

IMPACT OF A FAMILY CLINIC DAY INTERVENTION ON PEDIATRIC AND ADOLESCENT APPOINTMENT ADHERENCE AND RETENTION TO ART

A differentiated care model prioritizing HIV treatment and counselling for pediatric and adolescent patients improved patient adherence to ART appointment schedules. Qualitative findings suggested patients benefited from health education and increased psychosocial support. There was no evidence of a positive effect on patient retention.

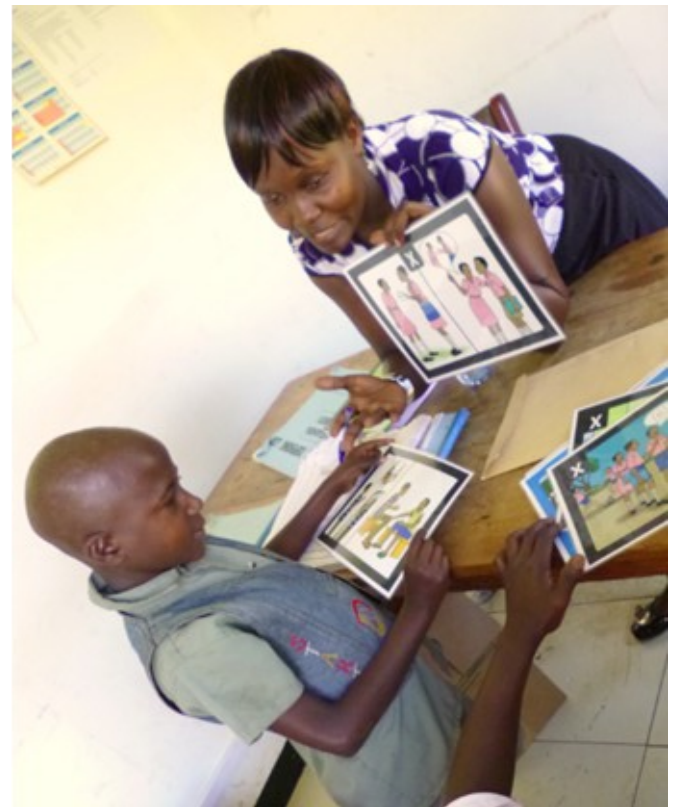
INTRODUCTION

In October 2013, the Ugandan national healthcare guidelines were revised to align with the WHO recommendation of a test-and-treat policy for all HIV-positive pediatric and adolescent patients less than 15-years of age, meaning these individuals should promptly begin antiretroviral therapy (ART) immediately after their HIV positive status is confirmed, regardless of CD4 count.¹ These new test-and-treat guidelines expanded the eligible pediatric and adolescent patient population by over 21,000 patients, which represented a nearly 50% increase on the previous patient population of 43,524.² Prior to the rollout of this new policy, the rate of retention in HIV treatment for pediatric and adolescent patients at one year after initiation was estimated to be 78.7%.^{3,4} Challenges with logistics and transport, child appointments that are not coordinated with caregiver appointments and lack of disclosure of HIV status to child have been identified as barriers to retention. Given these challenges, the Ministry of Health (MOH) was concerned about the potential loss of patients initiated in care under the expanded guidelines. Some qualitative and observational evidence has suggested that a family-centered approach to ART can help retain pediatric and adolescent patients in care,⁵ so the MOH sought to test the effectiveness of an intervention, called a Family Clinic Day (FCD), for potential national scale-up. The aim of this study was to determine if the FCD intervention was able to improve the proportion of pediatric and adolescent patients retained in ART care and adherent to ART appointment schedule.

INTERVENTION TESTED AND EVALUATION DESIGN

The FCD intervention is a designated ART clinic day when all pediatric and adolescent patients, and their linked family members, come together for care on the same day and are prioritized over individual patients. These families also receive specialized health education and HIV counselling as part of the FCD package. The frequency of FCD was determined independently by each implementing facility. The evaluation of this intervention was designed as a cluster-randomized controlled trial. Facilities in the control arm received the standard practice of care (n=23) while intervention arm facilities received the FCD package (n=23). The intervention was implemented from October 2014 through March 2015, and data was collected using routine clinical records (ART register and ART care card) in April 2015. Two data mentorships helped staff organize files and promote best practices for the completion of patient records. Semi-structured interviews with health workers and focus group discussions with patients were conducted in FCD facilities to understand their perspectives on the successes and challenges of the FCD program.

Two study outcomes were tested among pediatric and adolescent patients. First as a way to understand patient adherence to monthly clinic appointments, a proxy of medication dosing, we measured the proportion adherent to their last clinic appointment (visiting the ART clinic within a number of days equal to or less than the number of pills prescribed at their previous appointment). Second, to align with the Uganda MOH's definition of retention, we examined the proportion retained in care at the end of study (visiting the ART clinic at least once in the previous 90 days). Outcomes within the adult population were also assessed to ensure the intervention did not have a negative effect in that population. We compared study outcomes using facility aggregated t-tests to compare proportions and used generalized estimation equations (GEE) for modeling probability of outcomes. All were adjusted for initiation category, age, region, gender, child clinic representation at visit and facility level.



