APPENDICES

Appendix 3.1: Literature search strategy for the general and prison populations

Search strategy for the general population		
Database	**Concepts and terms used**	**Results**
Medline and Emcare	HIV OR Human Immunodeficiency virus OR AIDS or Acquired Immunodeficiency Syndrome OR (HIV OR AIDS OR HIV-AIDS OR Acquired Immunodeficiency Syndrome OR (Human immunodeficiency virus).tw,kf. AND ART OR Antiretroviral Therapy OR Highly Active antiretroviral therapy OR (antiretroviral* OR anti-retroviral* OR HAART OR ART OR anti-hiv).tw,kf. AND (Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cape Verde OR Cameroon OR Central African Republic OR Chad OR Comoros OR Democratic Republic of the Congo OR Congo or Cote D'ivoire OR Equatorial Guinea OR Eritrea OR Eswatini OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Sao Tome) and Principe) OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR South Sudan OR Sudan OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe). Refined by: publication year (01/01/2015-01/04/2019), humans, adults 19 plus years and English language.	1216
PubMed	((((((((((HIV) OR "Human immunodeficiency syndrome") OR AIDS) OR "Acquired immunodeficiency syndrome") AND ART) OR "Antiretroviral therapy") OR HAART) OR "Highly active antiretroviral therapy") AND (Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cape Verde OR Cameroon OR Central African Republic OR Chad OR Comoros OR Democratic Republic of the Congo OR Congo or Cote D'ivoire OR Equatorial Guinea OR Eritrea OR Eswatini OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR Sao Tome) and Principe) OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR South Sudan OR Sudan OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe)). Refined by: publication date (2015/01/01-2019/07/04), humans, adult 19 plus years and English language.	1262
Web of Science	((((((((((HIV) OR "Human immunodeficiency syndrome") OR AIDS) OR "Acquired immunodeficiency syndrome") AND ART) OR "Antiretroviral therapy") OR HAART) OR "Highly active antiretroviral therapy") AND (Angola OR Benin OR Botswana OR Burkina Faso OR Burundi OR Cape Verde OR Cameroon OR Central African Republic OR Chad OR Comoros OR Democratic Republic of the Congo OR Congo or Cote D'ivoire OR Equatorial Guinea OR Eritrea OR Eswatini OR Ethiopia OR Gabon OR Gambia OR Ghana OR Guinea OR Guinea-Bissau OR Kenya OR Lesotho OR Liberia OR Madagascar OR Malawi OR Mali OR Mauritania OR Mauritius OR Mozambique OR Namibia OR Niger OR Nigeria OR Rwanda OR	1708

	Sao Tome) and Principe) OR Senegal OR Seychelles OR Sierra Leone OR Somalia OR South Africa OR South Sudan OR Sudan OR Tanzania OR Togo OR Uganda OR Zambia OR Zimbabwe))). Refined by: publication year (2015-2019) and English language.	
Search strategy for prison populations		
Medline and Emcare	HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or Human immunodeficiency virus or (Acquired Immunodeficiency Syndrome or Human immunodeficiency virus).tw,kf AND antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv or (HAART or ART or anti-hiv).tw,kf. AND prison* or incarcerate* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict* or detain* or (prison* or incarcerate* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict* or detain*).tw,kf. Refined by: humans, adult 19 plus years and English language.	662
PubMed	((((((((((((((((("HIV"[Title/Abstract] OR "AIDS"[Title/Abstract]) OR "HIV-AIDS"[Title/Abstract]) OR "Acquired Immunodeficiency Syndrome"[Title/Abstract]) OR "Human immunodeficiency virus"[Title/Abstract]) AND "antiretroviral*"[Title/Abstract]) OR "anti retroviral*"[Title/Abstract]) OR "HAART"[Title/Abstract]) OR "ART"[Title/Abstract]) OR "anti-hiv"[Title/Abstract]) AND "prison*"[Title/Abstract]) OR "incarcerat*"[Title/Abstract]) OR "imprison*"[Title/Abstract]) OR "inmate*"[Title/Abstract]) OR "jail*"[Title/Abstract]) OR "detention*"[Title/Abstract]) OR "correctional facilities"[Title/Abstract]) OR "correctional setting"[Title/Abstract]) OR "custody"[Title/Abstract]) OR "convict*"[Title/Abstract]) OR "detain*"[Title/Abstract]. Refined by: humans, adult 19 plus years and English language.	365
Web of Science, Scopus and Cinahl	TOPIC: (HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or Human immunodeficiency virus) AND TOPIC: (antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv) AND TOPIC: (prison* or incarcerat* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict or detainee) ." Refined by: English language.	1283
Cochrane Library	HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or Human immunodeficiency virus) in Title Abstract Keyword AND (antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv) in Title Abstract Keyword AND (prison* or incarcerate* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict or detainee) in Title Abstract Keyword. Refined by: English language	33

Appendix 3.2: A systematic review protocol on risk factors for late linkage to care and delayed antiretroviral therapy initiation amongst HIV infected adults in sub-Saharan Africa

PROSPERO
International prospective register of systematic reviews

NHS National Institute for Health Research

UNIVERSITY of York
Centre for Reviews and Dissemination

Systematic review

*Fields that have an **asterisk (*)** next to them means that they **must be answered. Word limits** are provided for each section. You will be unable to submit the form if the word limits are exceeded for any section. Registrant means the person filling out the form.*

1. * Review title.

Give the title of the review in English

Risk factors for late linkage to care and delayed antiretroviral therapy initiation amongst HIV infected adults in sub-Saharan Africa: a systematic review and meta-analyses

2. Original language title.

For reviews in languages other than English, give the title in the original language. This will be displayed with the English language title.

3. * Anticipated or actual start date.

Give the date the systematic review started or is expected to start.

01/08/2020

4. * Anticipated completion date.

Give the date by which the review is expected to be completed.

31/07/2021

5. * Stage of review at time of this submission.

Tick the boxes to show which review tasks have been started and which have been completed. Update this field each time any amendments are made to a published record.

Reviews that have started data extraction (at the time of initial submission) are not eligible for inclusion in PROSPERO. If there is later evidence that incorrect status and/or completion date has been supplied, the published PROSPERO record will be marked as retracted.

This field uses answers to initial screening questions. It cannot be edited until after registration.

The review has not yet started: No

Review stage	Started	Completed
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	Yes
Formal screening of search results against eligibility criteria	Yes	Yes
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here.

6. * Named contact.

The named contact is the guarantor for the accuracy of the information in the register record. This may be any member of the review team.

Terefe Fuge

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

Mr Fuge

7. * Named contact email.

Give the electronic email address of the named contact.

fuge0002@flinders.edu.au

8. Named contact address

Give the full institutional/organisational postal address for the named contact.

-Sturt Road, Bedford Park | South Australia 5042GPO Box 2100 | Adelaide SA 5001

-Hossana, South Ethiopia, P.O.Box 159

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

+61(0)872218445/+251916357443

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

Flinders University

Organisation web address:

http://www.flinders.edu.au

11. * Review team members and their organisational affiliations.

Give the personal details and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong. **NOTE: email and country now MUST be entered for each person, unless you are amending a published record.**

Mr Terefe Fuge. Flinders University
Dr George Tsourtos. Flinders University
Dr Emma Miller. Flinders University

12. * Funding sources/sponsors.

Details of the individuals, organizations, groups, companies or other legal entities who have funded or sponsored the review.

Flinders University

Grant number(s)

State the funder, grant or award number and the date of award

13. * Conflicts of interest.

List actual or perceived conflicts of interest (financial or academic).

None

The authors declare that they have no known conflicts of interest.

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members. **NOTE: email and country must be completed for each person, unless you are amending a published record.**

15. * Review question.

State the review question(s) clearly and precisely. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS or similar where relevant.

What contextual and personal factors affect linkage to HIV care and antiretroviral therapy initiation amongst adults in sub-Saharan Africa?

16. * Searches.

State the sources that will be searched (e.g. Medline). Give the search dates, and any restrictions (e.g. language or publication date). Do NOT enter the full search strategy (it may be provided as a link or attachment below.)

We performed a systematic search on databases including MEDLINE, PubMed, Web of Science and Emcare. The search strategy was designed using the concepts HIV/AIDS, ART and Linkage to HIV Care or Initiation of ART and name of countries in SSA. Terms related to the concepts were used and combined with MEDLINE filter. We adapted the search terms to use with other bibliographic databases along with database-specific filters. Studies conducted in one or more of the sub-Saharan African countries and published in English language since 2015 and indexed up to 01 April 2021 will be included in the review. We selected a

period from 2015 for the review as this was the time when most sub-Saharan African countries endorsed the new "Test and Treat" Strategy. The searches will be re-run just before the final analyses and further studies retrieved for inclusion.

17. URL to search strategy.

Upload a file with your search strategy, or an example of a search strategy for a specific database, (including the keywords) in pdf or word format. In doing so you are consenting to the file being made publicly accessible. Or provide a URL or link to the strategy. Do NOT provide links to your search **results**.

The search strategy for MEDLINE was: HIV or Human Immunodeficiency virus or AIDS or Acquired Immunodeficiency Syndrome or (HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or Human immunodeficiency virus).tw, kf. and ART or Antiretroviral Therapy or Highly Active antiretroviral therapy and "linkage to care" or "presentation to care" or start* or initiate* or (antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv).tw, kf. and (Angola or Benin or Botswana or Burkina Faso or Burundi or Cape Verde or Cameroon or Central African Republic or Chad or Comoros or Democratic Republic of the Congo or Congo or Cote D'ivoire or Equatorial Guinea or Eritrea or Eswatini or Ethiopia or Gabon or Gambia or Ghana or Guinea or Guinea-Bissau or Kenya or Lesotho or Liberia or Madagascar or Malawi or Mali or Mauritania or Mauritius or Mozambique or Namibia or Niger or Nigeria or Rwanda or "Sao Tome and Principe" or Senegal or Seychelles or Sierra Leone or Somalia or South Africa or South Sudan or Sudan or Tanzania or Togo or Uganda or Zambia or Zimbabwe).

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied in your systematic review.

Linkage to HIV care and antiretroviral therapy initiation amongst adults in sub-Saharan Africa.

19. * Participants/population.

Specify the participants or populations being studied in the review. The preferred format includes details of both inclusion and exclusion criteria.

The review will include HIV infected adults (as World Health Organization defines: those older than 19 years of age) in sub-Saharan Africa. Studies focusing on specialised populations such as, sex workers, tuberculosis patients and serodiscordant couples will be excluded as such population groups may face unique challenges in accessing care and confound the results.

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the interventions or the exposures to be reviewed. The preferred format includes details of both inclusion and exclusion criteria.

Structural factors pertaining to access to care and other service delivery barriers (e.g. distance to health care

facility), psychosocial and personal determinants of late presentation for HIV care and ART initiation (such as the influence of social support, status disclosure, and perceptions of early treatment initiation) will be reviewed. In addition, sociodemographic factors (including age, sex, educational status and other characteristics) will also be assessed in the review.

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the intervention/exposure will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

While no restriction will be made based on whether a study has used comparators, individuals without an exposure of interest will be considered as a control group when comparisons are made.

22. * Types of study to be included.

Give details of the study designs (e.g. RCT) that are eligible for inclusion in the review. The preferred format includes both inclusion and exclusion criteria. If there are no restrictions on the types of study, this should be stated.

We will review observational studies analysing factors affecting linkage to HIV care and/or ART initiation in the target population. Qualitative and intervention-based studies will not be considered as the aim of the review is to quantify risk factors in a natural setting.

23. Context.

Give summary details of the setting or other relevant characteristics, which help define the inclusion or exclusion criteria.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

Rates of linkage to HIV care and ART initiation over a certain period of time (as defined by individual studies) will be considered as the main outcomes of the review. No restriction will be made on the inclusion of studies based on the definition of the outcomes.

Measures of effect

Please specify the effect measure(s) for you main outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

While there could be variation among studies in measuring time to linkage to HIV care and ART initiation, a period of time between diagnosis and first visit to ART clinic, and first prescription of HIV medication are considered as care linkage and ART initiation time, respectively.

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state 'None' or 'Not applicable' as appropriate to the review

Not applicable.

Measures of effect

Please specify the effect measure(s) for you additional outcome(s) e.g. relative risks, odds ratios, risk difference, and/or 'number needed to treat.

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how this will be done and recorded.

One author will perform screening of articles for their relevance to the review question with titles and abstracts. Full text review will be performed after removal of duplicate and irrelevant articles. Corresponding authors of primary studies will be contacted for any missing or unclear information. A format adapted from the Cochrane Systematic Review Checklist for Data Collection Data will be used to extract data. We will use separate data extraction formats for linkage to HIV care and ART initiation. Information in the data extraction form include author, year, geographical location, population, method, measurements, exposures, results and outcomes.

27. * Risk of bias (quality) assessment.

State which characteristics of the studies will be assessed and/or any formal risk of bias/quality assessment tools that will be used.

Three experts (one of them a review author) will independently perform quality (risk of bias) assessment of the retrieved articles. We will use the EPHPP Quality Assessment Tool for Quantitative Studies to assess the quality of review articles by considering the following characteristics; representativeness of participants (selection bias), study design, control of potential confounders, validity and reliability of data collection methods and completeness of outcome data (withdrawals and dropouts). Disagreements between the assessors over the risk of bias in particular studies will be resolved by discussion and will be decided by a final independent assessment where required.

28. * Strategy for data synthesis.

Describe the methods you plan to use to synthesise data. This **must not be generic text** but should be **specific to your review** and describe how the proposed approach will be applied to your data. If meta-analysis is planned, describe the models to be used, methods to explore statistical heterogeneity, and software package to be used.

We will provide a narrative review of the results across studies in terms of various exposures and outcomes. Given the difference in definition of the outcomes and exposure variables assess across studies, we anticipate limited scope for meta-analysis. However, whenever studies have measured the same outcome and exposure with a comparable definition, we will pool the outcomes using a random-effects meta-analysis if there is moderate heterogeneity between studies (26-50%) or using fixed-effects analysis model if the level of heterogeneity is low or none (0-25%), with standardized mean differences for continuous outcomes and odds ratios for binary outcomes, and calculate 95% confidence intervals and two-sided p values for each

We will determine heterogeneity between studies in effect measures using Chi² test and I² statistic. I² value of 75% will be considered as high heterogeneity. Sensitivity analysis will be performed based on study quality, and subgroup analysis to explore heterogeneity in effect estimate based on study quality and type of exposure. Publication bias will be detected using a funnel plot.

29. * Analysis of subgroups or subsets.

State any planned investigation of 'subgroups'. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

If the necessary data are available, we will perform subgroup analysis for types of study designs and outcome measurements. We will also perform subgroup analysis by age and other sociodemographic characteristics within each study outcome and overall.

30. * Type and method of review.

Select the type of review, review method and health area from the lists below.

Type of review

Cost effectiveness
No

Diagnostic
No

Epidemiologic
No

Individual patient data (IPD) meta-analysis
No

Intervention
No

Living systematic review
No

Meta-analysis
Yes

Methodology
No

Narrative synthesis
Yes

Network meta-analysis
No

Pre-clinical
No

Prevention
No

Prognostic
No

Prospective meta-analysis (PMA)
No

Review of reviews
No

Service delivery
No

Synthesis of qualitative studies
No

Systematic review
Yes

Other
No

Health area of the review

Alcohol/substance misuse/abuse
No

Blood and immune system
No

Cancer
No

Cardiovascular
No

Care of the elderly
No

Child health
No

Complementary therapies
No

COVID-19
No

Crime and justice
No

Dental
No

Digestive system
No

Ear, nose and throat
No

Education
No

Endocrine and metabolic disorders

No

Eye disorders
No

General interest
No

Genetics
No

Health inequalities/health equity
No

Infections and infestations
Yes

International development
No

Mental health and behavioural conditions
No

Musculoskeletal
No

Neurological
No

Nursing
No

Obstetrics and gynaecology
No

Oral health
No

Palliative care
No

Perioperative care
No

Physiotherapy
No

Pregnancy and childbirth
No

Public health (including social determinants of health)
Yes

Rehabilitation
No

Respiratory disorders
No

Service delivery
Yes

Skin disorders
No

Social care
No

Surgery
No

Tropical Medicine
No

Urological
No

Wounds, injuries and accidents
No

Violence and abuse
No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.
English

There is not an English language summary

32. * Country.

Select the country in which the review is being carried out. For multi-national collaborations select all the countries involved.

Australia

33. Other registration details.

Name any other organisation where the systematic review title or protocol is registered (e.g. Campbell, or The Joanna Briggs Institute) together with any unique identification number assigned by them. If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

If the protocol for this review is published provide details (authors, title and journal details, preferably in Vancouver format)

Add web link to the published protocol.

Or, upload your published protocol here in pdf format. Note that the upload will be publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Do you intend to publish the review on completion?

Yes

Give brief details of plans for communicating review findings.?

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords help PROSPERO users find your review (keywords do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

Systematic review; meta-analysis; late presentation for HIV care; delayed antiretroviral therapy initiation; adults; sub-Saharan Africa

37. Details of any existing review of the same topic by the same authors.

If you are registering an update of an existing review give details of the earlier versions and include a full bibliographic reference, if available.

38. * Current review status.

Update review status when the review is completed and when it is published.New registrations must be ongoing so this field is not editable for initial submission.
Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information relevant to the registration of this review.

40. Details of final report/publication(s) or preprints if available.

Leave empty until publication details are available OR you have a link to a preprint (NOTE: this field is not editable for initial submission). List authors, title and journal details preferably in Vancouver format.

Give the link to the published review or preprint.

Appendix 3.3: Abstract of a paper on systematic review and meta-analysis of risk factors for late linkage to care and delayed antiretroviral therapy initiation amongst HIV infected adults in sub-Saharan Africa

Systematic Reviews

Risk factors for late linkage to care and delayed antiretroviral therapy initiation amongst HIV infected adults in sub-Saharan Africa: a systematic review and meta-analyses

--Manuscript Draft--

Manuscript Number:	
Full Title:	Risk factors for late linkage to care and delayed antiretroviral therapy initiation amongst HIV infected adults in sub-Saharan Africa: a systematic review and meta-analyses
Article Type:	Research
Funding Information:	
Abstract:	Abstract Background: Late linkage to care and delay in antiretroviral therapy (ART) initiation threaten the clinical and public health benefits of ART such as: preventing acquired immunodeficiency syndrome (AIDS) and non-AIDS related morbidities and mortality, as well as reducing new infections. The prevalence of both of these poor care outcomes remains high in sub-Saharan African (SSA) countries. Quantitative synthesises of the existing data are lacking, which would help ascertain the best evidence-based interventions. This review aimed to systematically synthesise the available literature on factors affecting linkage to care and ART initiation amongst HIV infected adults in SSA. Methods: Systematic searches were undertaken of the following databases: Emcare, Medline, PubMed and Web of Science. In our review, we included observational studies that analysed factors affecting linkage to HIV care and ART initiation amongst adults (age ≥19 years) in SSA, and were published between January 1, 2015 and June 1, 2021. All included studies were assessed for risk of bias using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative Studies. RevMan-5 software was used to conduct meta-analyses and Mantel-Haenszel statistics to pool outcomes with 95% confidence interval and <0.05 level of significance. The review protocol has been published at the International Prospective Register of Systematic Reviews (PROSPERO; Number: CRD42021264398). Results: Forty-six studies were included in the systematic review, of which 18 fulfilled requirements for meta-analysis. Health care delivery, psychosocial, behavioural and sociodemographic factors were identified as determinants of late linkage to care and delay in ART initiation. The meta-analyses showed that people of a younger age group (<35 years) were 29% (OR: 0.71; 95%CI: 0.55-0.91, I 2 = 74%) and 45% (OR: 0.55; 95%CI: 0.49-0.63, I 2 = 0%) less likely to be linked to care and initiate ART respectively compared to people of an older age group (≥35 years). Employed people and people who travelled for more than an hour to reach a clinic were more than 1.3 (OR: 1.32; 95%CI: 1.14-1.52, I 2 = 14%) and 1.2 (OR: 1.27; 95%CI: 1.15-1.39, I 2 = 57%) times more likely to be presented late for care, respectively. The likelihood of linkage to care decreased by 26% (OR: 0.74; 95%CI: 0.62-0.87, I 2 = 25%) for people who were unable to disclose their HIV status and 50% (OR: 0.50; 95%CI: 0.42-0.60, I 2 = 0%) for those who had a baseline CD4 count >350cells/mm 3 compared to CD4 count ≤350cells/mm 3 , but increased by 65% (OR: 1.65; 95%CI: 1.16-2.34, I 2 = 0%) for those who were diagnosed through health facility-based testing approaches compared to community-based approaches. Conclusion: This systematic review and meta-analyses identified a range of risk factors for late linkage to care and delayed ART initiation amongst HIV infected adults in SSA including: health service delivery, psychosocial, behavioural and sociodemographic circumstances. We recommend implementation of patient-centred intervention approaches to alleviate these barriers. Key words: HIV, linkage to care, antiretroviral therapy initiation, factors, adults, sub-Saharan Africa
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Opposed Reviewers:	
Additional Information:	
Question	Response

Appendix 3.4: A paper on systematic review and meta-analysis of factors affecting HIV care continuum in prison populations

PLOS ONE

RESEARCH ARTICLE

A systematic review and meta-analyses on initiation, adherence and outcomes of antiretroviral therapy in incarcerated people

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OPEN ACCESS

Citation: Fuge TG, Tsourtos G, Miller ER (2020) A systematic review and meta-analyses on initiation, adherence and outcomes of antiretroviral therapy in incarcerated people. PLoS ONE 15(5): e0233355. https://doi.org/10.1371/journal.pone.0233355

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Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Abstract

Background

Incarcerated people are at increased risk of human immunodeficiency virus (HIV) infection relative to the general population. Despite a high burden of infection, HIV care use among prison populations is often suboptimal and varies among settings, and little evidence exists explaining the discrepancy. Therefore, this review assessed barriers to optimal use of HIV care cascade in incarcerated people.

Methods

Quantitative and qualitative studies investigating factors affecting linkage to care, ART (antiretroviral therapy) initiation, adherence and/or outcomes among inmates were systematically searched across seven databases. Studies published in English language and indexed up to 26 October 2018 were reviewed. We performed a narrative review for both quantitative and qualitative studies, and meta-analyses on selected quantitative studies. All retrieved quantitative studies were assessed for risk of bias. Meta-analyses were conducted using RevMan-5 software and pooled odds ratios were calculated using Mantel-Haenszel statistics with 95% confidence interval at a $p<0.05$. The review protocol has been published at the International Prospective Register of Systematic Reviews (PROSPERO; Number: CRD42019135502).

Results

Of forty-two studies included in the narrative review, eight were qualitative studies. Sixteen of the quantitative studies were eligible for meta-analyses. The narrative synthesis revealed structural factors such as: a lack of access to community standard of HIV care, particularly in resource limited countries; loss of privacy; and history of incarceration and re-incarceration as risk factors for poor HIV care use in prison populations. Among social and personal characteristics, lack of social support, stigma, discrimination, substance use, having limited knowledge about, and negative perception towards ART were the main determinants of suboptimal use of care in incarcerated people. In the meta-analyses, lower odds of ART initiation was noticed among inmates with higher baseline CD4 count (CD4 $\geq$500celss/mm^3)

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Competing interests: The authors have declared that no competing interests exist.

(OR = 0.37, 95%CI: 0.14–0.97, I^2 = 43%), new HIV diagnosis (OR = 0.07, 95%CI: 0.05–0.10, I^2 = 68%), and in those who lacked belief in ART safety (OR = 0.32, 95%CI: 0.18–0.56, I^2 = 0%) and efficacy (OR = 0.31, 95%CI: 0.17–0.57, I^2 = 0%). Non-adherence was high among inmates who lacked social support (OR = 3.36, 95%CI: 2.03–5.56, I^2 = 35%), had low self-efficiency score (OR = 2.50, 95%CI: 1.64,-3.80, I^2 = 22%) and those with depressive symptoms (OR = 2.02, 95%CI: 1.34–3.02, I^2 = 0%). Lower odds of viral suppression was associated with history of incarceration (OR = 0.40, 95%CI: 0.35–0.46, I^2 = 0%), re-incarceration (OR = 0.09, 95%CI: 0.06–0.13, I^2 = 64%) and male gender (OR = 0.55, 95% CI: 0.42–0.72, I^2 = 0%). Higher odds of CD4 count <200cells/mm^3 (OR = 2.01, 95%CI: 1.62, 2.50, I^2 = 44%) and lower odds of viral suppression (OR = 0.20, 95%CI: 0.17–0.22, I^2 = 0%) were observed during prison entry compared to those noticed during release.

Conclusion

Given the high HIV risk in prison populations and rapid movements of these people between prison and community, correctional facilities have the potential to substantially contribute to the use of HIV treatment as a prevention strategy. Thus, there is an urgent need for reviewing context specific interventions and ensuring standard of HIV care in prisons, particularly in resource limited countries.

Introduction

Global incarceration rates have increased substantially in the last two decades and there are currently more than 10 million people in prison worldwide [1]. Although there has been a recent decline in the number of new HIV infections in the general population worldwide, the virus is disproportionately affecting people in the prison system. Globally, 3.8% of the incarcerated people are estimated to be HIV infected, which is around five times higher than HIV prevalence in the general population [2]. Risk factors for both incarceration and HIV infection often overlap and include unemployment, poverty, homelessness, and substance use [3].

Despite the dramatic increase in the size of the incarcerated population and associated HIV prevalence, HIV care in correctional facilities is often substandard. While there is evidence that higher rates of linkage to care and subsequent viral suppressions can be achieved in prison populations [4–6], access to community standard of HIV care is often lacking within most prisons, particularly in low-income countries [7–10]. Factors pertaining to insufficient financing, insecurity of food, inadequate health staff and facilities [11–15], as well as lack of integration between community and prison health care systems [6, 16, 17] are considered main structural barriers to HIV care in correctional facilities. Consequently, delayed initiation of ART defined as initiating ART at World Health Organization (WHO) clinical stage III or IV [18], poor adherence and associated clinical complications are highly prevalent in prison populations compared to the general populations [9, 19–21]. Studies have shown that personal and psychosocial factors are also important in the utilization of HIV care among prisoners. Low awareness and negative perceptions of HIV and ART, as well as ongoing substance use are known to contribute to poor utilization of HIV care in prison populations [13, 22–25]. In addition, an increased risk of stress, depression, despair and mental health problems in inmates is associated with high rates of suboptimal ART adherence [24, 26, 27] and virological failure [4]. In some countries, HIV infected people in correctional facilities can face torture, violence, stigma

and discrimination, from both prison staff and other inmates, which could potentially impede care utilization and cause poor treatment adherence and outcomes [10, 12, 13, 28].

Prisoners are an inseparable part of the community regarding HIV transmission. Prisoners interact with the outside society not only after serving their sentences but also during incarceration through contact with prison staff and family visits. Thus, implementation of ART as an HIV prevention strategy [18] in correctional facilities is paramount, given the fact that inmates usually return to the same high risk groups from which they originate, such as people who inject drugs (PWID), sex workers and men who have sex with men (MSM). As access to HIV care for these groups can be challenging in the community, correctional facilities should create an ideal setting to implement such interventions [29].

Utilization of HIV care in correctional facilities varies widely across countries and settings within a country [30]. However, little is known about this variation in relation to promoting best practices and the use of evidence-based interventions. There have been few narrative reviews on prison HIV care with a primary focus on prisons of high-income countries [30–35]. Uthman et al [24] conducted a systematic review and meta-analyses of global studies exclusively on ART adherence among prisoners but the review did not encompass other major care cascade elements such as ART initiation and viral suppression. Iroh et al [6] and Erickson et al [36] also conducted systematic reviews on HIV care cascade in prison systems, but both reviews focused on studies in high-income countries, and the latter was specifically focused on female inmates. Thus, we systematically reviewed global studies investigating one or more of the main components of HIV care cascade (i.e. ART initiation, adherence and/or outcomes) in a prison population, with the intention to identify potential barriers to HIV care use and inform evidence-based intervention strategies for HIV infected people in correctional facilities, and to put forth further research priorities.

Methods

The reporting of this review was based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (PRISMA) [37] (see S1 Table). The review protocol has been published at the International Prospective Register of Systematic Reviews (PROSPERO; Number: CRD42019135502) [38] (S1 File).

Eligibility criteria

Studies. Both quantitative and qualitative studies were reviewed without restriction based on type of study design and publication date.

Participants. All studies in participants with a history of incarceration or currently being incarcerated were considered for review. Studies conducted on specific populations such as certain ethnic groups or populations identified as at high HIV risk or as vulnerable groups (e.g. transgender people, men who have sex with men) were excluded in order to reduce potential confounding, as these groups have been associated with low utilization of care in community and other settings [39, 40].

Exposures. Studies exploring structural, social and individual level determinants of HIV care utilization among prisoners were reviewed. More specifically, studies analysing factors related to access to and availability of HIV care; psychosocial factors such as depression, social support, disclosure, stigma and privacy; behavioural factors such as attitudes towards ART; health and medication related factors including comorbidity, immunological or clinical status; incarceration related factors such as number and length of imprisonment; and socioeconomic factors including age, sex, and other characteristics were assessed.

Comparators. While no restriction was made based on whether a study has used comparators, non-incarcerated people were considered as a control group when comparisons were made.

Outcome measures. Studies reporting one or more of the following outcomes were included in the review: linkage to HIV care, initiation of ART, adherence to and outcomes of ART in terms of change in CD4 count and viral suppression. No restriction was made based on the definition of the outcomes.

Information sources and search strategy

Systematic searches were carried out on the following databases; Emcare, Medline, PubMed, Scopus, Web of Science, Cinahl and Cochrane Library. The concepts HIV/AIDS, ART and Incarceration were used to construct the search strategy. The search strategy used only terms related to exposure (incarceration) and outcomes. The terms were combined with MEDLINE filter for the concepts under search. The search strategy for MEDLINE was; HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or Human immunodeficiency virus AND antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv AND prison* or incarcerate* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict* or detain*. The search terms were adapted for use with other bibliographic databases in combination with database-specific filters for the concepts, where these are available. The search strategy was developed with the guidance of a qualified librarian. Bibliographies of the retrieved studies as well as previous meta-analyses were searched for studies that might have been missed by the search strategy and no further studies were identified. While no restriction was made in terms of geographical region and year of publication, due to resource and time restrictions, studies published in English language and indexed up to 26 October 2018 were included in the review. An alert was set for newly indexed articles for each database and no relevant studies were detected post Oct 2018 with the last alert received on 28 March 2020.

Study selection and risk of bias assessment

Articles were initially screened for relevance with their titles and abstracts. After removal of duplicate and irrelevant articles, a full text review was performed on the retrieved articles based on the predefined protocol [38]. One author (TGF) performed the initial screening and selection of all papers including the quality assessments. Two other authors (GT and ERM) independently conducted the quality assessments (each assessing half of the studies) initially undertaken by the first author (TGF). The quality assessment was conducted using the Effective Public Health Practice Project (EPHPP) Quality Assessment Tool for Quantitative Studies (see S2 File) by considering the following characteristics; representativeness of participants (selection bias), study design, control of potential confounders, validity and reliability of data collection methods and completeness of outcome data (withdrawals and dropouts). Disagreements between the review authors were resolved by discussion, with involvement of a third review author where necessary.

Data abstraction

Data were extracted using a format adapted from the Cochrane Systematic Review Checklist for Data Collection (see S2 Table). Separate data extraction formats were used for treatment initiation, adherence and outcomes categories. Information in the data extraction form included author, year, geographical location, population, method, measurements, exposures, outcomes and conclusions. Corresponding authors of two primary studies were contacted for

missing information on the number of participants with and without ART initiation and/or non-adherence versus exposure variable of interest.

Data synthesis

We provided narrative synthesis of the findings across all qualitative and quantitative studies with regard to exposures and outcomes. Due to the variety of outcomes measured and differences in definition of each outcome across studies, our meta-analyses were limited to 16 of 34 quantitative studies included in the narrative review. Meta-analyses were conducted using RevMan-5 software [41] for each outcome when two or more studies assessed the exposure variable. A Fixed Effect Model was employed to pool the outcomes with odds ratios, and calculated 95% confidence intervals. We used a Fixed-Effect Model due to small numbers of studies ($n<5$) involved in the meta-analyses reporting a particular outcome, which made an estimation of between study variance impossible [42]. In addition, in most of the meta-analyses, a single study had substantially larger sample sizes relative to the other(s) in the model, so that generalization of the findings could not be claimed beyond the included studies [43]. We determined heterogeneity between studies with effect measures using Chi^2 test and I^2 statistic. We considered an I^2 value of 75% as high heterogeneity [44]. Mantel-Haenszel statistics were applied to calculate pooled odds ratios and results were presented in forest plots.

Results

The search resulted in a total of 2,345 articles. Fig 1 shows the overall screening process and number of studies excluded and retrieved. A total of 2,274 articles were eliminated due to duplication and irrelevance based on title and abstract review. Twenty-nine of the remaining 71 studies were excluded after full text review due to the study not analysing HIV care during incarceration, not reporting at least one of the HIV care cascade elements i.e. linkage to care, ART initiation, adherence or outcomes in terms of CD4 count or viral load or being different reports of the same study. The remaining 42 articles were included in the final review with 16 out of 34 quantitative studies being included in the meta-analyses.

