This literature digest summarizes, contextualizes and assesses the quality of recently published studies of behavioral, policy and prevention interventions that have one or more of the following aims: to reduce sexual or drug-related HIV risk behaviors, to decrease primary or secondary HIV transmission, to improve health service delivery and quality of life, or to improve HIV treatment and treatment adherence. Included studies were conducted in or have applications to resource-limited settings. The Lit Digest is prepared by the Cochrane HIV/AIDS Group, based at the University of California, San Francisco.

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NOTE ➡️ We have developed a survey to evaluate our Lit Digest, in order to assess its impact and to learn from you about any ways in which it might be improved. We would be very grateful if you would go to this link to complete the survey: https://ucsf.co1.qualtrics.com/SE/?SID=SV_5bX8I0Mt335FUKp

It should just take you a few minutes. Thank you very much in advance for helping us with this survey.

SUMMARIZED IN THIS EDITION:

Home-based HIV testing and counseling


Decentralization of care


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Home-based HIV testing and counseling


OBJECTIVE: To determine the effectiveness of an HIV testing and counseling intervention delivered by lay counselors in homes (HBTC) compared to HIV testing done in facilities on HIV testing prevalence and reported sexual behavior.

SETTING: Sixteen communities in rural KwaZulu province in South Africa, where poverty rates and HIV prevalence rates are among the highest in the country, randomized to either the intervention or control group.

STUDY DESIGN: Group (cluster) randomized trial.

POPULATION: Household members 18 years and older and adolescents 14-17 with guardian’s consent.

MAIN OUTCOME MEASURES: Primary outcome was prevalence of HIV testing. Secondary outcomes included sexual behavior, HIV knowledge, stigma, intimate partner violence and access to care.

METHODS: Two serial cross-sectional community surveys were conducted to evaluate this intervention. A baseline cross-sectional survey of 16 communities was conducted from September-November 2008 and results of this survey were previously reported.¹ The primary outcome for this study, HIV testing, was collected at baseline and follow-up whereas the remaining outcomes were only collected at follow-up. The 16 communities were then randomized 1:1 to the intervention or control group using computer generated randomization. Post-intervention data collection teams were blinded to the intervention group assignment.

The intervention was implemented by 11 lay counselors, 4 intervention supervisors and 1 clinical nurse supervisor and ran from September 2009-November 2010. The lay counselors were local women living in the intervention communities who spoke the local language, had previous community work experience and had completed at least 12 years of schooling. Counselors then completed a 10-day nationally accredited course and 4 months’ HIV testing experience at local health facilities before beginning intervention implementation. The intervention began with various community involvement engagement activities and then commenced as home visits to all households in a selected community. In the intervention group counselors first provided basic HIV education and then provided all eligible household members who chose to participate free pretest counseling, an HIV test and posttest counseling in a private area of the home. Couples counseling was particularly encouraged. Participants who tested positive were provided a referral letter to care services at local health facilities. In the control group participants received the standard of care, which involved HIV education and referrals to local clinics conducting HIV counseling and testing.

Post-intervention survey data was conducted from February-May 2011. Differences between intervention and control groups were tested using hierarchical generalized linear models in the negative binomial form to account for nesting within households and within communities and sub-analyses of the intervention interaction by gender were chosen a priori.

RESULTS: Sixteen communities participated in this intervention, 8 in each group, and included 2276 individuals in the intervention group and 2434 in the control group.

Participants in the intervention group were less likely to have piped water into house or yard, more likely to have water from a borehole or public tap and less likely to own a mobile phone; these variables were then included as potential confounders in all models. At baseline the percentage of those reporting having had an HIV test previously were similar between the intervention and control groups (32% vs. 31%).

Significantly more participants in the intervention group were tested for HIV during the study period (69%) compared to those in the control group (47%) (prevalence ratio [PR] 1.54, 95% CI 1.32-1.81). This difference also remained when data was analyzed by gender (PR 1.51, 95% CI 1.29-1.78 for women and PR 1.52. 95% CI 1.19-1.95) for men. Testing positive for HIV was significantly lower in the intervention group (6%) compared to the control group (10%) (PR 0.65, 95% CI 0.47-0.90). No significant differences were found between the intervention and control groups for the outcomes of receiving a first-ever HIV test or receiving test results.
The intervention also found significant effects for additional HIV-testing related outcomes. Significantly more participants in the intervention group received couples counseling with their most recent HIV test (21%) compared to the control group (10%) (PR 2.24, 95% CI 1.49-3.03), and those in the intervention group were less likely to report experiencing intimate partner violence since disclosing their HIV status (2%) compared to those in the control group (4%) (PR 0.57, 95% CI 0.33-0.99).

