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Perspectives of healthcare providers on differentiated service delivery of long-acting cabotegravir and rilpivirine in clinics and community settings in England: findings from the ILANA non-randomised implementation study

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Abstract

Introduction:

The introduction of two-monthly injectable Cabotegravir and Rilpivirine (CAB + RPV) has changed how HIV treatment is delivered and monitored. Differentiated service delivery via community settings may help to mitigate the added pressure on clinic capacity and space, while improving treatment accessibility. ILANA is a mixed-methods implementation study examining the acceptability and feasibility of implementing differentiated service delivery of CAB + RPV in six clinics and community sites in England.

Methods:

ILANA was a 12-month study where 114 people living with HIV chose to receive 2-monthly long-acting CAB + RPV in clinic or community settings in England. Community delivery settings included home visits (n = 3), HIV support organisations (n = 2), and a community sexual health clinic (n = 1). Longitudinal survey data from healthcare providers (HCPs) in clinic and community settings are reported at baseline, month 4 (clinic only), month 8 (community only) and month 12 (both groups). Feasibility, acceptability and appropriateness were scored on a 5-point scale using validated survey measures. Longitudinal interviews were conducted with HCPs at baseline (clinic only), month 8 (community only) and month 12. Thematic analysis was used to better understand how the intervention was implemented and to help explain the survey findings.

Results:

Twenty-five HCPs participated in the survey: 72.0% delivered CAB + RPV in the clinic and 28.0% in the community; 28.0% were doctors and 68.0% were nurses; 68.0% administered injections (mainly nurses). For both clinic and community HCPs, feasibility, acceptability and appropriateness mean scores for delivering the injection in their treatment setting were high (≥ 4) at all timepoints. While clinic HCPs mean scores improved over time, acceptability and appropriateness declined slightly among community HCPs. Interview findings indicated that feasibility, acceptability and appropriateness improved where HCP participants felt a sense of ownership over the implementation rationale and process, were able to balance innovation, sustainability and equity, and had established processes for flexible, safe and efficient delivery.

Conclusions:

These finding demonstrate that HCPs considered delivery of CAB + RPV in clinics and community settings to be largely feasible, acceptable and appropriate. However, patient need should be central to decision-making around community settings to support the rationale for this approach, and providers should ensure that implementation supports equitable access to treatment.

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Introduction

The advent of long-acting injectable HIV treatment broadens treatment options for people living with HIV, removing the need for daily treatment for the first time since ART was developed. However, its introduction presents logistical challenges for HIV services currently structured around oral treatment regimens. Cabotegravir and rilpivirine (CAB + RPV), the first long-acting injectable HIV treatment to be approved for use in the UK, requires two-monthly appointments and more rigorous adherence monitoring compared to oral treatment, increasing pressure on clinic staffing and space [1, 2]. In addition, equitable uptake and retention on CAB + RPV may be challenged by varying capacity among clinics to adequately support patients to adhere to the required 2-monthly dosing schedule, particularly among people who already face barriers to accessing care [3].

There have been calls for Differentiated Service Delivery (DSD) to be leveraged as a key element of implementing long-acting injectable HIV treatment in order to ensure that its implementation is patient-centred, efficient and equitable [4]. A differentiated service delivery (DSD) approach is one which adapts the "building blocks" (or the "who," "where," "when" and "what") of service delivery to meet the needs and expectations of people living with HIV, while acknowledging the resource constraints of publicly funded health systems [5, 6]. DSD aims to enhance the accessibility and quality of care provided by adapting services to meet patient needs and preferences [7]. Key DSD concepts include *decentralisation* (moving services from hospital-based to community settings), *task shifting* (delegating tasks among healthcare providers and to lay providers), and *service integration* (coordinating and combining services to reduce fragmentation of care) [8].

DSD of HIV care already happens to some extent in the UK, for example through multi-month dispensing, telehealth, and remote prescribing. However, HIV treatment services in the UK are predominantly delivered in clinics linked to tertiary hospitals. While treatment coverage in the UK exceeds global targets at 99% [9], the UK Health Security Agency (UKHSA) estimates that in 2023 in England, 5.3% of people with diagnosed HIV were not retained in HIV care and 15%–18% of the 104 000 adults living with HIV had transmissible levels of virus [10]. DSD may offer an opportunity to tackle barriers to both uptake and retention in care by making treatment services more patient-centred and accessible.

Delivery of CAB + RPV within HIV clinics in the United States, Canada and Europe has been demonstrated as generally feasible, appropriate, and acceptable to healthcare providers involved in its implementation, albeit complicated by a range of patient-, provider- and policy-level barriers [11–18]. Delivery outside of hospital-based HIV clinics has been proposed as a solution to some of these barriers, and prospective interest in this approach among people with HIV has been demonstrated [13, 19–21]. Implementation research exploring differentiated service delivery of CAB + RPV in community settings has so far been limited to the United States [22–26], Spain [27, 28] and Australia [29]; settings explored include home delivery [24, 25, 29], harm reduction services [22, 23], non-HIV secondary health services [26–28], and

primary care centres [27]. These studies have largely focused on patient outcomes and perspectives, with only three studies reporting provider perspectives on community delivery so far [22, 27, 29]. Preliminary findings from the CORAL study – based on focus groups with clinicians involved in real-world implementation of CAB + RPV– explored delivery of CAB + RPV within clinics in the UK but not community settings [30].

The ILANA (Implementing Long-Acting Novel Antiretrovirals) study, presented here, is therefore the first mixed-methods implementation study evaluating the implementation of differentiated service delivery of CAB + RPV in clinics and community sites in the United Kingdom. ILANA patient participant perspectives have been published elsewhere, and indicated high feasibility, acceptability and appropriateness of CAB + RPV treatment, but mixed views on receiving it in a community setting [31]. Although those who opted for community delivery found it feasible, acceptable and appropriate, uptake was low and interview participants indicated that many had concerns about sharing their HIV status beyond the clinic, attending unfamiliar settings, and/or being identified as living with HIV [31]. Here, we report the perspectives of healthcare providers (HCPs) gathered through longitudinal surveys and interviews.

