

Achieving epidemic control in South Africa:

A PEPFAR Perspective towards targeted HIV Counseling & Testing (HTS)

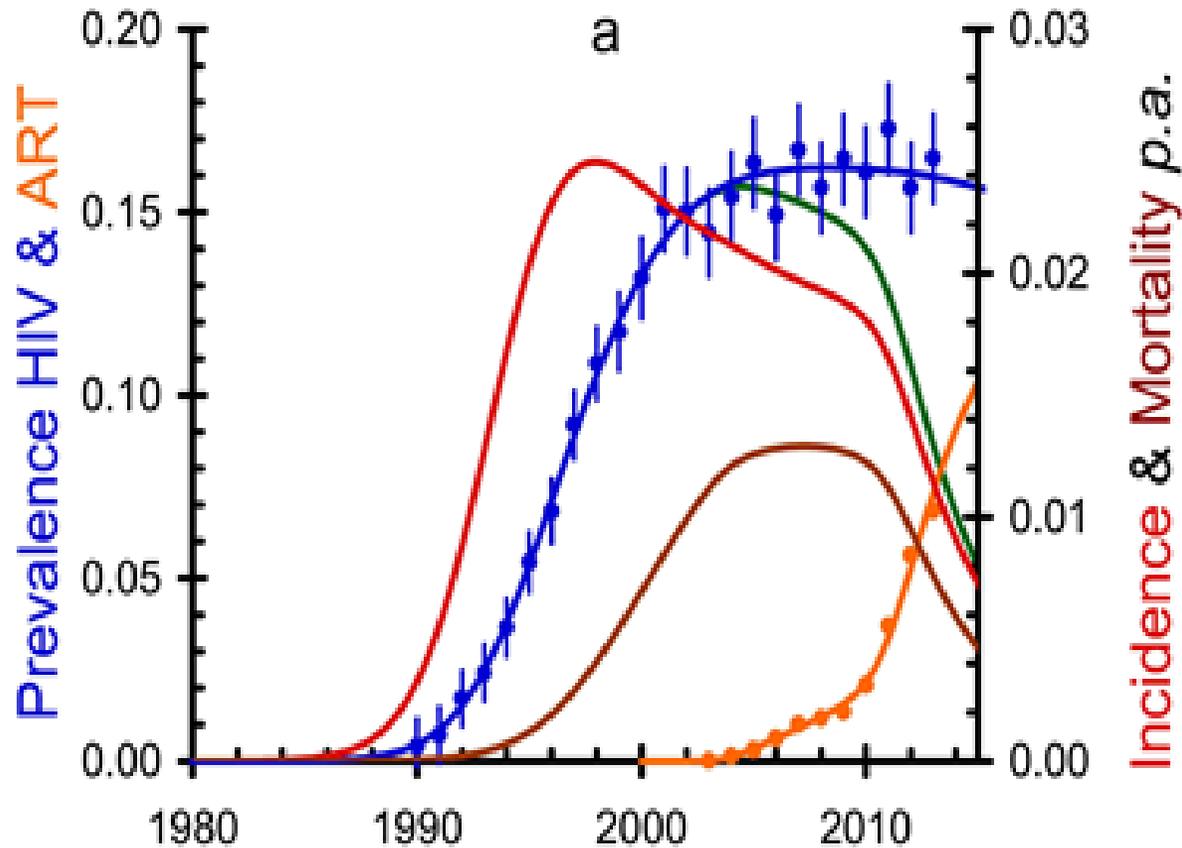
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US Centers for Disease Control & Prevention (CDC), South
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November 30, 2015