Study characteristics

The main characteristics of included studies are described in Tables 1–3. Thirty (71%) of the studies were from high-income countries; USA (18), Canada (5) and Europe (7) while the remaining twelve (29%) were from low-and middle-income countries; Asia (5), sub-Saharan Africa (5) and Latin America (2). 41% (17) of the studies were cross-sectional [5, 11, 16, 23, 25, 26, 45–55], 38% (16) cohort (14 retrospective and 2 prospective) [4, 9, 15, 17, 19–21, 56–64] and 19% (8) qualitative [12–14, 28, 65–68] in study design. One study employed mixed methods [22]. Fifteen studies reported on linkage to HIV care or ART initiation or both [5, 9, 11, 12, 22, 23, 45–50, 55, 65, 66] (Table 1), sixteen on adherence [12–15, 17, 20, 25, 26, 28, 45, 51, 52, 55, 56, 67, 68] (Table 2) and twenty on CD4 count or viral load or both [4, 5, 16, 17, 19, 21, 23, 25, 51, 53, 54, 56–64] (Table 3). Nine studies reported more than one element of the HIV care cascade and hence were included in more than one category [5, 12, 17, 23, 25, 45, 51, 55, 56]. Of the 42 articles, 39 were related to incarceration and HIV care, and the remaining three were specific to jail incarceration [46, 48, 57]. Twenty-nine studies investigated HIV care during incarceration [5, 9, 11–15, 19, 22, 23, 25, 26, 28, 45–48, 50–55, 62, 64–68] and seven investigated the impact of history of incarceration and/or the number of incarcerations [16, 17, 20, 21, 49, 57, 63]. Six studies compared HIV care utilization between incarceration trajectories [4, 56, 58–61]; three before and after incarceration [4, 56, 58] and three between incarcerated and re-incarcerated people [59–61]

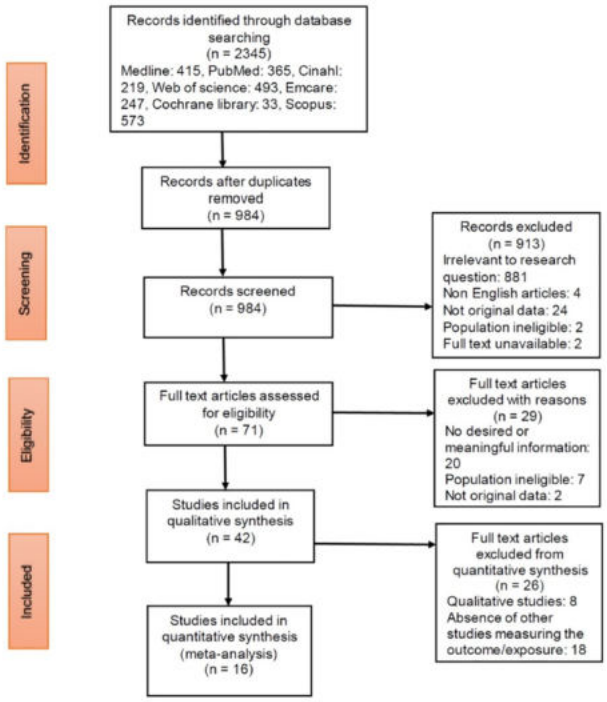

Fig 1. Study flow diagram. Study selection process and reasons for exclusion.

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Methodological quality

The majority of studies (74%) were scored as moderate or above performance with regard to minimising selection bias, while 38% scored moderate or above performance in terms of the appropriateness of the study design. Half of the studies (50%) accounted for confounding variables during analyses. Only eleven studies (32%) reported validity of data collection methods with four of these scoring 'strong' on the EPHPP tool. Risk of bias due to drop-out and withdrawal was inapplicable in the majority of studies (85%) mainly due to analyses of retrospective data, but of five studies in which it was applicable, three studies scored moderate or above performance. While two studies had a strong performance in the measurement of the overall methodological quality, eight other studies scored as having moderate methodological quality (see S3 Table).

Measurements

Definitions of linkage to HIV care and a delay in ART initiation varied across studies. Three studies measured time between diagnosis and linkage to care and/or initiation of ART [5, 47, 50]. Two studies used WHO clinical stagging defining a delay as ART initiation at stage III or IV [9, 11]. Other studies simply estimated ART coverage and acceptance (i.e. proportion of prisoners on ART) at a particular period of time [22, 23, 45, 46, 48, 49]. A full description of the definitions is presented in Table 1.

Table 1. Characteristics of studies investigating linkage to HIV care and initiation of ART.

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
Mostashari et al [45]	1998	USA	102 ART eligible women prisoners	Cross-sectional	ART acceptance	75% of the women accepted ART	• Acceptance of first offer of ART associated with completed education lower than high school (OR:3.5, 95%CI:1.2–10.7) and belief in medication safety (OR:4.3, 95%CI:1.3–13.7) • Current acceptance of ART associated with trust in medication efficacy (OR:3.2, 95%CI:1.2–8.6) and safety (OR: 4.3, 95%CI:1.4–12.9)
White et al [46]	2001	USA	77 HIV infected jail inmates	Cross-sectional	Percentage of ART initiation	ART initiation 58% in overall; 57% in males; 71% in females;73% in patients with CD4 count $\leq$500cells/mm^3; 33% in those with CD4 count $\geq$500cells/mm^3	Lower baseline CD4 count (<500cells/mm^3) associated with higher rate of ART initiation ($p<0.017$)
Altice et al [55]	2001	USA	205 HIV infected prisoners eligible for ART	Cross-sectional	Current ART acceptance defined as being prescribed ART at the time of the interview	Acceptance of ART 80% in overall	Mistrust of medication (AOR: 0.3, $P<0.001$) and trust in physician (AOR: 1.08, $P<0.0001$) were associated with ART acceptance
Perez-Molina et al [49]	2002	Spain	804 non-incarcerated and 104 incarcerated HIV infected individuals	Cross-sectional	Comparison of ART utilization between incarcerated and non-incarcerated people	No descriptive results reported	Incarcerated people utilized ART three times fewer than non-incarcerated people (OR: 2.95, 95% CI: 1.5–6.0)
Makombe et al [9]	2007	Malawi	103 HIV infected prisoners	Retrospective cohort (2004–2006)	Estimation of delay in ART initiation	93% of the prisoners started ART at WHO stage III or IV	Low access to HIV care (challenge: accessing HIV care from outside prison system)
Guin [65]	2009	India	10 HIV infected prisoners	Qualitative	Exploration of HIV care service in prison	———	Barriers to HIV care: inadequate access to HIV care and support service; protracted structural process to access care from public health facilities
Jaffer et al [48]	2012	USA	224 newly identified and 593 known HIV infected jail detainees	Cross-sectional	Percentage of detainees initiating ART	17% in newly identified; 76% in know HIV patients within 14 days of jail entry	Reasons for not starting ART; short stay (49%) and high CD4 count (39%) in newly identified people; short stay (38%) and being treatment naïve (17%) in known HIV positive people
J. Culbert [12]	2014	USA	42 HIV infected male and male-to-female transgendered recently released persons	Qualitative	Men's perception of and experiences with HIV care and ART during incarceration	———	Delayed treatment initiation due to lack of status disclosure and medication privacy in fear of stigma, discrimination and violence by prison officers and other inmates
Monarca et al [23]	2015	Italy	338 HIV infected prisoners	Cross-sectional	Number of prisoners on ART	81.4% of the prisoners were on ART	Refusal (69.2%), ongoing medication assessment (23.1%), fear of medication side effects, lack of privacy, religious/ethnic beliefs (7.7%) were reported as reasons for not initiating ART
Sgarbi et al [47]	2015	Brazil	34 HIV infected prisoners	Cross-sectional	Number of prisoners initiated ART	47% of the prisoners started ART within 6-months of diagnosis	No statistical analysis performed

(*Continued*)

Table 1. (Continued)

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
Seth et al [50]	2015	USA	841 newly HIV diagnosed prisoners	Cross-sectional	Linkage to HIV care defined as attendance at first medical appointment after diagnosis	67.5% linked within any time frame after testing; 37.9% linked within 90 days; 72.3% in older people (≥50years) at any time; 43.8% in younger people (18–29 years) within 90 days of diagnosis	No statistically significant associations observed
Bick et al [11]	2016	Malaysia	221 HIV infected male prisoners	Cross-sectional	Prevalence of ART initiation	34.4% of ART eligible and 22.8% with advanced AIDS not started ART	*Insufficient resource allocation for HIV treatment and care
Lucas et al [5]	2016	USA	135 HIV infected prisoners	Cross-sectional	• Linkage to HIV care defined as receiving a CD4 or viral load test within 90 days of HIV diagnosis • ART initiation	• 99% linkage to care and 91% ART initiation within 90 days of diagnosis • Initiation of ART at CD4 count ≥500cells/mm^3: 90% in previously diagnosed;50% in newly diagnosed	Longer duration of time (median 28 days) to linkage to care in newly diagnosed cases compared to previously diagnosed cases (median 0 days) (p<0.0001)
							* opt-out screening and care approach at prison entry achieved higher rates of linkage to care during incarceration but higher rates of care interruption after release
Culbert et al [22]	2016	Indonesia	102 HIV infected prisoners	Mixed method	Number of prisoners starting ART	A quarter of ART eligible prisoners didn't start ART	-ART utilization associated with higher score of attitude towards ART efficacy and safety (OR:1.90, 95% CI: 1.03–1.16)
							* Inmates who endorsed the attitude that ART is inefficient, unsafe, and causes adverse effects and stigma were less likely to use the treatment
Sprague et al [66]	2017	USA	25 HIV infected women former prisoners	Qualitative	Self-reported experiences in accessing HIV care in prison	————	Delay in receiving diagnosis results and structural barriers to see health staff led to delayed treatment initiation

Study ID (identification), geographical location, population involved, study design and main outcomes of articles included in the analyses of linkage to HIV care and ART initiation

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All ART adherence studies measured adherence to dose over varying period of time (days, weeks and months) using different methods (self-report, pharmacy refill, pill count, and electronic monitoring cups). Three studies considered adherence to medication schedule as an alternative measure to dose adherence [25–27]. Table 2 depicts how adherence was defined by the studies. Two studies set optimal adherence at 100% [17, 45] and other two used a threshold of >95% [15, 20]. Three studies defined non-adherence as missing more than three doses or schedules in a week [25–27]. The cut-off for viral suppression also varied greatly among studies, ranging from <40copies/mL [56, 69] to <500copies/mL [17, 21]. Eight studies used <400copies/mL [4, 19, 58–61, 63, 64] and four used <200copies/mL [5, 16, 57, 62]. In this review, we dichotomised the outcomes based on the highest cut off values used in the included studies; adherence <100% as a threshold for non-adherence and viral load <500 copies/mL for viral suppression. Most studies measured immunological outcomes as a change in CD4 count between two points in time (e.g. between entry and release from prison). Table 3 shows definitions of immunological and virological outcomes used by the studies.

Table 2. Characteristics of studies investigating adherence to antiretroviral therapy.

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
*Mostashari et al [45]	1998	USA	102 HIV infected female prisoners	Cross-sectional	Adherence defined as taking medication for ≥6 days/week, and not missing any doses per day	Non-adherence in 38% overall	Satisfaction with patient-physician relationship (OR:3.0, 95%CI:1.1–8.5) and seeking emotional supports from others (OR:3.1, 95%CI:1.1–9.4) associated with adherence
*Altice et al [55]	2001	USA	164 HIV infected prisoners taking ART	Cross-sectional	Adherence defined as taking 80% or more of the prescribed drugs	Adherence to ART 84% in overall	Composite variable of medication side effects and stopping medication when side effects occur (AOR: 0.09, P = 0.0001), social isolation (AOR: 0.08, P = 0.0005) and complexity of antiretroviral regimen (AOR: 0.33, P = 0.01) were negatively associated with ART adherence
Palepu et al [17]	2004	Canada	101 HIV infected people with history of incarceration and 1645without history of incarceration	Retrospective cohort (1997–2002)	Adherence defined as number of days patients received antiretroviral therapy refills divided by number of days of follow-up in the first year after starting therapy	Non-adherent (<100%) in 40% overall; 10% in incarcerated, 3% in non-incarcerated	Non-adherence positively associated with a history of incarceration (OR 2.40, 95% CI: 1.54–3.75)
Soto Blanco et al [26]	2005	Spain	177 HIV infected prisoners	Cross-sectional	Non-adherence defined as missing at least 2 doses or schedules in the last 5 days	Non-adherence in 24.3% overall;14% in females; 16% in males; 68% in those not-visited by people from outside; 35% in those reported robbery as a reason for incarceration	Fewer than one family visit in a month (OR:2.21, 95% CI:1.10–4.46), reporting robbery as a reason for imprisonment (OR:2.36, 95% CI:1.01–5.50), difficulty in taking medication (OR:3.64, 95%CI:1.78–7.43), having anxiousness and/or depression (OR:2.43, 95%CI:1.15–5.13) and receiving methadone treatment (OR:2.74, 95% CI:1.08–6.93) were associated with non-adherence
Soto Blanco et al [51]	2005	Spain	281 HIV infected prisoners	Cross-sectional	No-adherence defined as more than two doses missed in the last week, or more than 2 days of total non-medication in the last 3 months	Non-adherence in 54.8% overall; 64.6% in prisoners lacking support from officers; 66.7% in prisoners having difficulty in taking medication; 85.7% in prisoners unable to continue medication; 63.6% in mentally ill;83.3% in prisoners lacking support from outside prison	Having difficulty in taking medication (OR:1.94, 95%CI: 1.05–3.57), inability to continue with the medication (lack of self-efficacy) (OR: 5.37, 95%CI: 2.06–13.94), lack of support from outside prison (OR: 3.97, 95%CI: 1.19–13.23) and feeling anxious or depressed (OR: 2.07, 95%CI: 1.18–3.66) were associated with non-adherence
White et al [52]	2006	USA	31 HIV infected prisoners	Cross-sectional	Adherence defined as the proportion of prescribed doses taken	No descriptive results reported	Access to ART (correlation coefficient (r) = 0.43, $p < 0.05$), attitude towards taking ART (r = 0.53, $p<0.05$), coping scale (r = 0.49, $p < 0.05$), emotional wellbeing (r = 0.37; $p < 0.05$) and physical functioning (r = 0.44, $p < 0.05$) associated with adherence

(*Continued*)

Table 2. (Continued)

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
Ines et al [25]	2008	Spain	50 HIV infected prisoners	Cross-sectional	Non-adherence defined as missing at least 2 medication doses or schedules in the last 5 days	Non-adherence 58% in overall	Predictors of non-adherence: previous injecting drug use (OR: 8.86, 95%CI: 1.52–51.77)
							Predictors of adherence: having job in prison (OR: 5.56, 95%CI: 1.12–27.02), absence of HIV-related symptoms (OR: 7.81, 95%CI:1.01–62.5), good or average acceptance of treatment (OR: 10.10, 95%CI: 1.23–83.33) and higher academic background (OR: 5.20, 95%CI: 1.05–26.31)
Small et al [67]	2009	Canada	12 HIV positive and IDU male prisoners	Qualitative	Experience with ART in prison	———	Barriers to adherence: discrimination leading to discreetly taking medication which caused missing of doses; difficulty to obtain medication due to complicated institution health care delivery system particularly during entry; poor relation with physicians; poor quality of health staff
Roberson et al [28]	2009	USA	12 HIV infected women prisoners	Qualitative	Factors affecting adherence	———	Barriers to adherence: stigma, loss of privacy and long waiting time due to reception of drugs through DOTs; bad treatment by prison officers and other inmates
							Facilitators of adherence: tailoring drug taking time with prisoners' routine; support by nurses, friends or officers; using KOP than DOTs; concern for health, a desire to live, and evidence of improved health such as increased CD4 counts
Milloy et al [20]	2011	Canada	271 HIV infected IDUs	Retrospective cohort (1996–2008)	Adherence defined as number of days ART dispensed divided by number days that a patient eligible for ART	61% median level of adherence	Non-adherence (adherence <95%) associated with number of incarceration; 1–2 incarceration events (OR: 1.49, 95% CI: 1.03–2.05); 3–5 events (OR: 2.48; 95% CI: 1.62–3.65); >5 events (OR: 3.11, 95% CI: 1.86–4.95)
Paparizos et al [15]	2013	Greece	93 HIV infected prisoners	Longitudinal record review (2001–2011)	-Adherence defined as medication intake according to regimen (>95%)	Regiment or dose non-adherence 56% in overall	Age <40 years associated with non-adherence ($p<0.015$)
Shalihu et al [13]	2014	Namibia	18 HIV infected male prisoners	Qualitative	Identifying barriers to adherence	———	Barriers to adherence: lack of medication privacy leading to stigma, lack of social support, low access to food, brutality of officers causing despair, and commodification of ARVs by inmates due to low knowledge about HIV and ART

(*Continued*)

Table 2. (Continued)

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
*J. Culbert [12]	2014	USA	42 HIV infected male and male-to-female transgendered recently released persons	Qualitative	Men's perception of and experiences with HIV care and ART during incarceration	———	Barriers to adherence: delayed prescribing, out-of-stock medications, intermittent dosing during lockdowns, poor care and discrimination
Seyed Alinaghi et al [14]	2016	Iran	17 HIV infected prisoners	Qualitative	Barriers to ART adherence	———	Barriers to adherence: drug addiction, negative drug reactions, bad experiences with staff, psychosocial and nutritional problems, and poor quality of food
Subramanian et al [56]	2016	Canada	58 HIV infected prisoners	Retrospective cohort (2007–2011)	Adherence defined as number of months for which ART was dispensed divided by the number of months of follow-up	Mean adherence 57.3% one year before incarceration; 88.7% during incarceration	Adherence during incarceration was significantly higher than adherence before incarceration ($p<0.00$)
Farhoudi et al [68]	2018	Iran	7 HIV infected male prisoners	Qualitative	Barriers and facilitators of adherence	——	Barriers to adherence: medical factors: drug side-effects, medication interruption, taking methadone maintenance treatment, physical conditions, knowledge about CD4 level and accessibility of complementary medicines; social factors: stigma, patient-physician relationship; psychological factors: depression, anxiety, and disappointment; other factors: lack of education about ART, drug use, forgetfulness and lock ups

Study ID (identification), geographical location, population involved, study design and main outcomes of articles included in the analyses of adherence to ART

*Studies included in other categories

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HIV care linkage and ART initiation

Rate of linkage to care and ART initiation among inmates varied widely across geographical regions and settings (Table 1). Three studies from high income countries (two from the USA and the other from Italy) reported 75% and above initiation of ART among HIV infected inmates [5, 23, 45]. Lucas et al [5] in the USA identified 99% care linkage among inmates within 90 days of diagnosis. However, three other studies in the same country; one national [50] and two jail studies [46, 48] reported relatively lower rates of linkage to care (66%) and initiation of ART (58% vs 46%), respectively. Similarly, one study in Spain found three times lower utilization of ART by incarcerated people compared to their non-incarcerated counterparts [49].

There were few of published studies on HIV care use in the prisons of low-and middle-income countries, however available studies reported substantial delays in treatment initiation. A national retrospective ART survey in Malawi [9] reported 93% ART initiation among prisoners at WHO stage III or IV. A cross-sectional study in Malaysia reported that fewer than 50% of ART eligible inmates were initiated on treatment, a quarter of whom developed acquired immunodeficiency syndrome (AIDS) [11]. Another cross-sectional study in Brazil

Table 3. Characteristics of studies investigating outcomes of antiretroviral therapy.

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
Palepu et al [21]	2003	Canada	234 HIV infected IDUs	Retrospective cohort (1996–2001)	Viral suppression defined as having viral load of <500copies/mL in two consecutive measurements	Viral suppression in 19% in those with history of incarceration; 40% in those without a history of incarceration	Incarceration negatively associated with viral suppression (OR: 0.22, 95% CI: 0.09–0.58)
*Palepu et al [17]	2004	Canada	101 HIV infected people with history of incarceration and 1645 without history of incarceration	Retrospective cohort (1997–2002)	Viral suppression defined as having at least two consecutive viral load of <500 copies/mL	Viral suppression in 96% of people without a history of incarceration; 89% in people with a history of incarceration	History of incarceration negatively associated with viral suppression (HR: 0.68, 95% CI: 0.51–0.89); whereas longer time spent in prison was positively associated with viral suppression (HR: 1.06, 95% CI: 1.02–1.10)
Springer et al [61]	2004	USA	1866 HIV infected prisoners	Retrospective cohort (1997–2002)	• Viral suppression defined as having viral load of <400 copies/mL • Change in viral load and CD4 count during incarceration	Viral suppression 59% in overall; mean CD4 count increased by 74 cells/mL and the mean viral load decreased by 0.93 log10 copies/mL during incarceration; mean CD4 count decreased by 80 cells/mL, and the mean viral load increased by 1.14 log10 in re-incarcerated	Significant decrease in viral load ($p<0.0001$) and increase in CD4 count ($p<0.0001$) during incarceration, whereas significant increase in viral load ($p< 0.0001$) and decrease in CD4 count ($p< 0.0001$) at re-incarceration
Stephenson et al [60]	2005	USA	15 re-incarcerated and 30 incarcerated HIV infected males	Retrospective cohort (1997–1999)	• Viral suppression defined as having viral load of <400 copies/mL • Change in CD4 count over the follow period	Viral suppression at the beginning 53% in re-incarcerated; 50% in non-re-incarcerated; 20% in re-incarcerated at the end of two and half years follow up; 47% in non-re-incarcerated; mean CD4 count at the beginning 224 cells/mm^3 in re-incarcerated; 446 cells/mm^3 in non-re-incarcerated; 157 cells/mm^3 in re-incarcerated at the end of the follow up; 560 cells/mm^3 in non-re-incarcerated	Re-incarceration associated with poor immunological ($p<0.003$) and virological (OR: 8.29, 95% CI:1.78, 38.69) outcomes
*Soto Blanco et al [51]	2005	Spain	281 HIV infected prisoners	Cross-sectional	• Viral suppression defined as having viral load of <log_{10} 1.6 copies/mL • CD4 count	Viral suppression in 60.5% overall; mean viral load, log10 4.69 copies/ml; mean CD4 count, 381cells/mm^3; mean viral load 4.68 in adherent; 5.12 in non-adherent; mean CD4 count, 390.55cell/mm^3 in adherent; 373.53cells/mm^3 in non-adherent	No individual factors associated with viral suppression and mean CD4 count
*Ines et al [25]	2008	Spain	50 HIV infected prisoners	Cross-sectional	• Virological failure defined as having viral load of >50 copies/mL • Change in CD4 count after treatment	Viral suppression 46% in overall; change in CD4 count within 6-months of ART 119.71 ± 29.75 in overall; mean HIV-RNA levels 1.68 ± 0.26 log10 copies/mL in adherent patients; 1.33 ± 0.33 log10 copies/mL in non-adherent; change in CD4 count 188.21 ± 55.83 cells/mm^3 in adherent and 70.10 ± 28.84 cells/mm^3 in non-adherent patients	Adherence significantly associated with undetectable viral load ($p< 0.004$) and increase in CD4 count ($p<0.048$)

(*Continued*)

Table 3. (Continued)

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
Westergaard et al [63]	2011	USA	437HIV infected IDUs	Prospective cohort (1998–2009)	• Virological failure defined as having viral load of >400copies/mL • CD4 count	Virological failure 53.3% in those incarceration reported; 24.8% in those no incarceration reported; CD4 count of <200cells/mm^3 24% in never incarcerated; 26.5% in at least once incarcerated; viral load of >10,000copies/mL 37.4% in never incarcerated; 43.6% in at least once incarcerated	Brief incarceration (7–30 days) associated with virological failure (both at 400 and 10,00cepies/mL cut offs) (OR: 7.7, 95%CI: 3.0–19).
Davies and Karstaedt [19]	2012	South Africa	148 HIV infected prisoners	Retrospective cohort (2004–2008)	• Viral suppression defined as having viral load of <400copies/mL • Change in median CD4 count over the ART period	Viral suppression in 73% overall; median CD4 count 122cells/mm^3 during ART initiation; 356cells/mm^3 after 96 weeks of treatment	No statistical analysis performed
Meyer et al [4]	2014	USA	882 HIV infected prisoners	Retrospective cohort (2005–2012)	• Viral suppression defined as having viral load of < 400copies/mL • Change in CD4 count between entry and release	Viral suppression 29.8% in overall during entry; 70% during release; 68.% in men; 79.1% in women; 63.6% in psychiatric patients; 72.1% in non-psychiatric patients; mean increase in CD4 count 98 cells/μl during incarceration; mean decrease in viral load 1.12 log10 during incarceration	Viral suppression correlated with female sex (OR:1.81, 95% CI:1.26–2.59) and low psychiatric problem (OR: 1.50, 95% C: 1.12–1.99); significant increase in CD4 count ($P < 0.001$) and decrease in vital load ($P < 0.001$) during incarceration
Meyer et al [59]	2014	USA	497HIV infected prisoners	Retrospective cohort (2005–2012)	• Viral suppression defined as having viral load of <400copies/mL • Change in viral load and CD4 count between release and re-incarceration	Viral suppression 70% in overall before release; 52% in recidivists before release; 31% in recidivists on re-incarceration; mean loss of CD4 count 50.8 cells/mm^3 between release and re-incarceration; mean viral rebound 0.4log$_{10}$ between release and re-incarceration	Recidivism negatively associated with viral suppression (p<0.0001); increase in age (OR:1.04, 95% CI:1.01–1.07) and having higher level of medical or psychiatric comorbidity (OR:1.16, 95%CI:1.03–1.30) associated with viral suppression during re-incarceration
*Monarca et al [23]	2015	Italy	338 HIV infected prisoners	Cross-sectional	• Viral suppression defined as having viral load of <50 copies/mL • CD4 Count	Viral suppression 73.5% in overall; >200cells/mm^3 90.6% in overall	No statistical analysis performed
Meyer et al [58]	2015	USA	1,089 HIV infected prisoners	Retrospective cohort (2005–2012)	• Viral suppression defined as having viral load of <400 copies per/mL • Change in CD4 count during incarceration	Average viral suppression, 32.7% at entry; 70.6% during release; 80% in females; 68.7% in males; mean CD4 count, 344.5cells/mm^3 at entry; 449.5cells/mm^3 during release	Significantly more viral suppression rate in women than men during pre-release (p<0.002)
Chan et al [54]	2015	England	74HIV infected prisoners	Cross- sectional	Viral suppression defined as having viral load of <40copies/mL	Viral suppression 68% in overall	No statistical analysis performed

(*Continued*)

Table 3. (Continued)

Author	Year	Country	Population	Study Design	Measurement	Findings	Conclusions
*Lucas et al [5]	2016	USA	83 HIV infected prisoners	Cross-sectional	• Viral suppression defined as having viral load of <200 copies/mL • Change in CD4 count during incarceration	Viral suppression at late assessment 88% in overall; median increase in CD4 count 160cells/mm^3 in overall; viral suppression 43% at initial assessment in newly diagnosed; 25% in previously diagnosed; 86% at late assessment in newly diagnosed; 81% in previously diagnosed inmates	Significant change in viral suppression ($p<0.0001$) and CD4 count ($p<0.0001$) during incarceration
*Subramanian et al [56]	2016	Canada	58 HIV infected prisoners	Retrospective cohort (2007–2011)	• Viral suppression defined as having viral load of <40copies/mL • Change in CD4 count during incarceration	Viral suppression 50% in overall at prison entry;77.8% at exit; CD4 count of <200cells/mm^3 57.1% at entry;61.9% at exit	CD4 count significantly improved during incarceration ($p<0.02$)
Nasrullah et al [16]	2016	USA	443 HIV infected people with history of incarceration and 8077 without history of incarceration	Cross-sectional	Viral suppression defined as having viral load of <200copies/mL	Viral suppression 55.8% in incarcerated; 74.2% in non-incarcerated people	Recently incarcerated persons are significantly less likely to achieve viral suppression (OR:0.90, 95%CI:0.86, 0.95)
Telisinghe et al [64]	2016	South Africa	404HIV infected prisoners	Retrospective cohort (2007–2009)	Viral suppression defined as having viral load of <400copies/mL	Viral suppression 94.7% in ART naïve prisoners at 6th month;92.5% at 12th month; 72.1% in ART experienced prisoners at 6th month	*Provision of onsite ART service yielded high percentage of viral suppression
Eastment et al [57]	2017	USA	202HIV infected people with history of jail booking and 6788 without history of jail booking	Retrospective cohort (2014)	Viral suppression defined as having viral load of < 200 copies/ml or no viral load report	Proportion of CD4 count <200cells/mm^3, 25% in people with a history of jail booking; 7% in people without a history of jail booking; Viral suppression 62% in people with a history of incarceration (one year after release);79% in non-incarcerated people	Incarceration associated with lower CD4 count ($p<0.001$)
Mpawa et al [53]	2017	Malawi	262HIV infected prisoners	Cross-sectional	Viral suppression defined as having viral load of <40 copies/mL.	Viral suppression in 95% overall	No patient characteristics associated with viral suppression
Dos Santos Bet et al [62]	2018	Brazil	25HIV infected prisoners	Prospective cohort (2013–2014)	• Viral suppression defined as having viral load of < 200 copies/mL	Viral suppression 46% in overall	No statistical analysis performed

Study ID (identification), geographical location, population involved, study design and main outcomes of articles included in the analyses of ART outcomes (change in CD4 count and viral load)

*Studies included in other categories

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[47] reported less than 50% initiation of ART among HIV infected prisoners with unknown clinical status within 6-months of diagnosis.

Different personal and structural factors have been identified as factors affecting ART initiation among HIV infected prisoners. Lucas et al [5] and Jaffer et al [48] found longer time of linkage to care in those who were diagnosed during prison entry compared with those diagnosed before prison entry. The same authors [5, 48] and White et al [46] noted higher rates of ART initiation among inmates with lower baseline CD4 count (<500cells/mm^3). ART acceptance in HIV infected inmates was also influenced by their attitudes towards the medication.

Mostashari et al [45] and Altice et al [55] found a higher rate of ART acceptance among inmates who perceived ART as safe to take and efficient in improving their health. A similar finding was obtained by Culbert et al [22] who found that ART utilization among inmates was associated with more positive attitudes towards medication safety and efficacy.

While there is yet to be strong evidence for specific factors contributing to delayed presentation for care among HIV infected inmates in low-and middle-income countries, lack of access to standard of care has been proposed as a major barrier to ART initiation. Makombe et al [9] in Malawi reported limited access to HIV care in prisons as HIV infected inmates were forced to receive ART services from public health facilities. Bick et al [11] reported minimal resource allocation for prison HIV care in Malaysia compared to care provided in the community, which resulted in delayed treatment initiation and frequent care interruptions among inmates. A qualitative study in India [65] supported these findings by exploring protracted structural processes involved in accessing care from public health facilities which prevented HIV infected inmates from starting ART. Barriers to ART initiation among inmates appeared to possess different account in the context of prisons of high income countries. Qualitative studies from the USA [12, 66] described the importance of institutional and social barriers to care despite the presence of a standard of HIV care being provided in the correctional facilities. Prisoners dissuaded from disclosing their HIV status being afraid of perceived stigma and discrimination against, as well as anticipating a violent response by officers and other fellow inmates, which rendered them initiate treatment delayed.

Adherence to ART

Studies investigating the impact of incarceration history on ART adherence identified higher odds of non-adherence in people with a history of incarceration than those without a history of incarceration [17, 20]. One study in the USA on the other hand compared adherence at prison entry and exit, finding a significant increase in the level of optimal adherence during incarceration (57% vs 89%) [56]. Six other studies from different countries estimated prevalence of non-adherence among inmates during incarceration [15, 25–27, 45, 52, 70], and the overall prevalence ranged from 24% [26] to 58% [25] (Table 2).

Structural, social, and behavioural factors were found to affect inmates' adherence to ART. Among structural factors, Soto Blanco et al [26] identified higher rates of non-adherence in individuals who were incarcerated due to robbery offences, presumably due to shorter sentences. White et al [52] found more non-adherence in those who reported inconvenience in accessing care from the prison health care system. Qualitative studies [12–14, 28, 67] similarly explained a number of institutional-related factors to affect adherence among inmates including lack of privacy during medication pick-ups and use, difficulty in accessing care, and insufficiency and/or poor quality of food.

Social support within prison and from the outside community was associated with inmates' adherence to ART. Mostashari et al [45] and Altice et al [55] found optimal adherence in prisoners who were able to seek emotional support from others, and those who established good relationships with their care provider. Qualitative studies emphasized the importance of inmate-health care provider relationships in enhancing optimal adherence [14, 28, 67, 68]. Other studies [28, 67] also showed that inmates were more likely to use ART when health care providers were found to be caring and sympathetic towards their clients. Higher ART adherence was observed among inmates who reported 'cooperative' prison officers [27], and among those who were able to engage in jobs in prison [25]. This was concordant with what was described by qualitative studies [12–14, 28, 67, 68] that alienation of inmates using ART by prison officers and other inmates resulted in suboptimal adherence. Soto Blanco et al [26] and

Blanco et al [27] on the other hand identified higher prevalences of adherence in inmates who were capable of receiving regular visits from people from outside prison.

Behavioural factors and attitudes towards ART were reported to influence adherence. Ines et al [25] found that the inmate's belief in ART efficacy and safety had an effect on ART adherence. A study by White et al [70] corroborated the association between the inmate's belief in ART efficacy and ART adherence that those who believed that ART would help them live longer were more likely to be adherent. Two other studies [26, 27] documented higher likelihood of non-adherence in prisoners with difficulty of taking medication and those who could not consistently follow their medication schedule (commonly reported as having low self-efficacy).

Other behaviour- and awareness-related factors were suggested to influence ART adherence among prisoners: history of injecting drug use, medication refusal, and unintended use of ARV drugs as a result of having little knowledge about HIV and the health importance of ART were described as risk factors for non-adherence [13, 15, 25, 68]. Difference in adherence was also observed among inmates based on age and academic background. Paparizos et al [15] showed a high probability of poor adherence among inmates aged younger than 40 years compared to older prisoners. Ines et al [25] reported higher adherence among those with a higher academic background.

