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**Sally Blower\***, sblower@mednet.ucla.edu, and **Laurence Palk**. *Time, travel and HIV elimination: the case of Malawi*. Preliminary report.

Background: Malawi has a severe HIV epidemic, prevalence is 11%. Treatment coverage is 67%; the governments' goal is to reach UNAIDS' goal of 90% coverage by 2030 and eliminate HIV. We determine the time it would take for 90% of HIV-infected individuals to travel for treatment. Methods: We construct a treatment accessibility map by integrating a map of the healthcare infrastructure, a density of infection map, and a friction-surface map. We use geo-referenced HIV-testing data from 16,000 participants in the 2015 Malawi Demographic and Health Survey, and demographic data from WorldPop. For the friction-surface map we use data on road and river networks, land cover and topography. Using the accessibility map, we calculate the relationship between the HIV epidemic and travel-time to clinics. Results: Nationwide, 90% of HIV-infected individuals can access treatment in 80 minutes or less. However, we found considerable inequities in access. In the most urban healthcare district (HCD), travel-time for 90% coverage is 35 minutes or less; in the most rural HCD, travel-time is 160 minutes or less. Conclusions: To eliminate HIV, innovative strategies will need to be developed to minimize travel-times in rural HCDs and additional clinics will be needed in the most urbanized HCDs. (Received August 27, 2018)