# Getting HIV-infected children into care and treatment

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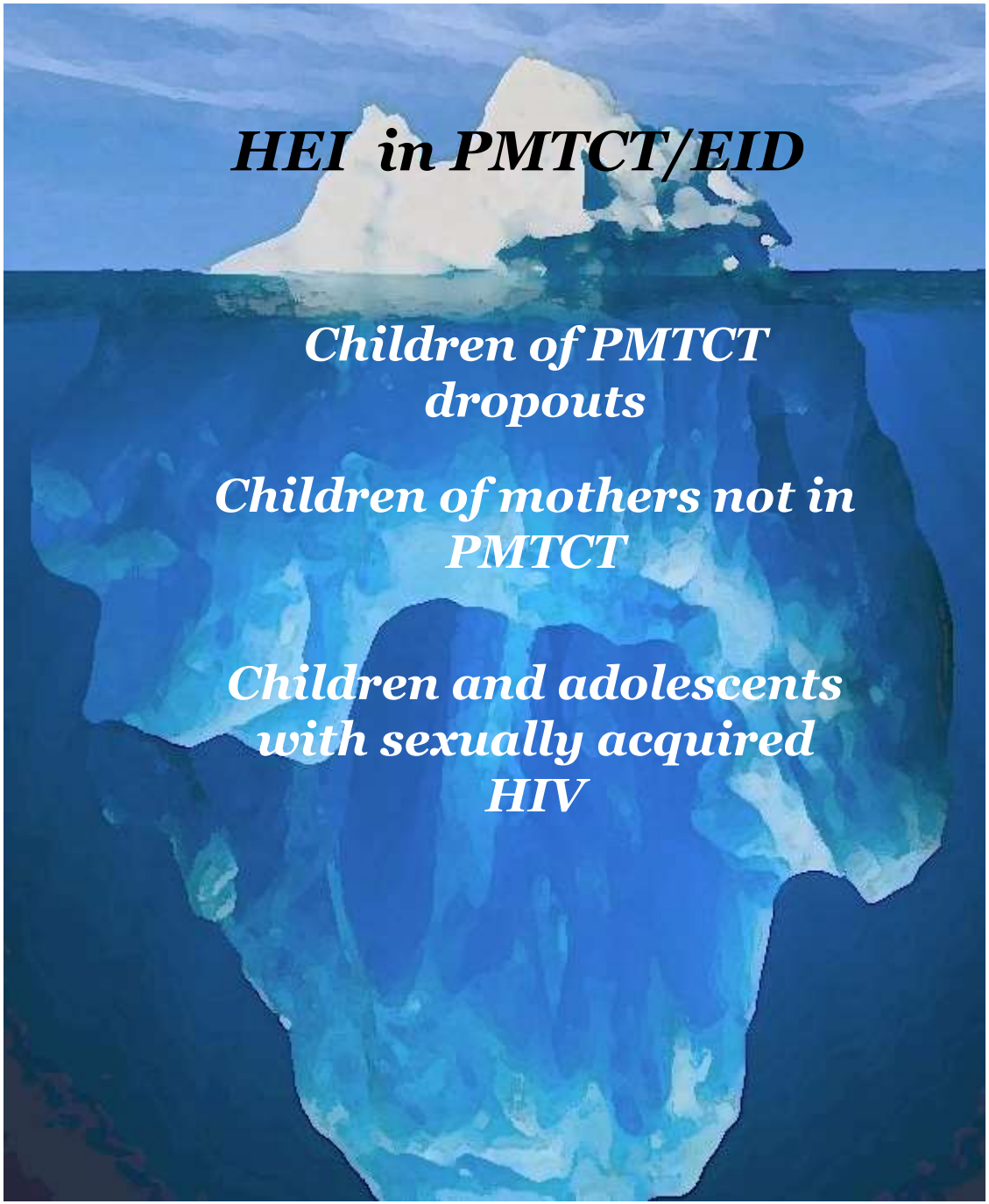
# Outline

- What can be done to expand enrollment and improve retention of children in ART services?
- Topics to cover
  - Expanding access for children to HIV testing in health care and other settings
  - Improving retention in care for HIV-infected children

# While progress is considerable- many HIV infected children go undiagnosed and untreated

- Antiretroviral therapy coverage for children has increased 9-fold since 2005
  - over 450,000 children started on ARV
- Of the **2 million** children estimated in need, only **28%** are receiving ARV
  - in contrast to 68% of women and 47% of men.
- In some countries >80% of eligible children lack ARV




