The Geography of PEPFAR 3.0

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September 14, 2015
Outline

• Background
• Evolution of PEPFAR’s capacity to use geography
• Insights and the drivers
• Data for Accountability, Transparency, and Impact (DATIM)
• Future directions
Where We Were Before the Global Response

• 2001: Nearly 10,000 new HIV infections daily
• 2002: 50,000 on treatment in sub-Saharan Africa
• Health systems overwhelmed by the epidemic
• Life expectancy declines of over 20 years in some countries
• Loss of working age population - reversing decades of development progress
Adults and children estimated to be living with HIV, 2014

- North America and Western and Central Europe: 2.4 million [1.5 million – 3.5 million]
- Middle East & North Africa: 240,000 [150,000 – 320,000]
- Sub-Saharan Africa: 25.8 million [24.0 million – 28.7 million]
- Eastern Europe & Central Asia: 1.5 million [1.3 million – 1.8 million]
- Caribbean: 280,000 [210,000 – 340,000]
- Latin America: 1.7 million [1.4 million – 2.0 million]
- Asia and the Pacific: 5.0 million [4.5 million – 5.6 million]

Total: 36.9 million [34.3 million – 41.4 million]

Source: UNAIDS
PEPFAR’s Contributions

- 7.7 million men, women, and children on life-saving antiretroviral treatment as of September 30, 2014,
- In FY 2014, PEPFAR provided care and support for more than 5 million orphans and vulnerable children.
- In FY 2014, PEPFAR supported HIV testing and counseling for more than 56.7 million people, including more than 14.2 million pregnant women.
- 6.5 million men received voluntary medical male circumcision services in Eastern and Southern Africa.
- As of September 30, 2014, PEPFAR is supporting training for more than 140,000 new health care workers in PEPFAR-supported countries to deliver HIV and other health services.
The American people, through the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), support the fight against global AIDS through bilateral and regional programs in 65 countries. As a result of this commitment, the U.S. supported life-saving treatment for 7.7 million men, women, and children worldwide. In addition, the U.S. is the largest donor to the Global Fund to Fight AIDS, Tuberculosis and Malaria.

**PEPFAR countries**
- Country operational plans
- Regional operational plans
- Other PEPFAR country programs

**Number of adults and children with advanced HIV infection receiving antiretroviral therapy with PEPFAR support**

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* Included in regional operational plan

Names and boundary representation are not necessarily authoritative.

Sources: Office of the U.S. Global AIDS Coordinator; PEPFAR Annual Program Reports

July 21, 2015 - U1258 STATE (HIU)
Mapping in PEPFAR 1.0
Mapping in PEPFAR 2.0
Mapping in PEPFAR 3.0

Nairobi County, Kenya: HIV Positivity Among Pregnant Women

Although PMTCT positivity in Nairobi is 6.9 percent, some sites found zero positives in a six-month period in 2014. Positivity at specific sites ranged from zero to 74 percent. Some sites needed to test large numbers of women to identify an HIV positive person, even in areas with high local positivity.
Now, PEPFAR is heading into what may be its most challenging, but exciting, phase yet—Phase III focusing on Sustainable Control of the Epidemic... We can best control the epidemic by pivoting to a data-driven approach that strategically targets geographic areas and populations where we can achieve the most impact for our investments.
Tanzania: Program Efficiency: HTC

- **No-yield**: 28% of total sites (N=8,667), 0% of total positives (N=137,605)
- **Low-yield**: 50% of total sites, 12% of total positives
- **High-yield**: 88% of total sites (N=8,667), 22% of total positives (N=137,605)
In Kenya, HIV-positivity from PMTCT sites is highly correlated with estimates that are modeled using data from population-based survey and antenatal care-based HIV surveillance.

Source: U.S. President's Emergency Plan for AIDS Relief (PEPFAR)
DATIM: Data for Accountability, Transparency, and Impact

- Built on DHIS2
- 36 national and regional programs
- Subnational unit hierarchies to low levels (>10,000)
- ~50,000 clinical sites
- > 75% clinical sites have latitude and longitude
Geographic Structure in DATIM
Points in DATIM
Facility Outside of District
## Supplemental Codes

### Geographic Exactness

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Strengthening National Spatial Data Infrastructure

Ethiopia Zones, 2015

Zambia Districts, 2015
Analysis
Future Directions

• Choropleth maps for all
  – Creating room for more advanced analysis

• Providing a better input to master facility lists

• Integrating additional geographic context