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HIV this month. Issue no. 1. January 2015

Welcome to **HIV this month!** In this issue, we cover the following topics:

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- How can HIV resources be best used to avert as many infections as possible?
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HIV this month, published by UNAIDS, is a selective scan of new HIV-related information found in scientific journals. The Editors of HIV this month interpret original abstracts and provide editorial comment, so that information may be easily understood by people responding to the HIV epidemic in many diverse settings. The selection of material, its abridgement and other editorial changes, and also the original editorial comment are the responsibility of the Editors and do not represent any official statement of UNAIDS. It should be noted that (except for open access journals, e.g. PLoS) the authors and/or publishers retain copyright in the original published material to which HIV this month refers.

1. Reduce sexual transmission

Reconceptualizing the HIV epidemiology and prevention needs of female sex workers (FSW) in Swaziland.

Baral S, Ketende S, Green JL, Chen PA, Grosso A, Sithole B, Ntshangase C, Yam E, Kerrigan D, Kennedy CE, Adams D. *PLoS One*. 2014 Dec 22;9(12):e115465. doi: 10.1371/journal.pone.0115465. eCollection 2014

Background: HIV is hyperendemic in Swaziland with a prevalence of over 25% among those between the ages of 15 and 49 years old. **The HIV response in Swaziland has traditionally focused on decreasing HIV acquisition and transmission risks in the general population** through interventions such as male circumcision, increasing treatment uptake and adherence, and risk-reduction counseling. There is **emerging data from Southern Africa that key populations such as female sex workers (FSW) carry a disproportionate burden of HIV even in generalized epidemics** such as Swaziland. **The burden of HIV and prevention needs among FSW remains unstudied in Swaziland.**

Methods: A **respondent-driven-sampling survey** was completed between August-October, 2011 of **328 FSW in Swaziland**. Each participant completed a structured survey instrument and biological HIV and syphilis testing according to Swazi Guidelines.

Results: **Unadjusted HIV prevalence was 70.3%** (n = 223/317) among a sample of women predominantly from Swaziland (95.2%, n = 300/316) with a **mean age of 21** (median 25) which was **significantly higher than the general population of women**. Approximately one-half of the FSW (53.4%, n = 167/313) had received HIV prevention information related to sex work in the previous year, and about one-in-ten had been part of a previous research project (n = 38/313). **Rape was common with nearly 40% (n = 123/314) reporting at least one rape; 17.4% (n = 23/314) reported being raped 6 or more times. Reporting blackmail (34.8%, n = 113/314) and torture (53.2%, n = 173/314) was prevalent.**

Conclusions: While Swaziland has a highly generalized HIV epidemic, **reconceptualizing the needs of key populations such as FSW suggests that these women represent a distinct population with specific vulnerabilities and a high burden of HIV compared to other women**. These women are understudied and underserved resulting in a limited characterization of their HIV prevention, treatment, and care needs and only sparse specific and competent programming. **FSW are an important population for further investigation and rapid scale-up of combination HIV prevention including biomedical, behavioral, and structural interventions.**

[Abstract](#) [Full-text \[free\] access](#)

***Editor's notes:** In countries with high prevalence generalised epidemics, research and resources often focus on the general population, and the role of key populations is often ignored. This study, from Swaziland, illustrates how the sex worker population in Swaziland suffer from a concentrated epidemic within a generalized one. The study highlights the need for focused services to address the very high HIV prevalence, some 70%, in this population. The study further highlights the lack of services, education and support reaching sex workers in this setting. Given large sexual networks, high prevalence of HIV and limited condom use, this vulnerable population is likely to be contributing substantially to the widespread epidemic in Swaziland. In this and similar settings, HIV treatment and prevention services specifically for sex workers are necessary and should be a central plank of service delivery programming, and policy making.*

Effectiveness of a combination prevention strategy for HIV risk reduction with men who have sex with men in Central America: a mid-term evaluation.

Firestone R, Rivas J, Lungo S, Cabrera A, Ruether S, Wheeler J, Vu L. *BMC Public Health*. 2014 Dec 4;14:1244. doi: 10.1186/1471-2458-14-1244.

Background: Despite over a decade of research and programming, **little evidence is available on effective strategies to reduce HIV risks among Central American men who have sex with men (MSM). The Pan-American Social Marketing Organization (PASMO) and partners are implementing a HIV Combination Prevention Program to provide key populations with an essential package of prevention interventions and services:** 1) behavioral, including interpersonal communications, and online outreach; 2) biomedical services including HIV testing and counseling and screening for STIs; and 3) complementary support, including legal support and treatment for substance abuse. Two years into implementation, **we evaluated this program's effectiveness for MSM** by testing whether exposure to any or a combination of program components could reduce HIV risks.

Methods: **PASMO surveyed MSM in 10 cities across Guatemala, El Salvador, Nicaragua, Costa Rica, and Panama in 2012 using respondent-driven sampling.** We used coarsened exact matching to create statistically equivalent groups of men exposed and non-exposed to the program, matching on education, measures of social interaction, and exposure to other HIV prevention programs. We estimated average treatment effects of each component and all combined to assess HIV testing and condom use outcomes, using multivariable logistic regression. We also linked survey data to routine service data to assess program coverage.

Results: **Exposure to any program component was 32% in the study area (n = 3531). Only 2.8% of men received all components. Men exposed to both behavioral and biomedical components were more likely to use condoms and lubricant at last sex (AOR 3.05, 95% CI 1.08, 8.64), and those exposed to behavioral interventions were more likely to have tested for HIV in the past year (AOR 1.76, 95% CI 1.01, 3.10).**

Conclusions: PASMO's strategies to reach MSM with HIV prevention programming are still achieving low levels of population coverage, and **few men are receiving the complete essential package. However, those reached are able to practice HIV prevention.** Combination prevention is a promising approach in Central America, requiring expansion in coverage and intensity.

[Abstract](#) [Full-text \[free\] access](#)

Editor's notes: *In countries where same-sex behaviour is criminalised and/or highly stigmatised, men who have sex with men (MSM) often find it very difficult to obtain appropriate sexual health services. Such difficulties contribute to the continued high prevalence of HIV among MSM in some settings. Strategies to prevent HIV transmission, increasingly favour a combination of activities which aim to reflect specific social conditions. It is important that these complex prevention programmes are systematically evaluated. This paper discusses one of the first evaluations of a combined HIV prevention strategy including behavioural, biomedical and psychosocial components. The strategy is aimed specifically at MSM in Central America, among whom the authors note that HIV prevalence ranges from 7.5% to 11.1%. About one-third of MSM participants in respondent-driven samples, reported exposure to at least one component of the programme during the two years of implementation. But few, three percent, received all three components, reflecting the hard-to-reach nature of the population as well as programmatic issues. Despite the modest coverage, there was some evidence that the programme was associated with reported risk reduction and HIV testing*

uptake. The study provides promising results, but highlights the need to tackle stigmatisation and social exclusion of MSM in this region, to enable prevention strategies to be effective at scale.

