Supplementary file I: Description of sustainability constructs and domains used in systematic review (Primary study outcomes)

Domain	Sustainability construct	Outcome measure	Description	Criteria for assigning scores		
The Intervention Design and Delivery	Demonstrating effectiveness	Patient-related outcomes	Any numeric or subjective patient-centred outcomes to show effectiveness e.g. retention-in-care, viral suppression, loss-to-follow-up, patient satisfaction etc.	effectiveness measures were extracted from included articles e.g. retention in care, loss to follow up, viral		
	Evidence base for the intervention	Evidence base	Evidence that the intervention provides the expected benefits as planned i.e. that the DSD improve outcomes	3 = There is sufficient evidence that the intervention provides expected benefits to stakeholders	2 = There is some evidence that the intervention provides expected benefits to stakeholders	1 = There is little or no evidence that the intervention provides expected benefits to stakeholders
	Expertise	Expertise	Evidence of adequate expert knowledge and experience to carry out DSD especially by supporting organisation	3 = There is sufficient evidence that the supporting organization has adequate expert knowledge and experience to conduct intervention	2 = There is some evidence that the supporting organisation has adequate expert knowledge and experience to conduct intervention	1 = There is little or no evidence the supporting organisation has adequate expert knowledge and experience to conduct intervention
	Quality Improvement (QI) methods	QI methods	Evidence that QI methods i.e. using data to identify gaps which are continually improved, starting with a pilot and then spreading etc. are used to support intervention success and sustainability	3 = There is sufficient evidence of the use of QI methods to support the conduct of intervention	2 = There is some evidence of the use of QI methods to support the conduct of intervention	1 = There is little or no evidence of the use of QI methods to support the conduct of intervention to a little or no extent
	Monitoring progress	Monitoring progress	A standardized and systematic method to gather and report data during DSD intervention	3 = There is sufficient evidence of monitoring the intervention using standardised system to gather and report data over time	2 = There is some evidence of monitoring the intervention using standardised system to gather and report data over time	1 = There is little or no evidence of monitoring the intervention using standardised system to gather and report data over time
	Intervention duration	Duration	Evidence that the intervention will last beyond initial funding	3 = There is sufficient evidence the intervention will last for a long time beyond the initial project and funding	2 = There is some evidence the intervention will last for some time beyond the initial project and funding	1 = There is little or no evidence the intervention will last beyond the initial project and funding
	Intervention type	Project Design	Evidence of a structured type of intervention is it e.g. prevention, treatment, palliative care, supportive care etc.	3 = The type and design of the project is clear (e.g. preventive, treatment, palliative care, supportive care etc.)	2 = The type and design of the project is clear to some extent (e.g. preventive, treatment, palliative care, supportive care etc.)	1 = The type and design of the project is clear to a little extent (e.g. preventive, treatment, palliative care, supportive care etc.)
	The problem	Problem awareness	General awareness of a problem among stakeholders that requires the DSD intervention to address	3 = The intervention is addressing a problem that is recognised and accepted as a real concern by all stakeholders i.e. community, staff, patients, supporting organisation, facility, government	2 = The intervention is addressing a problem that is recognised and accepted as a concern by some stakeholders i.e. mainly by the facility, patients, staff, supporting organization	1 = The intervention is addressing a problem that is not relly recognised and accepted as a concern by any stakeholders
	Training & Capacity building	Capacity building	Evidence of any orientation, training, on-going mentoring for staff delivering the DSD intervention	3 = There is sufficient evidence of orientation/ training/ mentoring to new staff and on-going training to all staff to be able to deliver intervention successfully	2 = There is some evidence of orientation/training/ mentoring to new staff and to all staff to be able to deliver intervention successfully	1 = There is little or no evidence of orientation/training/ mentoring to staff to be able to deliver intervention successfully
The External Environment	Awareness and Raising the profile	Community awareness	Evidence of the larger community being aware of the DSD intervention and promoting its benefit	3 = There is sufficient evidence of effort to ensure that stakeholders e.g. the community are aware of the benefits of the intervention through media marketing e.g. patient pressure groups, community leaders	2 = There is some evidence of effort to ensure that stakeholders e.g. the community are aware of the benefits of the intervention through media marketing e.g. community leaders alone or patients or pressure groups	1 = Only PLHIV and lay workers in the community participating in the intervention are aware of the intervention
	Socioeconomic and political considerations	Political support	Evidence that the intervention has political support e.g. government engagement i.e. ministry of health, guidelines revision to include DSD requirement	3 = There is sufficient evidence the intervention has the full support of Government (involvement of the MOH, District/State/zonal health unit, institutions, Revision of guideline, Inclusion in strategic plans etc.)	2 = There is evidence the intervention has some level of support of the Government (involvement of the MOH, District/State/zonal health unit, an institution, etc.)	1 = There is evidence the intervention has the support of at least the institution involved in implementation, a local NGO etc.
	Spread to other organizations	Spread	Evidence that the intervention or underlying concepts spread within participating organisation or to other locations	3 = There is sufficient evidence that the intervention or beneficial parts of it are spread within a facility or to other facilities in a community or district	2 = There is some evidence the intervention spread to a few other sites beyond the intervention facility	1 = There is evidence the intervention or beneficial parts of it are spread to at least other parts of a facility
	Urgency	Urgency	Evidence of an urgency to maintain intervention based on its relevance	3 = There is sufficient evidence of motivation or urgency to maintain the intervention or parts of it based on its perceived potential of supporting a relevant healthcare need.	2 = There is some evidence of motivation or urgency to maintain the intervention or parts of it based on its perceived potential of supporting a relevant healthcare need.	1 = There is little or no evidence of motivation or urgency to maintain the intervention or parts of it based on its perceived potential of supporting a relevant healthcare need.
Intervention processes	Accountability of roles and responsibilities	Roles & responsibilities	Evidence that roles & responsibilities of staff involved are spread out and clearly defined	3 = There is sufficient evidence that roles and responsibilities of all staff involved in the intervention is clear and evenly distributed so no staff is over-burdened	2 = There is some evidence that roles and responsibilities of staff involved in the intervention is clear and evenly distributed so no staff is over-burdened	1 = There is little or no evidence that roles and responsibilities of staff involved in the intervention are clear or evenly distributed
	Belief in the intervention	Belief in intervention	Evidence that staff think the intervention is a better way to do things	3 = There is sufficient evidence that majority of staff conducting the intervention believe the change is a better way of doing thing and will add value	2 = There is some evidence that staff conducting the intervention believe the change is a better way of doing thing and will add value	1 = There is little or no evidence that staff conducting the intervention believe the change is a better way of doing things
	Complexity	Complexity	Evidence that it is not difficult for staff to understand and conduct the intervention	3 = There is sufficient evidence that it is not hard to understand, conduct and maintain the intervention	2 = There is evidence of some difficulty in understanding or conducting and maintaining the intervention	1 = There is evidence of moderate difficulty in understanding or conducting and maintaining the intervention
	Defining Aims and Shared Vision	Shared goal	Evidence of a shared aim and vision established with all stakeholders before commencing the intervention	3 = There is sufficient evidence of a shared aim and vision for the intervention existing among all major stakeholders including the community, government, partners, patients as well as goal revision when necessary	2 = There is some evidence of a shared aim and vision for the intervention existing among most stakeholders including the community, a local partners and patients.	1 = There is little or no evidence of a shared aim and vision for the intervention existing among stakeholders. Only the supporting partner developed a goal.
	Incentives	Incentives	Evidence that rewards or benefits derived from the intervention are considered enough motivation that drive stakeholders to engage and continue delivering intervention over time	3 = There is sufficient evidence of perceived benefit from the intervention by all stakeholders including community, supporting organisation, patients, staff and government	2 = There is some evidence of perceived benefit from the intervention by some stakeholders e.g. only supporting organisation or patients or staff	1 = There is little or no evidence of perceived benefit from the intervention by any stakeholder, maybe only the supporting organisation
	Job requirements	Job requirements	Evidence of revision of job requirement for key staff incorporating intervention tasks as part of key job descriptions	3 = There is sufficient evidence of revised job requirement for key staff in facilities which capture the roles and job functions introduced by the intervention e.g. revised job description, SOP, guidelines OR a revision in job requirement was not required	2 = There is some evidence of revised job requirement for key staff in facilities with new roles and job functions introduced by the intervention but no revised job descriptions, SOP	1 = There is little or no evidence of revised job requirement for the staff involved with implementing the intervention at the facilities
	Workload	Workload	Evidence that any additional workload introduced by the intervention is manageable and requiring no special effort to staff involved	3 = There is sufficient evidence that any additional workload introduced by the intervention is manageable and evenly divided among staff without requiring extra effort	2 = There is evidence that the additional workload introduced by the intervention is manageable to a some extent and evenly divided among staff	1 = There is little or no evidence that the additional workload introduced by the intervention is manageable to the staff involved
	General resources	Resources	Evidence that resources needed to manage and maintain the DSD intervention is available	3 = There is sufficient evidence that all/most resources required to conduct and maintain the intervention are available and adequate and provided by the government i.e. more government less external donor	2 = There is evidence that some resources required to conduct and maintain the intervention are available and adequate i.e. less government and more external donor	1 = There is evidence that little or none of the resources required to conduct and maintain the intervention are available and adequate i.e. mostly provided by external donor

