Global roll-out of HIV treatment

Kalpana Sabapathy

Abstract

Access to HIV treatment globally, and especially in countries hardest hit by HIV, has increased dramatically over the last decade. A public-health approach that optimizes treatment and monitoring protocols to reach the widest number of patients with the minimum amount of resources, without compromising quality of care, has been adopted. At the end of 2011 an estimated 8 million people globally were taking antiretroviral treatment, representing great progress. However, just over half (54%) of individuals from low- and middle-income countries who were eligible for treatment received it and antiretroviral coverage varies greatly by country. Knowledge of HIV status remains suboptimal and, once linked into care, the losses of patients from HIV services along the cascade of care are alarming. Improving access to HIV testing, enhancing timely linkage into care of individuals who know they are HIV-infected and increasing the availability of treatment (which is effective, well tolerated and accessible) to patients everywhere are the first priorities. More drug options, better diagnostics and patient-centred delivery of services are much needed. Although treatment continues to be out of reach for many, the achievements to date should provide the necessary motivation for continued efforts for future success.

Keywords antiretroviral treatment; cascade of care; global HIV; low- and middle-income countries

What's new?

- Antiretroviral therapy roll-out in low- and middle-income countries has improved in the last decade largely using a public-health approach
- The use of much cheaper generic antiretroviral drugs has revolutionized access to treatment
- Community venue-based, workplace and home-based voluntary counselling and testing approaches are facilitating greater knowledge of HIV status
- Improvements are needed to increase engagement along the cascade of care from testing HIV-positive to timely initiation and retention on treatment

Introduction

Access to HIV treatment globally, and especially in countries hardest hit by HIV, has increased dramatically over the last decade,[1] but much remains to be done to achieve the overarching goal of universal access to treatment and care.[2] Of the 34 million people living with HIV globally, 69% come from sub-Saharan Africa (SSA) where almost 1 in every 20 adults is infected. In South, South-East and East Asia, although prevalence is approximately 25 times lower than in SSA, there are still almost 5 million people infected with HIV.[1] In countries where population level prevalence and the absolute burden of HIV infections may be relatively low, access to care may be proportionally even lower. This is seen in a number of countries in Asia and the Middle East and North Africa (MENA).[1,3] Antiretroviral treatment (ART) roll-out in low- and middle-income countries (LMIC) has largely taken on a public-health approach by optimizing treatment and monitoring protocols to reach the widest number of patients with the minimum amount of resources, without compromising quality of care.

The stage of the HIV epidemic and the social, political and economic factors that influence HIV treatment provision vary between countries. This paper focuses on some key issues relevant to the roll-out of ART in LMIC, and summarizes current successes, challenges and ambitions for the future.

Current treatment coverage

At the end of 2011 an estimated 8 million people globally were taking ART.[1] While this represents great progress — a 20% increase from 2010 and a 20-fold increase in coverage compared to 2003 — only just over half (54%) of individuals from LMIC who were eligible for treatment received it. ART coverage varies greatly. The regional differences are shown in Figure 1, but there is also considerable variability between individual countries with some performing well above or below the regional average. For country-specific information see reference.[1]

Knowledge of HIV status and linkage into care

Testing for HIV is the first step in the cascade of care for successful treatment.[4–6] Knowledge of HIV status remains suboptimal globally.[6] The proportion of respondents aware of their status amongst individuals living with HIV in national population surveys in six sub-Saharan African countries ranged from 31% in Congo to 69% in Kenya.[6] The success of maternal and child health programmes in systematically offering HIV testing as part of prevention of mother-to-child transmission (PMCT) has contributed to greater awareness of HIV status among women than men globally.[6] Innovative approaches to testing have been identified as a priority, especially for high-prevalence settings. Community venue-based,[7,8] workplace[9] and home-based voluntary counselling and testing[10,11] are all approaches that are gaining momentum as means to widen the gateway towards successful HIV care.

Data are scarce on what proportion of individuals found to be HIV-positive go on to register for care, attend for follow-up and initiate ART.[12] One South African study found that 63% of

