

## Barriers to access to antiretroviral treatment in developing countries: a review

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### Summary

**OBJECTIVE** To present a review of barriers impeding people living with HIV/AIDS in developing countries from accessing treatment, and to make recommendations for further studies.

**METHODS** Electronic databases, websites of main global agencies and international AIDS conferences were searched for relevant articles published between 1996 and 2007. Articles were reviewed using the Andersen and May framework of access to health services and barriers were categorized as either population-level or health system-level barriers.

**RESULTS** A total of 19 studies (7 articles and 12 abstracts) in English were reviewed. The barriers most frequently cited at the population level were lack of information about antiretroviral therapy (ART), perceived high costs for ART and stigma. Barriers most frequently cited at the health system level were long distance from home to the health facility, lack of co-ordination across services and limited involvement of the community in the programme planning process.

**CONCLUSIONS** Dissemination of information about HIV/AIDS and alternative related care, and alternative health financing policies seem to be the most relevant policy measures to remove barriers. In view of the paucity of evidence on barriers to access to ART, research should address the relative importance of barriers, include a mix of qualitative and quantitative research methods and evaluate barriers in different settings.

**keywords** HIV/AIDS, developing countries, ART, access, barriers to health care, review

### Introduction

HIV/AIDS is a significant and growing public health concern worldwide. In 2007, an estimated 33.2 million people were living with HIV, 2.5 million became newly infected and 2.1 million lost their lives because of AIDS (UNAIDS 2007). Not only does the epidemic cause tremendous human suffering, it has also become a major cause of social and economic instability. The introduction of antiretroviral therapy (ART) has offered hope to people living with HIV/AIDS and has been credited with improving the quality of life significantly and reducing mortality (Vittinghoff *et al.* 1999).

However, access to ART remains limited, especially in developing countries, where of 7.1 million in need of treatment, only 28% are receiving treatment (WHO/UNAIDS/UNICEF 2007). Even the availability of financial resources has not brought the number of patients on ART to the level desired – the Global Fund, e.g. has put forward US\$ 1.9 billion in order to scale-up access to ART

(UNAIDS 2006). The cost of drugs seems not to be the most important constraint of access to ART, as many of the drugs are provided free of cost to eligible patients through combined efforts by countries and bilateral and multilateral partners. For example, in Mozambique, one of the countries with the highest HIV/AIDS burden, only 14% of those in need received ART by the end of 2006 (WHO/UNAIDS/UNICEF 2007). In 2005, Mozambique had spent less than 30% of the donor funds earmarked for the Ministry of Health (Nemes *et al.* 2006). This weak absorptive capacity of the public institutions shows that there are other factors within the health system which hold back the scale-up of ART.

A wide array of such factors or barriers has been put forward in the literature including health system-level barriers (e.g. lack of resources, insufficient supply of human resources) and population-level barriers (e.g. lack of information about ART). However, there is little structured insight into those barriers that prevent or restrict access to ART, and limited research has been performed.

The main objective of this paper is to present an overview of barriers impeding people living with HIV/AIDS from accessing treatment to, ultimately, inform policy makers in designing interventions to reduce these barriers. This may include measures such as the provision of information about AIDS-related care or the reduction of costs of treatment. In addition, this paper reviews the research methodology applied in the literature to define recommendations for further studies.

This literature review includes studies from developing countries only, as the nature of their generalized HIV/AIDS epidemic and of their often fragile health system poses different problems when compared with developed countries. This paper adds to a recent review on adherence to ART – a process taking place after accessing ART – which identified financial constraints and interruption in the supply of ART as most important barriers limiting adherence to ART (Mills *et al.* 2006a,b).

