff person, with confirmatory blood pressure measurement on a second occasion in those with initial blood pressure ≥140/90 mmHg
   - Screen all eligible PLHIV for diabetes annually using random point-of-care fingerstick glucose, with confirmatory fasting glucose testing on a second occasion in those with initial random glucose ≥200mg/dl

3. **Implement standard hypertension and diabetes treatment protocols in primary care**
   - Train healthcare workers/ART service providers on hypertension management using a simple, **standard hypertension protocol** starting with either a **single drug** or **two-drug combination** recommended by **WHO**
   - Train NCD management team on using a simple, **standard diabetes treatment protocol** starting with standard oral anti-diabetes agents
   - Initiate people with existing CVD and people age ≥40 years old without CVD but with diabetes on **lipid-lowering treatment** with atorvastatin 20 mg
   - Follow up patients with controlled blood pressure or blood sugar within DSD mechanisms

4. **Ensure access to essential medicines**
   - Ensure an adequate supply of protocol medicines
   - Ideally provide medicines to PLHIV free of charge

5. **Track patient outcomes and program performance using an information system**
   - Establish **standard hypertension and diabetes indicators** for patient and program monitoring
   - Implement a fast, simple **digital information system** that optimizes health worker efficiency (e.g., **Simple app, DHIS2 hypertensive control package**)
   - Mainstream hypertension/diabetes program performance data review and use into existing mechanisms at site and above site levels

References

8. Authors own calculations based on PEPFAR-treated populations, hypertension prevalence in the general population, and clinical trials based effectiveness of hypertension treatment.