Factors related to individual health appeared to affect inmates' adherence to ART. In their two consecutive studies, Soto Blanco et al [26] and Blanco et al [27] identified a strong association between depression and suboptimal adherence among prisoners. White et al [70] supported this association using different scales of adherence measurement (i.e. medication admission record and pill count). Qualitative studies [14, 68] also highlighted the impact of depression on inmates' adherence as depressed prisoners lacked motivation to use ART due to being hopeless for recovery. Ines et al [25] on the other hand demonstrated that the presence of any non-specific symptoms of illness increased the probability of non-adherence. This was concordant with findings by White et al [70] and Farhoudi et al [68], which showed a relationship between inmates' emotional and physical wellbeing and ART adherence.

ART outcomes

Five studies investigated the impact of incarceration history on viral suppression [16, 17, 21, 57, 63], with two of these simultaneously analysing change in CD4 count over the course of treatment [57, 63]. In all cases, a statistically significant increase in viral suppression and CD4 count was recorded in people without a history of incarceration compared to those with a history of incarceration (Table 3). Four studies from high-income countries analysed changes in viral suppression and CD4 count during incarceration [4, 5, 56, 58]. All studies showed an increase in both treatment outcomes during the course of incarceration. In the studies that investigated the association between re-incarceration and ART outcomes [4, 60, 61], a statistically significant increase in viral load and decrease in CD4 count was observed among people with episodes of re-incarceration. Eight studies reported the overall rate of viral suppression during incarceration [19, 23, 25, 27, 54, 62, 64, 69], which ranged from 46% in Spain [25] and Brazil [62] to 95% in Malawi [69]. Four of these studies reported on CD4 count; two measuring mean and median CD4 count (381cells/mm^3 and 356 cells/mm^3, respectively) [19, 27], and the other two reporting change in CD4 count within 6-months of ART commencement (119.71 ± 29.75 cell/mm^3) and the percentage of inmates with CD4 count >200 cells/mm^3 (91%) [23, 25].

There was inconsistency among rarely available published studies about specific factors affecting viral suppression and CD4 count among HIV infected inmates. Ines et al [25] identified a higher level of viral suppression and an increase in CD4 count in adherent inmates

compared to non-adherent inmates. However, Blanco et al [27] reported no statistical association between adherence and viral suppression or CD4 count, although there were lower viral load and higher CD4 count in adherent prisoners than non-adherent ones. Meyer et al [4] in the USA found a negative association between psychiatric disorder and viral suppression among inmates. Two consecutive studies by these same authors also identified a correlation between female sex and viral suppression during incarceration [4, 58]. Whilst male and female inmates had comparable viral suppression at prison entry, females possessed significantly higher odds of achieving viral suppression during incarceration. In contrast, Mpawa et al [69] in Malawi found no association between viral suppression and inmate characteristics.

Meta-analyses of factors affecting ART initiation, adherence and outcomes

Meta-analyses for each outcome was employed when at least two studies assessed the exposure variable. The Fixed Effect Model was applied as the number of studies involved in the meta-analyses of a particular outcome was low, and considerable difference in size existed between the studies [42, 43]. The effect of incarceration history on CD4 count was not analysed because of a high level of heterogeneity between the studies reporting the outcome (I^2 = 96%). Mantel-Haenszel statistics was applied to calculate pooled odds ratio and the results are presented using forest plot as shown in Figs 2A–5B.

Sixteen studies involving 22,190 people were included in the meta-analyses to determine factors associated with initiation, adherence and outcomes of ART among prisoners. Lower odds of ART initiation was noticed among inmates with higher baseline CD4 count (CD4 ≥500celss/mm^3) (Fig 2A; OR = 0.37, 95%CI: 0.14–0.97, I^2 = 43%), new HIV diagnosis (Fig 2B; OR = 0.07, 95%CI: 0.05–0.10, I^2 = 68%), and in those who lacked confidence in ART safety (Fig 2C; OR = 0.32, 95%CI: 0.18–0.56, I^2 = 0%) and efficacy (Fig 2D; OR = 0.31, 95%CI: 0.17–0.57, I^2 = 0%).

Non-adherence was high among inmates who lacked social support (Fig 3A; OR = 3.36, 95%CI: 2.03–5.56, I^2 = 35%), had low self-efficiency score (Fig 3B; OR = 2.50, 95%CI: 1.64,-3.80, I^2 = 22%) and those with depressive symptoms (Fig 3C; OR = 2.02, 95%CI: 1.34–3.02, I^2 = 0%).

Lower odds of viral suppression were associated with a history of incarceration (Fig 4A; OR = 0.40, 95%CI: 0.35–0.46, I^2 = 0%), re-incarceration (Fig 4B; OR = 0.09, 95%CI: 0.06–0.13, I^2 = 64%) and male gender (Fig 4C; OR = 0.55, 95%CI: 0.42–0.72, I^2 = 0%).

Higher odds of CD4 count <200cells/mm^3 (Fig 5A; OR = 2.01, 95%CI: 1.62, 2.50, I^2 = 44%) and lower odds of viral suppression (Fig 5B; OR = 0.20, 95%CI: 0.17–0.22, I^2 = 0%) were observed during prison entry compared to those noticed during release. A study by Lucas et al [5] was removed from the analyses of viral suppression during prison entry and exit to avoid severe heterogeneity (Fig 5B).

Discussion

The review offered evidence that despite the prisoners' acceptance of, and compliance with ART, issues related to accessibility and availability of standard of HIV care remained a challenge. Although there existed variation at individual and facility levels [50], HIV infected inmates were generally capable of timely initiating ART in prison settings where an acceptable standard of care was available [5, 23, 45]. From the limited available studies of prisons in the low-and middle-income countries, there remained particular challenges in accessing the standard of care available to the surrounding community, and this resulted in delayed treatment initiation and associated health complications [9, 11]. Nevertheless, there was evidence that inmates could respond well to ART in these settings when an appropriate standard of care was

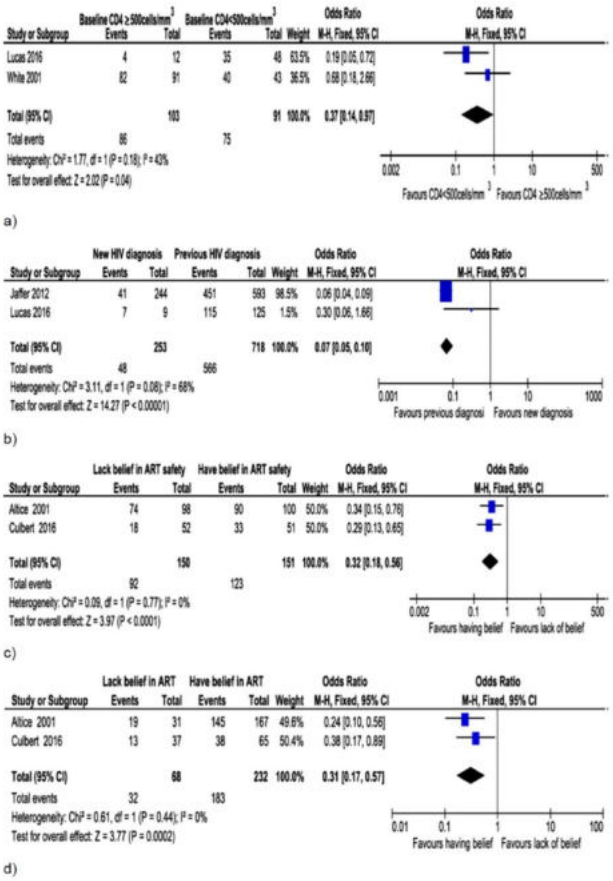

Fig 2. Forest plot of associations between ART initiation and baseline CD4 count (a), time of HIV diagnosis (b), belief in ART safety (c) and efficacy (d). Prisoners with higher baseline CD4 count (CD4 $\geq$500cells/mm^3) and new HIV diagnosis, and those who lacked belief in ART safety and efficacy were less likely to initiate ART.

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provided [64, 69]. Lower rate of ART initiation was also observed in jail settings which hold people serving short-term sentences, often for less than one year [46, 48], compared to prisons or long-term correctional facilities, possibly as a result of the transient nature of the incarcerated population.

Due to the bureaucracies commonly existing in prison systems, HIV infected inmates often faced challenges in navigating and using ART even in prison settings where the standard of care was available. Suboptimal treatment provided by health care providers, as well as stigma and discrimination arising amongst fellow inmates and prison security, contributed to delayed linkage to care and inadequate adherence to ART [12, 13, 28, 65–67]. In contrast, as supported by the meta-analyses results, inmates who were able to receive support either from people in prison (prison-officers, health staff and other inmates) or people external to prison, such as family and friends, demonstrated good adherence [25–27, 45]. Confidentiality around the use

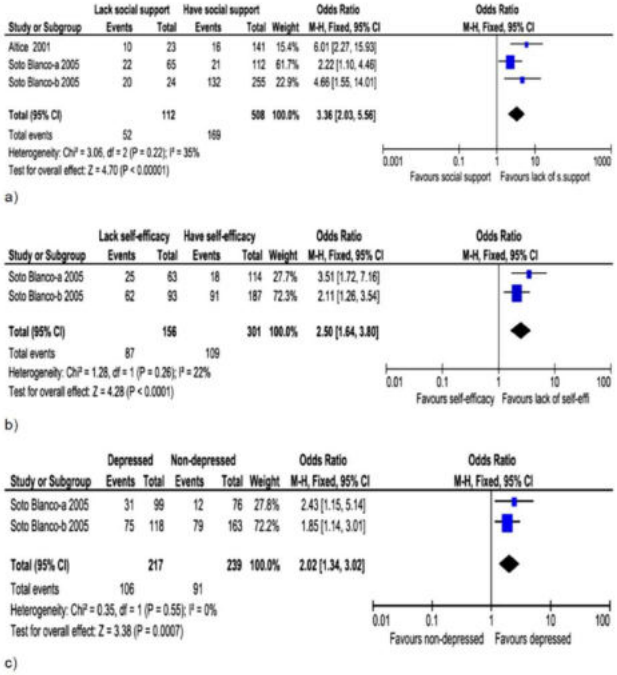

Fig 3. Forest plot of associations between non-adherence and social support (a), self-efficacy (b) and depression (c). Inmates who lacked social support, were unable to consistently use ART (or lacked self-efficacy) and those with experience of depression were less likely to be adherent to ART.

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of ART seemed to be difficult to maintain in prison, particularly in settings where prisoners were required to form a line [28] or shuttled in a group to external health facilities to access care [13]. Therefore, strategies ensuring medication privacy and the availability of social supports are highly needed in prison systems beyond offering of a high standard of care through adaptation of the Seek, Test, and Treat (STT) strategy [71] which involves identification and offering of ART to all HIV infected individuals, to the unique needs of prison settings.

It was found that the inmate's perception plaid a crucial role in the initiation of and adherence to ART. HIV-infected prisoners may feel healthy during the early phases of their infection and hesitate to initiate ART. This was shown by the current meta-analyses in which inmates with high CD4 count and those newly diagnosed for HIV were more reluctant to start ART [5, 48]. However, care providers at times preferred to prescribe medication for those who had lower CD4 counts [46]. Several studies also reported the same problem in the general populations as people at the asymptomatic stage often hesitate to decide to start ART due to the perception that they are not sick enough to warrant treatment [72, 73]. Prisoners' perception of the safety and efficacy of ART was another important factor affecting their initiation and proper use of ART. Inmates appeared to accept and adhere well to ART when they perceived that it improves health without causing harm [22, 25, 45, 70]. Adherence also occurred when they believed that they possessed the self-efficacy to consistently use the medication for life [26, 27]. It seems that novel information dissemination strategies including peer education

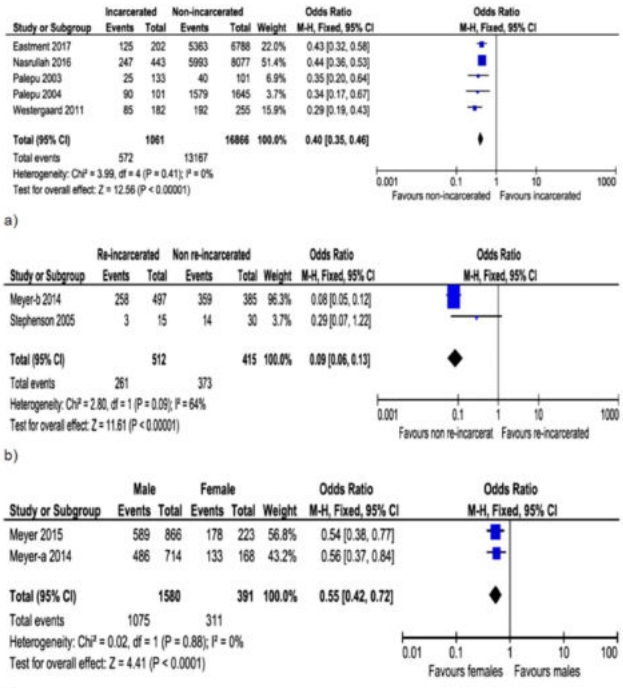

Fig 4. Forest plot of associations between viral suppression and incarceration (a), re-incarceration (b) and gender (c). Incarcerated people were at higher risk of viral non-suppression compared to unincarcerated people but had lower risk than re-incarcerated people. Higher odds of viral suppression in females than males at exit from prison.

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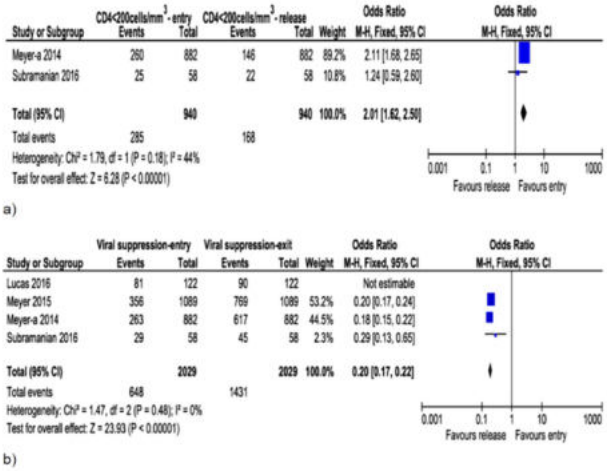

Fig 5. Forest plot of differences in CD4 count (a) and viral suppression (b) at prison entry and exit. Higher odds of low CD4 count (CD4 <200cells/mm^3) and viral non-suppression at entry than at exit from prison.

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and engagement of socially concordant navigators [74, 75] are highly required at prison settings to enhance inmates' awareness of the health benefits of early ART initiation and mechanisms to manage adverse effects of ARV drugs. Effective implementation of international guidelines to initiate all HIV infected individuals on ART regardless of their clinical background could also help minimise treatment delays [76].

Other personal and behavioural characteristics were also found to influence inmates' adherence to ART and subsequent treatment outcomes. Prisoners in some settings possessed limited knowledge about HIV and the importance of ART and so developed indifference to use the medication [13, 15]. Further, males, younger inmates, those with a lower educational background, and those with a history of injecting drug use were at high risk of suboptimal adherence and poor treatment outcomes [4, 15, 25, 58]. Given the high prevalence of these characteristics in incarcerated people [58, 77], group specific HIV care intervention strategies including provision of adequate educational information about HIV and the importance of ART are highly recommended.

Mental health problems were another important determinant of ART adherence and outcomes in prison populations. Due to the high prevalence of depression both in HIV infection [78] and in incarcerated people [79], prisoners infected with HIV were at increased risk of bearing the burden of psychiatric problems, which often caused difficulty in maintaining ART adherence [14, 26, 27, 68, 70], and led to poor treatment outcomes [4]. Integration of HIV care and treatment of medically diagnosed depression is therefore likely to be very important.

Although the level of ART adherence and outcomes varied greatly among studies (range; 42%-89% for adherence and 46%-95% for viral suppression), significant improvements were noted in general during incarceration [4, 5, 56, 58]. The variation might partly be attributed to the difference in overall quality of care provided across settings but might also be influenced by differences in study design and case definition. However, the overall improvements in ART adherence and outcomes during incarceration noted in our systematic review may suggest effectiveness of ART service in correctional facilities.

History of incarceration was associated with poor ART adherence [17, 20] and outcomes [16, 17, 21, 57, 63]. A number of factors might have contributed to this including poor quality of care and other psychosocial as well as structural barriers to care during incarceration. Linkage to community health care system also remains a challenge for maintaining the HIV care continuum among people discharged from the criminal justice system [6]. Moreover, re-incarcerated people were more likely to face viral rebound and immunological suppression than incarcerated people mainly due to care interruptions during their previous release [59–61]. This suggests a need for novel intervention strategies to ensure continuity of care during and after incarceration through integration of prison and community health care systems.

This review is subject to the following limitations. The majority of studies analysing determinants of ART initiation, adherence and outcomes were in high-income countries which made international extrapolation of the findings difficult. Causality between variables could not be claimed as the analyses were mostly made based on retrospective data. We were unable to ascertain determinants of HIV care use in prison settings in low-and middle-income countries as almost all the included studies were simple descriptive studies lacking explicit analyses of the potential factors. The definitions of HIV care cascade elements (i.e. linkage to care, ART initiation, adherence and outcomes) differed among studies, which might have led to over- or under-estimation of the effects. The certainty of the evidence could only be established with low-level of quality as all of the included studies were non-randomized observational studies; only 29% of the studies had a score of 'moderately high' or above in the overall quality assessment and there was inconsistency of effects between the studies (for some of the outcomes) and imprecision of the results as most of the studies were small studies with few events [80].

Studies published in languages other than English were excluded from the review due to resource and time constraints and this might have increased the potential for reporting bias. Also, there could be missed studies as screening was performed by a single reviewer [81]. A funnel plot for the detection of publication bias was not reported due to the small number of studies (n<10) [82] included in the meta-analyses of each exposure variable.

Conclusion

This systematic review demonstrated that prisoners respond well to ART when they are able to access a standard of care. In addition to the imperative to provide best quality care on an individual level, this finding is of critical public health importance regarding using treatment as an infection prevention strategy as people in prison are at high risk of acquiring HIV infection and transmitting to others in the outside community after their release. Thus, ensuring access to a standard of HIV care at prison settings is paramount. Each prison environment appeared to possess unique circumstances which potentially influence HIV care use, therefore prompting a need to design context specific interventions focusing on structural, social and behavioural aspects. Further research on specific determinants of HIV care use in correctional facilities with a particular focus on low-income countries is highly recommended. Additionally, standardized measures for HIV care cascade outcomes including linkage to care, adherence and viral suppression are crucial.

Supporting information

S1 Table. Systematic review reporting checklist. The preferred reporting items for systematic reviews and meta-analyses guidelines (PRISMA) 2009 checklist for reporting a systematic review.
(DOC)

S2 Table. Data extraction form. Data extraction form adapted from Cochrane review format for data extraction.
(DOCX)

S3 Table. Quality assessment results. Quality assessment results for quantitative studies included in the final review using EPHPP Tool.
(DOCX)

S1 File. Systematic review protocol. A review protocol registered in international prospective register of systematic reviews (PROSPERO).
(PDF)

S2 File. Study quality assessment tool. Effective public health practice project (EPHPP) quality assessment tool for quantitative Studies.
(PDF)

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Author Contributions

Conceptualization: Terefe G. Fuge.

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Appendix 4.1: A systematic review protocol on initiation, adherence and outcomes of antiretroviral therapy amongst incarcerated people

PROSPERO
International prospective register of systematic reviews

NHS National Institute for Health Research

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Centre for Reviews and Dissemination

Systematic review

1. * Review title.

Give the working title of the review, for example the one used for obtaining funding. Ideally the title should state succinctly the interventions or exposures being reviewed and the associated health or social problems. Where appropriate, the title should use the PI(E)COS structure to contain information on the Participants, Intervention (or Exposure) and Comparison groups, the Outcomes to be measured and Study designs to be included.

Systematic review and meta-analysis of initiation, adherence and outcomes of antiretroviral therapy among incarcerated people

2. Original language title.

For reviews in languages other than English, this field should be used to enter the title in the language of the review. This will be displayed together with the English language title.

3. * Anticipated or actual start date.

Give the date when the systematic review commenced, or is expected to commence.

01/02/2019

4. * Anticipated completion date.

Give the date by which the review is expected to be completed.

30/09/2019

5. * Stage of review at time of this submission.

Indicate the stage of progress of the review by ticking the relevant Started and Completed boxes. Additional information may be added in the free text box provided.
Please note: Reviews that have progressed beyond the point of completing data extraction at the time of initial registration are not eligible for inclusion in PROSPERO. Should evidence of incorrect status and/or completion date being supplied at the time of submission come to light, the content of the PROSPERO record will be removed leaving only the title and named contact details and a statement that inaccuracies in the stage of the review date had been identified.
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The review has not yet started: No

Review stage	Started	Complete
Preliminary searches	Yes	Yes
Piloting of the study selection process	Yes	No
Formal screening of search results against eligibility criteria	No	No
Data extraction	No	No
Risk of bias (quality) assessment	No	No
Data analysis	No	No

Provide any other relevant information about the stage of the review here (e.g. Funded proposal, protocol not yet finalised).

6. * Named contact.

The named contact acts as the guarantor for the accuracy of the information presented in the register record.

Terefe Fuge

Email salutation (e.g. "Dr Smith" or "Joanne") for correspondence:

Mr Fuge

7. * Named contact email.

Give the electronic mail address of the named contact.

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8. Named contact address

Give the full postal address for the named contact.

Flinders University, College of Medicine and Public Health, GPO Box 2100 | Adelaide SA 5001

9. Named contact phone number.

Give the telephone number for the named contact, including international dialling code.

+61(0)872218445

10. * Organisational affiliation of the review.

Full title of the organisational affiliations for this review and website address if available. This field may be completed as 'None' if the review is not affiliated to any organisation.

Flinders University

Organisation web address:

http://www.flinders.edu.au

11. * Review team members and their organisational affiliations.

Give the title, first name, last name and the organisational affiliations of each member of the review team. Affiliation refers to groups or organisations to which review team members belong.

Mr Terefe Fuge. Flinders University
Dr Emma Miller. Flinders University
Dr George Tsourtos. Flinders University

12. * Funding sources/sponsors.

Give details of the individuals, organizations, groups or other legal entities who take responsibility for initiating, managing, sponsoring and/or financing the review. Include any unique identification numbers assigned to the review by the individuals or bodies listed.

Flinders University

13. * Conflicts of interest.

List any conditions that could lead to actual or perceived undue influence on judgements concerning the main topic investigated in the review.

None

The authors declare that they have no known conflicts of interest.

14. Collaborators.

Give the name and affiliation of any individuals or organisations who are working on the review but who are not listed as review team members.

15. * Review question.

State the question(s) to be addressed by the review, clearly and precisely. Review questions may be specific or broad. It may be appropriate to break very broad questions down into a series of related more specific questions. Questions may be framed or refined using PI(E)COS where relevant.

How does incarceration impact on initiation, adherence and outcomes of antiretroviral therapy?

16. * Searches.

State the sources that will be searched. Give the search dates, and any restrictions (e.g. language or publication period). Do NOT enter the full search strategy (it may be provided as a link or attachment.)

Systematic searches will be carried out on the following databases; Emcare, MEDLINE, PubMed, Scopus, Web of Science, CINAHL and Cochrane Library. The concepts HIV/AIDS, ART and Incarceration will be used to construct the search strategy. The search strategy uses only terms related to exposure (incarceration) and outcomes. The terms will be combined with MEDLINE filter for the concepts under search. The search terms will be adapted for use with other bibliographic databases in combination with database-specific filters for the concepts, where these are available. The search strategy is developed with the help of a qualified librarian. While no restriction will be made in terms of geographical region and year of publication, studies should be published in English language and indexed up to 26 October 2018 to be included in the review. The searches will be re-run just before the final analyses and further studies retrieved for inclusion.

The search strategy for MEDLINE is; HIV or AIDS or HIV-AIDS or Acquired Immunodeficiency Syndrome or

Human immunodeficiency virus AND antiretroviral* or anti-retroviral* or HAART or ART or anti-hiv AND prison* or incarcerate* or imprison* or inmate* or jail* or detention* or "correctional facilities" or "correctional setting" or "house of correction" or custody or convict or detainee.

17. URL to search strategy.

Give a link to a published pdf/word document detailing either the search strategy or an example of a search strategy for a specific database if available (including the keywords that will be used in the search strategies), or upload your search strategy.Do NOT provide links to your search results.

Alternatively, upload your search strategy to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

Do not make this file publicly available until the review is complete

18. * Condition or domain being studied.

Give a short description of the disease, condition or healthcare domain being studied. This could include health and wellbeing outcomes.

Antiretroviral therapy in incarcerated people

19. * Participants/population.

Give summary criteria for the participants or populations being studied by the review. The preferred format includes details of both inclusion and exclusion criteria.

Studies evaluating HIV care during incarceration or the effect of history of incarceration on ART initiation, adherence and outcomes will be considered for review. Those studies focusing only on HIV care use before incarceration or community care linkage after release will be excluded. Studies will be included in the review if they investigated HIV care utilisation before, during and after incarceration comparatively. Studies conducted on specific populations such as certain ethnic groups or population with particular characteristics (e.g. transgender people, men who have sex with men) will be excluded.

20. * Intervention(s), exposure(s).

Give full and clear descriptions or definitions of the nature of the interventions or the exposures to be reviewed.

Articles exploring structural, social and individual level determinants of HIV care utilisation among prisoners will be reviewed. More specifically, studies analysing factors related to access and availability of HIV care; psychosocial factors such as depression, social support, disclosure, stigma and privacy; behavioural factors such as attitude towards ART; health and medication related factors including comorbidity, immunological or clinical status; incarceration related factors such as number and length of imprisonment; and socioeconomic factors including age, sex, and other characteristics will be assessed.

21. * Comparator(s)/control.

Where relevant, give details of the alternatives against which the main subject/topic of the review will be compared (e.g. another intervention or a non-exposed control group). The preferred format includes details of both inclusion and exclusion criteria.

While no restriction will be made based on whether a study has used comparators, non-incarcerated people will be considered as a control group when comparisons are made. Comparator 'Not applicable' for qualitative studies.

22. * Types of study to be included.

Give details of the types of study (study designs) eligible for inclusion in the review. If there are no restrictions on the types of study design eligible for inclusion, or certain study types are excluded, this should be stated. The preferred format includes details of both inclusion and exclusion criteria.

Studies investigating one or more of the following HIV care cascade elements in incarcerated populations will be included in the review; linkage to HIV care, initiation of ART, adherence to ART and outcomes of ART. Both quantitative and qualitative studies will be reviewed without restriction based on type of study design and publication date.

23. Context.

Give summary details of the setting and other relevant characteristics which help define the inclusion or exclusion criteria.

Global studies focusing on one or more of the major components of HIV care cascade (i.e. ART initiation, adherence or outcomes) in the prison population will be included.

24. * Main outcome(s).

Give the pre-specified main (most important) outcomes of the review, including details of how the outcome is defined and measured and when these measurement are made, if these are part of the review inclusion criteria.

Studies reporting one or more of the following outcomes will be included in the review; linkage to HIV care, initiation of ART, adherence to and outcomes of ART in terms of change in CD4 count and viral suppression. No restriction will be made based on the definition of the outcomes. For qualitative studies, description of barriers and facilitators of HIV care utilisation among inmates.

Timing and effect measures

Delay in linkage to HIV care or ART initiation measured using different methods such as WHO clinical staging, CD4 count and determination of time between HIV diagnosis and linkage to care/ART initiation. Adherence to dose at varying period of time (days, weeks and months) measured using different methods (self-report, pharmacy refill, pill count, electronic monitoring cups) at different thresholds. Outcomes of ART measured in terms of CD4 count and viral load at different cut off values.

25. * Additional outcome(s).

List the pre-specified additional outcomes of the review, with a similar level of detail to that required for main outcomes. Where there are no additional outcomes please state 'None' or 'Not applicable' as appropriate to the review

None

greater than 50% will be considered as substantial heterogeneity. We will perform sensitivity analysis based on study quality, and subgroup analysis to explore heterogeneity in effect estimate based on study quality and type of exposure. Publication bias will also be detected using a funnel plot.

29. * Analysis of subgroups or subsets.

State any planned investigation of 'subgroups'. Be clear and specific about which type of study or participant will be included in each group or covariate investigated. State the planned analytic approach.

If the necessary data are available, subgroup analysis will be performed for different settings (low and high income countries), types of study designs, measurements and thresholds. Within each study outcome and overall, we will also perform subgroup analysis by age and number of incarceration episodes.

30. * Type and method of review.

Select the type of review and the review method from the lists below. Select the health area(s) of interest for your review.

Type of review

Cost effectiveness
No

Diagnostic
No

Epidemiologic
No

Individual patient data (IPD) meta-analysis
No

Intervention
No

Meta-analysis
Yes

Methodology
No

Narrative synthesis
No

Network meta-analysis
No

Pre-clinical
No

Prevention
No

Prognostic
No

Prospective meta-analysis (PMA)
No

Review of reviews
No

Service delivery
No

Synthesis of qualitative studies
No

Timing and effect measures

Not applicable.

26. * Data extraction (selection and coding).

Describe how studies will be selected for inclusion. State what data will be extracted or obtained. State how this will be done and recorded.

Articles obtained from database searches will be screened for relevance with their titles and abstracts. After removal of duplicate and irrelevant articles, full text review will be performed on the retrieved articles. Corresponding authors of primary studies will be contacted for any missing or unclear information. Data will be extracted using a format adapted from Cochrane Systematic Review Checklist for Data Collection. Separate data extraction formats will be used for treatment initiation, adherence and outcomes categories. Information in the data extraction form include author, year, geographical location, population, method, measurements, exposures, results and outcomes.

27. * Risk of bias (quality) assessment.

Describe the method of assessing risk of bias or quality assessment. State which characteristics of the studies will be assessed and any formal risk of bias tools that will be used.

Two review authors will independently perform quality (risk of bias) assessment of the retrieved articles. The quality assessment will be done using EPHPP Quality Assessment Tool for Quantitative Studies by considering the following characteristics; representativeness of participants (selection bias), study design, control of potential confounders, validity and reliability of data collection methods and completeness of outcome data (withdrawals and dropouts). The criterion of "blindness" will not be considered due to observational nature of most studies in the field. Disagreements between the review authors over the risk of bias in particular studies will be resolved by discussion, with involvement of a third review author where necessary. Risk of bias assessment 'Not applicable' for qualitative studies.

28. * Strategy for data synthesis.

Provide details of the planned synthesis including a rationale for the methods selected. This **must not be generic text** but should be **specific to your review** and describe how the proposed analysis will be applied to your data.

We will provide narrative synthesis of the findings across studies in terms of exposures and outcomes. Due to variety of outcomes measured and difference in definition of each of the outcome across studies, we anticipate limited scope for meta-analysis. However, whenever studies have measured the same outcome and exposure with the same definition, we will pool the outcomes using a random-effects meta-analysis, with standardised mean differences for continuous outcomes and risk ratios for binary outcomes, and calculate 95% confidence intervals and two sided P values for each outcome. Standard deviations will be adjusted for studies with small sample size and those in which clustering effects have not been considered. Heterogeneity between studies in effect measures will be determined using Chi^2 test and I^2 statistic. I^2

No

Obstetrics and gynaecology
No

Oral health
No

Palliative care
No

Perioperative care
No

Physiotherapy
No

Pregnancy and childbirth
No

Public health (including social determinants of health)
Yes

Rehabilitation
No

Respiratory disorders
No

Service delivery
No

Skin disorders
No

Social care
No

Surgery
No

Tropical Medicine
No

Urological
No

Wounds, injuries and accidents
No

Violence and abuse
No

31. Language.

Select each language individually to add it to the list below, use the bin icon to remove any added in error.
English

There is not an English language summary

32. Country.

Select the country in which the review is being carried out from the drop down list. For multi-national collaborations select all the countries involved.

Australia

33. Other registration details.

Give the name of any organisation where the systematic review title or protocol is registered (such as with

Systematic review
Yes

Other
No

Health area of the review

Alcohol/substance misuse/abuse
No

Blood and immune system
No

Cancer
No

Cardiovascular
No

Care of the elderly
No

Child health
No

Complementary therapies
No

Crime and justice
No

Dental
No

Digestive system
No

Ear, nose and throat
No

Education
No

Endocrine and metabolic disorders
No

Eye disorders
No

General interest
No

Genetics
No

Health inequalities/health equity
No

Infections and infestations
No

International development
No

Mental health and behavioural conditions
No

Musculoskeletal
No

Neurological
No

Nursing

The Campbell Collaboration, or The Joanna Briggs Institute) together with any unique identification number assigned. (N.B. Registration details for Cochrane protocols will be automatically entered). If extracted data will be stored and made available through a repository such as the Systematic Review Data Repository (SRDR), details and a link should be included here. If none, leave blank.

34. Reference and/or URL for published protocol.

Give the citation and link for the published protocol, if there is one

Give the link to the published protocol.

Alternatively, upload your published protocol to CRD in pdf format. Please note that by doing so you are consenting to the file being made publicly accessible.

No I do not make this file publicly available until the review is complete

Please note that the information required in the PROSPERO registration form must be completed in full even if access to a protocol is given.

35. Dissemination plans.

Give brief details of plans for communicating essential messages from the review to the appropriate audiences.

Do you intend to publish the review on completion?