With respect to HIV testing location, 58% of participants in the intervention group reported being tested for HIV at home compared to only 0.6% in the control group. However, 40% of participants in the intervention group reported choosing to be tested for HIV at a health facility despite the in-home option.

A number of sexual behavior-related outcomes were also impacted by the intervention at follow up. Significantly fewer participants in the intervention group reported having more than one sexual partner in the past three months (3%) compared to the control group (6%) (PR 0.45, 95% CI 0.33-0.62); this difference was even more pronounced when analyzed only among those people reporting having had an HIV test (2% vs. 5%, PR 0.37, 95% CI 0.24-0.58). In addition, significantly fewer participants in the intervention group reported having a casual partner in the past three months (5%) compared to the intervention group (8%) (PR 0.55, 95% CI 0.42-0.73); again this difference was more pronounced among those reporting having had an HIV test (4% vs. 7%, PR 0.50, 95% CI 0.36-0.72). There were no significant differences in condom use at last sexual intercourse or HIV knowledge.

CONCLUSIONS: The authors concluded that this HBTC intervention was effective in increasing the number of individuals tested for HIV, decreasing some risky sexual behaviors and increasing testing and counseling among couples. The intervention did not appear to have an effect on HIV knowledge, stigma, condom use or receiving HIV test results.

RISK OF BIAS: The overall risk of bias in this trial was moderate. Allocation was randomly generated and assigned by a computer program and post-intervention data collectors were blinded to the intervention group assigned. However, the data analyzed are based on 2 serial cross-sectional community-level surveys, which do not provide data on the same individuals pre-intervention and post-intervention. All data analyzed were based on self-report, which is prone to social desirability bias. In addition, although this was a group randomized trial that assigned communities to the intervention and hierarchical modeling was used to accommodate the two levels of clustering, the data were analyzed and presented at the individual level and not the group level which may lead to incorrect conclusions.

IN CONTEXT: This paper is the first to present results from a large group randomized trial assessing the effectiveness of an HBTC intervention in a rural setting with high HIV prevalence in South Africa and found that HBTC has multiple benefits beyond even providing HIV testing. In addition, although this intervention was conducted in a rural area, the authors posit that such an intervention could also have a positive impact on urban communities as well. The most recent WHO guidelines also mention the inclusion of home-based testing as part of a comprehensive package of outreach services.

PROGRAMMATIC IMPLICATIONS: Home-based HIV testing and counseling conducted by lay counselors is feasible and can be effective at impacting both HIV-testing rates and non-testing related outcomes, and may be particularly useful for providing service in rural areas.


OBJECTIVE: To evaluate the effectiveness of a home-based HIV testing and counseling (HBTC) intervention delivered by local counselors on HIV testing uptake, community members’ HIV-related stigma and community leaders’ HIV-related stigma.

SETTING: 35 communities in Burnt Forest and Teso divisions in rural Kenya randomized to either the intervention or control group.

STUDY DESIGN: Community randomized trial.
**POPULATION:** Adult household members.

**MAIN OUTCOME MEASURES:** Uptake of HIV testing, community members and community leaders’ beliefs about HIV prevalence, condom use, and HIV-related stigma.

**METHODS:** A baseline and follow-up survey were conducted on a representative sample of 2700 households from the 35 participating communities. The baseline survey was conducted from April-June 2009 and the follow-up survey was conducted on the same households 18 months later, and, upon completion of this survey, the intervention was implemented in the control group communities.

In the intervention group counselors visited homes offering HBTC to all adults in the household and couples testing was particularly encouraged. Participants testing positive for HIV were referred to the local health facilities for follow-up care. The control group received no intervention at that time but instead received a deferred HBTC intervention once the study was completed.

Data were collected using the pre-post surveys of community members, a community leader survey and administrative data to determine rates of HIV testing uptake. The community members survey consisted of questions related to HIV prevalence beliefs and HIV-related stigma. The community leaders’ survey was conducted post-intervention only. Differences between the intervention and control groups were tested using t-tests and basic regression models.