Methods

Study design

ILANA was a 12-month, UK-based multicentre, longitudinal study evaluating equitable implementation and effectiveness outcomes for 2-monthly CAB + RPV delivery in six clinics and community settings (ClinicalTrials.gov identifier: NCT05294159) [32]. The study was co-designed with a co-author living with HIV and a lived-experience community advisory board. Patient participant recruitment took place between June and October 2022. Following a one-month oral lead-in as per protocol, injections were delivered in the clinic (months 1–6), and according to patient choice in clinic or community setting (months 6–12). The study sites were relatively large urban hospital-based clinics based in London, Liverpool and Brighton. Table 1 depicts the 'building blocks' of differentiated service delivery available in the different sites. Each site chose one feasible community setting, including home visits (three sites), HIV support organisations (two sites), and a community sexual health clinic (one site). Mandatory recruitment targets of 50% women, 50% ethnically-diverse people and 30% over 50 years of age were set to include a more representative study population, and were exceeded [31]. By the end of the study, 19/114 patient participants had received home visits and eight attended an HIV support organisation – none opted to attend the community sexual health clinic. Further detail on community implementation is provided in Supplementary Appendix 1.

Surveys (Supplementary Appendix 2) were conducted with the HCP participants at three timepoints; interviews (Supplementary Appendix 3) were conducted with a sub-sample of HCP participants at two timepoints, using nonprobability convenience sampling. This study was conducted in accordance with the Declaration of Helsinki and approved by City & East London Research Ethics Committee on 14 April 2022 (REC 22/PR/0318).

Participants

HCPs involved in the implementation and administration of CAB + RPV at each site, in both clinic and community settings, were invited to complete questionnaires. Clinic HCPs were invited to complete questionnaires at baseline, and months 4 and 12, while community HCPs were invited at months 8 and 12. In addition, each site identified 2–4 HCP participants willing to take part in interviews. The interviews took place at baseline (M0 for clinic HCPs, M8 for community HCPs) and month 12. Some interview participants were involved in CAB + RPV delivery in both clinic and community settings (as outreach) – they were asked about implementation within the clinic in their baseline interview, in the community setting at month 8, and both settings at month 12.

Quantitative Endpoints and Assessments

Primary and secondary outcomes focused on feasibility, acceptability, and appropriateness of providing CAB + RPV in the setting relevant to the HCP (i.e. clinic or community) setting. Quantitative surveys used validated measures: feasibility (FIM), acceptability (AIM), and appropriateness (IAM), of intervention measures, respectively [33]. The primary endpoint was FIM at M12 of providing the injection in clinic and community settings. Key secondary endpoints included AIM, and IAM at M0, M8, and M12.

Analysis Methods

Professional characteristics and survey data were summarized using descriptive statistics. FIM, AIM, and IAM were analysed as continuous scores and grouped as agreement/complete agreement (mean score ≥ 4) versus other responses. Score changes over time were calculated by subtracting baseline scores from M4 and M12 scores respectively for clinic HCPs, and by subtracting M8 scores from M12 scores for community HCPs.

Audio recordings of longitudinal semi-structured interviews guided by prespecified topic guides were transcribed and thematically analysed by RH using inductive and deductive coding informed by the Consolidated Framework for Implementation Research [34].

Role of the Funding Source

The study was funded and co-designed by ViiV Healthcare. The funder had no role in conduct, data analysis, or interpretation.

Results

Study Population

Twenty-five HCPs involved in ILANA participated in the survey (Table 1). Eighteen delivered CAB+RPV in the clinic ('clinic HCPs') and seven delivered it in the community ('community HCPs'). The total sample included doctors, clinic nurses and community nurses. 68.0% - mostly nurses – administered CAB+RPV-LA injections and 56.0% prescribed medications as part of their role.

Table 1. HCP Roles and Responsibilities

	Clinic (N=18)	Community (N=7)	Overall (N=25)
Current Role			
Physician (%)	7 (38.9)	0 (0.0)	7 (28.0)
Clinic based nurse (%)	11 (61.2)	2 (28.6)	13 (52.0)
Community nurse specialist (%)	0 (0.0)	4 (57.1)	4 (16.0)
Other (%)	0 (0.0)	1 (14.3)	1 (4.0)
Do you administer injections as part of your role			
No (%)	7 (38.9)	1 (14.3)	8 (32.0)
Yes (%)	11 (61.1)	6 (85.7)	17 (68.0)
Do you prescribe medications as part of your role			
No (%)	7 (38.9)	4 (57.1)	11 (44.0)
Yes (%)	11 (61.1)	3 (42.9)	14 (56.0)

Fourteen clinic HCPs were interviewed: 10 were interviewed at baseline and M12, three were interviewed at baseline only (due to maternity leave, changing jobs), and one was interviewed at M12 only. Clinic HCPs included doctors (n=6), nurses (n=7) and specialist pharmacists (n=1).

Eleven community HCPs were interviewed at M8 and M12. Community HCPs included a doctor (n=1), clinic nurses conducting outreach (n=4), community nurses (n=4), and non-clinical staff (n=2). Three participants were interviewed as both clinic and community participants due to their involvement in delivering CAB+RPV in both settings.

Survey data

Among both groups, mean acceptability, appropriateness and feasibility scores for delivering the injection in their treatment setting were high (≥4) at the beginning of the study and remained so by the end of the study (Table 2). Mean acceptability scores were highest at all time points compared to appropriateness and feasibility scores. Mean feasibility scores were lowest at all time points, with the exception of M4 for clinic HCPs. Among clinic HCPs, FIM, AIM, and IAM mean (SD) scores improved over

time between M0 and M12, by +0.61 (1.16), +0.38 (1.07) and +0.61 (1.09), respectively. Among community HCPs, FIM mean (SD) scores improved slightly M8-M12 by +0.20 (0.33), while AIM/IAM mean (SD) scores declined slightly by -0.15 (0.65) and -0.15 (0.49), respectively.

Table 2. Feasibility, acceptability and appropriateness scores from HCPs and CHCPs in relation to injection delivery in their treatment setting

