Commentary: Operational Guidance in the 2013 WHO consolidated antiretroviral guidelines

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In June 2013, the WHO released consolidated guidelines on the use of antiretrovirals (ARVs) [1]. The launch of these new guidelines is another milestone in the global endeavor toward universal access to antiretroviral treatment (ART) using the public health approach, pursuing the dual advantage of keeping HIV-infected people healthy and reducing HIV transmission.

The new guidelines promote initiating ARVs with a $CD4^+$ T-cell threshold of 500 cells/μl or less for adults, adolescents, and older children [1]. These guidelines further recommend ARVs, regardless of $CD4^+$ T-cell count, for patients with active tuberculosis (TB), pregnant and breastfeeding women, and children younger than 5 years of age [1]. This is a call for action to countries to further scale up provision of ARVs in addition to improving patient retention along the continuum of care.

Such ambitious goals are quite challenging to operationalize in many settings, especially in countries with high HIV burden and weak health systems. This is only possible by optimizing available human and financial resources, ensuring adequate links between care and treatment services, supporting adherence to ARVs, and maximizing retention of patients across the continuum of care.

Table 1 summarizes the recommendations on service delivery and operational aspects of ART delivery in the 2013 WHO guidelines [1].

In a systematic review of studies across countries, integration and linkage of ART delivery with other health services improved uptake and coverage of ART among people living with HIV. The review of studies indicates that maternal and child health settings can provide a key opportunity to expand access to ART [2–6]. ART provision in such settings improved utilization of and adherence to ARVs more than referring the women to HIV clinics for ART. Such approaches also led to better maternal and infant health outcomes [5,6]. Similarly, provision of ART in TB treatment settings improved uptake and early initiation and led to a non-significant reduction in mortality [2,7–9]. More limited data have also found that opioid substitution therapy has comparable retention in care, ART coverage and mortality [2]. Integration of services calls for simplification and integration of information systems. Hence, programs need to harmonize and align their monitoring and evaluation systems in such a way that data are captured, shared, and used for patient and program management.

Decentralizing HIV treatment and care to peripheral health facilities also facilitates increased access to ART. In a systematic review, partial decentralization improved retention and reduced mortality, while full decentralization improved retention and led to comparable mortality [2,10–16]. Task shifting for HIV treatment and care has also improved access to and coverage of ART. The review of studies showed no difference in mortality and losses to follow-up when nurses or nonphysician clinicians initiate or maintain people on ART or when community health workers maintain people on ART, relative to physicians providing care [14,17–21]. Countries need to develop regulatory frameworks that facilitate such task shifting and introduce of cadres of health workers wherever appropriate. It is equally important that HIV-related trainings are mainstreamed in existing preservice curricula.

The expanded eligibility for ARVs requires an uninterrupted supply of health products and expanded laboratory and diagnostic services. It is also important that programs jointly mobilize finance, which will facilitate the expanded provision of ARVs.

Although programs are intensifying access to ARVs, adherence and retention will remain real challenges. There is no 'magic bullet' for improving adherence and retention. A mix of factors, related to health systems, drugs and individual taking the drugs, affect adherence to

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Table 1. Summary of the main new recommendations on service delivery and operational aspects in the 2013 WHO guidelines [1].

Topic	Recommendation	Strength of recommendation and quality of evidence.
Integrating and linking services	In generalized epidemic settings, ART should be initiated and maintained in eligible pregnant and postpartum women and in infants at maternal and child healthcare settings, with linkage and referral to ongoing HIV care and ART	*Strong recommendation, very low quality evidence*
	In settings with high burden of HIV and TB, ART should be initiated for an individual living with HIV in TB treatment settings, with linkage to ongoing HIV care and ART	*Strong recommendation, very low quality evidence*
	In settings with high burden of HIV and TB, TB treatment may be provided for an individual living with HIV in HIV care settings in which TB diagnosis has also been made	*Strong recommendation, very low quality evidence*
	ART should be initiated and maintained in eligible people living with HIV at care settings in which opioid substitution therapy is provided	*Strong recommendation, very low quality evidence*
Decentralizing HIV treatment and care	ART can be initiated in hospitals with maintenance in peripheral health facilities	*Strong recommendation, low quality evidence*
	ART can be initiated and maintained in peripheral health facilities	*Strong recommendation, low quality evidence*
	ART can be initiated in peripheral health facilities with maintenance at the community level with regular clinical visits	*Strong recommendation, low quality evidence*
Task shifting for HIV treatment and care	Trained nonphysician clinicians, midwives, and nurses can initiate first-line ART	*Strong recommendation, moderate quality evidence*
	Trained nonphysician clinicians, midwives, and nurses can maintain ART	*Strong recommendation, moderate quality evidence*
	Trained and supervised community health workers can dispense ART between regular clinical visits	*Strong recommendation, moderate quality evidence*

ART, antiretroviral treatment; TB, tuberculosis.

ARVs, as shown in a rapid systematic review of the global evidence undertaken to support the guidelines process [2]. There is no single adherence intervention that is effective for all patients in every setting. Therefore, programs, care providers, and patients need to tailor, for every context, a combination of feasible interventions, based on individual patient conditions [22,23]. The same is true for retention in care. A blend of factors related to the health system, and sociocultural and individual circumstances affect retention. Interventions to improve retention will, therefore, need to consist of a bundle of measures that can be adapted to each situation and individual patient [3,4,24,25]. Implementation research is crucial for generating evidence on 'what works, where, and for whom' and continuously refining frameworks to improve adherence and retention [26].

How to implement all these recommendations in practice depends largely on the context and in particular on the current realities of the HIV services as part of the wider health system. These realities vary, with big differences between countries and within countries. Hence, operationalization of the new guidelines will necessarily also vary, and the guidance on operations and service delivery provided in the new guidelines needs to remain rather generic. It is, therefore, imperative that countries adapt these new guidelines to their health system realities and HIV epidemiology. Moreover, monitoring and evaluation systems have to evolve with these new realities to enable the generation and utilization of relevant strategic information, which helps to continuously increase coverage for ART, improve adherence to ARVs, and maximize retention in care. Comparative health systems and services research can enable continuous lessons learning across settings. This in turn will contribute to future guidance on key operational aspects, such as community-based ART delivery.

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Conflicts of interest

There are no conflicts of interest.

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