



# Addressing HIVDR to reach 90-90-90: what do we know and what do we need to do?

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# SUSTAINABLE DEVELOPMENT GOALS

## 17 GOALS TO TRANSFORM OUR WORLD



### 2016 HIGH-LEVEL MEETING ON ENDING AIDS

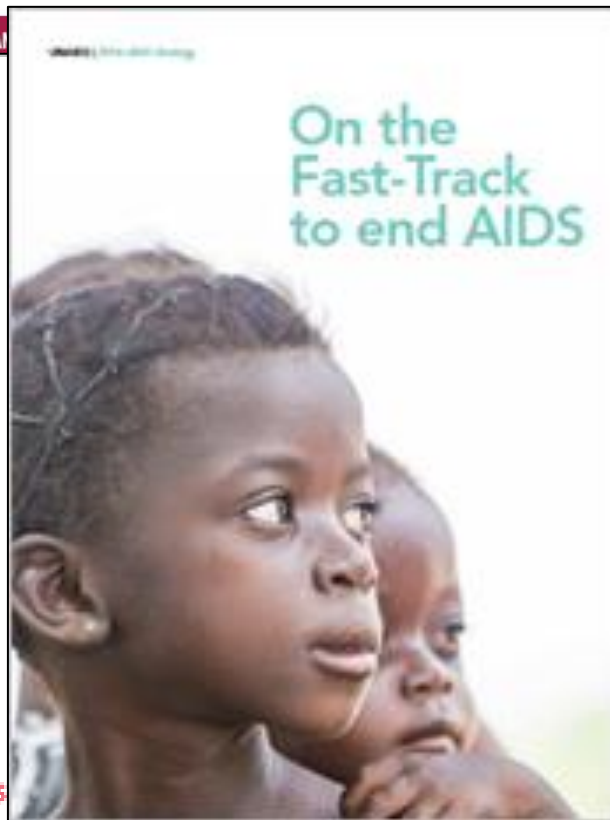
UNITED NATIONS GENERAL ASSEMBLY  
NEW YORK | 8–10 JUNE 2016

7 AFFORDABLE AND

9 DECENT WORK AND

## 90-90-90

An ambitious treatment target  
to help end the AIDS epidemic



SIXTY-NINTH WORLD HEALTH ASSEMBLY  
Provisional agenda item 15.1

A69/31  
xx April 2016

### Draft global health sector strategies

HIV, 2016–2021

Report by the Secretariat

1. The Executive Board at its 138th session noted an earlier version of this report, which provided a summary of the draft strategy and web links to the full version of the draft strategy in all official WHO languages.<sup>1</sup> The Executive Board recommended that the Sixty-ninth World Health Assembly consider the draft strategy and that the Secretariat draft a resolution for its possible adoption. The updated version of the strategy presented here (see the Annex) introduces additional detail, including: a definition of the term “key populations”; tailoring of responses to the country context; highlighting the importance of comprehensive HIV prevention; simplified antiretroviral treatment protocols and differentiated care; applying, as appropriate, the use of the provisions potential in the Agreement on Trade-Related Aspects of Intellectual Property Rights regarding flexibilities to protect public health; and reporting arrangements.<sup>2</sup>

2. In May 2011, the Sixty-fourth World Health Assembly endorsed the global health sector strategy on HIV/AIDS, 2011–2015,<sup>3</sup> and affirmed the vision and strategic directions of the global health sector strategy on HIV/AIDS, 2011–2015 and that the global strategy aimed to guide the health sector’s response to HIV, including recommended actions at country and global levels, as well as contributions to be made by WHO. Resolution WHA64.14 requested the Director-General, inter alia, to monitor and evaluate progress in implementing that global health sector strategy on HIV/AIDS, 2011–2015, and to report on that progress, aligned with the reporting of other United Nations agencies, through the Executive Board, to the Sixty-fifth, Sixty-seventh and Sixty-ninth World Health Assemblies.

3. In May 2014, the Sixty-seventh World Health Assembly reviewed progress on the implementation of the strategy.<sup>4</sup> There was a call by Member States for the development of a new

<sup>1</sup> Document EB138/29.

<sup>2</sup> Additional comments provided by Member States during the Executive Board at its 138th session are reflected in the updated draft strategy; see the summary records of the Executive Board at its 138th session, 138th meeting (document EB138/2016/REC/2). Specifically, sections of the draft strategy that were revised include: 3.4, 4.0, 4.2.2, 4.2.4, 4.3.1, 4.3.3, 5.5 and 5.3.3.

<sup>3</sup> Resolution WHA64.14 and document WHA64/2011/REC/1, Annex 4.

<sup>4</sup> Document A67/40 progress report A.