	Clinic			Community	
	Baseline (N=18)	**Month 4 (N=16)**	**Month 12 (N=14)**	**Month 8 (N=7)**	**Month 12 (N=7)**
AIM[1]					
Mean (SD)	4.44 (1.02)	4.63 (0.47)	4.82 (0.36)	4.71 (0.46)	4.50 (0.63)
>=4 (%)	16 (88.9)	15 (93.8)	14 (100.0)	6 (85.7)	5 (71.4)
Missing (%)	0 (0.0)	1 (6.2)	0 (0.0)	1 (14.3)	1 (14.3)
AIM change over time					
Mean (SD)	-	0.28 (1.09)	0.38 (1.07)	-	-0.15 (0.65)
Missing (%)	-	1 (6.2)	0 (0.0)	-	2 (28.6)
IAM[1]					
Mean (SD)	4.24 (1.04)	4.52 (0.49)	4.77 (0.51)	4.62 (0.49)	4.50 (0.55)
>=4 (%)	14 (77.8)	15 (93.8)	13 (92.9)	6 (85.7)	6 (85.7)
Missing (%)	0 (0.0)	1 (6.2)	0 (0.0)	1 (14.3)	1 (14.3)
IAM change over time					
Mean (SD)	-	0.35 (1.06)	0.61 (1.09)	-	-0.15 (0.49)
Missing (%)	-	1 (6.2)	0 (0.0)	-	2 (28.6)
FIM[1]					
Mean (SD)	4.04 (1.02)	4.53 (0.48)	4.61 (0.51)	4.38 (0.83)	4.21 (0.83)
>=4 (%)	11 (61.1)	13 (81.2)	13 (92.9)	4 (57.1)	3 (42.9)
Missing (%)	0 (0.0)	1 (6.2)	0 (0.0)	1 (14.3)	1 (14.3)
FIM change over time					
Mean (SD)	-	0.53 (1.13)	0.61 (1.16)	-	0.20 (0.33)
Missing (%)	-	1 (6.2)	0 (0.0)	-	2 (28.6)

Abbreviations: SD – standard deviation. % calculations exclude participants who withdrew.

[1] Higher FIM, AIM and IAM scores indicate greater agreement with feasibility, acceptability and appropriateness of intervention respectively (scores ≥4 indicate agreement or complete agreement).

Findings From Qualitative Interviews

The interview findings with both HCP groups provide deeper insight into their perspectives on the feasibility, acceptability and appropriateness of differentiated delivery of CAB+RPV in clinic and community settings, and the different factors which influenced these views. Overarching interview themes related to the importance of sharing power in decision-making and implementation of differentiated CAB+RPV service delivery; the challenges of balancing innovation, sustainability and equity; and the need to establish processes for flexible, safe, efficient delivery.

Theme 1: Sharing power in decision-making and implementation

Feasibility and acceptability of differentiated delivery of CAB+RPV appeared to be strengthened where relevant stakeholders felt sufficiently engaged in the implementation rationale and process. In sites where the choice of community setting did not appear to align with patient preferences and needs, acceptability was reduced for staff members. Staff who felt adequately involved in implementation decision-making had greater enthusiasm for delivery of CAB+RPV in both clinic and community settings. Collaboration with community partners had greater success where there was established and trusting relationships, communication, and understanding of each partner's needs.

1.1 Designing services based on patient needs and preferences

Several participants highlighted that the choice of community setting at their site did not align with patient preferences. Generally, patient participants wanted to remain at the clinic as they were concerned about attending an unfamiliar setting and/or being identified as living with HIV. Staff members felt that more neutral settings, such as GP practices or community pharmacies might offer greater convenience and privacy for patients, while others felt different modalities, particularly self-administered injections, might hold more appeal:

"The interesting thing that has been borne out is that despite what we think actually most people didn't want home administration. I think people would have liked self-administration… I think it's really the flexibility. The visit schedule a little bit but also just the autonomy and flexibility." Clinic HCP, M12, Doctor

1.2: Creating a sense of ownership over implementation

Attitudes towards differentiated delivery of CAB+RPV were shaped by organisational dynamics. Although staff were largely supportive of differentiated delivery of CAB+RPV, limited ownership over

implementation decision-making negatively affected acceptability. A lack of early team collaboration regarding the CAB+RPV service made introducing the service more challenging:

“There was an element of us not being prepared for it... It just felt like a couple of people were really on the ball with it but everyone [else] I felt was left in the background… We’ve made it work [pause] but it could have been done differently… I think it’s quite nice for everyone to feel we’re doing this, even if it was a half an hour meeting. You would create a sense that, although not much of the decision would be made by either the healthcare assistant or the nurses, there is a sense that you being there present, given an opportunity to speak… It’s also I think just saying to your team you’re part of a process.” Clinic HCP, M12, Nurse

Staff were less likely to support community delivery where they didn’t understand, or disagreed with, the rationale for it. Limited absorptive capacity, the attitudes of patient participants, and discomfort with the community setting all appeared to influence this perspective. Patient participant discomfort may have influenced community HCPs perceptions of the value of community delivery, but the reverse may also have been true – the lack of enthusiasm from some community HCPs may have entrenched views among the patient participants:

“Not everyone was comfortable to go to the community... It wasn’t a very professional setting, I would say… It’s not as clean as a clinic would be… Even I didn’t feel comfortable delivering injectables completely in that setting because it wasn’t a welcoming place in that sense with infection control and all of that.” Community HCP (HIV support service), M12, Nurse (outreach)

1.3: Improving coordination with external community partners to promote an integrated service

A history of collaboration between clinic and community settings supported successful implementation. Community nursing teams were well-established partners with clinical teams and already had existing cohorts of patients living with HIV; there were more ‘teething problems’ in settings where new relationships or processes were being established as part of the implementation. For example, restrictions on information sharing, communications issues around when outreach staff would be attending the support service, and limited opportunities to engage patient participants in the social and emotional support offered by HIV support services meant some community HCPs felt that the added value of community delivery was obscured:

“It lost momentum a little bit and I think the reason for… well the potential for it being delivered in a community setting I think was slightly forgotten by the operational clinical staff [who] didn’t create the opportunity for us to [engage with the patients], and [the rationale] probably became quite obscure and unclear for the patient themselves cos they were just [receiving treatment] in a different building for no clear reason.” Community HCP (HIV support service), M12, Non-clinical staff

Theme 2: Balancing innovation, sustainability and equity

Among both clinic and community HCPs, the introduction of CAB+RPV was considered a welcome development for patients, an opportunity for service innovation, and a source of additional operational pressure. While CAB+RPV was seen as clinically valuable and professionally rewarding, the feasibility of its implementation was consistently framed as contingent on organisational capacity and service infrastructure. Participants noted that this had implications for equity, with some highlighting that clinicians were restricting discussions about CAB+RPV to those who they perceived to be in need of the treatment. Community provision was considered useful for improving accessibility for patients, but feasibility was limited where delivery was reliant on outreach staff, as this reduced staff availability within clinic.

2.1: Limited resources and their implications for equity

Participants highlighted the additional resource demands CAB+RPV placed on the service, including longer and more frequent appointments and more pressure on clinic rooms. Several participants also noted that CAB+RPV shifts more of the responsibility for treatment success from the patient onto HCPs, increasing staff anxieties around injection technique and patient adherence to the appointment schedule. Consequently, staff monitored patients much more closely than before, creating additional work. All ILANA sites had incorporated the CAB+RPV service without additional resource and therefore limits to the physical space of the clinic, staffing capacity, and appointment provision strongly influenced participants' perceptions about the scalability of injectable treatment beyond the study. Some participants noted that their service was drawing up a business case for additional funding to expand provision of injectable treatment.