**RESULTS:** Thirty-five communities participated in this intervention, 18 in the intervention group and 17 in the control group, and included 3383 community members and 313 community leaders.

In regard to HIV test uptake, the percentage of households undergoing HIV testing as part of the intervention ranged from 23.4%-88.4% in the communities assigned to the intervention compared to a range of 0%-1.1% in the control communities. Prevalence of having ever had an HIV test were also higher in the intervention communities (95%) compared to the control communities (64%) (p<0.01) and this difference remained significantly different in subanalyses by gender and age. Higher levels of pre-intervention stigma were correlated with higher rates of testing, but this correlation was not statistically significant.

Beliefs about HIV remained unchanged between the intervention and control groups with regards to condom use and the belief that if you are HIV-infected then so is your partner. However, there was a significant difference in the response to the question of what percentage of discordant couples exist in the community with the intervention group guessing 42.3% compared to 44.6% in the control group.

For stigma measures the intervention group reported lower levels of stigma compared to the control group for three questions, higher levels for four questions and no change in stigma for the remaining 11 questions. Community leader beliefs about HIV prevalence remained unchanged between the intervention and control groups for any of the belief outcomes but community leaders had significantly lower levels of stigma for seven questions in the intervention group compared to the control group.

**CONCLUSIONS:** The authors concluded that HBTC was feasible to implement, even in settings where stigma was high, and some measures of community members’ stigma improved in the intervention group even though their HIV prevalence beliefs remained unchanged. Community members’ stigma both increased for some measures and decreased for others, and HIV prevalence beliefs remained mostly unchanged for this group.

**RISK OF BIAS:** The overall risk of bias in this trial was low. Allocation was randomly generated and assigned by a computer program and some data was collected using administrative databases, although data collectors were not blinded to the group assignment.

**IN CONTEXT:** This paper the first to present results from a randomized trial to evaluate the effectiveness of a HBTC intervention implemented in a rural setting with high stigma in Kenya. Findings from this study support those from other studies including a recent systematic review of HBTC studies conducted in sub-Saharan Africa which found 21 studies that met inclusion criteria conducted in 5 different countries and concluded that HBTC interventions increased HIV testing uptake and knowledge of HIV status among participants. WHO has developed a handbook to support HBTC interventions and provides information on HBTC implementation and evaluation for sub-Saharan Africa.
PROGRAMMATIC IMPLICATIONS: HBTC interventions may lead to multiple benefits in addition to increasing HIV testing uptake and may provide for more directed services than sporadic VCT interventions, but it would be beneficial to specifically target HIV-related stigma in order to directly impact this outcome.

Decentralization of care


OBJECTIVE: Systematic review to evaluate the effects of decentralized HIV care in relation to initiation and maintenance of antiretroviral therapy (ART) in patients with HIV infection.

STUDIES: Randomized controlled trials (RCT) and observational studies.

POPULATION: HIV-infected patients beginning ART, and patients already on ART.

INTERVENTION: Any form of decentralized care delivery model for the initiation of treatment, continuation of treatment, or both. Decentralized care was defined broadly as services provided at health centers peripheral to more centralized hospitals, or lower levels of service. Decentralized care is generally provided closer (geographically) to patients’ homes. The authors note that “decentralization” and other relevant terms (e.g., “community,” “health post,” “health centre” and “hospital services”) vary in their meanings in different countries. The authors define three basic models of decentralized care: 1) partial decentralization, in which patients initiate ART at hospitals but maintain therapy at decentralized health centers; 2) full decentralization, in which ART is initiated and maintained at decentralized health centers; and 3) community-based ART maintenance, in which ART is initiated at hospitals but maintained at home through the work of trained volunteers from the community.

MAIN OUTCOME MEASURES: The primary outcomes were attrition, loss to follow-up (LTFU) and death. Attrition was defined as a composite of death or LTFU. Secondary outcomes included time to ART initiation, tuberculosis (TB) diagnosis while in care, virologic or immunologic response to ART, AIDS-defining illness, patient satisfaction, costs to patient or provider, and any negative impact on health care or program delivery.

