ALTERNATIVE MODELS OF ART DELIVERY: OPTIMIZING THE BENEFITS

ELIGIBILITY CRITERIA FOR DIFFERENTIATED SERVICE DELIVERY MODELS OF HIV TREATMENT IN SUB-SAHARAN AFRICA

Evidence from a literature review 2016-2019

Background

- In sub-Saharan Africa, many countries are scaling up new service delivery approaches, or differentiated service delivery (DSD) models, for the treatment of HIV. DSD models, which are mostly intended to be less intensive than conventional care, are intended to sustain or improve patient outcomes, such as retention in care, while also reducing patient and provider costs and increasing provider capacity.
- These models were originally designed for patients who were regarded as "stable" on antiretroviral therapy, which generally limited them to ART-experienced adult patients.
- More recently, a few differentiated models have been developed for other patient populations, such as specific age groups, virally unsuppressed patients, and others.
- We conducted a systematic review of the published literature and international conference abstracts on DSD models for HIV treatment in sub-Saharan Africa between Jan 1, 2016 and Sept 12, 2019[1] and extracted details of eligibility criteria for each model, of which we found 63 in total. These criteria (see table on next page) provide an overview of who is currently eligible for DSD models.

Main findings

- Nearly all models were designed for adults, though some included adolescents.
- Explicit clinical stability was the most common eligibility requirement (84%), although "stability" was defined differently among models/countries. The definition of a stable patient typically specified a minimum duration on ART, viral suppression, and acceptable clinical condition.
- Two-thirds of the models required evidence of viral suppression, though some offered an alternative based on a minimum CD4 cell threshold if viral load results were not available.
- The minimum duration on ART before eligibility for differentiated model entry was most often 6 months (33%), though for some 12 months was needed.
- Current co-morbid conditions related to HIV, such as TB and other OIs, and adverse drug reactions were generally criteria for exclusion.
- At least a quarter of models excluded pregnant women.
- Fewer than five models each excluded previous ART defaulters and patients with non-communicable diseases or who were below set weight or BMI limits, breastfeeding, or on isoniazid preventive therapy.
- 13% of all models were aimed at key populations such as pregnant and post-partum women, adolescents, female sex workers and/or MSM, or inmates.

Conclusions

Through 2019, the vast majority of DSD models for HIV treatment in Africa continued to focus solely on stable adult patients, who are most frequently defined as being virally suppressed, on ART for at least six months, and without any acute or co-morbid conditions. Criteria for stability varied fairly widely, and some models were reported for children, adolescents/youth, and unsuppressed patients.

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Table. Frequency of eligibility criteria for DSD models

Criterion (n of models requiring criterion, %)*	Facility based individual (n=20)	Out of facility individual (n=15)	Client led group (n=11)	Healthcare worker led group (n=17)	Total (n=63)
Clinical status (explicit requirement for "stability")					
All patients eligible	3 (15%)	1 (7%)	0 (0%)	1 (6%)	5 (8%)
Stable status explicitly required	16 (80%)	13 (87%)	9 (82%)	15 (83%)	53 (84%)
Nonstable status explicitly required	1 (5%)	0 (0%)	1 (9%)	0 (0%)	2 (3%)
Not specified	0 (0%)	1 (7%)	1 (9%)	1 (11%)	3 (5%)
Age limits					
All ages eligible	3 (15%)	1 (7%)	0 (0%)	0 (0%)	4 (6%)
Minimum age 10-17 years	3 (16%)	3 (20%)	3 (27%)	3 (18%)	12 (19%)
Minimum age 18 -20 years	8 (40%)	6 (40%)	3 (27%)	6 (35%)	23 (37%)
21-24 years only	0 (0%)	0 (0%)	0 (0%)	1 (6%)	1 (2%)
"Adults"	1 (5%)	1 (7%)	0 (%)	1 (6%)	3 (5%)
Not specified, probably adults	5 (25%)	4 (27%)	5 (45%)	6 (35%)	20 (32%)
Viral suppression					
Viral suppression required	12 (60%)	11 (73%)	7 (64%)	12 (71%)	42 (67%)
Viral suppression not required	7 (35%)	2 (13%)	1 (9%)	2 (12%)	12 (19%)
Viral load status not specified	1 (5%)	2 (13%)	3 (27%)	3 (18%)	9 (14%)
CD4 threshold allowed	4 (20%)	3 (20%)	2 (18%)	4 (24%)	13 (21%)
Minimum months on ART					
≥6 months on ART	8 (40%)	4 (27%)	5 (45%)	4 (24%)	21 (33%)
≥12 months on ART	4 (20%)	4 (27%)	2 (18%)	4 (24%)	14 (22%)
No requirement	3 (15%)	1 (7%)	1 (9%)	2 (12%)	7 (11%)
Other	2 (10%)	4 (27%)	0 (%)	1 (6%)	7 (12%)
Not specified	3 (15%)	2 (13%)	3 (27%)	6 (35%)	14 (22%)
Conditions/comorbidities explicitly causing ineligibility					
Any current or acute illness	3 (15%)	2 (13%)	2 (18%)	2 (12%)	9 (14%)
Opportunistic infections	11 (55%)	5 (33%)	5 (45%)	7 (41%)	28 (44%)
Tuberculosis	4 (20%)	2 (13%)	0 (0%)	5 (29%)	11 (17%)
Adverse drug reactions/side effects	6 (30%)	0 (0%)	2 (18%)	0 (0%)	8 (13%)
Pregnant	8 (40%)	3 (20%)	1 (9%)	4 (24%)	16 (25%)

*Criteria are not mutually exclusive; most models exclude patients on the basis of any one of multiple criteria. The level of detail provided by reports also varies; a model that states only that a patient must be stable may implicitly require viral suppression, ART experience, and/or the absence of acute conditions. Only reports that stated each specific criterion are included in the totals in the table.

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[1]Long L, Kuchukhidze S, Pascoe S, et al. Differentiated service delivery models for antiretroviral treatment of HIV in sub-Saharan Africa: a rapid systematic review. AMBIT Project Report 04. Boston: Boston University and HE²RO, 2020.