

**Title: Using 3G Mobile Internet Technology to Enhance Early Initiation of Children on ART in Rural Settings of Lesotho**

**Authors: Oyebola OYEBANJI , Appolinaire TIAM, Tony ISAVWA , Leopold BUHENDWA , Allan AHIMBISIBWE, Mafusi MOKONE, Mamorapeli PUTSOANE, Matokelo FOSO**

**Presentation Type: Oral Abstract**

**Issues**

HIV-related infant mortality is high in sub-Saharan Africa, due to delay in diagnosis and timely initiation of children on antiretroviral treatment (ART). In Lesotho, the infant mortality rate is high (55 deaths per 1,000 live births) due in part to geographic inaccessibility of health services. There is a high mortality rate among children living with HIV, who often die while awaiting DNA polymerase chain reaction (PCR) test results, which can take up to 12 weeks to be returned to the health facility from laboratory facilities.

**Description**

In May, 2010, the Elizabeth Glaser Paediatric AIDS Foundation (EGPAF) launched a strategy to reduce HIV test result turnaround time, by speeding transfer of test results to health facilities to facilitate early initiation of infants on ART. A review of site data was conducted in January 2011 to examine the potential use of 3G mobile internet as a mechanism for feedback and distribution of DNA PCR results to reduce lag times between testing and initiation of children on ART.

EGPAF supported the Ministry of Health at the district level by supplying district clinical coordinators (DCC) with lap tops and 3G mobile internet technology. DCCs were trained on use of the devices and test result confidentiality issues and were provided with printers to print DNA PCR results in their respective districts. The EGPAF Director of Clinical Services receives DNA PCR results from the South Africa National Institute of Health weekly and immediately sends results to the DCCs. The results are then printed and patients contacted through the use of Lesotho Network of AIDS Service Organization (LENASO) focal persons, Mothers-to-Mothers (both are EGPAF sub-grantees) and Village health workers in the districts.

**Lessons Learned**

Between January and December 2010, a total of 308 infants with a mean age of six weeks had a dried blood spot (DBS) PCR test performed. Through the use of 3G technology, average test result turnaround times were reduced from 12 to four weeks. The percentage of HIV-positive children initiated on ART increased significantly from 2% in the second quarter of 2010 (when 3G technology was introduced) to 22% in the fourth quarter of 2010.

During the review period, a total of 107 children were initiated on ART within four weeks (from the time of DBS to the time of ART initiation), six children were initiated in the second quarter of 2010 and 66 children in the fourth quarter of 2010.

### **Next Steps**

The use of 3G mobile internet technology is feasible in Lesotho and has enabled faster and easier transfer of DNA PCR results from the central laboratory back to rural health facilities. This practice has facilitated early initiation of more children on ART by reducing the wait time for test results. There is ongoing research on the impact of this intervention on infant mortality among HIV-exposed infants in Lesotho.