# Few opportunities for HIV testing for children

- Apart from EID/PMTCT there is little access to testing
- Many infected children come in contact with but are **invisible** to the health care system.
- Many community settings are highly suitable for testing children

# Targeting Provider Initiated Testing

## Neglected Portals of Entry to Care

**Health Services**

- Children of parents in PMTCT and HIV treatment services
- Children in hospital wards, IMCI/Well-baby clinics, nutrition clinics
- TB services
- Sexual and reproductive health/family planning services
- Program for Immunization

**Community-based**

- Orphans and vulnerable children services
- Early childhood centers/ schools
- Churches, sports, and other community/youth/organizations
- Home-based testing

# PITC for children of women in PMTCT-1

- HIV testing in PMTCT programs is improving but remains low
- In 2009, only 26% of 1.4 million pregnant HIV-infected women in low- and middle-income countries were tested for HIV.
  - In Eastern and Southern Africa, only half of pregnant women were tested for HIV.
- Among 65 reporting countries, only **28%** [24–30%] of infants born to mothers receive appropriate testing (EID) within the first two months of life.

# PITC children of women in PMTCT-2

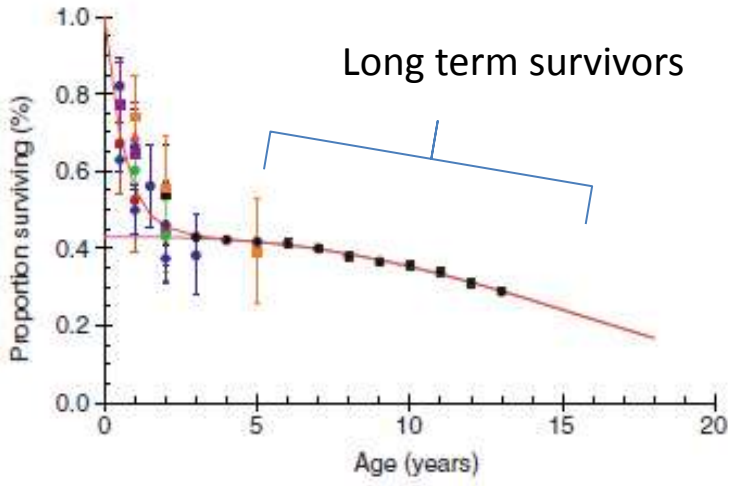
- There is little testing of *<u>older</u>* children of HIV+ mothers enrolled in PMTCT.
- In Cote d'Ivoire (2008)
  - only 10.3% of children of women enrolled in PMTCT were ever tested (excluding the known exposed infant)
  - 12% of those brought in for PITC were HIV+


Tonwe-Gold B,et al *Trop Med Int Health.* 2009;14(2):204–212.

# Expand PITC to children of adults in HIV treatment

- Testing of children of HIV+ adults in care and treatment programs is also extremely low
- Only 18% of children of adults in ART program <16 yrs were ever tested (Malawi 2010)
- Nigeria (2009) ART program identified 22,915 children of 16,234 HIV-infected adults enrolled in care and treatment programs
  - 63% had *not* been tested for HIV
  - 22% of those brought in for PITC were HIV+

# PITC in pediatric health services – hospitalized children




- 36% perinatally infected children are “long term survivors” with a median survival of 16 years (Ferrand RA AIDS 2009)