The price of sex: condom use and the determinants of the price of sex among female sex workers in eastern Zimbabwe.

Elmes J, Nhongo K, Ward H, Hallett T, Nyamukapa C, White PJ, Gregson S. J Infect Dis. 2014 Dec 1;210 Suppl 2:S569-78. doi: 10.1093/infdis/jiu493.

Background: Higher prices for unprotected sex threaten the high levels of condom use that contributed to the decline in Zimbabwe's human immunodeficiency virus (HIV) epidemic. **To improve understanding of financial pressures competing against safer sex, we explore factors associated with the price of commercial sex in rural eastern Zimbabwe.**

Methods: We collected and analyzed **cross-sectional data on 311 women**, recruited during October-December 2010, who reported that they received payment for their most-recent or second-most-recent sex acts in the past year. Zero-inflated negative binomial models with robust standard errors clustered on female sex worker (FSW) were used to explore social and behavioral determinants of price.

Results: **The median price of sex was \$10 (interquartile range [IQR], \$5-\$20) per night and \$10 (IQR, \$5-\$15) per act.** Amounts paid in cash and commodities did not differ significantly. At the most-recent sex act, more-educated FSWs received 30%-74% higher payments. **Client requests for condom use significantly predicted protected sex ($P < .01$), but clients paid on average 42.9% more for unprotected sex.**

Conclusions: Within a work environment where clients' preferences determine condom use, FSWs effectively use their individual capital to negotiate the terms of condom use. **Strengthening FSWs' preferences for protected sex could help maintain high levels of condom use.**

[Abstract](#) [Full-text \[free\] access](#)

Editor's notes: *This study addresses a relatively neglected issue of how payments for commercial sex among rural sex workers are determined, and which factors are important to price negotiations. In this study from Zimbabwe, the participants were grouped into "more professional", both the last two clients were commercial, (FSW2) and "less professional", one of the last two clients was commercial (FSW1). The "more professional" sex workers effectively negotiated transactions, with unprotected sex increasing the mean payment by almost a half, compared with protected sex. This differential pricing was not seen for the "less professional" sex workers, perhaps reflecting limited capacity to negotiate with clients. This study demonstrates the importance of strengthening preferences for protected sex, among female sex workers, including among less visible sex workers. Such strategies may include enhancing social capital and collective action, e.g. collective price-fixing to reduce competitive pressure to engage in unsafe sex.*

Using geospatial modelling to optimize the rollout of antiretroviral-based pre-exposure HIV interventions in sub-Saharan Africa.

Gerberry DJ, Wagner BG, Garcia-Lerma JG, Heneine W, Blower S. Nat Commun. 2014 Dec 2;5:5454. doi: 10.1038/ncomms6454.

Antiretroviral (ARV)-based pre-exposure HIV interventions may soon be rolled out in resource-constrained sub-Saharan African countries, but rollout plans have yet to be designed. Here **we use**

geospatial modelling and optimization techniques to compare two rollout plans for ARV-based microbicides in South Africa: a utilitarian plan that minimizes incidence by using geographic targeting, and an egalitarian plan that maximizes geographic equity in access to interventions. We find significant geographic variation in the efficiency of interventions in reducing HIV transmission, and that efficiency increases disproportionately with increasing incidence. **The utilitarian plan would result in considerable geographic inequity in access to interventions, but (by exploiting geographic variation in incidence) could prevent ~40% more infections than the egalitarian plan.** Our results show that the **geographic resource allocation decisions made at the beginning of a rollout, and the location where the rollout is initiated, will be crucial in determining the success of interventions** in reducing HIV epidemics.

[Abstract access](#)

***Editor's notes:** With the flatlining of HIV resources, it is becoming increasingly important to identify how best to maximise the impact of HIV programmes. This study used geospatial HIV modelling and optimisation to compare two potential rollout plans for antiretroviral based microbicides. One was based on egalitarian principles, where every community has an equal chance of accessing microbicides. The other was based on the utilitarian principles, where settings at greatest risk are prioritised. Assuming a fixed amount of resources, the impact of these two different rollout plans was compared. Using data from South Africa, the authors found that the geographic focusing at provincial level could prevent more infections in the first year of the rollout. The findings illustrate how decisions made about where new prevention technologies are first introduced at the start of a programme rollout can strongly influence the scale of their impact. In particular, it highlights that roll out strategies that first focus on the most vulnerable communities could have greatest impact. The modelling approach used in this study is applicable to other settings with geographic heterogeneity in the HIV epidemic, and could be used to inform the implementation and evaluation of other HIV prevention programmes.*

Intimate partner violence and HIV in ten sub-Saharan African countries: what do the Demographic and Health Surveys tell us?

Durevall D, Lindskog A. *Lancet Glob Health.* 2015 Jan;3(1):e34-43. doi: 10.1016/S2214-109X(14)70343-2. Epub 2014 Nov 21.

Background: Many studies have identified a significant positive relation between intimate partner violence and HIV in women, but adjusted analyses have produced inconsistent results. We systematically assessed the association, and under what condition it holds, using nationally representative data from ten sub-Saharan African countries, focusing on physical, sexual, and emotional violence, and on the role of male controlling behaviour.

Methods: We assessed **cross-sectional data** from 12 **Demographic and Health Surveys from ten countries in sub-Saharan Africa**. The data are nationally representative for **women aged 15-49 years**. We estimated odds ratios using logistic regression with and without controls for demographic and socioeconomic factors and survey-region fixed effects. Exposure was measured using **physical, sexual, emotional violence, and male controlling behaviour**, and combinations of these. The samples used were ever-married women, married women, and women in their first union. Depending on specification, the sample size varied between 11 231 and 45 550 women.

Findings: There were **consistent and strong associations between HIV infection in women and physical violence, emotional violence, and male controlling behaviour** (adjusted odds ratios ranged from 1.2 to 1.7; p values ranged from <0.0001 to 0.0058). The evidence for an association

between sexual violence and HIV was weaker and only significant in the sample with women in their first union. **The associations were dependent on the presence of controlling behaviour and a high regional HIV prevalence rate**; when women were exposed to only physical, sexual, or emotional violence, and no controlling behaviour, or when HIV prevalence rates are lower than 5%, the adjusted odds ratios were, in general, close to 1 and insignificant.