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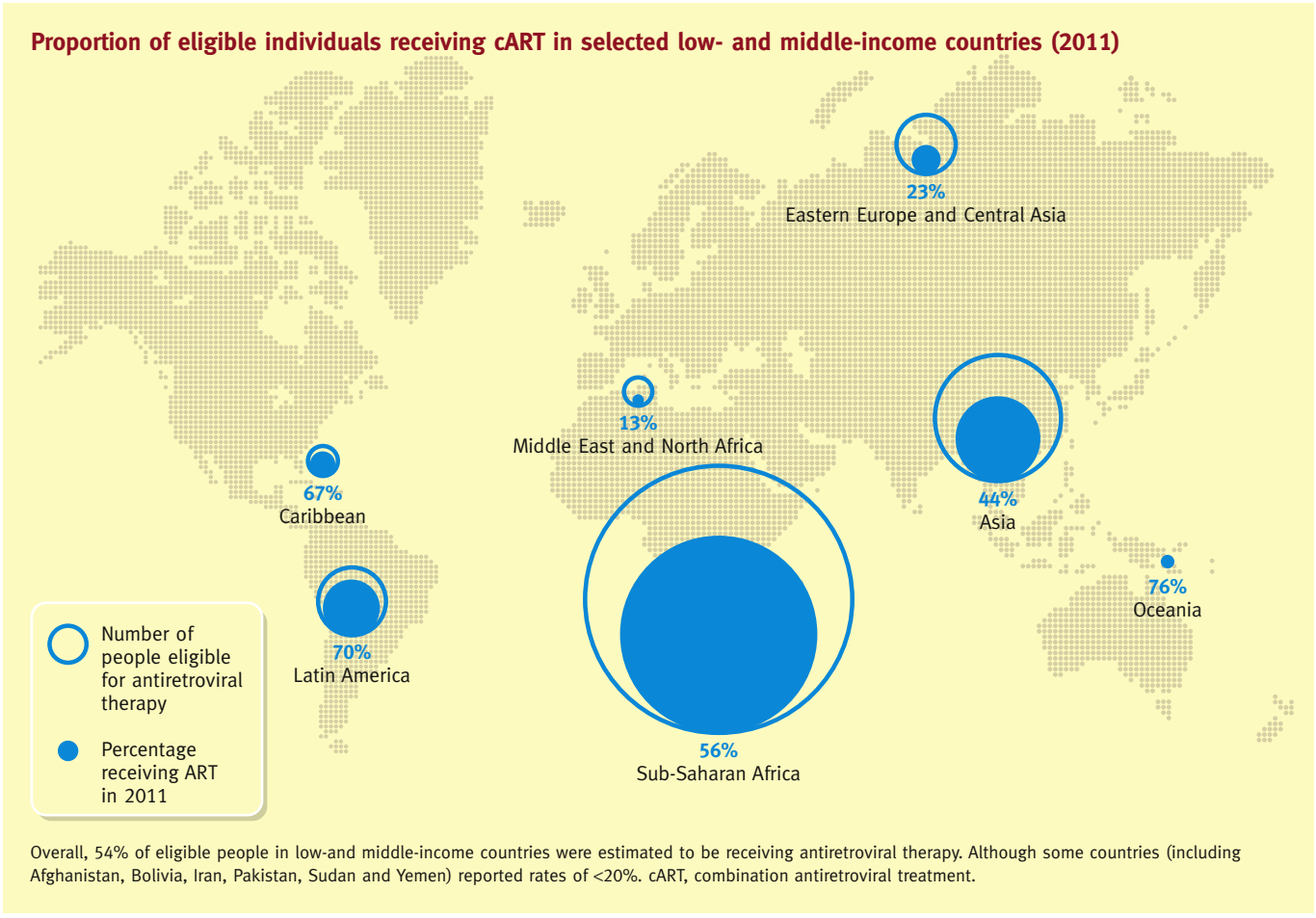

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individuals who tested HIV-positive linked into HIV care for CD4 measurement and assessment of ART eligibility within 6 months.[13] One-third were eligible for ART, of whom only two-thirds initiated treatment.[13] The losses of patients from HIV services along the cascade of care are alarming.

Challenges of delivering long-term treatment

Following initiation, retention on ART is a major challenge in LMIC, especially in SSA. Discrepancies in data collection between programmes are a problem for data assimilation and comparison across settings.[14,15] It can be difficult to evaluate outcomes of treatment programmes if relative achievements cannot be accurately compared.

A systematic review of over 22,500 patients on ART in 39 cohorts in SSA estimated an overall retention on ART programmes of approximately 70% after 3 years.[14] Mortality accounted for 41% of attrition while 59% was attributed to loss-to-follow (LTF). LTF rates in LMIC should be interpreted with caution given that unascertained death is an important cause for failure to attend and individuals are classified as 'LTF' due to the lack of availability of resources to trace patients and record the true outcome.[15]

Attrition is generally greatest in the first few months after starting treatment, largely related to the advanced disease stage at presentation. This is evidenced by the low CD4 count at ART initiation in LMICs (median CD4 counts ranging from 70 to 149 cells/μl at ART initiation have been described recently[3,16,17]) even though most national guidelines now advise ART initiation at CD4 counts under 350 cells/μl.[18]

Human resource shortages and challenges related to accessibility of health structures (e.g. insufficient and unaffordable transport networks), combined with the highest burden of HIV infection in SSA, contribute to lower proportions retained on treatment than in other settings.[3,12,19] Task-shifting and decentralization to local health centres have been identified as key interventions to address these challenges.[1,19]

The gender gap

More women than men (68% vs 47%) in LMIC are taking treatment.[1] In part this reflects the greater number of HIV-infected women in SSA and improved access to HIV testing through antenatal care, but it is also due to the delay in accessing testing and treatment by men.[3,6,13] Men are more likely to have poorer outcomes from ART, often due to late presentation and advanced disease at the time of initiating ART. Increasing access to knowledge of HIV status, increasing male involvement in PMCT programmes, making health facilities more 'male-friendly' and facilitating male-oriented peer support groups are some of the means recommended to encourage male participation in HIV services.[20]