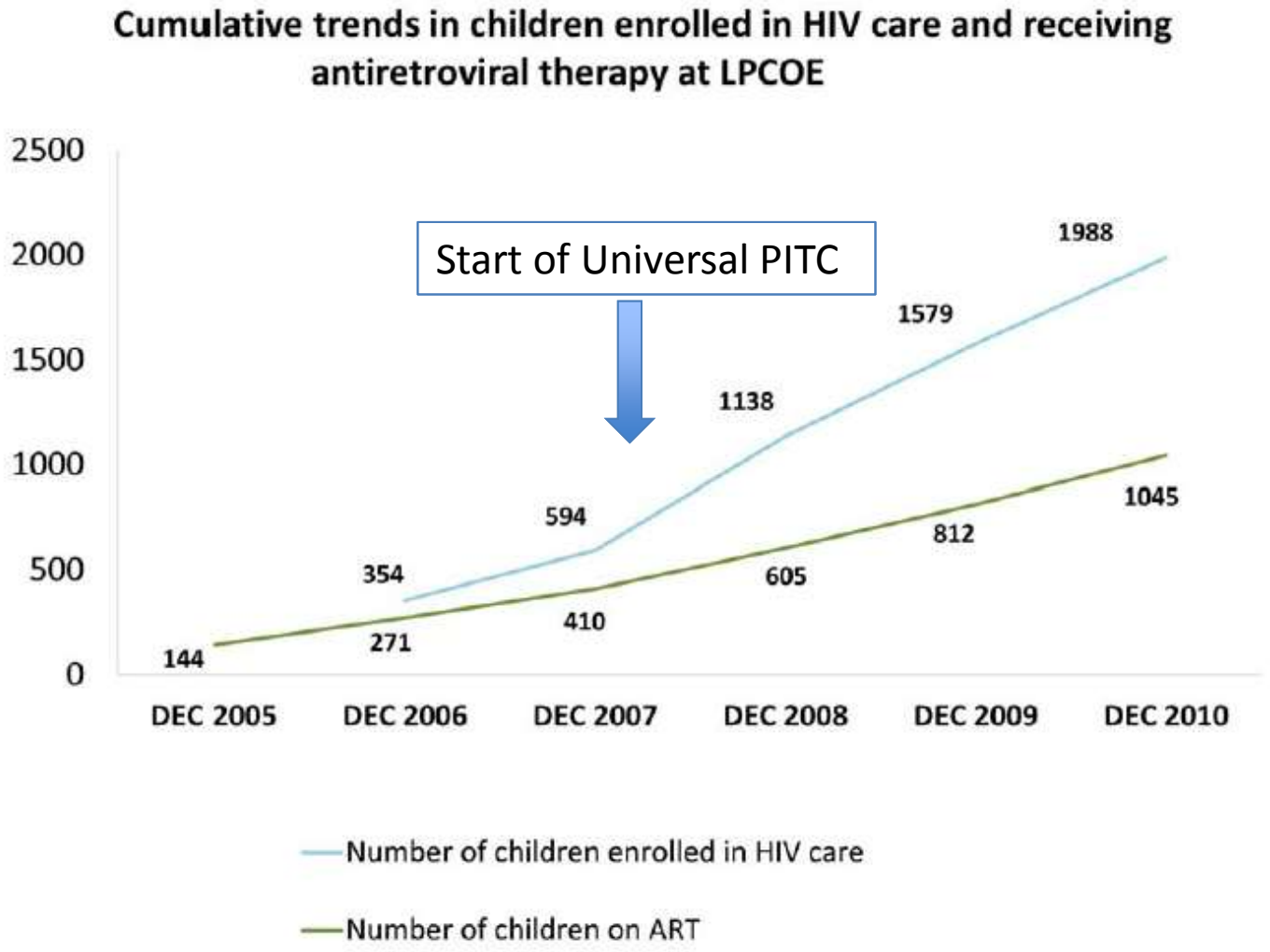
- Where PMTCT incomplete or has been delayed, children with unrecognized HIV frequently have contact with health services.
- In SA youth median age at diagnosis was 11-12 years (Walker, JAIDS 2006)
- In Zimbabwe, HIV was the most common cause of hospitalization for children >10 years (Ferrand RA, PLoS Med 2010)