Interpretation: The findings indicate that **male controlling behaviour in its own right, or as an indicator of ongoing or severe violence, puts women at risk of HIV infection**. HIV prevention interventions should focus on high-prevalence areas and men with controlling behaviour, in addition to violence.

[Abstract](#) [Full-text \[free\] access](#)

***Editor's notes:** Despite two cohort studies illustrating that exposures to intimate partner violence are associated with incident HIV infection, evidence from cross-sectional analysis of population data is more mixed. Using Demographic and Health Surveys data for women aged 15-49 years from 10 sub-Saharan countries, this paper illustrates that HIV infection is strongly associated with physical violence and/or emotional violence and controlling behaviour, with a weaker association with sexual violence. For all forms of violence, the association was strongest among women who also reported that their partner was controlling, and in settings where HIV prevalence exceeds five percent. This study adds to the growing literature on HIV and intimate partner violence that suggests that risk is not only linked to forced sex, but rather to being in a violent and controlling relationship. The paper highlights the importance of male control as a risk factor for HIV, and supports the need for HIV prevention programmes that focus on reducing intimate partner violence in higher-prevalence settings.*

2. Prevent HIV among drug users

'Women at risk': the health and social vulnerabilities of the regular female partners of men who inject drugs in Delhi, India.

Sharma V, Sarna A, Luchters S, Sebastian M, Degomme O, Saraswati LR, Madan I, Thior I, Tun W. Cult Health Sex. 2014 Dec 2:1-15. [Epub ahead of print]

Needle and syringe sharing is common among people who inject drugs and so is unprotected sex, which consequently puts their sex partners at risk of sexually transmitted infections (STIs) including HIV and other blood-borne infections, like hepatitis. **We undertook a nested study with the regular female partners of men who inject drugs participating in a longitudinal HIV incidence study in Delhi, India.** In-depth interviews were conducted with female partners of 32 men. The interviews aimed to gather focused and **contextual knowledge of determinants of safe sex and reproductive health needs of these women. Information obtained through interviews was triangulated and linked to the baseline behavioural data of their partner (index men who injected drugs).** The study findings illustrate that women in monogamous relationships have a low perception of STI- and HIV-related risk. Additionally, lack of awareness about hepatitis B and C is a cause of concern. **Findings also suggest impact of male drug use on the fertility of the female partner. It is critical to empower regular female partners to build their self-risk assessment skills and self-efficacy to negotiate condom use.** Future work must explore the role of drug abuse among men who inject drugs in predicting fertility and reproductive morbidity among their female partners.

[Abstract access](#)

Editor's notes: *This is an interesting study describing the HIV and sexual health needs of female partners of people who inject drugs (PWID). The study's strengths lie in the innovative way in which female partners of PWID were reached and recruited into the study. Female partners of PWID are a highly hidden group and there has been little research conducted among them, with research focussing mostly on PWID and their HIV risk. Therefore the approach to identifying female partners through an existing cohort of male PWID is highly innovative and provides new information on a hidden population. Findings have important implications for HIV programmes for this population. These include the need to increase uptake of HIV testing, teach the importance of condoms as a contraceptive method and for HIV prevention, as well as dispelling myths that assumed monogamy is a sufficient prevention tool. The paper clearly illustrates that addressing sexual and reproductive health needs of this population is paramount, including addressing problems with infertility and the need for contraceptives. The paper usefully highlights the impact of a male partner's drug use on the daily lives of their female partner, including increased poverty and high levels of violence.*

3. 15 million accessing treatment

Global burden of transmitted HIV drug resistance and HIV-exposure categories: a systematic review and meta-analysis.

Pham QD, Wilson DP, Law MG, Kelleher AD, Zhang L. *AIDS*. 2014 Nov 28;28(18):2751-62. doi: 10.1097/QAD.0000000000000494.

Objectives: Our aim was to review the global disparities of transmitted HIV drug resistance (TDR) in antiretroviral-naïve MSM, people who inject drugs (PWID) and heterosexual populations in both high-income and low/middle-income countries.

Design/methods: We undertook a systematic review of the peer-reviewed English literature on TDR (1999-2013). Random-effects meta-analyses were performed to pool TDR prevalence and compare the odds of TDR across at-risk groups.

Results: A total of 212 studies were included in this review. **Areas with greatest TDR prevalence were North America** (MSM: 13.7%, PWID: 9.1%, heterosexuals: 10.5%); **followed by western Europe** (MSM: 11.0%, PWID: 5.7%, heterosexuals: 6.9%) **and South America** (MSM: 8.3%, PWID: 13.5%, heterosexuals: 7.5%). Our data indicated disproportionately high TDR burdens in MSM in Oceania (Australia 15.5%), eastern Europe/central Asia (10.2%) and east Asia (7.8%). **TDR epidemics have stabilized in high-income countries**, with a higher prevalence (range 10.9-12.6%) in MSM than in PWID (5.2-8.3%) and heterosexuals (6.4-9.0%) over 1999-2013. **In low/middle-income countries, TDR prevalence in all at-risk groups in 2009-2013 almost doubled than that in 2004-2008** (MSM: 7.8 vs. 4.2%, $P = 0.011$; heterosexuals: 4.1 vs. 2.6%, $P < 0.001$; PWID: 4.8 vs. 2.4%, $P = 0.265$, respectively). **The risk of TDR infection was significantly greater in MSM than that in heterosexuals and PWID.** We observed increasing trends of resistance to non-nucleoside reverse transcriptase and protease inhibitors among MSM.

Conclusion: TDR prevalence is stabilizing in high-income countries, but increasing in low/middle-income countries. This is likely due to the low, but increasing, coverage of antiretroviral therapy in these settings. Transmission of TDR is most prevalent among MSM worldwide.

[Abstract access](#)

Editor's notes: HIV mutates very rapidly, and many early antiretroviral agents had a low genetic barrier to the development of resistance. Thus the emergence of virus resistant to antiretroviral agents, particularly to early drug classes, was inevitable. Surveillance for drug-resistant virus among people with no prior history of taking antiretroviral drugs (transmitted drug resistance) is essential to monitor the spread of drug resistance at population level.

