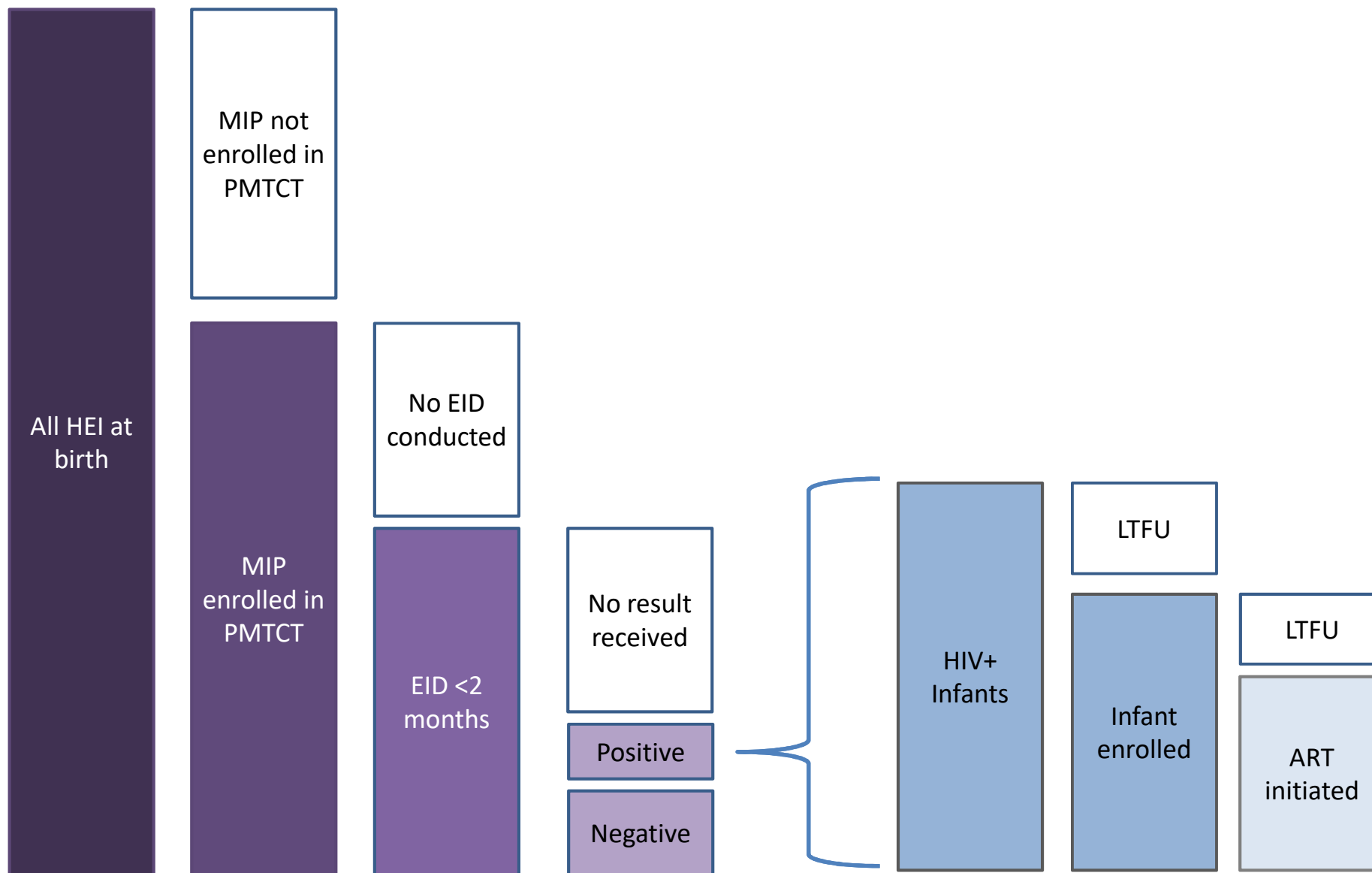


# Impact of POC EID on infant case finding and treatment initiation

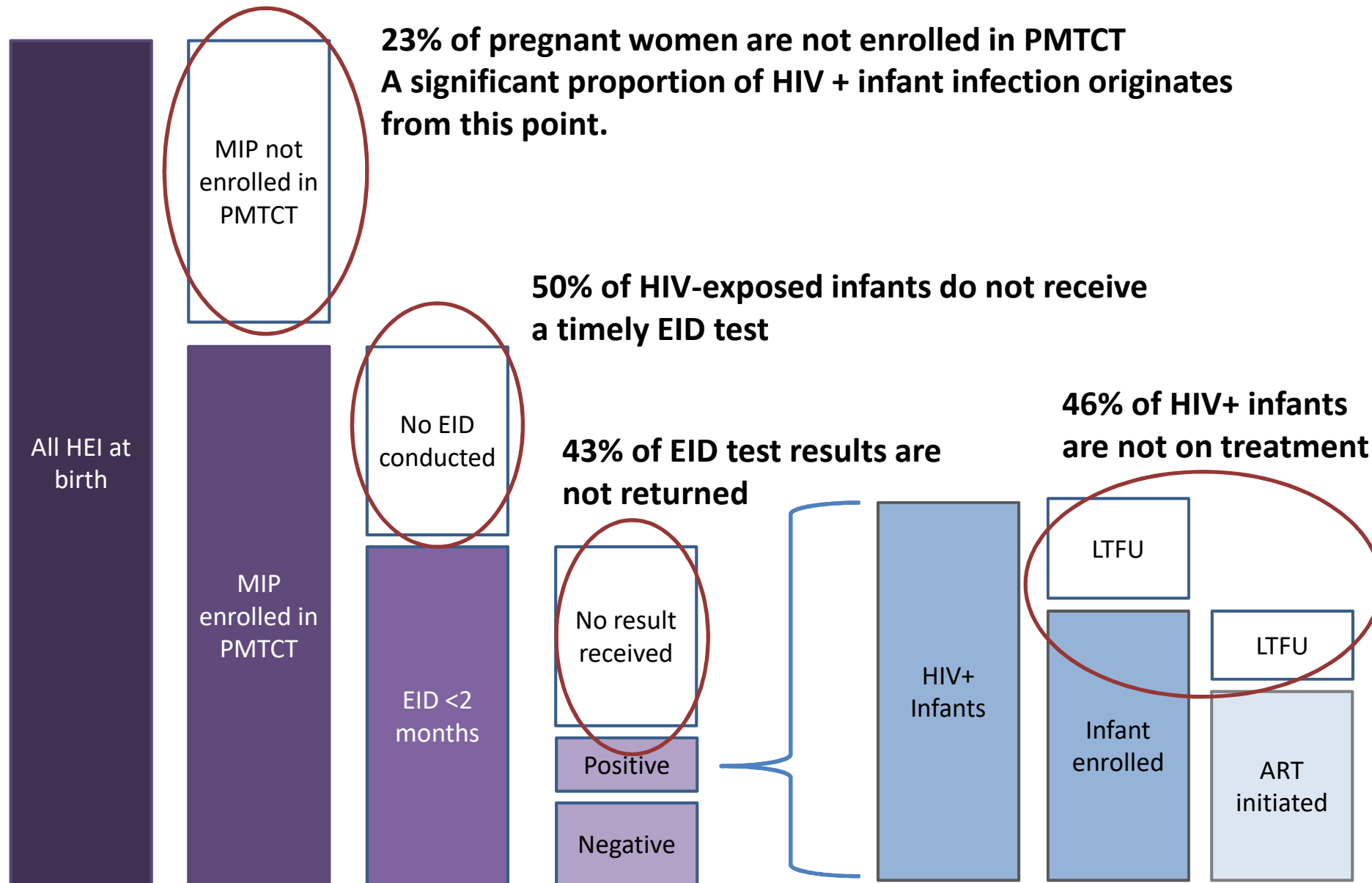
Durban, South Africa  
June 13 2017



# Access to timely HIV diagnosis is limited for HIV-exposed