



Impacts of community delivery of antiretroviral drugs in Dar es Salaam, Tanzania

The success of antiretroviral therapy (ART) to treat HIV and reduce transmission rates is critically dependent on lifelong adherence. Studies have found low retention and adherence in ART care among patients, which can lead to treatment failure and resultant morbidity and mortality. These factors can also increase the risk of HIV transmission and the development of drug-resistant HIV strains.

The primary reasons for missed ART clinic visits are a lack of time, as well as costs associated with receiving treatment. The delivery of antiretroviral drugs (ARVs) at home through community health workers could overcome many of these barriers. The reduced patient load could decongest ART clinics, decrease waiting times and improve quality of care as facility-based healthcare workers have more time available per patient.

Evaluating community delivery of ART

3ie funded the Harvard TH Chan School of Public Health to carry out an impact evaluation to assess the feasibility, safety and effectiveness of community delivery of ART in the routine healthcare system of Dar es Salaam, Tanzania. The study aimed to determine whether a differentiated ART care model (i.e. community delivery for patients who are clinically stable on ART and standard facility-based care for those who are not) is as safe as the standard of care (facility-based care for all ART patients) in preventing and treating viral failure. A secondary aim of this study was to assess the impact of the differentiated ART care model on patients' healthcare expenditures.

Main findings

- The ART community delivery scheme appears to be no worse, in terms of viral failure, than standard facility-based care.
- This delivery model for ART care experienced high uptake. Participants were satisfied with the scheme, and it is likely to save patients considerable time.
- Most participants who received ART community delivery (96.3%) reported that they would like to continue with the program (rather than return to standard facility-based care), and nearly all (99.7%) said they would recommend it to other communities.
- Decongestion of healthcare facilities and reductions in patients' healthcare expenditures were minimal.
- The primary patient concern was confidentiality of home visits.

This randomized evaluation used an existing and long-standing public sector community health worker cadre, called home-based carers (HBCs), to deliver the intervention. HBCs are lay healthcare workers whose main responsibility is to conduct regular home visits (at least once every three months) to HIV patients in

their assigned neighborhood. HBC program areas have one to three HBCs per neighborhood, who are also residents there.

HBCs affiliated with health facilities randomized to ART community delivery visited participants at home to provide counseling, deliver ARVs and perform ARV pill counts. Participants maintained

the pill pick-up schedule they had used at the facility, which was either monthly or bimonthly. For instance, ART patients who were scheduled to pick up pills from the facility every two months instead received an HBC visit every two months, which included pill delivery. They would only need to visit an HIV clinic annually.

Findings

The impact evaluation did not find any significant differences in viral failure between participants in the community-based ART delivery arm and the facility-based standard of care arm.

Qualitative interviews with HBCs and participants about the ART community delivery program were overwhelmingly positive. A common reason cited was the efficiency of the service, which allowed participants to continue their income-generating

activities with little interruption, rather than requiring them to attend an HIV clinic.

While participants' satisfaction with the program was high and ART community delivery is likely to save patients a substantial amount of time, two envisaged benefits of the program were minimal: decongestion of healthcare facilities and reductions in patients' healthcare expenditures. A possible explanation is that while program uptake was

strong among eligible patients (87.4%), strict entry criteria (i.e. having an undetectable viral load and living within the clinic's catchment area) allowed only a small percentage of patients (4.4%) to enroll in the program. The small reduction in patients attending the HIV clinic to pick up pills (due to home delivery) is unlikely to have had a noticeable effect on clinicians' workload and waiting times at healthcare facilities.

Recommendations for policy and programming

The proportion of ART patients enrolled in community delivery of ARV was small, largely due to ineligibility. Local policymakers may consider alterations to this model, such as allowing patients living outside the facility catchment area to enroll, to allow a larger proportion of the ART patients there to enroll. If more patients are eligible, this may lead to increased decongestion and decreased workload at clinics.

This could be assessed in future work, along with the effects of such a scheme on patient health and economic outcomes, as well as the greater health system.

It is imperative that any future aspects of the program retain strong measures to ensure patient confidentiality and guard against unintentional disclosure of HIV status, which is a primary concern of participants.

About this impact evaluation

This brief is based on *Impacts of community delivery of antiretroviral drugs in Dar es Salaam, Tanzania*, by Pascal Geldsetzer, Joel M Francis, Gerda Asmus, Nzovu Ulenga, Ramya Ambikapathi, David Sando, Wafaie Fawzi and Till Bärnighausen.



The International Initiative for Impact Evaluation (3ie) is an international grant-making NGO promoting evidence-informed development policies and programs. We are the global leader in funding, producing and synthesizing high-quality evidence of what works, for whom, how, why and at what cost. We believe that using better and policy-relevant evidence helps make development more effective and improve people's lives.

For more information on 3ie's Impact evaluation, contact info@3ieimpact.org or visit our website.

 3ieimpact.org

 @3ieNews  /3ieimpact  /3ievideos

 [international-initiative-for-impact-evaluation](https://www.linkedin.com/company/international-initiative-for-impact-evaluation)

October 2018

© Jake Lyell / Alamy Stock Photo. The photo in this brief is for illustrative purposes only, and the persons shown in the photo are stock photography models and not actual female sex workers.