This systematic review aimed to compare transmitted drug resistance in different geographical regions and between subpopulations of HIV-positive people by likely route of transmission. Transmitted resistance was most prevalent in high income settings. This is not surprising given wide use of suboptimal drug regimens before effective triple therapy was available. Reassuringly, the prevalence of transmitted resistance seems to have stabilised in high-income settings. The increase in transmitted resistance in low and middle income countries is of more concern. It is not surprising, given that first-line regimens comprising two nucleoside reverse transcriptase inhibitors and a non-nucleoside reverse transcriptase inhibitor are vulnerable to the development of resistance if the drug supply is interrupted or adherence is suboptimal. In addition, if viral load monitoring is not available, people remain on failing drug regimens for longer, and thus have more risk of transmitting resistant virus.

Within the subpopulations examined in this review, transmitted resistance was consistently higher in men who have sex with men, suggesting that resistance testing prior to treatment is particularly valuable for this population.

Limitations of the review include exclusion of studies that did not compare transmitted resistance between the specified subpopulations, and small sample size in many subgroups.

Continued surveillance for transmitted drug resistance is critical. This is most important in settings where individualised resistance testing is not available. This will ensure that people starting antiretroviral therapy receive treatment that will suppress their viral load effectively. Wider use of viral load monitoring, combined with access to effective second and third line regimens, will also help limit spread of drug resistance.

Household food insecurity associated with antiretroviral therapy adherence among HIV-infected patients in Windhoek, Namibia.

Hong SY, Fanelli TJ, Jonas A, Gweshe J, Tjituka F, Sheehan HM, Wanke C, Terrin N, Jordan MR, Tang AM. *J Acquir Immune Defic Syndr.* 2014 Dec 1;67(4):e115-22. doi: 10.1097/QAI.0000000000000308.

Objective: Food insecurity is emerging as an important barrier to antiretroviral therapy (ART) adherence. **The objective of this study was to determine if food insecurity is associated with poor ART adherence among HIV-positive adults** in a resource-limited setting that uses the public health model of delivery.

Design: A cross-sectional study using a 1-time questionnaire and routinely collected pharmacy data. Methods: Participants were HIV-infected adults on ART at the public ART clinics in Windhoek, Namibia: Katutura State Hospital, Katutura Health Centre, and Windhoek Central Hospital. Food insecurity was measured by the Household Food Insecurity Access Scale (HFIAS). Adherence was assessed by the pharmacy adherence measure medication possession ratio (MPR). Multivariate regression was used to assess whether food insecurity was associated with ART adherence.

Results: Among **390 participants**, 7% were food secure, 25% were mildly or moderately food insecure and **67% were severely food insecure. In adjusted analyses, severe household food insecurity was associated with MPR <80% [odds ratio (OR), 3.84; 95% confidence interval (CI): 1.65 to 8.95].** Higher household health care spending (OR, 1.92; 95% CI, 1.02 to 3.57) and longer duration of ART (OR, 0.82; 95% CI: 0.70 to 0.97) were also associated with <80% MPR.

Conclusions: Severe household food insecurity is present in more than half of the **HIV-positive adults attending a public ART clinic in Windhoek, Namibia and is associated with poor ART adherence as measured by MPR. Ensuring reliable access to food should be an important component of ART delivery** in resource-limited settings using the public health model of care.

[Abstract access](#)

Editor's notes: *United Nations Subcommittee on Nutrition defines food insecurity as “the limited or uncertain availability of nutritionally adequate, safe foods, or the inability to acquire personally acceptable foods in socially acceptable ways.” Qualitative studies in resource-limited settings have identified food insecurity as a potential risk for antiretroviral (ART) non-adherence. This is one of the first quantitative studies to analyse this issue. The findings from this cross-sectional survey of people living with HIV on ART in Namibia, are striking. Four of the ten top reasons given for missing a medication dose, were related to food insecurity, e.g. “Did not take ARVs because they make me hungry and I did not have enough food” or, “Did not take ARVs because I cannot afford good food while taking medicine”. After adjusting for potential confounders, severe household food insecurity was significantly and positively associated with poor ART adherence. Depression and travel to the clinic via walking, biking or hitchhiking were also significantly associated with poor adherence. Research into the potential causal pathway between food insecurity and ART adherence is required, including evaluation of programmes to assess the relative effectiveness of nutritional versus livelihood programmes.*

Family matters: co-enrollment of family members into care is associated with improved outcomes for HIV-infected women initiating antiretroviral therapy.

Myer L, Abrams EJ, Zhang Y, Duong J, El-Sadr WM, Carter RJ. J Acquir Immune Defic Syndr. 2014 Dec 1;67 Suppl 4:S243-9. doi: 10.1097/QAI.0000000000000379.

Background: Although there is widespread interest in understanding how models of care for delivering antiretroviral therapy (ART) may influence patient outcomes, family-focused approaches have received little attention. In particular, **there have been few investigations of whether the co-enrollment of HIV-infected family members may improve adult ART outcomes over time.**

Methods: **We examined the association between co-enrollment of HIV-infected family members into care and outcomes of women initiating ART in 12 HIV care and treatment programs across sub-Saharan Africa.** Using data from the mother-to-child transmission (MTCT) Plus Initiative, women starting ART were categorized according to the co-enrollment of an HIV-infected partner and/or HIV-infected child within the same program. **Mortality and loss to follow-up were assessed for up to 5 years after women's ART initiation.**

Results: **Of the 2877 women initiating ART included in the analysis, 31% (n = 880) had at least 1 HIV-infected family member enrolled into care at the same program, including 24% (n = 689) who had an HIV-infected male partner, and 10% (n = 295) who had an HIV-infected child co-enrolled. There was no significant difference in the risk of death of women by family co-enrollment status (P = 0.286). However, the risk of loss to follow-up was greatest among women who did**

not have an HIV-infected family member co-enrolled (19% after 36 months on ART) **compared with women who had an HIV-infected family member co-enrolled** (3%-8% after 36 months on ART) ($P < 0.001$). **These associations** persisted after adjustment for demographic and clinical covariates and **were consistent across countries and care programs.**

Discussion: These data provide novel evidence for the association between adult outcomes on ART and co-enrollment of HIV-infected family members into care at the same program. **Interventions that build on women's family contexts warrant further consideration in both research and policies to promote retention in ART services across sub-Saharan Africa.**

[Abstract](#) [Full-text \[free\] access](#)

***Editor's notes:** With the dramatic increase in the number of people on antiretroviral therapy (ART) over the last decade, further understanding of the impact of different service delivery models on treatment outcomes (including death and retention-in-care) is needed. Previous studies have compared health systems approaches such as primary care versus hospital delivery, task-shifting to nurses and community-based approaches. This study is one of the first to focus on the impact of family-focused approaches on adult outcomes. In this large multi-country study of women enrolled in prevention of mother-to-child transmission programmes, co-enrolment of a family member living with HIV was not associated with mortality among women, but co-enrolment was associated with an approximate halving of the risk of being lost to follow up. This association was consistent across different sub-groups of age, parity, partner status and location. The strength and consistency of the finding highlights the central role that family and social support can play in shaping health-seeking behaviours among people living with HIV. Further research would include the effect of co-enrolment on treatment outcomes among men, and exploration of specific aspects of co-enrolment, such as disclosure.*

4. Avoid TB deaths

Incidence and mortality of tuberculosis before and after initiation of antiretroviral therapy: an HIV cohort study in India.