# Low Level of Pre-Treatment Resistance in LMIC

## In The First 10 Years After Roll Out

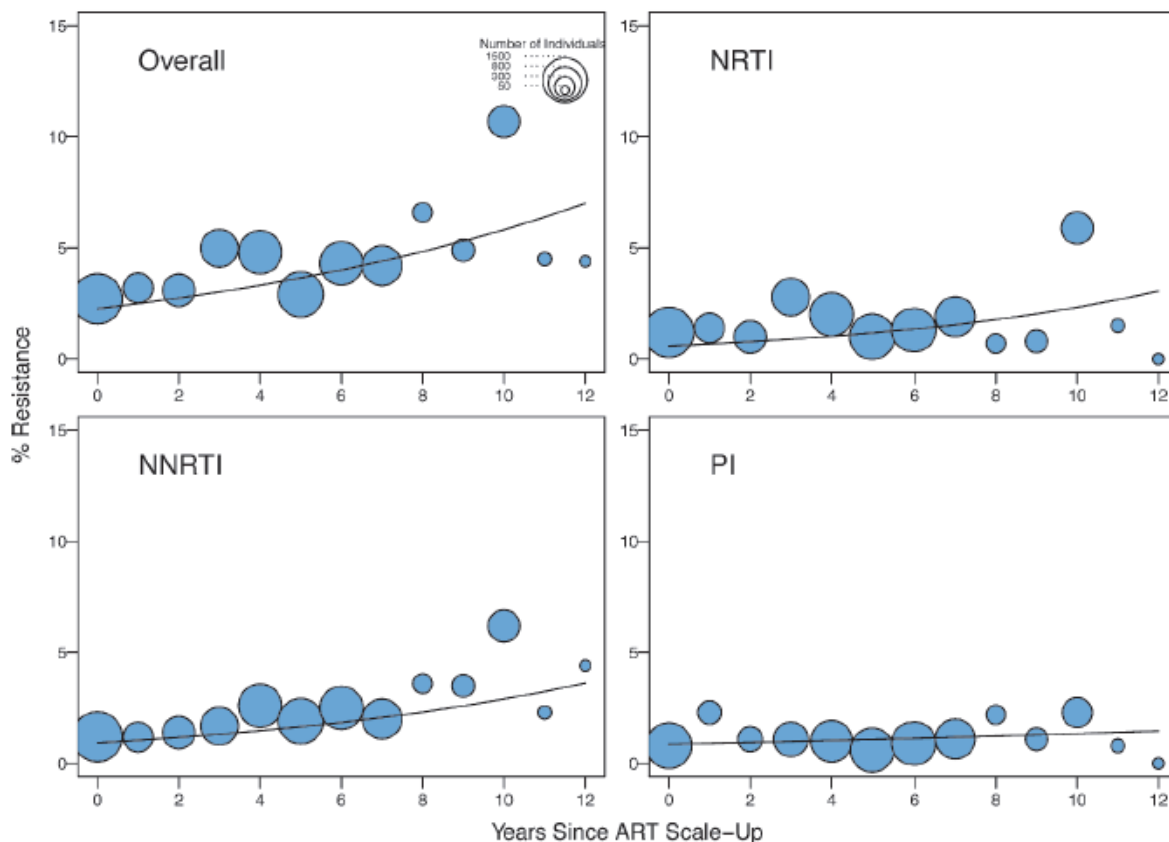
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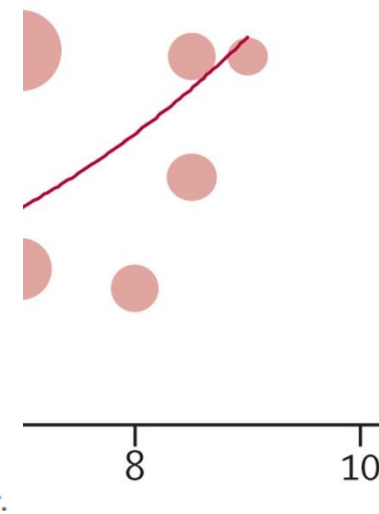
7.4%

6.8%

### Sub-Saharan Africa



Soo-Yon Rhee et al, PLOS Medicine 2015



R. Hamers,  
Effect of pre-treatment  
immunological  
first-line antiretroviral  
multicentre co

Raphi Hamers, Rob Schuurman, K  
Maureen Wellington, Akin Oluogbo  
Studies to Evaluate the Resistance (PA

**Summary**  
Background The effect of pre-treatment  
therapy (ART) in sub-Saharan  
immunological, and drug res

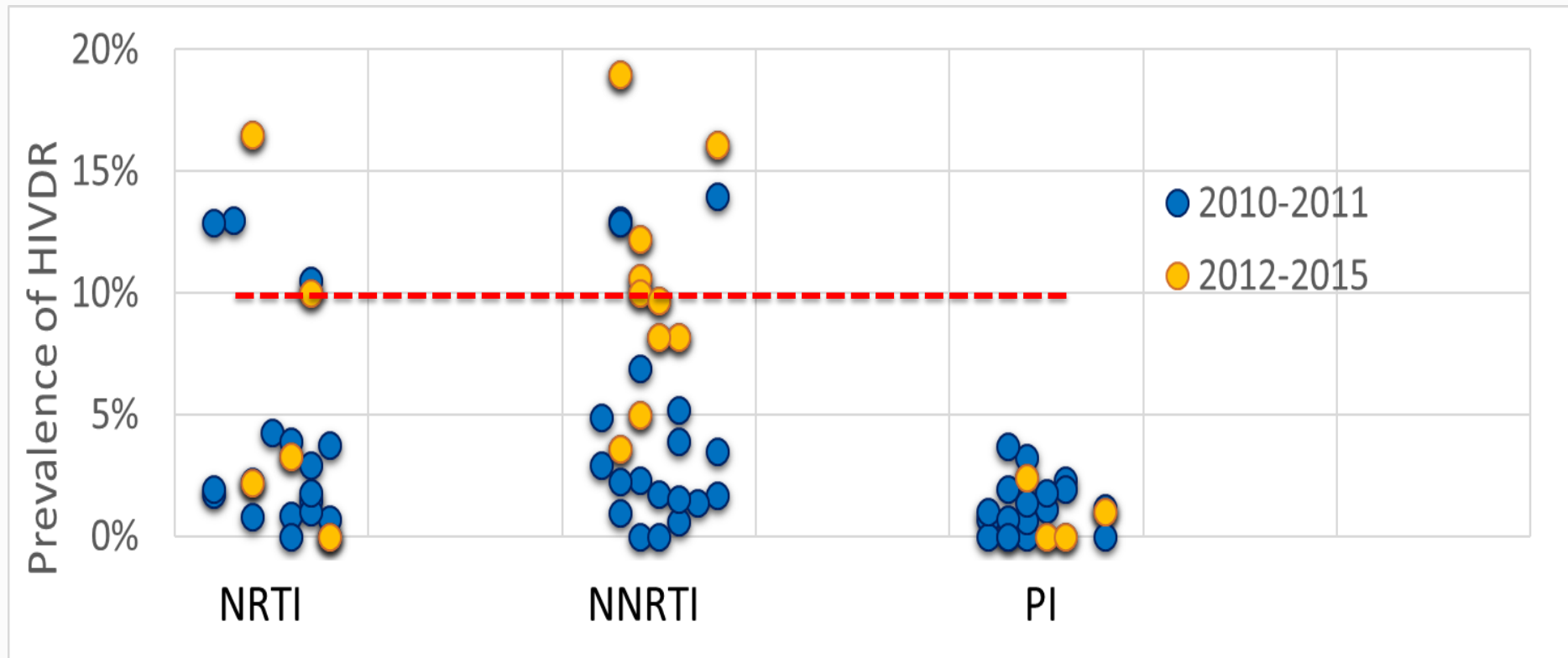
**Methods** HIV-1 infected pa  
cohort started non-nucleosid  
to 2009. We used the Inno  
classify participants into thr  
drug resistance with fully a  
least one prescribed drug,  
resistance after 12 months o  
CD4 cell counts increase wa

**Findings** Pre-treatment drug  
pre-treatment drug resistan  
had pre-treatment drug resi  
drug resistance, the odds ra  
resistance (2-30, 1-55-3-40  
prescribed drug, but not in  
participants with pre-treatm  
95% CI 13-58; p=0-002).

