ECONOMIC STRENGTHENING INTERVENTIONS TO ADDRESS KNOWN BARRIERS TO PMTCT AND IMPROVE HEALTH OUTCOMES: WHAT DO WE KNOW AND WHAT SHOULD WE DO WITH THIS EVIDENCE?

FHI 360, April 2018

Practitioner brief

Interventions aimed at prevention of mother-to-child transmission (PMTCT) of HIV are extremely effective, and the possibility of having a healthy child born free of HIV is a strong motivator for pregnant women to utilize PMTCT services. Nevertheless, substantial barriers to uptake of PMTCT services persist.[1] In particular, there is extensive documentation of the economic barriers to PMTCT faced by pregnant women with HIV. Addressing these economic barriers has the potential to improve PMTCT utilization and further reduce mother-to-child HIV transmission.

This brief provides an overview of the key findings from a literature review conducted by the Accelerating Strategies for Practical Innovation & Research in Economic Strengthening (ASPIRES) project, implemented by FHI 360 with funding from PEPFAR and USAID.[2] The review considered evidence on economic barriers to PMTCT and examined the results from 16 studies and five program evaluations on the effects of economic strengthening (ES) interventions applied within PMTCT settings and other relevant services, such as antenatal care (ANC), antiretroviral therapy (ART), or HIV counseling and testing services. While all these services are available on a stand-alone basis, they are also integral elements of the PMTCT cascade, thus the outcomes of ES interventions offered within these services may be applicable to PMTCT at least to some degree. Identifying ES interventions that positively affect all or any of the steps of the PMTCT cascade can strengthen PMTCT programs, contributing to better health outcomes and further reduction in HIV transmission from mother to child. The majority of the studies (n=11) in the review examined whether food assistance might increase ART adherence and access to services, while six studies looked at cash transfers as a means to increase access to and retention in services, and four studies assessed the effects of transportation assistance on the use of health services.

Key findings on economic barriers to PMTCT and related services:

- The most commonly cited barriers to accessing and adhering to PMTCT, ART and ANC services are distance to clinics and transportation costs. While very few studies quantify travel costs and identify what proportion of household income these costs represent, the expenses associated with reaching PMTCT services are likely to be significant. Effective use of PMTCT services requires multiple visits for women who may already be experiencing economic hardship. For example, 93 percent of HIV-positive mothers interviewed for a qualitative study in Uganda, said that transport fees were the major factor preventing them from enrolling in a PMTCT program.[3] And as many PMTCT programs move to WHO-recommended combination ARV regimens/HAART, which require increased visit frequency and more complex drug regimens, implementers should consider how this might amplify the barriers of distance and transportation costs.

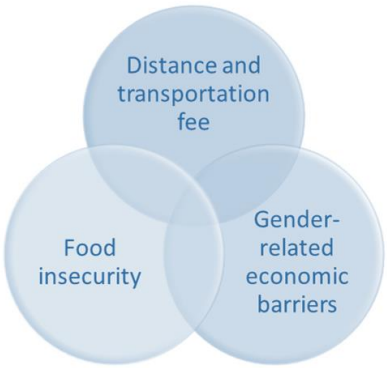

Fig 1. Common economic barriers to PMTCT

- Food insecurity represents a significant barrier to adherence to ART. It was commonly found that the perceived need to take antiretroviral drugs (ARVs) with food and the increased appetite associated with ARVs often lead to treatment interruption. Low-income clients were often forced to choose between food and ARVs. One study also

This brief was produced under United States Agency for International Development (USAID) Cooperative Agreement No. AID-OAA-LA-13-00001 and was made possible by the generous support of the American people through USAID and the United States President's Emergency Plan for AIDS Relief. The contents are the responsibility of FHI 360 and do not necessarily reflect the views of USAID or the United States Government.

indicated that food insecurity can undermine women's ability to breastfeed exclusively[4] and, as a result, supplementary foods are added to breastmilk too early – a practice that is shown to increase risk of HIV transmission to infants.

- Gender-related economic barriers affect a woman's access to and use of PMTCT and other relevant health services. Many women are financially dependent on their husbands or partners, and fear that revealing their HIV status will lead to abandonment, which makes it less likely that they will access and adhere to PMTCT services. In addition, while partner participation was considered to be a positive factor in PMTCT utilization and adherence, economic factors, such as fear of losing an opportunity to earn money or inability to afford the transportation fee for two people, made it less likely that a man will accompany his female partner to access PMTCT services.

