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*Applying Science to Strengthen
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CASE STUDY

Addressing the Therapeutic Feeding Gap for PLHIV with Nutrition and Self-Management Support: A Case of Aboke Health Center IV

Summary

Poor nutrition remains a key challenge for people living with HIV (PLHIV), especially those on antiretroviral therapy (ART). This case study highlights how health workers at Aboke HCIV, a site that has not received ready-to-use therapeutic food from the medical supply chain, leveraged self-management support (SMS) and nutrition counselling to support PLHIV diagnosed with malnutrition. Changes focused on instituting and streamlining systems and processes around patient flow, assessing nutritional status at each clinic visit, improving documentation, and providing patient-level support to those enrolled into SMS. This case study provides key information for rural health units on how they can improve identification and support for malnourished PLHIV using available local resources.

Introduction

Poor nutrition remains a key challenge for people living with HIV (PLHIV) and is a known driver for poor engagement, adherence, and retention (EAR) amongst PLHIV (Ivers et al 2009). HIV is highly associated with a higher risk of malnutrition due to a rise in body nutrient demands thence rapid progress to AIDS (AIDS map 2005). Such factors, coupled with poor health facility organisation to identify and support PLHIV with malnutrition, remain a key obstacle to achieving the third of the 90-90-90 goals (UNAIDS 2016) – 90% of PLHIV on ART remain virally suppressed – based on the fact that good nutrition is key for immune reconstitution and efficacy of antiretroviral drugs, while high viral load is strongly associated with malnutrition (Duggal et al 2012).

In northern Uganda, a region prone to chronic malnutrition, PLHIV on ART face many obstacles. During health education sessions, it is common to hear comments like, “*how can I swallow those pills when I have nothing in my stomach,*” “*I would not come for my appointment visit because I was weak; I had no food for 2 days,*” and “*my priority is having something in the garden before I think of coming for pills.*”

To close these gaps, the HIV EAR initiative under the USAID Applying Science to Strengthen and Improve Systems project (ASSIST) employed a quality improvement (QI) approach to support Aboke Health Center (HC) IV to leverage self-management and nutrition support to improve the nutrition status of patients attending their ART clinic.

About Uganda’s HIV EAR initiative

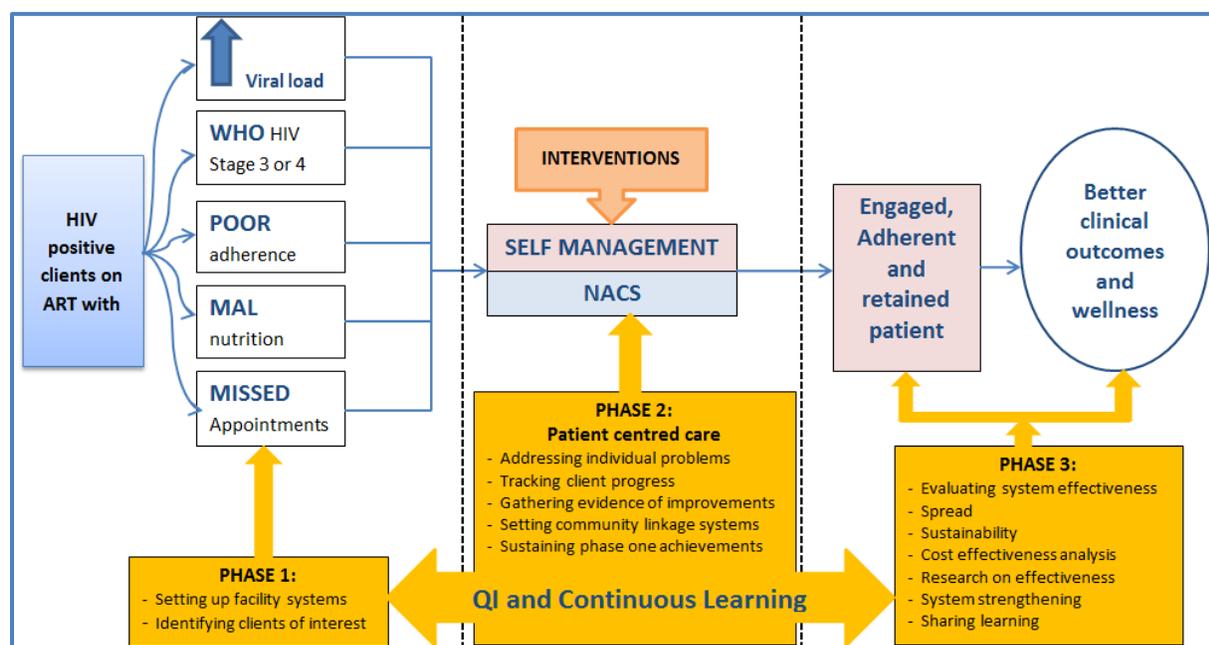
In July 2015, ASSIST Uganda received core funding to employ a quality improvement approach to assess the role of self-management support (SMS) and nutrition counselling in improving engagement, adherence and retention of PLHIV. This initiative is implemented at five intervention and five control sites in northern

