

## Title

Six-monthly appointments as a strategy for stable antiretroviral therapy patients: evidence of its effectiveness from seven years of experience in a Medecins Sans Frontieres supported programme in Chiradzulu district, Malawi

Presenter

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**Background:** HIV clinics are struggling to absorb new patients in Malawi, and overburdened health-workers and long waiting times can be detrimental to adherence. We evaluated a strategy of six-monthly appointments (SMA) for stable ART patients in Chiradzulu District, Malawi, where Medecins sans Frontieres is supporting the Ministry of Health's HIV programme.

**Methods:** Stable patients (aged  $\geq 15$ , on first-line ART  $\geq 12$  months, CD4 count  $\geq 300$  and without opportunistic infections or ART intolerance, not pregnant or breastfeeding) were eligible for clinical assessments every 6 months instead of 1-2 months at 11 HIV clinics. Early SMA enrollees were defined as patients who started SMA within 6 months of eligibility, late SMA enrollees were those starting  $>6$  months after eligibility.

Kaplan-Meier methods were used to calculate cumulative probabilities of death and loss to follow-up (LTFU) among those eligible for SMA, stratifying by SMA enrolment status and baseline characteristics. Cox regression, using SMA enrolment as a time-dependent variable, was used to estimate crude and adjusted hazard ratios for the association between SMA and death or LTFU.

**Results:** Between 2008 and 2015, 18,957 individuals were eligible for SMA (contributing 43,888 person-years of observation), of whom 15,308 (80.8%) ever enrolled. Median time from SMA eligibility to enrolment was 6 months (interquartile range 0-17 months). The cumulative probability of death or loss to follow-up five years after first SMA eligibility was 56.3% (95% CI: 52.4-60.2%) among those never SMA enrolled; 13.9% (95% CI: 12.5-15.6%) among early SMA enrollees and 8.1% (95% CI 7.2-9.0%) among late SMA enrollees. After adjusting for age, gender, year of first SMA eligibility, and other baseline variables (CD4 count, months on ART and in cohort), a significantly higher rate of death or LTFU was observed among patients during non-SMA periods compared to those during SMA periods (adjusted rate ratio: 1.87, 95% CI 1.68-2.08,  $p < 0.001$ ).

**Conclusions:** SMA represents a promising strategy for managing stable ART patients and should be rolled out, particularly with "test and treat" on the horizon, which will further stretch HIV clinics. However, further implementation research is needed, and selection biases which may explain poor retention among those eligible but never SMA-enrolled should be investigated.