## Methods

We systematically searched for qualitative and quantitative studies addressing barriers to access ART published between 1996 and 2007 from PubMed, FamMed and Cochrane databases. The search was limited to English-language articles. The year 1996 was chosen as HAART was introduced that year. The following search terms were used: ‘barriers’ and ‘access’ (all subheadings) combined with ‘HIV’ and ‘Acquired Immunodeficiency Syndrome’ (all subheadings). The search was supplemented by a review of the references of the retrieved articles, and

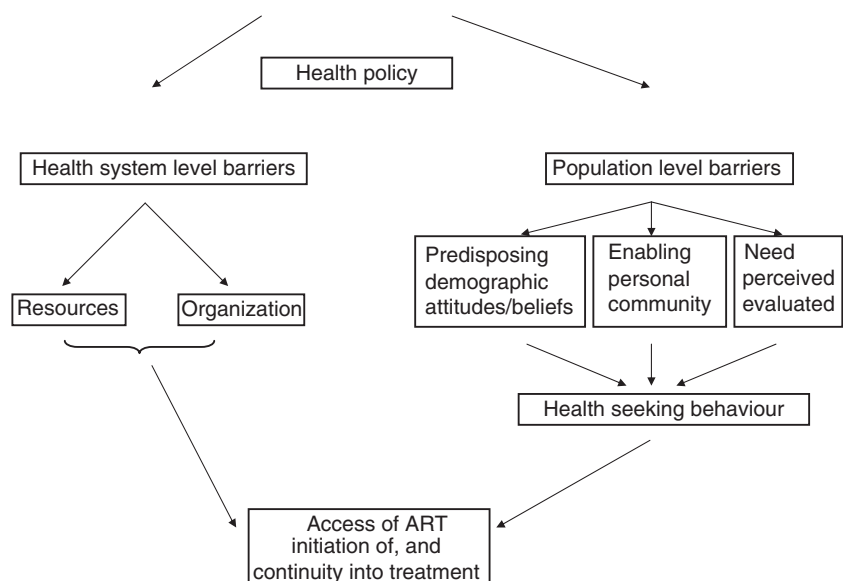
authors of key articles were contacted to identify unpublished studies on barriers to access ART. Websites of the main global agencies and international AIDS conferences were also searched for abstracts and unpublished studies. Only articles on developing countries were retained and analysed.

Studies were excluded in this review if they were policy reports, summaries, literature reviews conducted in developed countries; if they examined barriers to access of health care in general or if they examined variations of access to ART among different groups.

## Conceptual framework

Access barriers to antiretroviral treatment were analysed based on a theoretical framework of access to health services introduced in the 1960s and subsequently revised (Andersen & Newman 1973; Aday & Andersen 1974; Andersen 1995). Access is defined as entry to the health system and continuation of the treatment process, and is determined by characteristics of the system and of the population at risk. Following this framework, we defined barriers to access ART as any factor occurring at the population level or health system level that restricts patients’ initiation of and continuation into ART. We defined ART as any (combination of) drugs that have the primary intent to prevent the progression of AIDS.

Barriers at the population level are related to pre-disposing, enabling and need factors (Figure 1). These factors together determine the health-seeking behaviour of the individual. Pre-disposing factors influence the ‘pro-



**Figure 1** Conceptual framework, adapted from Aday and Andersen (1974).

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density' of individuals to use services, and may include demographic factors such as gender, marital status and attitudes or beliefs about treatment, medical practitioners and disease. Enabling factors refer to the means that individuals or their community may have availability to facilitate (or in their absence, hinder) the use of services and may include financial factors, information about treatment, familial responsibilities or insurance. At the community level, enabling factors may include community resources and/or social support factors. Need factors refer to the judgment or evaluation of the illness level that may hold back or accelerate the use of treatment. The need may be perceived either by the individual or by the medical care provider.

Barriers at health system level can relate to resource factors such as health personnel, infrastructure, equipment and material used in providing treatment. Organizational factors refer to the manner in which resources are coordinated and controlled in the process of providing treatment (Figure 1).