Alvarez-Uria G, Pakam R, Midde M, Naik PK. J Int AIDS Soc. 2014 Dec 9;17:19251. doi: 10.7448/IAS.17.1.19251. eCollection 2014.

Introduction: India has the highest burden of tuberculosis (TB) in the world, but the epidemiology of HIV-associated TB is not well known.

Methods: **We describe the incidence and the mortality of TB from HIV diagnosis to antiretroviral therapy (ART) initiation (pre-ART group) and after ART initiation (on-ART group) in an HIV cohort study in Anantapur, India.** Multivariable analysis of factors associated with TB was performed using competing risk regression and restricted cubic spline methods.

Results: A total of 4590 patients and 3133 person-years (py) of follow-up were included in the pre-ART group, and 3784 patients and 4756 py were included in the on-ART group. **In the pre-ART group, the incidence of TB was high during the first month after HIV diagnosis and dropped nearly four times soon after. In the on-ART group, the incidence of TB increased after ART initiation reaching a peak in the third month.** The probability of having TB within 30 months was 22.3% (95% confidence interval [CI], 21.1-23.6) in the pre-ART group and 17.8% (95% CI, 16.3-19.3) in the on-ART group. In a multivariable analysis, women had a lower risk of TB in both groups. Poor socio-economic conditions were associated with an increased risk of TB in the pre-ART group, but not

in the group on-ART. While the association between low CD4 counts and TB was strong in the pre-ART group, this association was weaker in the on-ART group, and the highest risk of TB was seen in those patients with CD4 counts around 110 cells/mm³. **The cumulative incidence of mortality at 12 months in patients with TB was 29.6% (95% CI, 26.9-32.6) in pre-ART TB and 34.9% (95% CI, 31-39.1) in on-ART TB. Half deaths before ART initiation and two thirds of deaths after ART initiation occurred in patients with TB.**

Conclusions: **The high incidence and mortality of TB seen in this study underscore the urgent need to improve the prevention and diagnosis of HIV-associated TB in India.** We found substantial differences between TB before and after ART initiation.

[Abstract](#) [Full-text \[free\] access](#)

Editor's notes: *Although India has a huge burden of TB, there are relatively few published data regarding the epidemiology of HIV-associated TB, which this retrospective analysis begins to address. This study describes the incidence of TB and mortality among people with TB. The study looked at a cohort of people living with HIV, attending a rural hospital funded by a non-governmental organisation where medical care, including antiretroviral therapy and TB treatment, were provided free of charge. The authors report extremely high incidence of TB shortly after both HIV diagnosis and antiretroviral therapy initiation. They also report high mortality among individuals with TB, all of which are far greater than described in antiretroviral therapy programmes in South Africa. As the authors note, this likely reflects multiple issues. These include the fact that people often first present for HIV care due to symptoms of TB, unsatisfactory screening for TB, and inadequate investigation of individuals with TB symptoms, which relies on sputum microscopy and radiology. Furthermore, isoniazid preventive therapy is not yet implemented in India and the authors report that buildings designated as antiretroviral therapy centres are often inadequate in terms of infection control. This study highlights the urgency of comprehensive implementation of WHO's three I's (intensified case finding, isoniazid preventive therapy, infection control) for tuberculosis strategy in this setting and access to better, affordable and rapid diagnostic tests for TB.*

Efficacy and safety of three regimens for the prevention of malaria in young HIV-exposed Ugandan children: a randomized controlled trial.

Kamya MR, Kapisi J, Bigira V, Clark TD, Kinara S, Mwangwa F, Muhindo MK, Kakuru A, Aweeka FT, Huang L, Jagannathan P, Achan J, Havlir DV, Rosenthal PJ, Dorsey G. *AIDS*. 2014 Nov 28;28(18):2701-9. doi: 10.1097/QAD.0000000000000497.

Objective: **Trimethoprim-sulfamethoxazole prophylaxis is recommended for HIV-exposed infants until breastfeeding ends and HIV infection has been excluded. Extending prophylaxis with a focus on preventing malaria may be beneficial in high transmission areas.** We investigated three regimens for the prevention of malaria in young HIV-exposed children.

Design: **An open-label, randomized controlled trial.**

Setting: Tororo, Uganda, a rural area with intense, year-round, malaria transmission.

Participants: Two hundred infants aged 4-5 months enrolled and 186 randomized after cessation of breastfeeding and confirmed to be HIV uninfected (median 10 months of age).

Intervention: **No chemoprevention, monthly sulfadoxine-pyrimethamine, daily trimethoprim-sulfamethoxazole or monthly dihydroartemisinin-piperaquine given from randomization to 24 months of age.**

Main outcome measures: The primary outcome was the incidence of malaria during the intervention period. Secondary outcomes included the incidence of hospitalization, diarrhoeal illness, or respiratory tract infection; prevalence of anaemia and asymptomatic parasitemia; measures of safety; and incidence of malaria over 1 year after the intervention was stopped.

Results: During the intervention, the incidence of malaria in the no chemoprevention group was 6.28 episodes per person-year at risk. **Protective efficacy was 69% [95% confidence interval (95% CI) 53-80, P < 0.001] for dihydroartemisinin-piperaquine, 49% (95% CI 23-66, P = 0.001) for trimethoprim-sulfamethoxazole and 9% for sulfadoxine-pyrimethamine (95% CI -35 to 38, P = 0.65). There were no significant differences in any secondary outcomes, with the exception of a lower prevalence of asymptomatic parasitemia in the dihydroartemisinin-piperaquine arm.**

Conclusion: **Monthly chemoprevention with dihydroartemisinin-piperaquine was well tolerated and associated with a significant reduction in malaria in young HIV-exposed children.**

[Abstract access](#)

Editor's notes: WHO recommends placing HIV-exposed but HIV-negative children on trimethoprim-sulfamethoxazole prophylaxis starting at six weeks of age, and discontinuing this prophylaxis after the period of HIV exposure. That is after breastfeeding cessation and HIV infection has been excluded.