Resources	Funding	Funding	Evidence that adequate funds are available to implement and strategic funds planned to sustain intervention i.e. DSD will be embedded and sustained	3 = There is sufficient evidence that adequate (all/most) funds required to implement and sustain the intervention are available and provided by government	2 = There is evidence that most of the funds required to implement and sustain the intervention are available e.g.less government funds and more external donor funds	1 = There is evidence that little of none of the funds required to implement and sustain the intervention are available e.g.mostly provided by external donor funds
	Infrastructure	Infrastructure	Evidence that resources required to support intervention e.g. office space, materials, and supplies are available	3 = There is sufficient evidence that all/most of the resources required to support the intervention such as buildings, office space, materials and supplies are available and provided by the government	2 = There is evidence that the resources required to support the intervention such as buildings, office space, materials and supplies are available i.e. less government support and more external donor support	1 = There is evidence that the resources required to support the intervention such as buildings, office space, materials and supplies are available and mostly paid by external funder
	Staff	Staff	Evidence of sufficient staff in place to conduct and sustain DSD intervention	3 = There is sufficient evidence of sufficient number of staff, internal and external (i.e. a team) in place to implement and sustain the intervention employed by the government	2 = There is evidence that the number of internal staff in place to implement and sustain the intervention is mostly adequate i.e. the cadre of staff needed is employed by govenrment but paid with external donor funds	1 = There is evidence that the number of internal staff in place to implement and sustain the intervention is somewhat adequate i.e. project staff are mainly employed and paid by extarnal funder
	Time	Time	Evidence that adequate time was dedicated for DSD intervention in the routine daily schedule of the facility	3 = There is sufficient evidence that adequate time was dedicated to the intervention activities in the routine daily schedule of the facility	2 = There is evidence that time was dedicated to some of the intervention activities in the routine daily schedule of the facility	1 = There is evidence that time was dedicated to little or none of the intervention activities in the routine daily schedule of the facility i.e. project activities run within the facility but parallel to routine facility activities
Organizational setting	Integration with existing programs and policies	Integration	Evidence that DSD intervention was embedded within the existing organizational structure, Programme and policies	3 = There is sufficient evidence that the intervention was embedded within the existing organizational structures, programmes and policies of the health system and the facility	2 = There is evidence that the intervention was embedded to some extent within the existing organizational structures, programmes and policies of the facility	1 = There is evidence that the intervention was embedded to a little extent within the existing organizational structures, programmes and policies of the facility
	Intervention adaptation and receptivity	Adaptation	Evidence that the DSD intervention is flexible to respond, change, adapt and fit with local context requirement	3 = There is sufficient evidence that the intervention responds to changes and adapts to fit with local context and requirements	2 = There is some evidence that the intervention responds to changes and adapts to fit with local context and requirements	1 = There is little or no evidence that the intervention responds to changes and adapts to fit with local context and requirements
	Opposition	No opposition	Evidence of any resistance due to other competing interests from stakeholders reported	3 = There is sufficient evidence of no resistance from stakeholders to the intervention due to other competing priorities	2 = There is evidence of some resistance from stakeholders to the intervention due to other competing priorities	1 = There is evidence of resistance to a large extent from stakeholders to the intervention
	Organizational readiness and capacity	Readiness	Evidence that health facilities have adequate capacity and readiness to undertake the intervention i.e. in terms of materials and manpower	3 = There is sufficient evidence of adequate capacity and readiness of facilities to conduct the intervention i.e. all materials and staff needed are provided by government	2 = There is some evidence of capacity and readiness of facilities to conduct the intervention i.e. most materials and staff needed are provided by government with support from external funder	1 = There is evidence that capacity and readiness of facilities to conduct the intervention is limited i.e. aii/most materials and staff needed are provided by external funder
	Organizational values and culture	Values system	Evidence that the values of the intervention align with health system values, prevailing beliefs and culture and priorities	3 = There is sufficient evidence that the health system and facility values, prevailing beliefs and culture and priorities support the sustainability and strategic direction of the intervention e.g. inclusion instragegic plan or guideline	2 = There is some evidence that the health system and facility values, prevailing beliefs and culture and priorities support the sustainability and strategic direction of the intervention e.g. some government involvement with little commitment	1 = There is little or no evidence that the health system and facility values, prevailing beliefs and culture and priorities support the sustainability and strategic direction of the intervention
	Support available	Management support	Evidence of management support for the delivery and maintenance of intervention	3 = There is sufficient evidence of management total support of the intervention in the form of reminders, staff, technical and education to enhance delivery	2 = There is some evidence of management support of the intervention to a large extent in the form of reminders, staff, technical and education to enhance delivery i.e. in principle but it is non-commital	1 = There is little or no evidence of management support of the intervention
The people involved	Leadership and Champions	Champions	Evidence of any influential person or group who advocates and supports the intervention	3 = There is evidence of an influential person (champion) and group of people (patient pressure group) who have the ability and skills to advocate, communicate and support the intervention e.g. a prominent community leader, a PLHIV group, NGO	2 = There is some evidence of an influential person (champion) and group of people (patient pressure group) who have the ability and skills to advocate, communicate and support the intervention e.g. expert patients living openly with their status	1 = There is little or no evidence of an influential patient, or group of people who have the ability and skills to advocate, communicate and support other patients at the facility level during the intervention.
	Ownership	Ownership	Evidence that stakeholders take ownership to support, embed and sustain the intervention	3 = There is sufficient evidence that the government, facilities, communities and other stakeholders take ownership and responsibility to support the intervention	2 = There is some evidence that the facilities and other stakeholders i.e. the community or any local partner take ownership and responsibility to support the intervention	1 = There is little or no evidence that any stakeholder take ownership and responsibility to support the intervention maybe just the facilities
	Power	Power	Evidence that stakeholders have the ability to use their power to make decisions, advocate and support the intervention	3 = There is sufficient evidence of the ability of stakeholders to use their power to make decisions, advocate and support initiative	2 = There is some evidence that stakeholders have the ability to use their power to make decisions, advocate and support initiative	1 = There is little or no evidence of the ability of stakeholders to use their power to make decisions, advocate and support initiative
	Relationships and collaboration and networks	Collaboration	Evidence of any collaborations, partnerships and support networks to promote and sustain the intervention	3 = There is sufficient evidence of partnerships, collaborations and networks to support and sustain the intervention e.g. with government and other local stakeholders, patient groups etc.	2 = There is evidence of some level of partnerships, collaborations and networks to support and sustain the intervention e.g. with some local stakeholders	1 = There is little or no evidence of partnerships, collaborations and networks to support and sustain the intervention e.g. with the facility or institution (s)
	Satisfaction	Satisfaction	Evidence of benefits and rewards enjoyed by stakeholders and staff for participation in intervention reported	3 = There is sufficient evidence of acceptance, enjoyment and reward among stakeholders from participating in intervention e.g. Government, local partners, staff, patients etc.	2 = There is evidence of some level of acceptance, enjoyment and reward among stakeholders from participating in intervention e.g. Among direct beneficiaries staff and patients	1 = There is little or no evidence of acceptance, enjoyment and reward among any stakeholder from participating in intervention
	Stakeholder participation	Stakeholder participation	Evidence that key stakeholders (those affected by the intervention) are engaged and participate in the intervention	3 = There is sufficient evidence of the involvement and participation of stakeholders who are affected by the intervention e.g. Government, community, staff, patients	2 = There is evidence of some level of involvement and participation of stakeholders who are affected by the intervention e.g. staff, patients	1 = There is little or no evidence of the involvement and participation of stakeholders who are affected by the intervention e.g. patients
	Community participation	Community participation	Evidence of the participation of community members in directing and shaping the intervention goals and approaches to reflect their values and needs	3 = There is sufficient evidence of the participation of community members to direct and shape the intervention to reflect their values, expectations and needs e.g. involving community groups and leaders	2 = There is evidence of some level of participation of community members to direct and shape the intervention to reflect their values, expectations and needs involving community groups e.g. involving lay workers from the community	1 = There is little or no evidence of participation of community membersto direct and shape the intervention to reflect their values, expectations and needs involving community groups e.g. community only involved as passive recipients
	Patient involvement	Patient involvement	Evidence of the involvement of patients in the intervention processes to understand patient's perspectives, values and needs	3 = There is sufficient evidence of the involvement of patients in the intervention's processes, to understand patient's perspective i.e. in the design and process	2 = There is evidence of some level of involvement of patients in the intervention's processes, to understand patient's perspective e.g. adapting the process	1 = There is little or no evidence of the involvement of patients in the intervention's processes e.g. only as passive participants
	Staff involvement	Staff involvement	Evidence of the involvement of staff in the planning, design, delivery of the intervention	3 = There is sufficient evidence of the involvement of staff in the planning, design, delivery and maintenance of the intervention	2 = There is evidence of some level of involvement of staff in the planning, design, delivery and maintenance of the intervention	1 = There is evidence of involvement of staff in the delivery and maintenance of the intervention

