Introduction of Birth Testing into the South African National Consolidated Guidelines

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BACKGROUND

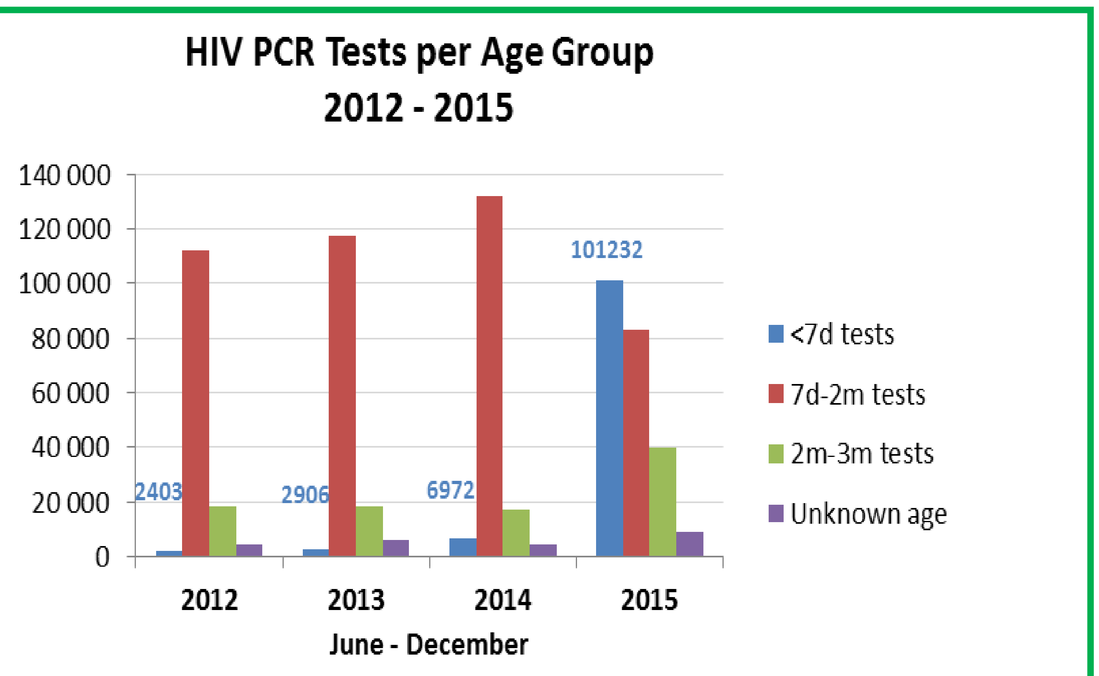
- As a means for earlier identification of intra-uterine infected infants, birth testing of all HIV-exposed babies was introduced into the South African National Consolidated Guidelines on 01 June 2015[1]
- Prior to this, routine HIV PCR testing was performed in infants at 6 weeks of age, with earlier testing in symptomatic infants
- In 2014, targeted birth testing of high risk neonates was introduced at which time the estimated 6-week transmission rate was 1.8%
- We describe at a national level, the number and results of HIV PCR tests done at <7 days, 7 days - 2 months, and 2 - 3 months of age for the period 01 June to 31 December 2015 and compare with the same period for 2012 - 2014 to determine immediate uptake of birth testing following implementation of new guidelines