South Africa: Progress to Date

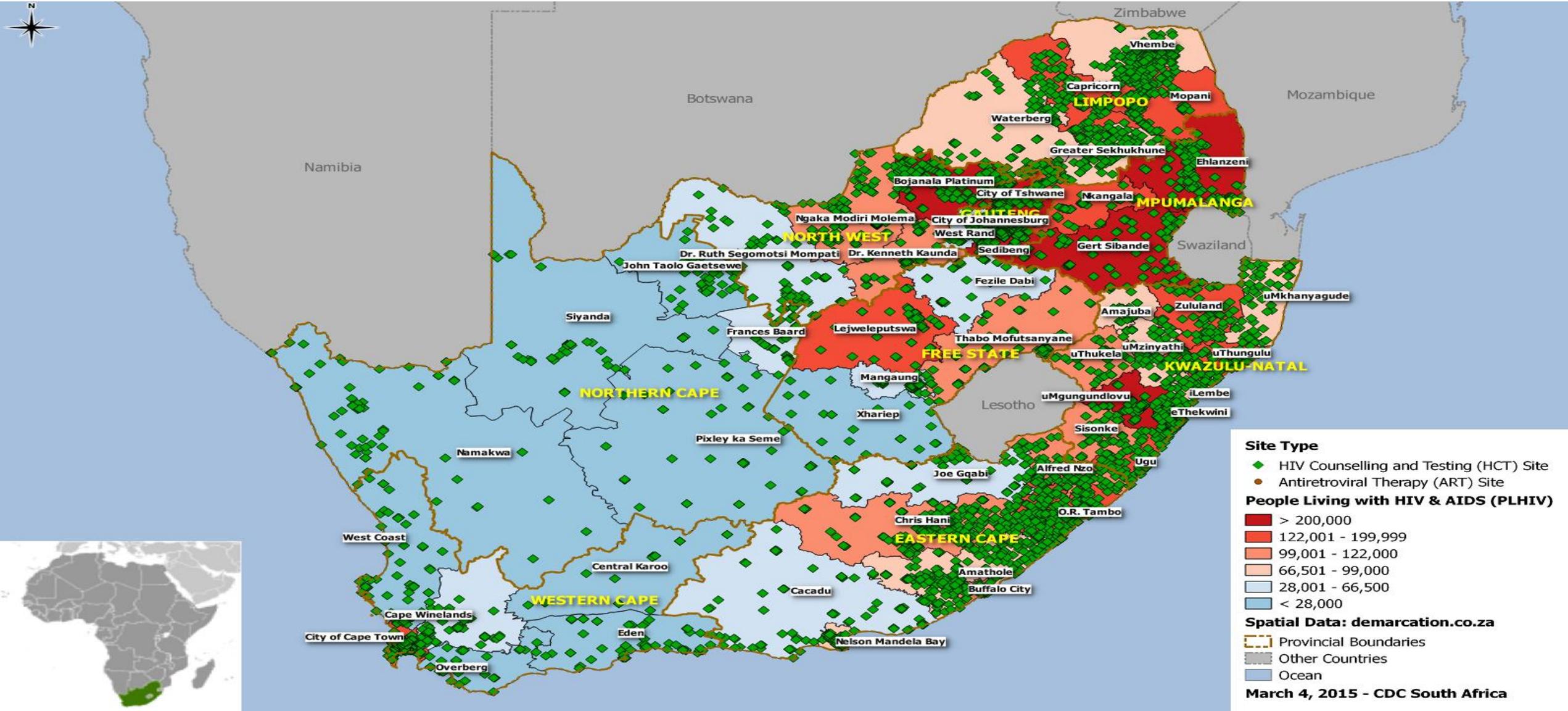


- HIV Prevalence: 15%
- HIV incidence: 1.7%
- Wide geographic and population variation in prevalence/incidence
- Estimated 6.5 million infected with HIV
- ~3.1 million currently on ART
 - ART eligibility: CD4 <500, TB/HIV, pregnant/HIV, HBV/HIV

HTS Target-Setting (PEPFAR): The *Old*

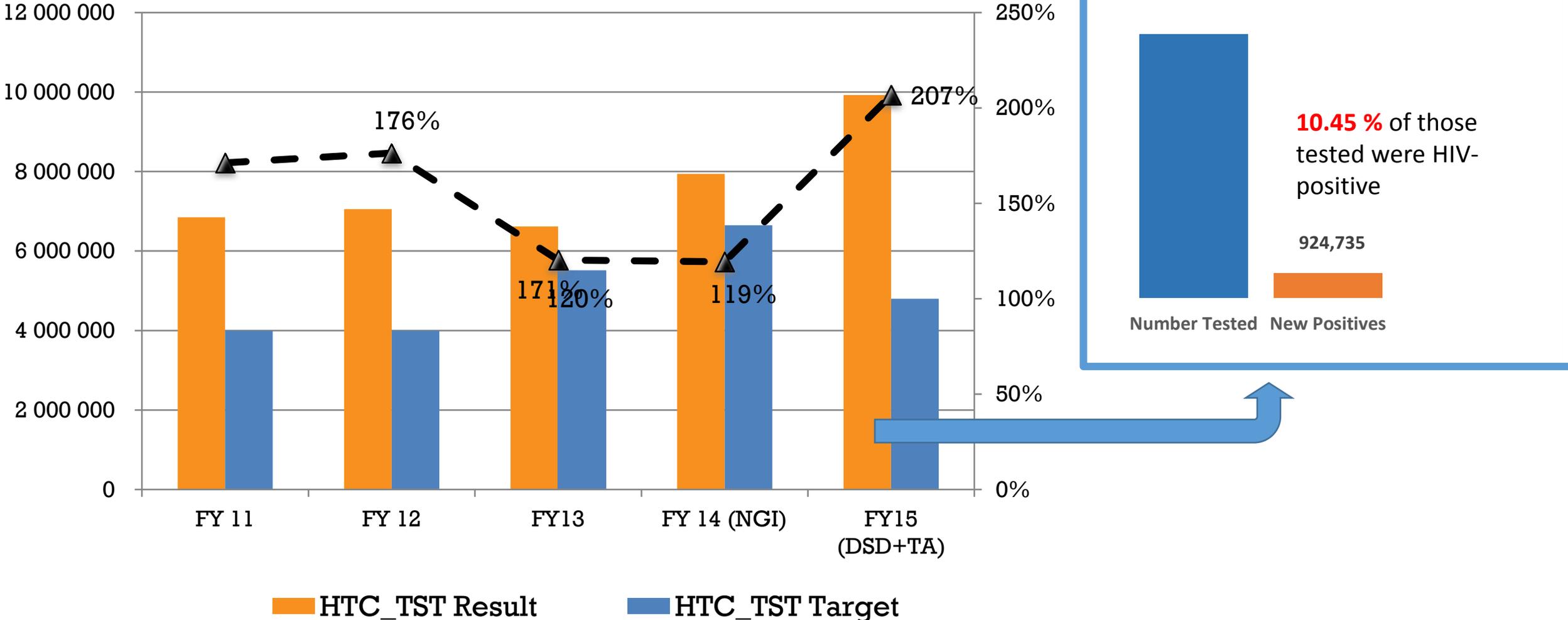
- HIV counseling & testing targets largely based on previous achievements and available budgets
- Variation on emphasizing identifying PLHIV relative to numbers tested (i.e. *positivity*)
- Limited use of epidemiology, program, and cost data
- Focus on national coverage
 - Analysis largely limited to provincial-level or above
- Limited emphasis on 'cascade' monitoring (e.g. linkage to care)
- Resulted in significant increases in numbers tested (and likely in those knowing their results).