Author, Year, Journal	Title of publication	HIV project/Study site, Town, Country	Setting	Project ownership and Funding	Year of commence ment of Intervention	Who is the Target population/ Intervention group	Comparison group/conte mporary or historical (if any)	Definition of "Stable" patient (see also Supp. File 4)	Number of participants (stable)	Number of participants (comparison)	DSD Model	Brief description of intervention	Level of implementa tion (number of sites)	Study aim	Study variables definitions	Primary care provider in intervention	Primary care provider in standard of care (SOC)	Provider in intervention funded by	Provider in SOC funded by	Study design	Outcomes - VL (%) SOC	Outcomes - VL (%) DSD	Outcome - VL (rate) SOC	Outcome - VL (rate) DSD	Outcome - VL - % rebound SOC
Bango F., 2016 (9)	Adherence clubs for long-term provision of antiretroviral therapy: cost-effectiveness and access analysis from Khayelitsha, South Africa.	***Ubuntu clinic, Khayelitsha, Cape Town, South Africa***	Peri-urban	MSF & Western Cape Dept of Health	2007	Stable patients in AC	Stable patients in Standard of care (SOC)	≥ 18 yrs; ART≥18 months; last CD4 >200cells/ml; Viral suppression (2 consecutive <400copies /ml not >6months old; no ongoing drug side effect; no ongoing opportunistic infection (OI)	932	5262	*Adherence clubs (AC)*	Group of 15-30 people. Lay worker led. Symptoms screening and basic health education at every meeting. 2-monthly drug pick-up of pre-packaged ART. Annual clinical consultation and blood draw for - CD4, viral load, creatinine. 6-monthly drug scripting. On the same ART regimen≥12 months. Treatment buddy allowed at alternate club meetings	1 clinic	*From a provider's perspective, (i) to assess the cost effectiveness of clubs in comparison with Standard of care and (ii) to present perceived accessibility differences associated with each model of care.*	Viral suppression - two consecutive viral loads <400 copies/ml with the most recent not being older than 6 months;	lay health worker	nurse	wcdoh-gf	wcdoh	*Cost effectiveness analysis (CEA) and access analysis (AA)*	97,2	99,06	2,84	0,94	
Bekolo C., 2017 (20)	Six-monthly appointment spacing for clinical visits as a model for retention in HIV Care in Conakry-Guinea: a cohort study	*Matam out-patient clinic, Conakry, Guinea*	Urban	MSF & Ministry of Health Guinea	2013	Stable patients in SMA	Stable patients in Standard of care (SOC)	≥15 years; current VL ≤1000 copies/µl, non-pregnant, no opportunistic infection (OI) between the 1st January 2014 and 31st December 2014.	1166	791	*Six-monthly appointment (SMA)*	Clinical 6-monthly appointments scheduled by nurses and every 3 months for drug refill instead of every 1-2 months for patients in regular ART care. Patients outside Conakry get 6 months refill while patients within Conakry get 3-monthly refills with a Pharmacy only refill visit between the 6-monthly clinical visits.	1 site	*Report a 6 -monthly appointment for clinic and drug refill adapted locally as Rendezvous de Six Mois (R6M) for stable HIV patients receiving ART, as a decongestion scheme to relieve pressure on its overstretched referral Centre of Matam in Conakry and to improve retention in care during the Ebola outbreak*	LTFU - no contact for 90 days or more after the last missed appointment for ARV refill; Retention in care - the proportion of patients alive and known to be still receiving ART at the time of the study	lay health worker	doctornurse	MSF	MOH, MSF	*Comparative Cohort study*					
Bemelmans M., 2014 (21)	Providing universal access to antiretroviral therapy in Thyolo, Malawi through task shifting and decentralization of HIV/AIDS care.	***Chiradzulu Malawi;*** *Khayelitsha, South Africa; Kinshasa, Congo; Tete, Mozambique.*	Rural	MSF & Ministry of Health Malawi	2008	Stable patients in SMA		Adult (≥15 years); on 1st line ART ≥12 months; w/CD4 count ≥ 300; without OI/side effects, pregnancy or breastfeeding	8523		*SMA*	6-monthly clinical consultation; 3-monthly ART refill by Health Surveillance officers (HSA); yearly VL	Chiradzulu District Hospital and 10 health centres	*Describe a number of community-supported models of ART delivery developed by Medecins Sans Frontieres (MSF) together with Ministries of Health (MoH) in public health facilities in sub-Saharan Africa*		health Surveillance officers	doctornurse	MSF and Government	MSF and Government	*Retrospective cohort study*					
Bochner AF., 2019 (22)	The rollout of Community ART Refill Groups in Zimbabwe: a qualitative evaluation.	*10 facilities - 2 rural hospitals, 6 rural clinics & 2 urban clinics in 5 provinces of Zimbabwe*	Rural & Urban	MOHCC Zimbabwe; CDC; and I-TECH	2018	Stable patients in CARG		≥ 6 months on ART, a viral load <1000 copies/mL (CD4 >200 cells/mm3 when viral loads are unavailable), and no active opportunistic infections. Pregnant or breastfeeding women are also excluded.	76		*CARG*	4 to 12 clients per group; 3-monthly ART refill; annual clinical consultation and viral load assessment. CARG members usually visit the clinic together on the same day.	10 - 2 rural hospitals, 6 rural and 2 urban clinics	*Evaluate the perceived effects of the CARG model for both HCWs and ART clients.*		Peer		MOHCC/PEPFAR		*A qualitative evaluation*					
Bock P., 2019	Retention in care and factors critical for effectively implementing antiretroviral adherence clubs in a rural district in South Africa.	*1 PHC and 3 CAC in Cape Winelands district, South Africa*	Rural	WCGDOH-PEPFAR	2014	Stable patients in AC	Stable patients in Standard of care (SOC)	Adult ≥18 years; on current ART regime ≥6 months; Most recent (taken in past 6 months) viral load <400 copies/mL; ART adherence ≥90%; consent to participate in CAC	202	263	*AC*	Nurse and CHW-led group; 2 monthly pre-packed ART refill, group counselling, brief symptoms check - 60 mins, annual blood drawing and clinical consultation	1 PHC & 3 CAC	*Determine clinical outcomes among ART clients attending adherence clubs and client experiences and healthcare worker perceptions of factors key to successful adherence club implementation in the Cape Winelands District, South Africa.*	LTFU - 3 months late for a scheduled pharmacy refill; Clients who transfer to another clinic without informing the clinic staff (silent transfers) without a treatment interruption > 3 months were defined as TFO. Silent transfers who had a treatment interruption > 3 months were documented.LTFU. Viral load (VL) suppression was defined as one VL result < 400 copies/ml	Nurse,CHW	doctornurse	MOH/PEPFAR	MOH/PEPFAR	*A retrospective cohort analysis*	87,3; 91,0; 76,9	100; 90,3; 97,0			
Brennan A., 2011 (24)	Outcomes of stable HIV-positive patients down-referred from a doctor-managed antiretroviral therapy clinic to a nurse-managed primary health clinic for monitoring and treatment.	*Themba Lethu Clinic/Crosby Clinic, Johanesburg, South Africa*	urban	Right to care (NGO), USAID, GuatengDOH, NDOH	2007	stableidr	stablenotdr	≥ 18 yrs; on ART ≥11 months; no OIs; a CD4 >200 cells/mm3; a stable weight; virally suppressed i.e. 2 consecutive VL <400 copies/ml	693	2079	*DR*	2 monthly drug pick-up. Nurse consultation at every visit. Viral load (VL) at 4th and 10th month and then 6-monthly, vitals at every visit	1 Hospital - TLC, 1 PHC - Crosby	*Compare one-year treatment outcomes amongst individuals down-referred for treatment maintenance at a nurse-managed PHC to patient's eligible for down-referral who remained at the doctor-managed treatment-initiation site*	Loss to follow-up - at least 3-months late for the last scheduled visit. Viral load rebound was defined as having a detectable viral load (>400 copies/mL) at 12-months after down -referral eligibility	nurse	doctor	usaid, Government	SANDoH (Government)	*Comparative Cohort study*					5,6
Decroo T., 2011 (25)	Distribution of Antiretroviral Treatment Through Self-Forming Groups of Patients in Tete Province, Mozambique.	*12 facilities in 6 districts of Tete Province, Mozambique*	Rural	MSF & Tete Provincial authorities	2008	stableincag-of		on ART≥ 6 months, CD4≥200 cells/mm^3 in the last 3 months; with no clinical stage II or IV conditions; on 1st line regimen; weight > 25kg	1384		*CAG*	Self-formed groups of up to 6 stable ART patients with a group leader. Monthly meetings to monitor adherence by pill count and to offer mutual support on daily issues. On a rotational basis every month, a group representative visits the nearest facility for medical consultation, to report on the health and the adherence status of fellow group members and to collect medicines for the group. In the community, (s)he distributes the drugs to group members. Every member has contact with the health centre every 6 months. Group members could still visit the health centre at any other time, for any reason if required. 6-monthly group session is organised for all CAG at the facility or in the community	12 facilities; 291 CAGs	*Describe the implementation of the community ART group (CAG) model and report preliminary outcomes*		Peer	Doctors and Nurse	MSF	Government	*Observational cohort study*					
Decroo T., 2014 (26)	Four-year retention and risk factors for attrition among members of community ART groups in Tete, Mozambique.	*Peri-urban, district and rural clinics in Tete Province, Mozambique*	Rural	MSF & Tete Provincial authorities	2008	stableincag-of		CD4 count <200cells/mm; on ART ≥6months; with no clinical complicationson	5729		*CAG*	Same as M8 (cell M8)	1391 CAG; 840 peri-urban, 389 district and 162 rural	*Analyse long-term retention in CAG, estimate individual- and CAG-level risk factors associated with attrition and describe the circumstances in which CAG members died.*	LTFU - more than 2 months late for the last appointment or date for refill. Return to individual/routine care was defined as the exit of a member from a CAG and the return to normal individual/ routine care, on the initiative of the patient or the clinician	Peer	Dotors and Nurse	MSF	Government	*Retrospective programme evaluation*					
De Jager GA., 2018 (27)	Patient satisfaction and treatment adherence of stable human immunodeficiency virus-positive patients in antiretroviral adherence clubs and clinics.	*14 PHCs in Eden district, Western Cape, South Africa*	Rural	WCGDOH	2013	Stable patients in AC	stableinsoc	Adult patient ≥18 yrs who is infected with HIV, on ART≥ 12 months and has two recent consecutive viral loads undetectable (<400 copies/ml)	98	222	*AC*	A group of 15 to 30 patients that meet every two months and is facilitated by a non-clinical staff member who provides a basic health assessment, referral where necessary, peer support and distribution of pre-packed ART	14 PHCs - 7 withAC, 7 without AC	*Investigate treatment adherence and patient satisfaction of stable patients living with HIV on ART in ART adherence clubs and clinics*	Patient satisfaction was is the extent to which the health care experience matches the patient's expectations of health care, it is measured by using the Patient Satisfaction with ART services questionnaire by Wouters and colleagues (2008:210).	LHCW	doctornurse	Wcdoh	Wcdoh	*Analytical cross-sectional study*					
Fox MP., 2019 (28) AC	Adherence clubs and decentralized medication delivery to support patient retention and sustained viral suppression in care: Results from a cluster-randomized evaluation of differentiated ART delivery models in South Africa.	*24 PHCs in 4 provinces (Gauteng, North West, Limpopo, and KwaZulu Natal), South Africa*	Rural & Urban	NDOH	2015-2018	Stable patients in AC	Stable patients in Standard of care (SOC)	18 years old who were resident in the facility's catchment area, no documented plan to transfer facilities, not pregnant; on the same ART regimen > 12 months, most recent VL in the past 3 months, and 2 consecutive undetectable viral loads (<400 copies/mL).	275	294	*AC*	**ACs** -up to 30 stable ART patients, meet at facilities or community locations every 2 to 3 months to receive group counseling, brief symptom screen, and receive prepacked medications managed by lay staff and nurses at the facility with support from CHW;	24 PHC	*Evaluate retention and viral suppression in AC and DMD compared with standard clinic-based care*	Sustained viral suppression - (<400 copies/mL) at 12 months after eligibility for ACs or DMD; retention in care at 12 months after eligibility for ACs or DMD = 100% - % attrition, with attrition as the sum of reported deaths, loss to follow-up and transfers; Loss to follow-up —failure to attend the clinic within 90 days of a scheduled appointment.	Nurse,CHW/Lay staff	doctornurse	NDOH	NDOH	*Unblinded cluster-randomized evaluation for AC*	79,6	80			
Fox DMD				NDOH	2015-2018	Stable patients in Home delivery (HD)	Stable patients in Standard of care (SOC)		232	346	*Decentralized medication delivery (DMD)*	**DMD** - prepacking and distribution of medications to PICK-UP-POINTS-PuPs, other than the clinic pharmacy. Patients only need to come to the clinic on a 6-monthly basis for a clinical exam and rescripting.	24 PHC			Nurse,CHW/Lay staff	doctornurse	NDOH	NDOH	*Observational study for DMD*	74,3	77,2			
Geldsetzer P., 2018 (29)	Community delivery of antiretroviral drugs: A non-inferiority cluster-randomized pragmatic trial in Dar es Salaam, Tanzania.	*18, 16 and 14 facilities in Temeke, Kinondoni and Ilala municipalities, Dar es Salam, Tanzania*	Urban	MDH (NGO); Havard; MoHCGEC	2016	Stable patients in Home delivery (HD)	Stable patients in Standard of care (SOC)	≥18 years, (ii) accessing ART care at one of the participating healthcare facilities; residing in a neighborhood in the facility's catchment area-self report; (i) on ART ≥ 6 months prior to study enrollment, (ii) CD4 >350 cells/mm, or a suppressed viral load (VL) ≥ 6 months after ART initiation (iii) the most recent VL < 12 months prior to study enrollment and shows virological suppression	516 (1,163)	1,009	*HD*	Home-based carers (HBC) visit stable patients at home or another meeting point in the community close to their homes or workplace, monthly or 2-monthly; delivers ARVs, counselling and pill count	48 (24 per arm)	*Determine whether an ARV community delivery model (lay health workers deliver ARVs to the homes of patients who are clinically stable on ART and nurses and physicians deliver standard facility-based care for patients who are clinically unstable on ART) leads to a lower or equal (non-inferior) risk of virological failure compared to the standard of care (standard facility-based care for all ART patients).*	Proportion ofpatients with virological failure at the end ofthe study period. Virological failure was defined as a VL ? 1,000 copies/ml. The prespecified secondary endpoint was patient healthcare expenditures in the 6 months pre-ceding study exit.	HBCs, Doctors, Nurses	Doctors and nurse	Dar es Salaam's municipalities, MDH	Government	*Cluster randomized trial*					10,9
Grimsrud A., 2014 (7)	Outcomes of a nurse-managed service for stable HIV-positive patients in a large South African public sector antiretroviral therapy programme.	*Community Health Centre (CHC) Guguletlhu, Cape Town, South Africa*	Peri-urban	WCGDOH	2006	stableidr	stablenotdr	on ART ≥ 16 weeks,most recent VL <50 copies/ml, no active OI or poorly controlled chronic conditions, on a 1st-line ART regimen (2 NRTI + 1 NNRTI), good adherence by pill count	2341	3405	*DR*	Down-referred patients were dispensed 2 months of ART rather than 1–2 months of ART for treatmentinitiation site patients. CD4 and VL were monitored every 16 weeks at both sites. Scheduled to return every 4 months to see a nurse for clinical care and a counselor for adherence support and every 2 months to the pharmacy for ART collection.	1 site CHC Guguletlhu; 1 down referral site	*Compare a nurse-managed, decentralized model of care for stable ART patients with a doctor-managed ART clinic, for patients receiving ART in primary care in Cape Town, South Africa*	LTFU - no contact between analysis and database closure and the last date of contact was assigned as the outcome date (Grimsrud et al. 2013). Virologic failure was defined as a single viral load >1000 copies/ml among patients who had a viral load below 1000 copies/ml after 4 months on ART	nurse	doctor	Government	Government, Desmund Tutu, Sizophilia programm	*Comparative Cohort study*	62,7	89,8	11,3	8,1	

