

Aspects from the Quadruple Burden of Disease in South Africa and Newborn Neurobehaviour

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INTRODUCTION

South Africa has a high quadruple burden of disease. Maternal depression is a leading cause of morbidity, with adverse effects on offspring well documented. Maternal HIV and resultant exposure of the infant to the virus and/or antiretroviral treatment, puts the newborn at risk in neurobehavioural factors.

Maternal, newborn and child health

- HIV+ pregnant mothers are treated with Antiretrovirals (ART) according to the WHO B+ protocol

HIV/AIDS

- In-utero HIV and ART exposure.
- Maternal and foetal inflammation and immune activation
- Influence brain development and ART toxicity

Maternal mental health

- Second leading contributing factor to disease burden of childbearing women globally
- Risk of adverse effects to the developing foetus : low birth weight, preterm delivery and infant behavioural problems

Violence and injury

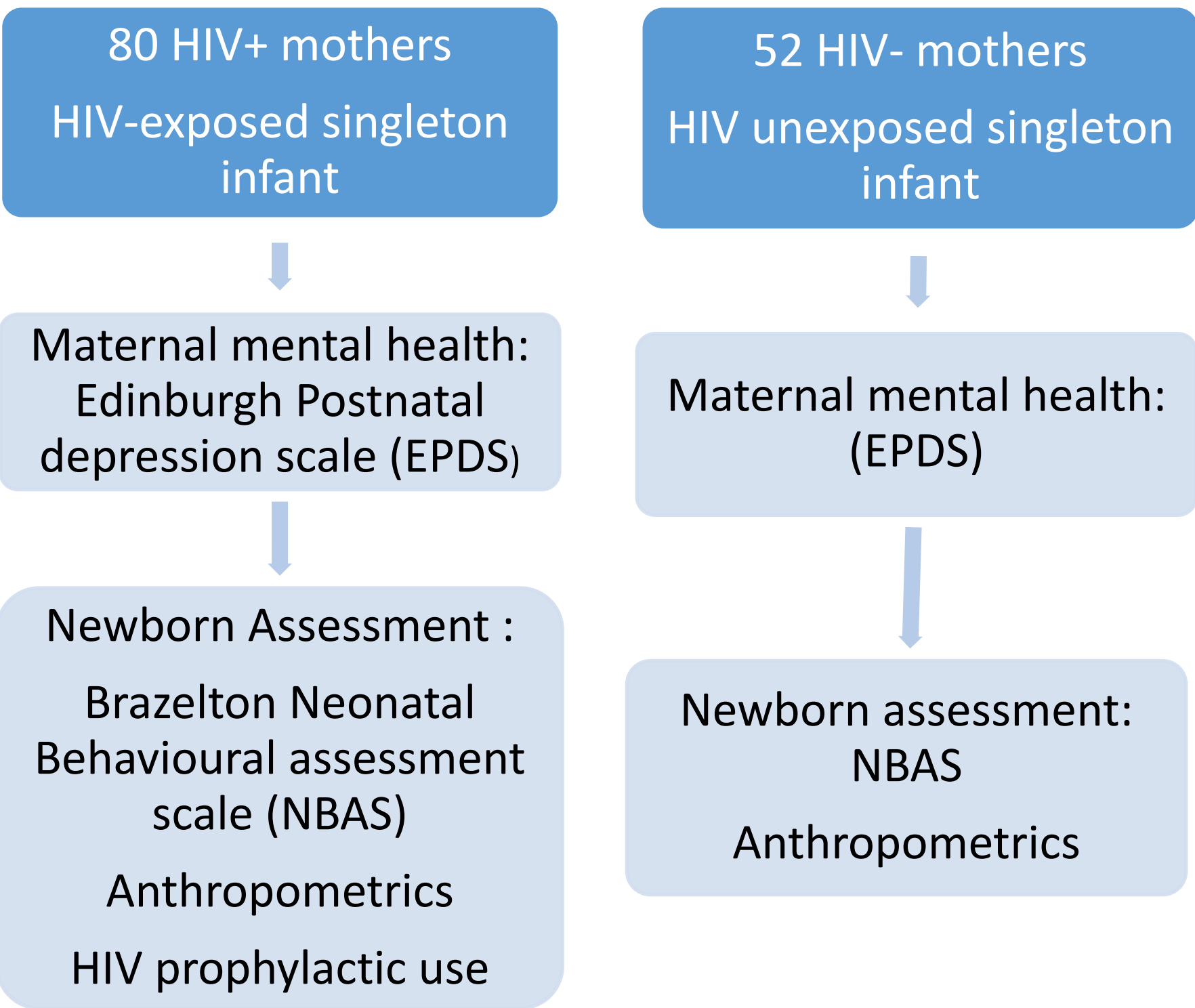
South Africa - high rates of interpersonal violence and murder

OBJECTIVES

To explore the influence of aspects of the quadruple burden of disease on mothers and their newborns in South Africa

MATERIALS AND METHODS

Mother-infant dyads (132) in a public hospital in South Africa



RESULTS

There was a high prevalence (72%) of depression in the mothers , measured as a total score >10 on the EPDS. These mothers were exposed to many risk factors for developing depression (unemployment, single status, HIV) Infants born to these mothers showed increased scores in motor skills, state organisation, and state regulation on day two of life. This possibly indicates a stressed newborn.

HIV-exposed infants performed less optimally in motor skills, state organisation, and social interaction, and had more abnormal reflexes.

CONCLUSIONS

Although infants of depressed mothers seemed to perform well in this time frame, the effects on neurodevelopment in childhood and adolescence is well documented, with bonding and attachment being particularly vulnerable. The HIV-exposed infants clearly showed inferior neurobehavioural functioning, which may affect their quality of life and ability to develop a reciprocal relationship with a primary caregiver. Close and careful monitoring and early supportive intervention of these mother-infant pairs through carefully designed treatment programmes is warranted in the burden of disease climate.

Treatment programmes should focus on the dynamic inter-relationship between infant neurobehavior and maternal mental health.

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