HTS Sites: South Africa

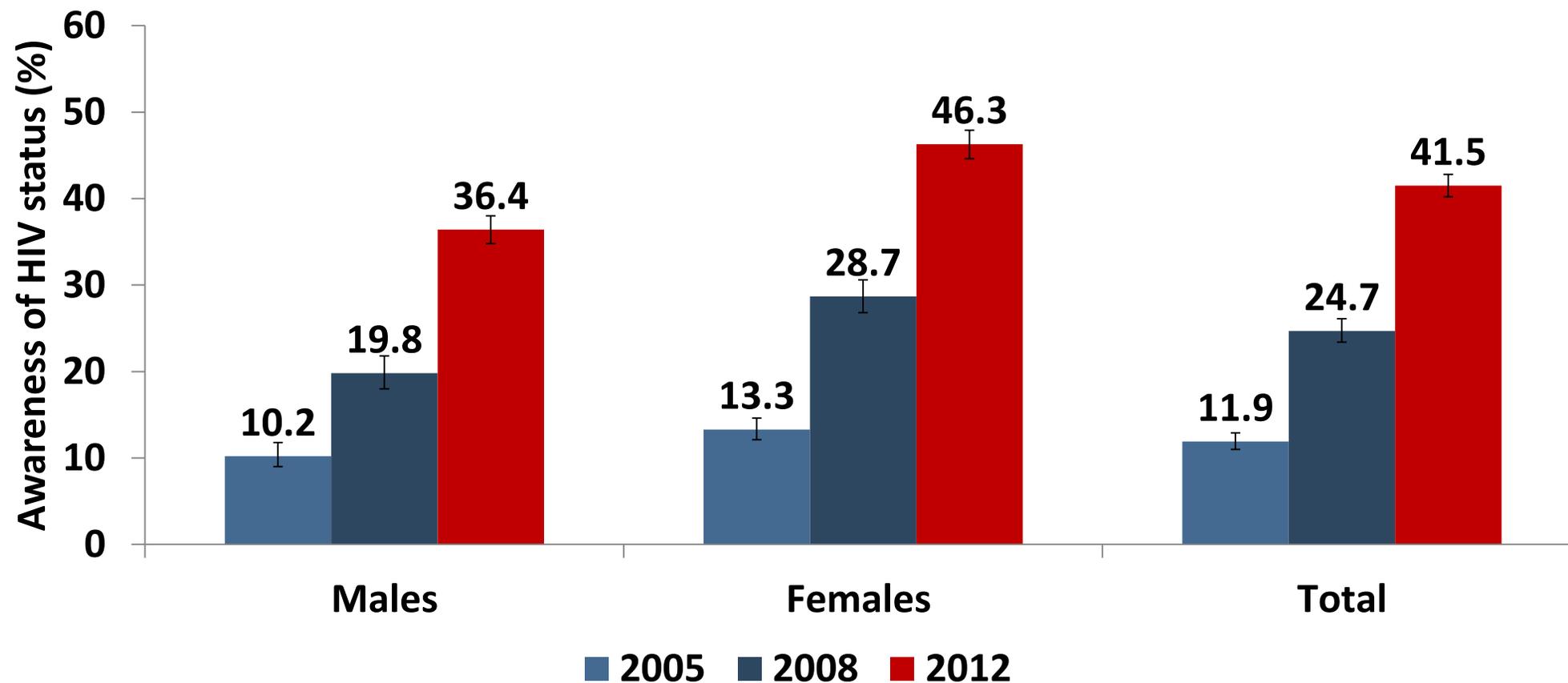


Data Sources: District Health Information Software (DHIS) 2014, South African National Department of Health, Human Sciences Research Council (HSRC)

HIV Testing and Counselling (PEPFAR, FY11-15)

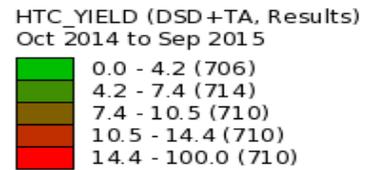
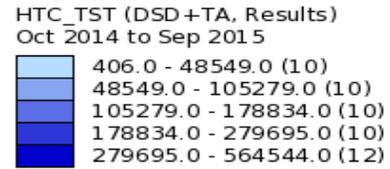


