

Experiences of initiating rapid antiretroviral therapy among people newly diagnosed with HIV in East London: A qualitative study

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RD and KD are responsible for the overall content as guarantors.

RD designed the study, carried out and analysed the interviews and drafted the manuscript.

AM reviewed the study design, carried out and analysed the interviews and reviewed the manuscript.

JT reviewed the study design, advised on the running of the study and reviewed the manuscript.

LK reviewed the study design, advised on the running of the study and reviewed the manuscript.

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CO reviewed the study design and the manuscript.

KD designed the study, supervised the research and drafted the manuscript.

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Abstract

Objectives

This study aims to explore the experiences of people who initiated rapid antiretroviral therapy (ART) within seven days of HIV diagnosis as part of routine care in London.

Methods

Using purposive sampling, 18 in-depth, semi-structured interviews were conducted between December 2020 - September 2021 with people who started rapid ART at Barts Health NHS Trust. Participants aged 22-69 years included 15 cisgender men and 3 cisgender women. Five identified as heterosexual and 13 as gay and bisexual men who have sex with men. Ethnic identities: 6 White Non-UK, 5 White UK, 3 Black Caribbean, 2 South Asian, and 2 East Asian. Interviews explored feelings about the new HIV diagnosis, attitudes to rapid ART including barriers to and facilitators of starting. Thematic analysis of transcribed interviews was undertaken.

Results

Four themes were identified 1) being offered rapid ART is acceptable 2) it's a way of taking control of their health 3) the need for information and support and 4) an individualised approach to care. Reasons for starting included getting well, staying well, and reducing the likelihood of passing on HIV. Facilitators included being given comprehensive information about treatment and managing potential side-effects, and a supportive clinical team. Support specified included a non-judgemental attitude, approachability, reassurance, encouragement and information about peer support. Most participants expressed they could not understand why people would not begin treatment, but suggested needing more time to decide and denial of diagnosis as possible barriers.

Conclusions

To our knowledge this is the first qualitative study exploring the experiences of people initiating rapid ART in the UK. It was deemed highly tolerable and even desirable to an ethnically diverse, predominantly male sample of people newly diagnosed with HIV. Future research should include strategies to recruit a more gender diverse sample and those who declined, or stopped rapid ART.

Key messages

- This is the first qualitative UK study to focus on the experiences of people starting rapid ART within seven days of diagnosis, as part of routine care.
- We found that rapid ART was highly tolerable and even desirable to an ethnically diverse, predominantly male sample of people newly diagnosed with HIV in London.
- Participants expressed the importance of the quality of the relationship with the HIV clinical team and the need to provide comprehensive information when offering rapid ART.

- We recommend an individually tailored approach to care when offering rapid ART as well as information, counselling and peer support.

Introduction

Since 2015, the World Health Organisation has recommended people living with HIV should start antiretroviral therapy (ART) regardless of CD4 count¹. However, care pathways to ART initiation can be protracted, resulting in unnecessary barriers to ART access^{2,3}. In settings where there are prolonged waiting times for ART, there are high rates of disengagement^{4,5}. In 2017, the World Health Organisation recommended rapid ART, defined as initiating ART within seven days of a HIV diagnosis⁶. Potential benefits of rapid ART include improved clinical outcomes such as reduced time to viral suppression, fewer tuberculosis and severe bacterial infections and greater engagement in care^[7-12]. Rapid ART may also have a long-term impact on HIV reservoir clearance for those with primary HIV infection¹³. The latest ART guidelines from the British HIV Association (BHIVA) are the first to mention rapid ART outside of the context of primary HIV infection in the UK¹⁴. However, they focus on ART offered on the same day as HIV diagnosis (not within seven days), recommending it when an individual wishes to, is ready to start, and it is clinically appropriate, as long as information on the potential advantages and disadvantages are given.

Literature looking at rapid ART has found high uptake rates, in a variety of settings^{12,15,16}. Qualitative studies in the United States (US), Eastern Africa and South Africa show various barriers to and facilitators of uptake among people living with HIV and their healthcare professionals¹⁷⁻²⁶. Barriers include time to adjust to the new HIV diagnosis, shock, denial, fear of domestic violence, anticipated side-effects and logistical issues. Facilitators such as wanting to improve health, a sense of agency, the benefits of viral suppression and provider knowledge and attitudes have been reported¹⁷⁻²⁶.

