

## APPENDIX: SUMMARY TABLES OF THE ECONOMIC STRENGTHENING INTERVENTIONS STUDIES INCLUDED IN THE REVIEW

**Table 1. Economic Strengthening Interventions: The Evidence on Cash Transfers**

<i>Author</i>	<i>Study Design/Size</i>	<i>Description/Relevant Outcomes</i>
<i>Morris et al. 2004 [1]</i>	Randomized trial with approximately 5,600 households surveyed at baseline and two years later.	The study in Honduras evaluated if conditional payments to households would increase use of preventive health-care services by pregnant women, new mothers, and children younger than three years of age. The participants were allocated at random to four groups: money to households; resources to local health teams combined with a community-based nutrition intervention; both packages; and neither. Based on mothers' reports, the household-level package had a significant impact on the uptake of ANC and routine well-child check-ups. Both of these indicators increased by 18–20 percentage points in the groups receiving the vouchers. There was no increase in use of services associated with the service-level package alone, and neither package affected uptake of the 10-day check-up. The household-level package also resulted in large increases in the coverage of growth monitoring.
<i>Emenyonu et al. 2009 [2]</i>	Randomized trial with a crossover design among patients initiating ART: 146 participants total, 79 in intervention group, and 67 in control group. Over 60% of study participants were women.	The study in rural Uganda compared adherence to ART and loss to follow-up among patients who received cash transfers (\$5-8 US dollars for 12 months out of 24 months) and those who didn't. As a result, the HIV treatment adherence scores and retention in care were higher among the participants in intervention group compared to controls. Only 18% of patients were lost to follow-up from the intervention group, versus 34% lost from the control group.

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Jones et al. 2008 [3]</i>	Program assessment (with the coverage of approximately 60,000 households)	Junto program in Peru provided fixed monthly cash transfers of approximately \$30 per month to eligible households on condition that they will be accessing basic public services for women and their children. This resulted in 30% increase of children under one year of age receiving vaccinations and 200% increase in health clinic visits for children under five years. Pre- and post-natal visits have increased by 65% and there has been a reported reduction in home birth.
<i>Davies 2009 [4]</i>	Program evaluation report. Poor households (pregnant women included)	DFID supported "Ultra Poor" program in Bangladesh directly linked cash transfers to health services. Some of the results include: increase in antenatal coverage to 96% and postnatal coverage to 93% (although the report doesn't provide a baseline) and an increase of 45% in immunization coverage (from 53% to 98%).
<i>Thornton 2008 [5]</i>	Prospective study among 2,812 residents who accepted an HIV test.	The study in Malawi offered free door-to-door HIV test and randomly assigned vouchers between zero and three dollars, redeemable upon obtaining their HIV test results at VCT center. The location of each HIV results center was also randomly placed to evaluate the impact of distance on VCT attendance. Respondents who received any cash value voucher were twice as likely to go to the VCT center to obtain their HIV test results as were individuals receiving no incentive. Even the smallest amount, approximately one-tenth of a day's wage, resulted in large attendance gains. Living over 1.5 kilometers from the VCT center reduced attendance by six percent.

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Yotenbieng 2016 [6]</i>	Randomized controlled trial among 433 pregnant women with HIV (217 in the control group and 216 in the intervention group)	The study in DRC provided compensation (US\$5, plus US\$1 increment at every subsequent visit) to women in the intervention group on the condition that they attended scheduled clinic visits and accepted PMTCT services; the control group received usual care. At 6 weeks' postpartum, the retention in care was higher among participants in the intervention group (81%) compared to controls (72%). Similarly, more participants in the intervention arm attended all clinic visits and accepted all PMTCT services – 68% vs.54% among controls.