Tested in the last 12 months, by sex (15 years +), South Africa 2005-2012

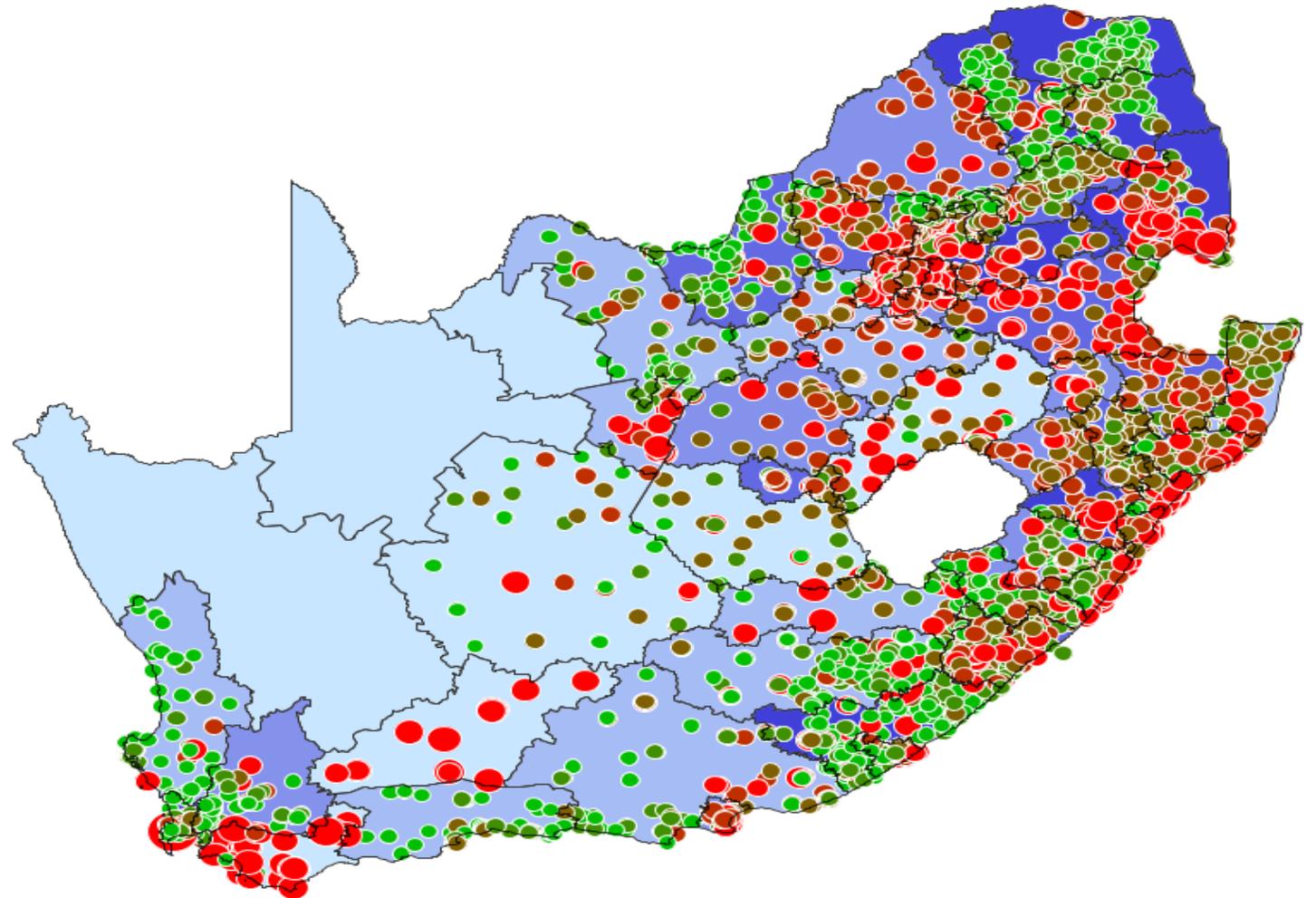


So if it isn't broken, why fix it?

HTS Yield by Facility (FY15)

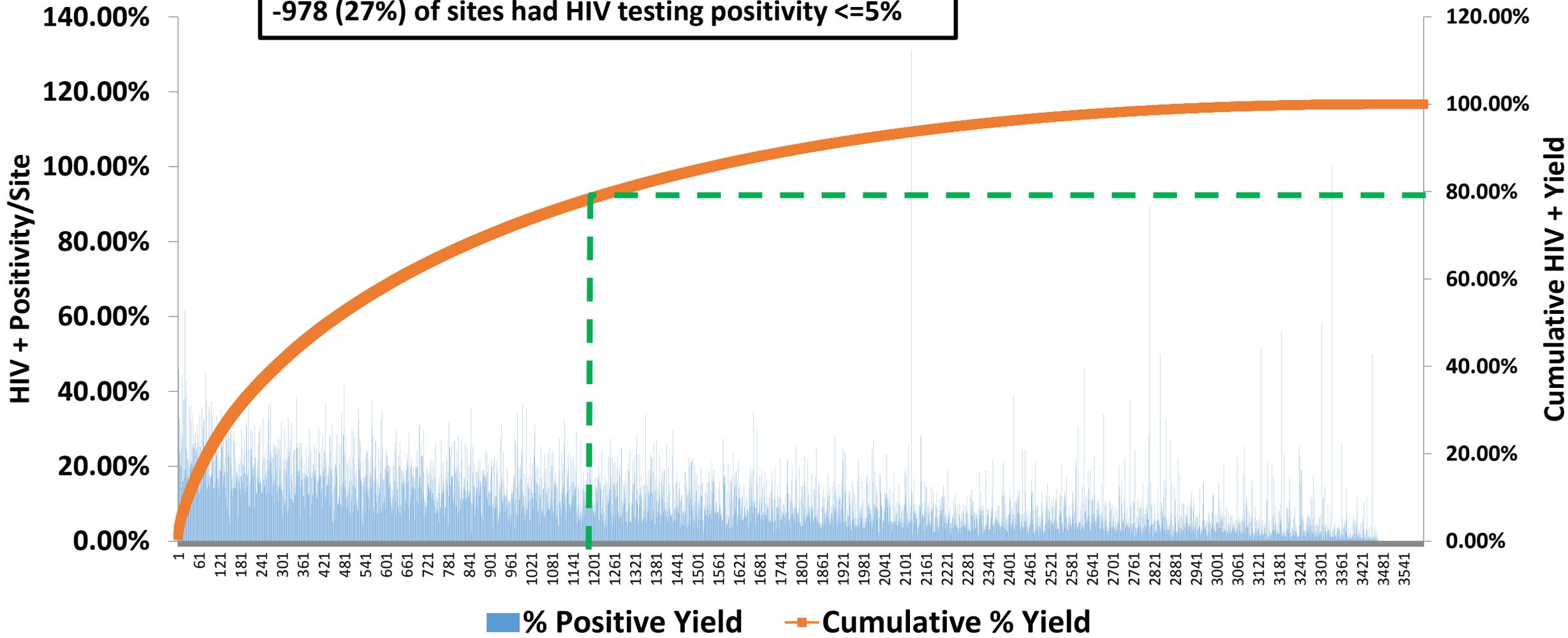


200 km



PEPFAR: HTS Yield by Site (APR14)

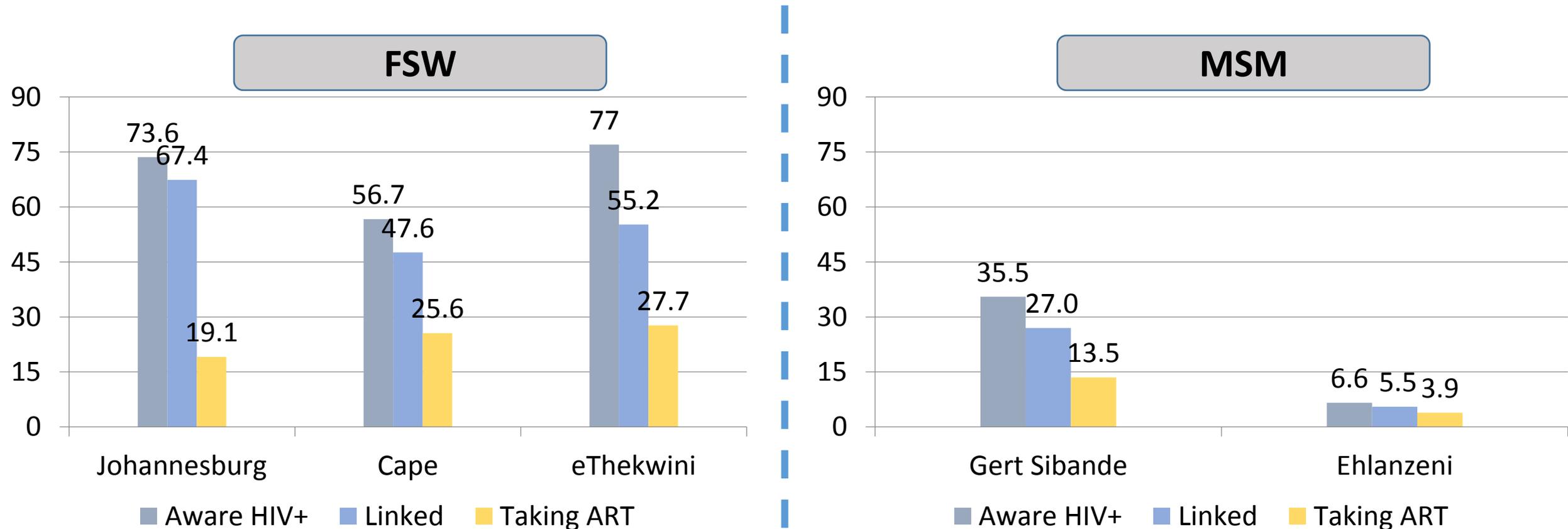
**80% of yield at 1261/3599 (35%) sites.
-978 (27%) of sites had HIV testing positivity <=5%**