In the UK, high uptake has been demonstrated in an urban population of gay and bisexual men who have sex with men (GBMSM)²⁷. However, beyond this study there is a lack of evidence on the uptake of and experiences of people starting rapid ART in the UK. This article reports findings from a qualitative study, aiming to explore the experiences of people who started rapid ART within seven days of diagnosis, and the barriers to and facilitators of rapid ART initiation.

Methods

In 2019, Barts Health NHS Trust launched the East London Immediate ART (ELIA) pathway offering rapid ART within seven days of HIV diagnosis (Supplementary Figure 1). Barts Health NHS Trust serves a population in East London with a high UK HIV prevalence of between 5.7 to 11.8 cases /1000 people aged 15-59 years²⁸. This includes communities with complex social and healthcare needs due to for example, the impacts of poverty, systemic racism, insecure immigration status, homelessness and addiction. During the first two years, approximately 180 individuals were offered rapid ART with 87% of individuals taking up the offer²⁹. Out of these individuals offered rapid ART, 26% were female, 51% were GBMSM, 45% were White (UK and non-UK) and the median age was 34 years. Of those that didn't

start rapid ART, some waited for baseline blood results and initiated ART more than seven days after diagnosis.

Between December 2020 – September 2021, 18 in-depth semi-structured interviews were conducted with people offered rapid ART through the ELIA pathway. This population were diverse in terms of sex, gender and ethnic identities. A purposive sampling approach was used to ensure a wide range of participants with different background characteristics including gender, age, ethnicity and sexual orientation. Participants were identified by the clinical team from the patient log and given information about the study. The study team followed up with patients who indicated interest in participation, to provide more information about the study, and on agreement arranged an interview time.

All interviews were conducted by RD and AM. RD is a British Asian, female doctor. AM is a white, queer, female social scientist and has a PhD. Both RD and AM are experienced researchers and were supervised for this study by KD who specialises in qualitative methods. None of the study participants were previously known to either RD or AM. RD works at Barts Health NHS Trust as a HIV clinician. Throughout the process, she reflected with AM and KD on her position as both a clinician and researcher, and how this may affect her approach to the interviews and analysis. She did not approach any potential participants or interview any participants that she had previously had any contact with as a clinician.

Eleven interviews were conducted over the telephone, five over Zoom and two in person. The use of Zoom and telephone interviews was primarily due to the COVID-19 pandemic which made in-person interviews impractical due to social distancing requirements. All participants were interviewed on their own. The study team conducted a quality review of the data emerging from the first five interviews to ensure that the mode of interviews was gathering data of sufficient quality and depth. All interviews were conducted with a pre-prepared interview topic guide devised by the study team that had been piloted with two persons living with HIV (Supplementary Figure 2). The interview guide was developed with the socio-ecological model of health as a conceptual framework³⁰. This guided both the questions asked and also the background to the study, as the team wanted to know what people from diverse backgrounds and communities experienced. The interviews explored participants' feelings about the new HIV diagnosis, attitudes to ART initiation, barriers to, and facilitators of accepting rapid ART, and recommendations for future improvements. The interviews lasted between 30-45 minutes. A debrief was conducted after each interview between the interviewer and KD to discuss emerging themes and any unanticipated methodological or ethical concerns. No participants required repeat interviews and none dropped out of the study. Participants were reimbursed for their time with £30 gift vouchers.

All interviews were recorded and transcribed, and managed in Nvivo Version 12. Transcripts were analysed using a reflexive thematic approach³¹. The first three interviews were open coded independently by RD and AM to produce a coding framework that was used to code the remainder of the interviews³². Following the standardisation of all codes, RD, AM and KD developed the core themes, which were then refined in consultation with the broader study team. Ethical approval was granted by Camden and Kings Cross Research Ethics Committee (20/LO/0390). Participants were given an information sheet and consent form in advance of

the interview and time to ask questions. Participants provided verbal consent, which was recorded and transcribed or written consent. The study was funded by a BHIVA Research Award 2019, reference 5020.