**Interpretation** At least three

# Recent signals of high levels of resistance

Update on HIVDR in ARV-Naïve in LMIC,  
by year of specimen collection (2010-2015)





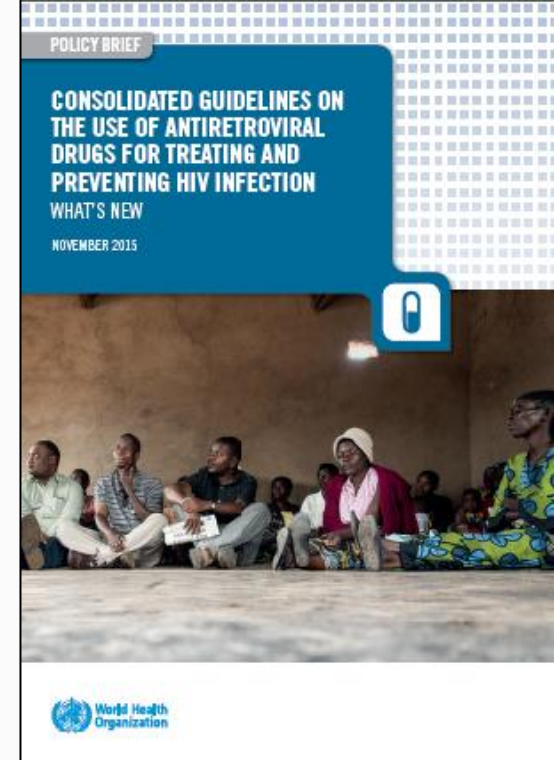
## Address resistance to reach the 90 90 90 and SDG target

- Recent signals of high levels of resistance
- If pre-treatment resistance >10%, we'll not likely meet last 90
- Resistance is a threat to programme sustainability
- Treat all \* Quality = Impact

# WHO recommendation on HIVDR testing for clinical care

WHO recognizes the value of HIVDR testing for individual patients where:

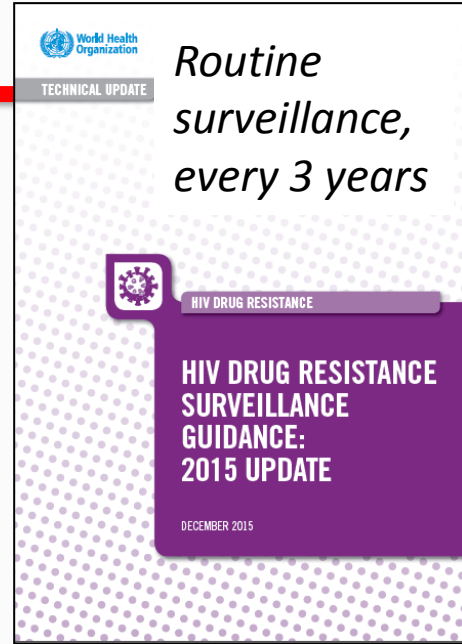
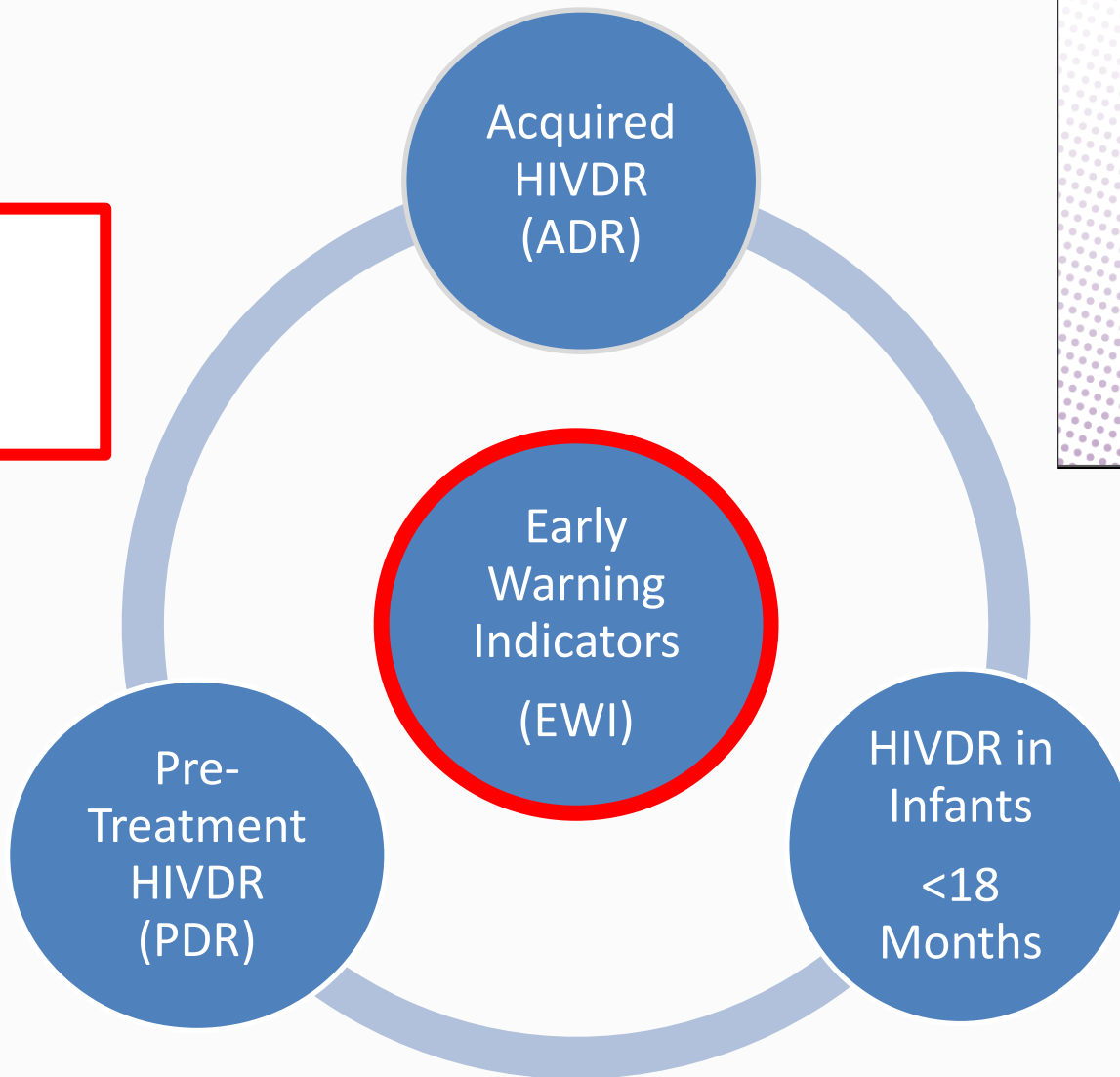
- adequate treatment options are available
- in-country expertise exists to properly interpret HIVDR testing results