Yes

36. Keywords.

Give words or phrases that best describe the review. Separate keywords with a semicolon or new line. Keywords will help users find the review in the Register (the words do not appear in the public record but are included in searches). Be as specific and precise as possible. Avoid acronyms and abbreviations unless these are in wide use.

Systematic review; meta-analysis; antiretroviral therapy; initiation; adherence; outcomes; incarceration

37. Details of any existing review of the same topic by the same authors.

Give details of earlier versions of the systematic review if an update of an existing review is being registered, including full bibliographic reference if possible.

38. * Current review status.

Review status should be updated when the review is completed and when it is published. For newregistrations the review must be Ongoing.
Please provide anticipated publication date

Review_Ongoing

39. Any additional information.

Provide any other information the review team feel is relevant to the registration of the review.

40. Details of final report/publication(s).

This field should be left empty until details of the completed review are available.

Give the link to the published review.

Appendix 4.2: The preferred reporting items for ystematic reviews and meta-analysis guidelines (PRISMA) 2009 checklist for reporting a systematic review

Section/topic	#	Checklist item	Reported on page #
TITLE			
Title	1	Identify the report as a systematic review, meta-analysis , or both.	1
ABSTRACT			
Structured summary	2	Provide a structured summary including, as applicable: background; objectives; data sources; study eligibility criteria, participants, and interventions; study appraisal and synthesis methods; results; limitations; conclusions and implications of key findings; systematic review registration number.	1
INTRODUCTION			
Rationale	3	Describe the rationale for the review in the context of what is already known.	3
Objectives	4	Provide an explicit statement of questions being addressed with reference to participants, interventions, comparisons, outcomes, and study design (PICOS).	4
METHODS			
Protocol and registration	5	Indicate if a review protocol exists, if and where it can be accessed (e.g., Web address), and, if available, provide registration information including registration number.	5
Eligibility criteria	6	Specify study characteristics (e.g., PICOS, length of follow-up) and report characteristics (e.g., years considered, language, publication status) used as criteria for eligibility, giving rationale.	5
Information sources	7	Describe all information sources (e.g., databases with dates of coverage, contact with study authors to identify additional studies) in the search and date last searched.	6&7
Search	8	Present full electronic search strategy for at least one database, including any limits used, such that it could be repeated.	6
Study selection	9	State the process for selecting studies (i.e., screening, eligibility, included in systematic review, and, if applicable, included in the meta-analysis).	6
Data collection process	10	Describe method of data extraction from reports (e.g., piloted forms, independently, in duplicate) and any processes for obtaining and confirming data from investigators.	7

Data items	11	List and define all variables for which data were sought (e.g., PICOS, funding sources) and any assumptions and simplifications made.	7
Risk of bias in individual studies	12	Describe methods used for assessing risk of bias of individual studies (including specification of whether this was done at the study or outcome level), and how this information is to be used in any data synthesis.	6
Summary measures	13	State the principal summary measures (e.g., risk ratio, difference in means).	7
Synthesis of results	14	Describe the methods of handling data and combining results of studies, if done, including measures of consistency (e.g., I^2) for each meta-analysis .	7

Appendix 4.3: Study quality assessment tool

QUALITY ASSESSMENT TOOL FOR QUANTITATIVE STUDIES

EPHPP
Effective Public Health Practice Project

COMPONENT RATINGS

A) SELECTION BIAS

(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?

1 Very likely
2 Somewhat likely
3 Not likely
4 Can't tell

(Q2) What percentage of selected individuals agreed to participate?

1 80 - 100% agreement
2 60 – 79% agreement
3 less than 60% agreement
4 Not applicable
5 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

B) STUDY DESIGN

Indicate the study design

1 Randomized controlled trial
2 Controlled clinical trial
3 Cohort analytic (two group pre + post)
4 Case-control
5 Cohort (one group pre + post (before and after))
6 Interrupted time series
7 Other specify _____
8 Can't tell

Was the study described as randomized? If NO, go to Component C.

No Yes

If Yes, was the method of randomization described? (See dictionary)

No Yes

If Yes, was the method appropriate? (See dictionary)

No Yes

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

1

C) CONFOUNDERS

(Q1) Were there important differences between groups prior to the intervention?

1 Yes
2 No
3 Can't tell

The following are examples of confounders:

1 Race
2 Sex
3 Marital status/family
4 Age
5 SES (income or class)
6 Education
7 Health status
8 Pre-intervention score on outcome measure

(Q2) If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?

1 80 – 100% (most)
2 60 – 79% (some)
3 Less than 60% (few or none)
4 Can't Tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

D) BLINDING

(Q1) Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?

1 Yes
2 No
3 Can't tell

(Q2) Were the study participants aware of the research question?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

E) DATA COLLECTION METHODS

(Q1) Were data collection tools shown to be valid?

1 Yes
2 No
3 Can't tell

(Q2) Were data collection tools shown to be reliable?

1 Yes
2 No
3 Can't tell

RATE THIS SECTION	STRONG	MODERATE	WEAK
See dictionary	1	2	3

F) WITHDRAWALS AND DROP-OUTS

(Q1) Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?

1 Yes
2 No
3 Can't tell
4 Not Applicable (i.e. one time surveys or interviews)

(Q2) Indicate the percentage of participants completing the study. (If the percentage differs by groups, record the lowest).

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell
5 Not Applicable (i.e. Retrospective case-control)

RATE THIS SECTION	STRONG	MODERATE	WEAK	
See dictionary	1	2	3	Not Applicable

G) INTERVENTION INTEGRITY

(Q1) What percentage of participants received the allocated intervention or exposure of interest?

1 80 -100%
2 60 - 79%
3 less than 60%
4 Can't tell

(Q2) Was the consistency of the intervention measured?

1 Yes
2 No
3 Can't tell

(Q3) Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?

4 Yes
5 No
6 Can't tell

H) ANALYSES

(Q1) Indicate the unit of allocation (circle one)

community organization/institution practice/office individual

(Q2) Indicate the unit of analysis (circle one)

community organization/institution practice/office individual

(Q3) Are the statistical methods appropriate for the study design?

1 Yes
2 No
3 Can't tell

(Q4) Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?

1 Yes
2 No
3 Can't tell

GLOBAL RATING

COMPONENT RATINGS
Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

A	**SELECTION BIAS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
B	**STUDY DESIGN**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
C	**CONFOUNDERS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
D	**BLINDING**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
E	**DATA COLLECTION METHOD**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	
F	**WITHDRAWALS AND DROPOUTS**	**STRONG**	**MODERATE**	**WEAK**	
		1	2	3	Not Applicable

GLOBAL RATING FOR THIS PAPER (circle one):

1	STRONG	(no WEAK ratings)
2	MODERATE	(one WEAK rating)
3	WEAK	(two or more WEAK ratings)

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No Yes

If yes, indicate the reason for the discrepancy

1	Oversight
2	Differences in interpretation of criteria
3	Differences in interpretation of study

Final decision of both reviewers (circle one):

1	**STRONG**
2	**MODERATE**
3	**WEAK**

Appendix 4.4: Cochrane review format for data extraction

Author (Year)	Country	Population	Study Design	Measurement	Types of exposures	Findings	Conclusions

HIV care continuum in prisons study

Appendix 4.5: Participant recruitment and follow-up process

Contact Terefe Fuge: +251916357443

fuge0002@flinders.edu.au

Each eligible individual should be offered participation in the study. Medication identification number must be filled on each questionnaire and laboratory data extraction form.

Participants should be:

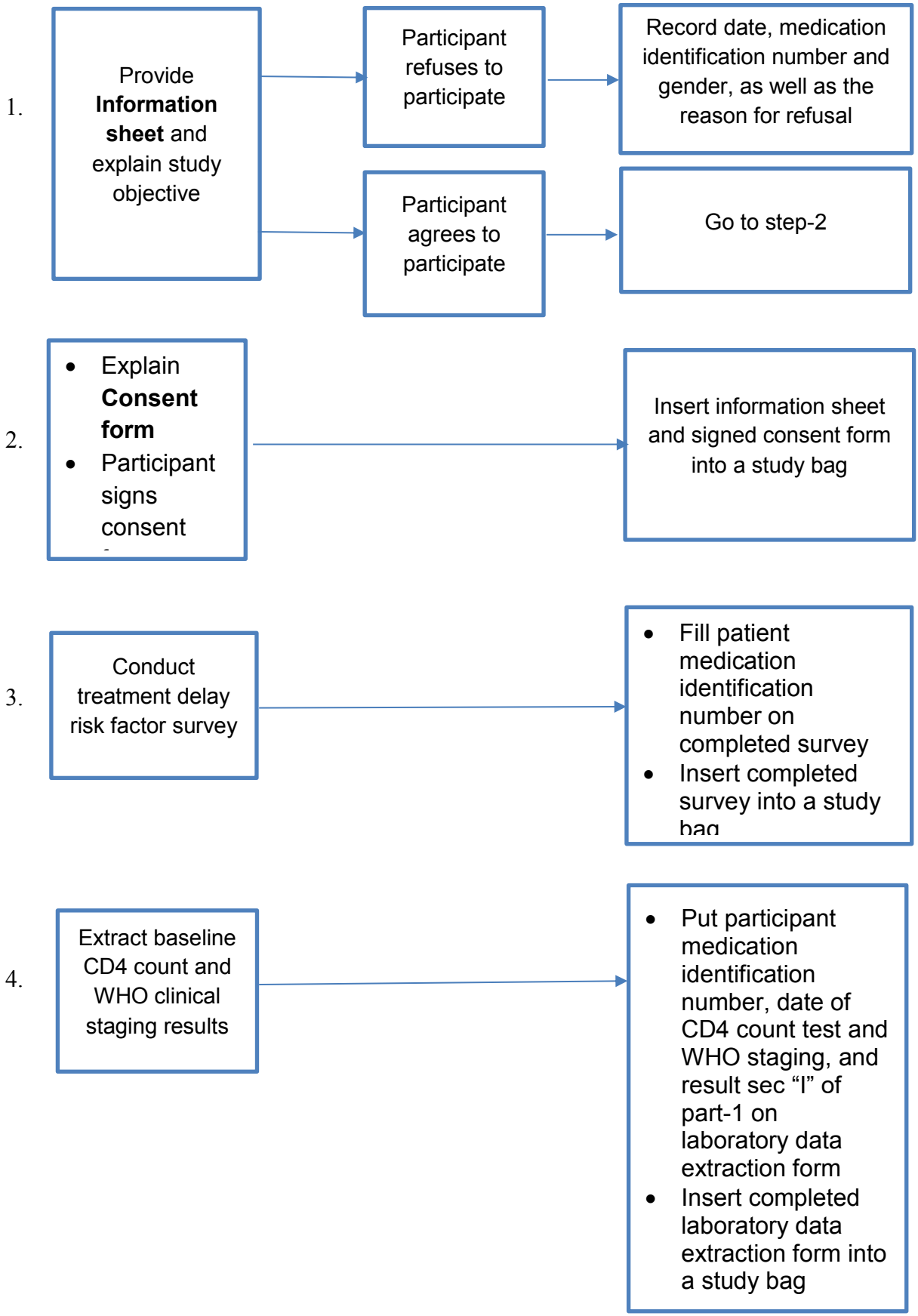
- HIV-infected
- Aged 18 and above years
- Mentally and physically healthy enough to understand the purpose of the study and give written informed consent.

Tools and materials required

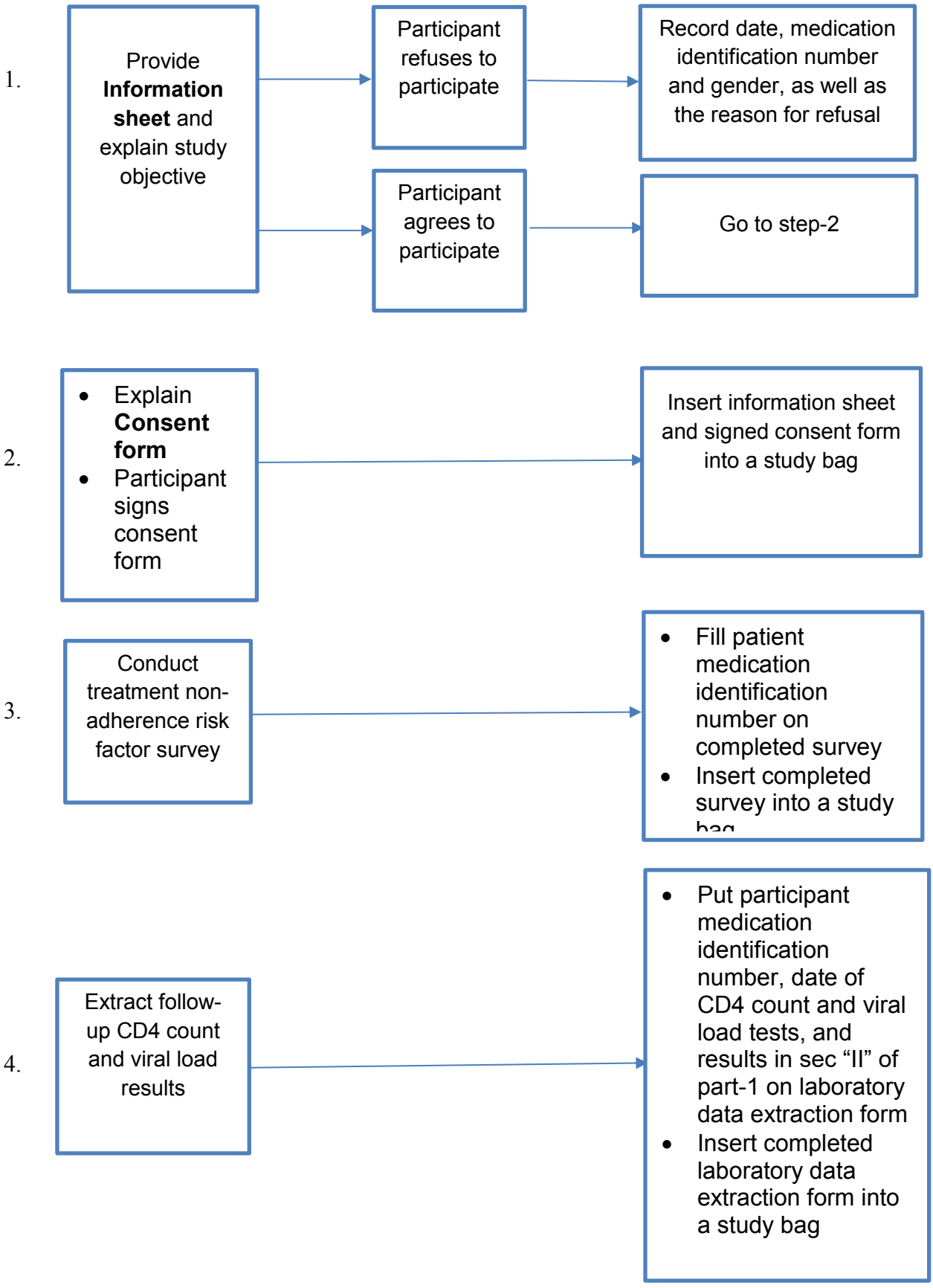
- Participant information sheet [inserted in a study bag after being read]
- Consent form [inserted in a study bag after being signed]
- Risk factor survey for ART initiating prisoners [inserted in a study bag after being completed]
- Risk factor survey for ART initiating non-incarcerated people [inserted in a study bag after being completed]
- Risk factor survey for adherence and ART outcomes amongst prisoners [inserted in a study bag after being completed]
- Risk factor survey for adherence and ART outcomes among HIV-infected non-incarcerated people [inserted in a study bag after being completed]
- Laboratory data extraction form [inserted in a study bag after being completed]
- Study bag with a locker [kept secured in a locker]

Recruitment (Research assistant)

I. ART initiators

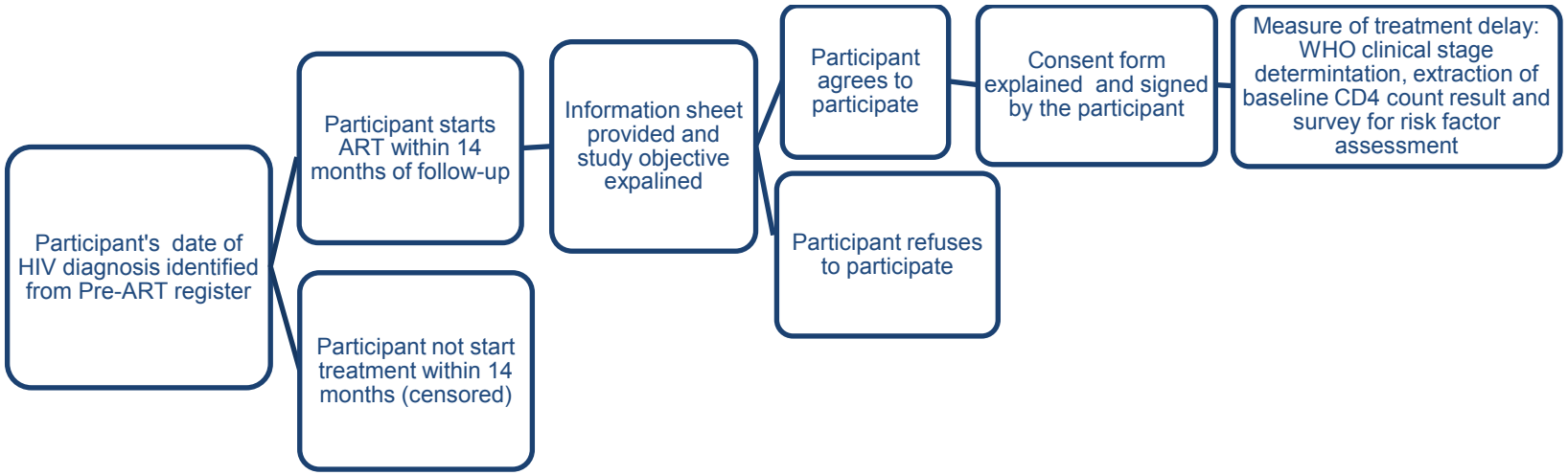


II. ART adherence and outcomes section

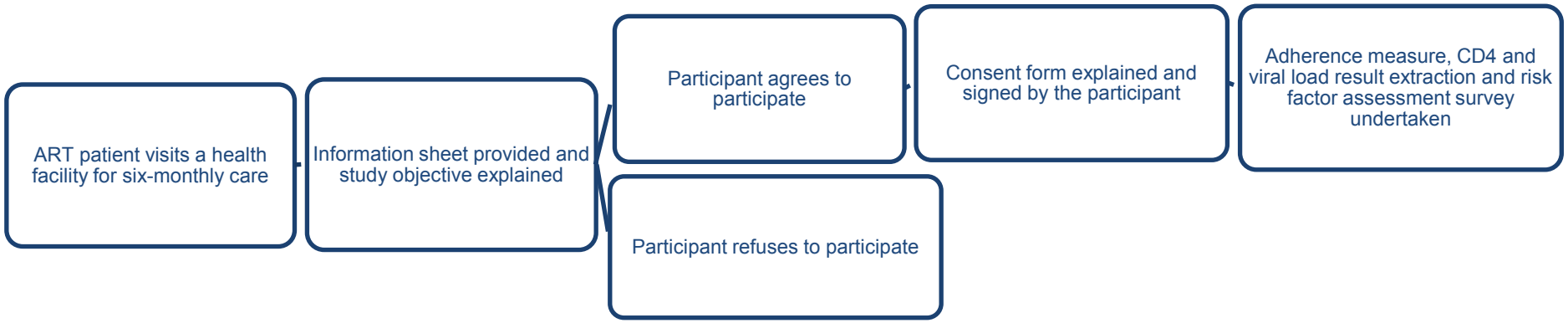


Participation pathway

I. ART initiators



II. ART adherence and outcomes



HIV care continuum in prisons study

Appendix 4.6: Survey questionnaire for incarcerated people

Date ----------

ART site code----------

Prison code ----------

Participant's medication identification number: ----------

For each question, please circle the number with the most suitable answer to the participant's response. Multiple responses are possible for some questions as indicated. If a participant's response doesn't match with any of the options provided, please write the response under the choice "others'. (**Research assistant only**)

Research assistant's name----------Signature----------

Part-I: Sociodemographic characteristics			
No	**Questions**	**Answer**	**Skip**
1.	Age in years?	----------years	
2.	Gender?	1. Male 2. Female 3. Non-binary 4. Prefer not say	
3.	Current marital status?	1. Have partner 2. Have no partner	
4.	Highest level of education you have completed?	1. No school 2. Elementary school completed 3. High school completed 4. College graduate	
5.	What is your religion?	1. Orthodox 2. Protestant 3. Catholic 4. Muslim 5. No religion 6. Others (Specify)……	
6.	What was your last employment status before current incarceration?	1. Unemployed 2. Government employee 3. House wife 4. Farmer 5. Daily labourer 6. Others (specify)----------	
7.	How much was your last monthly income in Ethiopian birr before current incarceration?	----------EB	
8.	Have you ever considered yourself to be homeless in any part of your life before current incarceration?	1. Yes 2. No	
9.	Where was your usual place of residence before current incarceration?	1. Urban 2. Rural 3. Unknown	
10.	How often do you get visits from people outside prison?	----------per month	If no visit, go to Q12
11.	How often they bring you food while visiting?	1. Never 2. Sometimes 3. Always	
12.	How satisfied are you with the food provided in the prison?	1. Very dissatisfied 2. Dissatisfied 3. Neutral	

		4. Satisfied 5. Very satisfied	
Part-II: Imprisonment information			
1.	How long have you been incarcerated in the current prison for your present sentence?	----------months	
2.	How many times have you ever been incarcerated?	----------times	
3.	How long is your current prison sentence?	----------months	
4.	When have you been incarcerated for your current sentence?	Date:----------	
5.	Have you ever been imprisoned in the current prison before?	1. Yes 2. No	If "No" go to Q7
6.	If your answer to Q5 is "Yes", for how long?	----------months 1st round----------months 2nd round----------month Others (specify)----------	
7.	Have you ever been imprisoned in another prison?	1. Yes 2. No	If "No" go to Q9
8.	If your answer to Q7 is "Yes", for how long?	----------months	
Part-III: Behavioural and HIV transmission risk factors			
1.	Do you smoke cigarettes?	1. Yes 2. No	If "No" go to Q3
2.	How many cigarettes a day do you smoke?	1. 10 cigarettes or less 2. 11-20 3. 21-30 4. 31 or more	
3.	Do you chew khat?	1. Yes 2. No	If "No" go to Q5
4.	If your answer to Q3 is "Yes", how often?	1. Daily 2. 2-3 times a week 3. Once a week or less	
5.	Do you use drugs other than those required for medical reasons?	1.Yes 2. No	If "No" go to Q7
6.	What type of drug do you use?	1. Heroin 2. Cannabis/hashish 3. Cocaine 4. Others (specify)----------	
7.	Do you share needle and syringe with your friends while using injecting drugs?	1.Yes 2. No	If "No" go to Q9

8.	Why don't you use a new needle and syringe?	1. Not available 2. Unaffordable 3. I don't want	
9.	Have you got any tattoo while being in the current prison?	1.Yes 2. No	If "No" go to Q11
10.	Have you ever shared tattooing materials with others?	1.Yes 2. No	
11.	Do you share shaver or nail clippers with your friends?	1.Yes 2. No	
12.	Have you had sex in the last 12 months?	1.Yes 2. No	If "No" go to Q20
13.	How often do you uses condom during sex?	1. Never 2. Sometimes 3. Always	
14.	If your answer to Q13 is "1" or "2", why?	1. Not available 2. Unaffordable 3. I don't want to use	
15.	How many sexual partners have you had in the last 12 months?	1. One 2. Two 3. More than two	
16	What is the gender of your sexual partner/s?	1. Male 2. Female 3. Male and female	
17.	What is your sexual partner's/s' HIV status?	1. HIV positive 2. HIV negative 3. HIV(+) and HIV(-) 4. I don't know	
18.	How long have you been in a relationship with your current partner?	1. Less than one year 2. One up to two years 3. More than two years	
19.	Have you ever had sexual relationship with a prisoner?	1. Yes 2. No	
20.	Have you ever disclosed your HIV status to people other than health professionals involved in your care?	1. Yes 2. No	If "No" go to Q23
21.	If your answer to Q20 is "Yes", to how many persons?	1. One 2. Two 3. More than two	
22.	If your answer to Q20 is "Yes", to whom you disclosed your status?	1. Spouse 3. Offspring 4. Parent 5. Sibling	

		6. Relatives 7. Friends 8.Others (specify)----------	
23.	Do you know anyone else living in your cell who has HIV?	1. Yes 2. No	
24.	Do you know anyone else living in your family who has HIV?	1. Yes 2. No 3. I don't know	
Part-IV: Health condition of the participant			
(A) Psychological distress			
During the last 30 days, about how often did…….			
1.	you feel so depressed that nothing could cheer you up?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
2.	you feel hopeless?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
3.	you feel restless or fidgety?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
4.	you feel that everything was an effort?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
5.	you feel worthless?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
6.	you feel nervous?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
Part-V: HIV care and support			
1.	HIV care facility?	1. Health centre 2. Hospital 3. Others (specify)----------	
2.	How long it usually takes to reach the health facility from your residence?	----------minutes	

3.	How long you usually wait to see a health professional once you arrive at the health facility?	----------minutes	
4.	How satisfied are you with the treatment by the ART staff?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
5.	How do you agree with the statement "places where you can get your HIV medications is very convenient"	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
6.	How much you trust your care provider to offer you high quality medical care?	1. Never 2. Not much 3. Neutral 4. Somewhat 5. Completely/Mostly	
7.	How much you trust your care provider to prescribe the best HIV medications?	1. Never 2. Not much 3. Neutral 4. Somewhat 5. Completely/Mostly	
8.	In general, how satisfied are you with the support provided by the prison health staff?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
9.	How satisfied are you with the support provided by the prison officers in accessing HIV care?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
Part VI: Knowledge and attitude towards HIV and ART			
(A) Knowledge of HIV transmission and ART			
1.	How is HIV transmitted?	1.Sharing eating/drinking utensils 2.Shacking hands 3. Coughing 4. Having sex without condom 5. Sharing sharp materials 6. From mother to child 7. Insect bite 8. Others (specify)----------	More than one answer possible

2.	Sexual transmission of HIV can be prevented by using condoms	1. Yes 2. No 3. I don't know	
3.	People who have been infected with HIV quickly show serious signs of being infected	1. Yes 2. No 3. I don't know	
4.	ART consists of drugs to suppress the progression of HIV	1. Yes 2. No 3. I don't know	
5.	ART can cause side effects	1. Yes 2. No 3. I don't know	
6.	Early initiation of ART improves health and reduces the risk of transmitting HIV	1. Yes 2. No 3. I don't know	
7.	Missing ART doses can lead to disease progression and drug resistance	1. Yes 2. No 3. I don't know	
8.	Missing doses of ART increases the risk of transmitting HIV	1. Yes 2. No 3. I don't know	
(B) Attitude towards ART			
How much do you agree with the following statements:			
1.	You should take ART only when you feel sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
2.	Traditional healers provide more effective treatments than ART	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Taking ART on schedule prevents you from being sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
(C) Self-efficacy			
How do you agree with:			
1.	Felt confident about your ability to handle your personal problems	1. Strongly disagree 2. Disagree 3. Neutral	

		4. Agree 5. Strongly agree	
2.	Seeking support from prison staff to help with daily activities if you are sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Seeking support from someone other than prison staff to help with daily activities if you are sick	1. Never 2. Rarely 3. Neutral 4. Sometimes 5. All/most of the time	
Part VII: HIV stigma			
How much do you agree with the following statements:			
1.	People I care about stopped calling after learning I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
2.	I have lost friends by telling them I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Some people avoid touching me if they know I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
4.	Telling someone I have HIV is risky	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
5.	I work hard to keep my HIV a secret	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
6.	I am very careful who I tell that I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree	

		5. Strongly agree	
7.	Most people believe a person who has HIV is dirty	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
8.	Most people are uncomfortable around someone with HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
9.	People with HIV are treated like outcasts	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
10.	I feel guilty because I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
11.	I feel I'm not as good a person as others because I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
12.	People's attitudes about HIV make me feel worse about myself	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
Part VIII: ART initiation (only ART naive patients)			
1.	Type of method a participant was diagnosed for HIV?	1. VCT 2. Opt-out/PICT 3. Opt-in 4. Others (specify)----------	To be filled by data collector from Pre-ART register
2.	When did you get diagnosed?	1. Before incarceration 2. After incarceration	
3.	What triggered you to be tested?	1. Partners' death/illness 2. Being sick or symptomatic	

		3. Advice from a health professional 4. Advice from friend/family 5. Others (specify)----------	
4.	How many health facility visits did you attend since diagnosis until your start of ART?	----------	
5.	How many appointments did you miss before you start treatment?	----------	If "None" go to Q6
6.	If you miss any of the appointments, why did you miss them?	1. Forgetting 2. Lack of transportation 3. Fear of stigma 4. Lack of support from prison staff 5. Others (Specify)----------	
7.	Since you had been tested HIV positive, how long have you waited to start ART?	Patient report----------weeks From register----------weeks	To be confirmed from Pre-ART register
8.	Why have you waited for the period of time you mention in Q6 without starting ART?	1. Not aware of ART 2. Feeling healthy 3. Fear of drug side effects 4. Fear of stigma/discrimination 5. Seeking repeated testing 6. Lack of access to care/drugs 7. Being on TB treatment 8. Using other treatment options 9. Others (specify)----------	More than one answer possible
9.	What triggered you to start treatment now?	1. Partner's/s' death/illness 2. Being sick or symptomatic 3. Advice from a health professional 4. Advice from partner/friend/family 5. Getting access to ART 6. Others (specify)----------	More than one answer possible
Part IX: Adherence to antiretroviral therapy (only for patients on ART for ≥ 6 months)			
1.	How long have you been taking ART?	----------months	
2.	Had you been taking ART before current incarceration?	1. Yes 2. No	If "No" go to Q11

3.	If your answer to Q2 is “Yes”, for how long?	----------months	
4.	If your answer to Q2 is “Yes”, how long did you wait to continue treatment in the prison?	----------months	
5.	Why did you wait for the amount of time you reported in Q4?	1. Lack of support from prison staff 2. Fear of stigma and discrimination 3. Lack of access to care 4. Lack of interest in the medication 5. Others (specify)----------	
6.	Had you stayed in a jail before coming to current prison?	1. Yes 2. No	If “No” go to Q11
7.	If your answer to Q6 is “Yes”, for how long?	----------weeks	
8.	Did you get ART drugs while you were in a jail?	1. Yes 2. No	If “No” go to Q10
9.	If your answer to Q8 is “Yes”, within how many days did you get drugs?	----------days	
10.	If your answer to Q8 is “No”, why didn’t you get ART in the jail?	1. Lack of access to drugs 2. Lack of support from jail staff 3. Fear of stigma and discrimination 4. Lack of interest in the medication 5. Others (specify)----------	
11.	How many clinic appointments did you miss in the last 12 months?	----------	
12.	If you missed any of the appointments, why did you miss them?	1. Lack of support from prison staff 2. Fear of stigma and discrimination 3. Lack of transportation 4. Forgetting 6. Being away from usual residence 7. Others (specify)----------	

13.	How many doses did you miss yesterday?	----------	
14.	How many doses did you miss the day before yesterday?	----------	
15.	How many doses did you miss 3 days ago?	----------	
16.	How many doses did you miss 4 days ago?	----------	
17.	How closely did you follow your specific medication schedule over the last 4 days?	1. Never 2. Some 3. Half 4. Most 5. All of the time	
18	Do any of your medications have special instructions?	1. Yes 2. No	If "No" go to Q20
19.	If so, how often did you follow those instructions over the last 4 days?''	1. Never 2. Some 3. Half 4. Most 5. All of the time	
20.	When was the last time you missed any of your medications?''	1. Never 2. >3 months 3. 1 to 3 months 4. 2 to 4 weeks 5. Within past 2 weeks 6. Within past 2 days	
21.	If you have missed any of the doses, why have you missed it?	1. Forgetting 2. Being away from usual residence 3. Being watched by others 4. Change in routines 5. Using tradition medicine 6. Run out of pills 7. Drug toxicity 8. Too ill 9. Others (specify)----------	More than one answer possible
22.	What do you use to manage your medication schedule?	1. Mobile phone 2. Watch 3. Prison meal time 4. Radio/TV 5. Social time cues like sun light 6. Government work hours 7. School dismissal time 8. Church prayer time 9. Others (Specify)----------	More than one answer possible

ART Adherence measurement through patient self-report (to be filled by the data collector)			
23.	Number of pills prescribed for the last 4 days	----------pills	
24.	Number of pills taken in the last 4 days	----------pills	
25.	Number of pills taken over the last 4 days/number of pills prescribed x 100	----------%	
ART Adherence measurement through pharmacy refill (to be filled by the data collector)			
26.	Number of days a client is late for ARV pick-up	----------days	
27.	The total number of days between the two most recent ARV pick-ups	----------days	
28.	1- Number of days a client is late for ARV pick-up/ the total number of days between the two most recent ARV pick-ups X 100	----------%	