Results

Participant characteristics

The sample of 18 participants had a median age of 34 (range 22-69 years; median age of men = 33 and women = 41 years). Time from diagnosis to interview ranged from 2-22 months. All participants had started ART and were taking it at the time of interview. Table 1 has more details.

Table 1. Participant demographics

Demographic		n (total N = 18)
Gender	Cis-male	15
	Cis-female	3
Sexual orientation	GBMSM	13
	Heterosexual	5
Ethnicity	White Non-UK	7
	White UK	5
	Black Caribbean	2
	South Asian	2
	East Asian	2

Our sample was representative of the ELIA cohort with regards to age, but women, people from Black ethnic groups and heterosexuals were under-recruited.

Through our analysis, four themes were identified.

1. Being offered rapid ART is acceptable

Being offered rapid ART within seven days of HIV diagnosis was deemed acceptable in retrospect. Many participants viewed it as the next step after diagnosis, particularly if they felt unwell. Most expressed they could not understand why people would delay treatment, as research has shown that it is potentially lifesaving and as it means that they can lead a “normal life”. One participant acknowledged that having regular check-ups meant their life span could even be extended, as any illnesses would get picked up early. However, some said that delaying treatment could be understandable, as the HIV diagnosis, its implications and information about treatment could be overwhelming. Patients were also making a decision to start lifelong treatment, taking tablets daily, so this may require some time for consideration. When asked about why people may not accept rapid ART, needing more time to decide, “to get comfortable with the diagnosis”, denial of diagnosis and not wanting to live were suggested.

Table 2. Theme 1: Being offered rapid ART is acceptable

Participant demographics	Quote
White UK GBMSM aged 26-35yrs	<i>"I've kinda dealt with it a bit more pragmatically – I've seen there's a problem that needs to be fixed, and I think that just comes from the way that I work. I just saw it as a problem that needed sorting."</i>
White non-UK heterosexual woman aged 36-45yrs	<i>"Why you wouldn't? You've got a sickness that you know is gonna kill you if you don't take the treatment. You've got research over the years that this treatment can help you have a normal life – maybe a better life because you are checked every six months." 41-year-old woman.</i>
White UK GBMSM aged 26-35yrs	<i>"So, I do get the hesitance because there is a lot to take in. Before you start on meds, you might want to just get comfortable with what's going on, before you then put this thing in. You are introducing something that's gonna be part of your daily routine...potentially the rest of your life, so I understand why people might be a bit hesitant at the start."</i>
White UK GBMSM aged 26-35yrs	<i>"So, like, there was never really anything to think about. It was like, I don't know, when you go to the hospital and you've got a broken leg, you don't have to think about whether or not you want your leg put in a cast, they just do it because that's what you need. So, it was kind of like that. I was just sort of like 'yep, fine, let's like... give me my tablets, let me go, I'll do it.'"</i>
Black Caribbean heterosexual man aged 46- 55yrs	<i>"Starting treatment is like what you'd say in my language, is like a no-brainer."</i>

2. Rapid ART is a way of taking control of their health

Participants expressed viewing HIV as a serious diagnosis, and ART life-saving. Therefore, taking rapid ART was a way of taking action quickly to regain control of their health, and avoid becoming unwell. Several participants had been unwell for many months, so the diagnosis gave them an explanation for their symptoms and a way of resolving them. For participants who were asymptomatic when diagnosed, they saw rapid ART as a way in which they could stay well. Some participants knew of people who had died from HIV, so this reinforced their view that ART could prevent this happening to them. Participants took

comfort in the fact it was offered so quickly and that their healthcare needs were being prioritised and taken seriously. Reasons for starting included the desire to get well, stay well, to reduce their likelihood of passing on HIV and to live “a normal life” again.