infants, with high loss to follow-up rates occurring throughout the cascade



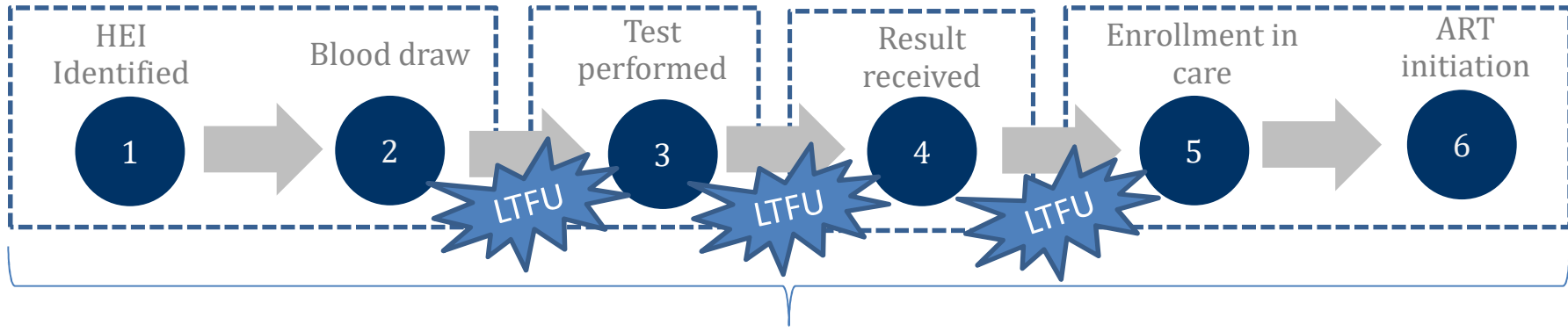
# Access to timely HIV diagnosis is limited for HIV-exposed infants, with high loss to follow-up rates occurring throughout the cascade



