Note: This is Online Appendix 1 of Pillay T, Du Toit S, Sforza C, et al. Barriers and facilitators of ongoing engagement in substance use treatment programmes among people with HIV in South Africa: A qualitative analysis. S Afr J HIV Med. 2026;27(1), a1776. https://doi.org/10.4102/sajhivmed.v27i1.1776.

Online Appendix 1

Qualitative interview guide - Parent study

Qualitative Interview Guide: Provider Version
This interview will take approximately 45 minutes. Please let me know if you need a break at any time. The reason for this interview is to understand your perspective better as a provider at Matrix and how we can provide better substance use treatment for patients living with HIV. We are interested to know how we can integrate ARV adherence support for people with HIV into existing substance use treatment.

I will be audio recording this session. Your name will not be on the recording. After the interview, the recording will be typed up into a transcript. If you happen to refer to a name during the session, the name will be removed from the transcript. What you share during this interview will in no way affect your role at Matrix. Your responses in this interview will hopefully help us to develop better treatments for people with HIV who also use substances, so we would appreciate it if you can be as honest as you can in your responses.

Any time you want to stop the interview or have me turn off the recording, you can tell me, and we will stop.

Do you have any questions before we start?

Note: This document is meant to be a guide for the interviewer to structure the interview; however, the interviewer is encouraged to follow the participant's responses and probe to gather as accurate a sense of their perspectives as possible. The primary topic areas will stay the same, but the specific questions we expect to change over time as we gather perspectives.
(Turn on the recording)
Introduction:

1. I'd like to start by telling you about the treatment we developed called "Khanya." Are you aware of our study at Town 2?

a. ***Probe (if yes):*** What have you heard about it? What are your thoughts on [reference what they know/have heard about Khanya]?

b. ***Probe (if yes):*** Do you know any patients who were in Khanya? Tell me about what you noticed in patients who received the Khanya intervention.
Let me tell you a little bit more about Khanya. First, the name translates to 'glow, direction, or light' in isiXhosa. The treatment is six sessions and is designed to help people living with HIV who are non-adherent to their ARVs AND who actively use alcohol or other substances, such as marijuana or tik. The treatment teaches specific behavioural skills to help patients improve their adherence to their ARVs and change their substance use.

Feasibility, barriers/facilitators of uptake

1. Let me tell you more about the HIV treatment component, which is called Life Steps. Life Steps is a brief behavioural intervention where we discuss a patient's adherence goals, the challenges or barriers that stand in their way of reaching those goals, and then we come up with plans that help them overcome the barriers so that they can adhere to their ARVs every day. We go through some of the most common barriers to taking ARVs such as transportation, forgetting, or alcohol use.

a. What are your overall reactions to the idea of integrating Life Steps into Matrix?

2. What are some of the barriers that would make it harder to integrate Life Steps into Matrix?
a. Probe. What are some patient barriers?
b. Probe. What are some provider barriers?
c. Probe. What are some clinic-level barriers?

3. What are some facilitators, or things that would make it easier, to integrate Life Steps into Matrix?
a. Probe. For patients?
b. Probe. For providers?
c. Probe. For the clinic?

4. Please describe how we could support Matrix providers to deliver interventions for HIV treatment adherence as part of their role.
a. Probe. What would get in the way?
b. Probe. What would make it easier?

Feedback on preliminary results

5. We wanted to share some preliminary results from our Khanya study and get your feedback on them. Half of our sample received Khanya, a six-session treatment. The other half were given a referral to Matrix and walked over. We found that patients who attended the Khanya intervention and patients who were referred to Matrix both improved their substance use. However, only the patients in Khanya improved their HIV medication adherence. What are your reactions to this finding?
a. Probe. What are your reactions to the substance use findings that both groups, including those who received Matrix, improved?
b. Probe. What are your reactions to the adherence findings that only the Khanya group, not the Matrix only group improved?

6. We found that most patients who were referred to Matrix through the study attended the intake appointment, but did not attend any follow-up visits. Why do you think this is?
a. Probe: Tell me how this is similar or different from what you see in clinical practice at Matrix.
b. Probe: Why do patients drop out of care after the intake appointment?

7. What are strategies that you or your colleagues use to increase patient engagement and attendance at Matrix, especially when patients first start treatment?
a. Probe: What do you think patients need to stay engaged in care?

