

Web Appendix 1: Detailing the compound search strategy performed on Medline and Global Health

SET		Medline and Global Health
1	HIV	Hiv
2		Aids
3		HIV
4		HIV-1
5		ACQUIRED IMMUNODEFICIENCY SYNDROME
6		Set 1-5 were combined with "or"
7	Retention	PATIENT DROPOUTS
8		LONG TERM CARE
9		CONTINUITY OF PATIENT CARE
10		patient dropouts
11		long term care
12		loss to follow-up
13		retention in care
14		attrition or defaulting
15		pre-art or (pre adj1 treatment) or (art adj1 initiation)
16		screening for art
17		art eligibility
18		eligible for art
19		eligibility for art
20		eligible for arv
21		art-eligible
22		Engaging
23		Engagement
24		continuum of care
25	continuity	
26		Set 7-25 were combined with "or "
27		Set 6 and 26 were combined with "and"
28		Set 27 was limited to years "2000-current"
29	Country	DEVELOPING COUNTRY
30		AFRICA SOUTH OF THE SAHARA
31		AFRICA
32		sub-Saharan
33		<i>all sub-Saharan countries included as Mesh and text term combined with or</i>
34		Set 29-33 were combined with "or "
35		Set 28 and 34 combined with "and"
<p>Words written in capital letters were used as MeSH headings, the others were used as free text.</p>		

Web Appendix 2: Selection process for the inclusion of studies

768 potentially eligible citations identified for screening

- 734 potentially relevant citations obtained from keyword searches on electronic databases
- 8 potentially relevant citations retrieved from reference lists
- 26 potentially relevant citations

Screen 1: 692 excluded

- 169 duplicates
- 519 irrelevant on basis of title and/or abstract
- 2 conference abstracts- retrieved the published

76 studies selected for full text review (54 articles + 22 abstracts)

Screen 2: 34 excluded

- 23 irrelevant to topic
- 11 had poor methodological quality studies (4 articles + 7 abstracts: assessment score < 50%)

42 studies retained for analysis (29 articles and 13 abstracts)

Web Appendix 3: Barriers and facilitators to retention in the pre-ART period and linkage to care

Author	Country	Setting	Design	Step in the care pathway	BARRIERS				FACILITATORS	
					Psychosocial	Economic	Health systems	Medical	Health System	Organisational
Braunstein [14]	Rwanda	Urban-Kigili, VCT ^a clinic. FSWs ^b	Prospective cohort. Participant interviews	Enrolment into HIV care	Perceived good health High CD4 count at diagnosis Belief that care was unnecessary					
Nsigaye[30]	Tanzania	Mwanza city, clinic	Evaluation of a referral system. Patient interviews	Enrolment into HIV care					Transport voucher Community escort	Supportive counselling Structured referral system
Amolloh[11]	Kenya	Rural, HBC ^c patients	Household survey/ Prospective cohort. Participant interviews	Enrolment into HIV care	Still felt healthy Did not believe HIV test result Confidentiality or stigma concerns					
Govindasamy [19]	South Africa	Cape Town, mobile HIV testing service	Retrospective cohort. Participant interviews and validation via folder review	Enrolment into HIV care	Fear toxicity and side-effects of ART Fear of disclosure of one's HIV+ ^d status/stigma associated with being HIV+ /social isolation	No time off work Distance				
Luseno[31]	South Africa	HIV clinic, randomised community trial, high risk women	Preliminary data collected in a trial	Enrolment into HIV care	HIV-related stigma and discrimination		Long waiting time Low quality care Judgemental and unresponsive staff			

Corneli[51]	Kenya and South Africa	Bondo and Pretoria, randomised controlled trial, HIV+ women	IDIs ^e with participants	Enrolment into HIV care	Wanted confirmatory test Shocked by diagnosis, unfamiliar with referral centre and staff Perceive good health	Distance				
Naidoo[18]	South Africa	Peri-urban, Primary healthcare clinic-Johannesburg	Survey of HIV+ patients that had bloods taken for a CD4 count test	Collection of CD4 count		No time off work Transport costs Distance Time-constraints				
McGuire[32]	Malawi	Rural, ART ^f clinic	Retrospective cohort Interviews with those LTFU ^g	Retention in pre-ART care	HIV-related stigma Perception of health improvement Lack of support by partner Opting for traditional medicine Poor health Fear of drug toxicities	Transport costs	Dissatisfied with care/staff behaviour Inconvenient clinic hours Long waiting times			
Posse[33]	Mozambique	Rural and urban, ART clinic	FGDs ^h and interviews with PLWHA ⁱ and HCWs ^j	ART initiation		Transport costs Distance Food shortage	Shortage of staff Long waiting time Lack of community information			
Lubega[34]	Uganda	Peri-urban, Iganaga, pre-ARV ^k clinic	KIIs ^l with HCWs ^m , FGDs with persons who looked after PLWHA ⁿ and IDIs with PLWHA	ART initiation	Fear of being beaten or divorced by one's husband	Transports costs	High staff workload Inadequate post-test counselling Competition with traditional healers Long waiting times Lack of incentives to seek pre-ART care			
Duff[35]	Uganda	Rural and urban-Kabarole, PMTCT ^m clinic	IDIs and FGDs with HIV+ mothers	ART initiation	Perceived that ART should be commenced when bedridden Non-disclosure of HIV+ status HIV-related stigma	Transports costs	Negative patient-provider interactions Long waiting times Staff favouritism of patients			
Kunihira[36]	Uganda	Rural-Rakai, ART clinic	KIIs with officials of HIV-related services, HCWs and PLWH.	ART initiation	Lack of knowledge on ARVs Fear to be seen at the clinic Do not know if it is HIV/AIDS-think they are	Distance Food shortage	Shortage of staff Long waiting times Patients unaware of free ARVs			