1 <sup>st</sup> line ART	2 <sup>nd</sup> line ART	3 <sup>rd</sup> line ART
2 NRTI + EFV (Preferred regimen)	2 NRTI + ATV/r or LPV/r	DRV/r + DTG (or RAL) ± 1-2 NRTIs
	2 NRTIs + DRV/r	
2 NRTI + DTG	2 NRTI + ATV/r or LPV/r	DRV/r + 2NRTIs ± NNRTI
	2 NRTIs + DRV/r	Optimize regimen using HIVDR testing

# WHO HIVDR Surveillance and Response

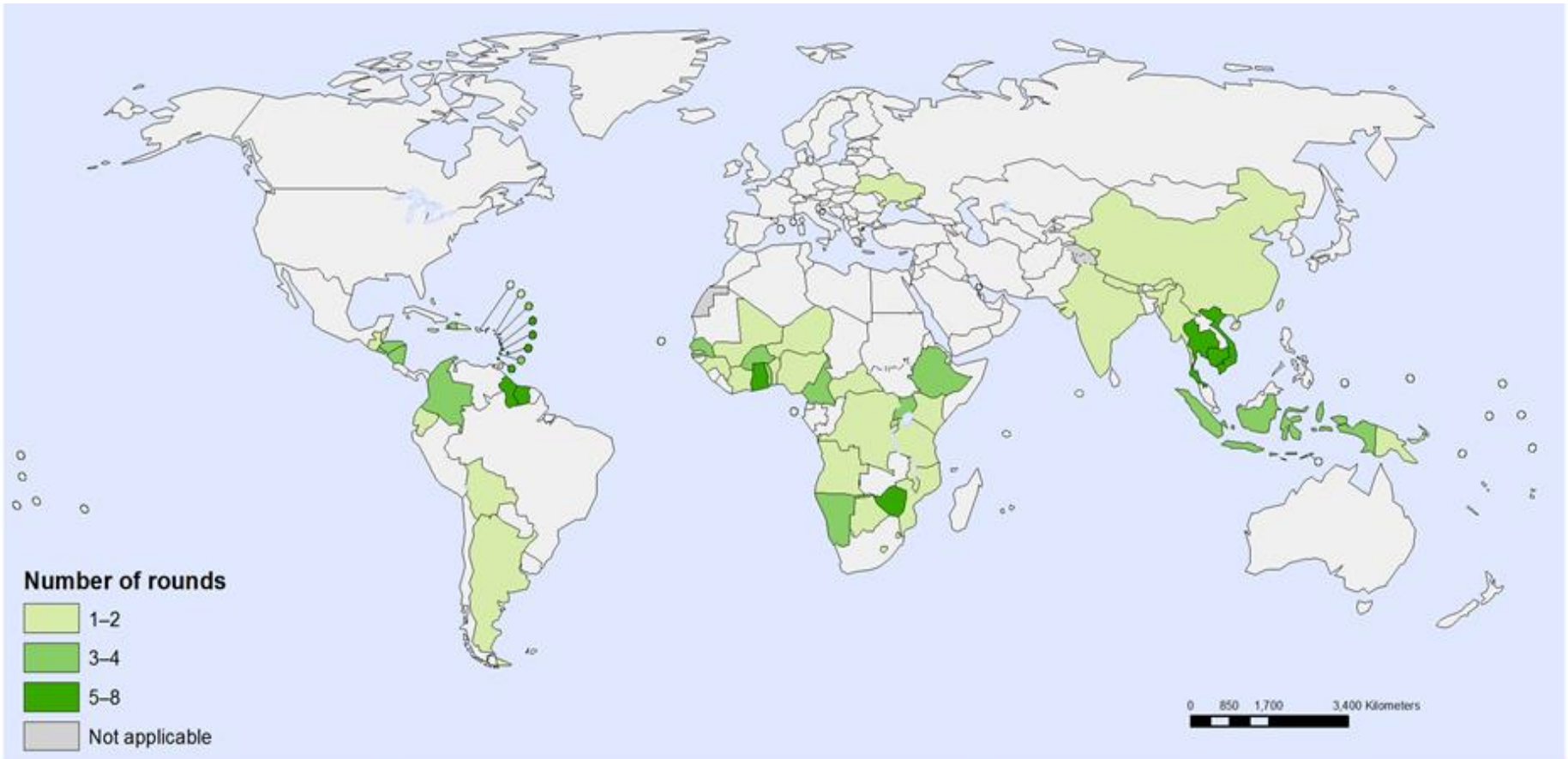
HIVResNet  
Laboratory  
Network





# Early Warning Indicators NEW Global Report planned for IAS 2016

59 countries - 7351 ART sites - 1,121,537 patients (204-2014)

