

## Trends in Mortality and Loss to Follow-up in HIV Care at the Regional Hospital of Nkongsamba, Cameroon *Bekolo C Epie<sup>1</sup>, Jayne Webster<sup>2</sup>*

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### Abstract

**Background:** Access to Human Immunodeficiency Virus (HIV) care has been rolled out in Cameroon in the last decade through decentralised delivery of care and timely initiation of free antiretroviral drugs. We sought to describe the evolution of mortality and loss to follow up (LTFU) and their patient-related determinants at an HIV clinic which is facing significant challenges.

**Methods:** A retrospective review of point of care data from HIV patients was conducted in June 2012 at Nkongsamba Regional Hospital in Cameroon to establish mortality and LTFU rates. Univariable and multivariable Cox regression models were used to screen for factors associated with the outcomes. Telephone calls were made to trace patients LTFU.

**Results:** Between June 2005 and December 2010 period, 2388 HIV infected patients were admitted. Of these, 1858 were aged 15 and above and were included in our analysis, 1305 (70.2%) of who were females. Their median age was 36 years (IQR: 16-70) and were followed up over a total risk period of 3647.3 person-years. The overall mortality rate was 34.6 deaths per 1000 person-years (95%CI: 29.0-41.1) while the overall LTFU rate was 94.6 per 1000 person-years (95%CI: 85.1-105.1). The mortality rates steadily rose to a peak of 69.6 per 1000pyrs in 2009 and then fell drastically to 20.6 per 1000pyrs in 2010. The LTFU rate increased sharply in 2007 (from 29.7 in 2006 to 138.2 in 2007) and remained virtually stable until 2010. Main factors associated with mortality were: being male (HR=2.25, 95%CI: 1.58-3.19,  $p<0.0001$ ), clinical stage (aHR=2.0, 95%CI: 1.58-2.53,  $X^2$  for linear trend on 2df,  $p=0.30$ ), CD4 count  $<200$ cells/ $\mu$ l (aHR=3.14, 95%CI: 1.27-7.73,  $p<0.0001$ ), haemoglobin level  $<10$ g/dl (aHR=2.50, 95%CI: 1.69-3.69). Major factors associated with high LTFU rate were: distance to clinic of over 5km (aHR=1.25, 95%CI: 1.00-1.55), being single, having partners with unknown HIV status or taking no treatment and with CD4  $>500$ cells/ $\mu$ l. One third (66.7%) of patients LTFU who were traced had already died while 85.4% of those still alive indicated that they lacked the personal motivation for regular follow up care.

**Conclusion:** Mortality and LTFU rate in this cohort are high but there is evidence that patients' outcomes are improving. Interventions to address factors associated with high mortality and LTFU should be implemented for optimal outcomes.

**Keywords:** Loss to follow-up, Mortality, HIV care, Cameroon