Grimsrud A., 2015 (30)	Implementation of community-based adherence clubs for stable antiretroviral therapy patients in Cape Town, South Africa.	*Hannan Crusaid Treatment Centre (HCTC), CHC Gugulethu, Cape Town South Africa*	urban	WCGDOH, Desmond Tutu HIV Foundation, Sizophila programme	May-12	Stable patients in AC		Adherent, on the same ART regimen > 12 mths, had 2 consecutive undetectable VL <400 copies/mL and no other medical conditions requiring more frequent followup.	2113		*CAC*	Groups of 25-30 patients, 2-monthly meeting, group counselling, brief symptoms check, ART pick up - 60 mins, annual blood drawing and clinical consultation	1 site - HCTC and 74 CACs	*Describe the implementation, early outcomes and lessons learned from the Community Adherence clubs (CACs given the limited evidence base for community-based models*	LTFU - having no contact at a CAC or the CHC in the first 12 weeks of 2014. For patients defined as LTFU, the date of last contact was the LTFU date. Viral rebound - having a single viral load measure of >1000 copies/ml after suppression	lay health worker	doctornuse	Government, Desmund Tutu, Sizophilia programm	Government	*Descriptive study*					
Grimsrud A., 2016 (31)	Community-Based Adherence Clubs for the Management of Stable Antiretroviral Therapy Patients in Cape Town, South Africa: A Cohort Study.	*Community Health Centre (CHC) Gugulethu, Cape Town South Africa*	urban	WCGDOH	Jun-12	Stable patients in AC	Stable patients in Standard of care (SOC)	self-reported adherence to ART, on ART >12 mths, 2 consecutive suppressed VL < 400 copies/mL, and no active opportunistic infections.	2113	6037	*CAC*	community-based, CHW led- and nurse-supported, groups of 25 to 30 patients. meets every 2 months for group counseling, a brief symptom screening, and distribution of prepacked ART. CAC patients could send a patient-nominated treatment supporter or "buddy" to collect their ART at alternating CAC visits.	1 site	*Describes outcome loss to follow up (LTFU) and viral rebound over the first 18 months of CAC implementation in Cape Town, South Africa and compares patient outcomes under the CAC model of care to those of patients managed in facility-based primary care*	LTFU- having no visit in the first 12 weeks of 2014, and patients were censored at the date of last contact with either health care service. Viral rebound- a single viral load measurement ≥1000 copies per millliter after previous suppression (≤1000 copies/mL).	laylhealth worker	doctornurse	Government	Government	*Comparative Cohort study*	44,3	83,4			
Hanrahan CF., 2018 (32)	The impact of community-versus clinic-based adherence clubs on loss from care and viral suppression for antiretroviral therapy patients: Findings from a pragmatic randomized controlled trial in South Africa.	*Witkoppen Health and Welfare Centre Johanesburg, South Africa*	Urban	NDOH	2014-2017	Stable patients in AC (community)	Stable patients in AC (clinic)	≥18 yrs, same ART regimen ≥12 months, virally suppressed ≥ 12 months (2 most recent VL results were ≤400 copies/ml), not pregnant, no comorbidity, HIV +ve child, HBP with more than 1 antiHBP drug	399	376	*AC*	Groups of 25 - 30 patients, leb by a lay HIV counselor, met every other month, weighed and screened for current TB, annual consultation, 6 mth blood draws. AC held in a space within clinic, CAC held within area of residence e.g. church, comm centres	1 clinic and 24 clubs	*Compare effectiveness of community- versus clinic-based adherence clubs with respect to loss from club-based care and viral suppression*	Primary outcome - loss from club-based care, defined as referral to clinic-based standard care for any reasons; Secondary - % voluntarily chose to return to clinic care or with medical contraindication for clubcare or death; % reengage clinicare within 90 days	Lay HIV counselor	Lay HIV counselor	NDOH/PEPFAR	NDOH/PEPFAR	*pragmatic, open-label, parallel randomized controlled trial*					
Long L 2011 (33)	Treatment Outcomes and Cost-Effectiveness of Shifting Management of Stable ART Patients to Nurses in South Africa: An Observational Cohort	*Themba Lethu Clinic/Crosby Clinic, Johanesburg, South Africa*	urban	Right to care (NGO), USAID, GuatengDOH, NDOH	2008	stabledr	stablenotdr	≥ 18 yrson ART ≥11 months; no OIs, a CD4 >200 cells/mm3, a stable weight i.e <5% weight loss in last 3 visits; virally suppressed i.e. <400 copies/ml in the last 10 months	712	2136	*DR*	2 monthly drug pick-up, nurse consulation at every visit, VL 4th month, 10th month then 6-monthly, sypmtoms screening and vitals at every visit	1 Hospital - TLC, 1 PHC - Crosby	*Evaluate the implications of this down-referral strategy for treatment outcomes and costs*	Lost to follow up - ≥3 months late for last scheduled consultation or medication pickup; Viral suppression -Viral load ≤400 copies/ml in months 9–15	nurse	doctor	usaid, Government	SANDoH (Government)	*Quasi-experimental*					4,3
Luque-Fernandez MA., 2013 (34)	Effectiveness of Patient Adherence Groups as a Model of Care for Stable Patients on Antiretroviral Therapy in Khayelitsha, Cape Town, South Africa.	*Ubuntu clinic, Khayelitsha, Cape Town, South Africa*	urban	WCGDOH, MSF	2007	Stable patients in AC	Stable patients in Standard of care (SOC)	≥18 yrs; ART ≥ 18 months at pilot start and during the study period; CD4 ≥ 200 cells/ml; sustained viral suppression	502	2327	*AC*		1 clinic; 20 clubs	*Evaluate the effectiveness of adherence clubs compared to traditional clinic-based care in maintaining or improving long-term retention-in-care and virologic suppression*	Lost To Follow up (LTFU) - not having any contact with the service in the 6 months following the analysis closure (between February 28th and August 31st 2011); Virologic suppression - having viral load < 400 copies/ml Virologic rebound - time to the first virologic rebound i.e. viral load > 400 copies/ mL	lay health care worker (LHCW)	nurse	MSF initially, then Government	Government	*Retrospective cohort evaluation*			90,4	31,8	
Mantell JE., 2019 (35)	Engaging men in HIV programmes: a qualitative study of male engagement in community-based antiretroviral refill groups in Zimbabwe	*3 clinics in 2 rural districts in Mashonaland Central and Mashonaland West Provinces, Zimbabwe*	Rural	MOHCC and partners	2014-2017	Stable patients in CARG		No definition given	147		***CARG***	Self-formed groups of 4-12 stable ART clients living in the same community; A CARG member visits the clinic monthly and collects 3 months of ARV for all groups members; screening each other for TB and OI; Annual VL & clinic consultation together	3 Clinic	*Identify facilitators and barriers to CARG participation by HIV-positive men, with inputs from recipients of HIV care, community members, HCWs, donors and policy makers*		Peer		MoHCC/BMG		*An exploratory qualitative study*					
Mudavanhu M., 2019 (36)	Perceptions of Community and Clinic-Based Adherence Clubs for Patients Stable on Antiretroviral Treatment: A Mixed Methods Study.	*Witkoppen Health and Welfare Centre Johanesburg, South Africa*	Urban	NDOH	2014-2017	Stable patients in AC (community)	Stable patients in AC (clinic)	Virally suppressed, on ART for ≥1 year, free of comorbidities	277	291	*AC*	Groups of 25 - 30 patients, leb by a lay HIV counselor, met every other month, weighed and screened for current TB, annual consultation, 6 mth blood draws. CIAC held in a space within clinic, CAC held within area of residence e.g. church, comm centres	1 Clinic	*Explore patient acceptability and attitude towards community and clinic-based adherence clubs*		Lay HIV counselor	Lay HIV counselor	NDOH/PEPFAR	NDOH/PEPFAR	*A mixed methods study*					
Mukumbang FC., 2018 (37))	"Patients Are Not Following the [Adherence] Club Rules Anymore": A Realist Case Study of the Antiretroviral Treatment Adherence Club, South Africa.	*Western Cape District Hospitals (WCDOH), South Africa*	urban	wcgdoh-tac-coct-doh-msf-lhi	2011	Stable patients in AC		No definition given	60		*AC*	25-30 people, bi-monthly meeting, consultations, health talks, group and individual adherence counseling sessions, and medication collections and ensures a conducive environment for social support	2 adherence clubs	*Test the hypothesis (the initial program theory) of the adherence club with the goal of validating, rejecting, or modifying the initial program theory. To obtain a refined program theory of the adherence club intervention based on the operation of the intervention in the identified primary health care facility*		lay health worker		Government		*Realist evaluation (Case study)*		96,7			
Mukumbang FC., 2019_SAJHIVM (38)	"At this [adherence] club, we are a family now": A realist theory-testing case study of the antiretroviral treatment adherence club, South Africa.	*1 Provincial PHC in Western Cape province, South Africa*	Urban	WCDOH	2014-2017	Stable patients in AC		Adults (18+ years), treatment-experienced patients on 1st-line treatment with a good clinic attendance record and evidence of medication adherence.	72		*AC*	Groups of 25-35 stable patients who meet every 2 months at the facility for quick group consultations, convenient medication pickup and direct access to a clinician if necessary	1 Clinic and 2 clubs	*Test a theory on how and why the adherence club intervention works and in what health system context(s) in a primary healthcare facility in the Western Cape Province*	Not retained in care = not attending a club session or sent a 'buddy' and were sent back to the clinic; VL was used as a proxy indicator of adherence to medication. Non-adherence = any reading > 400 copies/cm3 and adherence = undetectable VL	Nurse,CHW/Lay staff		wcdoh		*Retrospective cohort analysis and an explanatory qualitative approach*		94,4; 83,3			
Mukumbang FC., 2019_Pilot (39)	Unravelling how and why the Antiretroviral Adherence Club Intervention works (or not) in a public health facility: A realist explanatory theory-building case study.	*1 PHC in Mitchell's plain, Cape Town, South Africa*	Urban	WCDOH	2012-2016	Stable patients in AC		adult (18+ years) clinically 'stable' patients with evidence of good clinic attendance, have viral loads reading at "lower than detectable (LDL	86		*AC*	Groups of 25-35 stable patients who meet every 2 months at the facility for quick group consultations, convenient medication pickup and direct access to a clinician if necessary	1 Clinic and 2 clubs	*Unravel the mechanisms explicating how, why, for whom and in what circumstance the adherence club programme works at a community health centre in Cape Town*	Retention in care - the rate at which patients dropped out of club care; rate at which patients failed to maintained viral loads lower than detectable (≤400 copies/mL).	Nurse,CHW/Lay staff		wcdoh		*Retrospective cohort analysis and an explanatory qualitative approach*		94,2			
***Pasipamire L., 2018 (40)* (CAG)**	Rapid Implementation of Combination ART Refill Models in Rural Swaziland WHO advocates for differentiated HIV care.	*16 Primary care centres in Shiselweni region, Swaziland*		Swaziland MOH, MSF	2015	Stable patients in CAG		≥16 years, weight > 45 kg, CD4 > 350 cells/lL, on ART ≥ 12 months and virologically suppressed.	531		*CAG*	Maximum of 6 patients who alternated attending the PHC for consultation and pick up of drugs for the other group members, thus a patient visiting the clinic for consultation twice in a year	16 PHC	*Compare retention in care model and retention on ART among three care models i.e. CAG, Outreach and Treatment clubs and to determine factors associated with all-cause attrition.*	LTFU - patients without recorded visit for 120 days or more before database closure	Patients		MOH/Stakeholders		*Program evaluation (Retrospective analysis*					
Pasipamire Outreach		*1 Primary and 1 secondary care facility*		Swaziland MOH, MSF	2015	stableinor			98		*OR*	ART refill was integrated into existing mobile clinic outreach providing antenatal, child welfare and HIV testing services to remote communities	1 PHC and 1 Secondary facility			HCW		MOH/Stakeholders							
Pasipamire AC		*1 large health centre*	Rural	Swaziland MOH, MSF	2015	Stable patients in AC			289		*AC*	30 patients who met every three months at a health facility for one hour for patient education and drug refills	1 large health facility			HCW		MOH/Stakeholders							
Pellecchia U., 2017 (41)	Benefits and limitations of community ART groups (CAGs) in Thyolo, Malawi: a qualitative study.	*Mikolongwe Health Centre and Khonjeni Health centre, Thyolo, Malawi*	Rural	MSF, Thyolo DHO	2012	Stable patients in CAG		No definition given	60	9	*CAG*	Self-formed groups of up to 6 stable patients. Monthly meeting, venue is member home or other chosen community venue. The following happens, Adherence assessment, fill in the CAG community card, Select member who goes to the clinic to collect drugs for members and receive clinical consultation and required lab tests	2 CAG pilot sites	*Report the findings of a qualitative study to assess the perceived benefits and limitations of CAGS from a patient and a healthcare worker (HCW) perspective.*		Peer	doctornurse	MSF, Governemnt	Governemnt DHO	*Qualitative study*					
***Prust ML., 2018, (4)* CAG**	Multi-month prescriptions, fast-track refills, and community ART groups: results from a process evaluation in Malawi on using differentiated models of care to achieve national HIV treatment goals	*30 heterogenous sites in Malawi – 8 CAGs*	Urban, Rural	MOH, CHAM	2012	Stable patients in CAG		≥18 years , on ART ≥ 6 months, on 1st-line ART, have no ADRs or OIs, VL 1000 copies/Ml, good adherence, not pregnant or lactating	62		*CAG*	Peer-led groups of up to 6 stable patients that meet monthly at the community level for ARV distribution and peer-led discussions, Each month a different group member visits the facility to pick up ARV refills for the entire group, with each person having opportunity for a twice annual clinical visit	8 sites	*Describe the qualitative component of the process evaluation that explored patients and provider perspectives on the key benefits and challenges associated with models of differentiated care for stable patients*		Peer		MOH, CHAM		*Qualitative study*					
Prust FTR		*30 heterogenous sites in Malawi – 4FTR*		MOH, CHAM	2012	stableinftr			26		*FTR*	3-mth refills. Only 2 of 4 annual visits is required to be clinical visits with a nurse or doctor. The other 2 visits are refill-only visits with a lower-level health worker dispensing ARVs	4 sites			doctornurse and lay health worker		MOH, CHAM							
Prust MMS		*30 heterogenous sites in Malawi*		MOH, CHAM	2012	stableinmms			216		*MMS*	3-month refills rather than one-month refill as in the standard of care	30 sites			doctornurse		MOH, CHAM							
Rasschaert F, 2014 (42)	A qualitative assessment of a community antiretroviral therapy group model in Tete, Mozambique.	*20 clinics in Tete province, Mozambique*	Rural, urban, s-urban	MSF & MoH Mozambique	2012	Stable patients in CAG			5729		*CAG*		20 clinics	*Assess the relevance, the dynamic and the impact of CAG*		MoH Nurse, MSF counsellors		MSF		*Qualitative study*					
Rasschaert F, 2014 (43)	Sustainability of a community-based anti-retroviral care delivery model - a qualitative research study in Tete, Mozambique.	*MSF Project Tete province, Mozambique*	Rural	MSF & MoH Mozambique	Feb-08	Stable patients in CAG			5782		*CAG*		CAG intervention in Tete	*Highlights the components, which might facilitate and/or jeopardize the sustainability of the CAG model, and formulates recommendations to guarantee its long-term sustainability*		Peer, MSF counsellors		MSF		*Qualitative evaluation*					

