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The impact of ART initiation on household food security over time

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The Impact of ART Initiation on Household Food Security Over Time

Abstract

While evidence suggests that adequate nutrition contributes to the efficacy of antiretroviral therapy (ART), the potential causal impact of ART initiation itself on household food security has not been thoroughly examined. In this study, we present some of the first causal evidence of the impact of ART initiation on household food security. We employ a quasi-experimental design, regression discontinuity, over 5540 individuals from an ongoing cohort study in KwaZulu-Natal, South Africa, by utilizing the CD4 count-based ART eligibility threshold to examine the impact of ART initiation on household food security. We find that ART initiation causes a significant increase in the probability of food insecurity in the first year, which diminishes to zero within three years of initiation. Within the first year, ART initiation was found to significantly increase the probabilities that (1) the surveyed adult had missed any food in the past month by 10.2 percentage points (coefficient = 0.102, 95%CI = [0.039, 0.166]); (2) any adult in the household had missed a meal in the past month by 15.2 percentage points (coefficient = 0.152, 95%CI = [0.073, 0.231]); and (3) any child in the household had missed a meal in the past month by 8.9 percentage points (coefficient = 0.0898, 95%CI = [0.0317, 0.148]). While we cannot definitively isolate the mechanistic pathway from ART to household food security, our results are consistent with ART impacting food security through household resource strain and patient appetite recovery. Several policies could mitigate the negative effect of ART on food security, in particular food parcels or food vouchers for ART patients in the first two years after treatment initiation.

Keywords:

HIV/AIDS; food security; regression discontinuity; quasi-experiment; econometric methods; household welfare; antiretroviral therapy; causal inference

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