Scalability concerns meant that while some stated it was important to discuss CAB+RPV with all patients and felt it was not appropriate for clinicians to assume who may benefit, others felt that CAB+RPV was not discussed as widely as it could be, to avoid additional pressures on clinic capacity. Participants recognised the equity implications of this, as certain groups may be less informed about new treatments and therefore less likely to initiate conversations:

"I think with everything there's always a risk of inequity and that is occurring and it's something that we need to address… It's not necessarily being offered or explained to everybody. That may be because a lot of clinicians know their patients well and know that it's not appropriate for them… [but] then we also have the capacity issues in that we're seeing people more frequently… we just don't have physical space, and we don't have enough nurses." Clinic HCP, M12, Doctor

"Because there was a female [recruitment] target [for ILANA], we were really going out of our way to make sure we discussed it with all our women and it was amazing how many people just hadn't even heard of them, unlike in say our MSM cohorts where lots of them were very well informed... So, I think there's still a patient education piece of work to do really." Clinic HCP, M12, Doctor

Delivery within community settings was conceptualised as a way to reduce pressure on clinic capacity but did not achieve this aim if delivered through outreach. Variable availability of trained staff, and

logistical considerations such as travel time and lone-worker policies constrained the number of community-delivered injections that could realistically be offered and reduced the amount of staff available within clinic to provide injections. Several participants felt that home provision should be restricted to patients with complex needs who are otherwise unable to attend the clinic due to its high cost:

“[ILANA] patients are very well-established, they’ve been coming here for years. For people who are normal patients, they don’t have any issues, I don’t see the benefit [of home delivery].” Community HCP (home delivery), M12, Nurse (outreach).

Nevertheless, community HCPs valued the chance to trial a new care model that could improve access for people uncomfortable attending the clinic. Most HCP participants felt ILANA had opened the door to thinking more broadly about how HIV services might be delivered outside clinics in the future.

2.2: Strengthened professional satisfaction and identity

Injectable treatment services are predominantly nurse-led, hence their introduction had fostered a strong sense of professional satisfaction and identity among nurses. Providing a treatment that HCPs perceived as considerably improving patients’ quality of life was rewarding. Participants were often surprised at the extent of the impact among patients who were stable on oral treatment, who they had previously assumed were ‘managing fine’. Nurse participants described a ‘halo effect’ of having more dedicated time with patients, which built patient-provider trust and led to earlier identification of health concerns – enhancing the quality of care they were able to provide. By the time of their interviews at study end, participants expressed a growing sense of mastery over service provision, with initial anxieties around injection technique, patient adherence to the appointment schedule, and treatment failure giving way to increased confidence and competence as they accumulated experience.

“I think almost all of us feel a lot more relaxed and a lot more positive. All the concerns that you see in the published data [from CAB+RPV implementation studies] existed within our own clinical service. Anxiety about capacity, anxiety about time, anxiety about missed visits, anxiety about oral bridging and counselling people… I think what’s been surprising is the positive feedback… The positive feedback you get really creates a nice, positive loop in that these are not going to be the right thing for everyone but – for those people who have specific reasons that they want to go onto injections – it can be life changing.” Clinic HCP, M12, Doctor

Theme 3: Establishing processes for safe, efficient and flexible delivery of CAB+RPV in differentiated settings

Participants demonstrated how feasibility, acceptability, and appropriateness were strengthened where services built rigorous, well-communicated processes and iteratively adapted them. Operational clarity, forward-planning, and adaptability were crucial to manage the complexity of injectable delivery while

maintaining patient-centredness. Delivery in community settings, where conditions may not be equivalent to those of clinics, required adaptability and a 'can-do' attitude.

3.1: Rigorous clinical and operational processes

Participants emphasised the value of early multi-disciplinary communication and planning and clear Standard Operating Procedures for smooth implementation of CAB+RPV in differentiated settings. Key processes included Multi-disciplinary Team (MDT) eligibility assessment and review to safeguard against the risk of treatment resistance, and clear documentation to track adherence to the dosing schedule:

"Over time, better communication and better documentation [on the electronic medical record] about when the person's next injection is due... At the beginning, that wasn't happening, and then sometimes there were people that were going either out of their timelines or really close to it. We talked about documenting when the next appointments going to be booked for, the earliest time that they could come and the latest time that they could come. So that someone could look on there and know, so if the patient phones to change that appointment, they would know just simply by looking at the documentation, rather than try to go back and work it all out themselves." Clinic HCP, M12, Nurse

3.2: Flexibility as a core enabler of feasibility

Embedding flexibility within processes was repeatedly identified as an enabler of smooth implementation, for example: offering a wider range of appointment days and times, scheduling around patient holidays and travel, and being flexible on the injection site (i.e. ventrogluteal versus dorsogluteal) to manage nodules and respond to patient preference. Participants noted that patients had worked with them to manage the dosing schedule, proposing earlier injections to avoid oral bridging while travelling and notifying them in advance of any potential disruptions to their schedule. This was supported by preparing patients in advance of switching treatments in relation to the dosing schedule and the importance of the window period, as well as managing expectations around pain.

Flexibility and adaptability were also a crucial aspect of community delivery, with participants employed as community nurses considering this central to their role:

"His [home] environment is very challenging as well. Squeezing into the bedroom, and with the dog and so on – but that's community nursing. It's working well." Community HCP (home delivery), M12, Community Nurse

Some community HCPs who were usually clinic-based felt the outreach settings were not up to clinical standards and found it challenging to adapt. Others saw the value of a more informal, relaxed setting through which patients could gain other benefits, such as access to community support from other people living with HIV:

“They feel more relaxed when they’re here. I think they know that everyone that comes here is [living with] HIV… There’s no stigma or anything like that which makes a big difference… The ones who come in didn’t know that existed or there was a community.” Community HCP (HIV support service), M12, Non-clinical staff

3.3: Iteratively adapting processes to improve efficiency

Over time, sites identified ways of streamlining processes to enhance efficiency – such as pragmatic treatment management by prescribing another appropriate rilpivirine-based treatment while patients were awaiting MDT approval for CAB+RPV, meaning that if approved they were able to skip the oral lead-in. Several participants noted the importance of training nursing staff to deliver injectables and creating competency assessments which supported consistency and increased confidence among staff, particularly in relation to managing injection technique, side-effects, and the dosing schedule (including through oral bridging). Participants also discussed how digital patient apps could reduce the administrative burden of appointments and blood results reporting.