At both levels, some factors are more amenable than others to change by health policy decisions. For example, at the population level, the financial burden of care can be influenced if the government decides to provide universal health insurance coverage to the population. On the contrary, factors related to tradition, such as stigma, and beliefs are more difficult to change by policy decisions.

In addition, we classified studies on the basis of quantitative or qualitative research methods (or combinations of both). Quantitative methods are research techniques that are used to gather quantitative data – information dealing with numbers and anything that is measurable (Bowling 1997). This paper classifies all types of questionnaires, whether they take the shape of structured or semi-structured interviews, as well as analysis on the basis of medical charts, as quantitative research methods. They are therefore to be distinguished from qualitative methods. Qualitative data cannot be put into a context that can be graphed or displayed as a mathematical term (Bowling 1997). This paper classifies in-depth interviews and focus group discussions as qualitative research methods.

## Results

### Study characteristics

The review resulted in 19 articles (7 articles and 12 abstracts) (Table 1). Six studies were published in the peer-reviewed literature (International HIV/AIDS Alliance 2004; Kitajima *et al.* 2005; Adeneye *et al.* 2006; Mshana *et al.* 2006; Campero *et al.* 2007; Ramachandani *et al.*

2007), 11 were abstracts from AIDS conferences (Alker *et al.* 2004; Dimbunu *et al.* 2004; Khonyongwa 2004; Kwalombota & Shumba 2004; Lertpiriyasuwat *et al.* 2004; Vu Song Ha *et al.* 2004; Gamanya 2005; Gichoya-Wawira & Ernest 2005; Sangowana *et al.* 2005; Grant *et al.* 2006; McKoy 2007) and 1 article was an unpublished study (Mafigiri *et al.* 2004). Access studies were conducted in 13 countries; three studies were conducted in Zambia (International HIV/AIDS Alliance 2004; Kwalombota & Shumba 2004; Grant *et al.* 2006), two in Thailand (Lertpiriyasuwat *et al.* 2004; Kitajima *et al.* 2005), two in Nigeria (Sangowana *et al.* 2005; Adeneye *et al.* 2006) and one study each in Tanzania (Mshana *et al.* 2006), Uganda (Mafigiri *et al.* 2004), Botswana (Dimbunu *et al.* 2004), Mexico (Campero *et al.* 2007), Malawi (Khonyongwa 2004), Democratic Republic of Congo (Alker *et al.* 2004), Zimbabwe (Gamanya 2005), India (Ramachandani *et al.* 2007), Jamaica (McKoy 2007), Vietnam (Vu Song Ha *et al.* 2004) and Kenya (Gichoya-Wawira & Ernest 2005). Six studies were conducted in urban areas (Alker *et al.* 2004; Kwalombota & Shumba 2004; Mafigiri *et al.* 2004; Gamanya 2005; Kitajima *et al.* 2005; Grant *et al.* 2006), two in rural areas (Gichoya-Wawira & Ernest 2005; Mshana *et al.* 2006), five in both rural and urban settings (International HIV/AIDS Alliance 2004; Khonyongwa 2004; Lertpiriyasuwat *et al.* 2004; Adeneye *et al.* 2006; Campero *et al.* 2007), and six were not clear on the study setting (Alker *et al.* 2004; Dimbunu *et al.* 2004; Vu Song Ha *et al.* 2004; Sangowana *et al.* 2005; McKoy 2007; Ramachandani *et al.* 2007). No study compared access barriers between urban and rural people living with HIV/AIDS.