HIV care continuum in prisons study

Amharic version of survey questionnaire for incarcerated people

በኤች አይ ቪ ህክምና ዙሪያ ማረሚያ ተቋማት ላይ የሚካሄድ ጥናት

የታራሚዎች ዳሰሳ ጥናት መጠይቅ

ቀን----------

የጤና ተቋም መለያ ቁጥር ----------

የማረሚያ ተቋም መለያ ቁጥር ----------

የታራሚዉ ህክመና መለያ ቁጥር: ----------

እባኮትን ለእያንዳንዱ ጥያቄ ከተሳታፊዉ መልስ ጋር የበለጠ የሚቀራረብ ሃሳብ የያዘዉን ቁጥር ብቻ ያክብቡ። ነገር ግን "ዝለል" በሚለዉ አምድ ስር እንደተመለከተዉ አንዳንድ ጥያቄዎች ከአንድ በላይ ምላሽ ሊኖራቸዉ ይችላል። የተሳታፊዉ መልስ ከተሰጡት ምርጫዎች ከየትኛዉም ጋር የማይገጣጠም ሆኖ ከተገኘ እባኮትን መልሱን "**ሌሎች**" በሚለዉ ምርጫ ስር **በሚነበብ መልኩ** ይጻፉ። (**መረጃ ሰብሳቢ ብቻ**)

የመረጃ ሰብሳቢዉ ስም ----------ፊርማ----------

ክፍል አንድ፡ የተሳታፊዉ ማህበራዊ ሁኔታ			
ተ.ቁ	**ጥያቄ**	**መልስ**	**ዝለል**
1.	ዕድሜ?	----------ዓመት	
2.	ጾታ?	1. ወንድ 2. ሴት 3. ከሁለቱ ያልሆነ 4. ይለፈኝ	
3.	የጋብቻ ሁኔታ?	1. የትዳር አጋር ያለዉ 2. የትዳር አጋር የለለዉ	
4.	ከፍተኛዉ የትምህርት ደረጃዎት ስንት ነዉ?	1. ያልተማረ 2. የመጀመሪያ ደረጃ ት/ት ያጠናቀቀ 3. ሁለተኛ ደረጃ ት/ት ያጠናቀቀ 4. የኮሌጅ ት/ት ያጠናቀቀ	
5.	የምን ሃይማኖት ተከታይ ኖት?	7. ኦርቶዶክስ 8. ፕሮቴስታንት 9. ካቶልክ 10. እስልምና 11. ሃይማኖት የለለው 12. ሌሎች (ዘርዝር)……	
6.	ማረሚያ ተቋም ከመግባቶ በፊት ምን ስራ ላይ ተሰማርተዉ ነበር?	1. ስራ አልነበረኝም 2. የመንግስት ሰራተኛ 3. የቤት እመቤት 4. አርሶ አደር 5. የቀን ሰራተኛ 6. ሌሎች (ዘርዝር)----------	
7.	ማረሚያ ተቋም ከመግባቶ በፊት የወር ገቢዎ ምን ያህል ነበር?	----------የኢ ብር	የዓመት ገቢን ለ12 ማካፈል ይቻላል
8.	እዚህ ማረሚያ ተቋም ከመግባቶ በፊት ጎዳና ላይ ኑረዉ ያውቃሉ?	1. አዎ 2. አይደለም	
9.	ማረሚያ ተቋም ከመግባቶ በፊት የት ይኖሩ ነበር?	1. ከተማ 2. ገጠር 3. ሁለቱም	

10.	ሰዎች በምን ያህል ጊዜ ይጎበኝዎታል?	----------ጊዜ በወር	መልሱ “ምንም” ከሆነ ወደ ጥቁ-12 ሂድ
11.	ከጎበኝዎት ምን ያህሉን ጊዜ ምግብ ያመጡሎታል?	1. በፍጹም 2. አንዳንድ ጊዜ 3. ሁሌ	
12.	ማረሚያ ተቋሙ በሚያቀርቦት የምግብ አገልግሎት ምን ያህል ረክተዋል?	1. በፍጹም አልረካሁም 2. አልረካሁም 3. ገለልተኛ ስሜት 4. ረክቻለሁ 5. በጣም ረክቻለሁ	
ክፍል ሁለት፡ የዕሪማት ሁኔታ መረጃ			
1.	በአሁኑ ፍርድ ማረሚያ ተቋሙ ዉስጥ ለምን ያህል ጊዜ ቆዩ?	----------ወር	
2.	ባጠቃላይ የአሁኑን ጨምሮ ስንት ጊዜ ማረሚያ ተቋም ገብተዉ ያዉቃሉ?	----------ጊዜ	
3.	የአሁኑ ፍርድ ለምን ያህል ጊዜ ነዉ?	----------ወር	
4.	ለአሁኑ ፍርድ መች ወደ ማረሚያ ተቋም ገቡ?	ቀን:----------	
5.	እዚህ ማረሚያ ተቋም ከዚህ በፍት ታሪመዉ ያዉቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-7 ሂድ
6.	ለጥያቄ ቁ-5 መልሶ “አዎ” ከሆነ ስንት ጊዜ እና ለምን ያህል ጊዜ?	----------ጊዜ 1ኛ----------ወር 2ኛ----------ወር ሌሎች (ዘርዝር)----------	
7.	ከአሁኑ ማረሚያ ተቋም ዉጭ ሌላ ማረሚያ ታሪመዉ ያዉቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ክፍል-3 ሂድ

8.	ለጥያቄ ቁ-7 መልሶ “አዎ” ከሆነ ለምን ያህል ጊዜ?	----------ወር	
ክፍል ሦስት: ኤች አይ ቪን ከማስተላለፍ አንጻር የታራሚዎች ባህሪ			
1.	ስጋራ ያጨሳሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-3 ሂድ
2.	በቀን ስንት ስጋራ ያጨሳሉ?	1. 10 ስጋራ ወይም ያነሰ 2. 11-20 3. 21-30 4. 31 ወይም በላይ	
3.	ጫት ይቅማሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-5 ሂድ
4.	ለጥያቄ ቁ-3 መልሶ “አዎ” ከሆነ ምን ያህል ጊዜ ይቅማሉ?	1. በየቀኑ 2. 2-3 ጊዜ በሳምንት 3. በሳምንት አንዴ ወይም ያነሰ	
5.	ለህክምና አላማ ከሚዉሉ መድሃኒቶች ዉጪ ሌላ መድሃኒት ተጠቅመዉ ያዉቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-9 ሂድ
6.	ለጥያቄ ቁ-5 መልሶ “አዎ” ከሆነ ምን አይነት መድሃኒት ይጠቀማሉ?	1. ሄሮዪን 2. ካናቢስ/ሃሽሽ 3. ኮካይን 4. ሌሎች (ዘርዝር)----------	
7.	መድሃኒቱን በመርፌ ይወስዱ እንደሆን መርፌውን ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	
8.	ለጥያቄ ቁ-7 መልሶ “አዎ” ከሆነ ለምን አድስ መርፌ አይጠቀሙም?	1. ስለማይገኝ 2. ውድ ስለሆነ 3. መጠቀም ስላልፈለኩ 4. ሌሎች (ዘርዝር)----------	

9.	እዚህ ማረሚያ ተቋም እያሉ ንቅሳት ተነቅሰው ያውቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-11 ሂድ
10.	ለጥያቄ ቁ-9 መልሰ “አዎ” ከሆነ መነቀሻ እቃ ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	
11.	ስለታማ ዕቃዎችን ለምሳሌ፥ ጢም መላጫ፣ ጥፍር መቁረጫ ወዘተ ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	
12.	ባለፉት 12 ወራት ዉስጥ የግብረ ስጋ ግኙኝነት ፈጽመው ያውቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-20 ሂድ
13.	በግብረ ስጋ ግኙኝነት ወቅት ኮንዶም ተጠቅመው ያዉቃሉ?	1. በፍጹም 2. አንድ አንድ ጊዜ 3. ሁሌም	
14.	ለጥያቄ ቁ-13 መልሰ “1” ወይም “2” ከሆነ ለምን?	1. ስለማይገኝ 2. ውድ ስለሆነ 3. መጠቀም ስላልፈለኩ 4. ሌሎች (ዘርዝር)----------	
15.	ባለፉት 12 ወራት ስንት የወሲብ ጓደኛ ኖሮት ያዉቃል?	1. አንድ 2. ሁለት 3. ከሁለት በላይ	
16	የወሲብ ጓደኛዎ/ኞችዎ ጾታ ይግለጹ?	1. ወንድ 2. ሴት 3. ሴት እና ወንድ	
17.	የወሲብ ጓደኛዎ/ኞችዎ ኤች አይ ቪ ምርመራ ውጤት ምን ይመስላል?	1. ከቫይረሱ ጋር የሚኖር/ትኖር 2. ከቫይረሱ ነጻ 3. 1 እና 2 4. አላውቅም	
18.	ከወሲብ ጓደኛዎ/ኞችዎ ጋር ለምን ያህል ጊዜ አብረው ቆዩ?	1. ከአንድ ዓመት ላነሰ ጊዜ 2. 1-2 ዓመት 3. ከሁለት ዓመት በላይ	

19.	ከታራሚዎች ውስጥ የወሲብ ጓደኛ ኖሮት ያውቃል?	1. አዎ 2. አይደለም	
20.	ከጤና ባለሙያ ዉጭ ከቫይርሱ ጋር መኖሮትን ለሌላ ሰዉ አሳዉቀዉ ያውቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-23 ሂድ
21.	ለጥያቄ ቁ-20 መልሰ “አዎ” ከሆነ፣ ለስንት ሰዉ?	1. አንድ 2. ሁለት 3.ከሁለት በላይ	
22.	ለጥያቄ ቁ-20 መልሰ “አዎ” ከሆነ፣ ካሳወቁት ሰዉ ጋር ያሎት ግኑኝነት	1. የትዳር አጋር 2. ልጅ 3. ወላጅ 4. ዘመድ 5. ጓደኛ 6.ሌሎች (ዘርዝር)----------	
23.	በማደሪያ ክፍሎ ዉስጥ ሌላ ከቫይረሱ ጋር የሚኖር ታራሚ ያዉቃሉ?	1. አዎ 2. አይደለም	
24.	ከቤተሰቦ ዉስጥ ከርሶ ሌላ ከቫይረሱ ጋር የሚኖር ሰው አለ?	1. አዎ 2. አይደለም 3. አላውቅም	
ክፍል አራት: የታራሚዉ የጤና ሁኔታ			
(ሀ) ስነ ዓዕምሮአዊ ጤና			
ባለፉት 30 ቀናት ዉስጥ ለምን ያህል ጊዜ …….			
1.	ምንም ነገር በማያስደስቶት መልኩ ተከፍተዉ ያዉቃሉ?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	
2.	ተስፋ ቆርጠዉ ያዉቃሉ?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	
3.	የመቁጥነጥነጥ ስሜት ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	

4.	ሁሉ ነገር ድካም/ልፋት እንደሆነ ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	
5.	የዋጋቢስነት ስሜት ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	
6.	ጭንቀት ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰነዉን ጊዜ 4. ሁሌ	
ክፍል አምስት: የኤች አይ ቪ ድጋፍ እና ክትትል			
1.	የኤች አይ ቪ ህክምና አገልግሎት የሚያገኙበት ጤና ተቋም አይነት?	1. ጤና ጣቢያ 2. ሆስፒታል 3.ሌሎች (ዘርዝር)----------	
2.	ከመኖሪያ ቦታዎ ጤና ተቋሙን ለመድረስ በብዛት ምን ያህል ጊዜ ይፈጅቦታል?	----------ደቂቃ	
3.	ጤና ተቋሙ ከደረሱ በኋላ ባለሙያ ለማግኘት በብዛት ምን ያህል ይጠብቃሉ?	----------ደቂቃ	
4.	የጤና ባለሙያዎቹ በሚሰጡዎት አገልግሎት ምን ያህል ረክቷል?	1. በፍጹም አልረካሁም 2. አልረካሁም 3. ገለልተኛ ስሜት 4. ረክቻለሁ 5. በጣም ረክቻለሁ	
5.	“መድሃኒቱን የሚያገኙበት ቦታ በጣም ሚቹ ነዉ” በሚለዉ አረፍተ ነገር ምን ያህል ይስማማሉ?	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
6.	የጤና አገልግሎት ሰጪዎቹ ጥራት ያልዉን አገልግሎት እንደሚሰጡዎት ምን ያህል ይተማመናሉ?	1. በፍጹም 2. እምቢዛም 3. ገለልተኛ ስሜት 4. በተወሰነ መልኩ 5. ሙሉ በሙሉ	

7.	የጤና አገልግሎት ሰጪዎቹ ጥራት ያልዉን የኤች አይ ቪ መድሃኒት እንደሚሰጡዎት ምን ያህል ይተማመናሉ?	1. በፍጹም 2. እምቢዛም 3. ገለልተኛ ስሜት 4. በተወሰነ መልኩ 5. ሙሉ በሙሉ	
8.	በማረሚያ ተቋሙ የጤና ባለሚያዎች ድጋፍ አሰጣጥ ምን ያህል ረክተዋል?	1. በፍጹም አልረካሁም 2. አልረካሁም 3. ገለልተኛ ስሜት 4. ረክቻለሁ 5. በጣም ረክቻለሁ	
9.	በማረሚያ ተቋሙ የፖሊስ አባላት ድጋፍ አሰጣጥ ምን ያህል ረክተዋል?	1. በፍጹም አልረካሁም 2. አልረካሁም 3. ገለልተኛ ስሜት 4. ረክቻለሁ 5. በጣም ረክቻለሁ	
ክፍል ስድስት: በኤች አይ ቪ እና መድሃኒቱ ላይ የጥናቱ ተሳታፊ እዉቀትና አመለካከት			
(ሀ) ስለ ኤች አይ ቪ መተላለፍያ መንገድ እና ስለ መድሃኒቱ የጥናቱ ተሳታፊ እዉቀት			
1.	ኤች አይ ቪ እንዴት ይተላለፋል?	1.የምግብና የመጠጥ ዕቃን በመጋራት? 2. በሳል 3. ያለኮንዶም ወሲብ በመፈጸም 4. ስለታማ ዕቃዎችን በመጋራት 5. ከእናት ወደ ልጅ 6. በትንኝ ንክሻ 7. ሌሎች (ዘርዝር)----------	ከአንድ በላይ መልስ መስጠት ይቻላል
2.	ኤች አይ ቪን ኮንዶም በመጠቀም በግብረ ስጋ ግኑኝነት ወቅት እንዳይተላለፍ መከላከል ይቻላል	1. አዎ 2. አይደለም 3. አላዉቅም	
3.	በኤች አይ ቪ የተያዘ ሰዉ የበሽታዉ ምልክት በቶሎ ይታይበታል	1. አዎ 2. አይደለም 3. አላዉቅም	
4.	የኤች አይ ቪ መድሃኒት ቫይረሱ እንዳይንሰራራ ያደርጋል?	1. አዎ 2. አይደለም 3. አላዉቅም	
5.	የኤች አይ ቪ መድሃኒት የጎንዮሽ ጉዳት ሊያስከትል ይችላል?	1. አዎ 2. አይደለም 3. አላዉቅም	

6.	የኤች አይ ቪ መድሃኒትን በጊዜ መጀመር ጤናን ከማሻሻሉም አልፎ ቫይረሱ ወደ ሌላ ሰዉ የመተላለፍ ዕድሉን ይቀንሳል?	1. አዎ 2. አይደለም 3. አላዉቅም	
7.	የኤች አይ ቪ መድሃኒትን ሐኪም ባዘዘዉ መልኩ አለመዉሰድ ቫይረሱ እንድንሰራራና መድሃኒቱን እንዲላመድ ያደርጋል?	1. አዎ 2. አይደለም 3. አላዉቅም	
8.	የኤች አይ ቪ መድሃኒትን ሐኪም ባዘዘዉ መልኩ አለመዉሰድ ቫይረሱ ወደ ሌላ ሰዉ የመተላለፍ ዕድሉን ይጨምራል?	1. አዎ 2. አይደለም 3. አላዉቅም	
(ለ) ስለ ኤች አይ ቪ መድሃኒት የጥናቱ ተሳታፊ አመለካከት			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ፡			
1.	ህመም ቢኖርም ባይኖርም የኤች አይ ቪ መድሃኒት መዉሰድ አለብኝ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
2.	የባህል ሀኪሞች ከኤች አይ ቪ መድሃኒት የተሻለ የሚያሽል መድሃኒት አይሰጡም	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
3.	የኤች አይ ቪ መድሃኒትን በታዘዘዉ ሰዓት መዉስድ ህመም እንዳይከሰት ያደርጋል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
(ሐ) የራስ ውጤታማነት			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ:			
1.	የምያጋጥመኝን ችግር ለመፍታት ሙሉ በሙሉ በራሴ እተማመናለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	

2.	በምታመምበት ወቅት የማረሚያ ተቋሙ ሰራተኞች እንዲረዱኝ እጠይቃለሁ	1. በፍጹም 2. አልፎ አልፎ 3. ገለልተኛ ስሜት 4. የተወሰኔዉን ጊዜ 5. ሁሌ	
3.	በምታመምበት ወቅት ከማረሚያ ተቋሙ ሰራተኞች ዉጭ ሌላ ሰዉ እንዲረዳኝ እጠይቃለሁ	1. በፍጹም 2. አልፎ አልፎ 3. ገለልተኛ ስሜት 4. የተወሰኔዉን ጊዜ 5. ሁሌ	
ክፍል ሰባት: ከኤች አይ ቪ ጋር የተያያዘ ማግለልና መድሎ			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ:			
1.	ከዚህ በፊት የምቀርባቸዉ ሰዎች ከቫይረሱ ጋር መኖረን ሲያዉቁ ሸሽተዉኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
2.	ከቫይረሱ ጋር መኖረን በመንገሬ ጓዴኞቼን አጥቻለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
3.	አንዳንድ ሰዎች ከቫይረሱ ጋር መኖረን ሲያዉቁ ለመንካት እንኪን ይጠየፉኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
4.	ከቫይረሱ ጋር መኖረን ለሰዉ መናገር አደጋ አለዉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
5.	ከቫይረሱ ጋር መኖረን ሰዉ እንዳያዉቅብኝ በጣም እጠነቀቃለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ	

		5.በጣም እስማማለሁ	
6.	ከቫይረሱ ጋር መኖረን ለማን መንገር እንዳለብኝ ለመወሰን ከፍተኛ ጥንቃቄ አደርጋለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
7.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖርን ሰዉ እንደማይጠቅም ሰዉ አድርገዉ ያያሉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
8.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖር ሰዉ አጠገብ ሲሆኑ ምቾት አይሰማቸዉም	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
9.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖርን ሰዉ እንደተጠላ ሰዉ አድርገዉ ያያሉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
10.	ከቫይረሱ ጋር በመኖሬ ወንጀለኛ እንደሆንኩ ይሰማኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
11.	ከቫይረሱ ጋር በመኖሬ የበታችነት ይሰማኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
12.	ሰዎች ስለ ኤች አይ ቪ ያላቸዉ አመለካከት እራሴን እንድጠላ ያደርገኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	

ክፍል ስምንት: የኤች አይ ቪ መድሃኒት አጀማመር (መድሃኒቱን አዲስ ለሚጀምሩ ብቻ)			
1.	ተሳታፊዉ ለኤች አይ ቪ የተመረመሩበት መንገድ	1. ቪሲቲ/VCT 2. ፕክት/ PICT/Opt-out 3. በሌላ ህመም ምክኒያት/Opt-in 4. ሌሎች (ዘርዝር)----------	ከህክምና መዝገብ ላይ በመረጃ ሰብሳቢዉ የሚሞላ
2.	የኤች አይ ቪ ምርመራ ያካሄዱት መቸ ነበር?	1. ማረሚያ ተቋም ከመግባቴ በፊት 2. ማረሚያ ተቋም ከገባሁ በኋላ	
3.	ኤች አይ ቪ ለመመርመር ምን አናሳሳዎት?	1. የትዳር አጋር መታመም/ሞት 2. የበሽታዉ ምልክት መታየት/መታመም 3. የጤና ባለሙያ ምክር 4. የጓደኛ/ቤተሰብ ምክር 5. ሌሎች (ዘርዝር)----------	
4.	ከተመረመሩ ጊዜ ጀመሮ መድሃኒት እስከሚጀሚሩበት ጊዜ ድረስ ስንት ዙር ከጤና ባለሙያ ጋር ተማከሩ?	---------- ዙር	
5.	በቅድመ መድሃኒት ክትትል ወቅት ስንት የሐኪም ቀጠሮ ቀርተዉ ያዉቃሉ?	----------	መልሱ “ምንም” ከሆነ ወደ ጥቁ-6 ሂድ
6.	የሐኪም ቀጠሮ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. መጓጓዣ በማጣት 3. ሰዉ እንዳያቅ በመፍራት 4. ከማረሚያ ተቋሙ ትብብር በማጣት 5. ሌሎች (ዘርዝር)----------	
7.	ከተመረመሩ ጊዜ ጀመሮ መድሃኒቱን ለመጀመር ምን ያህል ጊዜ ፈጀቦት?	የተሳታፊዉ ምላሽ ---------- ሳምንት ከህክምና መዝገብ የተገኘ መረጃ ----- ሳምንት	ከህክምና መዝገብ ላይ በመረጃ ሰብሳቢዉ መረጋገጥ አለበት
8.	ለጥቁ-7 የተጠቀሰዉን ያህል ጊዜ ለምን ሊቆዩ ቻሉ?	1. ስለመድሃኒቱ ጥቅም ባለማወቅ 2. ስላላመመኝ	ከአንድ በላይ

		3. የመድሃኒቱን የጎኒዮሽ ጉዳት በመፍራት 4. ማግለልና መድሎን በመፍራት 5. የምርመራዉን ዉጤት ባለማመን 6. የህክምናዉ አገልግሎት ባአቅራቢያ ስለማይገኝ 7. ቲቢ መድሃኒት ላይ ስለነበርኩ 8. ሌላ አማራጭ መድሃኒት እየወሰድኩ 9. ሌሎች (ዘርዝር)----------	መልስ መስጠት ይቻላል
9.	መድሃኒቱን አሁን ለመጀመር ምን አናሳሳዎት?	1. የትዳር አጋር መታመም/ሞት 2. የበሽታዉ ምልክት መታዬት/መታመም 3. የጤና ባለሙያ ምክር 4. የጓደኛ/ቤተሰብ ምክር 5. መድሃኒቱን ማግኘት ስለቻልኩ 6. ሌሎች (ዘርዝር)----------	ከአንድ በላይ መልስ መስጠት ይቻላል
ክፍል ዘጠኝ: የኤች አይ ቪ መድሃኒት አወሳሰድ (መድሃኒቱን ለስድስት ወር እና ከዚያ በላይ ለወሰዱ ብቻ)			
1.	የኤች አይ ቪ መድሃኒት መዉሰድ ከጀመሩ ምን ያህል ጊዜ ሆንዎት?	----------ወር	
2.	የአሁኑን ማረሚያ ተቋም ከመግባቶ በፊት የኤች አይ ቪ መድሃኒት ይወስዱ ነበር?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-11 ሂድ
3.	ለጥቁ-2 መልሶ “አዎ” ከሆነ ለምን ያህል ጊዜ?	----------ወር	
4.	ለጥቁ-2 መልሶ “አዎ” ከሆነ የአሁኑ ማረሚያ ተቋም መድሃኒቱን ለመቀጠል ምን ያህል ቆዩ?	----------ወር	
5.	በጥቁ-4 የተጠቀሰዉን ያህል ጊዜ ለምን ሊቆዩ ቻሉ?	1. ከማረሚያ ተቋሙ ሰራተኞች ድጋፍ በማጣት 2. ማግለልና መድሎን በመፍራት 3. መድሃኒቱን ማግኘት ስላልቻልኩ 4. ፍላጎቱ ስላልነበረኝ 5. ሌሎች (ዘርዝር)----------	

6.	የአሁኑ ማረሚያ ተቋም ከመግባቶ በፊት ፖሊስ ጣቢያ ቆይትዉ ነበር?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-11 ሂድ
7.	ለጥቁ-6 መልሶ “አዎ” ከሆነ ለምን ያህል ጊዜ?	----------ሳምንት	
8.	ፖሊስ ጣቢያ እያሉ የኤች አይ ቪ መድሃኒት ያገኙ ነበር?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-10 ሂድ
9.	ለጥቁ-8 መልሶ “አዎ” ከሆነ መድሃኒቱን በስንት ቀን አገኙ	----------ቀን	
10.	ለጥቁ-8 መልሶ “አይደለም” ከሆነ ለምን?	1. መድሃኒቱን ማግኘት ስላልቻልኩ 2. ከፖሊስ ጣቢያዉ ሰራተኞች ድጋፍ በማጣት 3. ማግለልና መድሎን በመፍራት 4. ፍላጎቱ ስላልነበረኝ 5. ሌሎች (ዘርዝር)----------	
11.	ባለፉት 12 ወራት ዉስጥ በግምት ስንት የሀኪም ቀጠሮዎችን ቀርተዉ ያዉቃሉ?	----------	
12.	የሐኪም ቀጠሮ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. መጓጓዝ በማጣት 3. ከመደበኛዉ መኖሪዬ/ማረሚያ ተቋም ሪቄ ስለነበር 4. ከማረሚያ ተቋሙ ትብብር በማጣት 5. ሰዉ እንዳያቅ በመፍራት 6. ሌሎች (ዘርዝር)----------	
13.	ትናንት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
14.	ከትናንት ወዲያ ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
15.	ከሦስት ቀን በፊት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	

16.	ከአራት ቀን በፊት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
17.	ባለፉት አራት ቀናት ዉስጥ መድሃኒት መዉሰጃ ሰዓቶን ምን ያህል አክብረዋል?	1. በፍጹም 2. የተወሰነ 3. በከፍል 4. አብዛኛዉን 5. ሁሉንም	
18	ከመድሃኒቶቹ መሃል ልዩ የሐኪም ትዕዛዝ የተሰጠበት አለ?	1. አዎ 2. አይደለም	መልሱ “አይደለም ” ከሆነ ወደ ጥቁ-20 ሂድ
19.	ልዩ የሐኪም ትዕዛዝ ካለ ትዕዛዙን ምን ያህል አክብረዋል?	1. በፍጹም 2. የተወሰነ 3. በከፍል 4. አብዛኛዉን 5. ሁሉንም	
20.	መድሃኒቶትን ሳይወስዱ የቀሩበት የቅርቡ ጊዜ መች ነው?	1. በፍጹም ሳልወስድ ቀርቼ አላዉቅም 2. >3 ወር 3. 1 እስከ 3 ወር 4. 2 እስከ 4 ሳምንት 5. ባለፉት ሁለት ሳምንታት ዉስጥ 6. ባለፉት ሁለት ቀናት ውስጥ	
21.	መድሃኒት ሳይወስዱ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. ከመደበኛዉ መኖሪያዬ/ማረሚያ ተቋም ሪቄ ስለነበር 3. ሰዎች ያዩኝ ስለነበር 4. የወትሮ ሁኔታ በመቀየሩ 5. የባህል መድሃኒት እየወሰድኩ 6. መድሃኒቱ አልቆብኝ 7. የጎኒዮሽ ጉዳት በመፍራት 8. አሞኝ ስለነበር 9. ሌሎች (ዘርዝር)----------	ከአንድ በላይ መልስ መስጠት ይቻላል
22.	መድሃኒት መዉሰጃ ሰዓቶን ለማስታወስ ምን ይጠቀማሉ?	1. ሞባይል ስልክ 2. ሰዓት 3. የመመገቢያ ሰዓት 4. ራድዎ/ቴሌቪዥን 5. የፀሐይ ብርሃን	ከአንድ በላይ መልስ መስጠት ይቻላል

		6. የፀሎት ሰዓት 7. ሌሎች (ዘርዝር)----------	
የመድሃኒት አወሳሰድ መረጃ (በታካሚዉ ሪፖርት መሰረት)			
23.	ላለፉት 4 ቀናት የተሰጠው የክኒን ብዛት	----------ክኒን	
24.	ባለፉት 4 ቀናት የተወሰደው የክኒን ብዛት	----------ክኒን	
25.	ባለፉት 4 ቀናት የተወሰደው የክኒን ብዛት/ላለፉት 4 ቀናት የተሰጠው የክኒን ብዛት X100	----------%	
የመድሃኒት አወሳሰድ መረጃ (ከመዝገብ ላይ የሚሞላ)			
26.	ታካሚዉ መድሃኒት መዉሰድ ካለባቸው የቀጠሮ ቀን ዘግይተው የመጡበት የቀን ብዛት?	----------ቀን	
27.	በሁለት የቅርብ ጊዜ መድሃኒት መውሰጃ ቀጠሮዎች መሃከል ያለው የቀን ብዛት	----------ቀን	
28.	1-(ጥቁ-26 ያለዉ የቀን ብዛት/ጥቁ-27 ያለዉ የቀን ብዛት) X 100	----------%	

HIV care continuum in prisons study
Appendix 4.7: Survey questionnaire for non-incarcerated people

Date----------

ART site code----------

Participant's medication identification number: ----------

For each question, please circle the number with the most suitable answer to the participant's response. Multiple responses are possible for some questions as indicated. If a participant's response doesn't match with any of the options provided, please write the response under the choice "others'. (**Research assistant only**)

Have you ever been incarcerated? Yes----------No---------- (**Exclude if 'Yes'**)

Research assistant's name----------Signature----------

Part-I: Sociodemographic characteristics			
No	**Questions**	**Answer**	**Skip**
1.	Age in years?	----------years	
2.	Gender?	1. Male 2. Female 3. Non-binary 4. Prefer not say	
3.	Current marital status?	1. Have partner 2. Have no partner	
4.	Highest level of education you have completed?	1. No school 2. Elementary school completed 3. High school completed 4. College graduate	
5.	What is your religion?	1. Orthodox 2. Protestant 3. Catholic 4. Muslim 5. No religion 6. Others (Specify)……	
6.	What is your employment status?	1. Unemployed 2. Government employee 3. House wife 4. Farmer 5. Daily labourer 6. Others (specify)----------	
7.	How much is your monthly income in Ethiopian birr?	----------EB	
8.	Have you ever considered yourself to be homeless in any part of your life?	1. Yes 2. No	
9.	Where is your usual place of residence?	1. Urban 2. Rural 3. Unknown	
Part-II: Behavioural and HIV transmission risk factors			
1.	Do you smoke cigarettes?	1. Yes 2. No	If "No" go to Q3
2.	If your answer to Q1 is "Yes", how many cigarettes a day do you smoke?	1. 10 cigarettes or less 2. 11-20 3. 21-30 4. 31 or more	
3.	Do you chew khat?	1. Yes 2. No	If "No" go to Q5

4.	If your answer to Q3 is "Yes", how often?	1. Daily 2. 2-3 times a week 3. Once a week or less	
5.	Do you use drugs other than those required for medical reasons?	1.Yes 2. No	If "No" go to Q7
6.	If your answer to Q5 is "Yes", What type of drug do you use?	1. Heroin 2. Cannabis/hashish 3. Cocaine 4. Others (specify)----------	
7.	Do you share needles and syringes with your friends/family members while using injecting drugs?	1.Yes 2. No	
8.	If your answer to Q7 is "Yes", why don't you use a new needle and syringe?	1. Not available 2. Unaffordable 3. I don't want	
9.	Have you ever got any tattoo?	1.Yes 2. No	If "No" go to Q11
10.	If your answer to Q9 is "Yes", Have you ever shared tattooing materials with your friends/family members?	1.Yes 2. No	
11.	Do you share shaver or nail clippers with your friends/family members?	1.Yes 2. No	
12.	Have had sex in the last 12 months?	1.Yes 2. No	If "No" go to Q19
13.	If your answer to Q12 is "Yes", how often do you use condom during sex?	1. Never 2. Sometimes 3. Always	
14.	If your answer to Q13 is "1" or "2", why?	1. Not available 2. Unaffordable 3. I don't want to use	
15.	How many sexual partners have you had in the last 12 months?	1. One 2. Two 3. More than two	
16	What is the gender of your sexual partner/s?	1. Male 2. Female 3. Male and female	
17.	What is your sexual partner's/s' HIV status?	1. HIV positive 2. HIV negative 3. HIV(+) and HIV(-)	

		4. I don't know	
18.	How long have you been in a relationship with your current partner?	1. Less than one year 2. One up to two years 3. More than two years	
19.	Have you ever disclosed your HIV status people other than health professionals involved in your care?	1. Yes 2. No	If "No" go to Q22
20.	If your answer to Q19 is "Yes", to how many persons?	1. One 2. Two 3. More than two	
21.	If your answer to Q20 is "Yes", to whom you disclosed your status?	1. Spouse 3. Offspring 4. Parent 5. Sibling 6. Relatives 7. Friends 8.Others (specify)----------	
22.	Do you know anyone else living in your family who has HIV?	1. Yes 2. No 3. I don't know	
Part-III: Health condition of the participant			
(A) Psychological distress			
During the last 30 days, about how often did…….			
1.	you feel so depressed that nothing could cheer you up?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
2.	you feel hopeless?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
3.	you feel restless or fidgety?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
4.	you feel that everything was an effort?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
5.	you feel worthless?	1. None of the time 2. A little of the time 3. Some of the time	

		4. Most of the time	
6.	you feel nervous?	1. None of the time 2. A little of the time 3. Some of the time 4. Most of the time	
Part-IV: HIV care and support			
1.	HIV care facility?	1. Health centre 2. Hospital 3. Others (specify)----------	
2.	How long it usually takes to reach the health facility from your residence?	----------minutes	
3.	How long you usually wait to see a health professional once you arrive at the health facility?	----------minutes	
4.	How satisfied are you with the treatment by the ART staff?	1. Very dissatisfied 2. Dissatisfied 3. Neutral 4. Satisfied 5. Very satisfied	
5.	How do you agree with the statement "places where you can get your HIV medications is very convenient"	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
6.	How much you trust your care provider to offer you high quality medical care?	1. Never 2. Not much 3. Neutral 4. Somewhat 5. Completely/Mostly	
7.	How much you trust your care provider to prescribe the best HIV medications?	1. Never 2. Not much 3. Neutral 4. Somewhat 5. Completely/Mostly	
Part V: Knowledge and attitude towards HIV and ART			
(A) Knowledge of HIV transmission and ART			
1.	How is HIV transmitted?	1.Sharing eating/drinking utensils 2.Shacking hands 3. Coughing 4. Having sex without condom 5. Sharing sharp materials	More than one answer possible