Discussion

Differentiated service delivery adapts the ‘who’, ‘what’, ‘where’ and ‘when’ of service delivery in order to better meet patient needs while reducing pressures on the health system. In the ILANA study, adaptations were made to the ‘where’ and the ‘who’ of two-monthly CAB+RPV treatment delivery, with community delivery including injections provided at HIV support services as outreach, and at patients’ homes by community nursing teams. Our findings confirm that DSD of CAB+RPV in both clinic and community settings were considered feasible, acceptable and appropriate to HCPs providing this service, with mean FIM, AIM and IAM scores consistently high (≥4) across the course of the study. Interviews provide further nuance, highlighting that HCPs balance the rewards of innovation with the greater responsibility for treatment outcomes and associated increased workload in the context of limited resources and structural constraints, which in some cases had implications for treatment equity. Establishing rigorous clinical and operational processes and sharing power in decision-making and implementation of CAB+RPV delivery helped to facilitate implementation. A slight decrease in acceptability and appropriateness scores between M8 and M12 for CAB+RPV delivery in community settings was corroborated by qualitative interview findings which indicated that acceptability and appropriateness reduced where there was limited clinic capacity for staff to provide outreach, reluctance from most patient participants around attending a community setting, and a perception among HCPs that patient need was insufficient to justify the additional resource.

The tension between innovation and sustainability reinforces findings from other studies exploring implementation of CAB+RPV, both in the UK [30,35] and abroad [11,12,27]. Based on this evidence, it is likely that while some services will have capacity to absorb the additional workload created by CAB+RPV delivery, most will require additional resources if they are to scale-up CAB+RPV provision beyond a small proportion of their patients. However, equity considerations should be central in broader implementation

discussions given that our findings indicate that at these early stages, HCPs may be limiting discussions about CAB+RPV with patients to manage capacity – disadvantaging patients who are less knowledgeable about new treatments. The most recent BHIVA guidelines have stated that "it is reasonable for services to prioritise people most in need of injectable ART, who also meet the appropriate criteria, depending on local capacity" [36] yet it is arguable that this should not equate to clinicians withholding information about new treatments from patients, particularly as staff participants noted that they had not always accurately perceived patient need for the treatment. Criteria for prioritisation could be established as part of MDT eligibility assessments: for example, in the US, some services have managed this tension by prioritising CAB+RPV delivery to their most marginalised patients struggling to achieve viral suppression on oral ART [16].

The rationale for DSD of CAB+RPV in community settings is, in part, to reduce pressure on clinic capacity and space, yet this was only partially achieved within ILANA. In some sites, clinical staff were used as outreach, further reducing staff availability for providing appointments within clinic. Although utilising community nursing teams to provide home delivery did reduce pressure on clinic staffing and space, it is highly resource intensive. Nevertheless, home delivery was highly acceptable to patient participants who opted for it [31] and community nursing teams easily incorporated the provision of injections into their routine workload – reinforcing findings from the US and Australia which found CAB+RPV delivery to be feasible, acceptable and appropriate to both patients and providers [19,24,25,29]. Including CAB+RPV treatment as part of a community nursing service may be considered appropriate for patients typically eligible for home care (e.g. due to complex needs which inhibit their ability to attend clinic in person).

Community delivery in alternative settings could also be considered appropriate where there is sufficient patient demand to match the volume of clinic appointments, or to address inequitable outcomes for particular patient groups. Studies in the US have found that CAB+RPV delivery in harm reduction services can facilitate the successful use of CAB+RPV by people with HIV and opioid use disorders, although intensive wraparound support is often needed to enable patients to adhere to the treatment schedule [22,23]. In ILANA, the limited number of patients who opted to receive injections in HIV support services influenced HCPs' perceptions on the appropriateness of conducting outreach to these settings. Yet the study found that these support services can offer considerable added value for people living with HIV by providing access to community and peer support, reducing loneliness and isolation. Developments in who can administer CAB+RPV injections, such as lay providers and community pharmacists, may help to enhance the feasibility and appropriateness of community delivery in such settings [37,38].

Strengths and limitations

ILANA is the first study to explore differentiated service delivery of long-acting cabotegravir plus rilpivirine in clinics and community settings in the UK and offers important insights for policymakers and practitioners considering its implementation. By combining quantitative and qualitative data collection,

we have been able to both quantify and explore the nuances of HCPs views related to feasibility, acceptability and appropriateness. The small sample size and missing data for survey responses mean that the quantitative findings should be treated with caution. The qualitative data, however, helps to triangulate these findings.

One consideration is that the location of all ILANA sites in large urban centres with good public transport links may have reduced the added value of community delivery, which could instead be highly desirable for patients who travel considerable distances to attend clinics (although concerns about confidentiality may mediate the influence of travel distance on preferences for more local LA-ART treatment provision [39]). The restriction of ILANA patient participation to those who have an undetectable viral load (in line with current UK CAB+RPV licensing requirements) may also have limited the value of community delivery since evidence from the US indicates that people who are not virally suppressed are more likely to want treatment delivery out-of-clinic [40]. Further research is needed to explore whether delivery in other community settings not evaluated within ILANA – such as primary care or harm reduction services – could offer greater accessibility to people living with HIV while reducing capacity pressure on HIV services.

Conclusion

Our study demonstrates that differentiated service delivery of CAB+RPV in both clinic and community settings in the UK is feasible, acceptable and appropriate to clinic and community HCPs. Patient need should be central to decision-making around differentiated service delivery, as this can help to justify costs where delivery is more resource intensive. Establishing rigorous processes, prioritising adaptability and flexibility, and sharing power in implementation decision-making between staff, patients and community partners can all support successful implementation.

Declarations

Ethics approval and consent to participate

This study was conducted in accordance with the Declaration of Helsinki and approved by City & East London Research Ethics Committee on 14 April 2022 (REC 22/PR/0318). HCP participants provided informed written consent at the beginning of the study, and consent was checked verbally at the beginning of each interview.

Consent for publication

Publication of quotes was agreed as part of the informed consent process (explained within the Participant Information Sheet).