Table 3. Theme 2: Rapid ART is a way of taking control of their health

Participant demographics	Quote
White UK GBMSM aged 26-35yrs	<i>“I have always had the thought process that this medication was life-saving, and so therefore I just need to take it.”</i>
Black Caribbean heterosexual man aged 46- 55yrs	<i>“You know, there’s only one way and it’s to start treatment. If you go the other way then you’re gonna get sicker, you’re gonna mess your life up.”</i>
White UK GBMSM aged 26-35yrs	<i>“I mean, I was very happy to be offered it on the day. I took comfort I think in knowing how quickly everything was being responded to.”</i>
White UK GBMSM aged 26-35yrs	<i>“Like the fever just came and went and came again so it was really, really, really upsetting. Really annoying, and I just wanted something that can get rid of it already, so I was really, really happy that the doctor provided a treatment and ... after several days I started to feel better.”</i>
White non-UK GBMSM aged 20-25yrs	<i>“I mean of course like with, with any sickness, you start with treatment as soon as possible for your wellbeing, right?”</i>
East Asian GBMSM aged 26-35yrs	<i>‘I know that this treatment can help so that I have some hope. I know that I will be better’.</i>

3. The importance of being offered information and support

Many participants felt that receiving comprehensive information from the healthcare team was a facilitator to starting and staying on rapid ART. This included information on how treatment worked, managing potential side-effects, how to access peer support and counselling. The majority wanted to have everything explained to them by the healthcare team at initial appointments. Those that didn’t found having everything explained to be overwhelming. They preferred to take the clinicians’ advice and then be given leaflets and to be signposted to websites to read in their own time.

The importance of a supportive clinical team, who were approachable, non-judgemental, encouraging and reassuring was emphasised. Many said that being able to ask questions

and having them answered promptly, helped. Some participants also said that seeing an improvement in their symptoms and blood tests (particularly the HIV viral load) encouraged them to continue treatment. They also appreciated being given information on whether or not and how to share their diagnosis with others, and how they could access support for this if required.

Most participants said that they valued being offered peer support and counselling. However, preferences about the timing of when these were offered varied, with some preferring them immediately after diagnosis, and some months afterwards, when they felt more ready. This suggests that the offer should be made regularly from diagnosis onwards.

Trust in the healthcare team was seen as an important facilitator to starting rapid ART. Many said that they had been encouraged to start rapid ART by their care team, and that they had trusted in the advice they were given.

Table 4. Theme 3: The importance of being offered information and support

Participant demographics	Quote
White non-UK GBMSM aged 20-25yrs	<i>“They gave us a lot of literature explaining what HIV meant especially to young people, support services and the viral load and the explanation for all that. So yeah, it’s all been quite good, there, there wasn’t a lack of information.”</i>
White UK GBMSM aged 26-35yrs	<i>“What would have helped is just being told what to start with. I remember getting that list of all the meds, and I was just like, ‘I have no idea what you want from me, um, in this situation.’ I appreciate the information, and it was helpful, but... I just said, ‘Give me what will help.’”</i>
White UK heterosexual woman aged 56-65yrs	<i>“Seems like all the people that I’ve met are lovely, you know, caring and gentle and considerate. And trustworthy, I don’t feel that you know, anybody is going to be sort of you know, underhand in any way, I feel quite comfortable with it all.”</i>
White non-UK heterosexual woman aged 26-35yrs	<i>“So, yeah, probably the first thing is communities – that one is just quite helpful because you can see then that it’s other people who have the same issue, or same. You can talk with them, even, you know, you don’t talk, for example. In my case, I didn’t talk – I was just listening...”</i>
White UK GBMSM aged 26-35yrs	<i>“There was no judgement. I found it a very open environment and a safe environment.”</i>
White UK GBMSM aged 26-35yrs	<i>“She was just so nice to me when she told me. She offered me all the help that I wanted. She checked on me three or four times within the first couple of</i>

	<i>months and then again six months down the line, she just called me and I didn't ask her to. She would just call out of the blue and just ask me if I was alright, how I was doing, and that was really nice."</i>
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4. Providing an individualised approach to care

An individualised approach to care was mentioned by several participants who felt that this had been important to them. For example, one participant said that although initially his HIV viral load had been quick to drop, it then took a while to get to undetectable levels. He requested more frequent monitoring until the viral load was undetectable. Recognising his worry, the healthcare team agreed to the extra blood tests, which he was grateful for and alleviated his anxiety. Another preferred few tablets and was offered a switch to one pill, which they accepted. Participants recommended that the healthcare team should ask the individual what they needed.