Of the 19 studies, 10 used quantitative research methods, 6 used qualitative research methods and 3 a combination of both. The quantitative studies included research methods such as questionnaires (Kwalombota & Shumba 2004; Gamanya 2005; Kitajima *et al.* 2005) and semi-structured questionnaire (Adeneye *et al.* 2006). Qualitative studies included research methods such as in-depth interview (International HIV/AIDS Alliance 2004; Campero *et al.* 2007; McKoy 2007; Murray *et al.* 2007). Other studies combined focus group discussions with semi-structured interview (Grant *et al.* 2006), in-depth interview (Mshana *et al.* 2006), structured questionnaire (Dimbunu *et al.* 2004), or ethnographic interviews (Vu Song Ha *et al.* 2004). Most studies targeted people both on and not on treatment (Khonyongwa 2004; Kwalombota & Shumba 2004; Lertpiriyasuwat *et al.* 2004; Vu Song Ha *et al.* 2004; Kitajima *et al.* 2005; Sangowana *et al.* 2005; Adeneye *et al.* 2006; Grant *et al.* 2006; Campero *et al.* 2007; Ramachandani *et al.* 2007), a minority targeted only those on treatment (International HIV/AIDS Alliance 2004;

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Author	Year	Country	Setting	Methods	Sample	Study objective†
Adeneye <i>et al.</i>	2006	Nigeria	Rural and urban	Quantitative	<i>n</i> = 125; HIV+ on and not on treatment	To identify factors that may impede effective delivery and utilization of ART in the country
International HIV/AIDS Alliance	2004	Zambia	Rural and urban	Qualitative	<i>n</i> = 23 HIV+ on treatment and clinic personnel	To document experiences of people living with HIV/AIDS about the journey from getting tested for HIV, living with HIV and accessing ARV treatment
Alker <i>et al.</i>	2004	DRC	Urban	Quantitative	<i>n</i> = 94; HIV+ not on treatment (specific group)	To identify psychosocial and economic factors in women in Kinshasa that might prevent initiation of and adherence to ART
Campero <i>et al.</i>	2007	Mexico	Rural and urban	Qualitative	<i>n</i> = 40 HIV+ on and not on treatment and 24 key informants	Identify the diverse challenges experienced by PLWHAs in Mexico related to irregular/inopportune access to HAART, as well as the difficulties in treatment adherence associated primarily, although not exclusively, with the physician–patient relationship
Dimbungu <i>et al.</i>	2004	Botswana	Not clear	Quantitative/qualitative	<i>n</i> = HIV+ and health care providers, NGO representatives and CBOs	To identify the factors accounting for low take-up levels of ART (author's interpretation)
Gichoya-Wawira & Ernest	2005	Kenya	Rural	Quantitative	<i>n</i> = 56; medical care providers	To document providers' experiences of factors affecting the uptake of ARV by individuals infected with HIV-1
Grant <i>et al.</i>	2006	Zambia	Urban	Quantitative/qualitative	<i>n</i> = 41; HIV+ on and not on treatment	To explore cultural influences affecting access and adherence to ARV therapy from the patient perspective
Gamanya	2005	Zimbabwe	Urban	Quantitative	<i>n</i> = 30; HIV+ on treatment	To find out those practices that are detrimental to the health of women living with HIV and AIDS
Kitajima <i>et al.</i>	2005	Thailand	Urban	Quantitative	<i>n</i> = 593; HIV+ on and not on treatment	To identify the factors associated with the access to HAART among HIV/AIDS patients in Khon Kaen Province, Thailand
Khonyongwa	2004	Malawi	Rural and urban	Quantitative	<i>n</i> = 250 HIV+ on and not on treatment and care givers and service providers	To access the extent to which people access ARVs and the extent to which people access good nutrition
Kwalombota & Shumba	2004	Zambia	Urban	Quantitative	<i>n</i> = 170; 50 HIV+ on and not on treatment	To find gender-specific factors that influence access to antiretroviral therapy among women in Africa
Lertpiriyasuwat <i>et al.</i>	2004	Thailand	Rural and urban	Quantitative	<i>n</i> = 1015; HIV+ on and not on treatment	To evaluate existing services and needs in advance of the national HAART scale-up of HIV/AIDS services
Mafigiri <i>et al.</i>	2004	Uganda	Urban	Quantitative	<i>n</i> = 101; HIV+ on treatment (specific group)	Identify barriers that HIV-infected women in Kampala, Uganda encounter in accessing HIV care and to develop recommendations to ensure that available HIV care is accessible to them
McKoy	2007	Jamaica	Not clear	Qualitative	<i>n</i> = 40 HIV+ and policy making institutions	Evaluate access to therapy, treatment, and care in the context of the socio-economic profile of PWAs in Jamaica and propose strategies to addressing same
Mshana <i>et al.</i>	2006	Tanzania	Rural	Qualitative	HIV+ not on treatment and general community	To elicit community perceptions regarding access to treatment, in order to refine activities to meet local needs better while simultaneously providing information about the programme to encourage up-take
Murray <i>et al.</i>	2007	Zambia	Not clear	Qualitative	<i>n</i> = 33 community key informants	To gain local insights as to reasons why women in the community did not start or did not continue ARV treatment

