

## POLICY BRIEF to MINISTER OF HEALTH

### Effectiveness of the National Prevention of Mother-to-Child Transmission (PMTCT) Programme in South Africa

#### 2010 and Preliminary 2011 NATIONAL SAPMTCT SURVEY RESULTS

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#### Primary study question

- To evaluate the effectiveness of national PMTCT programme to reduce perinatal transmission of HIV from mothers to infants.

#### Survey design

- National survey of infants aged 4-8 weeks sampled at 580 facilities across all provinces annually since 2010.

#### SUMMARY OF NATIONAL FINDINGS

- Percentage of infants exposed to HIV-(weighted exposure prevalence):
  - 2010: 31.4% (95% CI 30.1-32.6%) ≈ ANC survey
  - 2011: 32.2% (95% CI 30.7-33.6%)
- Perinatal mother to child HIV transmission rate measured at 4-8 weeks of infant age (weighted):
  - 2010: 3.5% (95% CI 2.9-4.1%)
  - 2011: 2.7% (95% CI 2.1-3.2%)

\* 2010 Results based on 10182 infants sampled

\* 2011 Results based on 10106 infants sampled

### METHODS - SAMPLING

1st stage: selection of facilities:

- Multi stage, PPS sampling methods
- Facilities were stratified by province and size (immunisation load) & HIV prevalence.
- Very small (<130 DPT1 coverage p/a ) facilities are excluded
- **580 facilities** across all nine provinces were selected.
- Spent 2-4 weeks in each facility

2nd stage: sampling of mother & infant pairs

- **12, 200 Dry Blood Spots** from consecutive/systematic enrolment of all infants (aged 4-8 weeks) attending for their 1<sup>st</sup> DPT dose, and whose caregivers consent to participate and for HIV testing to be done.

### METHODS – DATA COLLECTION

August 2011 – March 2012

**Biologic Marker** for exposure and transmission: All infants tested for HIV exposure using ELISA to detect maternal antibody – those with positive ELISA then tested for DNA PCR to detect HIV transmission

**Questionnaire** to measure socio-demographics, antenatal, PMTCT and infant care, knowledge and infant feeding. Questionnaire data collected using cell phone technology which also allowed reminder SMS for caregivers to return for 10 week infant visit to receive results

### METHODS – DATA ANALYSIS

Results weighted for sample realisation and distribution live births across provinces in 2010. Analysis takes survey design into account

### Desired & Actual Sample Size by Province

PROVINCE	DESIRED SS	ACTUAL 2010 (%)	ACTUAL 2011 (%)
EC	1400	776 (55)	1194 (85)
FS	1300	1143 (88)	1056 (81)
GP	1800	1735 (96)	1607 (89)
KZN	1400	1224 (87)	1052 (75)
LP	1400	1022 (73)	1070 (76)
MP	1600	1286 (80)	1210 (76)
NC	700	444 (63)	506 (72)
NW	1200	1171 (98)	1037(86)
WC	1400	1381 (99)	1374 (98)
<b>Total - ZA</b>	<b>12 200</b>	<b>10182 (83)</b>	<b>10106 (83)</b>

### 2010 and preliminary 2011 PMTCT cascade

All mothers:	2010	2011
Tested for HIV	98.8 %	96.7 %
Received results	98.6%	99.3%
Reported HIV+	29.4%	29.5%
<b>Amongst HIV positive mothers</b>		
Received CD4	78.3%	77.7%
On ARV prophylaxis	58.7%	42.6%
On ART	33.1%	46.2%

### Perinatal Infant HIV-Exposure and MTCT: Weighted Results by Province and National % (95% CI)

PROVINCE	2010		2011	
	Infant HIV-Exposed	MTCT % (95%CI)	Infant HIV-Exposed	MTCT % (95%CI)
Eastern Cape	30.0 (26.3-33.7)	4.7 (2.4-7.0)*	32.0 (29.6-35.5)	3.82 (2.1-5.54)
Free State	31.1 (28.9-33.3)	5.9 (3.8-8.0)	30.9 (28.6-33.3)	3.80 (2.29-5.3)
Gauteng	30.2 (27.7-32.8)	2.5 (1.5-3.6)	33.1 (29.8-36.4)	2.13 (0.91-3.36)
KwaZulu Natal	43.9 (39.7-48.0)	2.9 (1.7-4.0)	44.4 (39.8-48.9)	2.10 (0.94-3.26)
Limpopo	22.6 (20.4-24.8)	3.6 (1.4-5.8)	23.0 (19.9-26.2)	3.06 (1.21-4.91)
Mpumalanga	36.2 (33.6-38.9)	5.7 (4.1-7.3)	35.6 (33.3-37.8)	3.32 (2.17-4.48)
Northern Cape	15.6 (13.0-18.3)	1.4 (0.1-3.4)*	15.1 (12.7-17.5)	6.06 (2.48-9.63)*
Northwest	30.9 (28.6-33.1)	4.4 (2.9-5.9)	30.8 (28.5-33.1)	2.57 (1.13-4.00)
Western Cape	20.8 (16.8-24.9)	3.9 (1.9-5.8)	17.8 (14.8-20.8)	1.98 (0.65-3.31)
<b>National</b>	<b>31.4% (30.1-32.6%)</b>	<b>3.5 (2.9-4.1)</b>	<b>32.2% (30.7-33.6%)</b>	<b>2.67 (2.13-3.21)</b>

\*Note unstable estimates due to smaller sample size realisation precision is low

### CONCLUSIONS AND POLICY IMPLICATIONS

- If we assume a 30% transmission rate by 8 weeks post-delivery in the absence of PMTCT interventions then an estimated 104 000 out of 117000 (89%) babies were saved from early HIV infection (by 8 weeks) in 2010, and an additional 3000 babies were saved in 2011, increasing the proportion saved to 91% (107 000/117 000)
  - These calculations assume that 391 000 (32.2% of 1 214 485 live births) are HIV exposed
- The perinatal MTCT rate of 3.5% (2.9-4.1%) in 2010 and 2.7% (95% CI 2.1-3.2) in 2011 suggests South Africa is potentially on track to reach the target of <2% perinatal HIV transmission by 2015.
- HIV positive pregnant women on HAART increased from 33% in 2010 to 46% in 2011.
- Further analysis of data on PMTCT programme indicators and MTCT risk factors, pending.