Availability of data and materials

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Competing interests

C.O. has received honoraria for advisory boards, lectureships, and travel sponsorships from Janssen, Gilead Sciences, ViiV Healthcare, MSD, and Bavarian Nordic and has received research grants from Janssen, Gilead Sciences, ViiV Healthcare, MSD, and AstraZeneca. K.R. has received honoraria from ViiV Healthcare and Janssen Pharmaceuticals. V.A. has received speaker fees from ViiV Healthcare, Gilead Sciences, and MSD. B.K. has received speaker honoraria and consultancy fees from Gilead Sciences, GSK, and ViiV Healthcare. E.C. has received speaker fees and advisory board honoraria, and her institution has received funding to run clinical trials from ViiV Healthcare, Gilead Sciences, and MSD. J.F.'s institution has received a research grant from Pfizer. T.J.B. has received consulting fees, conference support, and speaker fees from ViiV Healthcare, MSD, Gilead Sciences, Janssen, and GSK, and educational and research grants from Gilead Sciences, Roche, and ViiV Healthcare. A.C. has received speaker fees from MSD, conference registration fees from ViiV Healthcare and Gilead Sciences, honoraria for advisory boards from MSD, ViiV Healthcare, and Gilead Sciences, and her institution has received funding to run clinical trials from ViiV Healthcare, Gilead Sciences, MSD, and GSK. S.P. has received research grants from ViiV Healthcare and Gilead Sciences. The remaining authors (R.H., Y.L.W., J.H., and R.B.) have no interests to declare.

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The study was funded and co-designed by ViiV Healthcare. The funder had no role in conduct, data analysis, or interpretation.

Authors' contributions[Mandatory]

The study was conceptualized by C.O. and V.A. C.O. acquired the study funding. The methodology, recruitment plan and dissemination strategy were determined by C.O., V.A., and B.K. K.R., V.A., E.C., R.B., J.F., T.J.B., and A.C. were responsible for quantitative data collection at their study sites. The curation and formal analysis of the quantitative survey and clinical data was conducted by J.H. and Y.L.W. The qualitative interview data were collected and curated by R.H., and the formal qualitative analysis was conducted by R.H. with supervision from S.P. The study findings were interpreted by all co-authors. The original draft of the manuscript was written by R.H. Reviews and edits of subsequent drafts were conducted by all co-authors.

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References

1. Scarsi KK, Swindells S. The Promise of Improved Adherence With Long-Acting Antiretroviral Therapy: What Are the Data? J Int Assoc Provid AIDS Care JIAPAC. 2021;20. 10.1177/23259582211009011.
2. Davis JM, Rana A, Sax PE, Bares SH. Long-Acting Cabotegravir Plus Rilpivirine in People With HIV With Adherence Challenges and Viremia: Current Data and Future Directions. Clin Infect Dis. 2025;80(6):1349–54. 10.1093/cid/ciae557.
3. Waters L, Sparrowhawk A. Clinical implementation of long-acting antiretroviral treatment in high-income countries: challenges and advantages. Curr Opin HIV AIDS. 2022;17(3):121. 10.1097/COH.0000000000000730.
4. Grimsrud A, Wilkinson L, Delany-Moretlwe S, Ehrenkranz P, Green K, Murenga M, et al. The importance of the how: the case for differentiated service delivery of long-acting and extended delivery regimens for HIV prevention and treatment. J Int AIDS Soc. 2023;26(S2):e26095. 10.1002/jia2.26095.
5. Evaluating the sustainability of differentiated service. delivery interventions for stable ART clients in sub-Saharan Africa: a systematic review protocol | BMJ Open [Internet]. [cited 2026 Feb 16]. Available from: https://bmjopen.bmj.com/content/10/1/e033156
6. World Health Organization. Updated Recommendations on Service Delivery for the Treatment and Care of People Living with HIV [Internet]. Geneva: World Health Organization. 2021 Apr. Available from: https://www.ncbi.nlm.nih.gov/books/NBK570385/
7. International AIDS, Society. A Decision Framework for antiretroviral therapy for key populations. [Internet]. Geneva: International AIDS Society; 2018 Jul. Available from: https://www.differentiatedservicedelivery.org/wp-content/uploads/Decision-Framework-Key-Population-Web_Post_Conference_FINAL-1-1.pdf
8. Onyeaghala CA, Nortey MA, Bai-Sesay AU, Hassan A, Anyamene EL, Tsikata CY. Expanding differentiated service delivery from a HIV treatment model to a platform for broader healthcare in Sub-Saharan Africa. Discov Public Health. 2025;22(1):860. 10.1186/s12982-025-01273-3.
9. Shah A, Mackay N, Kitt H, Harrison C, Okumu-Camerra K, Ratna N et al. HIV testing, PrEP, new HIV diagnoses and care outcomes for people accessing HIV services: 2025 report [Internet]. UK Health Security Agency, London; 2025 Oct [cited 2026 Feb 17]. (The annual official statistics data release

(data to end of December 2024).). Available from: https://www.gov.uk/government/statistics/hiv-annual-data-tables/hiv-testing-prep-new-hiv-diagnoses-and-care-outcomes-for-people-accessing-hiv-services-2025-report

10. Schoemig V, Martin V, Shah A, Okumu-Camerra K, Mackay N, Bera S et al. HIV Action Plan monitoring and evaluation framework 2024 report: Report summarising progress from 2019 to 2023. [Internet]. London: UK Health Security Agency; 2024 Dec [cited 2026 Feb 17]. Available from: https://www.gov.uk/government/publications/hiv-monitoring-and-evaluation-framework/hiv-action-plan-monitoring-and-evaluation-framework-2024-report
11. Gutner CA, Hocqueloux L, Jonsson-Oldenbüttel C, Vandekerckhove L, van Welzen BJ, Slama L, et al. Implementation of long-acting cabotegravir and rilpivirine: primary results from the perspective of staff study participants in the Cabotegravir And Rilpivirine Implementation Study in European Locations. J Int AIDS Soc. 2024;27(7):e26243. 10.1002/jia2.26243.
12. Czarnogorski M, Garris CP, Dalessandro M, D'Amico R, Nwafor T, Williams W et al. Perspectives of healthcare providers on implementation of long-acting cabotegravir plus rilpivirine in US healthcare settings from a Hybrid III Implementation-effectiveness study (CUSTOMIZE). J Int AIDS Soc Sep;25(9):e26003. 10.1002/jia2.26003
13. Mantsios A, Murray M, Karver TS, Davis W, Galai N, Kumar P, et al. Multi-level considerations for optimal implementation of long-acting injectable antiretroviral therapy to treat people living with HIV: perspectives of health care providers participating in phase 3 trials. BMC Health Serv Res. 2021;21(1):255. 10.1186/s12913-021-06214-9.
14. Tarfa A, Sayles H, Bares SH, Havens JP, Fadul N. Acceptability, Feasibility, and Appropriateness of Implementation of Long-acting Injectable Antiretrovirals: A National Survey of Ryan White Clinics in the United States. Open Forum Infect Dis. 2023;10(7):ofad341. 10.1093/ofid/ofad341.
15. Christopoulos KA, Grochowski J, Mayorga-Munoz F, Hickey MD, Imbert E, Szumowski JD, et al. First Demonstration Project of Long-Acting Injectable Antiretroviral Therapy for Persons With and Without Detectable Human Immunodeficiency Virus (HIV) Viremia in an Urban HIV Clinic. Clin Infect Dis. 2023;76(3):e645–51. 10.1093/cid/ciac631.
16. Nguyen N, Lane B, Golub SA, Chastain C, Zucker J, King K, et al. Long-acting injectable ART to advance health equity: a descriptive analysis of US clinic perspectives on barriers, needed support and programme goals for implementation from applications to the ALAI UP Project. J Int AIDS Soc. 2024;27(S1):e26282. 10.1002/jia2.26282.
17. Fisk-Hoffman RJ, Ranger SS, Gracy A, Gracy H, Manavalan P, Widmeyer M, et al. Perspectives Among Health Care Providers and People with HIV on the Implementation of Long-Acting Injectable Cabotegravir/Rilpivirine for Antiretroviral Therapy in Florida. AIDS Patient Care STDs. 2024;38(6):275–85. 10.1089/apc.2024.0067.
18. Erguera XA, Smith MB, Pareek P, Dawdani A, Dance KV, Walker RS, et al. Optimizing the patient journey: Insights from early implementation of long-acting cabotegravir and rilpivirine in four urban