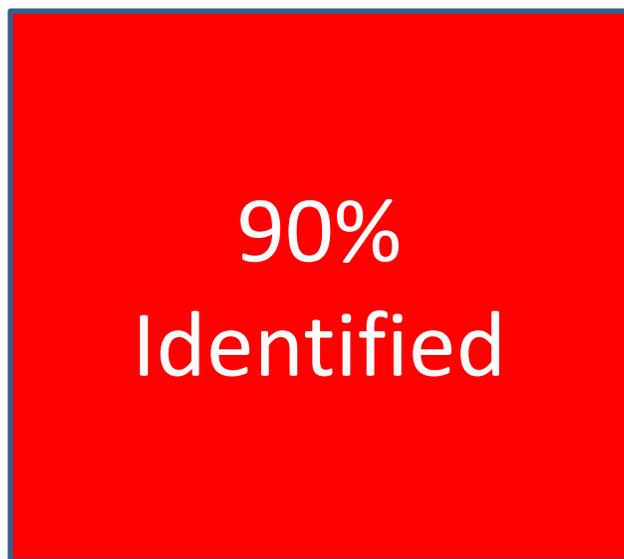
HIV Cascade for Key Populations (FSW, MSM)

Very few published reports that describe the HIV care cascade among key populations...*even less in the Africa region.*

Ref: Risher K, Mayer K, and Beyrer C. HIV treatment cascade in MSM, people who inject drugs, and sex workers. Current Opinion. Nov. 2015



90 90 90 HIV Cascade (UNAIDS)

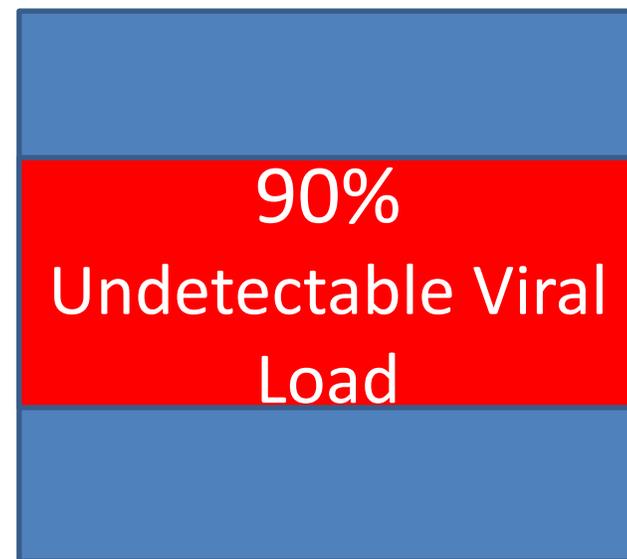


HTS

90% HIV infected tested



90% of these in care (81%)



90% undetectable (72.9%)

Current Context and Program Objectives

- PEPFAR SA is currently (FY15) operating in 100% (52/52) of districts (>3,500 HTS sites, 9.75 million HCT, 2.97 million ART)
- Goal: To reach the greatest number of those in need of HIV services for maximum program impact
 - Reduce the number of new infections to below the number of AIDS-related deaths
 - Support South Africa's commitment to the UNAIDS **90-90-90 targets**
 - Support all South African Government annual HIV targets
 - Improve linkages between prevention, treatment and OVC programs at the community and facility levels to achieve district level outcomes
- **Prioritization is critical** and PEPFAR programs should focus on the **locations** and **populations** with the highest burden of disease

HTS Target-Setting: The *New*

- **Need to target based on need (e.g. 90 90 90) using epidemiology and burden**
 - Prioritize high burden locations
 - Prioritize high risk populations
- Highlight identifying **PLHIV** (the 1st 90)
- Target to the level of service provision (e.g. facility, community)
- Establish targets and review in context of cascade
- This may result in less people tested but increased % of PLHIV knowing their status and linked to services

Testing Yield (i.e. the number of tests to find 1 case*)

- Random testing: $1/(\text{Prevalence not on ART})$
- South Africa
 - 2005=6; 2015=18
- South Africa ANC by age:
 - <15 yrs=25; 30-34 yrs=2; 45-49=3
- Ethiopia
 - 2015=300

*Ref: B. Williams. Presented at Regional Consultation on HIV Testing Services in East and Southern Africa. Nov 2015

Geographic Prioritization: District & Site ranking by **PHLIV**

- Identified districts with the highest HIV burden* and established a rank order
 1. *Burden defined as estimated number of PLHIV
 2. Districts rank ordered and grouped by burden cut-points (e.g. 50, 60, 70, 80, 90% of PLHIV) → **80% of PLHIV in 27/52 districts**
 3. Budget analysis (**HTS & ART**) based on expenditure analysis & est. PEPFAR budget
 4. Within district site analysis & selection
 - **Scale-up**: Based on HTS, PMTCT, and ART 2014 results (27 districts)
 - **Long-term transition**: high volume facilities (i.e. 80% national ART and within top 25k ART coverage within district) (9 districts)
- Used most recent data available
 - HSRC Household Survey 2012, 2012 Spectrum , StatsSA population data, 2014 District Health Info System (DHIS)