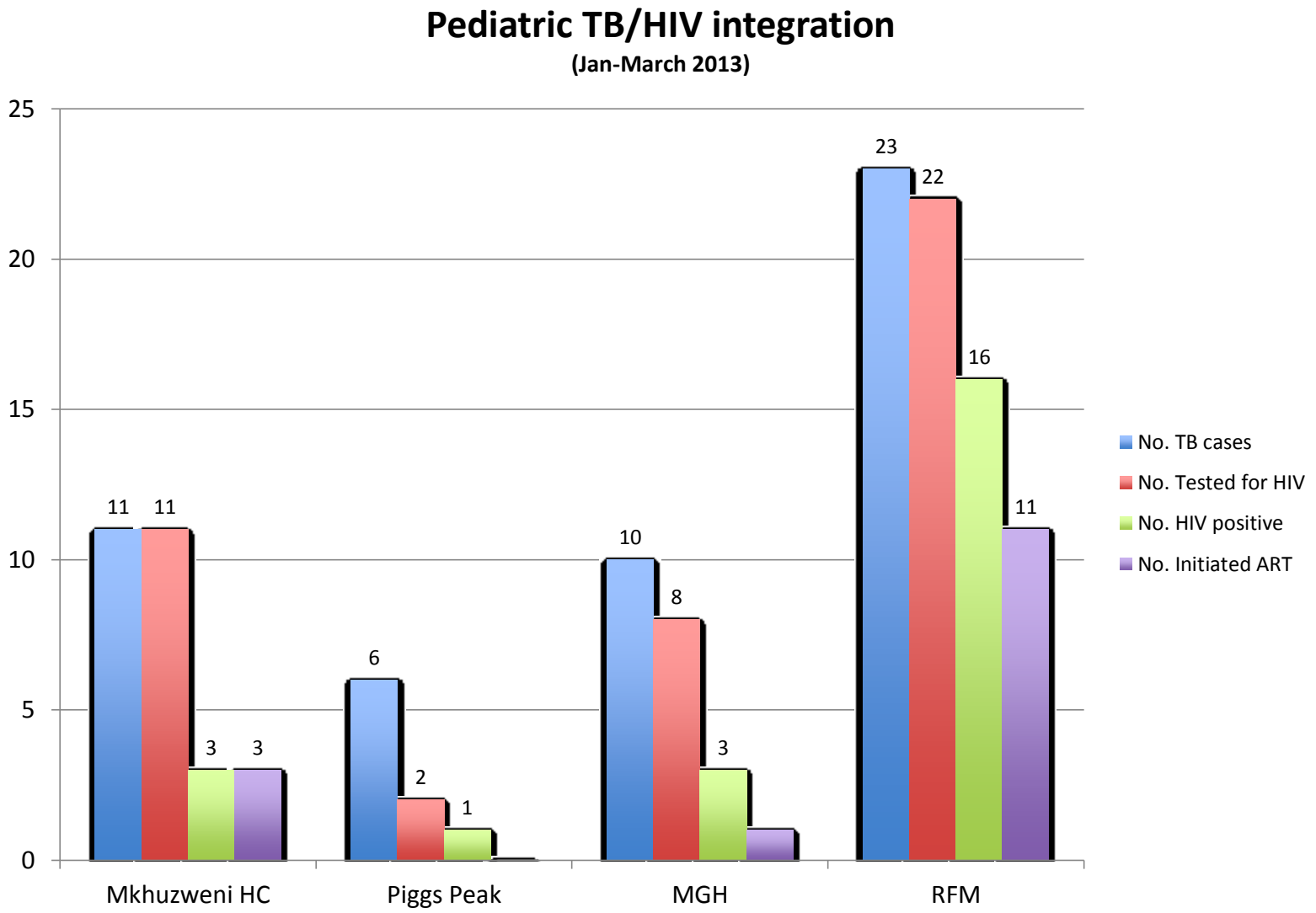
# Universal PITC in pediatric health services increases enrollment of children on ART

- Livingstone GH, Zambia – Nurses and physicians provided PITC to all children with unknown HIV status at all inpatient wards and outpatients clinics
- Confirmed positives were escorted to HIV care or contacted by phone if PCR pending at discharge
  - 5,074 children with unknown status were seen
  - 98.5 % were counseled and 98.2% of these children were tested
  - 15.5% tested positive for HIV
  - 99.9 % enrolled in care

Mutanga et al PLos ONE 2012 7 (4) e29656

# Institution-wide PITC and linkage to HIV care




Pediatric TB/HIV integration
(Jan-March 2013)
25
20
15
10
5
0
11
11
3
3
6
2
1
10
8
3
23
22
16
11
Mkhuzweni HC
Piggs Peak
MGH
RFM
No. TB cases
No. Tested for HIV
No. HIV positive
No. Initiated ART