Family-centered health education was provided in FCD facilities using visual guides

RESULTS

A total of 2,679 pediatric and adolescent patients were included in the sample. FCD improved patient adherence to their last clinic visit, as a significantly greater proportion of pediatric and adolescent patients were adherent in the FCD arm (65.5%) compared to the control arm offering the standard of care (55.3%) (**Figure 1**). Nevertheless, FCD did not significantly improve retention in care between FCD arm (92%) and the control standard of care (91%). GEE logistic regression models further suggest that patients from intervention facilities were 67% more likely to adhere to their last clinic appointment compared to participants from control facilities (90% CI 1.27–2.11, p value <0.001). FCD had no effect on retention or adherence within adult populations (**Figure 2**), while non-inferiority tests concluded that retention of the adults in the intervention arm was not inferior to that of the control.

Qualitative findings suggested that patients participating in the FCD program benefited from the health education and increased psychosocial support. Participants described learning new information related to: adherence to medications, preventing child neglect and social care for children, condom use and reproductive health and good nutrition. Psychosocial support was enhanced through increased disclosure among family members, and increased engagement of males and non-patient caregivers. Participants also received support from peers that they met at FCD. Feedback from health workers identified few challenges with implementation of the FCD program specifically, but broader challenges in ART care delivery may be impacting the ability of health facilities to implement FCD, such as stockouts, understaffing, and poor filing systems.

DISCUSSION

The findings of this evaluation support the routine use of the FCD intervention in order to improve pediatric and adolescent adherence to appointment schedule but not retention in care. Qualitative findings suggest that these improvements can be achieved through the mechanisms of increased knowledge based on health education lessons and psychosocial support.

Scaling up the FCD package throughout Uganda may produce improvements to patient health outcomes following an increase in knowledge based on health education, peer support and adherence to appointments. Improvements in patient retention may also be possible over a longer study period. Broad challenges facing ART clinics, such as understaffing and poor filing systems, should be addressed in order to maximize the impact of programs such as FCD.

FIGURE 1. Proportion of pediatric and adolescent patients that were retained in care and adherent to appointment schedule, by intervention arm

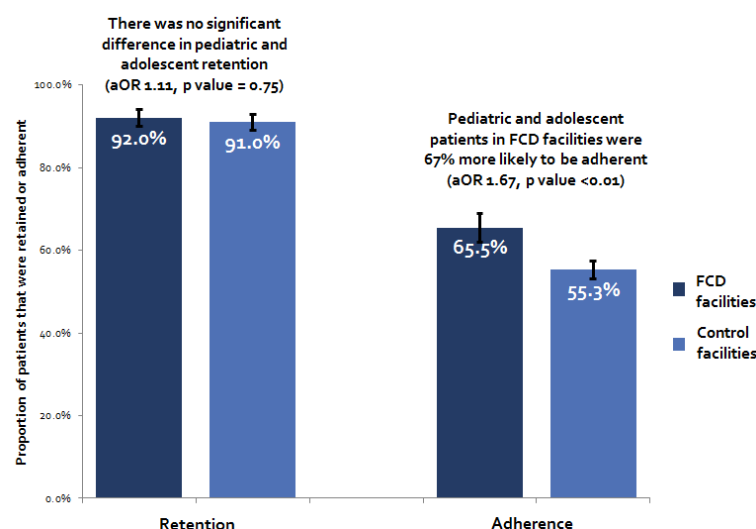
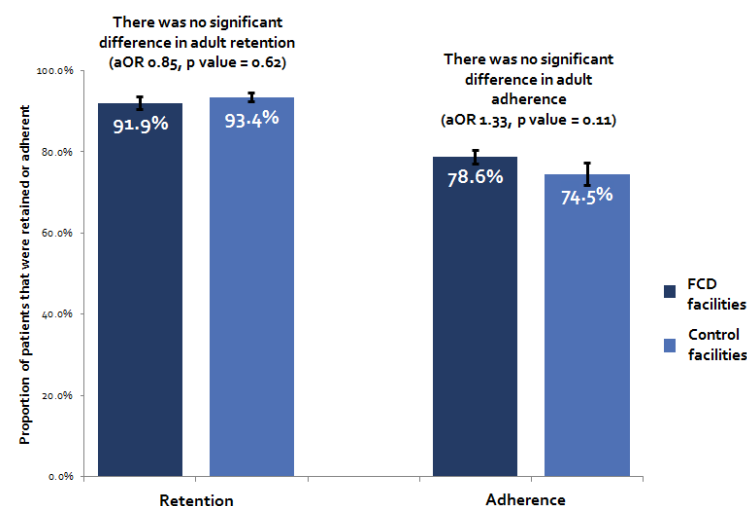


FIGURE 2. Proportion of adult patients that were retained in care and adherent to appointment schedule, by intervention arm



For further information:

Graves, JC et al. Impact of a Family Clinic Day intervention on pediatric and adolescent appointment adherence and retention in antiretroviral therapy: A cluster randomized controlled trial in Uganda. PLoS One. 2018 Mar 9;13(3):e0192068. Available from: <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0192068>

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The Demand-Driven Evaluations for Decisions (3DE) program is a pioneering approach to support ministries active in the health sector with evidence-based decision-making by using rigorous evaluations in a demand-driven, rapid and efficient way. It seeks to generate reliable impact evidence that meets the ministries' needs and is used to catalyze implementation of cost effective action.