CONGESTION IN URBAN HIV TREATMENT CLINICS IN LUSAKA, ZAMBIA: 
AN ASSESSMENT OF FACTORS TO INFORM DECONGESTION SOLUTIONS

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Background
In 2013, Zambia adopted national antiretroviral therapy (ART) guidelines that increased the number of treatment-eligible patients. Concern over the impact of congestion and crowding in Lusaka’s ART clinics on retention rates prompted an assessment to gather evidence on the critical factors contributing to and possible solutions for facility congestion, with particular attention focused on barriers to 3-month refills for stable patients.

Methods
- In order to identify critical process failures that lead to clinic congestion and inform the design of an intervention to address identified barriers, we undertook an exploratory assessment of eight randomly selected ART clinics in Lusaka, Zambia in November 2014.
- To better understand the patient and provider perspective of care, we conducted 84 exit interviews with ART patients (average of 10 per facility) and 16 key informant interviews with clinicians (2 per facility).
- To document the client flow and amount of time spent waiting for services, we directly observed patient wait time and time spent receiving care at each clinic station for 60 adult ART patients (10 per facility).
- To understand the patterns of refills for each facility, we reviewed ART registry records for 80 stable patients (10 per facility) and examined the proportion of stable patients receiving 1-week, 1-, 2-, and 3-month refills. To be characterized as stable, a patient must have been on first-line treatment for more than 6 months, have no health conditions requiring clinical attention, and have not switched medication in the last 3 months.
- To assess whether the proportion of 3-month refills was associated with stockouts, we obtained stockout history of antiretroviral drugs (ARVs) from medical store registers and examined the stockout pattern vs. the proportion of stable patients receiving 3-month refills.
- As an exploratory assessment, all analyses were descriptive and no statistical tests were performed.

Results

WAIT TIMES: Patients spent most time waiting for services and stated long wait times were a primary barrier to staying in care
Almost half of patients (47.5%) were visiting only to refill their prescription at the pharmacy. Total time spent by patients:
- At clinic on average (for all patient visit types) from arrival to departure: 1 hour 51 minutes (excluding wait time prior to triage).
- At the clinic for drug prescription refill only: 1 hour 34 minutes.
- With a clinical visit plus drug refill (21.3%): 2 hours 10 minutes.
- Visiting for clinical services, lab tests and a drug refill (22.5%): 2 hours 10 minutes.
Receiving care at the stations was between 3.5 and 5 minutes once patients passed through triage (Figure 1).
Wait time was 34 minutes for adherence counseling, 40 minutes for lab services, 35 minutes for clinical services and 52 minutes for pharmaceutical services (Figure 1).

STOCKOUTS: Stockouts of first-line drugs were infrequent
From January to October 2014, three of eight facilities experienced one or more stockouts of the first-line therapy, the single-tablet regimen of tenofovir (TDF)/emtricitabine (FTC)/efavirenz (EFV) for an average of 2.5 days (range: 1-4.5 days). Stockouts of TDF-FTC-EVF seem not to be associated with the proportion of patients on 3-month prescriptions in all facilities (Figure 3). A stockout meant that there was unavailability of TDF-FTC-EVF, but did not mean that patients went home without any drugs.

REFILL LENGTH: Many patients are not provided with the recommended ART refill length of 3 months, wide variation across sites
Between 8% and 70% of stable patients received a 3-month supply of ARVs (average 46% across facilities) (Figure 2).

CONCLUSIONS
Although Zambia’s national ART guidelines recommend that stable ART patients receive 3-month prescriptions, the assessment found that most stable patients were not receiving 3 months of drugs at a time. As a result, patients may frequent visits to the clinic, often to pick up their medications. Stockouts were not found to be a major barrier to 3-month refills hypothesized. Increasing the proportion of patients on 3-month refill was identified as potentially significantly reducing ART clinic congestion.

Using these findings, we tailored an intervention using quality improvement officers to troubleshoot challenges and improve compliance to the MOH policy of 3-month ART refills. This work is expected to contribute to clinic decongestion and pave the way for additional service delivery improvements.

We gratefully acknowledge the support for this project from the Department for International Development (DFID) of UK AID.

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