Selke HM., 2010 *(19)*	Task-Shifting of Antiretroviral Delivery From Health Care Workers to Persons Living With HIV / AIDS : Clinical Outcomes of a Community-Based Program in Kenya.	*Mosoriot rural health centre, Kosirai, Kenya*	Rural	USAID-AMPATH	2001	Stable patients in HD	Stable patients in Standard of care (SOC)	≥ 18 years old, clinically stable on ART for a minimum of 3 months with no adherence issues; lives in Kosirai Division	96	112	*HD*	Clinically stable and adherent Comminuty care coordinators (CCC) with secondary education were chosen from the HIV clinic population. They visited intervention patients monthly at home to dispense 1-month ARV supply and used a preprogrammed PDA to collect data - Symptoms, vital signs, adherence, OI prophylaxis. Clinic visits is every 3 months.	1 Hospital	*Evaluate the clinical outcomes of patients enrolled in an innovative HIV care delivery system which utilized PLWAs as Community Care Coordinators (CCCs), aided by an electronic decision support tool, to deliver medications and provide follow-up care to patients on ART in the community*		CCC	Doctor, Nurse, Pharmacist	USAID-AMIPATH	MOH, USAID-AMPATH	*Community randomized clinical trial*	13,5	10,5			
Sharp J., 2019 *(44)*	Outcomes of patients enrolled in an antiretroviral adherence club with recent viral suppression after experiencing elevated viral loads.	*Ubuntu clinic, Khayelitsha, Cape Town, South Africa*	Urban	NDOH	2012-2015	Stable patients in AC		on ART ≥6 months, single undetectable VL (VL < 400 copies/mL)	165		*AC*		1 Clinic	*Describe the outcomes of patients referred directly to ACs after viral suppression following specific adherence support*	Retention in care - having contact with the clinic or AC between March 24 and June 21, 2015, with retention in club care - attending an AC in the same period. Viral suppression = last VL before analysis closure < 400 copies/mL.	Lay HIV counselor		NDOH/PEPFAR		*A descriptive retrospective cohort study*					
Tsondai PR., 2017 *(3)*	High rates of retention and viral suppression in the scale-up of antiretroviral therapy adherence clubs in Cape Town, South Africa.	*Cape town health district, South Africa*	urban	WCDOH	2007	Stable patients in AC (clinic) and AC (community)		on ART >12 months with two consecutive suppressed viral loads (<400 copies/mL) and thereafter - on ART for >6 months, virally suppressed (<400 copies/mL) at the last viral load assesment and having no other condition requiring more frequent clinical consultation.	3216		*AC and CAC*	25-30 patients who meet five times a year either within the health care facility or at a community venue for a brief symptom screen, group discussion and to receive their pre-packed ART supply. Facilitated by lay health workers with support from clinical staff	100 Acs - 15 facilities	*Describe and explore possible predictors of LTFU and viral rebound for a representative sample of patients receiving their ART within ACs in Cape Town, South Africa*		lay health worker		Government		*Retrospective observational cohort study*		96,9; 95,7; 94,1			
Vandendyck M., 2015 *(45)*	HIV/AIDS Research and treatment Community-Based ART Resulted in Excellent Retention and Can Leverage Community Empowerment in Rural Lesotho, A Mixed Method Study	*Health Centre (HC) Nazareth clinic, Roma District, Lesotho*	Rural	MSF; Lesotho MOH; LENASO - Lesotho network of AIDS Services Organisation and EGPAF - Elizabeth Glaser Pediatric AIDS Foundation	2012	Stable patients in CAG	Stable patients in Standard of care (SOC)	an adult **≥18 yrs**; with a CD4 above 350 cells/µl, while more than 6 months on ART	199	397	*CAG*	Monthly meeting in the community; adherence assessment by pill count, choose a representative to go for consultation at the health facility, relates any important events about other members, and receives a treatment refill for all group members; distributes ART upon return to members	1 site HC Nazareth	*Study how CAG dynamic was perceived by different stakeholders, and study retention among patients in conventional care and CAG members in HC Nazareth.*		Peer	doctornurse	MSF; LMOH; LENASO, EGPAF	MSF; Lesotho MOH;	*Mixed methods*					
Venables E., 2019 *(46)*	Patient experiences of ART adherence clubs in Khayelitsha and Gugulethu, Cape Town, South Africa: A qualitative study.	*Ubuntu ART clinic, Khayelitsha and Guguletthu CHC,Western Cape Province*	Urban	MSF & WCDOH	2016	Stable patients in AC (clinic) and AC (community)		On ART ≥ six months, have an undetectable viral load result (<400 copies/mL) and no clinical condition requiring more frequent clinical follow-up	135		*AC*	25–30 patients group; lay health-care worker-led; meets 5 times a year for 30–60 minutes for a short symptom screen, peer support and distribution of pre-packed ART; annual clinical consultation	2 Clinics	*1. Explore perceptions of ACs among former and current AC members, as well as those who had never joined a club, in two settings in Cape Town, South Africa, including the perceived advantages and disadvantages of the differentiated model mechanisms. 2. Explore the experiences of patients referred out of ACs back to routine clinical care*		Lay HIV counselor		WCDOH		*A qualitative study*					
Vogt F., 2017 *(47)*	Decentralizing ART Supply for Stable HIV Patients to Community-Based Distribution Centers: Program Outcomes From an Urban Context in Kinshasa, DRC.	*Kabinda Referral Hospital, Kinshasa, DRC*	Urban	MSF, MOH DRC	2010	Stable patients in Community drug distribution point (CDDP)		≥18 yrs; on 1st-line ART ≥ 6 months; clinically stable for the past 3 months; CD4 >250 cells/ml; and not pregnant	2259		*CDDP*	Led by HIV positive lay community workers; adherence assesment; 3-monthly drug pick-up appointment; visit lasts typically 15 min; 1-yearly clinical consultation at the hub facility; upward referral if needed; Defaulters tracing.	1 Kabinda hopital, 3 PODIs	*Assess outcomes and risk factors for attrition after decentralization in this project*		Peer	doctornurse	MSF	MOH, MSF	*Cohort study*					
Wringe A., 2018 *(48)*	Retention in care among clinically stable antiretroviral therapy patients following a six-monthly clinical consultation schedule: findings from a cohort study in rural Malawi.	*District Hospital and 10 health centres in Chiradzulu, Malawi*	Rural	MSF & MOH Malawi	2008-2015	Stable patients in Six -monthly clinic consultation		18 years, 1st-line ART ≥12 months, CD4 count ≥300 cells without opportunistic infections, not pregnant/ breastfeeding	18,363		*SMA*	Clinic appointments every 6 months, instead of 1 or 2 months, provision of 3-month drug supply. Health surveillance assistants (HSA) provided 3-monthly ART refills from each health centre in between the SMCC	1 district Hospital, 10 HC	*Describe long-term retention in care, and risk factors for attrition from care among clinically stable ART patients accessing SMCC over the period from 2008-2015. To estimate the number of clinic appointments "saved" as a result of SMCC*	1. Attrition = either reported death, or loss to follow-up, with lost to follow-up recorded for patients more than 60 days late for their last scheduled appointment. 2. Annual number of drug refill visits with an HSA = annual number of clinical consultations that were saved	Clinical officers, Health surveillance assistants		MSF, Governemnt		*A retrospective cohort analysis*		93			