**Table 2. Economic Strengthening Interventions: The Evidence on Transportation Support**

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Pariyo et al. 2011 [7]</i>	A quasi experimental pilot study among ~12,000 pregnant and postpartum women in two districts selected for intervention and control arms.	The study in Uganda evaluated intervention package comprised of transport vouchers to access maternal health services (including ANC, delivery care and postnatal care) and service vouchers that helped to cover any additional fee associated with services. The package resulted in a dramatic increase in attendance of antenatal and delivery care services in intervention arm (up to 3,500 ANC visits per month) compared to control arm (remained at about 500 ANC visits a month). ANC attendances declined when vouchers for transport were stopped.
<i>Nsigaye et al. 2009 [8]</i>	Prospective study with quantitative and qualitative components among population of HIV-infected patients in need of ART (42 in-depth interviews and with patients, 11 in-depth interviews with health workers, 46 focus groups discussions with patients)	A study in rural Tanzania evaluated a referral system for ART, which introduced transportation allowances and “community escorts.” Over the three-year period, there was a steady increase in the overall number of HIV-infected persons who were referred, as well as the number who subsequently registered at the HIV clinic within six months of referral (from 22 to 114, and 15 to 64, respectively) Most patients reported that the referral system facilitated their arrival at the HIV clinic, but expressed a desire for HIV treatment services to be in closer proximity to their homes.
<i>Sanjobo et al. 2008 [9]</i>	Qualitative study; 60 ART patients, 12 ART providers, and three pharmacists were interviewed.	In Zambia, patients who were registered and supported by nongovernmental organizations mentioned the transport support they received each time they went for their medical reviews as a facilitator for their adherence to treatment.

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Mukherjee et al. 2006 [10]</i>	Program description; population of more than 8,000 HIV-positive persons, 2,300 of whom were on ART	ART program in Haiti implemented a package of interventions to promote access to care and adherence to ART. Several components were put into place to decrease economic barriers, such as providing all services and medications free of charge, providing a monthly transportation stipend to attend follow-up appointments and covering transportation fee for emergency visits, and providing food or cash transfers for food to the most vulnerable patients. The program description offers no baseline data, but states a dramatic increase in HIV counseling and testing and low rates of clinical or immunologic failure that required a change to second-line ART, suggesting excellent adherence to ART and medical follow-up.

**Table 3. Economic Strengthening Interventions: The Evidence on Food Support**

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Bergmann and Stone-Jiménez 2011 [11]</i>	Program assessment. Data collected through 12 clinic reviews, 43 individual client interviews (67 percent female, 33 percent male) and 12 FGDs with adult clients and caregivers of pediatric clients (72 percent female, 28 percent male). Provider information was obtained from 31 individual interviews and 12 FGDs with providers.	NuLife Food and Nutrition Interventions for Uganda focused on the development and integration of nutrition support, such as distribution ready-to-use therapeutic food (RUTF), into HIV treatment, care, and support programs. The beneficiaries included adults and children in ART and care programs as well as HIV-positive pregnant and postpartum women. The assessment of the intervention showed that the RUTF prescribed in the facilities has dramatically improved the nutrition status and the quality of life for clients and improved their ability to better adhere to drug regimens. Ninety percent of the clients interviewed said that RUTF helps them take their medication.
<i>Byron et al. 2008 [12]</i>	Qualitative study; data were collected from 18 interviews with key informants, nine focus group discussions, and 79 in-depth patient interviews.	The study assessed the effects of a short-term nutrition intervention linked to the provision of free ARV treatment in Kenya and found that patients enrolled in the food program while on treatment regimens had greater self-reported adherence to medication. Among food clients in the sample, 58% perceived that access to food made their adherence to their treatment regimen easier because the food they collected lessened unfavorable side effects of ARVs, including dizziness, and vomiting.
<i>Cantrell et al. 2008 [13]</i>	Prospective non-randomized study; 636 food insecure adults (with four study clinics providing food supplementation and four acting as controls).	The study from Zambia looked at food supplementation to improve adherence to ART among food insecure adults (65% female). Patients in the food group received a median of nine monthly rations. As a result of interventions, 70% of patients in the food group achieved an adherence rating of at least 95% vs. 48% of controls.

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Egge and Strasser 2006 [14]</i>	Qualitative study among women and infants engaged in PMTCT programs; individuals on ART, and individuals on TB treatment. Information gathered through key informant interviews (#66), group discussions, observational visits, and collection of current monitoring and evaluation tools.	The study in three countries—Malawi, Zimbabwe, and Zambia—explored potential effects of targeted food aid on women and infants engaged in PMTCT (among other patient populations). It found that food aid attached to PMTCT programs would increase program participation. However, this was based on interviews only and it is not clear if it would translate in actual participation.
<i>Gerberg and Stansbury 2010 [15]</i>	Program assessment. Qualitative data were collected in 33 interviews with key informants (program experts at the national level, hospital administrators, provincial nutrition officials and providers); 28 focus groups discussions with ART clients; 139 patient interviews.	An assessment by AIDSTAR-One conducted in Kenya in order to examine the national Food by Prescription (FBP) program and document lessons learned and promising practices. The program's objective was to provide a set of nutrition interventions as part of comprehensive care and treatment of PLWHA, thus preventing or improving malnutrition, and improving adherence to ART. The food product provided was a fortified blended flour. Providers interviewed for this assessment noted that FBP improved adherence to ART among its recipients.
<i>Iroezi et al. 2013 [16]</i>	Qualitative study; population included 22 HIV-positive women in PMTCT program.	The study in Malawi found food support to be an important facilitator for access to PMTCT care. Many of the women reported receiving aid in the form of food and food supplements for their infants as a factor. They also had access to a garden near the hospital although 20% of them voiced interest in having a garden closer to their homes.