HTS Targets: District Level

- Estimated '**Forward**' and '**Backward**' along the 90 90 90 cascade in the 27 priority districts (~80% of PLHIV)
- Goal to reach 90 90 90 in select areas by 2017
- **Forward:**
 - HTS TARGET: $[(\text{Untested PLHIV}^* \times 90\%)/\text{District HIV prevalence}^*] \times 90\%$
 - *Untested PLHIV, District prevalence estimated from household survey data
- **Backward:**
 - Estimated unmet ART need** → new ART needed → New Care (2016, 2017) by district
 - HTS TARGET: $[(\text{New Care} + \text{est. LTFU in Care})/2014 \text{ HTS Yield}]$
- Targets apportioned across 2016 (~60%) and 2017 (40%)
- ~10% of targets allocated to *community* testing modalities; 90% to *facilities*
 - Key population coverage targets factored in primarily for community testing

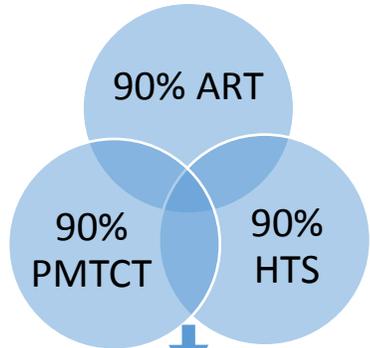
**Spectrum models under current guidelines (i.e. CD4<500); current ART coverage

Within District: Facility Selection & Targets

5,037 facilities
(DHIS, 2014)



2,202 facilities in
27 'Scale-up'
Districts



1,969 facilities in
27 'Scale-up'
Districts



198 Long-term
transition facilities
(9 districts)

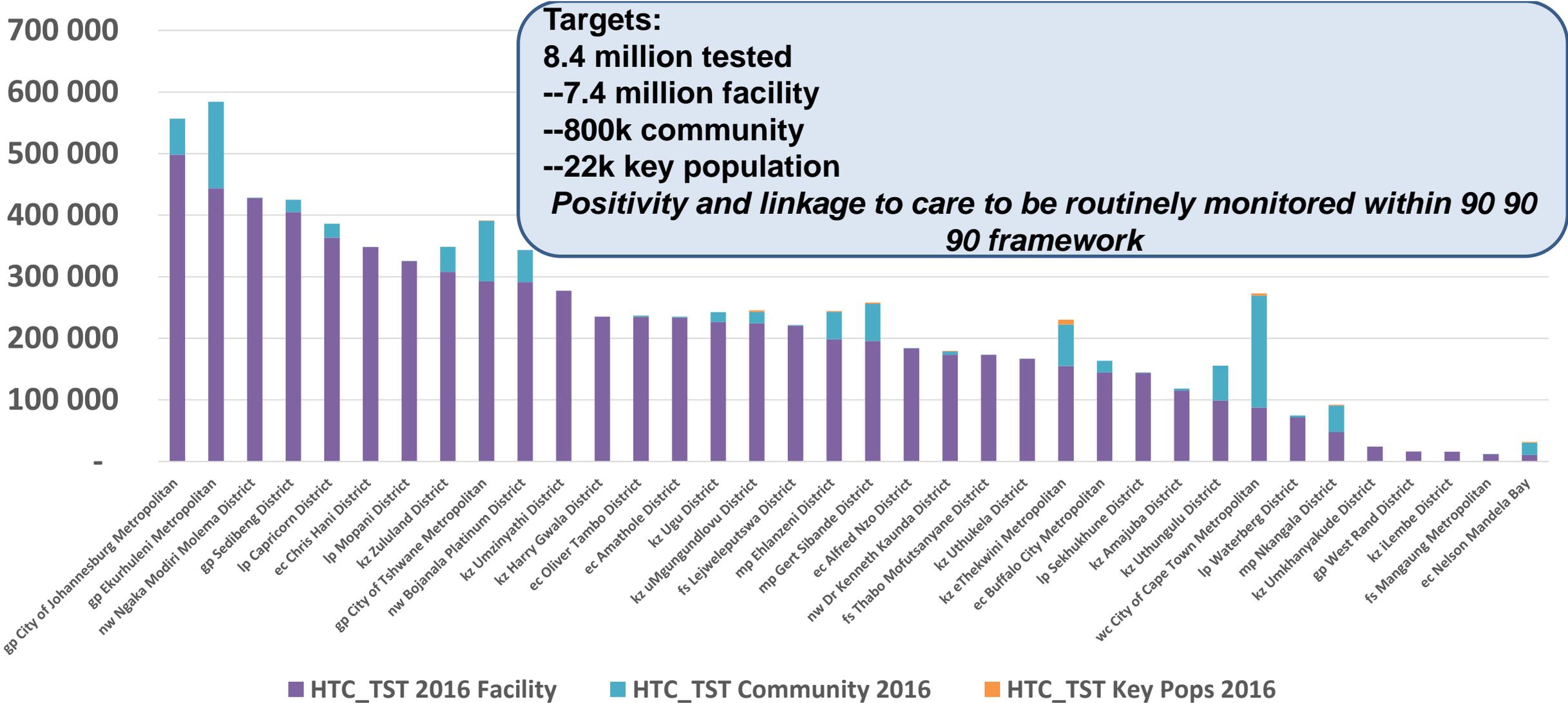


2,167 PEPFAR-
supported facilities
(36 districts)