		6. From mother to child 7. Insect bite 8. Others (specify)----------	
2.	Sexual transmission of HIV can be prevented by using condoms	1. Yes 2. No 3. I don't know	
3.	People who have been infected with HIV quickly show serious signs of being infected	1. Yes 2. No 3. I don't know	
4.	ART consists of drugs to suppress the progression of HIV	1. Yes 2. No 3. I don't know	
5.	ART can cause side effects	1. Yes 2. No 3. I don't know	
6.	Early initiation of ART improves health and reduces the risk of transmitting HIV	1. Yes 2. No 3. I don't know	
7.	Missing ART doses can lead to disease progression and drug resistance	1. Yes 2. No 3. I don't know	
8.	Missing doses of ART increases the risk of transmitting HIV	1. Yes 2. No 3. I don't know	
(B) Attitude towards ART			
How do you agree with:			
1.	You should take ART only when you feel sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
2.	Traditional healers provide more effective treatments than ART	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Taking ART on schedule prevents you from being sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
(C) Self-efficacy			

How do you agree with:			
1.	Felt confident about your ability to handle your personal problems	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
2.	Seeking support from family members to help with daily activities if you are sick	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Seeking support from someone other than family members to help with daily activities if you are sick	1. Never 2. Rarely 3. Neutral 4. Sometimes 5. All/most of the time	
Part VI: HIV stigma			
How do you agree with the following statements:			
1.	People I care about stopped calling after learning I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
2.	I have lost friends by telling them I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
3.	Some people avoid touching me if they know I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
4.	Telling someone I have HIV is risky	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
5.	I work hard to keep my HIV a secret	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	

6.	I am very careful who I tell that I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
7.	Most people believe a person who has HIV is dirty	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
8.	Most people are uncomfortable around someone with HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
9.	People with HIV are treated like Outcasts	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
10.	I feel guilty because I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
11.	I feel I'm not as good a person as others because I have HIV	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
12.	People's attitudes about HIV make me feel worse about myself	1. Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree	
Part VII: ART initiation (only ART naive patients)			
1.	Method a participant got diagnosed for HIV?	1. VCT 2. Opt-out/PICT 3. Opt-in 4. Others (specify)----------	To be filled by data collector from Pre-ART register
2.	What triggered you to be tested?	1. Partners' death/illness 2. Being sick or symptomatic 3. Advice from a health professional	

		4. Advice from friend/family 5. Others (specify)----------	
3.	How many health facility visits did you attend since diagnosis until your start of ART?	----------	
4.	How many appointments did you miss before you start treatment?	----------	If "none" go to Q6
5.	If you miss any of the appointments, why did you miss them?	1. Forgetting 2. Lack of transportation 3. Fear of stigma 4. Being busy in other activity 5. Others (Specify)----------	
6.	Since you had been tested HIV positive, how long have you waited to start ART?	Patient report---------weeks From register---------weeks	To be confirmed from Pre-ART register
7.	Why have you waited for the period of time you mention in Q6 without starting ART?	1. Not aware of ART 2. Feeling healthy 3. Fear of drug side effects 4. Fear of stigma/discrimination 5. Seeking repeated testing 6. Lack of access to care/drugs 7. Being on TB treatment 8. Using other treatment options 9. Others (specify)----------	More than one answer possible
8.	What triggered you to start treatment now?	1. Partner's/s' death/illness 2. Being sick or symptomatic 3. Advice from a health professional 4. Advice from partner/friend/family 5. Getting access to ART 6. Others (specify)----------	More than one answer possible
Part VIII: Adherence to antiretroviral therapy (only for patients on ART for ≥ 6 months)			
1.	How long have you been taking ART?	----------months	
2.	How many clinic appointments did you miss in the last 12 months?	----------	
3.	If you missed any of the appointments, why did you miss them?	1. Being busy in other activity 2. Fear of stigma and discrimination 3. Lack of transportation	

		4. Forgetting 6. Being away from usual residence 7. Others (specify)----------	
4.	How many doses did you miss yesterday?	----------	
5.	How many doses did you miss the day before yesterday?	----------	
6.	How many doses did you miss 3 days ago?	----------	
7.	How many doses did you miss 4 days ago?	----------	
8.	How closely did you follow your specific medication schedule over the last 4 days?	0. Never 1. Some 2. Half 3. Most 4. All of the time	
9.	Do any of your medications have special instructions?	1. Yes 2. No	If "No" go to Q11
10.	If so, how often did you follow those instructions over the last 4 days?''	1. Never 2. Some 3. Half 4. Most 5. All of the time	
11.	When was the last time you missed any of your medications?''	1. Never 2. >3 months 3. 1 to 3 months 4. 2 to 4 weeks 5. Within past 2 weeks 6. Within past 2 days	
12.	If you have missed any of the doses, why have you missed it?	1. Forgetting 2. Being away from home 3. Being watched by others 4. Being busy in other activity 5. Change in routines 6. Using tradition medicine 7. Using holy water 8. Run out of pills 9. Drug toxicity 10. Too ill 11. Others (specify)----------	More than one answer possible
13.	What do you use to manage your medication schedule?	1. Mobile phone 2. Watch 3. Radio/TV 4. Social time cues like sun light	More than one answer possible

		5. Government work hours 6. School dismissal time 7. Church prayer time 8. Others (Specify)----------	
ART Adherence measurement through pill count (to be filled by data collector)			
14.	Number of pills prescribed for the last 4 days	----------pills	
15.	Number of pills taken in the last 4 days	----------pills	
16.	Number of pills taken over the last 4 days/number of pills prescribed x 100	----------%	
ART Adherence measurement through pharmacy refill (to be filled by the data collector)			
17.	Number of days a client is late for ARV pick-up	----------days	
18.	The total number of days between the two most recent ARV pick-ups	----------days	
19.	1- Number of days a client is late for ARV pick-up/ the total number of days between the two most recent ARV pick-ups X 100	----------%	

HIV care continuum in prisons study
Amharic version of survey questionnaire for non-incarcerated people

በኤች አይ ቪ ህክምና ዙሪያ ማረሚያ ተቋማት ላይ የሚካሄድ ጥናት

ታራሚ ያልሆኑ ሰዎች የዳሰሳ ጥናት መጠይቅ

ቀን----------

የጤና ተቋም መለያ ቁጥር ----------

የተሳታፊዉ ህክምና መለያ ቁጥር: ----------

እባኮትን ለእያንዳንዱ ጥያቄ ከተሳታፊዉ መልስ ጋር የበለጠ የሚቀራረብ ሃሳብ የያዘዉን ቁጥር ብቻ ያክብቡ። ነገር ግን "ዝለል" በሚለዉ አምድ ስር እንደተመለከተዉ አንዳንድ ጥያቄዎች ከአንድ በላይ ምላሽ ሊኖራቸዉ ይችላል። የተሳታፊዉ መልስ ከተሰጡት ምርጫዎች ከየትኛዉም ጋር የማይገጣጠም ሆኖ ከተገኘ እባኮትን መልሱን "**ሌሎች**" በሚለዉ ምርጫ ስር **በሚነበብ** መልኩ ይጻፉ። **ከዚህ በፊት ማረሚያ ተቋም ገብተው የወጡ ሰዎች ጥናቱ ላይ አይሳተፉም** ። (**መረጃ ሰብሳቢ ብቻ**)

ከዚህ በፊት ማረሚያ ተቋም ገብተው ያዉቃሉ? አዎ-----አይደለም-----(**መልሱ 'አዎ' ከሆነ ዝለል**)

የመረጃ ሰብሳቢዉ ስም ----------ፊርማ----------

ክፍል አንድ፡ የተሳታፊዉ ማህበራዊ ሁኔታ			
ተ.ቁ	**ጥያቄ**	**መልስ**	**ዝለል**
1.	ዕድሜ?	----------ዓመት	
2.	ጾታ?	1. ወንድ 2. ሴት 3. ከሁለቱ ያልሆነ 4. ይለፈኝ	
3.	የጋብቻ ሁኔታ?	1. የትዳር አጋር ያለዉ 2. የትዳር አጋር የለለዉ	
4.	ከፍተኛዉ የትምህርት ደረጃዎት ስንት ነዉ?	5. ያልተማረ 6. የመጀመሪያ ደረጃ ት/ት ያጠናቀቀ 7. ሁለተኛ ደረጃ ት/ት ያጠናቀቀ 8. የኮሌጅ ት/ት ያጠናቀቀ	
5.	የምን ሃይማኖት ተከታይ ኖት?	1. ኦርቶዶክስ 2. ፕሮቴስታንት 3. ካቶልክ 4. እስልምና 5. ሃይማኖት የለለው 6. ሌሎች (ዘርዝር)……	
6.	በምን ሥራ ይተዳደራሉ?	1. ስራአጥ 2. የመንግስት ሰራተኛ 3. የቤት እመቤት 4. አርሶ አደር 5. የቀን ሰራተኛ 6. ሌሎች (ዘርዝር)----------	
7.	የወር ገቢዎ ምን ያህል ነው?	----------የኢ ብር	የዓመት ገቢን ለ12 ማካፈል ይቻላል
8.	ጎዳና ላይ ኑረዉ ያውቃሉ?	1. አዎ 2. አይደለም	
9.	መኖሪያ ቦታዎ የት ነው?	1. ከተማ 2. ገጠር 3. ሁለቱም	

ክፍል ሁለት: ኤች አይ ቪን ከማስተላለፍ አንጻር የታካሚዉ ባህሪ			
1.	ስጋራ ያጨሳሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-3 ሂድ
2.	በቀን ስንት ስጋራ ያጨሳሉ?	1. 10 ስጋራ ወይም ያነሰ 2. 11-20 3. 21-30 4. 31 ወይም በላይ	
3.	ጫት ይቅማሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-5 ሂድ
4.	ለጥያቄ ቁ-3 መልሶ “አዎ” ከሆነ ምን ያህል ጊዜ ይቅማሉ?	1. በሳምንት አንዴ ወይም ያነሰ 2. 2-3 ጊዜ በሳምንት 3. በየቀኑ	
5.	ለህክምና አላማ ከሚዉሉ መድሃኒቶች ዉጪ ሌላ መድሃኒት ተጠቅመዉ ያዉቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-9 ሂድ
6.	ለጥያቄ ቁ-5 መልሶ “አዎ” ከሆነ ምን አይነት መድሃኒት ይጠቀማሉ?	1. ሄሮዪን 2. ካናቢስ/ሃሽሽ 3. ኮካይን 4. ሌሎች (ዘርዝር)----------	
7.	በመርፌ ሚወሰድ መድሃኒት ተጠቅመው እንደሆን መርፌውን ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	
8.	ለጥያቄ ቁ-7 መልሶ “አዎ” ከሆነ ለምን አዲስ መርፌ አይጠቀሙም?	1. ስለማይገኝ 2. ውድ ስለሆነ 3. መጠቀም ስላልፈለኩ 4. ሌሎች (ዘርዝር)----------	
9.	ንቅሳት ተነቅሰው ያውቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-11 ሂድ
10.	ለጥያቄ ቁ-9 መልሶ “አዎ” ከሆነ መነቀሻ እቃ ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	

11.	ስለታማ ዕቃዎችን ለምሳሌ፥ ጢም መላጫ፣ ጥፍር መቁረጫ ወዘተ ከሌላ ሰዉ ጋር ተጋርተዉ ያዉቃሉ?	1. አዎ 2. አይደለም	
12.	ባለፉት 12 ወራት ዉስጥ የግብረ ስጋ ግኑኝነት ፈጽመዉ ያውቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-19 ሂድ
13.	በግብረ ስጋ ግኑኝነት ወቅት ኮንዶም ተጠቅመዉ ያዉቃሉ?	1. በፍጹም 2. አንድ አንድ ጊዜ 3. ሁሌም	
14.	ለጥያቄ ቁ-13 መልሶ “1” ወይም “2” ከሆነ ለምን?	1. ስለማይገኝ 2. ውድ ስለሆነ 3. መጠቀም ስላልፈለኩ 4. ሌሎች (ዘርዝር)----------	
15.	ባለፉት 12 ወራት ስንት የወሲብ ጓደኛ ኖሮት ያዉቃል?	1. አንድ 2. ሁለት 3. ከሁለት በላይ	
16	የወሲብ ጓደኛዎ/ኞችዎ ጾታ ይግለጹ?	1. ወንድ 2. ሴት 3. ሴት እና ወንድ	
17.	የወሲብ ጓደኛዎ/ኞችዎ ኤች አይ ቪ ምርመራ ውጤት ምን ይመስላል?	1. ከቫይረሱ ጋር የሚኖር/ትኖር 2. ከቫይረሱ ነጻ 3. 1 እና 2 4. አላውቅም	
18.	ከወሲብ ጓደኛዎ/ኞችዎ ጋር ለምን ያህል ጊዜ አብረው ቆዩ?	1. ከአንድ ዓመት ላነሰ ጊዜ 2. 1-2 ዓመት 3. ከሁለት ዓመት በላይ	
19.	ከጤና ባለሙያ ዉጭ ከቫይርሱ ጋር መኖሮን ለሌላ ሰዉ አሳዉቀዉ ያዉቃሉ?	1. አዎ 2. አይደለም	መልሱ “አይደለም” ከሆነ ወደ ጥቁ-22 ሂድ
20.	ለጥያቄ ቁ-19 መልሶ “አዎ” ከሆነ፣ ለስንት ሰዉ?	1. አንድ 2. ሁለት 3.ከሁለት በላይ	
21.	ለጥያቄ ቁ-19 መልሶ “አዎ” ከሆነ፣ ካሳወቁት ሰዉ ጋር ያሎት ግኑኝነት	1. የትዳር አጋር 2. ልጅ 3. ወላጅ 4. ዘመድ	

		5. ጓደኛ 6.ሌሎች (ዘርዝር)----------	
22.	በቤተሰብ ዉስጥ ከርሶ ሌላ ከቫይረሱ ጋር የሚኖር ሰው አለ?	1. አዎ 2. አይደለም 3. አላውቅም	
ክፍል ሦስት: የታካሚዉ የጤና ሁኔታ			
(ሀ) ስነ ዓዕምሮአዊ ጤና			
ባለፉት 30 ቀናት ዉስጥ ለምን ያህል ጊዜ …….			
1.	ምንም ነገር በማያስደስቶት መልኩ ተከፍተዉ ያዉቃሉ?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
2.	ተስፋ ቆርጠዉ ያዉቃሉ?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
3.	የመቁጥነጥነጥ ስሜት ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
4.	ሁሉ ነገር ድካም/ልፋት እንደሆነ ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
5.	የዋጋቢስነት ስሜት ተሰሚቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
6.	ጭንቀት ተሰምቶት ያዉቃል?	1. በፍጹም 2. አልፎ አልፎ 3. የተወሰኔዉን ጊዜ 4. ሁሌ	
ክፍል አራት: የኤች አይ ቪ ድጋፍ እና ክትትል			
1.	የኤች አይ ቪ ህክምና የሚያገኙበት ጤና ተቋም አይነት?	1. ጤና ጣቢያ 2. ሆስፒታል	

		3.ሌሎች (ዘርዝር)----------	
2.	ከመኖሪያ ቦታዎ ጤና ተቋሙን ለመድረስ በብዛት ምን ያህል ጊዜ ይፈጅቦታል?	---------- ደቂቃ	
3.	ጤና ተቋሙ ከደረሱ በኋላ ባለሙያ ለማግኘት በብዛት ምን ያህል ይጠብቃሉ?	----------ደቂቃ	
4.	የጤና ባለሙያዎቹ በሚሰጡዎት አገልግሎት ምን ያህል ረክቷል?	1. በፍጹም አልረካሁም 2. አልረካሁም 3. ገለልተኛ ስሜት 4. ረክቻለሁ 5. በጣም ረክቻለሁ	
5.	“መድሃኒቱን የሚያገኙበት ቦታ በጣም ሚቹ ነዉ” በሚለዉ አረፍተ ነገር ምን ያህል ይስማማሉ?	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5. በጣም እስማማለሁ	
6.	የጤና አገልግሎት ሰጪዎቹ ጥራት ያለዉን አገለግሎት እንደሚሰጡዎት ምን ያህል ይተማመናሉ?	1. በፍጹም 2. እምቢዛም 3. ገለልተኛ ስሜት 4. በተወሰነ መልኩ 5. ሙሉ በሙሉ	
7.	የጤና አገልግሎተ ሰጪዎቹ ጥራት ያልዉን የኤች አይ ቪ መድሃኒት እንደሚሰጡዎት ምን ያህል ይተማመናሉ?	1. በፍጹም 2. እምቢዛም 3. ገለልተኛ ስሜት 4. በተወሰነ መልኩ 5. ሙሉ በሙሉ	
ክፍል አምስት: በኤች አይ ቪ እና መድሃኒቱ ላይ የጥናቱ ተሳታፊ እዉቀትና አመለካከት			
(ሀ) ስለ ኤች አይ ቪ መተላለፍያ መንገድ እና ስለ መድሃኒቱ የጥናቱ ተሳታፊ እዉቀት			
1.	ኤች አይ ቪ እንዴት ይተላለፋል?	1.የምግብና የመጠጥ ዕቃን በመጋራት? 2. በሳል 3. ያለኮንዶም ወሲብ በመፈጸም 4. ስለታማ ዕቃዎችን በመጋራት 5. ከእናት ወደ ልጅ 6. በትንኝ ንክሻ	ከአንድ በላይ መልስ መስጠት ይቻላል

		7. ሌሎች (ዘርዝር)----------	
2.	ኤች አይ ቪን ኮንዶም በመጠቀም በግብረ ስጋ ግኑኝነት ወቅት እንዳይተላለፍ መከላከል ይቻላል	1. አዎ 2. አይደለም 3. አላዉቅም	
3.	በኤች አይ ቪ የተያዜ ሰዉ የበሽታዉ ምልክት በቶሎ ይታይበታል	1. አዎ 2. አይደለም 3. አላዉቅም	
4.	የኤች አይ ቪ መድሃኒት ቫይረሱ እንዳይንሰራራ ያደርጋል?	1. አዎ 2. አይደለም 3. አላዉቅም	
5.	የኤች አይ ቪ መድሃኒት የጎንዮሽ ጉዳት ሊያስከትል ይችላል?	1. አዎ 2. አይደለም 3. አላዉቅም	
6.	የኤች አይ ቪ መድሃኒትን በጊዜ መጀመር ጤናን ከማሻሻሉም አልፎ ቫይረሱ ወደ ሌላ ሰዉ የመተላለፍ ዕድሉን ይቀንሳል?	1. አዎ 2. አይደለም 3. አላዉቅም	
7.	የኤች አይ ቪ መድሃኒትን ሐኪም ባዘዘዉ መልኩ አለመዉሰድ ቫይረሱ እንድንሰራራና መድሃኒቱን እንዲላመድ ያደርጋል?	1. አዎ 2. አይደለም 3. አላዉቅም	
8.	የኤች አይ ቪ መድሃኒትን ሐኪም ባዘዘዉ መልኩ አለመዉሰድ ቫይረሱ ወደ ሌላ ሰዉ የመተላለፍ ዕድሉን ይጨምራል?	1. አዎ 2. አይደለም 3. አላዉቅም	
(ለ) ስለ ኤች አይ ቪ መድሃኒት የጥናቱ ተሳታፊ አመለካከት			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ፡			
1.	ህመም ቢኖርም ባይኖርም የኤች አይ ቪ መድሃኒት መዉሰድ አለብኝ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
2.	የባህል ሀኪሞች ከኤች አይ ቪ መድሃኒት የተሻለ የሚያሽል መድሃኒት አይሰጡም	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ	

		5.በጣም እስማማለሁ	
3.	የኤች አይ ቪ መድሃኒትን በታዘዘዉ ሰዓት መዉስድ ሀመም እንዳይከሰት ያደርጋል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
(ሐ) የራስ ውጤታማነት			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ:			
1.	የምያጋጥመኝን ችግር ለመፍታት ሙሉ በሙሉ በራሴ እተማመናለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
2.	በምታመምበት ወቅት ቤተሰቦቼ እንዲረዱኝ እጠይቃለሁ	1. በፍጹም 2. አልፎ አልፎ 3. ገለልተኛ ስሜት 4. የተወሰኔዉን ጊዜ 5. ሁሌ	
3.	በምታመምበት ወቅት ከቤተሰቦቼ ዉጭ ሌላ ሰዉ እንዲረዳኝ እጠይቃለሁ	1. በፍጹም 2. አልፎ አልፎ 3. ገለልተኛ ስሜት 4. የተወሰኔዉን ጊዜ 5. ሁሌ	
ክፍል ስድስት: ከኤች አይ ቪ ጋር የተያያዘ ማግለልና መድሎ			
ከዚህ ቀጥለዉ ባሉት ሀሳቦች ምን ያህል ይስማማሉ:			
1.	ከዚህ በፊት የምቀርባቸዉ ሰዎች ከቫይረሱ ጋር መኖረን ሲያዉቁ ሸሽተዉኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
2.	ከቫይረሱ ጋር መኖረን በመንገሬ ጓዴኞቼን አጥቻለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት	

		4. እስማማልሁ 5.በጣም እስማማለሁ	
3.	አንዳንድ ሰዎች ከቫይረሱ ጋር መኖረን ሲያዉቁ ለመንካት እንኪን ይጠየፉኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
4.	ከቫይረሱ ጋር መኖረን ለሰዉ መናገር አደጋ አለዉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
5.	ከቫይረሱ ጋር መኖረን ሰዉ እንዳያዉቅብኝ በጣም እጠነቀቃለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
6.	ከቫይረሱ ጋር መኖረን ለማን መንገር እንዳለብኝ ለመወሰን ከፍተኛ ጥንቃቄ አደርጋለሁ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
7.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖርን ሰዉ እንደማይጠቅም ሰዉ አድርገዉ ያያሉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
8.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖር ሰዉ አጠገብ ሲሆኑ ምቾት አይሰማቸዉም	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
9.	ብዙ ሰዎች ከቫይረሱ ጋር የሚኖርን ሰዉ እንደተጠላ ሰዉ አድርገዉ ያያሉ	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	

10.	ከቫይረሱ ጋር በመኖሬ ወንጀለኛ እንደሆንኩ ይሰማኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
11.	ከቫይረሱ ጋር በመኖሬ የበታችነት ይሰማኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
12.	ሰዎች ስለ ኤች አይ ያላቸዉ አመለካከት እራሴን እንድጠላ ያደርገኛል	1. በፍጹም አልስማማም 2. አልስማማም 3. ገለልተኛ ስሜት 4. እስማማልሁ 5.በጣም እስማማለሁ	
ክፍል ሳባት: የኤች አይ ቪ መድሃኒት አጀማመር (መድሃኒቱን አዲስ ለሚጀምሩ ብቻ)			
1.	ተሳታፊዉ ለኤች አይ ቪ የተመረመሩበት መንገድ	1. ቪሲቲ/VCT 2. ፕክት/ PICT/Opt-out 3. በሌላ ህመም ምክኒያት/Opt-in 4. ሌሎች (ዘርዝር)----------	ከህክምና መዝገብ ላይ በመረጃ ሰብሳቢዉ የሚሞላ
2.	ኤች አይ ቪ ለመመርመር ምን አናሳሳዎት?	1. የትዳር አጋር መታመም/ሞት 2. የበሽታዉ ምልክት መታየት/መታመም 3. የጤና ባለሙያ ምክር 4. የጓደኛ/ቤተሰብ ምክር 5. ሌሎች (ዘርዝር)---------	
3.	ከተመረመሩ ጊዜ ጀመሮ መድሃኒት ላስከሚጀሚሩበት ጊዜ ድረስ ስንት ዙር ከጤና ባለሙያ ጋር ተማከሩ?	----------ዙር	
4.	በቅድመ መድሃኒት ክትትል ወቅት ስንት የሐኪም ቀጠሮ ቀርተዉ ያዉቃሉ?	----------	መልሱ “ምንም” ከሆነ ወደ ጥቁ-6 ሂድ
5.	የሐኪም ቀጠሮ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. መጓጓዣ በማጣት	

		3. ከመደበኛዉ መኖሪዬ ሪቄ ስለነበር 4. በሌላ ሥራ ተይዤ (ባተሌነት) 5. ማግለልና መድሎን በመፍራት 6. ሌሎች (ዘርዝር)----------	
6.	ከተመረመሩ ጊዜ ጀመሮ መድሃኒቱን ለመጀመር ምን ያህል ጊዜ ፈጀቦት?	የተሳታፊዉ ምላሽ ----------ሳምንት ከህክምና መዝገብ የተገኘ መረጃ ----------ሳምንት	ከህክምና መዝገብ ላይ በመረጃ ሰብሳቢዉ መረጋገጥ አለበት
7.	ለጥቁ-6 የተጠቀሰዉን ያህል ጊዜ ለምን ሊቆዩ ቻሉ?	1. ስለመድሃኒቱ ጥቅም ባለማወቅ 2. ስላላመመኝ 3. የመድሃኒቱን የጎኒዮሽ ጉዳት በመፍራት 4. ማግለልና መድሎን በመፍራት 5. የምርመራዉን ዉጤት ባለማመን 6. የህክምናዉ አገልግሎት ባአቅራቢያ ስለማይገኝ 7. ቲቢ መድሃኒት ላይ ስለነበርኩ 8. ሌላ አማራጭ መድሃኒት እየወሰድኩ 9. ሌሎች (ዘርዝር)--------	ከአንድ በላይ መልስ መስጠት ይቻላል
8.	መድሃኒቱን አሁን ለመጀመር ምን አነሳሳዎት?	1. የትዳር አጋር መታመም/ሞት 2. የበሽታዉ ምልክት መታየት/መታመም 3. የጤና ባለሙያ ምክር 4. የጓደኛ/ቤተሰብ ምክር 5. መድሃኒቱን ማግኘት ስለቻልኩ 6. ሌሎች (ዘርዝር)---------	ከአንድ በላይ መልስ መስጠት ይቻላል
ክፍል ስምንት: የኤች አይ ቪ መድሃኒት አወሳሰድ (መድሃኒቱን ለስድስት ወር እና ከዚያ በላይ ለወሰዱ ብቻ)			

1.	የኤች አይ ቪ መድሃኒት መዉሰድ ከጀመሩ ምን ያህል ጊዜ ሆንዎት?	----------ወር	
2.	ባለፉት 12 ወራት ዉስጥ በግምት ስንት የሀኪም ቀጠሮዎችን ቀርተዉ ያዉቃሉ?	----------	
3.	የሐኪም ቀጠሮ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. መጓጓዣ በማጣት 3. ከመደበኛዉ መኖሪያዬ ሪቄ ስለነበር 4. በሌላ ሥራ ተይዤ (ባተሌነት) 5. ማግለልና መድሎን በመፍራት 6. ሌሎች (ዘርዝር)----------	
4.	ትናንት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
5.	ከትናንት ወዲያ ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
6.	ከ ሦስት ቀን በፊት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
7.	ከ አራት ቀን በፊት ስንት ክኒን ሳይወስዱ ቀሩ?	----------	
8.	ባለፉት አራት ቀናት ዉስጥ መድሃኒት መዉሰጃ ሰዓቶን ምን ያህል አክብረዋል?	1. በፍጹም 2. የተወሰነ 3. በከፍል 4. አብዛኛዉን 5. ሁሉንም	
9.	ከመድሃኒቶቹ መሃከል ልዩ የሐኪም ትዕዛዝ የተሰጠበት አለ?	1. አዎ 2. አይደለም	መልሱ ‘‘አይደለም’’ ከሆነ ወደ ጥቁ-11 ሂድ
10.	ልዩ የሐኪም ትዕዛዝ ካለ ትዕዛዙን ምን ያህል አክብረዋል?	1. በፍጹም 2. የተወሰነ 3. በከፍል 4. አብዛኛዉን 5. ሁሉንም	
11.	መድሃኒቶትን ሳይወስዱ የቀሩበት የቅርቡ ጊዜ መች ነዉ?	1. በፍጹም ሳልወስድ ቀርቼ አላዉቅም 2. >3 ወር 3. 1 እስከ 3 ወር 4. 2 እስከ 4 ሳምንት	

		5. ባለፉት ሁለት ሳምንታት ዉስጥ 6. ባለፉት ሁለት ቀናት ዉስጥ	
12.	መድሃኒት ሳይወስዱ ቀርተዉ ያዉቁ እንደሆን በምን ምክኒያት?	1. ረስቸዉ 2. ከመደበኛዉ መኖሪያዬ ሪቄ ስለነበር 3. ሰዎች ያዩኝ ስለነበር 4. የወትሮ ሁኔታ በመቀየሩ 5. የባህል መድሃኒት እየወሰድኩ 6. መድሃኒቱ አልቆብኝ 7. የጎኒዮሽ ጉዳት በመፍራት 8. አሞኝ ስለነበር 9. ሌሎች (ዘርዝር)---------	ከአንድ በላይ መልስ መስጠት ይቻላል
13.	መድሃኒት መዉሰጃ ሰዓቶን ለማስታወስ ምን ይጠቀማሉ?	1. ሞባይል ስልክ 2. ሰዓት 3. የመመገቢያ ሰዓት 4. ራድዎ/ቴሌቪዥን 5. የፀሐይ ብርሃን 6. የፀሎት ሰዓት 7. ሌሎች (ዘርዝር)----------	ከአንድ በላይ መልስ መስጠት ይቻላል
የመድሃኒት አወሳሰድ መረጃ (በታካሚዉ ሪፖርት መሰረት)			
14.	ላለፉት 4 ቀናት የተሰጠው የክኒን ብዛት	----------ክኒን	
15.	ባለፉት 4 ቀናት የተወሰደው የክኒን ብዛት	----------ክኒን	
16.	ባለፉት 4 ቀናት የተወሰደው የክኒን ብዛት/ላለፉት 4 ቀናት የተሰጠው የክኒን ብዛት X100	----------%	
የመድሃኒት አወሳሰድ መረጃ (ከመዝገብ ላይ የሚሞላ)			
17.	ታካሚዉ መድሃኒት መዉሰድ ካለባቸው የቀጠሮ ቀን ዘግይተው የመጡበት የቀን ብዛት?	----------ቀን	
18.	በሁለት የቅርብ ጊዜ መድሃኒት መውሰጃ ቀጠሮዎች መሃከል ያለው የቀን ብዛት	----------ቀን	

19.	1-(ጥቁ-17 ያለዉ የቀን ብዛት/ጥቁ-18 ያለዉ የቀን ብዛት) X 100	----------%	

HIV care continuum in prisons study
Appendix 4.8: Laboratory data extraction form

I. Participant initiating ART
Participant medication identification number----------
Baseline CD4 count result ---------- cells/mm^3
Date of baseline CD4 count test (dd/mm/yy)----------
Baseline WHO clinical stage (circle one) A. I B. II C. III D. IV
Date of baseline WHO stage determination (dd/mm/yy)----------
II. Participant on ART at least for 6 months
Participant medication identification number----------
Follow-up CD4 count result ---------- cells/mm^3
Date of follow-up CD4 count test (dd/mm/yy)----------
Viral load result---------- copies/µl
Date of viral load test(dd/mm/yy)----------

Appendix 4.9: Diagnostic findings of regression models used for the analysis of cohort data

Model	Type of test	*Result*
Cox proportional hazards model (5.2-5)	Proportional-Hazards assumption (ph) test	1.000*
Logistic regression model-1 (5.2-6)	Hosmer-Lemeshow goodness-of-fit (gof) test	0.4369*
Logistic regression model-2 (5.2-8)	Hosmer-Lemeshow goodness-of-fit (gof) test	0.1596*
Fractional regression model-1 (5.2-9)	Akaike's information criteria (AIC)	0.4959¥
	Bayesian information criterion (BIC)	-269.68ɤ
Fractional regression model-2 (5.2-10)	Akaike's information criteria (AIC)	0.5933¥
	Bayesian information criterion (BIC)	-216.71ɤ
Logistic regression model-3 (5.2-11)	Hosmer-Lemeshow goodness-of-fit (gof) test	0.9550*
Ordered logistic regression model (5.2-13)	Ordinal Hosmer-Lemeshow goodness-of-fit (gof) test	0.3443*
	Proportional odds assumption (omodel) test	0.2328*

**P*-value; ¥ the value of Akaike's information criterion (AIC); ɤ the value of Bayesian information criterion (BIC)

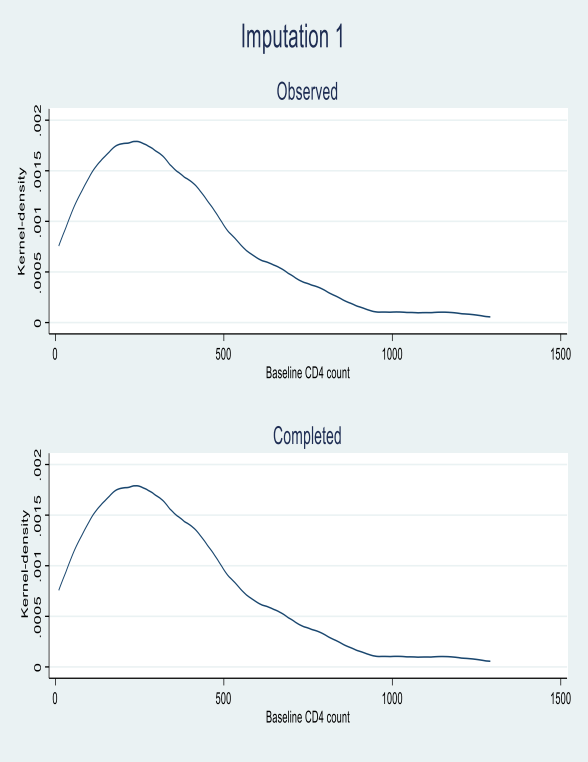
- The null hypothesis for the gof and ph tests is that the model fits the data well.
- A small AIC and more negative BIC values indicate the model fits the data well.
- The null hypothesis for omodel test is that the relationship between each pair of outcome groups is the same.