METHODS: Standard Cochrane HIV/AIDS Group search strategies were used, along with a range of relevant keywords and medical subject heading (MeSH) terms. There were no limits to language or publication status. Databases searched included the Cochrane Central Register of Controlled Trials, EMBASE, LILACS, PubMed, Web of Science and the World Health Organization’s (WHO) Global Index Medicus, as well as online archives of major HIV/AIDS conference abstracts. The date range for the searches of the peer-reviewed literature was from January 1996 to March 2013. In an effort to identify ongoing studies and to be sure they did not miss any studies through their searches, reviewers contacted researchers in the field and staff at key international organizations. They also searched WHO’s International Clinical Trials Registry Platform (ICTRP) and checked bibliographies of included studies.

Two reviewers working independently screened search results by scanning their titles, abstracts, and descriptor terms of all references and applying the review’s inclusion criteria. They discarded irrelevant reports and obtained the full article or abstract for all potentially relevant reports. After final studies were selected for inclusion, two reviewers independently double-coded and entered data from each study into standardized data extraction forms. Two reviewers independently assessed the risk of bias within all included studies using standard Cochrane Collaboration methods. Observational study quality was further assessed with the Newcastle-Ottawa instrument.

Reviewers summarized dichotomous outcomes for effect in terms of risk ratios (RR) with their 95% confidence intervals (CI). When interventions and study populations were sufficiently similar across the different studies, reviewers pooled the data across studies and estimated summary effect sizes using random-effects models. Reviewers assessed evidence quality across studies, by outcome, using GRADE methodology.

RESULTS: After removing duplicates, 3,437 publications were screened. Twenty-nine full-text articles were read in their entirety to assess them for eligibility. Fifteen studies were initially selected. One additional study was identified through a reference list. Sixteen studies were, thus, included in the review. In terms of study design, two were cluster RCTs, two were prospective cohort studies, and 12 were retrospective cohort studies.
Two studies were conducted in urban, peri-urban and rural Ethiopia; one was in rural and urban Kenya; three were in rural Malawi; one was in Nigeria; two were in rural Uganda; four were in urban, peri-urban and rural settings in South Africa; and one was in rural Swaziland. One study examined data from five sub-Saharan African countries, and one study was conducted in Thailand.

All studies evaluated decentralization of care from the hospital level to more basic levels of care. Eight studies included task shifting from doctors to nurses or clinical officers. Three studies examined treatment in children only, two included adults and children, and the other studies included only adults.

**Partial decentralization:** Six observational cohorts reported on partially decentralized care. The reviewers found evidence from four cohort studies that partial decentralization reduced attrition at 12 months (risk ratio [RR] 0.46, 95% confidence interval [CI] 0.29 to 0.71). They also found evidence from these studies that patients in partially decentralized care were 45% less likely to be lost to care (RR 0.55, 95% CI 0.45 to 0.69), as well as evidence that partial decentralization led to reduced mortality at 12 months (RR 0.34, 95% CI 0.13 to 0.87). Data from three cohorts showed no difference in mortality at six months (RR 0.52, 95% CI 0.19 to 1.41). One cohort of children in partially decentralized care had lower mortality at 24 months (RR 0.04, 95% CI 0.00 to 0.58).

**Full decentralization:** Six observational cohorts reported on fully decentralized care. Full decentralization for ART initiation and maintenance appeared in four studies to reduce attrition at 12 months (RR 0.70, 95% CI 0.47 to 1.02). This result was consistent across three of the studies, while the fourth study showed no difference in attrition. Four cohorts found that patients were much less likely to be lost to care at 12 months (RR 0.30, 95% CI 0.17 to 0.54) and at 24 months (RR 0.50, 95% CI 0.36 to 0.71). Two studies found no difference in mortality at six months (RR 0.84, 95% CI 0.35 to 2.00), four studies found no difference at 12 months (RR 1.10, 95% CI 0.63 to 1.92), and four studies found no difference at 24 months (RR 0.64, 95% CI 0.39 to 1.06).

**Community-based ART maintenance:** Two cluster RCTs and one cohort study reported on delivering maintenance ART in the community. In the two trials, reviewers found no significant difference in attrition rates at 12 months, compared to facility-based care (RR 0.95, 95% CI 0.62 to 1.46). In the cohort study, there was no difference in LTFU at six months (RR 0.81, 95% CI 0.30 to 2.21) and 24 months (RR 0.74, 95% CI 0.46 to 1.20). The two trials showed no difference in LTFU at 12 months (RR 0.81, 95% CI 0.3 to 2.21). The two trials showed no difference in mortality at 12 months (RR 1.03, 95% CI 0.64 to 1.65). The cohort study showed no difference in mortality at six months (RR 1.44, 95% CI 0.81 to 2.57) or at 24 months (RR 1.50, 95% CI 0.91 to 2.47).