This article reports on a four-arm randomized controlled trial examining the effect of chemoprevention beyond the period of HIV exposure. The efficacy and safety of daily trimethoprim-sulfamethoxazole, monthly sulfadoxine-pyrimethamine, and monthly dihydroartemisinin-piperaquine was compared with the current standard of care which is no chemoprevention beyond the period of HIV exposure. Children received the allocated treatment until two years of age. They were followed up for an additional year after the programme to examine whether chemoprevention would delay the acquisition of antimalarial immunity, which would lead to a rebound in the incidence of malaria after the activity, was stopped.

The trial found that continuing daily trimethoprim-sulfamethoxazole or starting monthly dihydroartemisinin-piperaquine had significant protective efficacy against malaria in comparison to the current standard of care which is the discontinuation of trimethoprim-sulfamethoxazole prophylaxis. Monthly dihydroartemisinin-piperaquine was found to be the most protective chemoprevention.

The trial found no evidence of significant protection against diarrhoeal illnesses or respiratory tract infections, and no evidence of a negative impact of chemoprevention on the development of antimalarial immunity. The authors suggest that integration of chemoprevention strategies for HIV-exposed but HIV-negative children in the era of Option B+ (initiating lifelong antiretroviral therapy among pregnant women living with HIV) needs to be further evaluated.

Interestingly the authors found a high incidence of malaria in the children who were receiving standard care, despite the use of insecticide-treated nets. They also found a discrepancy between the caregivers' reported adherence to dihydroartemisinin-piperaquine and its blood concentrations, suggesting non-adherence to the monthly dosing schedule.

5. Close the resource gap

Global Fund investments in human resources for health: innovation and missed opportunities for health systems strengthening.

Bowser D, Sparkes SP, Mitchell A, Bossert TJ, Bärnighausen T, Gedik G, Atun R. *Health Policy Plan.* 2014 Dec;29(8):986-97. doi: 10.1093/heapol/czt080. Epub 2013 Nov 6.

Background: Since the early 2000s, there have been large increases in donor financing of human resources for health (HRH), yet few studies have examined their effects on health systems.

Objective: To **determine the scope and impact of investments in HRH by the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund)**, the largest investor in HRH outside national governments.

Methods: We used **mixed research methodology** to analyse budget allocations and expenditures for HRH, including training, for 138 countries receiving money from the Global Fund during funding rounds 1-7. From these aggregate figures, we then **identified 27 countries with the largest funding for human resources and training and examined all HRH-related performance indicators tracked** in Global Fund grant reports. We used the results of these quantitative analyses to select six countries with substantial funding and varied characteristics-representing different regions and income levels for further in-depth study: Bangladesh (South and West Asia, low income), Ethiopia (Eastern Africa, low income), Honduras (Latin America, lower-middle income), Indonesia (South and West Asia, lower-middle income), Malawi (Southern Africa, low income) and Ukraine (Eastern Europe and Central Asia, upper-middle income). We used **qualitative methods to gather information in each of the six countries through 159 interviews with key informants from 83 organizations**. Using comparative case-study analysis, we examined Global Fund's interactions with other donors, as well as its HRH support and co-ordination within national health systems.

Results: Around **US\$1.4 billion (23% of total US\$5.1 billion) of grant funding was allocated to HRH by the 138 Global Fund recipient countries**. In funding rounds 1-7, the six countries we studied in detail were awarded a total of 47 grants amounting to US\$1.2 billion and HRH budgets of US\$276 million, of which approximately half were invested in disease-focused in-service and short-term training activities. **Countries employed a variety of mechanisms including salary top-ups, performance incentives, extra compensation and contracting of workers for part-time work, to pay health workers using Global Fund financing. Global Fund support for training and salary support was not co-ordinated with national strategic plans** and there were major deficiencies in the data collected by the Global Fund to track HRH financing and to provide meaningful assessments of health system performance.

Conclusion: **The narrow disease focus and lack of co-ordination with national governments call into question the efficiency of funding and sustainability of Global Fund investments in HRH and their effectiveness in strengthening recipient countries' health systems**. The lessons that emerge from this analysis can be used by both the Global Fund and other donors to improve co-ordination of investments and the effectiveness of programmes in recipient countries.

[Abstract access](#)

Editor's notes: *This study describes Global Fund's budget allocations, expenditures and specific activities on human resources for health (HRH) from 2002 to 2010. The authors were particularly interested in exploring whether and how these investments contributed to health system strengthening through a more detailed qualitative analysis of six geographically and programmatically different countries.*

They find that the 27 countries with the largest budgeted HRH expenditures allocated some 29.6% to HRH, and had a ratio of 1.35 health workers trained in comparison to the total national health workforce, suggesting duplication of training activities and programme inefficiency. This reflects the

confirmed lack of coordination with national HRH training programmes that the authors documented, particularly in Ethiopia, Bangladesh and Malawi. In terms of coordinating HRH salary support and financing plans, only Honduras and Malawi had developed plans for absorbing some of the health workers that were being covered by Global Fund grants. In other countries, the top-ups and monetary compensation/ incentives funded through Global Fund grants to increase retention and motivation, were considered short-term and would not be sustained. Of the six country case studies, it is only in Malawi that the Global Fund coordinated its efforts with the national HRH strategy and other donor programmes.

The study highlights the need for a paradigm shift away from disease-focused grants to co-investments in HIV, tuberculosis and malaria that would allow the realisation of remarkable synergies and efficiency gains.

6. Eliminate gender inequalities

Effectiveness of an integrated intimate partner violence and HIV prevention intervention in Rakai, Uganda: analysis of an intervention in an existing cluster randomised cohort.

Wagman JA, Gray RH, Campbell JC, Thoma M, Ndyababo A, Ssekasanvu J, Nalugoda F, Kagaayi J, Nakigozi G, Serwadda D, Brahmbhatt H. *Lancet Glob Health*. 2015 Jan;3(1):e23-33. doi: 10.1016/S2214-109X(14)70344-4. Epub 2014 Nov 28.