8. Although the majority of patients only attended the intake session, we did see improvements in substance use among patients, even after only attending the intake and then completing assessments with our team. What is your reaction to this finding?
a. Probe: Why do you think these patients still improved, even though they did not complete the Matrix programme?
b. Probe: Is it ever the case that patients attend the intake assessment and that, in and of itself, is an intervention that gets them to change their behaviour? Tell me more about that.

HIV adherence and referrals

9. How do Matrix providers currently support patients who are not adhering to their HIV treatment?
a. Probe: What is working well currently?
b. Probe: What is not working well currently?
c. Probe: What do providers need to be able to support patients who are not adhering to HIV treatment?

10. Tell me what happens clinically when you work with a patient who has medical comorbidities, either HIV or something else, say TB or diabetes, and you think the patient has not been keeping up with their medical care.

a. Probe (if not already addressed): Do you ever make a referral for a patient to the Town 2 clinic for medical reasons?

b. Probe: What information do you try to get from the patient to decide if they need a referral or need additional medical care?

c. Probe: What information do you try to get elsewhere to decide if the patient needs additional medical care? For example, you might look in the patient's chart or talk to the patient's family members to get additional information.

11. How would you describe the relationship between Matrix and Town II clinic in terms of coordinating care for shared patients?

a. Probe. What could be improved in order to provide patients with better care?

Other factors that improve outcomes

12. Please describe efforts at Matrix to include family members or loved ones in care.

a. Probe: What works well in these sessions?

b. Probe: What is challenging?

c. Probe: How can family members/loved ones be part of support to improve HIV medication adherence for patients at Matrix?

Wrap up

13. Please share any other feedback or thoughts you have on the topic we have been discussing.

Thank you for your time and for sharing your insights. We hope to use this information to improve our programme and we really value your input and guidance.

Qualitative Interview Guide: Patient Version

Introduction: This interview is going to take 45 minutes. Please let me know any time you need a break. The reason for this interview is to hear your ideas about the treatment you received from Khanya. We would like to hear your honest thoughts about the way you have been assisted and the way you have not been assisted here. Our wish is to improve the level of treatment and the way we treat our people here at Khanya, we ask you to share all the thoughts you have.

I will be recording your answers and your name will not be mentioned. There is no one here at Khanya who will listen to this recording, even Nonceba who delivered treatment and other clinic staff. When we are finished with this interview, all that has been said in this interview will be written down. If it happens that you mention someone's name, that name will be taken off when we write. All that will be said here will not affect your clinic treatment. We hope that your ideas will help us improve the level of this treatment and that of those infected by HIV who doubt the use of substances when using the treatment. And we would really appreciate your complete honesty in answering questions in this interview.

At any time when you feel that you want us to stop or you would like me to stop the recording of this interview, feel free to do so and we will stop.
Before we start, do you have any question/s?

Note: This paper is supposed to guide the researcher in the way of setting up this interview. Moreover, the researcher is urged to follow the answers of the participant and investigate to get exact answers and

ideas as much as they can. Topics will remain the same even though some questions may change during the course of time, depending on the ideas we are collaborating.

Switch on the recorder
Acceptability

1. Could you briefly explain to me about your experience of therapy sessions with your therapist, Nonceba in this treatment called Khanya? How can you explain your experience?
   Investigate: How was it?

2. **Which skills were helpful (or worked for you) in this treatment?** (By skills we mean the topics of the sessions you did with Nonceba. Please explain freely in your own words)
   Important: Do not mention the skills in the session. We would like to see which skills resonated with participants by hearing which skills they bring up.

3. Which skills (from Khanya Project Topics) have you used (or that you have tried using on your own) out of the session? (Ask for examples)

4. Which parts of Khanya Project are still helping you to this day? (Ask for examples)

a. **Investigate**: Please provide me with a recent example of this Khanya treatment, which has helped you in your life?
b. **Investigate**: Please provide me with w recent example when there was a time you used some of the skills from Project Khanya. (ask questions on using meds and alcohol or drugs)

5. **How satisfied are you about the time you spent in Project Khanya Intervention** (by Intervention we are talking about the things that you and Nonceba used and things that you focused on) Please explain why you are satisfied or not satisfied.
   Relation
6. Please tell me about your relationship with the interventionist (Alexandra L Rose et al.)

a. **Investigate**: What are the examples of how helpful she was in your interaction?
b. **Investigate:** What are the examples of how she can improve?