**Other outcomes:** The cohorts reporting CD4+ cell counts showed increases in immunological status, but no difference between models of care was found. Similar results were found for changes in viral load, with studies reporting comparable virological suppression regardless of the model of care. No study reported data on initiation of tuberculosis treatment, or time to initiation of antiretroviral treatment. One study reported on new WHO clinical stage 3 or 4 diseases, indicating no difference between groups. No study reported any negative impact on healthcare delivery.

One study of community-based care found reduced travel costs for patients (USD $0.74 vs. USD $1.50, p=0.001). Another found three times higher costs for patients receiving hospital-based treatment (total cost per year for transport, lunch, childcare costs, lost work time, after first year: USD $18/year vs. USD $54/year). One study of community-based care found lower costs to the health service, compared to hospital-based care (USD $793 per patient, per year vs. USD $838 per patient, per year).

Two observational studies, one of partial decentralization and one of full decentralization, had a qualitative component. In each study, decentralized care was found to be acceptable. Common points of satisfaction between the studies included receiving care closer to home, being treated better by staff and receiving better care.

**CONCLUSIONS:** The reviewers conclude that no model of decentralized care lead to worsened health outcomes. They suggest that provision of HIV treatment at lower levels in the health system is feasible and does not necessarily lead to a serious reduction in the quality of clinical care.

**QUALITY OF THE EVIDENCE:** In the GRADE approach, to assessing evidence quality is graded on four levels: "high," "moderate," "low" and "very low." Evidence from randomized controlled trials starts at "high," but can be
downgraded based on study limitations, inconsistency of results, indirectness of evidence, imprecision or for reporting bias. Evidence from observational studies starts at "low," but can be upgraded if the magnitude of treatment effect is very large, if there is a significant dose-response relation, or if all possible confounders would decrease the magnitude of an apparent treatment effect. Evidence from observational studies can also be downgraded. As would be expected in a review comprised largely of observational data, the quality of evidence reported for facility-based models of decentralization was generally low or very low. Two exceptions to this were the attrition outcome in the partial decentralization model and LTFU in the full decentralization model, where there was moderate quality evidence. Evidence quality for this outcome was upgraded from "low" due to the large effect size. In the community-based care model, two high-quality cluster RCTs provided moderate quality evidence that rates of mortality and LTFU were similar to those of facility-based care.

QUALITY OF THE REVIEW: This is a high quality systematic review. It was conducted according to Cochrane Collaboration standards and meets every relevant criterion of the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines.

IN CONTEXT: Many countries (especially those generalized HIV epidemics), have begun to decentralize ART provision. This increases geographic coverage of HIV clinical care, thus facilitating patient access to care, and alleviating the burden of care at existing clinical facilities in regional centers. In its recent ART update, WHO has recommended that ART maintenance care be decentralized to peripheral health facilities, whether ART is initiated in hospitals or peripheral health facilities.

PROGRAMMATIC IMPLICATIONS: Planning and implementing decentralized ART provision is a complex process that requires the involvement of stakeholders at many levels.


OBJECTIVE: To examine the rates of disengagement from care and the factors associated with disengagement in a decentralized program providing antiretroviral therapy (ART).

SETTING: Rural Hlabisa, KwaZulu-Natal, South Africa.

STUDY DESIGN: Retrospective cohort study.

POPULATION: Adults (≥16 years) who were members of the Africa Centre Demographic Information System (ACDIS) and who initiated ART in the Hlabisa HIV Treatment & Care Programme (HHTCP) between 1 August 2004 and 31 March 2011.

INTERVENTION (PREDICTOR VARIABLE): Demographic variables, CD4 count at baseline and at last follow up, year of initiation.

MAIN OUTCOME MEASURES: Rates of disengagement from care, factors associated with disengagement and outcomes after disengagement.

METHODS: Disengagement from care was defined as loss to follow-up (LTFU), adjusted for mortality. LTFU was defined as non-attendance at the clinic for at least 180 days. LTFU patients who were found to have died within 180 days of the last clinic visit were reclassified as deaths. Patients who formally transferred care to a different facility were classified as transfers out.