Some participants did not want to be given a choice on which rapid ART regimen to start, preferring to be told by the healthcare team which they thought would be best for them. This could be regarded as being too paternalistic in approach for some people, so again an individualised approach should be taken. Indeed, some participants expressed that they wanted a choice.

There were also differences in attitudes to the peer support worker offered. Some participants preferred to see someone from a similar sociodemographic background to them, with regards to gender, age or sexuality. The last quote in Table 5 from the White UK GBMSM aged 46-55yrs demonstrates this well. This would make them more likely to continue with peer support. Participants who reported negative experiences of peer support said they did not feel like they had life experiences in common with the worker they were allocated. However, some participants had no preference. This suggests participants should be offered a choice where available. Some participants also talked about attending peer groups for people newly diagnosed with HIV, where they found comfort in hearing other peoples' narratives.

Table 5. Theme 4: Providing an individualised approach to care

Participant Characteristics	Quote
East Asian GBMSM aged 26-35yrs	<i>"Different people have different ways of dealing with their problems. I mean generally that's how you should be approached. You see the individual... you tailor to their needs."</i>
South Asian GBMSM aged 20-25yrs	<i>"Actually, I was a bit bad with my medication when I first started, like just being consistent with it. So then once they realised that they, instead of giving me two pills they gave me a brand-new pill which was all of them put together one smaller pill, which I take now. Just one pill a day and it's so easy."</i>

White UK GBMSM aged 26-35yrs	<i>“So, they were really great coz they allowed me to come back like more regularly. I was like ‘well, can I come back in three weeks or something? So, they allowed me to come back in three weeks as opposed to three months, just because that’s what I wanted.”</i>
White UK GBMSM aged 46-55yrs	<i>“I think it’s really important that I relate to them. The person I spoke to had come from a similar way that they contracted it and they’d also got that same attitude towards it ‘cause they’d lived through all the horrible adverts of the 90s and we could laugh at those things and certain things.”</i>

Discussion

In this qualitative study of people who initiated rapid ART, within seven days of diagnosis as part of routine care at Barts Health NHS Trust in London, we found rapid ART was deemed to be tolerable and even desirable for some. Using thematic analysis of 18 semi-structured interviews, four themes were identified. These were that 1) being offered rapid ART is acceptable 2) it’s a way of taking control of their health 3) the need for information and support and 4) an individualised approach to care.

The participants found that being offered rapid ART was retrospectively acceptable to them, meeting the component constructs of ‘affective attitude’, ‘intervention coherence’ and ‘self-efficacy’ in Sekhon’s theoretical framework of acceptability³³. Qualitative studies in the US and Eastern Africa¹⁷⁻¹⁹ and uptake rates reported in the UK also found rapid ART to be acceptable²⁷. Like participants in the US study, our participants viewed rapid ART as the logical next step after diagnosis and found reassurance in the speed of the response to diagnosis from healthcare providers¹⁸.

Most of the participants in our study could not understand why people would not start rapid ART. This is likely to be because all of our sample initiated rapid ART. When asked about why people may not start, participants felt it may be due to needing more time to decide, denial of diagnosis and not wanting to live. Other qualitative studies have shown that needing more time to process the diagnosis, and denial are barriers to starting immediately¹⁷⁻¹⁹. Additional barriers cited in other qualitative studies, but not ours, include feeling too healthy to need medication¹⁷, fear of side-effects^{17,20}, the stigmatising nature of attending clinic for ART²⁰, not understanding the benefits of rapid ART¹⁷ and logistical issues^{18,19}.