**Table 1** (Continued)

Author	Year	Country	Setting	Methods	Sample	Study objective†
Ramchandani <i>et al.</i>	2007	India	Not clear	Quantitative	<i>n</i> = 1667; HIV+ on and not on treatment; care providers.	To characterize the knowledge, attitudes and practices (KAP) regarding HIV care and treatment of HIV patients attending private and public clinics in India
Sangowana <i>et al.</i>	2005	Nigeria	Not clear	Qualitative/quantitative	<i>n</i> = 46; HIV+ on and not on treatment (specific group)	To determine the factors affecting access of PLWHAS to ARVs
Vu Song Ha <i>et al.</i>	2004	Vietnam	Not clear	Qualitative	<i>n</i> = 125; HIV+ on and not on treatment, family members, health providers and social workers	Explore experiences of PLWA with informal, formal and social services, their needs and suggestions

†As cited in the study.

Mafigiri *et al.* 2004; Gamanya 2005) and two studies assessed access barriers for those not on treatment (Alker *et al.* 2004; Mshana *et al.* 2006) and two studies were not clear (McKoy 2007; Murray *et al.* 2007). The majority of respondents in all studies were recruited from HIV/AIDS clinics within health care facilities. Almost all studies also interviewed key informants such as health care providers, support groups and family members. One study targeted exclusively health care providers.

### Access barriers

A considerable number of barriers were identified (Tables 2 and 3). Of 19 studies, 9 identified both population- and health system-level barriers (Alker *et al.* 2004; Dimbunu *et al.* 2004; International HIV/AIDS Alliance 2004; Khonyongwa 2004; Kwalombota & Shumba 2004; Vu Song Ha *et al.* 2004; Mshana *et al.* 2006; Campero *et al.* 2007; McKoy 2007; Ramchandani *et al.* 2007). The other studies identified either population-level barriers (Lertpiriyasuwat *et al.* 2004; Mafigiri *et al.* 2004; Gamanya 2005; Kitajima *et al.* 2005; Sangowana *et al.* 2005; Adeneye *et al.* 2006; Grant *et al.* 2006; Murray *et al.* 2007) or health system-level barriers (Gichoya-Wawira & Ernest 2005). At the population level, barriers cited most frequently<sup>1</sup> were enabling factors such as the lack of awareness about ART (11/19), stigma (10/19), perceived high costs for ARVs and/or related services (7/19) and the lack of financial means (5/19). Pre-disposing factors such as the fear of side effects (2/19) and husband's permission to start ART (1/19) were cited less frequently. At the health system level, the most frequently mentioned barriers were resource factors such as the length of the travel time and/or the long distance from home to the health facility (4/19), organizational factors such as lack of consistency and co-ordination across services (2/19), and the limited involvement of the community in the programme planning process (2/19). No study ranked barriers according to their relative importance.

### Discussion

This review identified a large number of barriers at population and health system level. A number of population-level barriers were reported frequently in the studies, such as the lack of information on treatment, the perceived high cost of ART and the stigma associated with HIV/AIDS that discouraged people from seeking ART. Health system-level barriers were reported less frequently

<sup>1</sup>Number of cites out of total population or health system-level studies between brackets.