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Uganda, targeting PLHIV on ART with high viral load, malnutrition, WHO stage 3 or 4 of HIV, poor adherence, poor retention, and/or missed HIV clinic appointments (**Figure 1**). At intervention sites health workers were trained in nutrition assessment, counselling, and support (NACS), and SMS. Anthropometric equipment was supplied, facility-level system changes were made to accommodate SMS into clinic flows, and changes in clinic standard operating procedures and data management were instituted. Monthly coaching visits and periodic learning sessions were conducted.

Figure 1: Uganda’s HIV EAR framework



Introducing HIV EAR work at Aboke HCIV

Aboke HC is a level-four facility located in Kole District, in the Lango sub-region of Uganda. It is one of the five USAID ASSIST-supported EAR sites. It offers outpatient and inpatient health services, and has an ART clinic that provides care to approximately 6,018 PLHIV. The ART clinic is headed by a nursing officer who is supported by a nurse and four non-medical community linkage facilitators. The clinic is open on Monday, Tuesday, and Friday. Prior to introducing improvement work, in September 2015, a baseline assessment PHASE 1: was conducted at the Aboke HIV clinic. One of the areas of interest was nutrition, and key parameters assessed were knowledge and skill in nutritional assessment, counselling and support, presence of nutrition assessment equipment, presence of therapeutic and supplementary food (TSF), data on patients with malnutrition, and nutrition tools.

- The Aboke HIV EAR team**
1. Jennifer Omara (team leader)
 2. Isaac Apita (team member)
 3. Ojok Bonny (team member)
 4. Acam Doris (team member)
 5. Omara Joe (team member)
 6. Owidi Oscar (team member)

Key findings showed that the whole ART team had never been trained in NACS and SMS. The site had no height boards, mid-upper arm circumference (MUAC) tapes, body mass index (BMI) wheels, or baby weighing scale. One inaccurate weighing scale was in place; TSF was available, but exclusively for children under 5 years of age; the clinic had no nutrition register, guide for classification of malnutrition or tool for recording assessment results. Generally, patient assessment and counselling for malnutrition was not done

consistently for all patients at each clinic visit. After this assessment of NACS services, a debrief was held and key findings were shared with the site team.

1. Resolving key system gaps through:

i) Training in NACS and SMS

In September 2015, four staff from Aboke HCIV had NACS training with a focus on improving their skills in nutrition assessment, categorization and providing counselling to malnourished PLHIV. Another two-day SMS training followed, during which health workers were empowered to identify and enrol patients for SMS (see **Figure 1** above), manage their HIV-related symptoms and provide support.



Health workers from Aboke HCIV during a practical session on height measurement. Photo by Jude Ssensamba (URC)

ii) Provision of anthropometric equipment

ASSIST worked closely with the Food and Nutrition Technical Assistance Project III (FANTA), which procured anthropometric equipment that was supplied to Aboke HCIV. The equipment included: electronic adult and infant weighing scales, stadiometers, height meters, body mass index (BMI) wheels, and MUAC tapes. This equipment helped Aboke HCIV staff to start conducting nutrition assessment.

2. Integrating HIV EAR into routine HIV care

Integrating nutrition and SMS into HIV care requires changes in system organisation, health worker roles, data collection and entry processes, and patient flow. Staff at Aboke HCIV tested undertook the following system changes:

i) Improving assessment of nutritional status

To improve patient nutritional assessment, a care point where every patient had to be assessed before seeing a clinician was introduced. A health worker and linkage facilitators were assigned to this care point each day. Over time, it was noted that the majority of patients were assessed, but their results were only recorded into patient books that they carried home. This made it hard for staff to follow-up malnourished patients since they had no records retained in the clinic for reference. During one meeting, the team agreed to improvise by creating columns in the HIV ART dispensing log to record patient anthropometric measurements.