Many of the participants expressed that taking rapid ART helped them to feel more in control of their health at the time of a serious diagnosis. This suggests that rapid ART may help people feel empowered to be proactive about their diagnosis. Participants of the US study also reported this feeling of being in control and related this to a reduction in the anxiety of getting physically unwell¹⁸. The authors of this study felt that this mitigation in anxiety may even partially ease the psychosocial challenges of a HIV diagnosis. Another US study also reported that participants feared what would happen to their health if they did not start treatment¹⁹.

Being given comprehensive information, the quality of the relationship with the healthcare team and being treated as an individual were important facilitators of accepting rapid ART in our study. In the US, three qualitative studies found that having clinical teams that were supportive, were seen to be warm and encouraging and were viewed as skilled and knowledgeable were important^{18,19,22}. In East African settings, participants also highlighted the need for individualised counselling, that the healthcare team were available, aware of what each service-user was taking and provided phone call reminders to take their medication¹⁷.

There were considerable strengths to our study. Firstly, to our knowledge, this is the first qualitative study examining the experiences of people initiating rapid ART in the UK. Due to the heterogeneity of the Barts Health NHS Trust patient cohort, we were able to recruit an ethnically diverse sample, and a proportion of our sample was heterosexual. The study was initiated in December 2019 just before the advent of the COVID-19 pandemic – as a study team we had to overcome several barriers related to this. These included swiftly adapting to carrying out Zoom and telephone interviews as in-person interviews were not possible, and pausing the study during redeployment of several clinical members of the team in the first and second waves.

Limitations of the study included difficulties recruiting cis-women, trans and non-binary people. This was despite regular review of our recruitment strategies within the study team, which included cis-women and lived experience of HIV. We note that out of the population eligible for the study, more than two thirds were cis-men so there were fewer cis-women and even fewer (<5) trans and non-binary people to approach. It's possible that cis-women, trans and non-binary people may have preferred to meet the study team in person to discuss their potential involvement, rather than by phone or email. Barriers to recruitment in general may have included not being familiar with taking part in research, adjusting to the HIV diagnosis and stigma. We were unable to recruit people who had stopped rapid ART.

Our study has several implications. It suggests that rapid ART, starting within seven days of diagnosis, is desirable, may offer a sense of empowerment and provides benefits along with other parts of HIV care. The BHIVA guidelines recommend as a good practice point that “the advantages and disadvantages of starting ART the same day as diagnosis are discussed with each person, including the lack of proven benefit for same-day ART in a UK or similar setting”¹⁴. We agree that informed choice is essential and believe that our study contributes to evidence for this.

We recommend that clinics develop streamlined pathways to offer rapid ART within seven days of HIV diagnosis to eligible individuals within a package of support. This should include counselling and peer support. This package should be tailored to the individual depending on their needs at different stages after the diagnosis. People must be able to make an informed decision about whether to start ART, so providing comprehensive information about rapid ART and easy access to clinic staff for queries is essential.

Future qualitative research should include strategies to recruit a more gender diverse sample of participants and those who did not start, or stopped rapid ART. It would also be

useful to interview people who started rapid ART several years afterwards to explore how their attitudes to it have developed over time.

Conclusion

To our knowledge this is the first qualitative study exploring the experiences of people initiating rapid ART in the UK. Starting rapid ART was highly tolerable and even desirable to an ethnically diverse, predominantly male sample of people newly diagnosed with HIV. Findings emphasise the importance of a tailored approach to care, the quality of the relationship with the HIV clinical team, and the need to provide comprehensive information, counselling and peer support when offering rapid ART. Further research should look at strategies to recruit a more gender diverse sample, people who did not accept rapid ART, or stopped rapid ART.

