CLOSER TO HOME

DELIVERING ANTIRETROVIRAL THERAPY IN THE COMMUNITY: EXPERIENCE FROM FOUR COUNTRIES IN SOUTHERN AFRICA

MEDECINS SANS FRONTIERES
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UNAIDS

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INTRODUCTION

There has been remarkable progress in the past decade in increasing the access to antiretroviral therapy (ART) in resource-limited settings. Ambitious target setting by the World Health Organization and UNAIDS[1] backed by substantial financial support from major donors has catalysed a global effort to scale up access to ART. At the end of 2011, more than eight million people were receiving ART in low- and middle-income countries; more than three quarters of all people on ART live in Africa[2].

The benefits of ART in reducing mortality and morbidity have been convincingly demonstrated. Despite initial concerns about the feasibility of large-scale HIV treatment programming in resource-limited settings[3], early reports showed comparable treatment outcomes to those reported from upper-income countries[4,5]. More recent data suggests that people receiving ART in sub-Saharan Africa can have an almost normal life expectancy[6]. Recent evidence also demonstrates that treating people early with ART reduces HIV transmission[7], which further supports the need to increase and sustain access to antiretroviral therapy.

TABLE 1: SUMMARY OF MSF COMMUNITY ART MODELS

Location	Clinical monitoring	Adherence checks	Frequency of ART dispensing	Frequency of clinic visits	Referral mechanism back to clinic	Cumulative retention*
Mozambique, Tete	Every 6 months in health facility	Every 6 months in health facility; monthly in Community ART groups (CAG)	Monthly	Every 6 months	Self referral / referral by other CAG members	97% after average follow up time of 16 months
Malawi, Thyolo	Every 3 months in health facility	Every 3 months in health facility	Every 3 months	Every 3 months	Self referral	98% after 15 months
Malawi, Chiradzulu	Every 6 months in health facility	Every 6 months in health facility	Every 3 months	Every 6 months	Self referral	97% after 1 year and 93% after 2 years**
South Africa, Khayelitsha	Every 2 months in health facility	Viral load testing every year in health facility	Every 2 months	Every 6 months	Lay person	90% at 2 years
Democratic Republic of the Congo, Kinshasa	Peer counsellor, every 3 months (weight only)	Every 3 months in health facility	Every 3 months	yearly (hospital)	Self referral / referral by peer counsellor	98% after 16 months (cumulative)

* These data are for patients after referral into a community group
** Active discontinuation (e.g. pregnancy) are excluded from the denominator

Placing more than eight million people on ART in low- and middle-income countries in less than a decade represents important progress but this number is placing a considerable strain on health systems, particularly in high-prevalence countries of sub- Saharan Africa where health workers are already scarce[8]. In addition, substantial numbers of people eligible for ART are not receiving treatment: many still do not know they are HIV-positive, many others do not have access to HIV care and treatment due to programme or financing shortfalls and many who are identified as HIV-positive leave care prior to the initiation of ART for a variety of reasons. To maximize the individual and population-level benefits of HIV treatment, the number of people accessing ART must be rapidly increased, while those receiving treatment must continue to do so, which means ensuring that health services have the capacity to serve their needs. Recent systematic reviews have highlighted substantial rates of attrition in HIV services for those who were not successfully linked to care and treatment, who did not require ART at the time of HIV diagnosis, and who initiated but did not remain on ART, underscoring the pressing need to improve access and retention. A number of decentralized health facility and community modalities have been implemented to reduce the burden on health workers and health centres and to improve retention in care for those on ART. As national, provincial and district teams address the various challenges, lessons from these innovative models can help shape the next stages of HIV care and treatment scale-up.

UNAIDS recognized that MSF projects may serve as inspiring examples on how community service delivery can catalyze the benefits of antiretroviral treatment, in synergy with local health systems. Considering the importance of community mobilizations and strengthening of health delivery systems—two pillars of the WHO/UNAIDS Treatment 2.0 programmatic approach—UNAIDS supported this report which describes MSF's activities in supporting community based organizations in their interaction with local health structures to scale-up access to ART.

Improving access and retention in care for those who initiate ART

There are, broadly speaking, two phases of ART. Even after 10 years of treatment scale- up, most people initiating ART have advanced immunosuppression and associated illnesses that require urgent clinical services. In this first phase, patients also require support to understand the need for lifelong therapy on medicines that can have a range of side-effects. Beyond this first phase, once their health has stabilized and immune status improved, most patients do not require intensive clinical care and frequent visits to a health facility. With time, however, a proportion of patients may develop side-effects or resistance to treatment, or face adherence challenges, all of which will require another period of intensive clinical and adherence support.

There can be an association between the 'user friendliness' of services and access and retention in care. Distance to clinic services and associated transport costs, long queuing times and competing demands, such as the need to work, have all been associated with poor adherence to treatment and patients leaving care[9–12]. Decentralization of ART services to community clinics reduces the distance patients need to travel and has been found to help keep them in care and on treatment[13–17].

Decentralization from hospital-based services to health centres is an important strategy to improve retention and one that can also decongest health services. A priority for the World Health Organization and UNAIDS, endorsed under the Treatment 2.0 initiative, is to decentralize HIV care to primary health-centre level, which often means the integration of HIV treatment services with other HIV and non-HIV health services. There are increasing systemic changes in the way ART services are delivered. As health centres are rarely staffed by full-time physicians, decentralization usually means that ART is managed principally by nurses and other non-physicians. Task shifting of ART services from physicians to other providers is supported by WHO guidance, and its safety and efficacy has been demonstated. This has been accompanied in many countries by changes in regulations to permit nurses to initiate ART, or to continue prescribing ART once it has been initiated by a medical doctor, and by changes in pharmacy regulation or practice that allows for longer supplies of antiretroviral drugs and fewer appointments.

In addition, WHO and UNAIDS support increased community engagement in service delivery to improve retention in care[18]. Several pilot programmes are testing the feasibility of separating ART delivery and clinical care by establishing models of ART delivery at the community level for those patients deemed stable on treatment. Health centre or hospital services would still serve as a back-up when problems arise for patients who were previously stable or for those with complicated clinical-care needs.