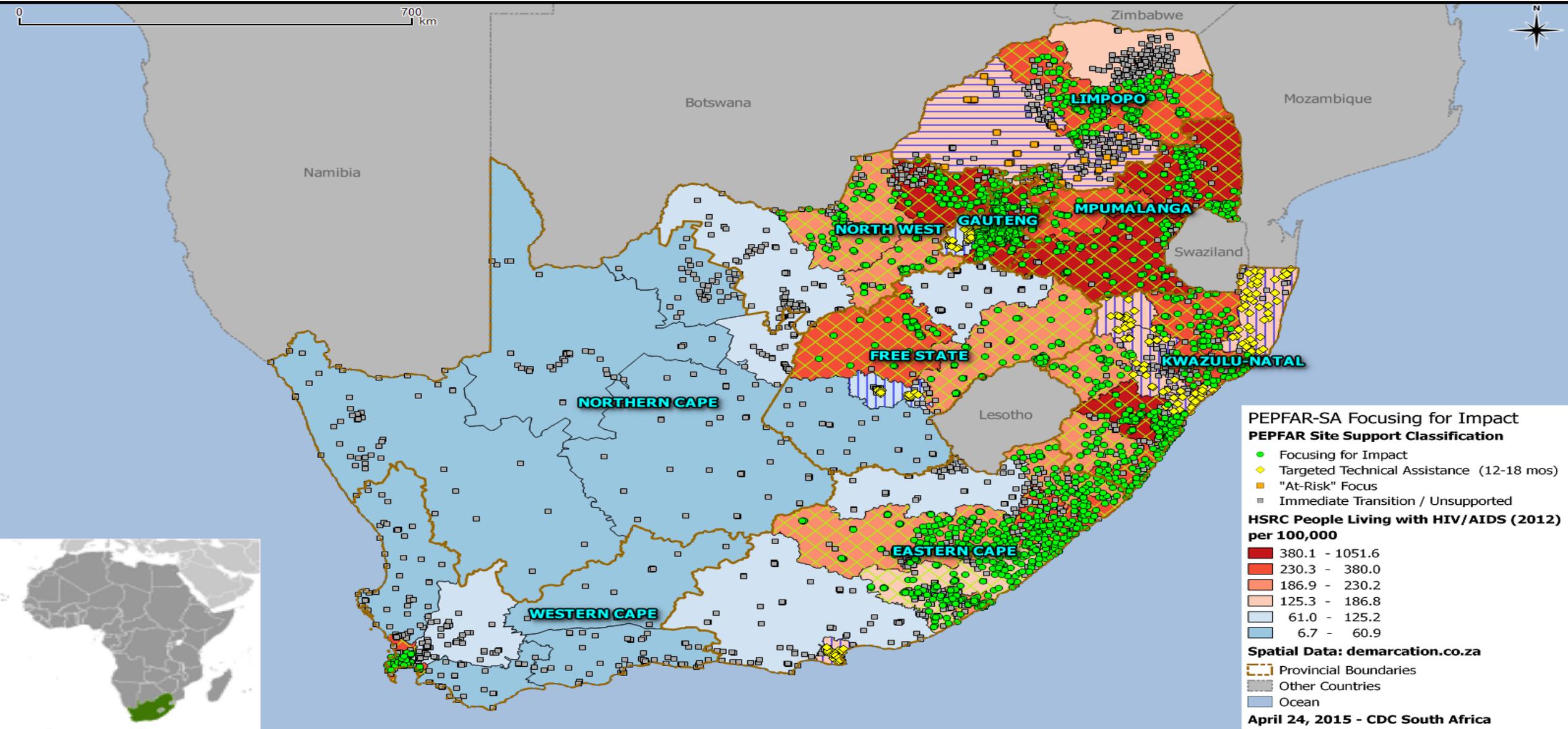
- Began with 2014 DHIS site list for SA
- Filtered based on priority districts (e.g. 27 scale-up districts)
- Calculated within district rank-sum values for ART, PMTCT, and HTS
 - Selected sites that were in top 90% of results for ART, PMTCT, or HTS
- Allocated district-level HTS (and ART, PMTCT) targets (see previous slide) to sites proportional to their 2014 results (DHIS)

Proportional allocation of 2016 targets

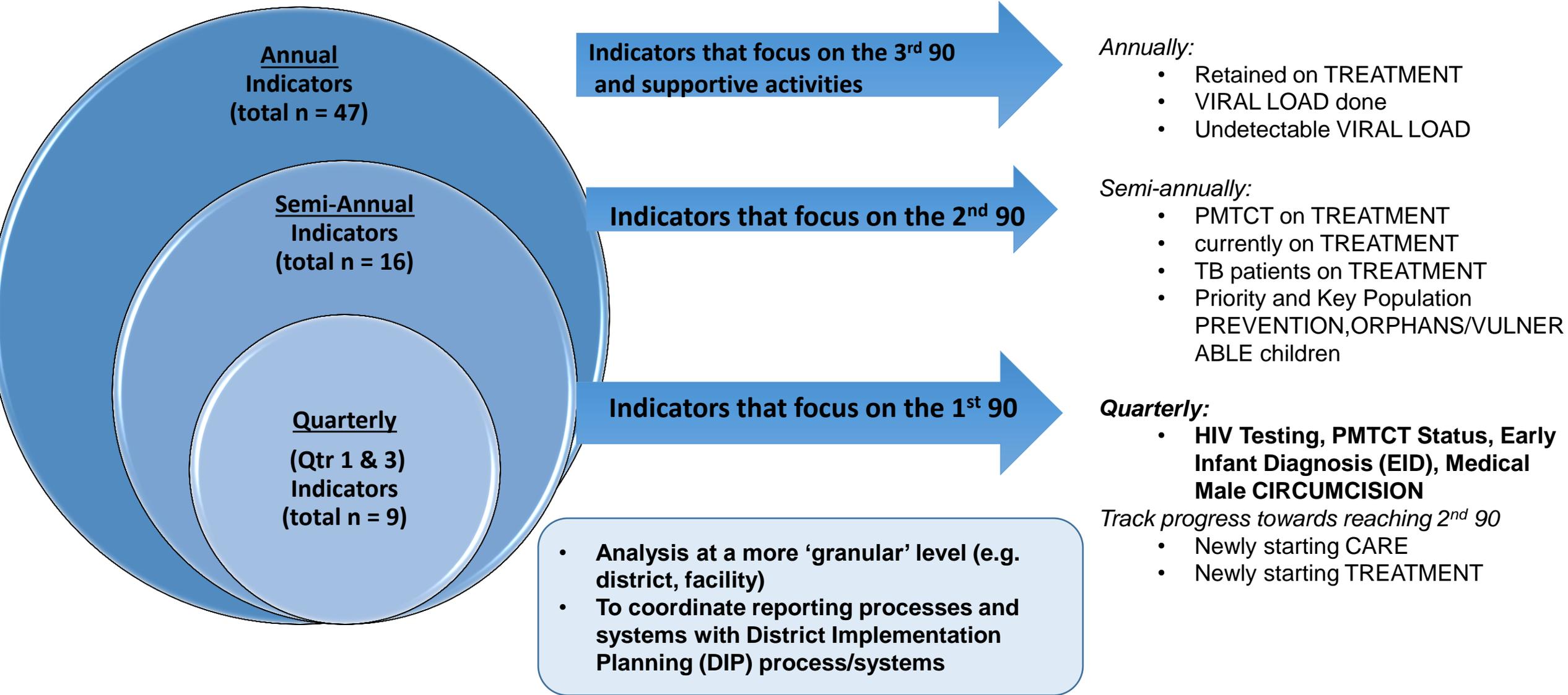
HTS Targets (PEPFAR) by District: Oct 2015-Sept 2016