**Table 2** Population-level barrier in access to ART

Factors	Studies																			No. of cites
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>Pre-disposing factors</b>																				
Demographic/gender factors																				
Not being given complete information because of being female										X										1
Requiring husband's permission to start ART										X										1
Fear of divorce or rejection															X					1
<b>Attitudes and beliefs</b>																				
Being ready to die															X					1
Change of life style															X					1
Fear of taking medicines for life															X					1
Fear of side effects															X					1
Fear of terminal diagnosis															X					1
Fear because of negative experience acquaintances had with treatment															X					1
Fear of being used by fake medical practitioners	X																			1
Tradition made it difficult to access ART										X										1
Stress associated with a+ status	X																			1
<b>Personal enabling factors</b>																				
<b>Financial factors</b>																				
Perceived high costs for ARVs/costs for related services	X	X								X										7
Lack of financial means/insufficient personal financial resources/ARVs not affordable	X																			5
Loss of income during the time lost at hospital																	X			2
Unemployment														X						1
Transport and food costs/nutrition																	X			3
<b>Information factors</b>																				
Lack of awareness about ART/lack of knowledge of where to get services/not enough/inappropriate information about ART	X	X																		11
<b>Other factors</b>																				
Not inclusion of ARV in health insurance (UC)																				1
Family responsibilities																	X			1
Difficulties in accessing CD4 testing																				1
Difficulties in sustaining long-term treatment																				1
Late HIV testing																				1
Nutrition/food																				2
<b>Community enabling factors</b>																				
Stigma/inability of disclosure of one+ status/no support from partners/relatives/fear because of partners and friends (Local) poverty	X	X																		10
																				3

**Table 2** (Continued)

Factors	Studies																			No. of cites
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
Need factors																				
Need factors: Perceived by the patient																				
Thought of not being candidates for ART											X									1
Have just been diagnosed HIV positive	X																X			2
Not wanting to take medications											X									1
No signs of illness yet	X																			1
Minimization of the importance of HIV/AIDS diagnose and symptoms																				1
Never considered being HIV positive													X							1
Not accepting their known positive status/disbelief in test result	X												X							2
Conviction of no need for treatment																			X	1

across studies, and respondents mentioned the long distance from home to the health facility, the lack of co-ordination across services and the limited involvement of the community in the planning process. However, the frequency of citation may indicate the importance of a certain barrier, but should be interpreted with caution as in our sample of studies, population-level barriers have been subjected to more studies than health system-level barriers, and may be cited more frequently on that ground only.

Policy makers need to find ways to address these barriers and encourage people to seek treatment. Our findings indicate a need to further involve the patient and community in decisions concerning treatment as well as to provide improved education of the individual and the community at large on the benefits of treatment. For example, the lack of information on ART was frequently mentioned as a barrier to access ART, although most study respondents had been tested for HIV/AIDS in the past. This indicates inadequate provision of information during counseling (and testing) sessions, and improved dissemination of information about HIV/AIDS and related care may improve the perception towards treatment. These findings are similar to the results from a recent review by Mills *et al.* (2006a,b) on adherence to HAART. This indicates that addressing concerns with regard to access to treatment may also be beneficial to adherence and vice versa.

A variety of further policy options exist to address barriers and improve access to ART (WHO/UNAIDS/ UNICEF 2007). One example is the implementation of directly observed antiretroviral treatment (DOT-HAART), in analogy to TB-DOTS treatment. A pilot project implementing this type of HIV delivery in Haiti resulted in diminished stigma and increased demand for HIV testing (Farmer *et al.* 2001; Mukherjee *et al.* 2003). Another example is the delivery of ARV treatment within the primary health care system as Médecins sans Frontières did in Khayelitsha, South Africa, where educating and empowering patients as well as involving the community in decisions on patient selection ensured local ownership over the process (Kasper *et al.* 2003). These community and patient-centred approaches increased the demand of HIV services and reduced social barriers to entry into care (Schneider *et al.* 2006). However, to generalize these policy options to other setting remains a challenge. Countries face different circumstances, especially with regard to the availability of human resources in the health sector, and context-specific strategies need to be considered (Van Damme & Kegels 2006).