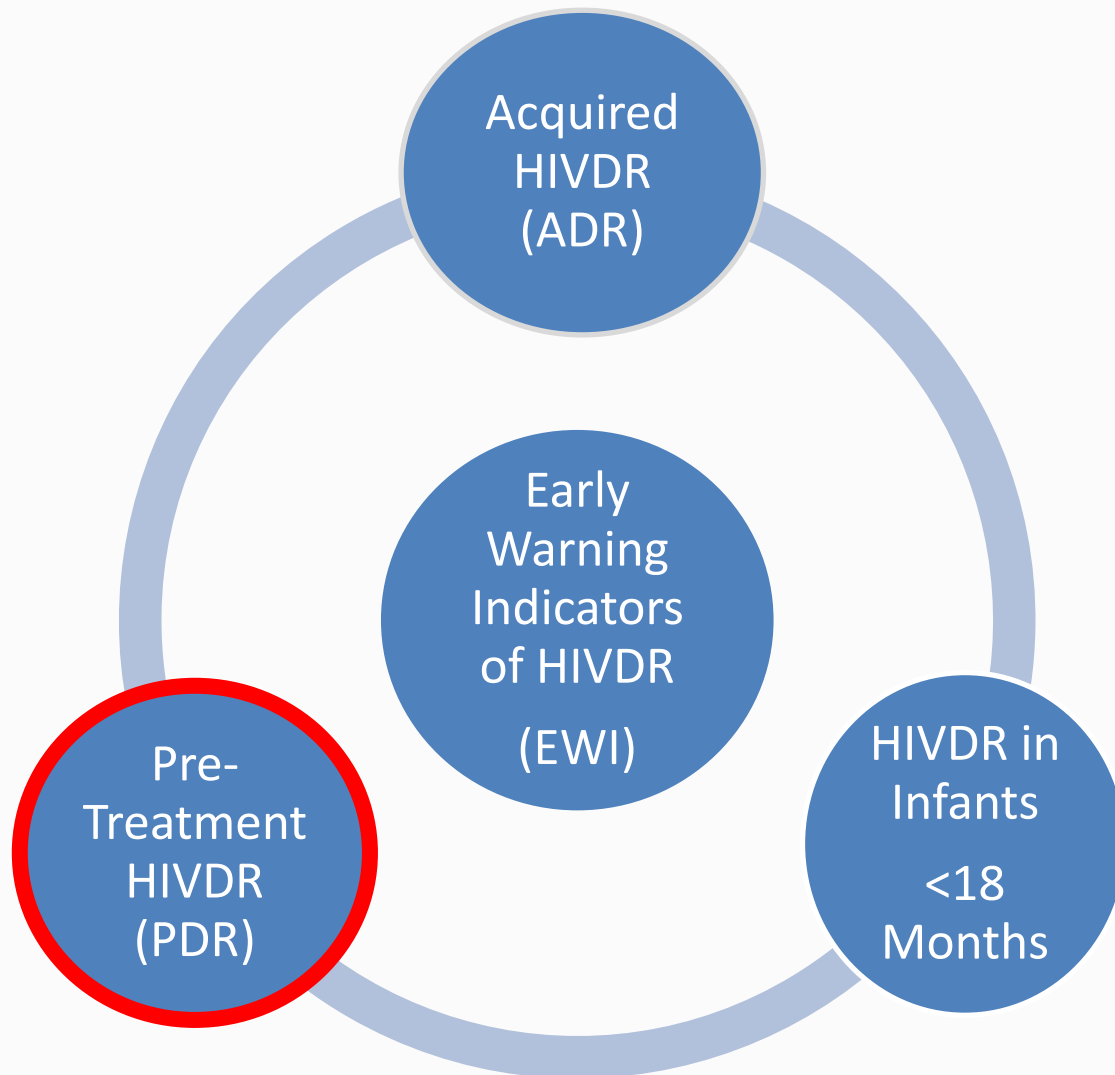


- ARVs stock out
- Retention in care at 12 months
- Lost to follow up at 12 months
- Appropriate prescribing practices

- VL testing coverage
- VL suppression
- On time pill pick up



# WHO HIVDR Surveillance and Response



# Nationally Representative Pre-Treatment HIVDR Survey Among 1<sup>st</sup> line ART Starters (PDR)

## Reported prior ARVs exposure:

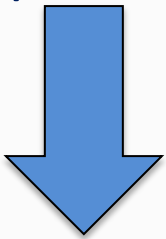
Risk of PDR: 5 times greater;

Risk of VF in the 1<sup>st</sup> year: OR=3.10;

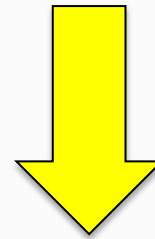
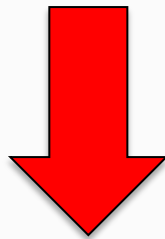
p<0.0001

*R.Hamers, Lancet ID, 2011*

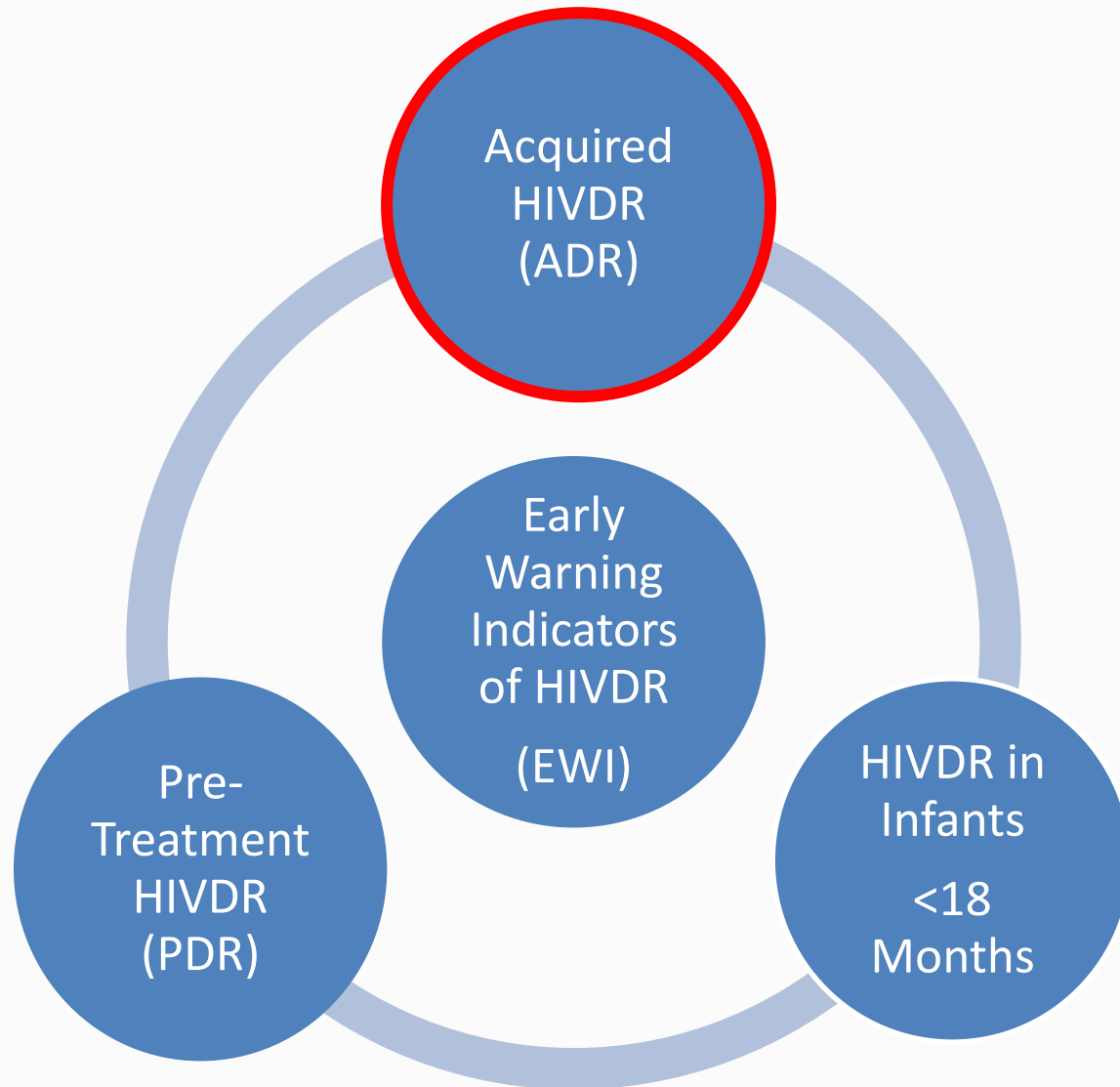
ART re-starters or women  
with prior PMTCT