Outcome - VL - % rebound DSD	Comments about units or subgroup analysis	Outcome - Retention (%)SOC	Outcome - Retention (%)DSD	Comments about units or any subgroup analysis	Outcome - LTFU (%)SOC	Outcome - LTFU (%)DSD	Outcome - LTFU (rate) SOC	Outcome - LTFU (rate) DSD	Comments about units or any subgroup analysis	Outcome - Mortality (%) SOC	Outcome - Mortality (%) DSD	Outcome - Mortality (rate)SOC	Outcome - Mortality (rate)DSD	Comments about units or any subgroup analysis	Outcome - Provider Cost/visit ($)SOC	Outcome - Provider Cost/visit ($)DSD	Outcome - Provider Cost per patient year(ppy)($) SOC	Outcome - Provider Cost per patient year(ppy) ($)DSD	Outcome - Patient. Cost/visit (PPP$)SOC	Outcome - Patient. Cost/visit (PPP$)DSD	Comments about units or any subgroup analysis	Outcomes	Evidence_base	Expertise	QI_method	Monitoring	Project_duration	Project_type	Problem_awareness	Capacity_building	Community_awareness	Political_support	Spread	Urgency	Roles & responsibities	Belief_in_intervention	Complexity
	% - 1 yr; rate - 100PY	95,49	98,03				4,61	1,99	rate - 100PY						18,04	16,52	374	300				3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
		95,4; 91,9; 90,8	98,2; 96,3; 95,8	% - 6 months; 1 yr; 18 months	9,4	3,9			% - 2 yrs	1,3	1			% - 2yr								3	3	3	3	3	1	3	3	2	1	3	1	3	nd	3	3
		83%	94,3	% - 3 yrs		1,3; 2,9; 7,8			% - 1 yr; 2 yrs; 5 yrs		0,4; 0,9; 2,8			% - 1 yr; 2 yrs; 5 yrs								3	3	3	3	3	1	3	3	2	1	3	3	3	3	3	3
																						3	3	3	3	3	1	3	3	3	1	3	3	3	2	3	3
	% - 6 months; 1 yr; 2yrs				34,2	3,5			% - 2 yrs	21,7	2			% - 2 yrs								3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
3,3	% - 1 yr	95,2	98,3	% - 1 yr	4,2	1,4	4,3	1,5	% - 1 yr; rate - 100PY	1,5	0,3	1,6	0,3	% - 1 yr; rate - 100PY								3	3	3	3	3	2	3	3	3	1	3	3	3	3	3	3
			97,5	% - 1 yr		0,1			% - 1 yr		2,2			% - 1 yr								3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3
			97,7; 96,0; 93,4; 91,8	% - 1 yr; 2 yrs; 3 yrs; 4 yrs				0,1	rate - 100PY				2,1	rate - 100PY								3	3	3	3	3	2	3	3	nd	2	3	3	3	nd	3	3
																						3	3	3	3	3	3	3	3	3	nd	3	3	2	2	nd	3
		81,6	89,5	% - 1 yr																		3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	% - 1 yr	87,2	81,5																			3	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3
5,7	% - 1 yr				13.6	18.9			% - 1 yr										2313TZS	4483TZS, 1.16	median cost on study exit day	3	3	3	3	3	1	3	3	3	2	3	2	3	3	2	3
	% - 4 months; rate - 100PY						8,9	5,9	rate - 100PY			4,3	1,2	rate - 100PY								3	3	3	3	3	3	3	3	3	1	3	2	3	3	3	3

1,4; 1,7	% - 6 months; 1 yr		97,2; 93,5	% - 6 months; 1 yr		2,6; 6,2			% - 3 months; 1 yr		0,2; 0,4			% - 6 months; 1 yr								3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3
	% - 1 yr																					3	3	3	3	3	2	3	3	3	2	3	3	3	3	3	3
					43	52			% - 2 yrs													3	2	3	3	3	3	3	3	3	2	3	3	3	3	3	3
2,8	% - 1 yr	89,5	95,5	% - 1 yr	5,1	1,7			% - 1 yr	1,2	0			% - 1 yr	14	7	602	509				3	3	3	3	3	2	3	3	3	1	3	3	3	3	3	3
	rate - 1000PY	85	97	% - 1 yr			116,8	29,8	rate - 1000PY													3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
																						3	3	3	nd	3	2	3	3	3	2	3	3	3	3	3	3
																						3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
	% - 3 yrs		81,7	% - 3 yrs																		3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
	% - 1 yr; 2yrs		80,5; 77,8	% - 1yr; 2 yrs																		3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
	% - 3 yrs		81,4	% - 3 yrs																		3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
			94,4	% - 1 yr																		3	3	3	3	3	3	3	3	nd	nd	3	3	3	nd	3	3
			90,8	% - 1 yr																		3	3	3	3	3	3	3	3	nd	nd	3	3	3	nd	3	3
			94,4	% - 1 yr																		3	3	3	3	3	3	3	3	nd	nd	3	3	3	nd	3	3
																						3	3	3	3	3	2	3	3	3	2	3	3	3	1	3	3
																						3	3	3	1	1	2	3	3	2	2	3	3	3	2	2	2
																						3	3	3	2	2	2	3	3	2	1	3	2	3	3	3	3
																						3	3	3	2	2	2	3	3	2	1	3	3	3	3	3	3
			95,7	% - 19 months		0,2		0,1	% - 19 months; rate - 100PY		3,6		2,1	% - 1 yr; rate - 100PY								3	3	3	3	3	2	3	3	3	3	3	3	3	2	3	3
			95,7	% - 19 months																		3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3