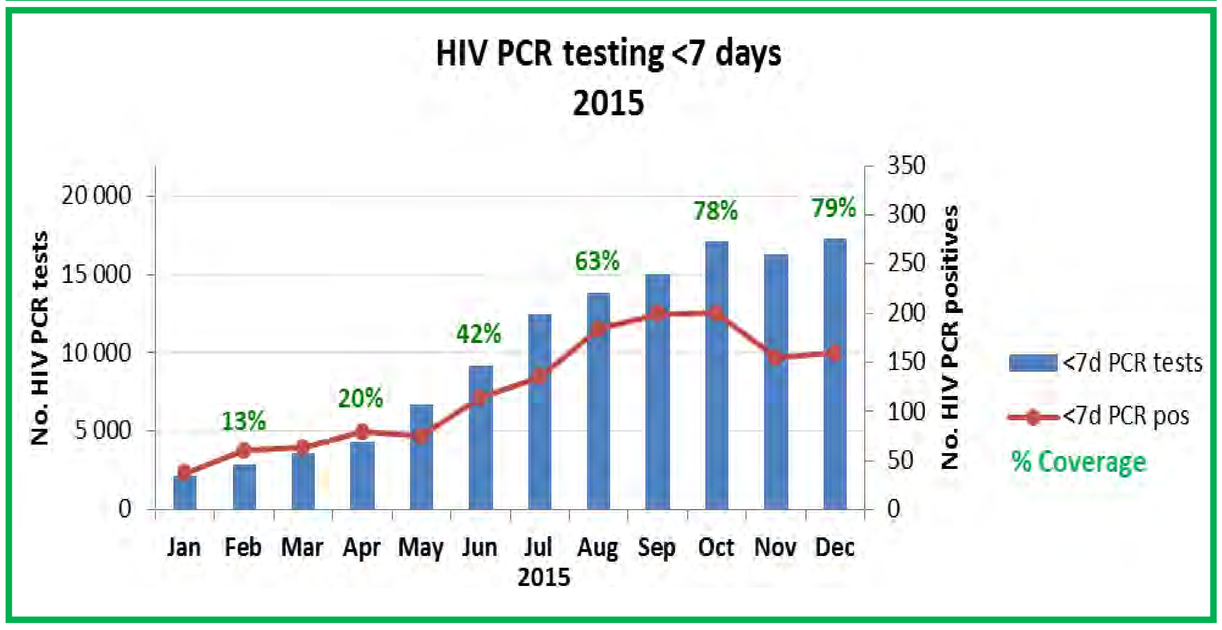
METHODS

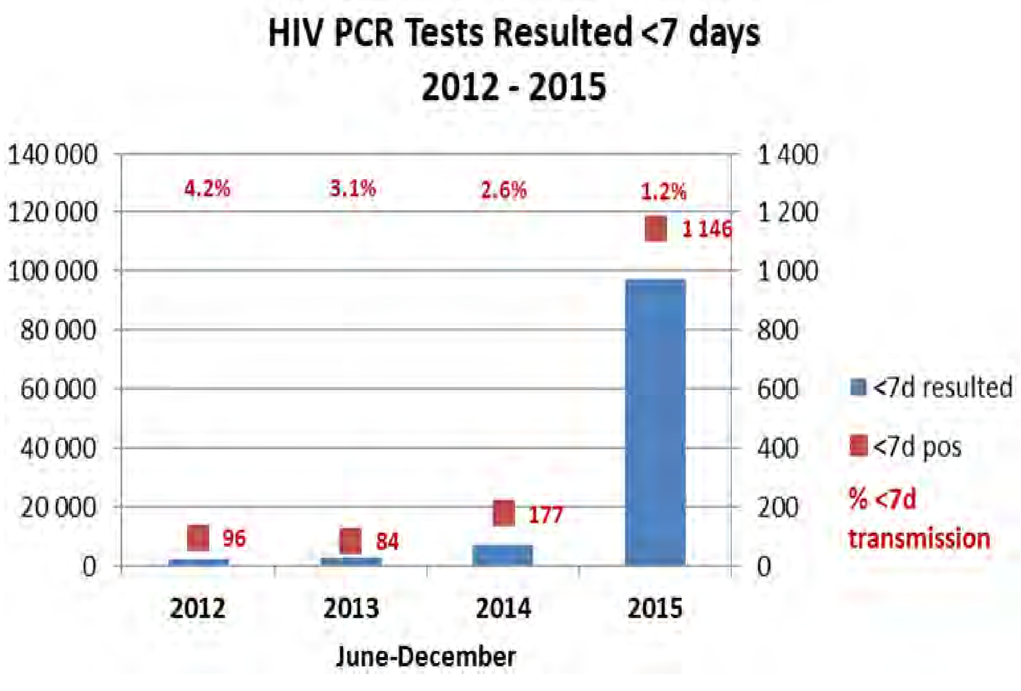
- HIV PCR test data from 2012 – 2015 was extracted from the Corporate Data Warehouse of the National Health Laboratory Service, a central data repository of all registered test-sets within the public health sector in South Africa, by year, month, age and result
- Birth testing coverage was calculated per month as a proportion of HIV exposed neonates tested for HIV at age <7 days over the average number of HIV exposed neonates delivered who required testing (national live births x national maternal HIV seroprevalence ÷ 12)[2,3]
- The estimated intra-uterine HIV transmission rate for South Africa was determined by calculating positivity rate of HIV PCR tests resulted in neonates <7 days

RESULTS

- For the 7 months since the implementation of birth testing guidelines there has been a substantial increase in the number of specimens submitted for HIV PCR testing at <7 days of age amounting to 101 232 tests from a baseline of 2403 in 2012, 2906 in 2013 and 6972 in 2014
- This trend is reflected in all 9 provinces with the national birth testing coverage estimated at 79% for December 2015
- The number of HIV PCR positive tests during the first week of life increased to 1146 for the period June – December 2015 compared with 96 in 2012, 84 in 2013, and 177 in 2014 for the same period
- The national intra-uterine transmission rate is estimated at 1.2%
- The decrease in testing at 7 days – 2 months and increase at 2 – 3 months likely reflects transition from 6 week to 10 week testing
- Testing performed at 2 – 3 months of age is of a more modest volume than testing performed at birth, with a calculated coverage of only 35%







CONCLUSIONS

- These results suggest that universal HIV PCR testing at birth for all HIV-exposed neonates can be achieved in South Africa and will assist in earlier detection of intra-uterine HIV infected infants
- Intra-uterine infection comprises a considerable proportion of early HIV infected infants as determined by a national intra-uterine transmission rate of 1.2% compared with the national 6 week transmission rate of 1.8% for 2014
- Priorities remain successful linkage into care and monitoring outcomes of neonates who test HIV PCR positive at birth, and to ensure repeat testing at 10 weeks of age for neonates who test HIV PCR negative at birth

References: **1)** South African National Department of Health. National Consolidated Guidelines for the prevention of mother-to-child transmission of HIV (PMTCT) and the management of HIV in children, adolescents and adults. Pretoria: National Department of Health, 2015. **2)** Statistics South Africa. Recorded live births 2014. Pretoria: Statistics South Africa;2015. **3)** South African National Department of Health. The 2013 National Antenatal Sentinel HIV Prevalence Survey South Africa. Pretoria: National Department of Health;2015.

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