<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Ivers et al.</i> 2010 [17]	Prospective observational cohort study; 600 PLWHA (300 eligible and 300 ineligible for food assistance)	The study in Haiti measured the effects of food rations provided to PLWHA if they met certain criteria (e.g. co-infection with active TB, CD4 count less than 350 cells/mm <sup>3</sup> or severe socioeconomic circumstances). Interviews were conducted before rations were distributed, at 6 months and at 12 months. At both 6 and 12 months, timely attendance at monthly clinic visits was better in the food assistance group than in the non-food group. The mean number of scheduled visits attended at 6 months was 5.49 vs. 2.82 for the food assistance vs. the nonfood group, and at 12 months was 9.73 vs. 8.34. Study also observed a significant improvement in ability to take ART at 6 months and a trend for improvement in this variable at 12 months. At 6 months, patients on ART who received food assistance reported fewer difficulties taking their medications compared to those who did not receive food (14.4% vs. 28.1%).
<i>Musumari et al.</i> 2014 [18]	A cross-sectional quantitative study of 898 patients receiving ART	The study in Kinshasa, DRC, measured adherence by combining pharmacy refills data with self-reported adherence. Of the 898 participants recruited into the study, 512 (57%) were food insecure, and 188 (20.9%) were not adherent to ART. Food insecurity was significantly associated with non-adherence to ART.
<i>Posse et al.</i> 2013 [19]	Retrospective study; population of ART patients with and without food assistance (172 food recipients, 185 controls).	The study in Mozambique analyzed three years of data extracted from randomly selected clinic and pharmacy records of HIV/AIDS patients who were receiving ART as well as food assistance (~77% of patients were female). In order to assess the effect of the food assistance program on adherence, the study compared food assistance recipients with a control group who did not receive food assistance. Rates of adherence between intervention and control groups were found to be similar.



<b>Author</b>	<b>Study Design/Size</b>	<b>Description/Relevant Outcomes</b>
<i>Serrano et al.</i> 2010 [20]	Prospective, non-randomized study; population of ART patients with and without nutritional support (62 patients in intervention group, 118 in control)	The study in Niger compared adherence to ART among intervention group (patients who received Family Nutritional Support (FNS) and nutritional advice) and control group (patients who received nutritional advice, but no food support). Adherence was significantly improved for patients receiving FNS compared to controls—98.4% vs. 77.4%.
<i>Tirivayi et al.</i> 2010 [21]	Retrospective cohort study; population of ART patients enrolled in a food assistance program (200 patients at four clinics participating in the food distribution program and 200 patients at four control clinics not included in food program)	The study in Zambia evaluated the effects of food assistance on the weight and adherence of HIV patients to ART. This study obtained baseline data using the programmatic ART database in conjunction with a household survey. Random sampling was used to select 50 participants from eight public-sector health clinics providing ART in Lusaka. The results demonstrated a positive overall effect of food assistance on the adherence, but when patients were stratified by the duration of ART treatment the results were mixed. Among patients on treatment for less than the sample median of 995 days, receiving food assistance had more significant positive effect compared to full sample estimates. However, food assistance did not appear to increase adherence among patients who had been on ART for more than the median of 995 days.
<i>Tirivayi et al.</i> 2012 [22]	Retrospective cohort study (a follow-up to the Tirivayi 2010 study above); population of ART patients receiving food assistance (N=145) and those who did not (N=147)	The study in Zambia used interviewer-administered surveys and retrospective clinical data to compare ART patients receiving food assistance with a control group of non-recipients, found that food assistance recipients had higher ART adherence compared to non-recipients. It also found a greater impact of food assistance on adherence among patients in the first three years of treatment, and particularly in the first 230 days (7.5 months) after ART initiation. Additionally, the effect was greater among those with several indicators of more advanced illness.

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