Ryan White-funded clinics in the United States. J Int AIDS Soc. 2026;29(2):e70082. 10.1002/jia2.70082.

19. Adekunle RO, Kirk S, Williams J, Hanson R, Moreland-Johnson A, Fonner V, et al. Receipt of Injectable HIV Treatment in Clinic Versus at Home: Perspectives of Persons Living with HIV Infection. AIDS Patient Care STDs. 2023;37(9):428–31. 10.1089/apc.2023.0154.
20. Fletcher L, Burrowes SAB, Khan GK, Sabin L, Johnson S, Kimmel SD, et al. Perspectives on long-acting injectable HIV antiretroviral therapy at an alternative care site: a qualitative study of people with HIV experiencing substance use and/or housing instability. Harm Reduct J. 2023;20(1):4. 10.1186/s12954-023-00730-z.
21. Collins LF, Koester KA, McNulty MC, Montgomery ET, Johnson MO, Neilands TB, et al. Patient Attitudes Toward Self- or Partner-, Friend-, or Family-Administered Long-acting Injectable Antiretroviral Therapy: A Mixed-Methods Study Across 3 Urban Human Immunodeficiency Virus Clinics. Open Forum Infect Dis. 2024;11(6):ofae265. 10.1093/ofid/ofae265.
22. Fletcher L, Burrowes S, Sabin LL, McCann N, Khan GK, Ruiz-Mercado G, et al. Long-Acting Injectable ART in Practice: A Mixed Methods Implementation Study Assessing the Feasibility of Using LAI ART in High Risk Populations and At Alternative Low Barrier Care Sites. AIDS Patient Care STDs. 2024;38(5):221–9. 10.1089/apc.2024.0048.
23. Perez A, Nieves S, Meisner J. Implementation of Injectable Cabotegravir/Rilpivirine for Treatment of Human Immunodeficiency Virus in Patients With Substance Use Disorders at a Syringe Exchange Clinic. Open Forum Infect Dis. 2024;11(11):ofae640. 10.1093/ofid/ofae640.
24. Dieterich M, Patel R, Rybicki-Newman M, Richardson K, Sarkodie E, Schrag J, et al. 577. Acceptability, Feasibility and Appropriateness of the Mobile Outreach Retention and Engagement (MORE) Program and Home Long-Acting Cabotegravir/Rilpivirine (CAB + RPV LA) Injections for People with HIV (PWH) Experiencing Adherence Challenges at Whitman-Walker Health in Washington D.C. Open Forum Infect Dis. 2026;13(Supplement1). ofaf695.186.
25. Moreland AD, Hanson R, Kirk SE, Berry H, Fonner V, Williams J, et al. Quantitative and Qualitative Perspectives of Participants Who Received Long-Acting Injectable Cabotegravir-Rilpivirine at Home or in Clinic. AIDS Patient Care STDs. 2025;39(8):300–5. 10.1089/apc.2025.0024.
26. Gutner C, Harrington CM, Bontempo G, Pazhamalai S, Kumar A, Rimler K, et al. P-545. Feasibility, Fidelity, and Effectiveness of Administering CABENUVA in Infusion Centers. Open Forum Infect Dis. 2025;12(Supplement1):ofae631744. 10.1093/ofid/ofae631.744.
27. Hernández-Sánchez D, Leyva-Moral JM, Olalla J, Negredo E, on behalf of the HOLA Study Group. Barriers and Facilitators of Implementation of the Non-Hospital-Based Administration of Long-Acting Cabotegravir Plus Rilpivirine in People with HIV: Qualitative Data from the HOLA Study. Viruses. 2025;17(7):993. 10.3390/v17070993.
28. Instituto de Investigación Sanitaria de la Fundación Jiménez Díaz. Implementation of Long-acting Cabotegravir + Rilpivirine Administration Out of HIV Units.[Clinical trial registration] [Internet].

clinicaltrials.gov; 2025 Jun [cited 2026 Feb 16]. Clinical trial registration no.: NCT06159894. Available from: https://clinicaltrials.gov/study/NCT06159894.