POC EID transforms infant case finding and linkage by providing same-day results, reducing loss to follow-up, and facilitating timely ART initiation

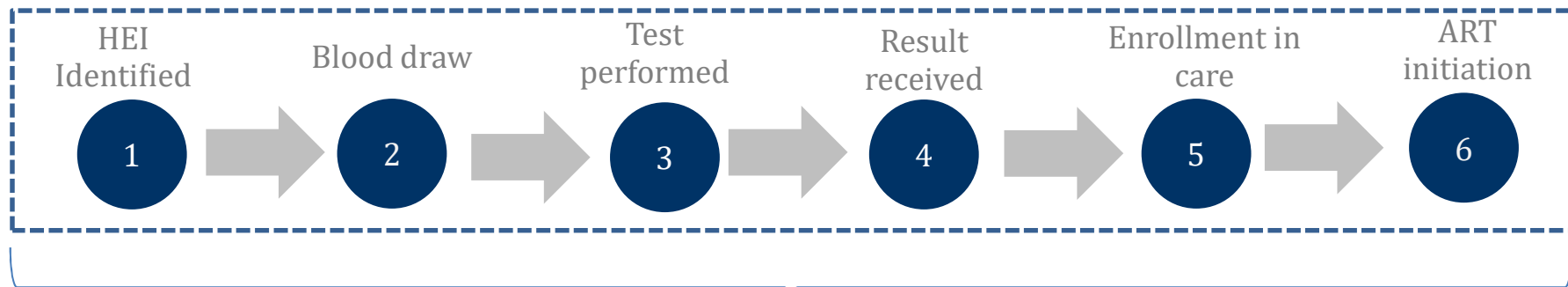
### HIV-Exposed Infant Continuum of Care

#### *Conventional EID*



Can last > 100 days

#### *Point-of-Care EID*



1 Day

# Two studies were conducted to demonstrate the impact of POC EID

## **Mozambique**

*Effect of POC EID on ART initiation: A Cluster Randomized Trial*

### Intervention Group

8 primary health care clinics in 2 provinces implemented Alere Q

### Control Group

8 primary care clinics in 2 provinces collected DBS for EID at standard-of-care reference laboratories

### Enrollment

September 2015 – March 2016



## **Malawi**

*Impact of POC EID Testing on National EID Program*

### Intervention

Data were collected from 7 facilities with Alere Q devices for 6-months following implementation of POC EID

### Comparator

Data were collected on samples tested using conventional laboratory-based EID for 6 months prior to POC device implementation

### Enrollment

September 2015 – June 2016

## The study in Mozambique showed that POC EID reduces time to treatment initiation and decreases result turnaround time

	POC	SOC	RR <sub>(adjusted)</sub>	p-value
<b>ART initiation</b>				
Within 2 months of sample collection	89.7%	12.8%	7.3 (4.7 – 11.5)	<0.001
Within 6 months of sample collection	90.3%	40.2%	2.3 (2.0 – 2.7)	<0.001
Within 1 month of results received by patient	92.7%	77.6%	1.2 (1.1 – 1.4)	0.004
<b>Retention rate</b>				
3 months after ART initiation	61.6%	42.9%	1.4 (1.1 – 1.9)	0.027
<b>Results received by patient</b>				
Same day as sample collection	98.2%	0%	-	-
Within 2 months of sample collection	99.2%	7.2%	14.4 (7.1 – 29.5)	<0.001
Within 6 months of sample collection	99.6%	47.2%	2.2 (1.7 – 2.9)	<0.001

### Mozambique findings:

- POC EID enables earlier ART initiation
- POC EID appears to improve ART retention rates
- POC EID significantly reduces loss to follow-up across the cascade

The Malawi pilot demonstrated that POC EID increases the ART initiation rate, reduces time to treatment initiation, and decreases result turnaround time