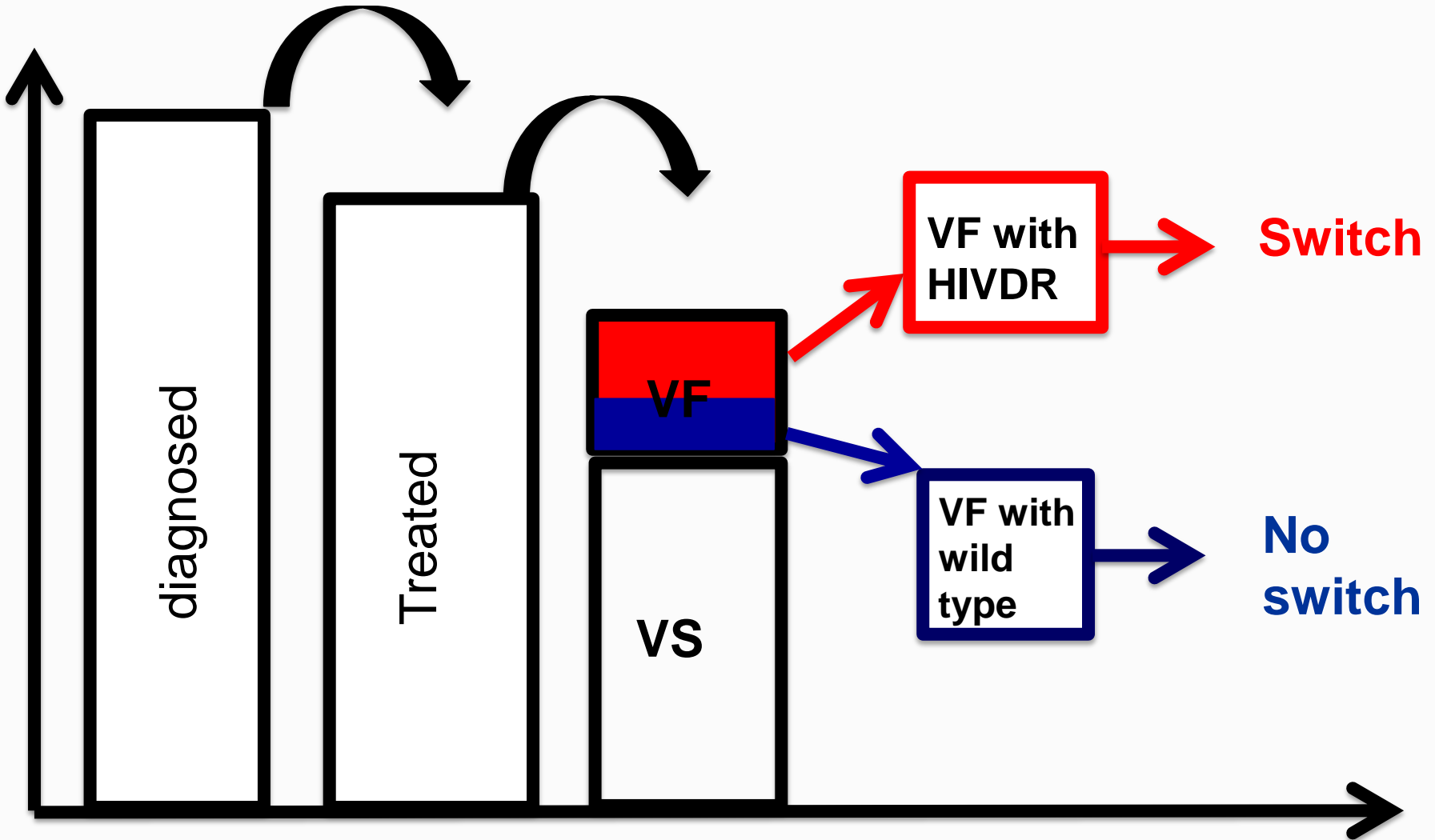
ARV naïve ART starters



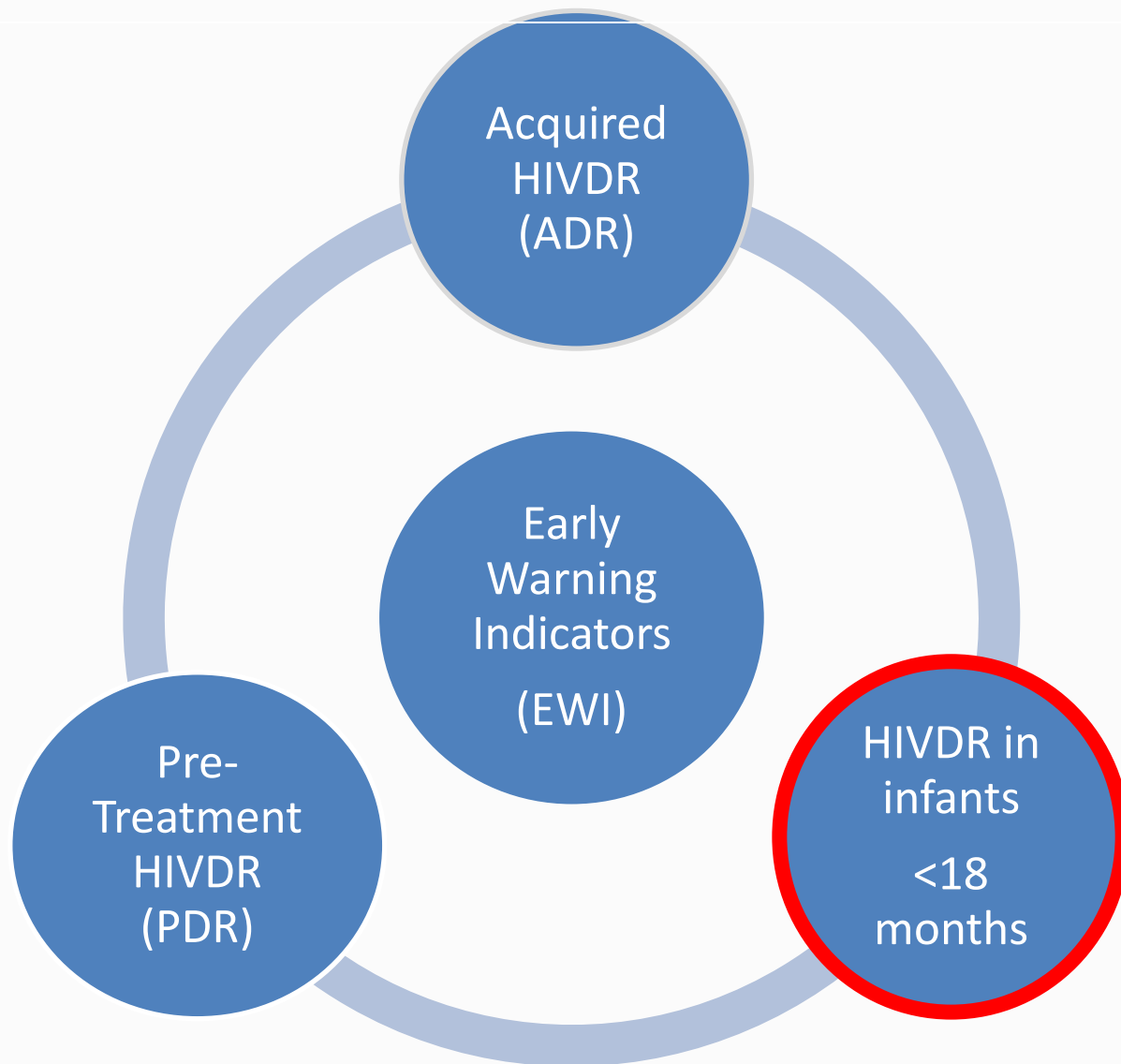
# WHO HIVDR Surveillance and Response



# Nationally Representative Survey of Acquired HIVDR (ADR)



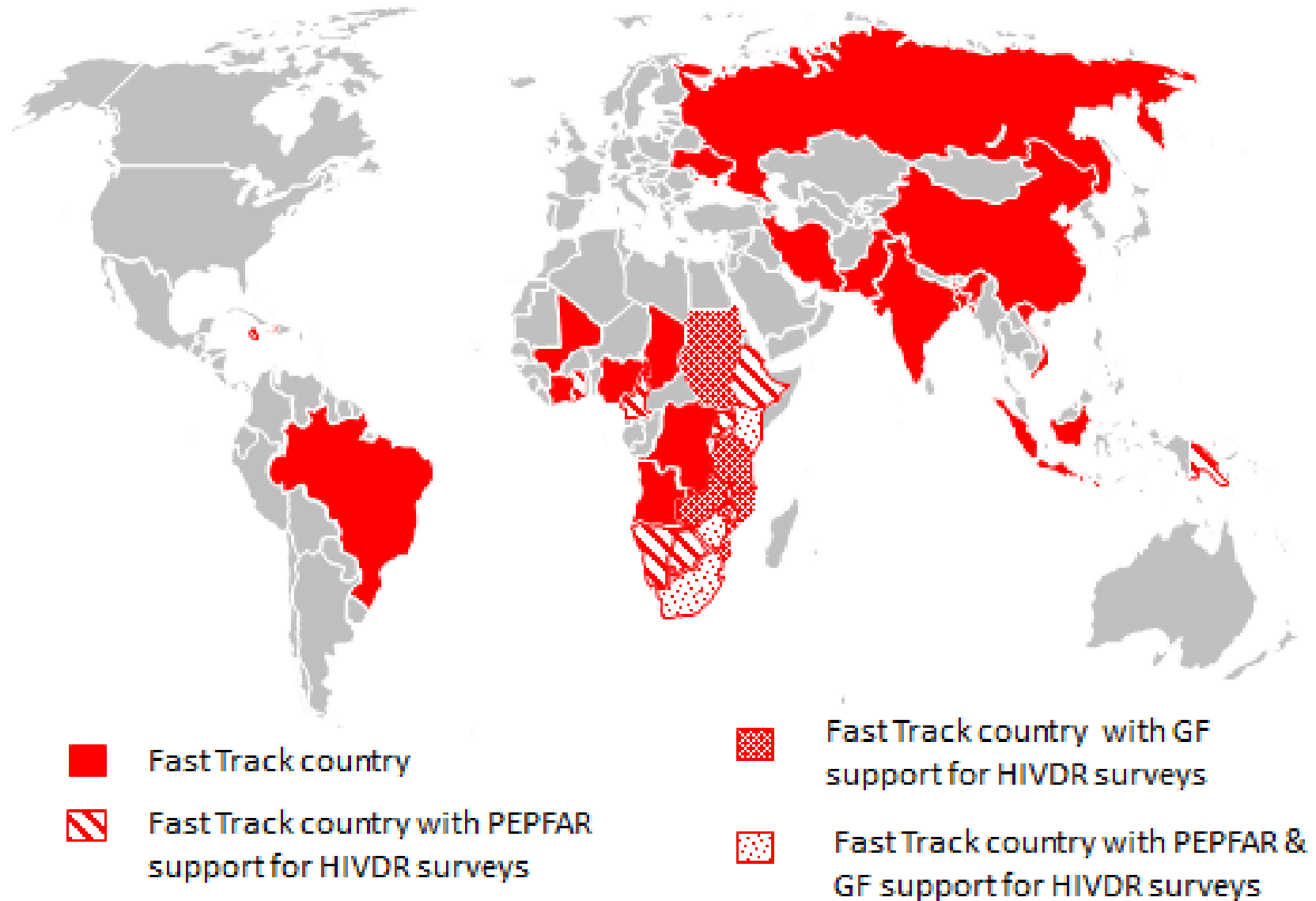
# WHO HIVDR Surveillance and Response



# Nationally representative surveys of resistance in children < 18 months ART- naive

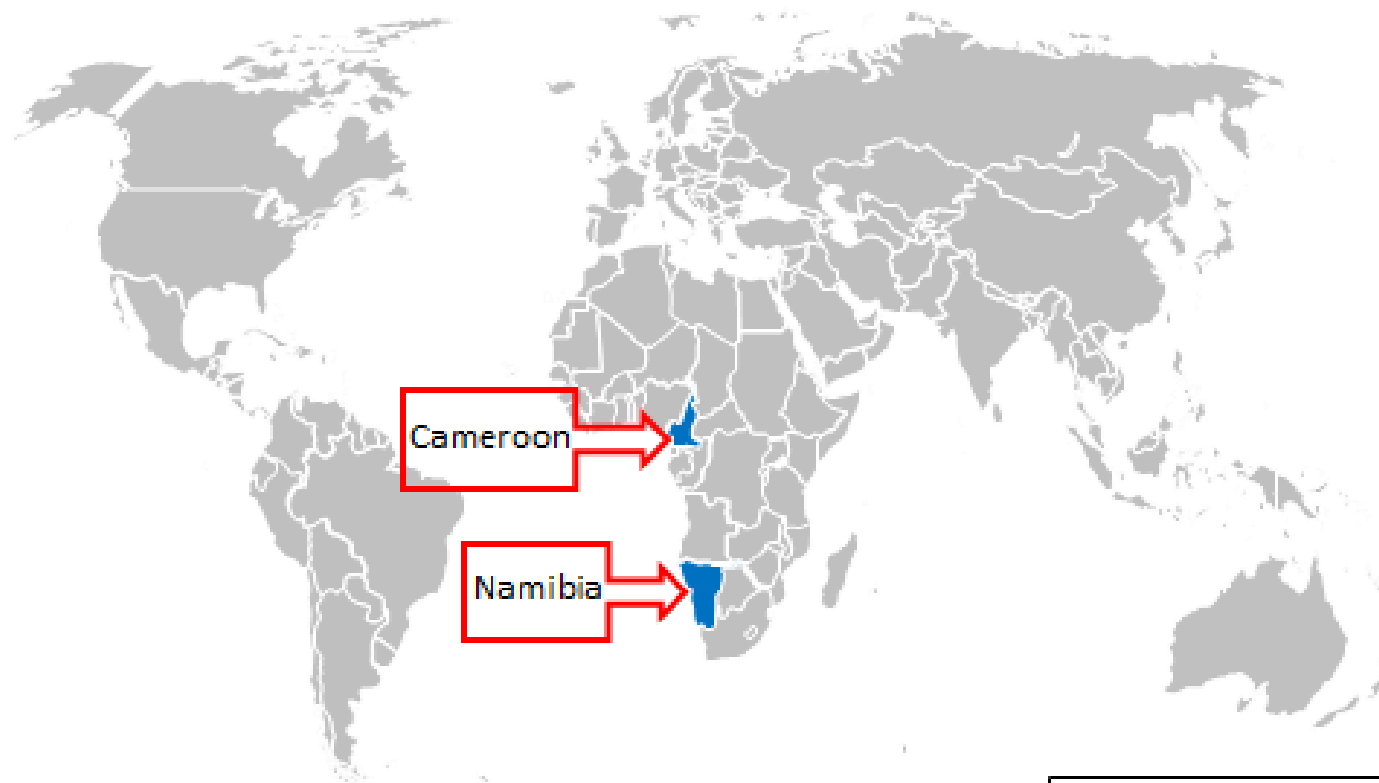
- **Background:** All children < 3 yrs should be started on PI-based ART. At present, 40% of children still initiate a NNRTI-based regimen.
- **Survey outcome:** Prevalence of **NRTI and NNRTI resistance** in infants < 18 months
- **Relevance:**
  - Reinforce the need to use PI-based ART in children < 3yrs.
  - Inform potential future treatment strategies (e.g. PI-sparing options)

# 34 Fast Track Countries account for 90% of new infections





# Only 2 countries have completed implementation of the 3 priority elements: PDR + ADR + EWI (2013-2015)



■ All 3 elements of HIVDR Strategy not implemented/ HIVDR survey implementation not reported to WHO