	% - 1 yr				4,5	5,2			*% - 1 yr*														3	3	3	3	3	1	3	3	3	2	2	1	3	3	3	3
																							3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
	% - 4 months; 16 months; 28 months		95,2; 89,3; 82,1	*% - 1 yr; 2 yrs; 3 yrs*		2,6; 12,2			*% - 1 yr; 3 yrs*		0,1; 0,3			*% - 1 yr; 3 yr*								3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
		90,2	98,7	*% - 1 yr*																			3	3	3	3	3	3	3	3	2	3	3	3	3	2	3	3
																							3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	3
						2,2; 4,8; 9,0			*% - 6 months; 1 yr; 2 yrs*		0,1; 0,2; 0,3			*% - 6 months; 1 yr; 2 yrs*									3	3	3	3	3	2	3	3	3	1	3	3	3	3	3	3
	% - 21 months		97,0; 86,0	*% - 1 yr; 5 yrs*				26,4	*rate - 1000PY*														3	3	3	3	3	3	3	3	2	2	3	3	3	3	3	3

Shared_goal	Incentives	Job_description	Workload	Resources	Funding	Infrastructure	Staff	Time	Integration	Adaptation	No_opposition	Readiness	Value_system	Management_support	Champions	Ownership	Power	Collaboration	Satisfaction	Stakeholder_participation	Community_participation	Patient_involvement	Staff_involvement	Sustainability score	Challenges reported	Comments (Pros & Cons)	Patients perspective	Staff perspective
3	3	3	2	2	3	3	2	3	3	3	3	3	3	3	2	3	3	3	3	3	3	1	3	91,7	Low Community involvement, Staff shortage, Stigma	Reduced wait time	prefer the clubs due to reduced wait time	
2	3	2	3	1	1	1	2	3	3	3	3	1	3	3	1	2	2	3	2	2	1	1	1	71,8	1. inefficient and flexible drug supply chain; 2. inadequate capacity for routine viral load testing; 3. health information system not robust			
2	2	3	3	2	2	2	2	3	3	3	3	2	3	3	1	2	2	3	2	2	1	1	2	78,3	HSA not allowed to dispense ART	HSA are recognized and paid by the governement	Satisfied	Satisfied
2	3	3	3	2	1	2	1	3	3	2	3	1	3	2	nd	1	1	2	3	1	1	2	2	74,4	another family member on ART, such as a child or pregnant spouse, was ineligible to join. Other clients had to leave CARGs when they themselves became pregnant; a member not respecting other member's confidentiality; desiring more frequent discussions with HCWs; obtaining sufficient quantities of free condoms; Migration in search of job; inaccurate information and rumours could spread among CARG members; late presentation of illnesses that begin with minor symptoms	increased paperwork; quality of documentation improved due to reduced workload; reduced transmission of communicable diseases such as TB due to less visits;	Time and cost saving; Psychosocial support provided during CARG group meetings; share knowledge and information; reduced wait times and quarels in the clinic; income generating activities in some CARGs; improved the quality of care received at clinics due to reduced workload	a temporary increase in workload when CARGs were first implemented completing the required documentation; fewer clients needed to be tracked; using CARGs to communicate with CARG members
2	3	3	3	2	1	2	2	3	3	3	3	2	3	3	nd	2	2	2	3	2	2	2	3	85,5	clients who do not collect their medication and the transportation of medication to the club as major challenges to successful adherence club implementation. Substance abuse and not having disclosed their HIV status to those with whom they live;	Communication between clinic staff and those leading the adherence club as well as between adherence club staff and the client was reported as a factor critical for adherence club success.	ideal number of clients per club should be ≥ 20, counsellors should lead the management of club support, and churches and community halls were the most appropriate venues.	Clients are not adherent when they feel healthy or when they travel
2	3	3	3	2	1	1	2	1	2	2	3	1	3	3	1	1	1	3	3	2	1	1	2	74,2	No wide spread availability of EMR	Therapy Edge-HIV EMR was instrumental to having good data quality	Patient were satisfied with down referral	satisfied
3	3	2	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	93,3	adapt CAG for vulnerable sub-groups i.e. children, adolescent, pregnant women, commercial sex workers, HIV/TB co infected; long term follow-up	Strong stakeholders involvement	Highly acceptable; decreased financial and economic cost; improved self management; reduced transport; enforcing social networks and peer support;	4-fold reduction in consultations
2	3	nd	3	2	2	1	2	3	3	3	3	nd	3	3	nd	2	2	3	3	2	1	2	2	82,9	Low male participation; fear of disclosure leading to stopping	Could potentially be used to promote uptake of HIV testing, linkage to care	Acceptable	Acceptable
1	3	nd	3	nd	nd	nd	nd	3	3	2	3	3	3	3	nd	2	nd	2	3	nd	nd	2	2	86,2				
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	nd	3	3	3	3	3	2	2	2	94,9				
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	nd	3	3	3	3	3	2	2	2	94				
1	3	3	3	2	1	2	2	3	3	3	3	1	3	3	1	1	1	3	3	2	2	1	2	76,7	No CD4 or VL results in past 12 mths plus long TAT for VL results to come; No exit interviews for 417 participants; Linking patients in database, poor documentation and incomplete data	may lead to missed annual facility-based checkups for patients; decrease the per-patient costs bc HBCs are cheaper; more time to treat and care for ART patients bc of travel time and more social interaction during visit	Generally satisfied	Not really described
1	3	nd	3	2	2	3	2	3	3	1	3	3	3	3	1	2	1	3	nd	1	1	1	2	78,1				

2	3	3	3	2	2	2	2	3	3	3	3	3	3	3	3	1	2	2	3	3	2	2	1	2	84,2	Venue for club meeting; Logistics of transporting materials between facility and club meeting; Different line managers for staff involved; undesignateed staff unwilling to get engaged	Well funded and functioning site which may not represent the generality of other facilities in the country	Acceptable	Acceptable
2	3	2	3	2	2	2	2	3	3	3	3	3	3	3	3	1	2	2	3	3	2	2	1	2	83,3	Policy regarding who can distribute ART and the frequency of rescripting not updated to accommodate reality (needs to be revised)			
3	3	nd	2	3	3	3	2	3	3	3	3	3	3	3	nd	3	3	3	3	3	2	2	3	92,1				
2	3	3	3	1	2	1	2	1	1	2	3	1	3	3	1	1	1	3	3	2	1	1	2	73,3		Wealthy province; Well resourced sites; accessible to most patients		
2	3	3	3	3	3	3	nd	3	3	3	3	3	3	3	nd	3	nd	3	3	3	2	1	3	93,7	Inadequate staff; Management of increasing number of clubs; Logistics of drugs		Patients were eager to join clubs	rotation of club nurse function shows acceptance of the club model among staff
2	3	3	3	2	2	2	3	3	3	2	3	2	3	3	nd	2	2	3	2	3	2	2	2	85,1				
2	3	2	2	3	3	3	3	3	3	3	3	3	3	3	nd	2	3	3	3	3	2	2	2	90,6				
2	3	3	3	3	nd	3	2	3	1	3	3	3	3	3	1	3	2	3	3	2	1	1	3	86,3	Uncondicve space, insufficient staff; risk of stigma in the integrated program		Integrating with other chronic diaeases was seen as discouraging to adherence	Lack of conducive meeting place prevents staff from implementing the AC as planned
2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	3	2	2	3	93,3				
2	3	2	3	3	3	3	2	3	3	3	3	3	3	3	nd	3	3	3	3	3	2	2	3	92,3				
2	3	3	2	2	2	2	2	3	3	3	3	2	3	3	1	2	3	3	3	3	nd	2	3	87	attrition; Labour intensive; within group conflicts; protocol violation	Self-sustaining	Patient thought the intervention was good enough to pressure HCW to be enrolled	Labour intensive
2	3	3	3	2	2	2	3	3	3	3	3	2	3	3	1	2	2	3	3	3	nd	1	3	87		promotes integration of community ART models into existing interventions		
2	3	3	3	2	2	2	3	3	3	3	3	3	3	3	1	2	2	3	3	2	nd	1	2	86,1	non-adherence to eligibility criteria to enrolment			
3	3	1	3	2	2	2	2	3	3	3	3	2	3	3	3	2	3	3	3	3	2	3	2	85,8	Inadequate promotion, Lack of awareness among patients, preferential treatment of CAG members, Lack of recognition of HSAs; Gender dynamics; Stigma		Highly acceptable	Highly acceptable
2	3	2	3	2	2	2	2	3	3	3	3	1	3	3	2	1	2	2	3	1	2	3	2	75	Fear of disclosure, lack of supervision, Clashes within groups, inadequate understanding about CAG by participants, low male participation	material support among members beyond social; variability in amount of ARVs dispensed	social support; material support eg food, transport	incomplete knowledge about eligibility criteria
2	3	3	3	2	2	2	3	3	3	3	3	1	3	3	1	2	2	3	3	2	1	1	3	79,2	inadequately trained staff; Lateness to clinic by HAS thereby increasing wait time	inconsistent stock of ART	Reduced wait time	Reduced workload so nurses and physicians can care for patients in need;
2	3	2	3	2	2	2	3	3	3	3	3	1	3	3	1	2	2	3	3	2	1	1	3	79,2	Stock out of ARVs & CTX; Delyed care seeking, use of alternative medicine, implementation d/fs i.e. differences in refill length across facilities	Encourages self management, maintain confidentiality in high stigma setting, improved adherence	reduced travel costs, time spent in clinic, absenteeism from work	Reduced workload; decongest clinics; improved adherence and retention
3	3	2	3	1	1	1	1	3	3	3	3	1	3	3	2	1	3	3	3	3	3	3	3	84,2				
3	3	3	3	1	1	1	1	3	3	3	3	1	3	3	2	1	3	3	3	3	3	3	3	85,8				

1	3	1	3	1	1	2	1	1	1	3	3	1	3	3	1	1	1	2	2	2	2	2	1	2	67,5	Stand alone intervention; Funded externally; minimal government involvement;	withdawal from study due to faith that God will heal; CCCs recognize psychosocial issues e.g. food insecurity, domestic violence, alcohol abuse,	Mostly satisfied	Mostly pleased
3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	nd	3	3	3	3	2	2	3			94,9				
2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	2	3	3			95,8	Missing registers; only variables routinely collected in AC registers were used;limited followup period;	Unique identifiers enabled differentiating btw true LTFU from silent transfers;		
2	3	1	3	2	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3			90,8	a reliable drug supply system; appropriate number of CHW and counselors to support the formation, training and monitoring of CAGs; clear mechanisms to trigger support or referral back to clinic care; simplified monitoring system			
3	3	3	2	3	3	3	3	3	3	3	3	3	3	3	2	3	3	3	3	2	3	3			94,2				
2	3	3	3	2	1	2	2	3	3	3	3	2	3	3	2	2	2	3	3	2	2	2	2	2	83,3	High levels of stigma;	Fast drug pick-up	Convenient	Convenient
2	3	3	2	2	2	3	3	3	3	3	3	3	3	3	nd	2	3	3	nd	2	nd	3	3		90,1				