Background: Intimate partner violence (IPV) is associated with HIV infection. **We aimed to assess whether provision of a combination of IPV prevention and HIV services would reduce IPV and HIV incidence in individuals enrolled in the Rakai Community Cohort Study (RCCS), Rakai, Uganda.**

Methods: We **used pre-existing clusters of communities** randomised as part of a previous family planning trial in this cohort. **Four intervention group clusters from the previous trial were provided standard of care HIV services plus a community-level mobilisation intervention to change attitudes, social norms, and behaviours related to IPV, and a screening and brief intervention to promote safe HIV disclosure and risk reduction in women seeking HIV counselling and testing services (the Safe Homes and Respect for Everyone [SHARE] Project).** Seven **control group clusters** (including two intervention groups from the original trial) **received only standard of care HIV services.** Investigators for the RCCS did a baseline survey between February, 2005, and June, 2006, and two follow-up surveys between August, 2006, and April, 2008, and June, 2008, and December, 2009. Our **primary endpoints were self-reported experience and perpetration of past year IPV (emotional, physical, and sexual) and laboratory-based diagnosis of HIV incidence in the study population.** We used Poisson multivariable regression to estimate adjusted prevalence risk ratios (aPRR) of IPV, and adjusted incidence rate ratios (aIRR) of HIV acquisition. This study was registered with ClinicalTrials.gov, number NCT02050763.

Findings: Between Feb 15, 2005, and June 30, 2006, we enrolled 11 448 individuals aged 15-49 years. 5337 individuals (in four intervention clusters) were allocated into the SHARE plus HIV services group and 6111 individuals (in seven control clusters) were allocated into the HIV services only group. **Compared with control groups, individuals in the SHARE intervention groups had fewer self-reports of past-year physical IPV** (346 [16%] of 2127 responders in control groups vs 217 [12%] of 1812 responders in intervention groups; **aPRR 0.79, 95% CI 0.67-0.92**) **and sexual IPV** (261 [13%] of 2038 vs 167 [10%] of 1737; **0.80, 0.67-0.97**). Incidence of emotional IPV did not differ (409 [20%] of 2039 vs 311 [18%] of 1737; 0.91, 0.79-1.04). **SHARE had no effect on male-reported IPV**

perpetration. At follow-up 2 (after about 35 months) the intervention was associated with a **reduction in HIV incidence** (1.15 cases per 100 person-years in control vs 0.87 cases per 100 person-years in intervention group; **aIRR 0.67**, 95% CI 0.46-0.97, $p=0.0362$).

Interpretation: **SHARE could reduce some forms of IPV towards women and overall HIV incidence, possibly through a reduction in forced sex and increased disclosure of HIV results.** Findings from this study should inform future work toward HIV prevention, treatment, and care, and SHARE's ecological approach could be adopted, at least partly, as a standard of care for other HIV programmes in sub-Saharan Africa.

[Abstract](#) [Full-text \[free\] access](#)

***Editor's notes:** There are a very limited number of programme trials that have illustrated impacts on HIV incidence. This trial adds to the evidence base. The Safe Homes and Respect for Everyone (SHARE) project, incorporates both community programming elements, to shift social norms on gender inequality and violence, along with a clinic based screening and brief activity, to promote safe HIV disclosure and risk reduction. This study showed that the SHARE project had an impact on women's experience of violence and HIV incidence. The findings suggest that, when compared with the provision of standard HIV treatment alone, SHARE plus HIV treatment had a significant impact on HIV incidence and women's experiences of physical and sexual partner violence. The findings complement previous trials, that illustrate that intimate partner violence can be prevented, and strengthen the case for the need to invest in programmes to address gender inequality and violence as part of the HIV response. Further research is needed to better understand the pathways through which HIV incidence may have been reduced, especially given that the study did not document impacts on reported numbers of sexual partners or condom use.*

Eliminate stigma and discrimination

Was it a mistake to tell others that you are infected with HIV?: factors associated with regret following HIV disclosure among people living with HIV in five countries (Mali, Morocco, Democratic Republic of the Congo, Ecuador and Romania). Results from a community-based research.

Henry E, Bernier A, Lazar F, Matamba G, Loukid M, Bonifaz C, Diop S, Otis J, Préau M; The Partages study group. AIDS Behav. 2014 Dec 23. [Epub ahead of print]

This study examined **regret following HIV serostatus disclosure and associated factors** in under-investigated contexts (**Mali, Morocco, Democratic Republic of the Congo, Ecuador and Romania**). **A community-based cross-sectional study** was implemented by a mixed consortium [researchers/community-based organizations (CBO)]. Trained CBO members interviewed 1500 PLHIV in contact with CBOs **using a 125-item questionnaire**. A weighted multivariate logistic regression was performed. Among the 1212 participants included in the analysis, 290 (**23.9 %**) **declared that disclosure was a mistake. Female gender, percentage of PLHIV's network knowing about one's seropositivity from a third party, having suffered rejection after disclosure, having suffered HIV-based discrimination at work, perceived seriousness of infection score, daily loneliness, property index and self-esteem score were independently associated with regret.** Discrimination, as well as individual characteristics and skills may affect the disclosure experience. Interventions aiming at improving PLHIV skills and reducing their social isolation may facilitate the disclosure process and avoid negative consequences.

Editor's notes: *Anticipated and perceived consequences of disclosing one's HIV status are recognized as important drivers for HIV disclosure. This community-based study looked at the experience of disclosing one's HIV status, and the emotions that were associated with disclosure. The study was nested within a larger cross-sectional research project. 1500 people living with HIV (PLHIV) from Ecuador, the Democratic Republic of the Congo (DRC), Mali, Romania, and Morocco were included in the study. Respondents were asked 'Was it a mistake to tell others that you are infected with HIV?' and to answer either 'yes' or 'no.' Participants also responded to questions about the process of disclosure. Among people that had disclosed their status, some 23.9% said that it was a mistake to do so. Almost 40% of participants said that a person in their network learned about their status from a third party. More than 17% of participants responded that they faced rejection and eight percent of participants suffered discrimination at work following disclosure. But this varied greatly across countries. Factors associated with feeling regret after disclosing one's status included being a female, perceived seriousness of HIV infection, and feeling lonely every day. This study highlights the fact that status disclosure can be emotional and stressful for people living with HIV. This suggests that people living with HIV must weigh the costs and benefits of disclosure before doing so and programmes that empower them to make informed decisions about disclosure may be beneficial.*

Strengthening HIV integration

When I was no longer able to see and walk, that is when I was affected most: experiences of disability in people living with HIV in South Africa.

Hanass-Hancock J, Myezwa H, Nixon SA, Gibbs A. Disabil Rehabil. 2014 Dec 19:1-11. [Epub ahead of print]

Abstract Purpose: HIV-related disability is an emerging issue in countries where HIV is endemic. This study aimed to understand experiences of disability in patients living with HIV in South Africa using the International Classification of Functioning, Disability and Health (ICF) as a guiding framework.