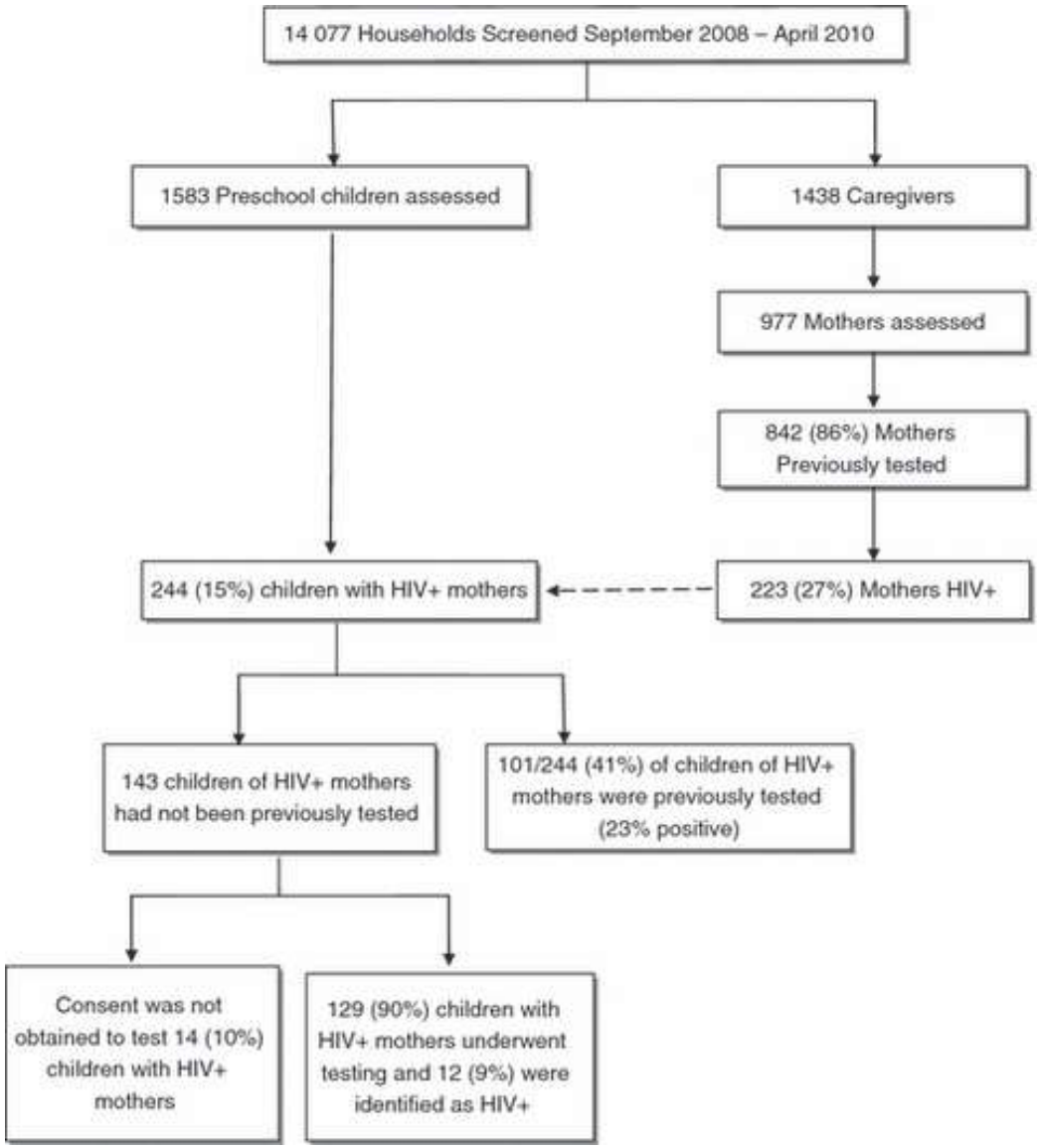
# School-based PITC

- 6 primary schools in Harare, Zimbabwe were invited for testing to be done at nearby community centers
  - Anonymous seroprevalence (n=4386)
  - Simultaneously offered HCT (n=1886)
- Overall seroprevalence 2.7%,
- Seroprevalence of 6.8% for those with parental consent
  - many parents  who consented “were concerned” their child was infected
- All HIV-infected had CD4 and were referred to care

Bandason T, et al AIDS Care2013;10;1080

# Household PITC

- A survey of households with 4-6 yo in rural SA, found 15% of children had HIV+ mothers but only 41% of them had ever been tested
- PITC found 9% of these children were infected