Community ART delivery

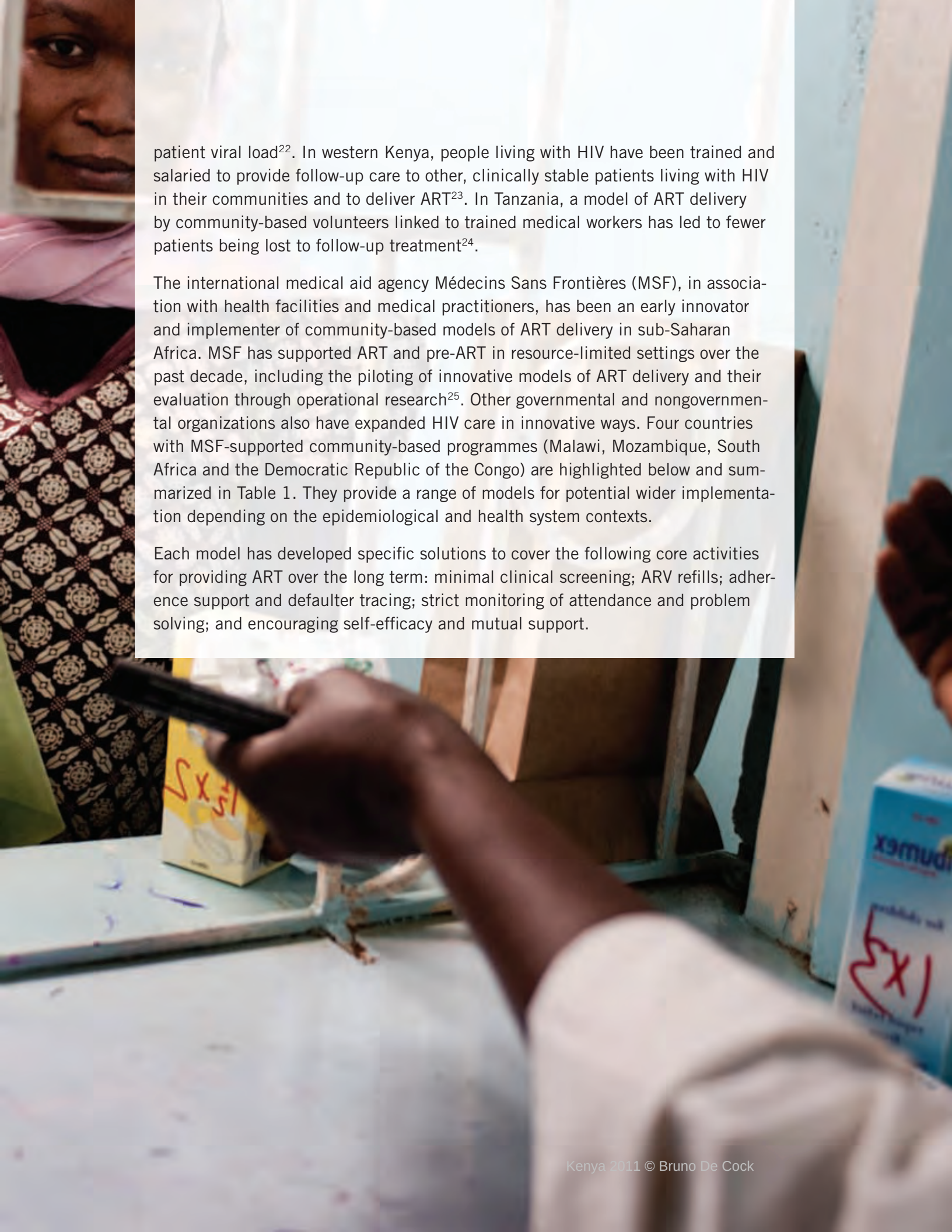
The relationship between providing social support and improved adherence to treatment is well established. It is also supported by evidence from systematic reviews that have found that interventions to provide patient support and education programmes have improved adherence to antiretroviral therapy[19,20]. Community-based ART helps build patient self-efficacy and the social networks that encourage patient autonomy within a supportive environment[21], and can be adjunct to a more general decentralization of ART service delivery.

The feasibility of providing ART beyond the health-service setting has been demonstrated in several studies. In Uganda it was demonstrated that home-based ART delivery matched facility-based ART delivery in patient survival and suppressing

patient viral load[22]. In western Kenya, people living with HIV have been trained and salaried to provide follow-up care to other, clinically stable patients living with HIV in their communities and to deliver ART[23]. In Tanzania, a model of ART delivery by community-based volunteers linked to trained medical workers has led to fewer patients being lost to follow-up treatment[24].

The international medical aid agency Médecins Sans Frontières (MSF), in association with health facilities and medical practitioners, has been an early innovator and implementer of community-based models of ART delivery in sub-Saharan Africa. MSF has supported ART and pre-ART in resource-limited settings over the past decade, including the piloting of innovative models of ART delivery and their evaluation through operational research[25]. Other governmental and nongovernmental organizations also have expanded HIV care in innovative ways. Four countries with MSF-supported community-based programmes (Malawi, Mozambique, South Africa and the Democratic Republic of the Congo) are highlighted below and summarized in Table 1. They provide a range of models for potential wider implementation depending on the epidemiological and health system contexts.

Each model has developed specific solutions to cover the following core activities for providing ART over the long term: minimal clinical screening; ARV refills; adherence support and defaulter tracing; strict monitoring of attendance and problem solving; and encouraging self-efficacy and mutual support.



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MALAWI

Malawi, with a population 14.4 million, ranks 171 of 187 on the Human Development Index[26]. 85% of the population live in rural areas and 40% of the population lives below the poverty line. Malawi is among the top 10 countries most affected by the HIV epidemic[14]. Adult HIV prevalence is 10.6% and an estimated 920 000 people are living with HIV.

There is a severe shortage of human resources for health in Malawi, with just two doctors and 50 nurses per 100 000 population[27]. Despite these challenges, the Government of Malawi has implemented one of the most successful ART programmes in southern Africa. Malawi has achieved high levels of ART coverage by taking a public- health approach to HIV care, which includes: a limited number of treatment regimens; simplified laboratory requirements; task shifting from doctors to nurses and other health workers; and decentralizing care from hospitals to health centres[14]. By June 2011, 276 987 patients were on ART, a coverage of 67% of those estimated to be eligible for ART[28].

MSF supports the Government of Malawi in the rural districts of Thyolo and Chiradzulu in the southern part of the country. In these districts, MSF-backed facilities have implemented several models to expand the reach of HIV programmes and developed sustainable models for ART delivery despite the shortage of human resources for health.

Decentralizing into the community in Thyolo District

MSF, working with the Ministry of Health, has supported HIV care in Malawi's southern Thyolo District (population 587 093) since 1997. Adult prevalence was 21% in 2004, which represented 63 963 people living with HIV. ART coverage is high: 20 601 on ART out of 22 376 eligible for ART in June 2011.

In 2003, MSF and the Ministry of Health launched a model of care adapted to this rural and impoverished district. By 2007, the Thyolo programme had scaled up to provide universal access to treatment in the district[14]. Decentralized ART is provided in Thyolo at health centres and relies on task shifting from doctors to non-physicians, as health centres in Malawi are generally staffed by nurses, medical assistants and health surveillance assistants (lay workers who receive 10 weeks' basic training).

In 2009 the Ministry of Health began to extend primary-care services to health posts. Health posts, unlike health centres, are not routinely staffed by nurses, and are overseen by community health workers. The health posts receive regular visits from a community nurse and are staffed by health surveillance assistants and peer counsellors. Patient support groups, consisting of people living with HIV in pre-ART