ii) Closing the human resource for health gap

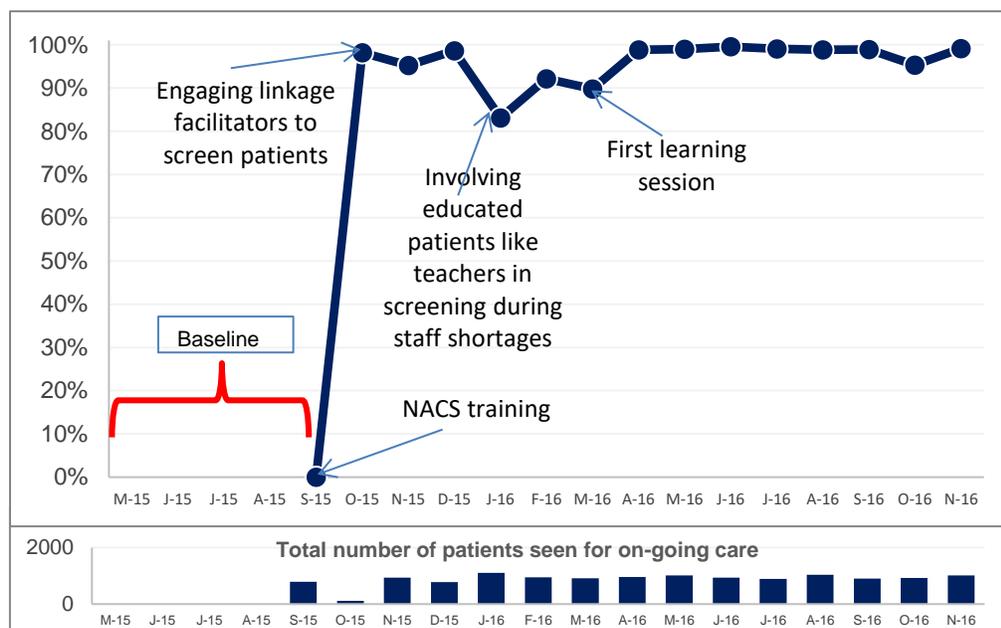
To close the severe staff shortage gap, the facility team mentored willing patients, such as police officers, high school students and teachers who, with consent, assessed their fellow patient nutritional status. This, combined with engaging linkage facilitators in assessment, led to an increase in the number of patients assessed, as shown in **Figure 2**. To ensure that patients received the right diagnosis, those categorized with moderate or severe acute malnutrition by volunteer patients or linkage facilitators would be re-assessed by the clinician.

3. Supporting patients identified with malnutrition

Even though Aboke HCIV had no TSF for treatment of adults with acute malnutrition, the team instituted systems to support PLHIV diagnosed with malnutrition. All clinicians were mentored on how to identify, categorise, and refer patients with malnutrition to a newly introduced SMS counselling care point. The staff rotation was changed, and a health worker or trained linkage facilitator was assigned to the counselling care point each day. The health workers/linkage facilitators would then use the SMS progress form to discuss with the patient the likely factors contributing to their challenges, and thereafter support them to develop improvement goals.

The counselling sessions involved analysing problems and supporting patients to take the lead in solving their malnutrition problems. Through discussions and exploring practically available alternatives like available local food options and how to prepare and store them; how to get support from family members, especially for elderly patients; sustainable small projects like rearing chicken as a source of eggs for protein; and referral to community support organisations. These practical solutions motivate the patients to deal with their problems. The session ends with patients developing SMS goals and plans of action, and agreeing on a follow-up date.

Figure 2: Percentage of patients screened for nutritional status at Aboke HCIV (May 2015 – Nov 2016)



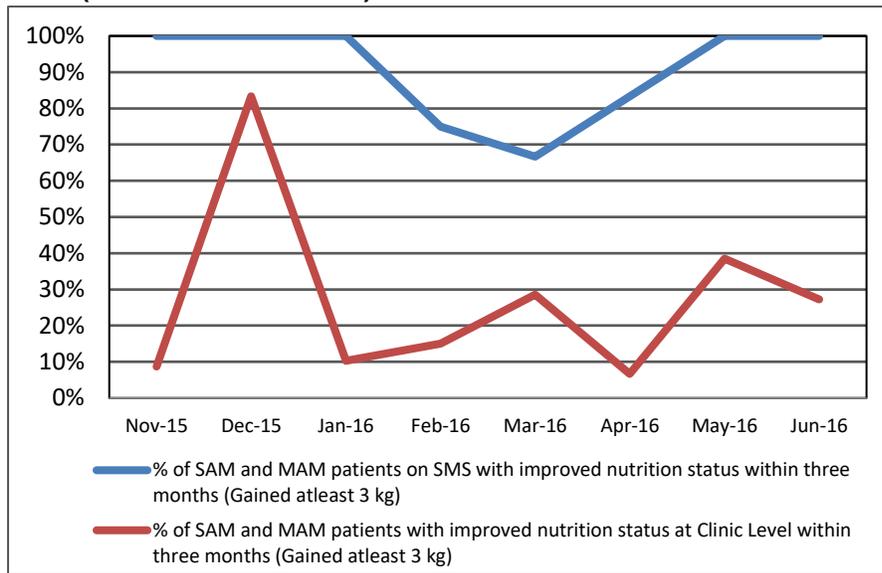
To assess the impact of nutrition and SMS, the site tracked the proportion of patients who improved within three months of initiation on SMS. This was measured as weight gain of three kilograms. Patients who failed to return were followed up by linkage facilitators. During the course of the initiative, there were a demonstrable number of patients with moderate and severe malnutrition who, due to health worker shortage, were not enrolled in SMS. These provided the comparative group of patients where malnourished patients enrolled into SMS had better clinical outcomes compared to those not enrolled as shown in **Figure 3**.