In the HHTCP, patient care is provided free of charge by nurses and trained counselors in 17 primary health care clinics. Routinely-collected clinical data at ART initiation are transferred from standardized paper-based records to a Microsoft SQL database. Subsequent patient visits while on ART and changes in vital status (death, LTFU, transfer out) are captured on paper-based records and transferred to the database each month. Data from the ACDIS, collected in a large part of the region since 2000, were available to investigators for review. The National Population Register (NPR) was also used for identifying deaths.

Investigators reviewed patient data from ART initiation or date of transfer into program on while on ART. Observation ended at death, date of last clinic visit or the date the database closed (12 July 2012). Investigators
calculated cumulative incidence of disengagement from care, stratified by year of ART initiation and adjusted for all covariates. They estimated overall five-year retention in care from the cumulative incidence curve, and performed competing-risks regression analysis to explore factors associated with disengagement. Investigators used ACDIS data to obtain individual and household sociodemographic characteristics. They estimated subhazard ratios (SHR) for disengagement, describing SHR as “the risk of disengagement for individuals in a certain category compared with a reference category, in the presence of competing risks of death and transfer out.”

**RESULTS:** A total of 4,674 adult ACDIS members initiated ART in the study period, contributing 13,610 person-years of follow-up (median 2.77 years per individual).

**Disengagement from care:** Overall, 676 (14.5%) patients died, 260 (5.6%) transferred out of the program, 558 (11.9%) were LTFU, and 3,180 (68.0%) were alive on ART. Of those LTFU, 91 (16.3%) had died within 180 days of their last clinic visit (median time 7 days, interquartile range [IQR] 0 days to 36 days). True mortality was thus 16.4% (n=767). The rate of disengagement was 3.4 per 100 person-years (PY), 95% confidence interval (CI) 3.1 to 3.8, with 467 (10.0%) individuals disengaged from care over the study period.

The first three months after ART initiation had the highest rate of disengagement, after adjusting for mortality. Rates of disengagement increased through the study period (p<0.002). At five years, overall program retention was estimated to be 61%.

**Factors associated with disengagement from care:** Higher baseline CD4 cell counts significantly increased the hazard of disengagement from care (see figure below). Year of ART initiation was also associated with risk of disengagement, with risk increasing with calendar year. Patients migrating into the surveillance area within the past year before ART initiation were at much higher hazard of disengagement than those who had resided there over a longer period (SHR 1.53, p= 0.03).

**Outcomes after disengagement from care:** Surveillance data from beyond 180 days since the last clinic visit were available for two thirds (303, 65.9%) of the 467 patients disengaged from care. Most (206/303, 68.0%) continued to reside within the surveillance area. Of those migrating outside the surveillance area (n=97, 32.0%), the median time from last clinic visit to migration was two days (IQR 2 days to 157 days). Twenty-four patients died after disengagement, a median of 455 days (IQR 287 days to 590 days) after their last clinic visits.

**CONCLUSIONS:** The authors conclude that increasing rates of disengagement from care over the years, as patients initiate ART with higher baseline CD4 cell counts, show that new service delivery strategies are needed to achieve the high rates of long-term retention necessary to sustain the positive impacts of ART roll-out. In view of this association between higher baseline CD4 cell count and increasing disengagement, they echo the concern of previous authors who suggest that adherence and retention could be different in patients who are asymptomatic at ART initiation.

**RISK OF BIAS:** As a retrospective cohort study with high LTFU and no external comparator or control group, the risk of bias in this study is high. The authors also note several potential confounders, such as their inability to identify patients who had disengaged but then reengaged with care, which was reported to be a frequent phenomenon in a different South African study.
IN CONTEXT: As the authors suggest, high rates of disengagement from care have the potential to limit the positive impacts on population-level mortality and HIV transmission conveyed by rapidly expanding ART coverage. Although it has saved thousands of lives, this rapid scale-up has also led to great strains on health systems, especially those in under-resourced rural areas.

PROGRAMMATIC IMPLICATIONS: The first few months after ART initiation may be a critical period when more intensive patient support is required. Although scarce resources may preclude it, ART programs should consider making efforts to provide this additional support.

REFERENCES:

Doherty et al:

Low et al:

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