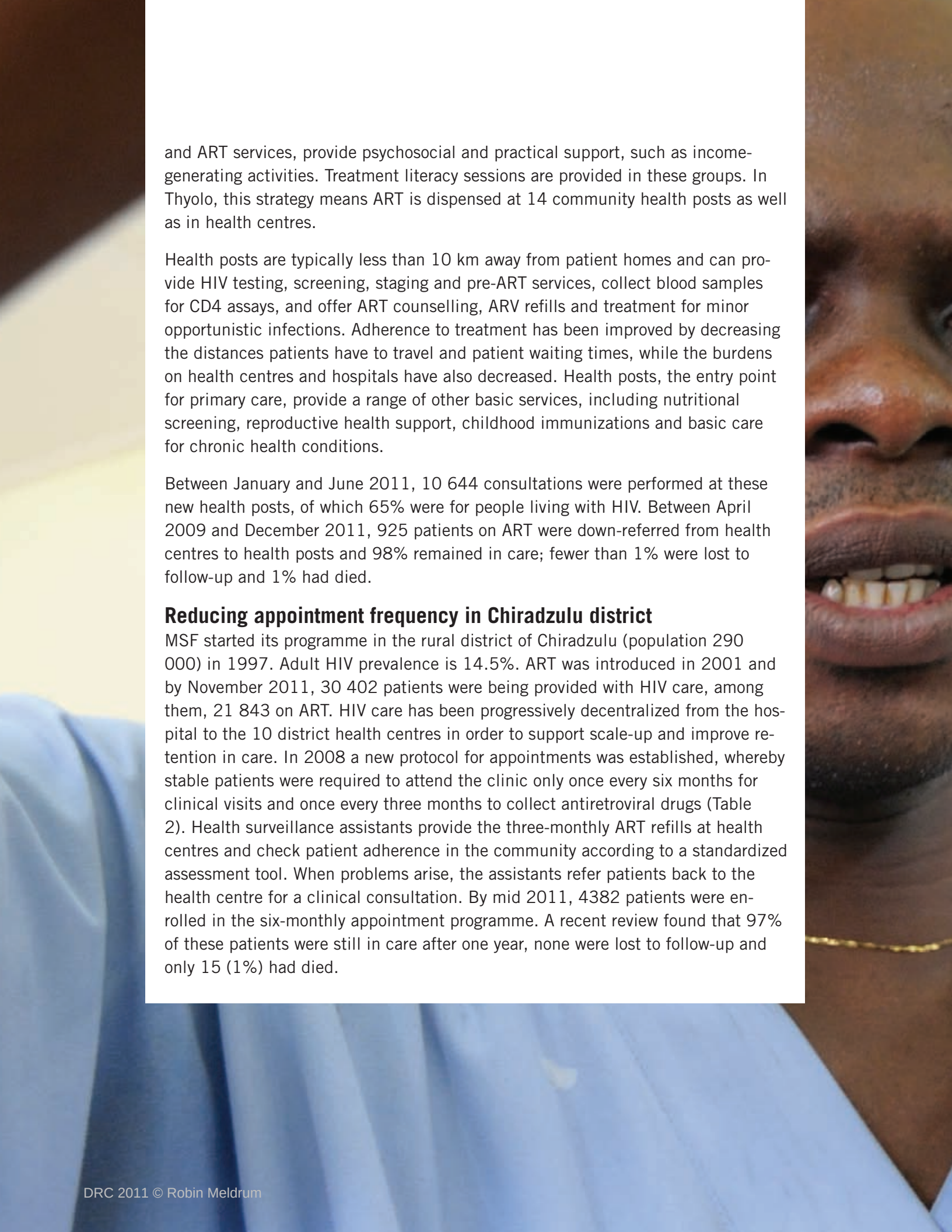
and ART services, provide psychosocial and practical support, such as income-generating activities. Treatment literacy sessions are provided in these groups. In Thyolo, this strategy means ART is dispensed at 14 community health posts as well as in health centres.

Health posts are typically less than 10 km away from patient homes and can provide HIV testing, screening, staging and pre-ART services, collect blood samples for CD4 assays, and offer ART counselling, ARV refills and treatment for minor opportunistic infections. Adherence to treatment has been improved by decreasing the distances patients have to travel and patient waiting times, while the burdens on health centres and hospitals have also decreased. Health posts, the entry point for primary care, provide a range of other basic services, including nutritional screening, reproductive health support, childhood immunizations and basic care for chronic health conditions.

Between January and June 2011, 10 644 consultations were performed at these new health posts, of which 65% were for people living with HIV. Between April 2009 and December 2011, 925 patients on ART were down-referred from health centres to health posts and 98% remained in care; fewer than 1% were lost to follow-up and 1% had died.

Reducing appointment frequency in Chiradzulu district

MSF started its programme in the rural district of Chiradzulu (population 290 000) in 1997. Adult HIV prevalence is 14.5%. ART was introduced in 2001 and by November 2011, 30 402 patients were being provided with HIV care, among them, 21 843 on ART. HIV care has been progressively decentralized from the hospital to the 10 district health centres in order to support scale-up and improve retention in care. In 2008 a new protocol for appointments was established, whereby stable patients were required to attend the clinic only once every six months for clinical visits and once every three months to collect antiretroviral drugs (Table 2). Health surveillance assistants provide the three-monthly ART refills at health centres and check patient adherence in the community according to a standardized assessment tool. When problems arise, the assistants refer patients back to the health centre for a clinical consultation. By mid 2011, 4382 patients were enrolled in the six-monthly appointment programme. A recent review found that 97% of these patients were still in care after one year, none were lost to follow-up and only 15 (1%) had died.



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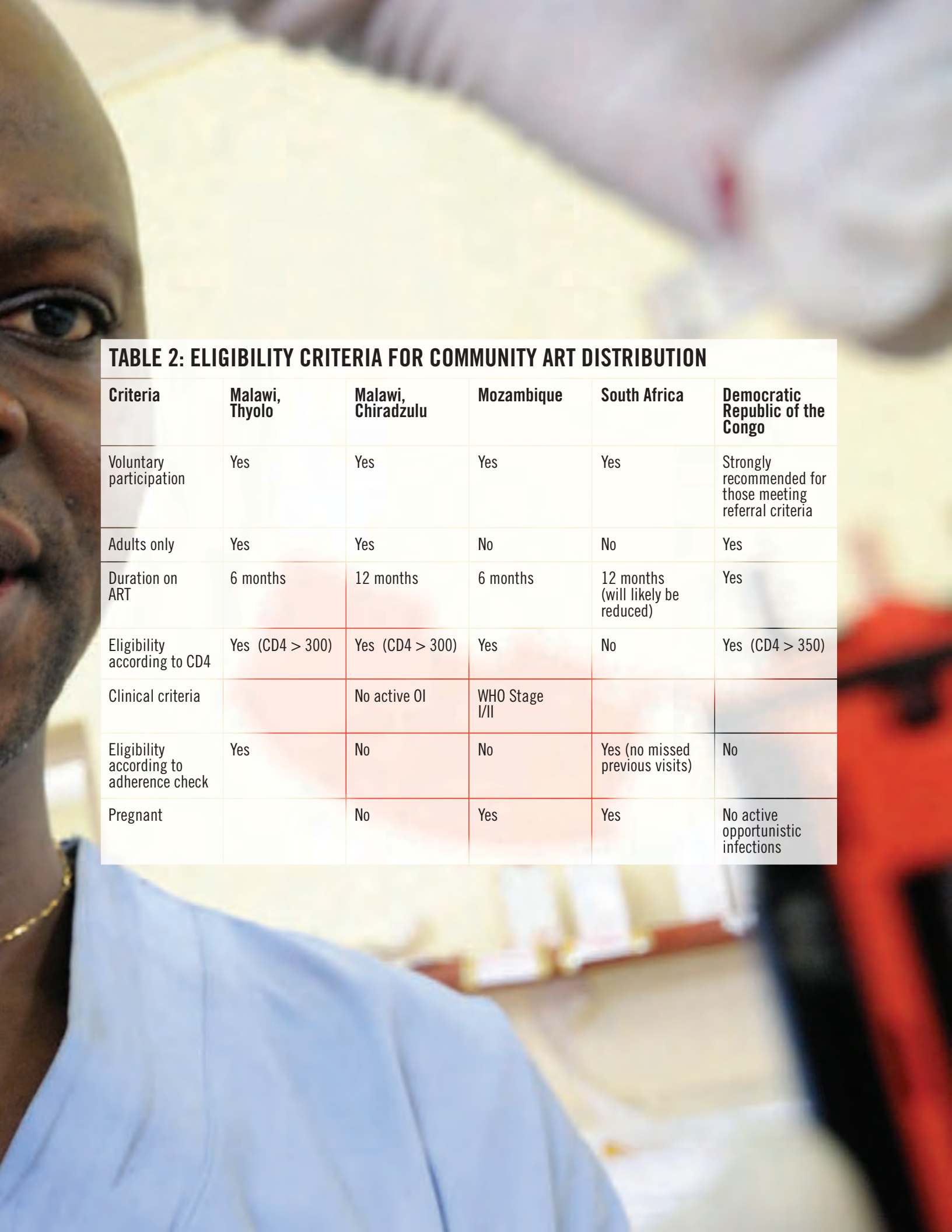
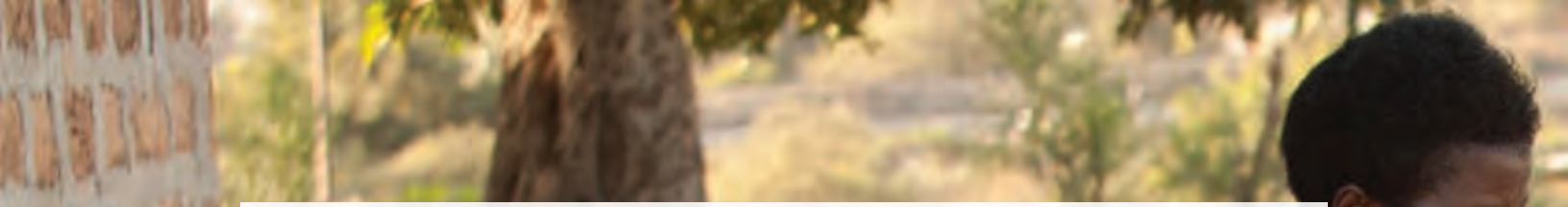