Methods: In-depth interviews were conducted with 19 HIV-positive people receiving ART through a public hospital in KwaZulu-Natal. Data were analyzed using collaborative qualitative content analysis.

Results: Participants described a variety of impairments related to mental, sensory, neuromusculoskeletal, skin, cardiovascular, digestive or reproductive systems. A tenuous relationship was evident between HIV and mental health impairments and the experience of other disabilities. Impairments affected participants' activity levels, especially mobility, domestic life, self-care and ability to work. Activity limitations affecting livelihood were often of more concern to participants than the impairments. Furthermore, women and men appeared to experience disability related to activities relevant to gendered norms in their cultural context.

Conclusions: More understanding of the intersections among HIV, disability, gender and livelihood is needed. To respond to the increased need to manage disability within HIV care in Africa, HIV programs should include rehabilitative approaches, address concerns related to livelihoods in households with disability and consider gender differences in the experience of disability.

Implications for Rehabilitation: HIV, its opportunistic infections and the treatments associated to them are related to health conditions and impairments that have the potential to develop into disability.

Rehabilitation professionals in HIV endemic countries have therefore a larger and changing number of people living with HIV and need to consider the impact of the disease on the rehabilitation process. Mental health issues and disability might be interrelated and affect antiretroviral treatment (ART) adherence. Hence, rehabilitation has to use a holistic approach and integrate different therapy approaches (e.g. physiotherapy and mental health). The experience of living with HIV and developing disability has unreflected gender dynamics that need to be considered in rehabilitative care. Hence, the rehabilitation process has to consider the cultural realities and gendered experience of the condition. **The study highlights the interrelationship between disability levels, the influence of environmental and social factors, and the changing experience related to gender. Hence, rehabilitation professionals in resource-poor settings have to go beyond the clinical response and therapy approaches in order to improve the activity and participation of people with disabilities and those living with HIV in their homes and communities.** Community or home-based care might be avenues to further explore.

[Abstract access](#)

***Editor's notes:** While the existence of disability among people living with HIV and on antiretroviral therapy (ART) has been reported, few studies have investigated the individual's experience of disability. This important study from South Africa aims to fill that gap. The authors used WHO International Classification of Functioning, Disability and Health (ICF) to guide their interviews and the analysis. They systematically sampled participants from an antiretroviral treatment clinic at a public hospital in KwaZulu-Natal. Importantly they did not purposely choose people with a visible disability because they wished to capture the perspectives of people who appeared to be doing well on ART as well as people who may have a visible impairment. No screening for disability was done prior to recruitment in the study. Ten of the 19 participants had no visible disability, but 17 out of 19 reported challenges at the impairment level of disability. These challenges were often related to mental function, sensory function and pain, headaches, painful feet and vision problems (which in some cases seemed to be linked to TB treatment). These different impairments affected mobility, social interactions, ability to make a living and self-esteem. Not all of these impairments were visible nor necessarily reported to clinic staff who perceived many of these people to be 'doing well' on ART. The authors illustrate in this small but important study a great diversity of experience of disability across a small number of people in one clinic in South Africa. They highlight the importance of understanding the social and environmental factors which influence individual experience. Most importantly they stress the need to pay attention to impairment and the rehabilitation support that may be needed, even for people who appear to be doing well on medication.*

Integration of community home based care programmes within national primary health care revitalisation strategies in Ethiopia, Malawi, South-Africa and Zambia: a comparative assessment.

Aantjes C, Quinlan T, Bunders J. Global Health. 2014 Dec 11;10(1):85. [Epub ahead of print]

Background: In 2008, the WHO facilitated the primary health care (PHC) revitalisation agenda. **The purpose was to strengthen African health systems in order to address communicable and non-communicable diseases. Our aim was to assess the position of civil society-led community home based care programmes (CHBC), which serve the needs of patients with HIV, within this agenda.** We examined how their roles and place in health systems evolved, and the prospects for these programmes in national policies and strategies to revitalise PHC, as new health care demands arise.

Methods: The study was conducted in Ethiopia, Malawi, South Africa and Zambia and used an historical, comparative research design. We used purposive sampling in the selection of countries and case studies of CHBC programmes. Qualitative methods included semi-structured interviews, focus group discussions, service observation and community mapping exercises. Quantitative methods included questionnaire surveys.

Results: The capacity of PHC services increased rapidly in the mid-to-late 2000s via CHBC programme facilitation of community mobilisation and participation in primary care services and the exceptional investments for HIV/AIDS. CHBC programmes diversified their services in response to the changing health and social care needs of patients on lifelong anti-retroviral therapy and there is a general trend to extend service delivery beyond HIV-infected patients. We observed similarities in the way the governments of South Africa, Malawi and Zambia are integrating CHBC programmes into PHC by making PHC facilities the focal point for management and state-paid community health workers responsible for the supervision of community-based activities. Contextual differences were found between Ethiopia, South Africa, Malawi and Zambia, whereby the policy direction of the latter two countries is to have in place structures and mechanisms that actively connect health and social welfare interventions from governmental and non-governmental actors.

Conclusions: Countries may differ in the means to integrate and co-ordinate government and civil society agencies but the net result is expanded PHC capacity. In a context of changing health care demands, CHBC programmes are a vital mechanism for the delivery of primary health and social welfare services.

[Abstract](#) [Full-text \[free\] access](#)

***Editor's notes:** This paper presents a comprehensive overview of the integration of community home based care (CHBC) with primary health care (PHC) strategies in four countries in sub-Saharan Africa. It emphasises the co-ordination of efforts between government and civil society. Using a multi method approach drawing on surveys, key informant interviews, focus group discussions and in-depth interviews the authors sought to gain an historical perspective on the changing form and content of CHBC and PHC in Ethiopia, Malawi, South Africa and Zambia. They focused on programmes that had been active for more than 10 years, were nationally representative and offered diversity of care. Their findings reveal a commitment to integration of care within PHC strategies in all the countries. This reflects the recent call by WHO to revitalise primary health care approaches in developing countries. The authors identified similarities across the countries, especially government commitment to revitalise PHC, a strong presence of actors providing CHBC, and the extension of focus beyond one disease such as HIV to the care and support for people with chronic conditions. They also identified three different approaches taken. These included supervision by the government (Malawi, Zambia), contracting (South Africa) and referral (Ethiopia). This reveals that approaches to integration need to be context-driven. This is a very useful paper to understand how HIV care is now being integrated into broader medical and social care and lessons learned from innovative HIV care are being applied more widely and in a more coordinated way.*