Appendix 4.10: Missing completely at random (MCAR) assumption test result for variables with missing values in the cohort study

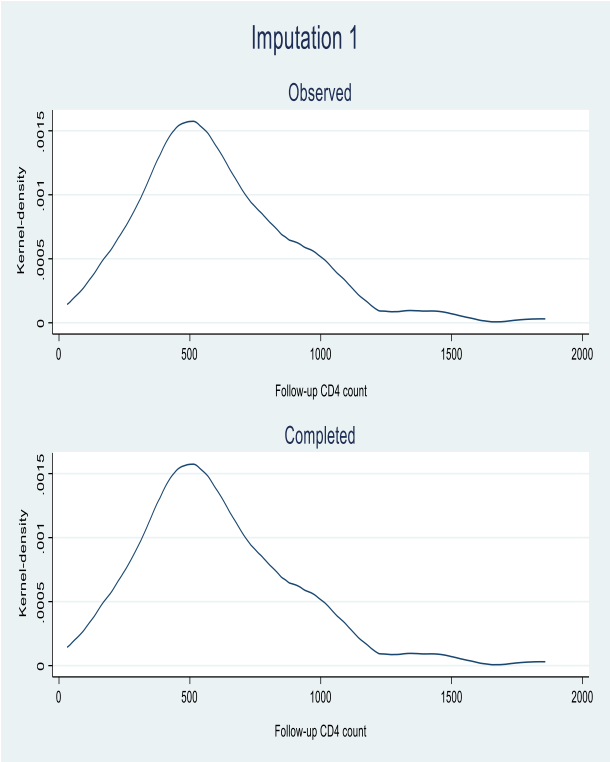
Variable with missing values	Type of test	*P*-value
-Monthly income -Baseline CD4 count -Follow-up CD4 count -Viral load	Missing completely at random (MCAR) test (mcartest)	P=0.001

*The null hypothesis of the mcartest is that missing pattern is MCAR.

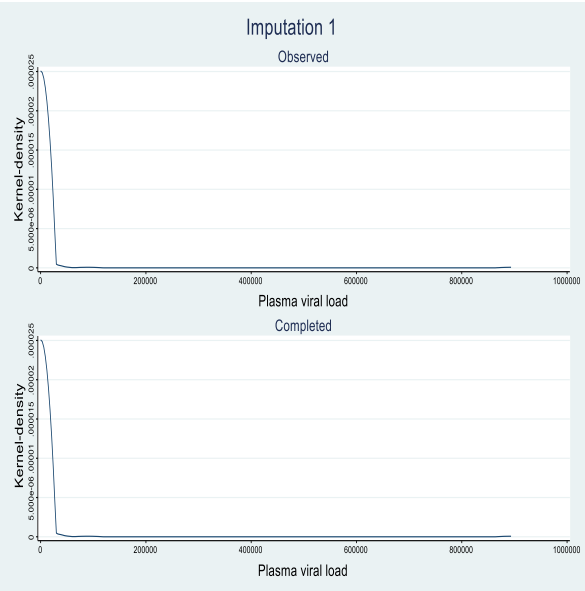
Appendix 4.11: Diagnostic results for multiple imputation (MI)



a)



b)



c)

Figure 4.12-1: Multiple imputation diagnostic plots for baseline (a) and follow-up (b) CD4 count and plasma viral load (c) results

*The assumption of the diagnostic plots is that the distribution of the imputed and completed values should be comparable with the distribution of the observed values.

*The distribution of the imputed values for these datasets is not displayed due to limited number of observations with missing values in each category.

* The diagnostic test findings displayed above represent the first imputation out of twenty imputations iteratively undertaken for each of the variables.

HIV care continuum in prisons study
Appendix 4.12: Prisoners and service providers interview guide

Date----------

Institution's code----------

Participant's code----------

Place of interview: ----------

Name of interviewer: ----------Signature ----------

(A) Prisoners interview			
1.	Welcome and brief introduction about the study		
2.	Personal information: age, gender, educational and marital status		
3.	Where you were first diagnosed for HIV? Would you describe how you got diagnosed? (Probe: steps a participant followed to get HIV diagnosis in the prison)	----------	
4.	How long did you wait to get HIV treatment? Why did you stay for this amount of time without treatment? (Probe: personal and institutional barriers to access ART while starting treatment)	----------	
5.	What is the level of importance that you attach to ART for your health? (Probe: ART benefits, risks of treatment interruption)		
6.	Describe the way you are receiving ART drugs in the prison? Are you satisfied with it? If not why? (Probe: processes and length of time required to access drugs, distance between clinic and prison/cell, means of transportation, people involved)	----------	
7.	Describe any challenges you might be facing in accessing ART drugs and why the challenges exist? (Probe: challenge due to lack of cooperation, transportation, distance, lack of drugs, lack of privacy and associated stigma/discrimination)	----------	
8.	Have you ever faced HIV related stigma and discrimination in the prison? If yes, how would you describe it? (Probe: particularly associated with accessing and taking drugs)	----------	
9.	Describe the level of privacy in taking ART drugs in the prison and the amount of confidentiality offered by health staff and officers?	----------	
10.	In general, how would you describe the prison officer's attitude towards HIV positive inmates? (Probe: related to routine treatment compared to HIV negative inmates)	----------	
11.	How would you describe the ART staff's attitude towards HIV positive inmates? (Probe: compared to community based HIV positive people)	----------	
12.	What support do you get from prison health staff? How do you describe it? (Probe: in terms of HIV diagnosis, treatment initiation, accessing ART and counselling/support to sustain adherence (schedule))	----------	
13.	How would you describe care and support provided by prison officers to HIV infected inmates to get HIV care? (Probe: when a patient seeks support and during health facility visit)	----------	

14.	How would you describe the quality of care you receive in public health facility in terms of ART drug availability, time, respect, privacy and confidentiality?		
15.	Do you have any suggestions about what could be done to improve the ART service in prison?	----------	
(B) Prison officers interview			
1.	Welcome and brief introduction about the study		
2.	Could you describe your role in HIV care in the prison (if any)?		
3.	Could you describe any challenges that might exist for HIV positive inmates in accessing ART drugs and why they exist?	----------	
4.	How would you describe the prisoners' interest to attend clinic appointments and collect medications?	----------	
5.	If any, what support are you providing for HIV positive prisoners with and without ART and how?	----------	
6.	Is there anything you would suggest that could be done to improve ART service in the prison?	----------	
(C) Prison health staff interview			
1.	Welcome and brief introduction about the study		
2.	Would you describe your role in HIV care in the prison (if any)?	----------	
3.	How long have you been doing this job?		
4.	What training have you received regarding HIV care?		
5.	How would you describe HIV care in the prison in terms of diagnosis, treatment initiation and adherence support?	----------	
6.	How are TB infected inmates being identified in the prison?	----------	
7.	Would you describe what challenges exist for HIV positive inmates in accessing ART drugs, receiving CD4 and viral load tests? If there is any, why do you think they exist?	----------	
8.	How would you see prisoner's knowledge about and trust in ART? Is there any action being taken to scale up inmates knowledge and trust in ART?	----------	
9.	How would you see privacy issues for HIV positive inmates in taking ART drugs and protection of confidentiality?	----------	
10.	How would you describe HIV related stigma and discrimination in the prison?	----------	
11.	What kind of support do you provide for HIV positive prisoners and how? If so, is there a standard document for that? a. not started ART b. on ART	----------	

12.	Would you describe what is being done to prevent HIV in the prison?	----------	
13.	Would you describe what is being done to ensure continuity of HIV care including ART for prisoners arriving in, and leaving prison?	----------	
14.	How would you describe training level of prison officers about the importance of continuity of HIV treatment?		
15.	What would you suggest to be done in order to improve ART service in the prison?	----------	
(D) ART service providers interview			
1.	Welcome and brief introduction about the study		
2.	Would you describe your role in HIV care?	----------	
3.	How long have you been doing this job?	----------	
4.	What training have you received regarding HIV care?	----------	
5.	Are ART drugs always available in the health facility? (If not, how often and why?)		
6.	How reliable are the laboratory services in the health facility? Are CD4 and viral load tests done on time? Are results delivered on time? (If not, please explain why?)		
7.	How do you identify HIV positive prisoners? (Probe: coordination between prison health staff and ART staff)	---------	
8.	How do you link HIV diagnosed prisoners in to care?	----------	
9.	What kind of support do you provide for HIV positive prisoners and how? If so, is there a standard document for that? a. not started ART b. on ART	----------	
10.	How would you evaluate HIV positive prisoners' HIV care utilization compared to community people in terms of attending appointments, treatment initiation, drug pickups and adherence compared to people from the community?	----------	
11.	What are the main challenges you face in supporting HIV positive prisoners to get HIV care compared to people from the community?	----------	
12.	How would you describe prisoner's interest to visit a public health facility? (Probe: any frustration, complain, or treatment refusal)	----------	
13.	How would you see prisoner's knowledge about and trust in ART compared to people from the community?	----------	
14.	What would you suggest to be done in order to improve ART service in the prison?	----------	
(E) Prison and health administrators interview			
1.	Welcome and brief introduction about the study		

2.	Would you describe your role in HIV care in prison/s?	----------	
3.	Is the prison authority taking part in the HIV/AIDS coordination activities in the zone? If so, how? Can you show evidence/document for that?	----------	
4.	Is the prison HIV care issue part of the HIV action framework and monitoring and evaluation system at zonal-level? If so, how?	----------	
5.	Does the prison authority involve in all aspects of treatment scale-up, from applications for funding to development, implementation, and monitoring and evaluation of treatment roll-out plans? If so, how?	----------	
6.	What policies, guidelines and systems are available specifying that people with HIV or AIDS are allowed to keep their HIV medication upon them, or are to be provided with their medication, upon arrest and incarceration and at any time they are transferred within the system or to court hearings?	----------	
7.	How would you describe training level of prison officers about the importance of continuity of HIV treatment?	----------	
8.	Does the prison have any partnerships with health clinics, hospitals, NGOs, universities and civil society organizations to provide health care and other services for prisoners? If so, please explain how?	----------	
9.	How would you describe prison health care staff's training level in the comprehensive management of HIV and AIDS, including the provision of antiretroviral therapy?	----------	
10.	How would you evaluate the existing strategy of antiretroviral therapy service in the prison? (Probe: HIV diagnosis, treatment initiation, access to ART and adherence support)	----------	
11.	What would you suggest to be done in order to improve ART service in the prison/s?	----------	

HIV care continuum in prisons study

Amharic version of prisoners and stakeholders interview guide

በኤች አይ ቪ ህክምና ዙሪያ ማረሚያ ተቋማት ላይ የሚካሄድ ጥናት

የታራሚዎች እና የባለድርሻ አካላት የዉይይት መነሻ መጠይቅ

ቀን----------

የተቋሙ መልያ ቁጥር ----------

የተሳታፊዉ መልያ ቁጥር ----------

ዉይይቱ የሚካሄድበት ቦታ: ----------

የአወያይ ስም ----------ፊርማ----------

(ሀ) የታራሚዎች የዉይይት መነሻ መጠይቅ			
1.	ከተሳታፊዉ ጋር ትውውቅና ስለጥናቱ አጭር መግለጫ መስጠት		
2.	የተሳታፊው ግላዊ መረጃ: ዕድሜ፣ ፆታ፣የጋብቻ ሁኔታ፣ የትምህርት ደረጃ		
3.	ኤች አይ ቪ መጀመሪያ የት ተመረመሩ? አገልግሎቱን እንዴት እንዳገኙ ይገልፁለኛል? (ምርመራ: ተሳታፊዉ በምርመራዉ ወቅት ያጋጠመዉን ሁኔታ ኢንዲዘረዝር ማስቻል)	----------	
4.	ከምርመራዉ በኋላ ህክምና ለመጀመር ምን ያህል ቆዩ? ለምን ይህን ያህል ጊዜ ልቆዩ ቻሉ? (ምርመራ: ግለሰባዊ፣ ማህበራዊ እና ተቋማዊ ማነቆዎችን እንዲተነትን ማስቻል)	----------	
5.	የኤች አይ ቪ መድሃኒት ለጤናዎ ምን ያህል ይጠቅማል ብለዉ ያስባሉ፣ ምን፣ምን ጥቅምስ አለው? (ምርመራ: የመድሃኒቱን የጤና ጥቅም፣ ማቋረጥ የሚያስከትለዉን ችግር)		
6.	አሁን የኤች አይ ቪ መድሃኒት እንዴት እንደሚያገኙ ሂደቱን ይገልፁልኛል? በአገልግሎቱስ ምን ያህል ረክተዋል? ካልረኩ ለምን? (ምርመራ: መድሃኒቱን ለማግኘት ያለዉ ሂደት፣ የሚፈጀዉ ጊዜ፣ የጤና ተቋሙ ርቀት፣የመጓጓዣ እጥረት፣የሰራተኞች የትብብር ሁኔታ)	----------	
7.	በማረሚያ ተቋሙ በኤች አይ ቪ ህክምና አገልግሎት ዙሪያ ያጋጠሞት ችግሮች ምን ምንድን ናችው፣ በምሳሌ ያስደግፉ? ችግሮቹስ በምን ምክኒያት ተከሰቱ ብለው ያስባሉ? (ምርመራ: ትብብር አለመኖር፣የመጓጓዣ ችግር፣ርቀት፣የመድሃኒት እጥረት፣ ምስጥር አለመጠበቅ፣ ማግለልና መድሎ)	----------	
8.	ከኤች አይ ቪ ጋር የተያያዘ መገለል ወይም መድሎ ደርሶቦት ያዉቃል? ካጋጠሞት እንዴት ይገልፁታል፣ ለምሳሌ? (ምርመራ: መድሃኒቱን ከጤና ተቋም ስያመጡም ሆነ ስዉጡት)	----------	
9.	የኤች አይ ቪ መድሃኒት ስወስዱ ያልዉ የግል ምስጥሮን የመጠበቅ ሁኔታ ምን ይመስላል? የማረሚያ ተቋሙስ ሰራተኞች ምን ያህል የግል ምስጥሮን ይጠብቃሉ ብለው ያስባሉ ?	----------	
10.	የማረሚያ ተቋሙ ፖሊሶች ከቫይረሱ ጋር ስለሚኖሩ ታራሚዎች ያላቸዉን አመለካከት እንዴት ይገልፁታል? (ምርመራ: ቫይረሱ ከሌሌባችዉ ታራሚዎች አንፃር ስታይ)	----------	
11.	የጤና ተቋሙን ባለሙያ/ዎች ከቫይረሱ ጋር ስለሚኖሩ ታራሚዎች ያላቸዉን አመለካከት እንዴት ይገልፁታል? (ምርመራ: ታራሚ ካልሆነ ታካሚ አንፃር ስታይ)	----------	

12.	ከማረሚያ ተቋሙ የጤና ባለሙያ/ዎች ምን ምን ድጋፍ ያገኛሉ? (ምርመራ: ከኤች አይ ቪ ምርመራ፣ መድሃኒት ከማስጀመር፣ መዲሃኒቱን በወቅቱ እንዲያገኙና እንዲወስዱ ከመርዳት፣ ምክር ከመስጠት አንጻር)	----------	
13.	የማረሚያ ተቋሙ ፖሊሶች ከቫይረሱ ጋር ለሚኖሩ ታራሚዎች የሚሰጡትን ድጋፍነ እንክብካቤ እንዴት ይገልፁታል? (ምርመራ: በተለይ ድጋፍ በምፈልጉበት እና ወደ ጤና ተቋም መሄድ በምፈልጉበት ወቅት)	----------	
14.	ከጤና ተቋሙ የሚያገኙትን የአገልግሎት ጥራት በተለይ መድሃኒት ሁሌ ከመገኘት፣ ቶሎ ከማስተናገድ፣ በአክብሮት ከማስተናገድ፣ ምስጥር ከመጠበቅ አንፃር አንዴት ይገልፁታል?		
15.	በመጨራሻም የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት ለማሻሻል ምን መደረግ አለበት ብለው ያምናሉ?	----------	
(ለ) የማረሚያ ተቋም ፖሊሶች የዉይይት መነሻ መጠይቅ			
1.	ከተሳታፊዉ ጋር ትውውቅና ስለጥናቱ አጭር መግለጫ መስጠት		
2.	በማረሚያ ተቋሙ ዉስጥ የኤች አይ ቪ ህክምና አገልግሎት ላይ ያሎትን ድርሻ ይገልፁልኛል (ካለ)		
3.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች እያጋጠማችዉ ያለዉ ችግሮች ምን ምንድን ናችዉ ፣ ለምሳሌ መድሃኒት ሲጀሚሩ፣ጤና ተቋም መሄድ ሲፈልጉ፣ መድሃኒት ሲያልቅባችዉ፣ ሲዉጡ ወዘተ?	----------	
4.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ጤና ተቋም በቀጠሯቸው ቀን የመሄድ ተነሳሽነት እና መድሃኒቱን ለመዉሰድ ያላችዉን ቆራጥነት እንዴት ያዩታል?	----------	
5.	ከኤች አይ ቪ ጋር ለሚኖሩ ታራሚዎች እርሶ ምን አይነት ድጋፍ ያደርጋሉ፣ እንዴት ለምሳሌ?	----------	
6.	በመጨራሻም የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት ለማሻሻል ምን መደረግ አለበት ብለው ያምናሉ?	----------	
(ሐ) የማረሚያ ተቋም የህክምና ባለሙያዎች የዉይይት መነሻ መጠይቅ			
1.	ከተሳታፊዉ ጋር ትውውቅና ስለጥናቱ አጭር መግለጫ መስጠት		
2.	በማረሚያ ተቋሙ ዉስጥ የኤች አይ ቪ ህክምና አገልግሎት ላይ ያሎትን ድርሻ ይገልፁልኛል (ካለ)	----------	
3.	ይህን ስራ ለምን ያህል ጊዜ ስሰሩ ነበር?		
4.	ስለኤች አይ ቪ ህክምና አገልግሎት ምን ምን ስልጠና ወስደዋል?		
5.	የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት እንዴት ይመለከቱታል፥ ከምርመራ፣ ቫይረሱ የተገኘባቸዉን መድሃኒት ከማስጀመር፣ መድሃኒት የጀመሩት እንዳያቋርጡና ባአግባቡ	----------	

	ኢንዲወስዱ ድጋፍ ከመስጠት አንፃር? አገልገሎቱስ በቂ ነዉ ብለው ያስባሉ?		
6.	በቲቢ በሽታ የተያዙትን ታራሚች እንዴት ትለያላችሁ?	----------	
7.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች መድሃኒት፣ የላቦራቶሪ ምርመራ ዉጤት ለምሳሌ CD4 and viral load፣ ባአግባቡና በወቅቱ ያገኛሉ? ካላገኙ ችግሩ በምን ምክኒያት የተከሰት ይመስሎታል፣ በዝርዝር ያስረዱ?	----------	
8.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ስለኤች አይ ቪ ህክምና ያላቸዉን ዕዉቀትና እምነት እንዴት ያዩታል? ይህን ለማሳደግ የተሰራ/እየተሰራ ያለ ስራ አለ? ካለ ስራዉ በቂ ነዉ ብለዉ ያምናሉ?	----------	
9.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ወደ ጤና ተቋም ሲሄዱም ሆነ መድሃኒት ሲወስዱ ያልዉ ምስጥር የመጠበቅ/የማስጠበቅ ሁኔታ ምን ይመስላል?	----------	
10.	ማረሚያ ተቋሙ ዉስጥ ከኤች አይ ቪ ጋር የተገናኘ መድሎንና ማግለልን እንዴት ይገልፁታል?	----------	
11.	ከኤች አይ ቪ ጋር ለሚኖሩ ታራሚዎች ምን አይነት ድጋፍ እና ክትትል ያደርጋሉ፣ እንዴት ለምሳሌ? ካለ መርጃ ያሳዩኛል? 1. መድሃኒት ላልጀመሩ 2. መድሃኒት ላይ ላሉ	----------	
12.	ማረሚያ ተቋሙ ዉስጥ ኤች አይ ቪን ለመከላከል ምን ምን ስራ እየተሰራ ነው? ስራው በቂ ነው ብለዉ ያስባሉ?	----------	
13.	ማረሚያ ተቋሙ አዲስ የሚገቡና ከቫይረሱ ጋር የሚኖሩትን ለይቶ መድሃኒት ለማስጀመር እንዲሁም ማረሚያ ተቋሙ ዉስጥ መድሃኒት እየወሰዱ ያሉ ከተቋሙ ሲወጡ መድሃኒቱን እንዳያቋርጡ ለማድረግ የሚያስችል አሰራር አለ? ካለ ያብራሩ	----------	
14	የማረሚያ ተቋሙ ፖሊሶች ስለ ኤች አይ ቪ ህክምና ያላቸዉ ግንዛቤ ምን ይመስላል?		
15.	በመጨራሻም የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት ለማሻሻል ምን መደረግ አለበት ብለው ያምናሉ?	----------	
(መ) የጤና ተቋም የህክምና ባለሙያዎች የዉይይት መነሻ መጠይቅ			
1.	ከተሳታፊዉ ጋር ትውውቅና ስለጥናቱ አጭር መግለጫ መስጠት		
2.	የኤች አይ ቪ ህክምና አገልግሎት ላይ ያሎትን ድርሻ ይገልፁልኛል?	----------	
3.	ይህን ስራ ለምን ያህል ጊዜ ስሰሩ ነበር?	----------	
4.	ስለኤች አይ ቪ ህክምና አገልግሎት ምን ምን ስልጠና ወስደዋል?	----------	

5.	በጤና ተቋሙ የኤች አይ ቪ መድሃኒት ሁሌ ይገኛል? ካልተገኘ ለምንና ለምን ያህል ጊዜ/በስንት ጊዜ ይጠፋል?		
6.	የላቦራቶሪ ምርመራ ውጤቶች ምን ያህል አስተማማኝ ናቸዉ? ምርመራዎቹ በወቅቱ ይሰራሉ? ውጤት በጊዜ ይወጣል? ካልሆና በዝርዝር ያስረዱ?		
7.	ቫይረሱ ያለባቸዉን ታራሚዎች (አዲስ) እንዴት ታጌኟቸዋላችሁ/ትለያቸዋላችሁ? (ምርመራ: በዚህ ዙሪያ በጤና ተቋሙ እና ማረሚያ ተቋሙ መሃከል ያልዉን ቅንጂታዊ አሰራር ይግለፁ?)	---------	
8.	ቫይረሱ የተገኘባቸዉን ታራሚዎች እንዴት ወደ ኤች አይ ቪ ህክምና አገልግሎት ታስገቡአቸዋላችሁ፣ ህደቱን በዝርዝር ያስረዱ?	----------	
9.	ከኤች አይ ቪ ጋር ለሚኖሩ ታራሚዎች ምን አይነት ድጋፍ እና ክትትል ያደርጋሉ፣ እንዴት ለምሳሌ? ካለ መርጃ ያሳዩኛል? 1. መድሃኒት ላልጀመሩ 2. መድሃኒት ላይ ላሉ	----------	
10.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ስለኤች አይ ቪ ህክምና አጠቃቀም ከማረሚያ ተቋም ዉጭ ካለ ሰዉ ጋር ስነፃፀር በተለይ የቀጠሮ ቀን ማክበር፣ መድሃኒት ቶሎ መጀመር፣ መድሃኒት አወሳሰድ ዙሪያ ምን ይመስላል?	----------	
11.	ከኤች አይ ቪ ጋር ለሚኖሩ ታራሚዎች የህክምና ድጋፍ ስሰጡ ከማረሚያ ተቋም ዉጭ ካለ ሰዉ በተለየ መልኩ ያጋጠሞት ችግር አለ? ካለ በዝርዝር ይንገሩ?	----------	
12.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ጤና ተቋም በቀጠሯቸው ቀን ለመምጣት ያላቸዉ ተነሳሽነት እና መድሃኒቱን ለመዉሰድ ያላቸዉን ቆራጥነት እንዴት ያዩታል? (ምርመራ: መነጫነጭ፣ ተስፋ መቁረጥ፣ ምሬት፣ ተቃዉሞ)	----------	
13.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች ስለኤች አይ ቪ ህክምና ያላቸዉን ዕዉቀትና እምነት ከማረሚያ ተቋም ዉጭ ካለ ሰዉ ጋር ስነፃፀር እንዴት ይታያል? ይህን ለማሳደግ የተሰራ/እየተሰራ ያለ ስራ አለ? ካለ ስራዉ በቂ ነዉ ብለዉ ያምናሉ?	----------	
14.	በመጨራሻም የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት ለማሻሻል ምን መደረግ አለበት ብለው ያምናሉ?	----------	
(ሠ) የማረሚያ እና የጤና ተቋማት ሃላፊዎች የዉይይት መነሻ መጠይቅ			
1.	ከተሳታፊዉ ጋር ትውውቅና ስለጥናቱ አጭር መግለጫ መስጠት		
2.	በማረሚያ ተቋም የኤች አይ ቪ ህክምና አገልግሎት ላይ ያሎትን ድርሻ ይገልፁልኛል (ካለ)?	----------	

3.	በዞኑ በሚደረጉ የኤች አይ ቪ ኤድስ የጋራ እንቅስቃሴዎች ላይ ማረሚያ ተቋሙ ተሳትፎ ያውቃል/ይሳተፋል? ተሳትፎ ያዉቅ እንደሆን ለምሳሌ በምን በምን መልኩ?	----------	
4.	የማረሚያ ተቋም የኤች አይ ቪ ህክምና ጉዳይ የዞኑ የኤች አይ ቪ የተቀናጀ ተግባር እና የድጋፍና ክትትል አካል ነውን? ከሆነ ሥራውን በዝርዝር ያስርዱ?	----------	
5.	የማረሚያ ተቋሙ አስተዳደር በሁሉአቅፍ የኤች አይ ቪ ህክምና ማስፋፋት፣ ድጋፍ ከማፈላልግ አንስቶ እስከ ትግበራ፣ እንዲሁም ድጋፍና ክትትል ሥራ ላይ ይሳተፋል? ከተሳተፈ በዝርዝር ያስረዱ	----------	
6.	ከኤች አይ ቪ ጋር የሚኖሩ ታራሚዎች በፖሊስ ቁጥጥር ስር ሲዉሉ፣ ማረሚያ ተቋም ሲገቡ፣ እንዲሁም ወደ ሌላ ተቋም ሲዛወሩም ሆነ ለፍርድ ሲቀርቡ የኤች አይ ቪ መድሃኒት ማግኘት እና መዉሰድ እንደሚችሉ የሚገልጽ መመሪያ/ደንብ አለ? ካለ ሊያሳዩኝ ይችላሉ?	----------	
7.	የማረሚያ ተቋሙ ፖሊሶች ስለ ኤች አይ ቪ ህክምና ያላቸዉ ግንዛቤ ምን ይመስላል?	----------	
8.	የማረሚያ ተቋሙ ከጤና ተቋማት፣መንግስታዊ ካልሆኑ ድርጅቶች ፣ ዩኒቨርሲቲዎች እንዲሁም በጎ አድራጊ ድርጅቶች ጋር ኤች አይ ቪን ከመከላከል፣ ምርመራ ከማካሄድ፣ መድሃኒት ከማስጀመርና ከማቅረብ አንፃር ህብር ፈጥሮ ይሰራል? ከሰራ በዝርዝር ይግለጹ	----------	
9.	የማረሚያ ተቋሙ የጤና ባለሙያዎች በኤች አይ ቪ ህክምና ዙሪያ ያላቸዉ የስልጠና ሁኔታ ምን ይመስላል? ስልጠና ከሌሎች ጤና ተቋማት ባለሙያዎች እኩል ያገኛሉ?	----------	
10.	ማረሚያ ተቋሙ አሁን ያልዉን የኤች አይ ቪ ህክምና አገልግሎት ባጠቃላይ እንዴት ይመለከቱታል? (ምርመራ: ምርመራ ማካሄድ፣ መድሃኒት ከማስጀመርና መድሃኒት ላይ ላሉት ባግባቡ እንዲወስዱ ድጋፍና ክብካቤ ከማድረግ አንፃር)	----------	
11.	በመጨራሻም የማረሚያ ተቋሙን የኤች አይ ቪ ህክምና አገልግሎት ለማሻሻል ምን መደረግ አለበት ብለው ያምናሉ?	----------	

Appendix 4.13: Ethics approval from Flinders University, Social and Behavioural Research Ethics Committee (SBREC) for cohort study

Dear Terefe,

Your conditional approval response for project 8173 was reviewed by the Chairperson of the Social and Behavioural Research Ethics Committee (SBREC) and was **approved.** The ethics approval notice can be found below.

APPROVAL NOTICE

Project No.:	**8173**
Project Title:	Outcomes of Antiretroviral therapy in correctional facilities in comparison with community settings: A cohort study in Southern Ethiopia
Principal Researcher:	Mr Terefe Fuge
Email:	fuge0002@flinders.edu.au
Approval Date:	20 December 2018
Ethics Approval Expiry Date:	**5 March 2023**

The above proposed project has been **approved** on the basis of the information contained in the application, its attachments and the information subsequently provided with the addition of the following comment.

Additional comments:

1. Please ensure that copies of the correspondence granting permission to conduct the research from the two organisations listed in the conditional approval notice are submitted to the Committee *on receipt.* Please ensure that the SBREC project number is included in the subject line of any permission emails forwarded to the Committee. Please note that data collection should not commence until the researcher has received the relevant permissions (item D8 and Conditional approval response – number 10).

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. Participant Documentation

Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

- all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.
- the Flinders University logo is included on all participant documentation (e.g., letters of Introduction, information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead

is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialling codes for all telephone and fax numbers listed for all research to be conducted overseas.

- ☐ the SBREC contact details, listed below, are included in the footer of all letters of introduction and information sheets.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 'INSERT PROJECT No. here following approval'). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

2. Annual Progress / Final Reports

In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research (2007-Updated 2018)* an annual progress report must be submitted each year on the (approval anniversary date) for the duration of the ethics approval using the report template available from the Managing Your Ethics Approval SBREC web page. *Please retain this notice for reference when completing annual progress or final reports.*

If the project is completed *before* ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please submit either (1) a final report; or (2) an extension of time request and an annual report.

Student Projects

The SBREC recommends that current ethics approval is maintained until a student's thesis has been submitted, reviewed and approved. This is to protect the student in the event that reviewers recommend some changes that may include the collection of additional participant data.

Your first report is due on or on completion of the project, whichever is the earliest.

3. Modifications to Project

Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, principal researcher or supervisor change);
- changes to research objectives;
- changes to research protocol;
- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes / additions to information and/or documentation to be provided to potential participants;
- changes to research tools (e.g., questionnaire, interview questions, focus group questions);
- extensions of time.

To notify the Committee of any proposed modifications to the project please submit a Modification Request Formavailable from the Managing Your Ethics Approval SBREC web page. Download the form from the website every time a new modification request is submitted to ensure that the most recent form is used. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

Change of Contact Details

Please ensure that you notify the Committee if either your mailing or email address changes to ensure that correspondence relating to this project can be sent to you. A modification request is not required to change your contact details.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Ethics Committee on 08 8201-3116 orhuman.researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforseen event occurs that may affect the ethical acceptability of the project.

Kind regards
Andrea

Ms Andrea Mather (formerly Fiegert) **and Ms Rae Tyler**

Ethics Officers and Executive Officers, Social and Behavioural Research Ethics Committee

Ms Andrea Mather | Monday - Friday	T: +61 8201-3116 | E: human.researchethics@flinders.edu.au
Ms Rae Tyler | Monday, Wednesday and Friday mornings	T: +61 8201-7938 | E: human.researchethics@flinders.edu.au
A/Prof David Hunter | SBREC Chairperson	T: +61 7221-8477 | E: david.hunter@flinders.edu.au
Dr Deb Agnew | SBREC Deputy Chairperson	T: +61 8201-3456 E: deb.agnew@flinders.edu.au
SBREC Website	Social and Behavioural Research Ethics Committee (SBREC)

Research Development and Support |Union Building Basement
Flinders University
Sturt Road, Bedford Park | South Australia | 5042
GPO Box 2100 | Adelaide SA 5001

Appendix 4.14: Ethics approval from Flinders University, Social and Behavioural Research Ethics Committee (SBREC) for qualitative study

Dear Terefe,

Your conditional approval response for project 8362 was reviewed by the interim Chairperson of the Social and Behavioural Research Ethics Committee (SBREC) and was **approved.** The ethics approval notice can be found below.

APPROVAL NOTICE

Project No.:	**8362**
Project Title:	HIV care in prison, initiation, adherence and outcomes of antiretroviral therapy among inmates in Southern Ethiopia
Principal Researcher:	Mr Terefe Fuge
Email:	fuge0002@flinders.edu.au
Approval Date:	8 July 2019
Ethics Approval Expiry Date:	**5 March 2023**

The above proposed project has been **approved** on the basis of the information contained in the application, its attachments and the information subsequently provided with the addition of the following comment.