TABLE 2: ELIGIBILITY CRITERIA FOR COMMUNITY ART DISTRIBUTION

Criteria	Malawi, Thyolo	Malawi, Chiradzulu	Mozambique	South Africa	Democratic Republic of the Congo
Voluntary participation	Yes	Yes	Yes	Yes	Strongly recommended for those meeting referral criteria
Adults only	Yes	Yes	No	No	Yes
Duration on ART	6 months	12 months	6 months	12 months (will likely be reduced)	Yes
Eligibility according to CD4	Yes (CD4 > 300)	Yes (CD4 > 300)	Yes	No	Yes (CD4 > 350)
Clinical criteria		No active OI	WHO Stage I/II		
Eligibility according to adherence check	Yes	No	No	Yes (no missed previous visits)	No
Pregnant		No	Yes	Yes	No active opportunistic infections



MOZAMBIQUE

Mozambique ranks 184 of 187 on the Human Development Index[26]. With an average of 0.3 doctors and 2.1 nurses per 10 000 inhabitants, Mozambique has one of the lowest health-worker densities in Africa[29]. HIV prevalence in adults is 11.5%[30] and an estimated 1.4 million people are HIV-positive.

ART first became available in the public sector in 2003, initially only in specialized HIV clinics primarily located at provincial and district hospitals. To improve access to services and decongest hospitals, the Government of Mozambique began to decentralize HIV services from hospitals to health centres in 2006[31]; between 2005 and 2008, the number of HIV treatment sites increased 10-fold from 20 to 229. However, this still represents fewer than one fifth of health facilities[32]. By the end of 2009, only about 42% of the 373 000 eligible for ART were receiving treatment; for children the figure was even lower (19% of 73 000 eligible)[33]. By April 2011, 320 000 patients had been initiated on ART. However, at least one quarter of those patients have not been retained in care[34] and it is estimated that among those lost to follow-up, 40% have died[35].

The increasing numbers of patients required to travel to a health facility every month to collect medications and the limited number of clinics providing ART have meant the facility-based model has not been sufficient for further ART scale-up.

Community ART Groups in Tete province, Mozambique

MSF began supporting the Government of Mozambique to provide ART in 2003; by March 2012 MSF had provided support to more than 4000 patients on ART in Tete province. Concern about the high rates of loss to follow-up among patients on treatment prompted the government, with support from MSF, to launch in 2008 a pilot programme of community-based ART distribution and adherence monitoring in Tete. This programme encourages patient self-management within a community-based peer support network[36]. The model was designed to reduce both the need for patients to attend clinics every month to collect ART and the burden on the health facilities.

In this programme, groups of patients were established, with patients taking turns to collect antiretroviral medicines for group members. This means that each group member attends the clinic at least once every six months. Group members have assumed four functions: to collect and deliver ART each month to other members in the community; to provide community-based adherence support and treatment outcome monitoring; to establish a community-based treatment social support network; and to ensure each group member has a clinical consultation at least once every six months.

To join a group, patients need to be clinically stable on ART (CD4 >200 cell/mm^3) for at least six months. Interested patients are advised to form groups of up to six, elect a leader and be assessed at the nearest clinic to determine their eligibility for

the programme. Lay counsellors provide training for newly formed groups on the approaches, roles and responsibilities of members; monitor the adherence of members on a monthly basis; and provide group counselling and education sessions.

Group leaders arrange monthly meetings, conduct monthly pill counts, monitor attendance and ensure that possible ART side-effects are reported to clinicians. Group members conduct simple health checks and advise patients to seek medical care at clinics when needed. The group must be linked to a clinic that is able to provide appropriate HIV-related services: HIV counselling and testing; a clinician authorized to prescribe ART; a guaranteed supply of ART and drugs to prevent and treat opportunistic infections; and transport for CD4 samples and results.

The pilot programme of Community ART groups (CAGs) was implemented in 20 health facilities in seven districts of Tete province in April 2008. By December 2012, 96.8% of the 4177 patients enrolled in a CAG remained in care. Of these, 5.5% had left the CAG and were transferred to another health centre (3%) or standard care (2.5%). Of the others initially enrolled, 3.1% had died and 0.1% had been lost to follow-up treatment from the CAG programme.

Following this early success, the Ministry of Health recommended in July 2011 that CAGs become part of the national HIV care strategy and plans to scale up CAGs[37]. MSF is refining the model, in particular to adapt CAGs to specific key populations, such as children, adolescents, pregnant women, patients not yet eligible for ART, patients co- infected with tuberculosis (TB) and HIV, sex workers and patients on second-line regimens.

Delegations from the health ministries of Malawi, South Africa, Swaziland and Zimbabwe have visited this programme to assess its feasibility and appropriateness for replication. Malawi has plans to pilot community ART groups in 2012.

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SOUTH AFRICA

South Africa has the fourth highest adult HIV prevalence (17.8%) in the world, and with 5.3 million people estimated to be HIV-positive, the largest number of people living with HIV worldwide[38]. In 2003, the Government of South Africa launched a comprehensive HIV care and treatment programme and has progressively scaled up HIV care services. By mid 2011, 1.79 million people had been initiated on ART, about 55% of those considered eligible.

MSF began to provide ART in 2001 at three dedicated HIV clinics in Khayelitsha, a township of 500 000 inhabitants located on the outskirts of Cape Town. Khayelitsha carries one of the highest burdens of both HIV and TB in the country. As ART was introduced prior to the national programme, it provided the opportunity to demonstrate feasibility and acceptability of treatment in a resource-poor urban setting. The ART delivery was initially doctor-based and located in three community health centres. However, scale-up has been exponential: in June 2002, 100 people had been initiated on ART; by June 2003 the number had increased to 400; the following year it was 1000, and by June 2011, more than 20 000 people had been initiated on ART.