Key findings on economic strengthening interventions:

The evidence on cash transfers is limited, but promising. While only one study[5] out of six that examined cash transfers was done within a PMTCT setting, it showed that offering cash transfers to women with HIV increased their retention in care and uptake of available services (see text box 1).

There is also evidence that cash transfers improve utilization of health services relevant to the PMTCT cascade:

- A large randomized trial in Honduras[6] concluded that direct small payments to households 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 payments.
- Program evaluations in Peru[7] and Bangladesh[8] confirmed that cash transfers can have a positive effect on the use of ANC services.
- A randomized trial in Uganda[9] demonstrated that adherence to ART was better among recipients of cash transfers (see text box 2).
- A study in Malawi[10] showed that small monetary incentives increase HIV result-seeking behaviors. Individuals who received any cash value voucher were twice as likely to obtain their HIV test results as individuals receiving no incentive.

1. Cash transfers for PMTCT

A study in Kinshasa randomized 433 women who attended a PMTCT program into two groups: the intervention group received the equivalent of US$5 cash incentive (increased by US$1 at every subsequent visit), and the control group did not. Compensation was dependent on clinic attendance, adherence to antiretroviral prophylaxis and return at six weeks postpartum for infant HIV testing. Retention in care and adherence was 30% higher in the intervention group, and loss to follow-up at delivery and at six weeks postpartum was 47% lower in the intervention group compared to the control group. (Yotebieng et al., 2016)

- Three studies and one program evaluation documented positive effects of transportation assistance on access and adherence to either ANC or ART services:
  - A pilot study in Uganda found that transport vouchers led to a substantial increase in attendance of ANC services.[11]
  - Studies in Tanzania[12] and Zambia,[13] and a program evaluation in Haiti[14] all showed that transportation allowances increased the uptake of ART referral and adherence to treatment.

- Ten out of 11 interventions involving food assistance resulted in either improved adherence to ART or better service utilization.

2. Cash transfers and adherence to ART

A study in rural Uganda compared adherence to ART and loss to follow-up among 146 patients who received cash transfers ($5-8 US dollars for 12 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. (Emenyonu et al., 2009)

- Studies in Kenya[15], Zambia[16, 19-20], Haiti[17] and Niger[18], and program evaluations in Uganda and Kenya[21-22] all found better adherence to ART among food recipients.
- In addition, two small studies—one in Malawi[23] and another in Zimbabwe, Malawi and Zambia[24]—reported that food aid facilitated access to PMTCT services.

Based on the evidence, what should we implement?

ES initiatives are an important strategy in enabling HIV/AIDS-affected households to cope with the effects of the epidemic.[25] Because households affected by HIV/AIDS are struggling with economic challenges that undermine their ability to access treatment and care, there is an increasing need for programs to respond to the HIV/AIDS crisis in a more holistic way. While the evidence base on the impact of ES interventions on HIV-related health outcomes, including PMTCT outcomes, is limited, and very few ES interventions were tested directly within PMTCT settings, the effects of these interventions on PMTCT access and adherence appear to be positive. The randomized trial within a PMTCT program in Kinshasa (text box 1) provides the strongest evidence to date that cash transfers significantly improve adherence to the PMTCT cascade.

Importantly, the evidence review found that the only ES interventions that have been tested within PMTCT, ANC, and ART settings are interventions that provide immediate relief, such as cash transfers, transportation vouchers, or food/nutritional support. These interventions seem to be the most logical for PMTCT settings because the anticipated impact has to be immediate—the intended beneficiaries are already HIV-positive and pregnant, and the window to prevent transmission to a child is narrow, so improving women's access to PMTCT is needed without a delay. Economic improvement and financial gains that may result from other interventions, such as vocational skills training, microfinance/microcredit, or income generating activities take time to materialize and will not affect women's immediate ability to access services or to take their medication correctly.