	Conventional	POC
Proportion of HIV+ patients starting ART	45.8%	91.1%
TAT: Sample collection to results received	57 days	0 days
TAT: Sample collection to ART initiation	40 days	0 days
Proportion of results received within 60 days	41%	100%
Proportion of results received on same day	0%	99%

### Malawi findings:

- POC EID improved ART initiation rates
- POC EID significantly reduced time to ART initiation and result return

In addition to patient impact, the Malawi study found that POC EID is acceptable to healthcare workers and patients

<b>User Acceptability of the POC Device (n=20 operators interviewed)</b>	
<b>Ease of use</b>	<b>95% of operators</b>
<b>Ability to better treat and manage HIV-positive infants</b>	<b>95% of operators</b>
<b>Patients willing to wait for results</b>	<b>85% of operators</b>
<b>Patients willing to come back the next day</b>	<b>65% of operators</b>
<b>Device suitable for non-lab staff</b>	<b>95% of operators</b>
<b>Device suitable for all types of health facilities</b>	<b>55% of operators</b>

*Mwenda et al. Significantly improved antiretroviral therapy initiation rates after implementation of Point of Care Early Infant Diagnosis. ASLM 2016.*



The two studies demonstrated that POC EID enables delivery of same day test results and improves ART initiation; POC EID is feasible and acceptable

- ✓ Same day:
  - ✓ testing
  - ✓ result return
  - ✓ enrollment in care
  - ✓ treatment initiation
  
- ✓ Increased treatment initiation
  
- ✓ Reduced loss to follow-up
  
- ✓ Feasible at different levels of health system
  
- ✓ Facilitates case finding at multiple entry points
  
- ✓ Acceptable to users and patients

# Key lessons have been learned from the impact studies and initial implementation of POC EID

## Deployment strategy:

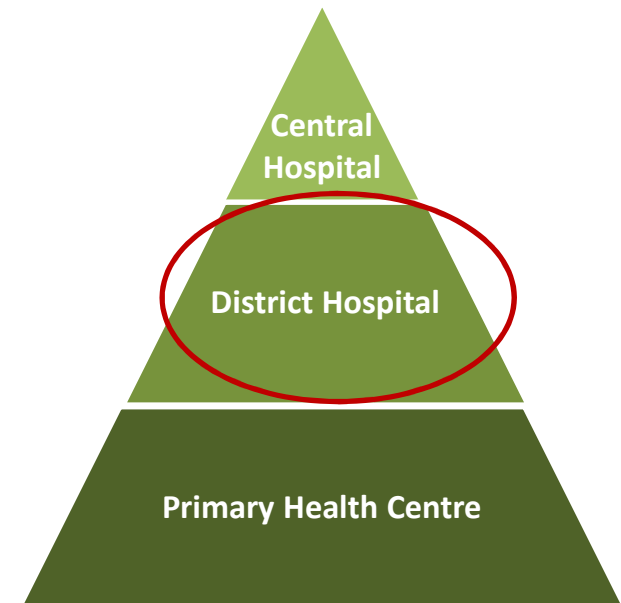
- District Hospitals appear to be the “sweet spot” for maximizing POC EID utilization
- Device sharing by multiple low-volume rural health centers can increase device utilization
- Pediatric ward seems the main entry point to identify HIV+ babies

## Workflow adjustments:

- Prioritization of patients for testing on POC device
- Adjustments to testing schedule and clinic hours
- Updated data management procedures (i.e. new registers)

## Training/mentorship requirements:

- Use of training-of-trainers model for decentralized training
- Regional/district support for troubleshooting
- Regular visits for assessment and refresher trainings (1/6/12-months post training)
- Use of existing POC CD4 systems and expertise



While PMTCT coverage remains below 100%, countries are considering alternative testing strategies to identify more positive infants

### Alternative Entry Points

- Pediatric in-patient wards
- Nutrition wards
- Immunization/EPI clinics
- Maternity wards (testing at birth)

Facility type	HIV test result		Total	% positive
	Positive	Negative		
PMTCT/ART/M IP	18	697	715	3%
Peds ward - inpatient	21	23	44	48%
Peds ward - outpatient	6	48	54	11%
<b>Total</b>	<b>45</b>	<b>768</b>	<b>813</b>	<b>6%</b>

*Testing yields from Malawi POC EID impact study*

**Additional research is underway to determine how POC EID facilitates case finding beyond the 4-6 week EID test**

# POC EID is an effective tool for addressing gaps in the cascade to achieve the 1<sup>st</sup> and 2<sup>nd</sup> 90 targets for the most vulnerable population