As the number of patients on ART increased rapidly, the proportion of patients being lost to follow-up also began to rise as clinics became saturated[39]. In response, a care model was adapted to relieve pressure on these large clinics by moving towards a nurse- based, doctor-supported decentralized model of care and by developing out-of-clinic approaches to adherence support for stable patients.

Community adherence clubs

ART adherence clubs were established in November 2007 as a way to decongest health centres by shifting the majority of consultations and ART collections for stable patients to 'clubs' organized by lay counsellors or peer educators. The adherence club model builds on a pre-existing approach to community delivery of medicines for chronic diseases such as diabetes, hypertension and epilepsy.

In the ART adherence clubs, groups of up to 30 patients meet every two months, either at the facility or in a community setting. Participation is voluntary and offered to all adults who have been on ART for at least 12 months and are considered clinically stable (CD4 count >200 cells/mm^3 and undetectable viral load). In these groups, essential tasks such as measuring weight and conducting symptom-based general health assessments are provided by a trained counsellor. Medicines are pre-packaged for each participant and brought to the group by the facilitator. Any patient reporting symptoms suggesting illness, adverse drug effects or weight loss are referred back to the clinic for assessment by a nurse. All club patients attend the clinic twice a year; once for blood taking and two months later when attended by a health worker.

The adherence clubs began as an in-clinic innovation, with specific days and hours to reduce time spent at the clinic (no more than two hours), but they have evolved into a community-based programme. By December 2011 there were 98 clubs linked to six clinics in Khaleyitsha. MSF has assisted with the broad replication of this model by city and provincial authorities; by March 2012 there were 251 adherence clubs across Cape Town.

An analysis comparing the outcomes among 502 patients who joined adherence clubs with those among 2327 patients who remained in clinic care found that retention in care was significantly higher in the clubs (97%) than in clinical-based care (85%). Club participation reduced loss to follow-up by two thirds and nearly halved the proportion with virologic rebound or breaks in monitoring compared with patients who remained in clinic-based care. As burdens on the formal health system increase with additional scale- up of ART, there do not seem to be negative consequences of moving significant components of HIV care and treatment to the community.

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DEMOCRATIC REPUBLIC OF THE CONGO

While adult HIV prevalence (1.5%) is relatively low in the Democratic Republic of the Congo, ART coverage is among the lowest in the world, with fewer than 15% of those eligible receiving treatment[40]. In addition, in a population of 71 million, there are more than one million people living with HIV[41].

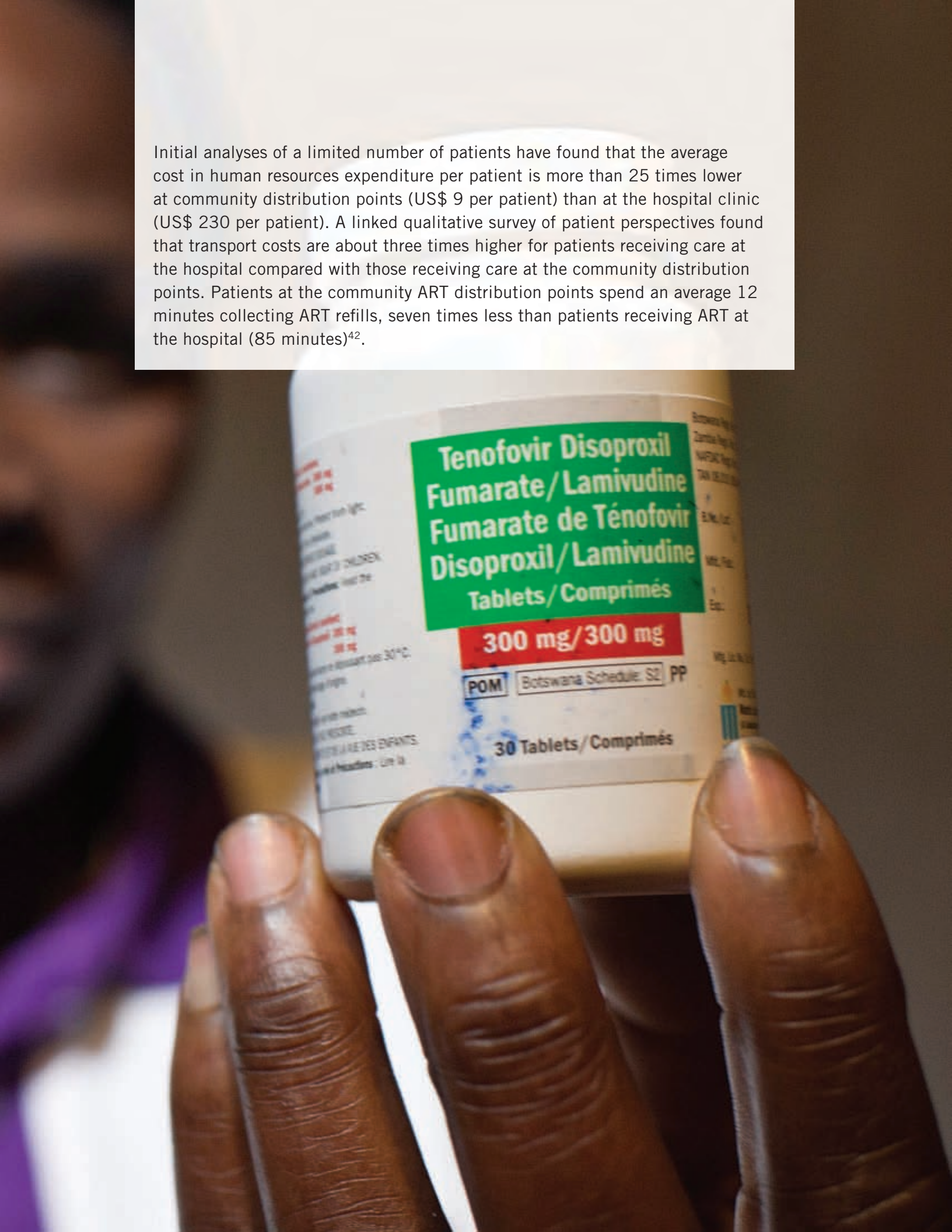
MSF has helped provide ART services in Kinshasa since 2002. Early identification of patients eligible for treatment has been hampered by a general lack of access to health services, a shortage of HIV diagnostic tests and limited availability of CD4 testing, and by the requirement for patients to partly pay for these tests. Many of the patients at MSF-supported clinics first enter into care with advanced HIV illness, with complications reminiscent of the pre-ART era.