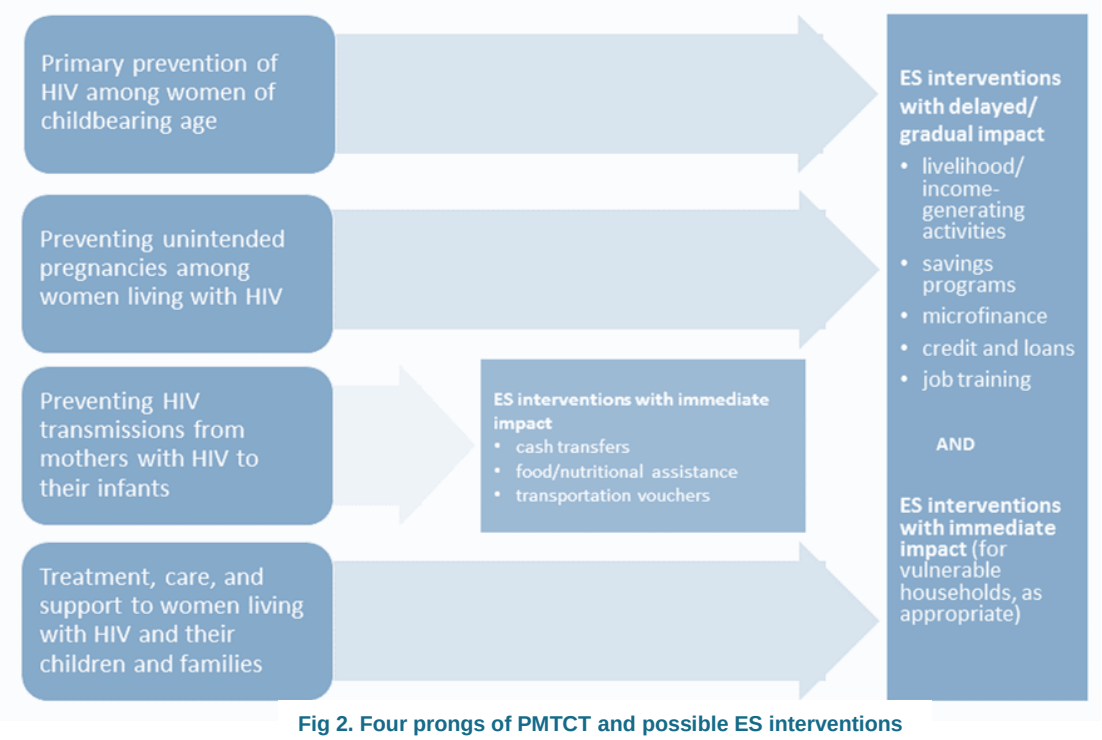

Fig 2. Four prongs of PMTCT and possible ES interventions

However, this is not to say that interventions that may lead to eventual economic improvement on individual and/or household levels have no place in PMTCT. A comprehensive PMTCT approach, in addition to preventing HIV transmission from mothers with HIV to their infants, would include three other prongs: preventing primary HIV acquisition among women of childbearing age; preventing unintended pregnancies among women living with HIV;

and providing appropriate treatment, care, and support to women living with HIV and their children and families. As shown in Figure 2, when all four prongs of PMTCT are considered, ES interventions with “delayed benefit” may have a valuable role to play.

While there is still need for more research to increase our understanding of whether different ES interventions improve women’s utilization of PMTCT services and to explore the pathways through which such changes may occur, it doesn’t mean that programs should wait – what we already know about positive effects of cash transfers, food and transportation support can help guide programmatic decisions. Practitioners should assess economic barriers to their individual PMTCT programs, review the available evidence on ES interventions that offer immediate impact and consider if and how they can apply this evidence to their individual settings.

References:

1. Ferguson, L. 2012. Women's experiences in services for preventing the mother-to-child transmission of HIV: a literature review. California, USA: Prepared for the World Health Organization.
2. Irina Yacobson, Morrisa Malkin, and Elena Lebetkin, Increasing Access and Adherence to the PMTCT Cascade: Is There a Role for Economic Strengthening Interventions? International Journal of Population Research, vol. 2016, Article ID 4039012, 8 pages, 2016.
3. Duff P, Kipp W, Wild TC, Rubaale T, Okech-Ojony J. Barriers to accessing highly active antiretroviral therapy by HIV-positive women attending an antenatal clinic in a regional hospital in western Uganda. J Int AIDS Soc. 2010; 13:37.
4. Webb-Girard A, et al., Food insecurity is associated with attitudes towards exclusive breastfeeding among women in urban Kenya. Matern Child Nutr, 2012. 8(2): p. 199-214.
5. Yotebieng, M., et al., Conditional cash transfers and uptake of and retention in prevention of mother-to-child HIV transmission care: a randomised controlled trial. Lancet HIV, 2016. 3(2): p. e85-93.
6. Morris SS, et al., Monetary incentives in primary health care and effects on use and coverage of preventive health care interventions in rural Honduras: cluster randomised trial. Lancet, 2004. 364(9450): p. 2030-7.
7. Jones N, Vargas R, and Villar E, Cash transfers to tackle childhood poverty and vulnerability: an analysis of Peru’s Juntos programme. Environment and Urbanization, April 2008. 20(1): p. 255-73.
8. Davies M, Working Paper 31: DFID Social Transfers Evaluation Summary Report. July 2009, DFID.
9. Emenyonu N, et al., Cash transfers to cover clinic transportation costs improve retention in care in a HIV treatment program in rural Uganda. Poster presentation at Conference on Retroviruses and Opportunistic Infections (CROI); Montreal. Abstract no. 831, 2009.
10. Thornton RL, The Demand for, and Impact of, Learning HIV Status. Am Econ Rev, 2008. 98(5): p. 1829-1863.
11. Pariyo GW, et al., Exploring new health markets: experiences from informal providers of transport for maternal health services in Eastern Uganda. BMC Int Health Hum Rights, 2011. 11 Suppl 1: p. S10.
12. Nsigaye R, et al., From HIV diagnosis to treatment: evaluation of a referral system to promote and monitor access to antiretroviral therapy in rural Tanzania. J Int AIDS Soc, 2009. 12(1): p. 31.
13. Sanjobo N, Frich JC, and Fretheim A, Barriers and facilitators to patients' adherence to antiretroviral treatment in Zambia: a qualitative study. SAHARA J, 2008. 5(3): p. 136-43.
14. Mukherjee JS, et al., Antiretroviral therapy in resource-poor settings. Decreasing barriers to access and promoting adherence. J Acquir Immune Defic Syndr, 2006. 43 Suppl 1: p. S123-6.
15. Byron E, Gillespie S, and Nangami M, Integrating nutrition security with treatment of people living with HIV: lessons from Kenya. Food Nutr Bull, 2008. 29(2): p. 87-97.
16. Cantrell RA, et al., A pilot study of food supplementation to improve adherence to antiretroviral therapy among food-insecure adults in Lusaka, Zambia. J Acquir Immune Defic Syndr, 2008. 49(2): p. 190-5.
17. Ivers LC, et al., Food assistance is associated with improved body mass index, food security and attendance at clinic in an HIV program in central Haiti: a prospective observational cohort study. AIDS Res Ther, 2010. 7: p. 33.
18. Serrano C, et al., Family nutritional support improves survival, immune restoration and adherence in HIV patients receiving ART in developing country. Asia Pac J Clin Nutr, 2010. 19(1): p. 68-75.
19. Tirivayi N, Koethe J, and Groot W, Food Assistance and its effect on the Weight and Antiretroviral Therapy Adherence of HIV Infected Adults: Evidence from Zambia. March 2010, The Maastricht Graduate School of Governance: The Netherlands.
20. Tirivayi N, Koethe JR, and Groot W, Clinic-Based Food Assistance is Associated with Increased Medication Adherence among HIV-Infected Adults on Long-Term Antiretroviral Therapy in Zambia. J AIDS Clin Res, 2012. 3(7): p. 171.
21. Bergmann H and Stone-Jiménez M, NuLife—Food and Nutrition Interventions for Uganda: Nutritional Assessment, Counseling, and Support. 2011, USAID’s AIDS Support and Technical Assistance Resources, AIDSTAR-One, Task Order 1.: Arlington, VA.
22. Gerberg L and Stansbury JP, Food by Prescription in Kenya. 2010, USAID |AIDSTAR-ONE PROJECT, Task Order 1: Arlington, VA.
23. Iroezi ND, et al., A qualitative analysis of the barriers and facilitators to receiving care in a prevention of mother-to-child program in Nkhoma, Malawi. Afr J Reprod Health, 2013. 17(4 Spec No): p. 118-29.
24. Egge K and Strasser S, Measuring the Impact of Targeted Food Assistance on HIV/AIDS-Related Beneficiary Groups: Monitoring and Evaluation Indicators in AIDS, poverty, and hunger: Challenges and responses. Highlights of the International Conference on HIV/AIDS and Food and Nutrition Security, Durban, South Africa, April 14–16, 2005, S. Gillespie, Editor. 2006, International Food Policy Research Institute: Washington, D.C. p. 305-24.
25. Stene A, Chandani T, Arur A, Patsika R, Carmona, A. 2009. Economic Strengthening Programs for HIV/AIDS Affected Communities: Evidence of Impact and Good Practice Guidelines, Private Sector Partnerships One Project, Abt Associates, Bethesda, Md, USA.