“Patients with malnutrition are getting better even though we do not have therapeutic feeds; this SMS thing works,”
 Isaac – HIV EAR team member
 Aboke HCIV

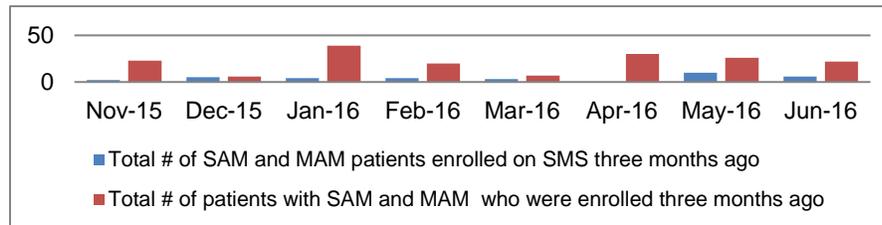
Results

Since initiating SMS, Aboke HCIV has seen a decline in the proportion of patients categorised with acute malnutrition. For example, in January 2016, Aboke HCIV recorded 39 patients with moderate acute malnutrition (MAM) and severe acute malnutrition (SAM). This has progressively reduced to 7 patients that were recorded in November 2016. This reduction is further attributed to health education sessions that were reintroduced at Aboke HCIV. The health talks always include SMS topics like good diet and nutrition. Many patients are now empowered and have knowledge on how to eat well and take care of their nutrition needs. This is one of the goals of SMS: a patient able to take the lead of their own health.

Figure 3: Comparing weight gain among SAM and MAM patients at clinic and SMS level at Aboke HCIV (Nov 2015 – June 2016)



- Tested changes for SMS patients**
- SMS counselling on food options
 - More time allocated to patients with MAM or SAM who are on SMS
 - Duty roster changed to have health worker dedicated to SMS
 - Engaging linkage facilitators into SMS counselling
 - Patients counselled to engage family members to provide them with food support



Conclusion

This case study demonstrates that it is possible for resource-poor countries that lack therapeutic and supplementary food to improve the nutritional status of malnourished HIV-positive patients by adopting the SMS/NACS model. Implementing this model calls for some changes in system flow, leveraging local innovations like using fellow patients, and creating columns in already existing registers to record key nutrition status information. Specifically, the SMS/NACS model offers patients an opportunity to explore locally available food options and how they can be best used, seek support from relatives and family members, and provides a gateway for follow-up where progress can be assessed.

References

- AIDSmap (2005): HIV and malnutrition [Online] Available from: <http://www.aidsmap.com/HIV-and-malnutrition/page/1445213/> [Accessed 18/01/2017]
- Duggal et al (2012): HIV and Malnutrition: Effects on Immune System [Online] Available from: <https://www.hindawi.com/journals/jir/2012/784740/> [Accessed 20/01/2017]
- Ivers et al (2009): HIV/AIDS, Under-nutrition, and Food Insecurity [Online] Available from: <http://cid.oxfordjournals.org/content/49/7/1096.full> [Accessed 18/01/2017]
- UNAIDS (2016): Global gains made towards the 90–90–90 targets [Online] Available from: http://www.unaids.org/en/resources/presscentre/featurestories/2016/july/20160717_90-90-90 [Accessed 18/01/2017]

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USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project

University Research Co., LLC

Uganda: Plot 40 Ntinda II Road, Kampala

USA: 5404 Wisconsin Avenue, Suite 800 • Chevy Chase, MD 20815-3594 USA