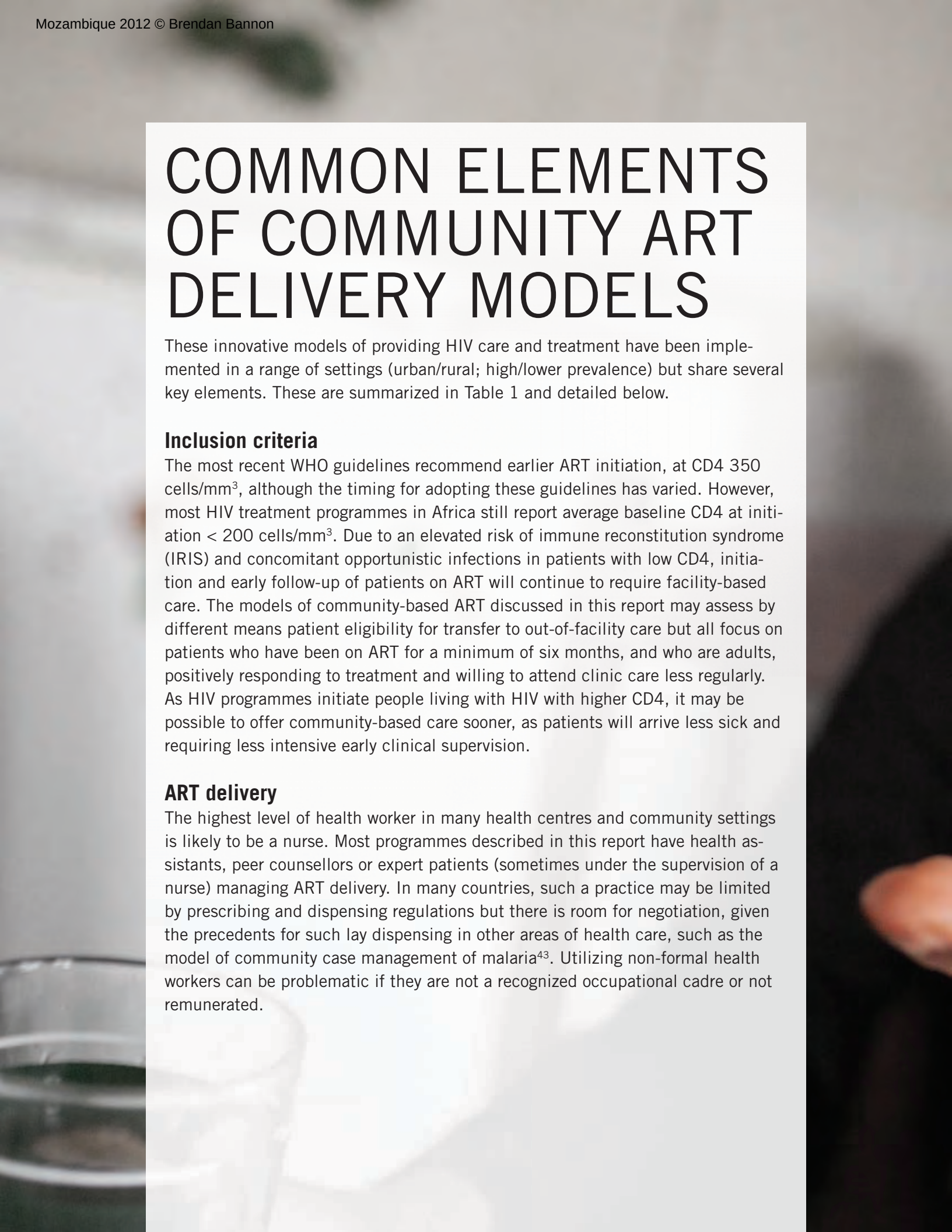
ART was initially provided at the Centre Hospitalier de Kabinda but by 2005 the hospital had reached capacity, with more than 1500 patients on ART and another 1300 in pre- ART care. To try to decongest the hospital, a process of down-referral began in mid- 2005, with stable patients referred to one of three health centres. Even this innovation was insufficient to cope with the overwhelming number of patients and new enrolment into care was closed. Enrolment began again in 2009 once those patients on the pre-ART waiting list had been initiated on ART.

Patient-managed ART distribution in Kinshasa

By the latter part of 2010 MSF, working with a local network of people living with HIV (Réseau National des Organisations des Assises Communautaires), established community ART distribution points in Kinshasa. These distribution points are managed by people living with HIV who have received training. They provide ART refills, adherence counselling and basic health follow-up, including measuring weight and performing basic symptom screening. Patients who have been on ART for more than six months and belong to a support group (see Table 2) are considered stable and eligible for participation in these community ART distribution points. As of December 2011, 195 patients had been down-referred from the facility-based HIV treatment centre to the community ART distribution points.

Initial analyses of a limited number of patients have found that the average cost in human resources expenditure per patient is more than 25 times lower at community distribution points (US$ 9 per patient) than at the hospital clinic (US$ 230 per patient). A linked qualitative survey of patient perspectives found that transport costs are about three times higher for patients receiving care at the hospital compared with those receiving care at the community distribution points. Patients at the community ART distribution points spend an average 12 minutes collecting ART refills, seven times less than patients receiving ART at the hospital (85 minutes)[42].





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COMMON ELEMENTS OF COMMUNITY ART DELIVERY MODELS

These innovative models of providing HIV care and treatment have been implemented in a range of settings (urban/rural; high/lower prevalence) but share several key elements. These are summarized in Table 1 and detailed below.

Inclusion criteria

The most recent WHO guidelines recommend earlier ART initiation, at CD4 350 cells/mm^3, although the timing for adopting these guidelines has varied. However, most HIV treatment programmes in Africa still report average baseline CD4 at initiation < 200 cells/mm^3. Due to an elevated risk of immune reconstitution syndrome (IRIS) and concomitant opportunistic infections in patients with low CD4, initiation and early follow-up of patients on ART will continue to require facility-based care. The models of community-based ART discussed in this report may assess by different means patient eligibility for transfer to out-of-facility care but all focus on patients who have been on ART for a minimum of six months, and who are adults, positively responding to treatment and willing to attend clinic care less regularly. As HIV programmes initiate people living with HIV with higher CD4, it may be possible to offer community-based care sooner, as patients will arrive less sick and requiring less intensive early clinical supervision.

ART delivery

The highest level of health worker in many health centres and community settings is likely to be a nurse. Most programmes described in this report have health assistants, peer counsellors or expert patients (sometimes under the supervision of a nurse) managing ART delivery. In many countries, such a practice may be limited by prescribing and dispensing regulations but there is room for negotiation, given the precedents for such lay dispensing in other areas of health care, such as the model of community case management of malaria[43]. Utilizing non-formal health workers can be problematic if they are not a recognized occupational cadre or not remunerated.

Health checks and referral mechanisms

Self-management and peer support critically depend on rapid self- or programme-referral to health professionals if a participant's health deteriorates. Peer group members must be trained to systematically detect early signs and symptoms, and each patient must have direct contact with the health services at least every 6–12 months. At the education session during the initial months on ART, each patient should be clearly told the potential symptoms which would require them to present back to health services. These would certainly include any signs of TB or ART-specific toxicity. In general, the risk of other new opportunistic infections is limited for those who have remained on ART for more than six months.

TABLE 3: ADVANTAGES AND DISADVANTAGES OF COMMUNITY ART MODELS

Advantages	Disadvantages
Relieves burden on health facilities	Requires more intensive initial education of patients and lay staff to minimize risk of problems not being identified
Relieves burden on stable/adherent patients who need only refills	Not all patients are eligible according to current criteria, with those most likely to be lost to follow-up excluded
Promotes self-efficacy and patient involvement consistent with chronic disease management	Requires disclosure at community levels, with potential negative impact on individuals where stigma is high
Empowers individuals and develops community networks with potential for activism, support etc	New forms of decentralized monitoring and supervision required, without which, outcomes may worsen
Potential to support other community-based activities (HIV testing, tracing, TB screening etc)	Some models may lead to competition for scarce community human resources between HIV care and other health priorities
May hold health sector more accountable to meeting needs of patients and communities (i.e. prevent stock-outs	Tighter drug control needs to be instituted to prevent leakages
Likely to be more cost effective than facility-based drug refills	Need strong referral system for those patients who require urgent medical assistance
Reduces need for routine tasks being carried out by scarce, highly trained health professionals (task shifting)	

KEY CHALLENGES

The programmes outlined in this document present several options for delivering ART at the community level. Programme managers will need to evaluate the various elements. Table 3 provides a summary of possible advantages and disadvantages of community ART models.