Supplementary file III(a): Risk of bias assessment - Quantitative studies

Author	Year	Reporting	External validity	Bias	Selection bias	Power	Risk of bias
Bemelmans M	2014	High	High	High	High	Moderate	High
Bango F	2016	Low	Moderate	High	High	Moderate	Moderate
Bekolo C	2017	Low	Moderate	High	High	Moderate	Moderate
Bock P	2019	Moderate	High	High	High	High	High
Brennan A	2011	Low	Moderate	High	High	Moderate	Moderate
Decroo T	2011	Moderate	High	High	High	Moderate	High
Decroo T	2014	Low	High	High	High	High	High
De Jager G	2018	Low	Moderate	High	High	Low	Moderate
Fox_AC	2019	Moderate	Low	Low	Low	Low	Low
Fox_DMD	2019	Moderate	Low	Moderate	Moderate	Moderate	Moderate
Geldsetzer P	2018	Low	High	Low	Low	Low	Low
Grimsrud A	2014	Low	Moderate	High	High	Moderate	Moderate
Grimsrud A	2015	Moderate	High	High	High	Moderate	High
Grimsrud A	2016	Moderate	Moderate	High	High	Moderate	High
Hanrahan CF	2019	Moderate	Moderate	Moderate	Low	Low	Moderate
Long L	2011	Moderate	High	Moderate	Moderate	Moderate	Moderate
Luque-Fernandez MA	2013	Low	Moderate	High	High	Moderate	Moderate
Mudavanhu M	2019	Moderate	Moderate	High	High	High	High
Mukumbang FC_Plos1	2019	Moderate	Moderate	High	High	High	High
Pasipamire L_CAGs	2018	Low	High	High	High	High	High
Pasipamire L_Outreach	2018	Low	High	High	High	High	High
Pasipamire L_Clubs	2018	Low	High	High	High	High	High
Selke HM	2010	Low	High	Moderate	Low	Low	Moderate
Sharp J		Low	High	High	High	High	High
Tsondai PR	2017	Low	High	High	High	Moderate	High
Vandendyck M	2015	Moderate	Moderate	High	High	Moderate	Moderate
Vogt F	2017	Moderate	High	High	High	High	High
Wringe A	2018	Moderate	Moderate	High	High	Low	High

Supplementary file III(b): Risk of bias assessment - Qualitative studies

Author	Year	Method& Philosophy	Method & question	Method & Data collection	Method Represent& analysis	Method & Result	Locating researcher theoretica	Researcherl nfluence	Participants voices	Ethical approval	Conclusions flow from analysis
Mukumbang FC	2018	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Bochner F	2019	Not stated	Yes	Yes	Yes	Yes	Not stated	Yes	Yes	Yes	Yes
Mantell JE	2019	Not stated	Yes	Yes	Yes	Yes	Not stated	Yes	Yes	Yes	Yes
Mudavanhu	2019	Not stated	Yes	Yes	Yes	Yes	Not stated	Yes	Yes	Yes	Yes
Mukumbang FC	2019	Yes	Yes	Yes	Yes	Yes	Not stated	Yes	Yes	Yes	Yes
Mukumbang FC_Plos1	2019	Yes	Yes	Yes	Yes	Yes	Not stated	Yes	Yes	Yes	Yes
Pellecchia U	2017	Not stated	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Prust ML_CAG	2018	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Prust ML_FTR	2018	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Prust ML_MMS	2018	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Rasschaert F	2014	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Rasschaert F	2014	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Vandendyck M.	2015	Not stated	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes
Venables	2019	Not stated	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Supplementary file 4: Criteria used for Stable patient definition per included study vs definition category												
Author/Year (ref)	**Model**	**Age (years)**	**Months on ART**	**CD4 (cells/mm^3)**	**Viral Load VL-(copies / ml)**	**Opportunistic infection (OI) /side effects**	**Weight**	**Regimen**	**Adherence**	**Pregnancy/ lactating**	**Residence**	**Definition category**
Bango F., 2016 *(9)*	AC	≥ 18	≥18	>200	2 consecutive VL <400 not >6months old	No ongoing drug side effect; No ongoing OI	> 40 kg					Base+
Bekolo C., 2017 *(20)*	SMA	≥15	≥ 6		≤1000	No OI				Not pregnant		Base+
Bemelmans M., 2014 *(21)*	SMA	≥15	≥12	≥ 300		No OI/side effects,		1st line		Not pregnant/breastfeeding		Base+
Bochner AF., 2019 *(22)*	CARG	≥ 18	≥ 6	>200	<1000/	No active OI				Not pregnant/breastfeeding		Base+
Bock P., 2019 *(23)*	AC	≥18	≥ 6		<400 L			On current ART	ART adherence ≥90%			Base+
Brennan A., 2011 *(24)*	DR	≥ 18	≥11	CD4 >200	2 consecutive VL <400	no OIs		1st line				Base+
Decroo T., 2011 *(25)*	CAG	Adult	≥ 6	≥200		No clinical stage II or IV conditions	> 25kg	1st line				Base+
Decroo T., 2014 *(26)*	CAG	Adult	≥ 6	≥200								Base
De Jager GA., 2018 *(27)*	AC	≥ 18	≥ 12		2 recent consecutive results i,e, <400							Base
Fox MP., 2019 *(28)* ***AC***	AC	≥18	> 12		2 consecutive results i.e.(<400			On same ART		Not pregnant	In the facility's catchment area	Base+
Fox DMD	DMD											Base+
Geldsetzer P., 2018 *(29)*	HD	≥18	≥ 6	>350 cells/mm	<1,000 ≥ 12 months prior to study enrolment						In the facility's catchment area	Base+
Grimsrud A., 2014 *(7)*	DR		≥ 16 weeks		most recent VL <50 l,	No active OI or poorly controlled chronic conditions		1st-line	Good adherence by pill count			Base+
Grimsrud A., 2015 *(30)*	CAC		>12		2 consecutive undetectable VL <400	No other medical conditions requiring more frequent follow-up		Adherent on the same ART regimen	Adherent			Base+
Grimsrud A., 2016 *(31)*	CAC		>12		2 consecutive suppressed VL <400	No active opportunistic infections.			Self-reported adherence			Base+
Hanrahan CF., 2018 *(32)*	AC	≥18	≥12		2 most recent results ≤400	No comorbidity, HIV +ve child, HBP with more than 1 anti-HBP drug		same ART regimen >12 months				Base+
Long L, 2011 *(33)*	DR	≥ 18	≥11	CD4 >200 cells/mm3	<400 the last 10 months	no OIs	<5% weight loss in last 3 visits					Base+
Luque-Fernandez MA., 2013 *(34)*	AC	≥ 18	≥18	≥ 200 cells/ml	Sustained VS							Base
Mantell JE., 2019 *(35)*	CARG	**No specific definition given**										Base-
Mudavanhu M., 2019 *(36)*	AC	≥ 18	≥1 year	≥ 200	Sustained VS	Free of comorbidities						Base+
Mukumbang FC., 2018 *(37))*	AC	**No specific definition given**										Base-
Mukumbang FC., 2019_SAJHIVM *(38)*	AC	≥18			Lower than detectable (<400 copies/ml)			1st-line	Good clinic attendance and medication adherence.			Base

Mukumbang FC., 2019_Plos1 *(39)*	AC	≥18			Lower than detectable (<400 copies/ml)				evidence of good clinic attendance			Base
Pasipamire L., 2018 *(40)* **(CAGs)**	CAG	≥16	≥ 12	> 350	VS		> 45 kg					Base+
Pasipamire Outreach	OR	≥16	≥ 12	> 350	VS		> 45 kg					Base+
Pasipamire *AC*	AC	≥16	≥ 12	> 350	VS.		> 45 kg					Base+
Pellecchia U., 2017 *(41)*	CAG	**No specific definition given**										Base-
Prust ML., 2018, *(4)* **CAG**	CAG	≥18	≥ 6		<1,000	No ADRs or OIs		1st-line	Good adherence	Not pregnant/ lactating		Base+
Prust FTR	FTR											Base+
Prust MMS	MMS											Base+
Rasschaert F, 2014 *(42)*	CAG	≥ 18	≥6	>200		No current OI		1st line		Not pregnant	live in same geographic area	Base+
Rasschaert F, 2014 *(43)*	CAG	**No specific definition given**										Base-
Selke HM., 2010 *(19)*	HD	≥ 18	≥ 3	>200					No adherence issues/disclosed status to a HH member		Lives in Kosirai Division	Base+
Sharp J., 2019 *(44)*	AC	≥ 18	≥6		single undetectable VL i.e. < 400							Base
Tsondai PR., 2017 *(3)*	AC and CAC	≥ 16	>12		2 consecutive results <400	No other condition requiring more frequent clinical consultation.						Base+
Vandendyck M., 2015 *(45)*	CAG	≥18	≥ 6	>350								Base
Venables E., 2019 *(46)*	AC	≥ 18	≥ 6		undetectable viral load result i.e.<400	No clinical condition requiring more frequent clinical follow-up						Base+
Vogt F., 2017 *(47)*	CDDP	≥18	≥ 6	>250				1st-line		Not pregnant		Base+
Wringe A., 2018 *(48)*	SMA	≥ 18	≥12	≥300	VL ≤ 1000	No opportunistic infections		1st-line		Not pregnant/ breastfeeding		Base+

Legend: ***AC*** *- Facility-based treatment club;* ***CAC*** *- Community-based Adherence clubs;* ***CAG*** *- Community ART Groups;* ***HD*** *- community ARV home delivery;* ***OR*** *- Out-of-facility group – Outreach*

FTR *- Fast Track refills;* ***SMA*** *- Six monthly appointment;* ***MMS*** *- Multi-month scripting i.e. 3-month refills;* ***DR*** *- Down-referral from Hospital to PHC;* ***VS –*** *virally suppressed;* ***HH*** *- Household*