Chhagan M et al. Trop Med &Int Hlt 2011;16: 1490-94

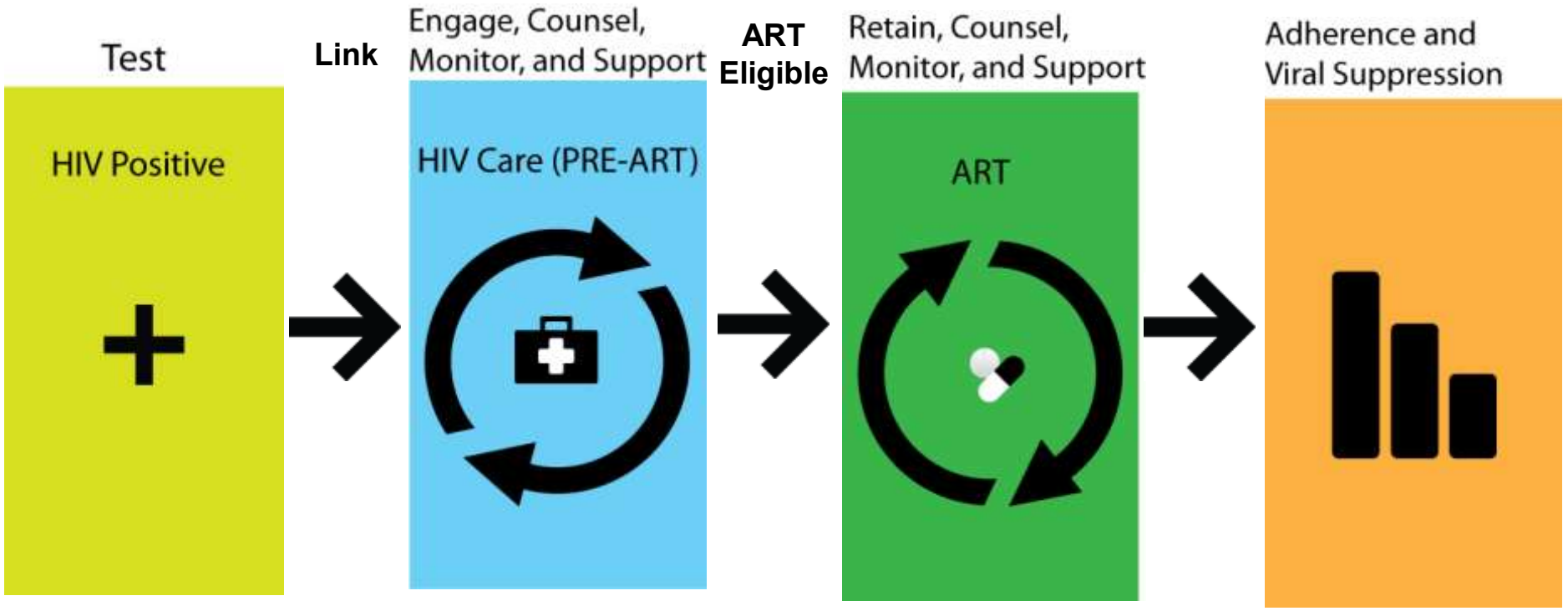
# Expanding PITC for Children

- Expansion of PITC in health services:
  - For children of women enrolled PMTC
  - For children of adults enrolled in HIV care and treatment/ART programs
  - Points of care for children e.g. hospital wards
- Community settings:
  - Services for orphans and vulnerable children
  - Household level
  - School and other community based settings
- Feasible, acceptable and  when coupled with linkage to care increases enrollment of children on ART

# What does it take to scale up to universal PITC for children?

- Clear and well known policies regarding consent for testing of children
- Effective procurement and supply chain for test kits.
- Human resources for counseling and follow up support
- In healthcare settings, reorganization of space and patient flow to support routine testing may be necessary
- Information management- “seamless” lab/medical record systems to facilitate movement of test results and patients between sites of testing and treatment

- Expanding testing is only the first step-
- Improving linkage and retention during Pre ART period as well as after initiation of ART remain priorities



# Unacceptably high rates of lost to follow up (drop outs) from care and treatment program

- Estimates of program LTFU rates are sparse, varied but indicate the problem is substantial
  - LTFU rates are high during "Pre-ART"
  - LTFU is especially high for older children
    - 19% of children (n ~10,000) were LTFU 24 mos after starting ARVs. (McNairy et al JAIDS 2013)
- Poverty, poor systems of transportation, long travel distances to clinics (especially in rural areas) are major barriers to retention Mugglin C et al. PLosOne 2013;8:e56446