Geographic Prioritization: By Facility



Quarterly, Semi-Annual and Annual Monitoring



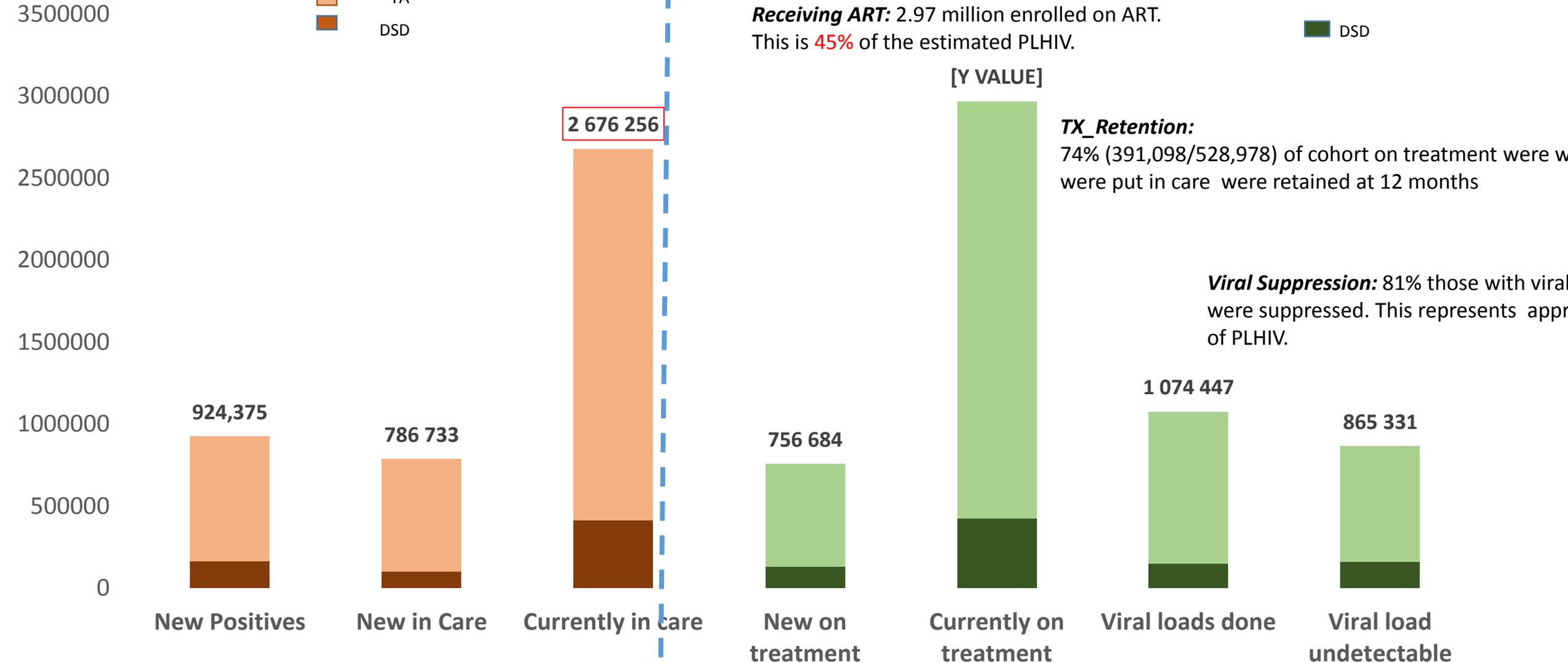
Core Clinical Cascade (Care and Treatment), PEPFAR (FY15)

CARE

- TA
- DSD

TREATMENT

- TA
- DSD



Limitations and Considerations

- Wide variation around district level prevalence estimates leading to variation in PLHIV estimates
 - Plans to update based on updated Spectrum (2014) and household survey (2016) data
 - Update when treatment initiation guidelines change (e.g move to 'test and treat')
- PEPFAR unit expenditures don't represent full program cost (SAGvt is largest payer for most services)
 - USG:SAGvt ratio \$\$ range by district 0.9-5.0 (HTS)
- PEPFAR program must align with South African government targets and resources for maximum impact
 - Aim to support achieving targets by 2017
- Epidemiologic priority districts may not have the capacity to scale-up

Conclusion: 90 90 90 provides pathway for a paradigm shift for HTS

- Updated HTS target-setting approach emphasizes:
 - Utilizing sub-national (e.g. site, district) epidemiology and program data to drive targets
 - **Identifying PLHIV (rather than # tested) as a key step for linkage to care, treatment**
 - Routine (quarterly) review of data to assess progress (e.g. positivity) and corrective actions
 - Age, gender, key pop disaggregation's (in-line with 2015 WHO SI guidelines)
 - *Innovation is key*
- Support for comprehensive M&E systems is essential:
 - Local (facility, district) data review and use
 - Must allow monitoring of patient level flow from 'HTS' to 'care & treatment' (e.g. complete roll-out of full tier.net module) at facility and community services

Extra Slides

HTS * Status by District: APR14