Balancing options

In many countries, HIV care has evolved from being a service delivered by specialized HIV clinics to one that is delivered by integrated primary health centres, or via clinic outreach and community-based models. Choosing the most appropriate model (clinic appointment spacing, outreach to health posts or community ART groups) will be context specific and conditioned by a range of factors, including: geography; the extent of existing decentralization; HIV prevalence; average CD4 at treatment initiation; likelihood of side-effects with a particular ART regimen; the capacity of health services; and, in some cases, regulatory or logistical constraints to ART delivery. Other regular health needs such as family planning, or co-morbidities such as hypertension and diabetes, will also determine which model is most appropriate for individual patients. To ensure the intervention is accepted, deciding the most appropriate model must be done in collaboration with the patients living with HIV.

Defining inclusion criteria

Many models of community-based delivery or decentralized care have specific inclusion criteria, most of which limit participation to patients beyond the first 6–12 months on treatment. While patients during the first 6–12 months of treatment require the greatest clinical support, earlier initiation thresholds being introduced in national guidelines may allow for certain patients to benefit from these models earlier in their treatment history. Use of viral load for detecting early non-adherence at three or six months may allow earlier referral to these models and, as a monitoring tool, clearly identify those needing referral for more intensive clinical and adherence interventions.

Monitoring, evaluation, and supervision

Simplified monitoring systems with a minimum set of indicators are needed to ensure quality is maintained and to support drug supply. Systematic supervision of the implementation and outcomes of the model should also be a prerequisite of any community-based model. There is a growing interest in the potential contribution mHealth (the use of mobile devices to support health-care delivery) could make in transferring information between clinic-based functions and community groups and/or individuals. Further operational research is needed to determine the potential benefits of mHealth.

Drug supply

Procurement, pharmacy management and supply-chain management to peripheral sites are critical for implementing community-based and health-post models. Supply-chain weaknesses can lead to ART stock-outs and such weaknesses must be critically monitored and reported. Community models will often require policies and supply-chain integrity that permit ART being delivered for periods of more than a month. Consistent with the goals of Treatment 2.0, developing appropriate pricing and providing less toxic, heat-stable ART regimens in fixed-dose combinations will further simplify these community-based approaches. Finally, advances in the availability of certain drugs (heat-stable, fixed-dose combinations) and point-of-care diagnostics will help expedite community models of ART delivery.

Community participation

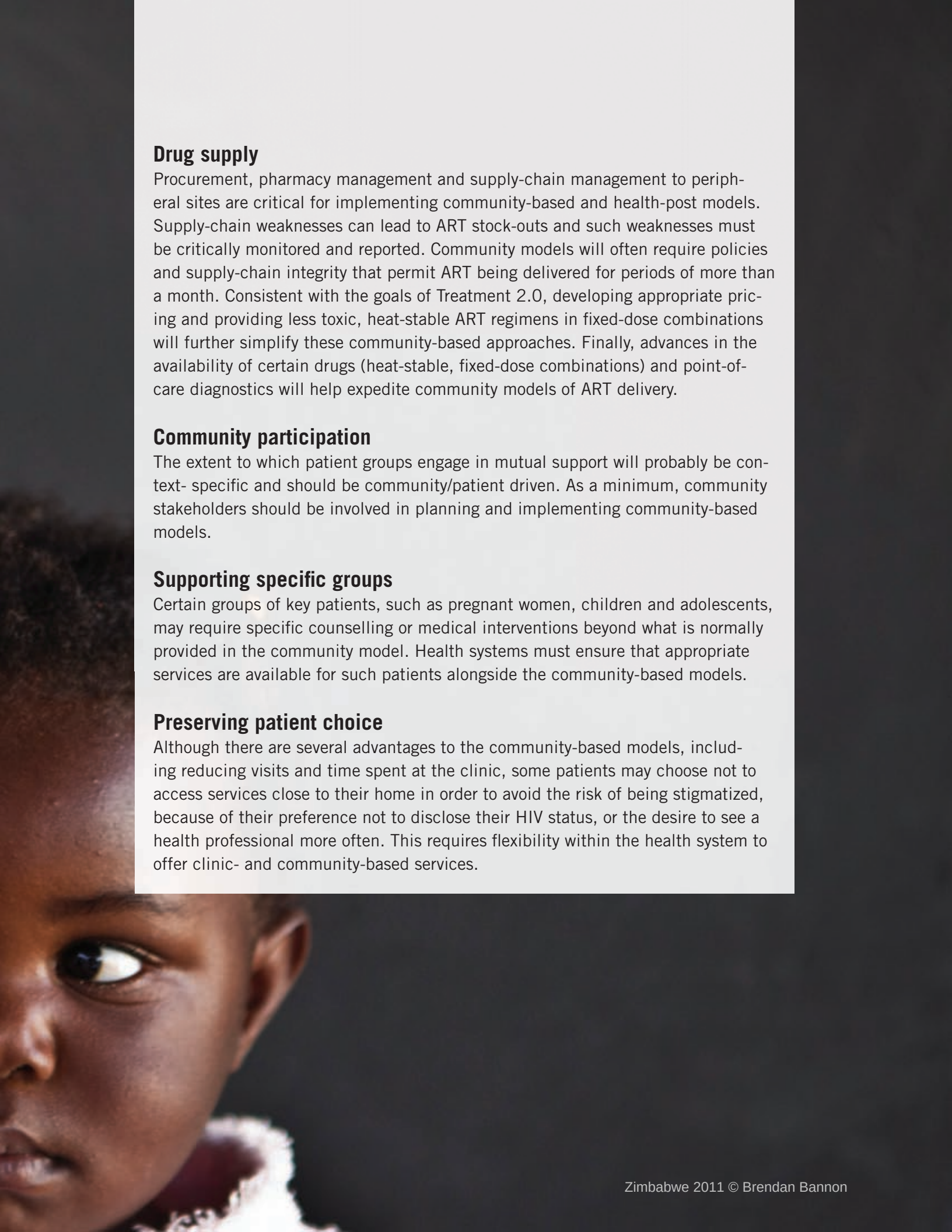
The extent to which patient groups engage in mutual support will probably be context- specific and should be community/patient driven. As a minimum, community stakeholders should be involved in planning and implementing community-based models.

Supporting specific groups

Certain groups of key patients, such as pregnant women, children and adolescents, may require specific counselling or medical interventions beyond what is normally provided in the community model. Health systems must ensure that appropriate services are available for such patients alongside the community-based models.

Preserving patient choice

Although there are several advantages to the community-based models, including reducing visits and time spent at the clinic, some patients may choose not to access services close to their home in order to avoid the risk of being stigmatized, because of their preference not to disclose their HIV status, or the desire to see a health professional more often. This requires flexibility within the health system to offer clinic- and community-based services.