			IDIs with PLWHA		bewitched Fear side effects of drugs					
Amuron[27]	Uganda	Rural and semi-urban, ART clinic	Prospective cohort. Interviews with patients that did not complete ART screening	ART initiation	Not ready to start ART Experiences difficulty in disclosing HIV status Requested to be transferred to a nearby clinic Wants to complete TB ⁿ treatment before starting ART Fear toxicity and side-effects of ART Failed to identify a treatment buddy	Transport costs				
Parkes[37]	Uganda	Rural, NGO ° health units	Retrospective cohort	ART initiation	Uncertain about which service provider to choose Difficulties in understanding Domestic problems	Transport costs Relocating	Awaiting ART team home visit Administration issues	Initial phase of TB treatment Medically unfit		
Mshana[38]	Tanzania	Rural, VCT clinic	FGDs with community members and IDIs with PLWHA	ART initiation	HIV-related stigma Reluctant to identify a treatment buddy	Transport costs Food costs	Confusing hospital set-up Low drug supply Unfriendly HCWs †		Transport voucher	Designated staff to welcome and assist new patients in the clinic
Fox[39]	Zambia	Rural and urban: Southern, Central and Lusaka Province, patients on ART & HBC (patients who did not initiate ART)	Cross-sectional survey. Interviews with PLWHA	ART initiation	HIV-related stigma	Distance Transport costs No time off work Time constraints Clinic fees Accrue other expenses due to regular clinic visits	Inconvenience of clinic hours Quality of counselling Lack of provider time Poor service Staff concern Long waiting time			

Murray[40]	Zambia	Urban women, Lusaka	FGDs and KIIs with HCWs as well as, community, church and HBC members	ART initiation	Consider ART to be bad Fear side effects and stigma Do not know much about HIV Scared of ending marriage Failure to accept status	Food shortage					
Nunu[41]	Swaziland	Rural, public sector hospitals	Retrospective cohort: Follow-up interviews with patients who failed to initiate ART	ART initiation	Non-disclosure to partner	Transport costs No time off work	Laboratory system failure Late arrival to clinic	Admitted to hospital On TB treatment			
Unge[42]	Kenya	Urban township, Kibera	Interviews with patients that failed to initiate ART	ART initiation	Fear of taking medication on an empty stomach Fear side-effects of medication Fear disclosure and possible repercussions Concern for continuity of care and treatment Seeking alternate care Conflicting information from religious/community leaders	Food shortage					
Assefa[43]	Ethiopia	Rural and urban, public sector sites	Retrospective cohort. Interviews with program managers, health service providers	ART initiation	HIV-related stigma Perceived good health Opting for traditional medicine Fear side-effects of drugs	Transport costs Distance	Inadequate post-test counselling				
Clouse[44]	Zimbabwe and South Africa	Semi-urban and rural, HIV clinic	Retrospective cohort. Folder review of patients that failed to initiate ART	ART initiation		Transport costs Relocated Employment commitments					
Bassett[22]	South Africa	Urban and peri-urban, semi-private hospitals	Retrospective cohort. Interviews with patients that failed to initiate ART	ART initiation	Feeling unready to commence ART	Changed service provider Relocated					

Feucht[45]	South Africa	Urban, Paediatric ART clinic	Retrospective cohort. Folder review	ART initiation	Social problems: Caregiver's refusal to disclose HIV status to another adult, denial of child's status/ill health/need for ART. Caregiver's substance abuse	Referral to other ART site	Shortage of staff Incorrect disease stage classification	Co-infected with TB Treatment of TB Acute illness Current stable medical condition		
Bianchi[46]	South Africa	Primary healthcare clinics, ART clinic	Retrospective cohort. FGDs with patient follow-up workers	ART initiation		No time off work				
Akello[50]	Uganda	Gulu district, AIDS support Organisation, HIV+ women	FGDs and IDIs with HIV+ women	ART initiation	Gender-based violence					

a=voluntary counselling and testing, b=female sex workers, c=home-based care, d= HIV positive, e= in-depth interviews, f=antiretroviral therapy, g=lost to follow-up, h=focus group discussions, i= people living with HIV/AIDS, j=healthcare workers, k=antiretrovirals, l= key informant interviews, m=prevention of mother to child transmission, n=tuberculosis, o=non-governmental organisations