This review revealed paucity in evidence on access barriers to ART in developing countries, both in terms of geographic coverage and in terms of population repre-

**Table 3** Health system-level barriers in access to ART

Factors	Studies																			No. of cites
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	
<b>Resource factors</b>																				
Unavailability of treatment in hospitals/pharmacies									X					X						
No antiretroviral treatment in every site				X									X							
Shortage of reagents and other supplies						X														
Different testing systems that make testing costs high						X														
Inadequate health care facilities					X															
Lack of personnel									X											
Lack of testing facilities									X											
Limited care available																		X		
No enough women specific counsellors											X									
<b>Organizational factors</b>																				
Lack of consistency and co-ordination across services/existence of other competing interventions																				
Differential support for testing and access						X														
Long distances between laboratory facilities for ART and HIV/AIDS disease monitoring						X														
Inadequate community sensibilization																				
Limited involvement of the community in the programme planning process/lack of models that support and involve the participation of PLHA					X															
Long waiting time at the hospital															X					
Unfriendly and corrupt staff														X						
Travel time/long distance from home to hospital										X										
Discrimination at health facilities																				
Breaches of confidentiality in treatment settings																		X		
Poor quality of care																		X		
Deferral by physician																	X			



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sentativeness. Only 19 studies from a total of 13 countries were identified, of which only 7 articles were published in the peer-reviewed literature. This indicates the need for more research, and future studies could benefit from a number of observations from the present review. First, the studies in this review used a wide array of quantitative and qualitative research methods. While structured questionnaire is relatively easy to administer to a large number of individuals, the pre-coded answers may not be sufficiently comprehensive to capture all barriers and do not enable the respondent to raise other relevant issues. For this reason, semi-structured interviews, or qualitative research methods such as in-depth interviews, are more suited to collect information on behaviour, attitudes and perceptions and obtain responses from the respondent, which will allow the researcher to gain insight and clarification on the respondents' answers. Because such methods are time consuming and expensive, usually only a limited sample is feasible which then raises concerns of generalization. However, as Mills *et al.* (2005) explained: 'A combination of recording and feeding back the evidence into the community using both surveys and qualitative research maximizes the potential for deep and comprehensive understanding'.

Second, no study evaluated the relative importance of identified barriers and its relationship to access. For example, it is not clear whether lack of information on HIV/AIDS and related care is as an important barrier as the high costs of ART. In the absence of such information, it is difficult to policy makers to prioritize interventions. Future research should aim to include the relative importance of barriers, by e.g. asking the respondents to simply rank order or rate the importance of identified barriers.

Third, there is a paucity of studies on access barriers to ART for HIV-positive children. Currently, less than 20% of children in need of antiretroviral medicine receive it (WHO/UNAIDS/UNICEF 2007). Many of these children are orphans, which poses very specific barriers to access. Future studies should specifically address these. Finally, as mentioned earlier, factors influencing access are context-specific, and barriers identified in a particular country, such as a shortage in the number of counsellors, may not be relevant to another country. With more research on access, barriers from different setting can be compared. This will assist policy makers in identifying those barriers that may vary across settings and formulate context-specific strategies, and identify those barriers to access to ART that are consistent across settings. Recently, a similar initiative on the identification of universal barriers to adherence to ART has been undertaken (HATIP 2008).

This review analysed barriers to access ART in developing countries. At a time when treatment for HIV/AIDS

is rapidly scaled-up, it may contribute to a better understanding why access remains low, despite the availability of treatment and free drug provision, and may help policy makers in designing interventions to reach the people in need of ART.

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