References

1. Guideline on When to Start Antiretroviral Therapy and on Pre-Exposure Prophylaxis for HIV. Geneva: World Health Organization; 2015 Sep. Accessed 13 March 2023. <https://www.ncbi.nlm.nih.gov/books/NBK327115/>
2. Hoehn N, Gill MJ, Krentz HB. Understanding the delay in starting antiretroviral therapy despite recent guidelines for HIV patients retained in care. *AIDS Care* 2017;29(5):564-9.
3. Wachira J, Naanyu V, Genberg B, et al. Health facility barriers to HIV linkage and retention in Western Kenya. *BMC Health Services Research* 2014;14:646.
4. Rosen S, Fox MP. Retention in HIV care between testing and treatment in sub-Saharan Africa: a systematic review. *PloS Med.*, 8 (2011), Article e1001056, [10.1371/journal.pmed.1001056](https://doi.org/10.1371/journal.pmed.1001056)
5. Clouse K, Pettifor AE, Maskew M, Bassett J, Rie A, Behets F, et al. Patient retention from HIV diagnosis through one year on antiretroviral therapy at a primary health care clinic in Johannesburg, South Africa. *Journal of Acquired Immune Deficiency Syndromes* 2013;62(2):e39-46.
6. World Health Organization. Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy. Accessed 22 August 2022. <https://www.who.int/publications/i/item/9789241550062>
7. Bai R, Du J, Lv S, Hua W, Dai L, Wu H. Benefits and Risks of Rapid Initiation of Antiretroviral Therapy: A Systematic Review and Meta-Analysis. *Front Pharmacol.* 2022;13:898449. Published 2022 Jun 3. Doi:10.3389/fphar.2022.898449
8. Mateo-Urdiales A, Johnson S, Smith R, Nachega JB, Eshun-Wilson I. Rapid initiation of antiretroviral therapy for people living with HIV. *Cochrane Database Syst Rev.* 2019;6(6):CD012962. Published 2019 Jun 17. Doi:10.1002/14651858.CD012962.pub2
9. Ford N, Migone C, Calmy A, et al. Benefits and risks of rapid initiation of antiretroviral therapy. *AIDS* 2018;32(1):17-23
10. Rosen S, Maskew M, Fox MP, et al. Initiating antiretroviral therapy for HIV at a patient's first clinic visit: the RapIT randomized controlled trial. *PloS Medicine* 2016;13(5):e1002015.
11. Bacon O, Chin J, Cohen SE, et al. Decreased Time From Human Immunodeficiency Virus Diagnosis to Care, Antiretroviral Therapy Initiation, and Virologic Suppression during the Citywide RAPID Initiative in San Francisco. *Clin Infect Dis.* 2021;73(1):e122-e128. Doi:10.1093/cid/ciaa620
12. Coffey S, Bacchetti P, Sachdev D, et al. RAPID antiretroviral therapy: high virologic suppression rates with immediate antiretroviral therapy initiation in a vulnerable urban clinic population [published correction appears in *AIDS*. 2019 Nov 1;33(13):2113]. *AIDS.* 2019;33(5):825-832. Doi:10.1097/QAD.0000000000002124
13. Massanella M, Bender Ignacio RA, Lama JR, et al. Long-term effects of early antiretroviral initiation on HIV reservoir markers: a longitudinal analysis of the MERLIN clinical study. *Lancet Microbe.* 2021;2(5):e198-e209. Doi:10.1016/S2666-5247(21)00010-0
14. British HIV Association guidelines on antiretroviral treatment for adults living with HIV-1 2022 Accessed 22 October 2022. <https://www.bhiva.org/file/63513a1745ea9/BHIVA-guidelines-on-antiretroviral-treatment-for-adults-living-with-HIV-1-2022.pdf>