#### \*Priority Elements of HIVDR Strategy

1. EWI of HIVDR
2. PDR surveys
3. ADR surveys

# WHO

Convening, norms and standards, monitor health situation and assess trends, stimulate knowledge generation and its translation into policy

Steering Group Meeting

HIVResNet Meeting

Regional meetings; on-line input

HIVResNet Steering Group reviews input

Complete draft vetted at IAS Durban

Launch

OCTOBER 2015

FEB 2016

TODAY-JUNE

JUNE

JULY

1<sup>st</sup> QUARTER 2017

BMGF

PEPFAR

GF

National Governments

Bilateral donors



## Addressing HIVDR to reach the last 90 and SDG target: **what do we need to do?**

- HIVDR surveillance is not one off -- need **for fresh national data from standardized surveillance** (core data) from **ALL** countries
- **Building lab capacity** in HIVDR testing: a step wise approach
- More surveys/studies that look beyond merely measuring TDR
- Use **national** data and **local** data (phylogeny; population dynamics in high incidence areas)
- Monitor **programmatic factors** leading to HIVDR and identify **effective strategies** to address them
- Empower **country ownership** and **encourage use of data** for programmatic improvement and policy making
- Improved **alignment** among stakeholders



## Addressing HIVDR to reach the last 90 and SDG target: what do we need to learn?

- Future **role of HIVDR testing** in patients management
- Improve algorithm for **switching**
- **DR testing**: cheaper, easier to interpret, with POC delivery?
- Can we capitalize on GeneExpert platform to assess HIVDR?
- "**Cost of inaction**" in addressing HIVDR
- **DLG**: changing the treatment landscape?
- **ART starters with prior ARV exposure**: a need for a differentiated care?
- Move towards the use of **programmatic data**
- **Research** to assess drivers and **impact of interventions** in various contexts; **HIVDR in key populations**