29. Lam C, Bangham M, Rose M, Narayanasamy S, Sullivan A, Dowling R, et al. Implementation of a Hospital in the Home model for delivery of long-acting injectable antiretroviral therapy to people living with HIV: development, integration and early experience. Sex Health. 2026;23(2):SH25237. 10.1071/SH25237.
30. Tanner C, Alford K, Norcross C, Sabin C, Vera J, Cresswell F, Abstract. 202526(S4):5–701. doi:https://doi.org/10.1111/hiv.70104.
31. Orkin C, Hayes R, Haviland J, Wong YL, Ring K, Apea V, et al. Perspectives of People With HIV on Implementing Long-acting Cabotegravir Plus Rilpivirine in Clinics and Community Settings in the United Kingdom: Results From the Antisexist, Antiracist, Antiageist Implementing Long-acting Novel Antiretrovirals Study. Clin Infect Dis. 2025;80(5):1103–13. 10.1093/cid/ciae523.
32. Farooq HZ, Apea V, Kasadha B, Ullah S, Hilton-Smith G, Haley A, et al. Study protocol: the ILANA study - exploring optimal implementation strategies for long-acting antiretroviral therapy to ensure equity in clinical care and policy for women, racially minoritised people and older people living with HIV in the UK - a qualitative multiphase longitudinal study design. BMJ Open. 2023;13(7):e070666–070666. 10.1136/bmjopen-2022-070666.
33. Weiner BJ, Lewis CC, Stanick C, Powell BJ, Dorsey CN, Clary AS, et al. Psychometric assessment of three newly developed implementation outcome measures. Implement Sci. 2017;12(1):108. 10.1186/s13012-017-0635-3.
34. Damschroder LJ, Reardon CM, Widerquist MAO, Lowery J. The updated Consolidated Framework for Implementation Research based on user feedback. Implement Sci. 2022;17(1):75. 10.1186/s13012-022-01245-0.
35. Tanner C, Alford K, Vera J, Burns F, Ralph L, Cresswell F, et al. A165 Roll-out of long-acting injectable HIV treatment in the UK: successes and challenges. HIV Med. 2025;26(S2):17–137. 10.1111/hiv.70013.
36. Waters L, Winston A, Reeves I, Boffito M, Churchill D, Cromarty B et al. BHIVA guidelines on antiretroviral treatment for adults living with HIV-1 2022 (2025-interim-update) [Internet]. British HIV Association; 2025 Oct [cited 2026 Mar 3]. Available from: https://bhiva.org/wp-content/uploads/2025/10/BHIVA-guidelines-on-antiretroviral-treatment-for-adults-living-with-HIV-1-2025-interim-update.pdf
37. Bourdeau B, Rebchook G, Shade SB, O'Shea J, Buchacz K, Harris O, et al. Innovative administration of long-acting injectables for HIV treatment enhancement at home (INVITE-HOME): implementation science study protocol. BMJ Open. 2025;15(8):e097921. 10.1136/bmjopen-2024-097921.
38. Berg KA, Morelli MK, Hughes AM, Nelson A, Forkapa L, Maierhofer J, et al. P-349. Using Participatory Design to Establish a Workflow for Administration of Long-Acting Cabotegravir + Rilpivirine in Community Pharmacies. Open Forum Infect Dis. 2026;13(Supplement1):ofaf695567. 10.1093/ofid/ofaf695.567.

39. Nkodo ENE, Furl R, Lyden E, Cramer D, O'Neill J, Kubat M, et al. P-2061. Beyond Distance: Social Barriers Influence Long-acting Antiretrovirals Location Preference Among People with HIV in Rural Areas. Open Forum Infect Dis. 2026;13(Supplement1):ofaf6952225. 10.1093/ofid/ofaf695.2225.
40. Gutierrez JIJ, Montgomery ET, Dilworth SE, McNulty MC, Colasanti JA, Johnson MO, et al. Identifying Preferred Program Delivery Attributes for Long-Acting Injectable Cabotegravir-Rilpvirine in Three US HIV Clinics: A Discrete-Choice Experiment. JAIDS J Acquir Immune Defic Syndr. 2025;99(3):248. 10.1097/QAI.0000000000003661.

Figures

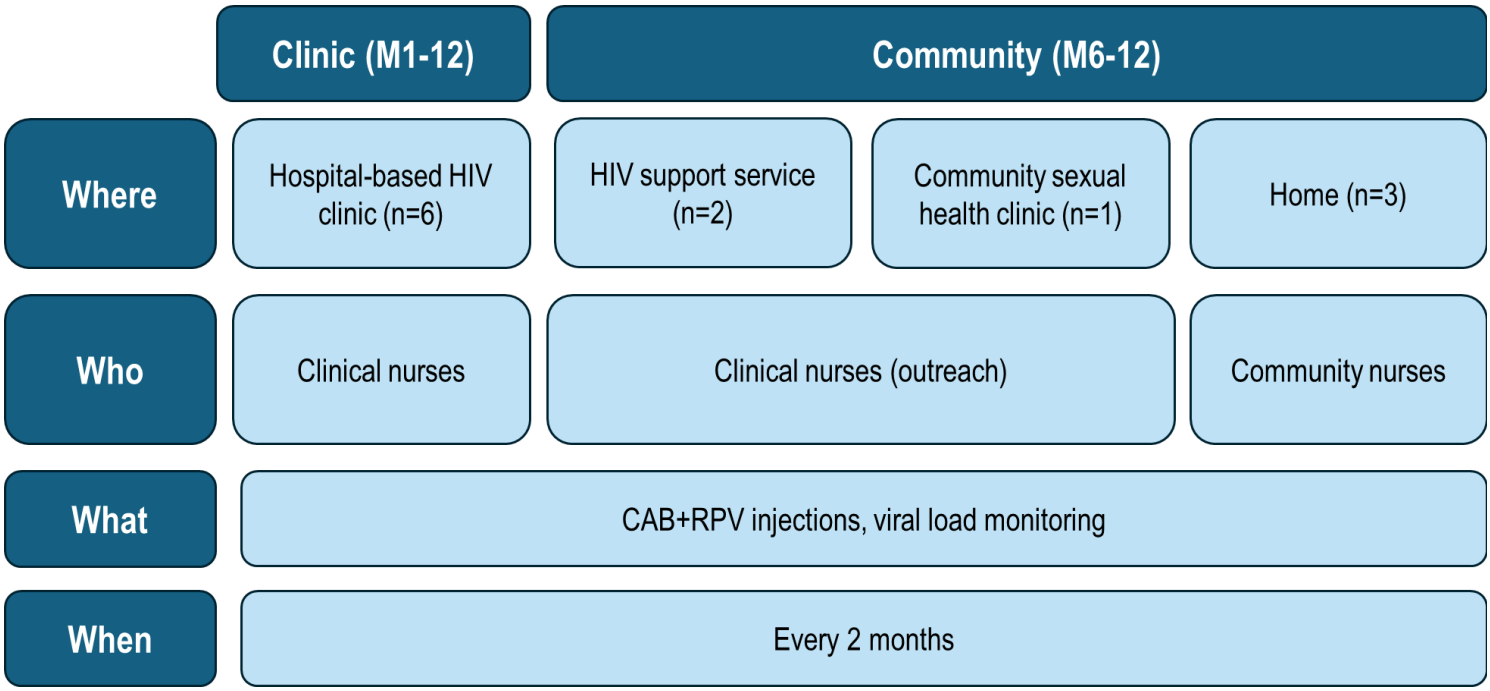


Figure 1

Differentiated service delivery of CAB+RPV HIV treatment for sites participating in the ILANA (N=6)

Supplementary Files

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