15. Black S, Zulliger R, Myer L, et al. Safety, feasibility and efficacy of a rapid ART initiation in pregnancy pilot programme in Cape Town, South Africa. *South African Medical Journal* 2013;103(8):557-62.
16. Pilcher CD, Ospina-Norvell C, Dasgupta A, et al. The effect of same-day observed initiation of antiretroviral therapy on HIV viral load and treatment outcomes in a US public health setting. *Journal of Acquired Immune Deficiency Syndromes* 2017;74(1):44-51.
17. Mwangwa F, Getahun M, Itiakorit H, et al. Provider and Patient Perspectives of Rapid ART Initiation and Streamlined HIV Care: Qualitative Insights From Eastern African Communities. *J Int Assoc Provid AIDS Care*. 2021;20:23259582211053518. Doi:10.1177/23259582211053518
18. Christopoulos KA, Erguera XA, VanderZanden L, et al. A Qualitative Study of the Experience of Immediate Antiretroviral Therapy Among Urban Persons With Newly Diagnosed Human Immunodeficiency Virus. *Open Forum Infect Dis*. 2021;8(12):ofab469. Published 2021 Sep 17. Doi:10.1093/ofid/ofab469
19. Amico KR, Miller J, Schairer C, et al. I wanted it as soon as possible: a qualitative exploration of reactions to access to same-day ART start among participants in San Diego's ART-NET project. *AIDS Care* 2020; 32:1191–7.
20. Ross J, Ingabire C, Umwiza F, et al. How early is too early? Challenges in ART initiation and engaging in HIV care under Treat All in Rwanda – A qualitative study. *PloS One*. 2021;16(5):e0251645. Published 2021 May 13. Doi:10.1371/journal.pone.0251645
21. Onoya D, Mokhele I, Sineke T, et al. Health provider perspectives on the implementation of the same-day-ART initiation policy in the Gauteng province of South Africa. *Health Res Policy Syst*. 2021;19(1):2. Published 2021 Jan 6. Doi:10.1186/s12961-020-00673-y
22. Harkness A, Wawrzyniak AJ, Kolber MA, et al. Multilevel Determinants of Rapid Antiretroviral Treatment Implementation and Demand in Miami-Dade County. *J Acquir Immune Defic Syndr*. 2022;90(S1):S177-S189. Doi:10.1097/QAI.0000000000002978
23. Koester KA, Moran L, LeTourneau N, et al. Essential elements of and challenges to rapid ART implementation: a qualitative study of three programs in the United States. *BMC Infect Dis*. 2022;22(1):316. Published 2022 Mar 31. Doi:10.1186/s12879-022-07297-3
24. Black S, Zulliger R, Marcus R, et al. Acceptability and challenges of rapid ART initiation among pregnant women in a pilot programme, Cape Town, South Africa. *AIDS Care - Psychological and Socio-Medical Aspects of AIDS/HIV* 2014;26(6):736-41.
25. Katirayi L, Namadingo H, Phiri M, et al. HIV-positive pregnant and postpartum women's perspectives about Option B+ in Malawi: a qualitative study. *Journal of the International AIDS Society* 2016;19(1):20919.
26. Helova A, Akama E, Bukusi EA, et al. Health facility challenges to the provision of option B+ in western Kenya: a qualitative study. *Health Policy Plan* 2017; 32:283–291.
27. Whitlock G, Carbonell M, Blackwell S, Nwokolo N; Dean Street Collaborative Group. Rapid initiation of antiretroviral therapy in those with newly diagnosed HIV infection in London, UK. *HIV Med*. 2019;20(10):699-703. Doi:10.1111/hiv.12780
28. Towards Zero, The HIV Action Plan for England 2022 to 2025. Accessed 13 March 2023. <https://www.gov.uk/government/publications/towards-zero-the-hiv-action-plan-for-england-2022-to-2025/annex-b-local-authorities-with-high-or-very-high-hiv-prevalence-2019>

29. Thornhill JP, Dhairyawan R, Moir K, et al. Immediate ART is feasible during the COVID-19 Pandemic. Poster PEB184. International AIDS Conference 2021. Berlin & Virtual. 18-21 July 2021. Available at: <https://theprogramme.ias2021.org/Abstract/Abstract/2242>
30. McLeroy KR, Bibeau D, Steckler A, Glanz K. An ecological perspective on health promotion programs. *Health Educ Q.* 1988 Winter;15(4):351-77. doi: 10.1177/109019818801500401. PMID: 3068205.
31. Braun V, Clarke V. Using thematic analysis in psychology. *Qualitative Research in Psychology.* 2006;3(2):77–101.
32. Nowell LS, Norris JM, White DE, et al (2017). Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16(1), 1609406917733847. doi: 10.1177/1609406917733847.
33. Sekhon M, Cartwright M, Francis JJ. Acceptability of healthcare interventions: an overview of reviews and development of a theoretical framework. *BMC Health Serv Res.* 2017 Jan 26;17(1):88. doi: 10.1186/s12913-017-2031-8. PMID: 28126032; PMCID: PMC5267473.