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HIGH PREVALENCE OF UNDETECTED, ACUTE HIV INFECTION IN A SOUTH AFRICAN PRIMARY CARE CLINIC

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Stevens W.¹, Akkers E.², Myers M.³, Motlounge T.³, Pilcher C.⁴, Venter F.³

¹University of Witwatersrand and National Health Laboratory Services, Johannesburg, South Africa, ²University of Witwatersrand, Johannesburg, South Africa, ³Reproductive Health Research Unit, University of Witwatersrand, Johannesburg, South Africa, ⁴University of North Carolina, Chapel Hill, United States of America

INTRODUCTION: Primary HIV infection (PHI) is rarely diagnosed despite a high HIV prevalence in South Africa. This phase is the most infectious stage of the disease and identification is deemed important for both prevention and treatment strategies. This cross sectional study assesses the prevalence of antibody-negative PHI among South African men and women attending a primary health care clinic for treatment of sexually transmitted infections or to ascertain their HIV status (VCT). The study also addresses the feasibility and impact of nucleic acid amplification pooling testing strategies in a developing world setting.

METHODS: Clinic attendees were enrolled sequentially during the period of April to October 2004. Basic demographic information was collected and HIV ELISA confirmatory testing was conducted in an anonymous, unlinked fashion. HIV antibody negative or indeterminate subjects had plasma stored for pooling and subsequent nucleic acid testing using the Roche MONITOR HIV-1 version 1.5 assay.

RESULTS: A total of 1906 consecutive individuals were recruited to the study reflecting a relatively equal gender distribution. 672 individuals (35.2%) were HIV ELISA antibody positive. Of the 1200 HIV negative samples pooled, 3 of the pools of 100 specimens were positive for HIV-1 RNA, 3 were positive in the pools of 50, and 7 pools of 10 were positive. Individual sample testing revealed 8 HIV RNA samples positive. 4 of 11 indeterminate HIV ELISA samples were also positive for HIV RNA. The total number of acute HIV infections was thus 12.

CONCLUSIONS: A significant number of individuals were identified in this study as having acute primary HIV infection (0.99%), translating into an incidence rate per year of 12.9%. (C.I.: 11.01 to 14.12%). The feasibility of using pooling nucleic acid amplification testing strategies for high risk populations locally was confirmed.

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