The Impact of Care Transitions on Pregnant Youth Living with HIV in Kisumu, Kenya.

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Introduction: Pregnant adolescents and young adults living with HIV (AYALWH) in low-middle-income countries (LMIC), face poor retention in HIV care during the transition to antenatal care (ANC). The impact of this pregnancy-associated transition (PAT) is unclear. This Adapt for Adolescents (A4A) sub-study assesses the impact of PAT on HIV care engagement.

Methods: AYALWH (14-24 years) were enrolled at three public facilities in Kisumu Country, Kenya (2021-2022). Female participants with a PAT included those pregnant at enrollment, became pregnant during the study, or with a prior pregnancy and transition. HIV care engagement failure, defined as the first occurrence of a missed clinic visit ($\geq$ 14 days late for a scheduled visit) *or* viral failure (viral load $\geq$ 200 copies/ml) *or* death due to HIV, was compared between those with and without PAT over two years study follow-up. Time-to-failure was analyzed using Kaplan-Meier curve and risk was assessed via cox proportional hazard models with time-varying covariate. Categorical variables were compared using chi-square analysis.

Results: Of 457 female AYALWH participants, 114 (24.9%) experienced a PAT. The median age of participants with PAT was 21 years (IQR 19-23) compared to 20 years (IQR 16-23) for those without. Among participants with a PAT, 50 (43.9%) experienced a failure, with 33 (66.0%) missing a clinic visit, 4 (8.0%) with viral failure, and 13 (26%) experiencing both. In comparison, of the 343 participants without a PAT, 173 (50.4%) experienced failure. The probability of remaining engaged in care decreased for those with PAT to 53.7% by 2 years. Though not significant, the time to 80% survival was longer for participants with PAT at 384 days (95% CI: 229-379) compared to 288 days (95% CI: 276-300) for those without (log rank test, p=0.131). When adjusted for transition times, participants with PAT trended towards a decreased risk of failure (HR = 0.44, 95% CI: 0.05-3.27).

Conclusion: Care engagement for AYALWH with a PAT declined over time, though pregnancy may be a motivating factor reducing risk of failure. Efforts are needed to support AYALWH retention in care and further evaluation of the effect of transition due to pregnancy is needed.