Suitability

1. How much did this treatment meet your needs? Now we mean, how much of the focus of this treatment did you find met those needs

Life steps – develop a plan and a back-up plan in order to overcome barriers in taking your ARVs on time
Behavioural activation-behavioural cycle, cravings and behaviour
Planning and monitoring substance free activities
Identifying values – important areas in your life or things that are important to you
Mindfulness – focusing on current things without judging yourself
Identifying high-risk situations – to avoid using substances or forgetting to take your ARVs regularly
Plans on continuing with work

2. Tell me about the areas of therapy that were not helpful to you. Explain the treatment sections that you found not useful to you.

a. Investigate: Why were they not helpful? How did you feel about these sections?

3. Is there a theme associated with the use of substances or adherence that you would have liked it to be added to the intervention?

4. Were there skills that you found that were familiar because you were already using them?

a. **Explanation**: If the meaning is unclear, in other words, did the interventionist try to teach you things that you already knew?
b. **Investigate**: Which words, in local language, could you use to describe what you have learnt from Khanya?

5. Can you tell me about the changes we can make in this programme to make it compatible with your culture and language?
a. **Probe:** What activities in this Khanya programme did you find similar to activities done in your culture or spoken in your language.
b. **Probe:** What can we add to the programme so that it is compatible with your culture or language?

6. People in your life – friends, family, your partner, community members: what role did they play in your use of substances (in a helpful or risky way)?
a. **Investigate**: If not mentioned before, investigate more about the partner

7. People in your life – friends, family, your partner, community members: what role did they play in your HIV adherence (in a helpful or risky way)?
a. **Investigate**: If not mentioned before, investigate more about the partner

8. How would you feel if you were to participate with a friend, a family member, a partner or a community member in this treatment?
a. **Investigate:** If you are not feeling free, is there any other person in your life who can give you support in this way? How is your relationship with this person?
b. **Investigate**: How much of great support can this person to you?

Feasibility

1. Could you please explain how it felt for you to come to your weekly sessions?
a. **Investigate**: Was it difficult for you to come to these sessions? Please give examples
b. **Investigate**: What made it easy for you to come to these sessions?
c. **Investigate**: How did you feel about coming to these sessions once a week?

2. Please explain challenges that you had in doing home activities. Now we are talking about the skills that you learnt in the treatment and that you practised outside therapy (like, skills that helped in taking meds, scheduling work and mentally)
a. **Investigate**: Please explain by making examples of the things that were a challenge in doing your homework outside the session.

3. What made it easier for you to do these home activities outside the session?
a. **Investigate**: Please give me examples of those things that made it easier for you to do your home activities outside the session?

4. Please explain difficulties you had using the Wisepill device. This is the device you were asked to put your ARVs in, when you were in the study.
a. **Investigate:** Please give an example of a problem you had in using your Wisepill device
b. **Investigate:** Please tell me about a time when you deliberately did not use your Wisepill?

5. Please explain any problems you had in using the Wisepill in front of your family, friends and other people you live with?
a. **Investigate**: Please tell me about a time you did not use your Wisepill in front of your family, friends and other people you live with.

6. Please tell me about the way in which the Wisepill device helped you take your ARVs?

a. Investigate: Please give me an example of a time the Wisepill made it easy to take your medication**.**
b. **Investigate:** What is it about the Wisepill that helped you, if it helped you, take your ARVs?

Questions on substance use:

1. How did your alcohol/drug use change (if any) now that you are attending this research?
a. **Investigate**: What is an example of how you have changed?
b. **Investigate**: What helped you change?

If the way you drink or use drugs has not changed…

c. **Investigate**: What do you think needs to be done so that the way you drink (or use drugs) can change?
d. **Investigate**: At the time you were in this research, how have the problems involving your use of alcohol/drugs changed?

Adherence questions

1. How has your use of medication changed now that you are in this research, if there is change?
a. **Investigate**: What is an example of how it has changed?
b. **Investigate**: What made this change?

If there is no change in the way you take your ARV's

c. **Investigate**: What do you think can be done in order to change the way you take your medicines?
d. **Investigate**: What is the challenge or barrier in making this change?

Conclusion

1. Please explain other feedback or your thoughts about this treatment or something else that you would like to share.

Thank you for your time and for sharing your thoughts with us. We are hoping that we can use this explanation in improving this programme and we really appreciate your input and your advice