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REFERENCES

1. Schwartlander B, Grubb I, Perriens J. The 10-year struggle to provide antiretroviral treatment to people with HIV in the developing world. Lancet 2006. 368(9534):541–546.
2. Global HIV/AIDS response. Epidemic update and health sector progress towards universal access. Progress report 2011. WHO/UNAIDS/UNICEF, Geneva, 2011. Available http://whqlibdoc.who.int/publications/2011/9789241502986_eng.pdf
3. McCoy D et al. Expanding access to antiretroviral therapy in sub-Saharan Africa: avoiding the pitfalls and dangers, capitalizing on the opportunities. American Journal of Public Health 2005. 95(1):18–22.
4. Braitstein P et al. Mortality of HIV-1-infected patients in the first year of antiretroviral therapy: comparison between low-income and high-income countries. Lancet 2006. 367(9513):817–824.
5. Keiser O et al. Public-health and individual approaches to antiretroviral therapy: township South Africa and Switzerland compared. PLoS Medicine 2008. 5(7):e148.
6. Mills EJ et al. Life expectancy of persons receiving combination antiretroviral therapy in low-income countries: a cohort analysis from Uganda. Annals of Internal Medicine 2011. 155(4):209–216.
7. Cohen MS et al. Prevention of HIV-1 infection with early antiretroviral therapy. New England Journal of Medicine 2011. 365(6):493–505.
8. World Health Statistics 2007. WHO Statistical Information System, Geneva, 2007. Available http://www.who.int/whosis/whostat2007/en/index.html.
9. Deribe K et al. Defaulters from antiretroviral treatment in Jimma University Specialized Hospital, Southwest Ethiopia. Tropical Medicine and International Health 2008. 13(3):328–333.
10. Yu JK et al. True outcomes for patients on antiretroviral therapy who are "lost to follow-up" in Malawi. Bulletin of the World Health Organization 2007. 85(7):550–54.
11. Miller CM et al. Why are antiretroviral treatment patients lost to follow-up? A qualitative study from South Africa. Tropical Medicine and International Health 2010. 15(Suppl 1):48–54.
12. Mills EJ et al. Adherence to HAART: a systematic review of developed and developing nation patient-reported barriers and facilitators. PLoS Medicine 2006. 3(11):e438.
13. Fatti G, Grimwood A, Bock P. Better antiretroviral therapy outcomes at primary healthcare facilities: an evaluation of three tiers of ART services in four South African provinces. PLoS One 2010. 5(9):e12888.
14. Bemelmans M et al. Providing universal access to antiretroviral therapy in Thyolo, Malawi through task shifting and decentralization of HIV/AIDS care. Tropical Medicine and International Health 2010. 15(12):1413–1420.
15. Bedelu M et al. Implementing antiretroviral therapy in rural communities: the Lusikisiki model of decentralized HIV/AIDS care. Journal of Infectious Diseases 2007. 196(Suppl 3):S464-468.
16. Boulle A et al. Antiretroviral therapy and early mortality in South Africa. Bulletin of the World Health Organization 2008. 86(9):678–687.
17. Long L et al. Treatment outcomes and cost-effectiveness of shifting management of stable ART patients to nurses in South Africa: an observational cohort. PLoS Medicine 2011. 8(7):e1001055.
18. The Treatment 2.0 framework for action: catalysing the next phase of treatment, care and support. Geneva, World Health Organization/UNAIDS, Geneva, 2011. Available http://www.who.int/hiv/pub/arv/treatment/en/index.html
19. Ware NC et al. Explaining adherence success in sub-Saharan Africa: an ethnographic study. PLoS Medicine 2009. 6(1):e11.
20. Rueda S et al. Patient support and education for promoting adherence to highly active antiretroviral therapy for HIV/AIDS. Cochrane database of systematic reviews 2006. 3:CD001442.
21. Barnighausen T et al. Interventions to increase antiretroviral adherence in sub- Saharan Africa: a systematic review of evaluation studies. Lancet Infectious Diseases 2011. 11(12):942-951.

22. Jaffar S et al. Rates of virological failure in patients treated in a home-based versus a facility-based HIV-care model in Jinja, southeast Uganda: a cluster-randomised equivalence trial. Lancet 2009. 374(9707):2080–2089.
23. Wools-Kaloustian KK et al. A model for extending antiretroviral care beyond the rural health centre. Journal of the International AIDS Society 2009. 12:22.
24. Roura M et al. Barriers to sustaining antiretroviral treatment in Kisesa, Tanzania: a follow-up study to understand attrition from the antiretroviral program. AIDS Patient Care and STDs 2009. 23(3):203–210.
25. Anon. East Africa: Community HIV drug distribution improves adherence. IRIN, 2010. Available http://www.irinnews.org/report.aspx?ReportId=89757
26. Human Development Report 2011. Sustainability and equity: a better future for all. UNDP, New York, 2011.
27. Africa Health Workforce Observatory. Human resources for health country profile: Malawi. World Health Organization/Global Health Workforce Alliance, Geneva, 2009. Available http://www.hrh- observatory.afro.who.int/images/Document_Centre/malawi_country_profile.pdf
28. Klausner JD et al. Scale-up and continuation of antiretroviral therapy in South African treatment programs, 2005–2009. Journal of Acquired Immune Deficiency Syndrome 2011. 56(3):292–295.
29. WHO country cooperation strategy 2009–2013. Mozambique. WHO Regional Office for Africa, Brazzaville 2009. Available http://www .who.int/countryfocus/cooperation_strategy/ccs_moz_en.pdf
30. http://www.unaids.org/en/regionscountries/countries/mozambique/
31. Decroo T et al. Lessons learned during down referral of antiretroviral treatment in Tete, Mozambique. Journal of the International AIDS Society, 2009, 12(1):6.
32. WHO country cooperation strategy 2009–2013. World Health Organization, Geneva, 2009. Available http://www .who.int/countryfocus/cooperation_strategy/ccsbrief_moz_en.pdf
33. UNGASS United Nations General Assembly Special Session on HIV and AIDS Progress Report: Mozambique, 2008–2009. March 2010. Available http://www.unaids.org/en/dataanalysis/monitoringcountryprogress/2010progressrepor tssubmittedbycountries/mozambique_2010_country_progress_report_en.pdf
34. Caluwaerts C et al. Risk factors and true outcomes for lost to follow-up individuals in an antiretroviral treatment programme in Tete, Mozambique. International Health 2009. 1:97–101.
35. Brinkhof MW, Pujades-Rodriguez M, Egger M. Mortality of patients lost to follow-up in antiretroviral treatment programmes in resource-limited settings: systematic review and meta-analysis. PLoS One 2009. 4(6):e5790.
36. Kober K, Van Damme W. Expert patients and AIDS care. A literature review on expert patient programmes in high-income countries, and an exploration of their relevance for HIV/AIDS care in low-income countries with severe human resource shortages. Antwerp, Institute of Tropical Medicine, 2006. Available http://www.eldis.org/fulltext/kober-vandamme.pdf
37. Decroo T et al. Distribution of antiretroviral treatment through self-forming groups of patients in Tete province, Mozambique. JAIDS 2011.56;2:e39-e44.
38. http://www.unaids.org/en/regionscountries/countries/southafrica/
39. Geng EH et al. Retention in care among HIV-infected patients in resource- limited settings: emerging insights and new directions. Current HIV/AIDS Reports 2010. 7(4):234–244.
40. DRC: 85 percent of AIDS patients deprived of treatment. London, Médecins Sans Frontières, 2012. Available at http://www.msf.org.uk/DRC_AIDS_treatment_deprived_20120125.news
41. http://www .unaids.org/en/regionscountries/countries/democraticrepublicofthecong o/
42. Jouquet G. Economic evaluation of HIV/AIDS Primary/Community Care in 4 selected MSF project settings (patient & health care provider perspective). Brussels, Médecins Sans Frontières, 2011.
43. Chanda P et al. Community case management of malaria using ACT and RDT in two districts in Zambia: achieving high adherence to test results using community health workers. Malaria Journal 2011. 10:158.

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