Mugglin C et al. PLosOne 2013;8:e56446

# Innovations for improving retention

- **Programmatic**
  - Active defaulter tracking
  - Reducing travel to care by decentralizing to Primary health facilities
  - Integrating homecare psycho-social support
- **Technologic**
  - Point of care CD4 testing
  - SMS texting

# Programmatic measures to improve retention

# **Defaulter tracing**

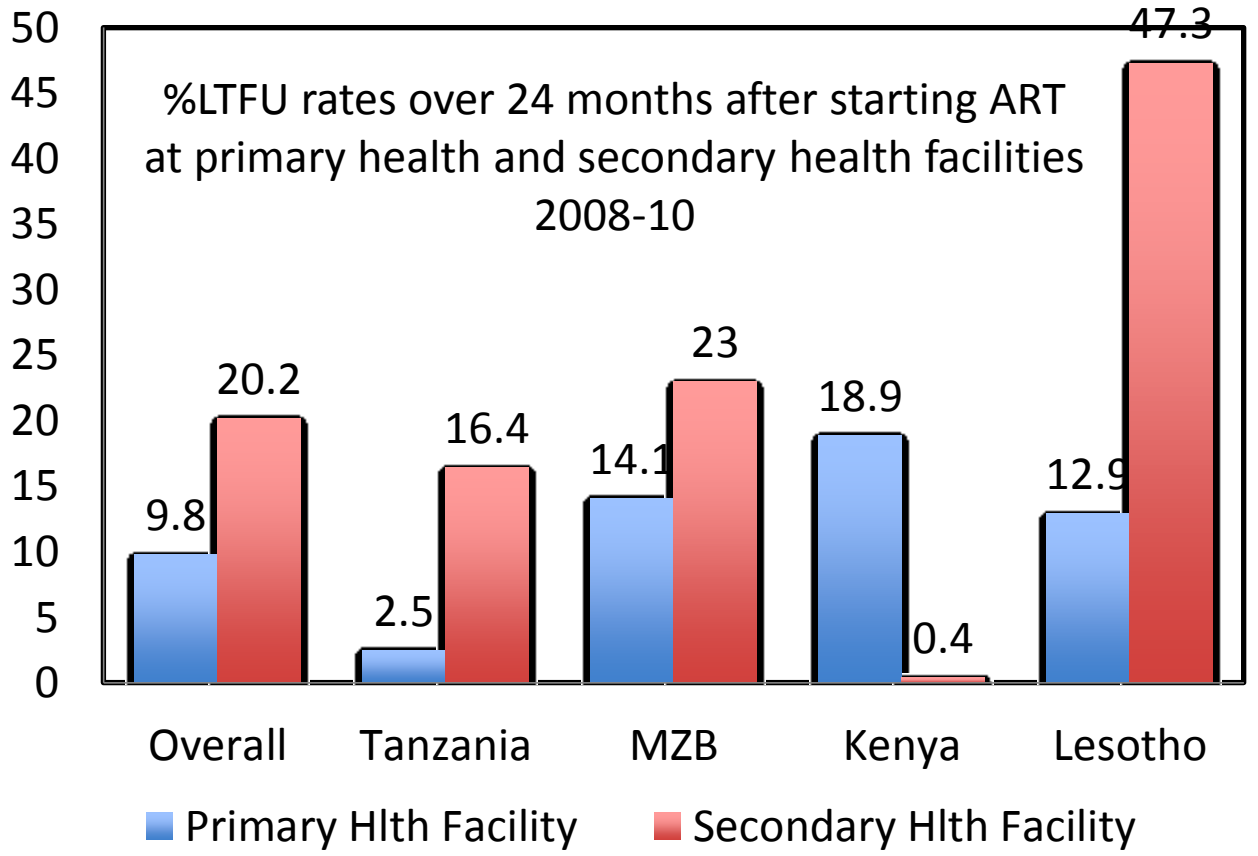
- Active defaulter tracing through telephone calls, in-person visits or both for missed appointments in Kibera, Kenya reduced LTFU (21% vs 11%)*
  - 1069 patients missed visit, 15% not traced
  - 59% returned to clinic, 9% unable to return, 6% died, 4% refused, 0.8% were hospitalized

*Thomson KA et al Trans R Soc Trop Med Hyg 2011;105c:320-26

Programmatic measures to improve retention

# Expanding access to HIV care to primary health facilities

- Expanding HIV care for children to PHF increases overall enrollment
- LTFU lower at PHF compared to SHF




Fayorsey R et al JAIDS 2013;62:e124-30

Programmatic measures to improve retention

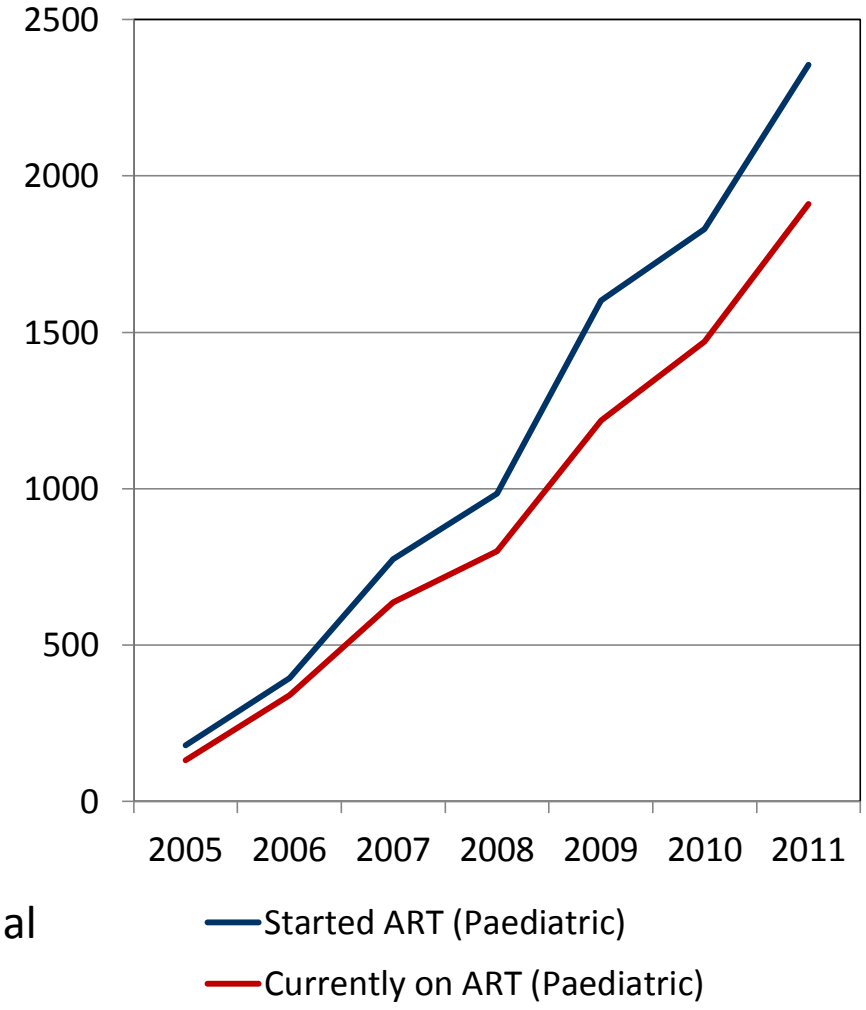
# Co-locating multiple services

- **Program characteristics associated with low LTFU**
  - Co-located pediatric HIV/ART and PMTCT, and nutrition services
  - Linkages with home-based services
  - Linkages to associations of PLWHIV

Mugglin C PLoS ONE 3013

# Programmatic measures to improve retention
# **Specialized Community Health Workers**

- Mwangalizi (Swahili for overseer) integrate home/community/clinic and provide support for families with HIV infected children at clinic and during home visits




N.Kist, et al AIDS 2010 - XVIII International AIDS Conference: Abstract no. CDE1291

# Technologic innovations to improve retention

- **Point of care CD4 testing**
  - Logistics of CD4 testing is a source of delays ART initiation and may contribute to pre-ART and ART LTFU
  - Point of care CD4 testing -
    - Rapid, simple, portable and accurate (but may underestimate at higher CD4 –e.g.>500)
- **SMS Texting**
  - Weekly texts improve adherence to ART reduced VL (Cochrane Review 2012)
  - Used widely to transmit EID results from lab to facility
  - Trials of SMS for retention in care are on-going

Jani IV et al. Lancet 2011;378:1572-9

# Thank you