Condition:

1. Prisoners receiving Emergency Medical Care
   The Chairperson advises that no prisoner attending the clinic for emergency medical care should be recruited to participate in this project. Please ensure that this condition is adhered to throughout the life of this research project.

RESPONSIBILITIES OF RESEARCHERS AND SUPERVISORS

1. Participant Documentation

Please note that it is the responsibility of researchers and supervisors, in the case of student projects, to ensure that:

- all participant documents are checked for spelling, grammatical, numbering and formatting errors. The Committee does not accept any responsibility for the above mentioned errors.
- the Flinders University logo is included on all participant documentation (e.g., letters of Introduction, information Sheets, consent forms, debriefing information and questionnaires – with the exception of purchased research tools) and the current Flinders University letterhead is included in the header of all letters of introduction. The Flinders University international logo/letterhead should be used and documentation should contain international dialling codes for all telephone and fax numbers listed for all research to be conducted overseas.
- the SBREC contact details, listed below, are included in the footer of all letters of introduction and information sheets.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number 'INSERT PROJECT No. here following approval'). For more information regarding ethics approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

2. Annual Progress / Final Reports

In order to comply with the monitoring requirements of the *National Statement on Ethical Conduct in Human Research 2007 (updated 2018)* an annual progress report must be submitted each year on the **8 July** (approval anniversary date) for the duration of the ethics approval using the report template available from the Managing Your Ethics Approval web page.

Please note that no data collection can be undertaken after the ethics approval expiry date listed at the top of this notice. If data is collected after expiry, it will not be covered in terms of ethics. It is the responsibility of the researcher to ensure that annual progress reports are submitted on time; and that no data is collected after ethics has expired.

If the project is completed *before* ethics approval has expired please ensure a final report is submitted immediately. If ethics approval for your project expires please either submit (1) a final report; or (2) an extension of time request (using the modification request form).

First Report due date:	**8 July 2020**
Final Report due date:	**5 March 2023**

Student Projects
For student projects, the SBREC recommends that current ethics approval is maintained until a student's thesis has been submitted, assessed and finalised. This is to protect the student in the event that reviewers recommend that additional data be collected from participants.

3. Modifications to Project

Modifications to the project must not proceed until approval has been obtained from the Ethics Committee. Such proposed changes / modifications include:

- change of project title;
- change to research team (e.g., additions, removals, researchers and supervisors)
- changes to research objectives;
- changes to research protocol;
- changes to participant recruitment methods;
- changes / additions to source(s) of participants;
- changes of procedures used to seek informed consent;
- changes to reimbursements provided to participants;
- changes to information / documents to be given to potential participants;
- changes to research tools (e.g., survey, interview questions, focus group questions etc);
- extensions of time (i.e. to extend the period of ethics approval past current expiry date).

To notify the Committee of any proposed modifications to the project please submit a Modification Request Form available from the Managing Your Ethics Approval SBREC web page. Download the form from the website every time a new modification request is submitted to ensure that the most recent form is used. Please note that extension of time requests should be submitted prior to the Ethics Approval Expiry Date listed on this notice.

Change of Contact Details
If the contact details of researchers, listed in the approved application, change please notify the Committee so that the details can be updated in our system. A modification request is not required to change your contact details; but would be if a new researcher needs to be added on to the research / supervisory team.

4. Adverse Events and/or Complaints

Researchers should advise the Executive Officer of the Ethics Committee on 08 8201-3116 or human.researchethics@flinders.edu.au immediately if:

- any complaints regarding the research are received;
- a serious or unexpected adverse event occurs that effects participants;
- an unforeseen event occurs that may affect the ethical acceptability of the project.

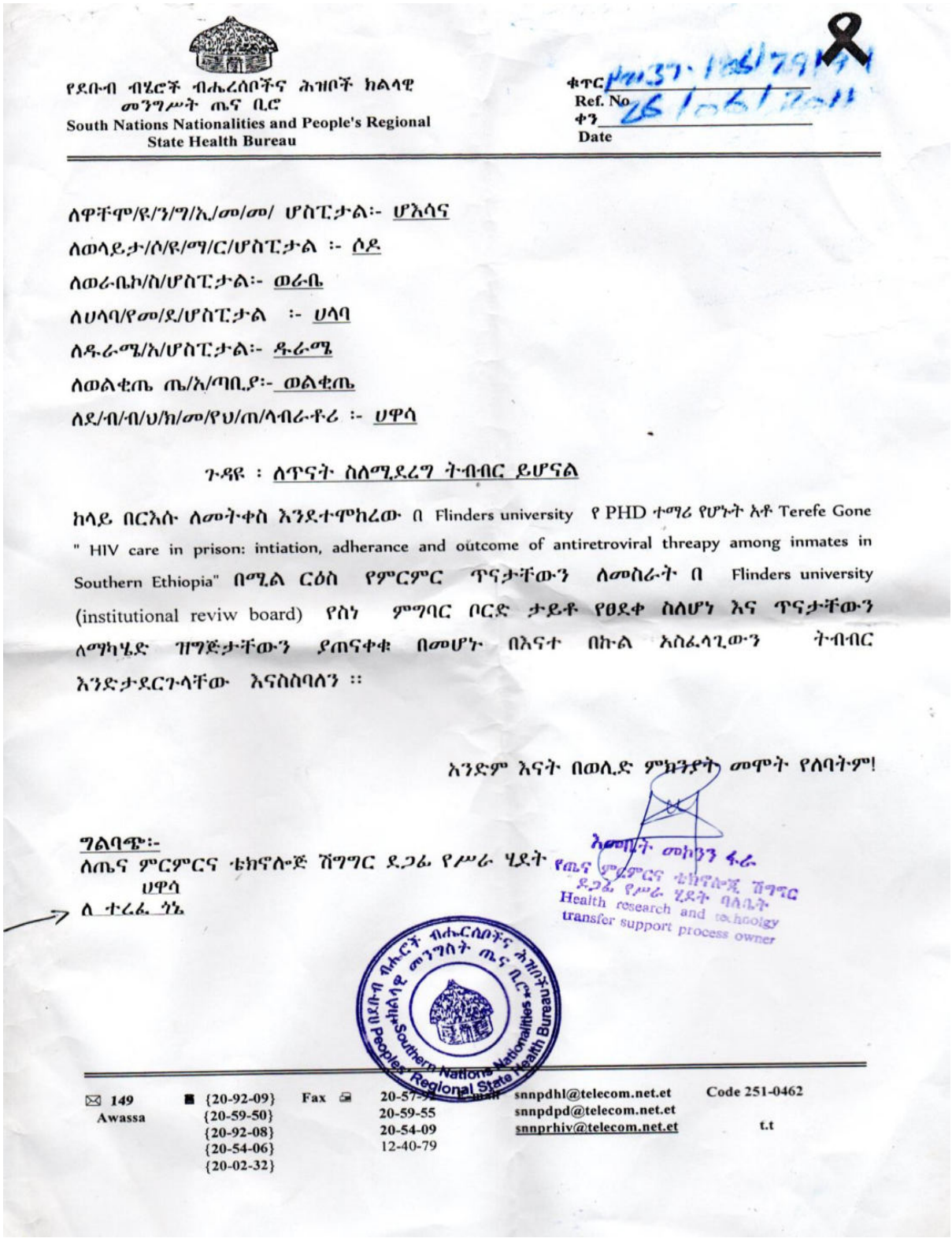
Kind regards
Andrea

Andrea Mather and Rae Tyler
Executive Officers, Social and Behavioural Research Ethics Committee
Research Development and Support
P: (+61-8) 8201 3116 | andrea.mather@flinders.edu.au
P: (+61-8) 8201 7938 | rae.tyler@flinders.edu.au

Flinders University
Sturt Road, Bedford Park, South Australia, 5042
GPO Box 2100, Adelaide, South Australia, 5001

http://www.flinders.edu.au/research/researcher-support/ebi/human-ethics/human-ethics_home.cfm

Appendix 4.15: Ethics approval from Southern Nations, Nationalities and People's Regional Heatlh Bureau (SNNPRHB) for cohort and qualitative studies



የደቡብ ብሄሮች ብሔረሰቦችና ሕዝቦች ክልላዊ
መንግሥት ጤና ቢሮ
South Nations Nationalities and People's Regional
State Health Bureau

ቁጥር Ref. No
ቀን Date

ለዋቸሞ/ዩ/ን/ግ/ኢ/መ/መ/ ሆስፒታል፡- ሆሳና

ለወላይታ/ሶ/ዩ/ማ/ር/ሆስፒታል ፡- ሶዶ

ለወራቤኮ/ስ/ሆስፒታል፡- ወራቤ

ለሀላባ/የመ/ደ/ሆስፒታል ፡- ሀላባ

ለዱራሜ/አ/ሆስፒታል፡- ዱራሜ

ለወልቂጤ ጤ/አ/ጣቢ.ያ፡- ወልቂጤ

ለደ/ብ/ብ/ህ/ክ/መ/የህ/ጠ/ላብራቶሪ ፡- ሀዋሳ

ጉዳዩ ፡ ለጥናት ስለሚደረግ ትብብር ይሆናል

ከላይ በርእሱ ለመትቀስ እንደተሞከረው በ Flinders university የ PHD ተማሪ የሆኑት አቶ Terefe Gone " HIV care in prison: intiation, adherance and outcome of antiretroviral threapy among inmates in Southern Ethiopia" በሚል ርዕስ የምርምር ጥናታቸውን ለመስራት በ Flinders university (institutional reviw board) የስነ ምግባር ቦርድ ታይቶ የፀደቀ ስለሆነ እና ጥናታቸውን ለማካሄድ ዝግጅታቸውን ያጠናቀቁ በመሆኑ በእናተ በኩል አስፈላጊውን ትብብር እንድታደርጉላቸው እናስስባለን ::

አንድም እናት በወሊድ ምክንያት መሞት የለባትም!

ግልባጭ፡-
ለጤና ምርምርና ቴክኖሎጅ ሽግግር ደጋፊ የሥራ ሂደት
ሀዋሳ
ለ ተረፈ ጎኔ

የጤና ምርምርና ቴክኖሎጂ ሽግግር ደጋፊ የሥራ ሂደት ባለቤት
Health research and technology transfer support process owner

149 Awassa
{20-92-09} {20-59-50} {20-92-08} {20-54-06} {20-02-32}
Fax 20-57-92 20-59-55 20-54-09 12-40-79
snnpdhl@telecom.net.et snnpdpd@telecom.net.et snnprhiv@telecom.net.et
Code 251-0462
t.t

Appendix 4.16: Letter of permission from Southern Nations, Nationalities and People's Regional State (SNNPR) Prison Commission

በደቡብ ብሔር ብሔረሰቦች ሕዝቦች ክልል መንግሥት
በፀጥታና አስተዳደር ቢሮ
የማረሚያ ቤቶች አስተዳደር ኮሚሽን
SNNPRS Security & Administration Bureau
Prison Administration Commission

ቁጥር Ref No ጸፖ/7/1655/11
ቀን Date 27/6/2011

ለ ዩሃዕና ማረሚያ ተቋም

ጉዳዩ፡- ትብብር እንዲደረግ ስለመጠየቅ ይሆናል

ከላይ ለመጥቀስ እንደተሞከረው አቶ ተረፈ ጐኔ በአውስትራሊያ በሚገኘው ፍልንደርስ ዩኒቨርስቲ ተማሪ ሲሆን የህግ ታራሚ መሆን በኤች አይቪ መድሃኒት አጀማመር ፣ አወሳሰድ እንዲሁም የሕክምናው ውጤት ላይ ያለውን ተጽዕኖ በደቡብ ኢትዮጵያ በሚል ርዕስ በተመረጡ ማረሚያ ተቋማት ጥናት ለማድረግ ማቀዱንና ትብብር እንዲደረግላቸው የክልሉ ጤና ቢሮ በቁጥር የወ 37-186/29249 በቀን 27/06/2011 ዓ.ም በፃፈው ደብዳቤ ገልጸልናል።

በመሆኑም ይህ ጥናት ለክልላችንም ብሎም ለአገራችን እጅግ ጠቃሚ በመሆኑ ከጤና ቢሮ የተፃፈ አንድ ገጽ ደብዳቤ አያይዘን የላክን ሲሆን ለባለሙያው የተለመደውን ድጋፍና ትብብር እንድታደርጉለት እንጠይቃለን ።

አንድም ሰው በኤች አይቪ/ኤድስ እንዳይያዝ ሀላፊነታችንን እንወጣ !

ከሰላምታ ጋር

ግልባጭ

❖ ለኮሚሽኑ· ኮሚሽነር ጽ/ቤት
ክልል ማረሚያ ቤቶች አስኮሚሽን

ቶርባ·/ቶጋ ማሳዬ
ኮማንደር
ኤች አይ ቪ ኤድስ እና ሥርዓተ
ፆታ· ሜንስትሪሚንግ አፈጸር

☎ 221 11 62/220 82 27/220 82 30 220 69 23 279 E-mail rpac23@gmail.com
"ኤች አይ.ቪ ኤድስን በጋራ እንከላከል
ኤድስን እንግታ ቃላችንን እንጠብቅ"

Appendix 4.17: Letter of introduction, information sheet and consent form for cohort participants

Letter of introduction

Date: ----------

Dear Sir/Madam/Name----------
This letter is to introduce Mr Terefe Fuge who is a PhD student in the Department of Medicine and Public Health at Flinders University. He will produce his student card, which carries a photograph, as proof of identity.

He is undertaking research leading to the production of a thesis or other publications on the subject of HIV care for prisoners. Successful HIV care needs early finding of infected people followed by timely linkage to treatment in order to reduce progression of the virus. However, it is generally known that people in prison are underprivileged and often lack standard of health care including HIV treatment. Therefore, he is investigating differences in linkage to HIV treatment and its outcomes between people in the outside community and people in prison in Southern Ethiopia.
He would like to invite you to assist with this project by agreeing to respond to verbally administered questionnaire which covers certain aspects of this topic. No more than half an hour on one occasion would be required.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. While no identifying information will be published, anonymity cannot be guaranteed as other people will know who has participated. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on (+61 8 7221 8445) or e-mail (emma.miller@flinders.edu.au)
Thank you for your attention and assistance.
Yours sincerely

Dr Emma Miller

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number: 8173). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

Amharic version of letter of introduction

የማሳወቂያ ደብዳቤ

ቀን: ----------

ክቡር/ክብርት/አቶ/ወ/ሮ/ሪት ----------
ይህ ደብዳቤ በፍልንደርስ ዩኒቨርሲቲ በህክምናና ህብረተሰብ ጤና ት/ት ክፍል የፕ ኤች ዲ ታማሪ የሆኑት አቶ ተረፈ ጎኔን ለማስተዋወቅ የተፃፈ ነው። ግለሰቡ ተማሪነቱን ያረጋግጥ ዘንድ በፎቶ የተደገፈ መታወቂያ አብሮት ይገኛል።

ተማሪዉ በማረሚያ ተቋማት የኤች አይ ቪ ህክምና አገልግሎት ላይ ጥናት ያካሄዳል። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግርን ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባቸዉ ይስተዋላል። ስለሆነም ተማሪው ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መካከል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡትን የጤና ችግሮች ልዩነት ያጠናል።

ተማሪዉ እርሶ ከሳላሳ ደቂቃ በማይበልጥ በኤች አይ ቪ ህክምና ዙሪያ በተዘጋጀ ቃለ መጠይቅ ላይ ለመሳተፍ በመስማማት ትብብር እንዲያደርጉ በአክብሮት ይጋብዛል።

እርሶ ቃለ መጠይቁ ላይ የሚሰጡት መረጃ በከፍተኛ ጥንቃቄ በምስጥር የሚያዝ መሆኑንና ማንኛዉም ማንነቶን የሚለይ መርጃ እንደማይኖረው እናም የጥናቱ ዉጤት ስታተምም ሆነ የመመረቂያ ፅሁፉ ሲዘጋጅ ማንነቶ በምንም አይነት መልኩ እንደማይገለጽ አረጋግጥሎታልሁ። በርግጥ መቼም ቢሆን በፈለጉት ጊዜ ተሳትፎዎን የማቋረጥ እንዲሁም መመለስ የማይፈልጉትን ጥያቄ የመዝለል ሙሉ ነፃነት አሎት።

በጥናቱ ላይ ያሎትን ማንኛዉንም ጥያቄ ወይም አስተያየት ከፍ ብሎ በተጠቀሰዉ አድራሻ ወይም በስልክ ቁጥር (+61 8 7221 8445), ወይም ኢ-መይል (emma.miller@flinders.edu.au) ሊያደርሱልኝ ይችላሉ።

ለትብብሮ እጅግ አድርጌ አመሰግናልሁ!

ከሰላምታ ጋር

ዶ/ር ኤማ ሚሌር

Participant information sheet

Title: 'HIV care continuum in prison: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'

Researcher(s)
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Description of the study

This study is part of the project titled 'HIV care continuum in prison: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'. HIV care process needs early finding of infected people followed by timely linkage to treatment in order to obtain successful viral suppression. However, it is generally known that people in prison are underprivileged and often lack standard of health care including HIV treatment. Therefore, this project will look at differences in linkage to HIV care and outcomes of antiretroviral therapy between people in the outside community and people in prison in South Ethiopia. Ultimately, the researcher hopes to reduce any gaps in care between the two settings. This project is supported by Flinders University, in the College of Medicine and Public Health.

Purpose of the study

This project aims to find out the difference in antiretroviral therapy outcomes including starting treatment after diagnosis, ability to take treatment and treatment failure between prisoners and the general population, with the intention of revealing contributing factors for each. It will also investigate prisoners' and stakeholders' views towards currently existing prison antiretroviral therapy system and the way forward to improving the service.

What will I be asked to do?
You are invited to attend a one-on-one interview to complete a survey with a trained research assistant who will ask you about your living situation, HIV risk factors, history of imprisonment (if prisoner), and HIV care use. The interview will take 30 minutes. Your treatment monitoring CD4 count and viral load test results will be extracted from laboratory register.

What benefit will I gain from being involved in this study?
While there may be no direct benefit to you, the sharing of your experiences may contribute to improving access to quality antiretroviral therapy where it is needed, including correctional facilities. Due to the involvement of stakeholders at different levels, it is hoped that opportunities will be created to reduce problems related to access and utilisation of antiretroviral therapy in prisons in the future.

Will I be identifiable by being involved in this study?
We will be using your medication identification number from the health facility where you are currently receiving HIV care for data collection and feedback provision. The medication ID will be de-identified at the end of data entry and will be replaced by specific study identification number. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers.

Are there any risks or discomforts if I am involved?
The researcher anticipates minimal risk from your involvement in this study, however, given the nature of the project, some participants could experience emotional discomfort. If any emotional discomfort is experienced please contact Mr Wondesen Abebe through phone no: +251916032070 for support/counselling that may be accessed free of charge by all participants. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the research assistant.

How do I agree to participate?
Participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the interview at any time without any effect on your care, now or in the future. A consent form accompanies this information sheet. If you agree to participate please read (or listen, while the consent form is read out) and sign the form and give it back to the research assistant.

Recognition of contribution / time / travel costs
If you would like to participate, in recognition of your contribution and participation time, you will be provided with a $AUD1.00 (20 Ethiopian birr) voucher. This voucher will be provided to you face-to-face on completion of the interview.

How will I receive feedback?
On project completion, outcomes of the project will be available from the health facility where you are currently receiving HIV care.
Thank you for taking the time to read this information sheet, and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number: 8173). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

Amharic version of participant information sheet

የመረጃ ቅፅ

የጥናቱ ርዕስ: “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ”

አጥኚ/ዎች
አቶ ተረፈ ጎኔ
የህክምናና ህብረተሰብ ጤና ኮሌጅ
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የጥናቱ መግለጫ

ይህ ጥናት “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ” የሚል ፕሮጄክት አካል ነው። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግርን ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባችዉ ይስተዋላል።. ስለሆነም ጥናቱ በደቡብ ኢትዮጲያ ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መካከል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ያጠናል። አጥኚው በሁለቱ ህዝቦች መካከል ያለዉን ማነኛዉንም የኤች አይ ቪ ህክምና አገልግሎት አለመመጣጠን ለመቀነስ ያልማል። ለጥናቱ ድጋፍ ያደረገው የፍልንደርስ ዩኒቨርሲቲ የህክምናና ህብረተሰብ ጤና ኮሌጅ ነው።

የጥናቱ አላማ

ይህ ጥናት ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መካከል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ለማጥናትና የችግሮቹን መንስዔ ለማወቅ የታለመ ነው። በተጨማሪም ጥናቱ ከቫይረሱ ጋር የሚኖሩ ታራሚዎች እና ባለድርሻ አካላት አሁን ስላለዉ የኤች አይ ቪ ህክምና አገልግሎት ያላችዉን አስተያየት ብሎም ችግሩን በዘላቂነት ለመፍታት በቀጣይ መደረግ ስላለባችዉ የመፍትሄ አቅጣጫዎች ምልከታ ይዳስሳል።

ምን እንዳረግ እጠየቃለሁ?

እርሶ የሰለጠነ የአጥኚዉ ረዳት ስለ አኗኗር ሁኔታ፣ ቫይረሱን ወደ ሌላ ሰው እንዲተላለፍ ሁኔታን ስለሚያመቻቹ ባህሪያት፣ የእርማት ታሪክ (ታራሚ ከሆነ/ች) እና ስለኤች አይ ቪ ህክምና አጠቃቀም በሚያካሄደዉ የፍትለፍት ቃለመጠይቅ ላይ እንዲሳተፉ በአክብሮት ተጋብዘዋል። ቃለመጠይቁ 30 ደቂቃ የሚፈጅ ይሆናል። በተጨማሪም የኤች አይ ቪ ህክምና መከታታያ የላቦራቶር ምርመራ ውጤት ማለትም የCD4 እና viral load ውጤት ከመዝገብ ላይ ይወሰዳል።

ጥናቱ ላይ በመሳተፌ የማገኘው ጥቅም ምንድን ነው?

ምንም እንኳን ቀጥተኛ የሆነ ጥቅም ባይኖረዉም እርሶ ያሎትን ልምድ ማካፈል የኤች አይ ቪ ህክምና በሚያስፈልግበት ሁሉ የማረሚያ ተቋማትን ጨምሮ አገልግሎቱን ለማሻሻል ትልቅ ፋይዳ ይኖረዋል።
በተጨማሪም የአገልግሎቱ ባለድርሻ አካላት ከተለያየ ደረጃ ጥናቱ ላይ ስለሚሳተፉ የማረሚያ ተቋማትን የኤች አይ ቪ ህክምና ችግር ወድፊት ትርጉም ባለው መልኩ መቀነስ ይቻላል ብለን እናምናለን።

ጥናቱ ላይ በመሳተፌ ማንነቴ ይጋለጠል?

መረጃ ለመሰብሰብና የጥናቱን ግብረ መልስ ለመስጠት ያመች ዘንድ ባአሁኑ ሰዓት የኤች አይ ቪ ህክምና አገልግሎት ከሚያገኙበት የህክምና ተቋም የህክምና መዝገብ ቁጥሮን እንጠቀማለን። የህክምና መዝገብ ቁጥሩ መረጃዉ ወዴ ኮምፕቴር ከገባ በኋላ በሌላ ቁጥር የሚተካና የሚጠፋ ይሆናል። በዚህ ጥናት የሚሰበሰብ ማንኛዉም መረጃ ሆነ የጥናቱ ውጤት በከፍተኛ ጥንቃቄ ደህንነቱ በተጠበቀ መልኩ በተገቢዉ አጥኚዎች ዘንድ ብቻ የሚቀመጥ ይሆናል።

ጥናቱ ላይ ብሳተፍ ምን ጉዳት ይደርስብኛል?

አጥኚዉ ጥናቱ ላይ በመሳተፎ የሚደርስቦት ጉዳት በጣም ዝቅተኛ እንደሆነ ያምናል። ነገር ግን በጥናቱ ምክኒያት አንዳንድ ተሳታፊዎች ስሜታችዉ ሊነካ ይችላል። ማኒኛዉም አይነት የስሜት ጉዳት ቢያጋጥሞት ኣባኮትን በዚህ አድራሻ +251916032070 አቶ ወንድወሰን አበበ ብለው ነፃ ምክር እና ድጋፍ አገልግሎት ያግኙ።. ማኒኛዉም ያልተመቾት ነግር ቢኖር እባኮትን ለረዳት አጥኚዉ ያሳዉቁ።

ጥናቱ ላይ ለመሳተፍ መስማማቴን እንዴት መግለፅ እችላለሁ?

ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ ነው። ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማይፈልጉትን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለጉት ሰዓት ሁሉ የመቋረት ሙሉ ነፃነት አሎት። ይህን በማድረጎም በማኒኛዉም የሚያገኙት አገልግሎት ላይ አሁንም ቢሆን ወደፊት የምደርስቦት ምንም አይነት ጫና አይኖርም። የተሳትፎ ስምምነት ዉል ቅጽ ከዚህ መረጃ ቅጽ ጋር አብሮ ተሰቶታል። ጥናቱ ላይ ለመሳተፍ ከተስማሙ እባኮትን የስምምነት ቅጹ ላይ ያልዉን መረጃ በደንብ አንብበው አልያም ሲነበብ በደንብ አድምጠው ቅጹ ላይ ከፈረሙ በኋላ ለአጥኚዉ ረዳት ይመልሱ።

ለሰዉት ጊዜ/ጉልበት ዕዉቅና መስጠት

ጥናቱ ላይ ለመሳተፍ ፍቃደኛ ከሆኑ ለሰዉት ጊዜና ጉልበት ዕዉቅና ለመስጠት ያህል 20 የኢትዮጲይ ብር ይሰጦታል። ብሩ ልክ ቃለመጠይቁን እንደጨረሱ ፍትለፍት የሚሰጥ ይሆናል።

ግብረ መልስ እንዴት ይወሰዳል?

የጥናቱ ማብቂያ ላይ የጥናቱ አጠቃላይ ዉጤት አሁን የኤች አይ ቪ ህክምና አገልግሎት በሚያገኙበት የጤና ተቋም አማካይነት የሚደርሶት ይሆናል።
የመረጃዉን ቅጽ ስላነበቡ/ሲነበብ ስላዳመጡ እጅግ አድርገን እያመሰገንን ጥናቱ ላይ እንዲሳተፉ ያቀረብንሎትን ግብዣ እንደሚቀበሉ ተስፋ እናደርጋለን።

Participant consent form

‘HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia’

I ….....being over the age of 18 years hereby consent to participate as requested in the …… for the research project on with the title listed above.

1. I have read the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
4. I understand that:
   - I may not directly benefit from taking part in this research.
   - Participation is entirely voluntary and I am free to withdraw from the project at any time; and am free to decline to answer particular questions.
   - While the information gained in this study will be published as explained, my participation will be anonymous and my individual information will remain confidential.
   - Whether I participate or not, or withdraw after participating, will have no effect on any treatment, sentencing or service that is being provided to me.
   - I may ask that the interview be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
   - My medication identification number will be used for data collection and feedback provision

Participant’s signature……Date……...

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher’s name…….....

Researcher’s signature……..Date…….

Amharic version of participant consent form

የጥናት ተሳትፎ ስምምነት ቅጽ

የጥናቱ ርዕስ: "የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ"

እኔ…….....ዕድሜዬ ከ18 ዓመት በላይ ስሆን ከላይ ርዕሱ ላይ በተጠቀሰው ጥናት ላይ ለመሳተፍ መስማማቴን ቀጥሎ ባለዉ መልኩ እገልፃልሁ።

1. የተሰጠኝን መረጃ ማንበቤን
2. የጥናቱን ዝርዝር ሂደትና ተያይዘው ሊከሰቱ ስለሚችሉ ጉዳቶች በሚያረካኝ ልክ ገለጻ መደረጉን
3. የመረጃና የስምምነት ቅጾች ኮፒ ለቀጣይ ጊዜ ማጣቀሻነት መያዝ እንደምችል መረዳቴን
4. እንዲሁም ከዚህ ቀጥለዉ የተዘረዘሩትን ሃሳቦች መረዳቴን አረጋግጣለሁ፡

- ጥናቱ ላይ በመሳተፌ ቀጥተኛ ጥቅም እንደማላገኝ
- ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ መሆኑንና ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማልፈልገውን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለኩት ሰዓት ሁሉ የመቋረጥ ሙሉ ነፃነት እንዳለኝ።
- ምንም እንኳን በጥናቱ የሚገኘዉ መረጃ በተገለፀው መልኩ የሚታተም ቢሆንም ጥናቱ ላይ መሳተፌ ምስጥር መሆኑንና ማንነቴን የሚገልፁ ማናቸውም መረጃዎች የሚጠፉ መሆኑን
- ጥናቱ ላይ ብሳተፍም ባልሳተፍም ወይም ጥናቱን በመሃል ባቋርጥ ይህን በማድረጌ በማኒኛዉም የማገኛቸው አገልግሎቶች ላይ አሁንም ቢሆን ወደፊት የምደርስብኝ ምንም አይነት ተጽዕኖ እንደለለው።
- ጥናቱን ለማካሄድ እንዲያመች እና ግብረመልስ ለመስጠት የህክምና መለያ ቁጥሬ ጥቅም ላይ እንደሚዉል

የተሳታፊ ፊርማ ……ቀን ……...

የጥናቱን አላማ ለተሳታፊዉ በተገቢዉ መልኩ ማስረዳቴንና ተሳታፊዉም ተያይዘዉ ያሉትን ጉዳዮች በመረዳት በነፃነት ፍቃደኝነታቸውን መግለጻቸውን አረጋግጣለሁ።

የአጥኚው ረዳት ስም ……..…….....
የአጥኚው ረዳት ፊርማ ……..ቀን…….

Appendix 4.18: Letter of introduction, information sheet and consent form for qualitative interview participants

Letter of introduction (For prisoner participants)

Date: ----------

Dear Sir/Madam/Name
This letter is to introduce Mr Terefe Fuge who is a PhD student in the Department of Medicine and Public Health at Flinders University. He will produce his student card, which carries a photograph, as proof of identity.

He is undertaking research leading to the production of a thesis or other publications on the subject of HIV care for prisoners. Successful HIV care needs early finding of infected people followed by timely linkage to treatment in order to reduce progression of the virus. However, it is thought that people in prison may not always have the highest standard of health care including HIV treatment. Therefore, he is investigating differences in linkage to HIV treatment and its outcomes between people in the community and people in prison in Southern Ethiopia.

He would like to invite you to assist with this project by agreeing to be involved in an interview which covers certain aspects of this topic. No more than one hour on one occasion would be required though some components of the interview may take longer to complete than the anticipated time.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. While no identifying information will be published, anonymity cannot be guaranteed as other people will know who has participated. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since he intends to make a tape recording of the interview, he will seek your consent, on the attached form, to record the interview, to use the recording or a transcription in preparing the thesis, report or other publications, on condition that your name or identity is not revealed, and the recording will not be made available to any other person.

To partly compensate you for your time, you will receive 50 Ethiopian birr after the interview ends, which will be provided in cash.

Any enquiries you may have concerning this project should be directed to me by post at the address given above or you can contact a prison nurse to have your inquiry redirected to me by telephone on (+61 8 7221 8445) or e-mail (emma.miller@flinders.edu.au).
Thank you for your attention and assistance.

Yours sincerely
Dr Emma Miller

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number: 8362). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

Amharic version of letter of introduction
የማሳወቂያ ደብዳቤ(ለታራሚዎች)

ቀን: ----------

ክቡር/ክብርት/አቶ/ወ/ሮ/ሪት ----------
ይህ ደብዳቤ በፍልንደርስ ዩኒቨርሲቲ በህክምናና ህብረተሰብ ጤና ት/ት ክፍል የፕ ኤች ዲ ታማሪ የሆኑት አቶ ተረፈ ጎኔን ለማስተዋወቅ የተፃፈ ነው። ግለሰቡ ተማሪነቱን ያረጋግጥ ዘንድ በፎቶ የተደገፈ መታወቂያ አብሮት ይገኛል።

ተማሪዉ በማረሚያ ተቋማት የኤች አይ ቪ ህክምና አገልግሎት ላይ ጥናት ያካሄዳል። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግር ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባችዉ ይስተዋላል። ስለሆነም ተማሪዉ ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ ሚመጡትን የጤና ችግሮች ልዩነት ያጠናል።

ተማሪዉ እርሶ ከአንድ ሰዓት በማይበልጥ በኤች አይ ቪ ህክምና ዙሪያ በተዘጋጀ ቃለ መጠይቅ ላይ ለመሳተፍ በመስማማት ትብብር እንዲያደርጉ በአክብሮት ይጋብዞታል። ምንአልባትም አንዳንዶቹ ጥያቄዎች ከተገመተው ጊዜ በላይ ሊወስዱ ግን ይችላሉ።

እርሶ ቃለመጠይቁ ላይ የሚሰጡት መረጃ በከፍተኛ ጥንቃቄ በምስጥር የሚያዝ መሆኑንና ማንኛዉም ማንነቶን የሚለይ መርጃ እንደማይኖረው እናም የጥናቱ ዉጤት ስታተምም ሆነ የመመረቂያ ፅሁፉ ሲዘጋጅ ማንነቶ በምንም አይነት መልኩ እንደማይገለጽ አረጋግጥሎታልሁ። በርግጥ መቸም ቢሆን በፈለጉት ጊዜ ተሳትፎዎን የማቋረጥ እንዲሁም መመለስ የማይፈልጉትን ጥያቄ የመዝለል ሙሉ ነፃነት አሎት።

ተማሪዉ ቃለመጠይቁን ለጥናቱ እንዲያመች በካሴት መቅዳት ስለሚፈልግ እና የጥናቱ ዉጤት ማንነቶን በማይገልፅ ሁኔታ ለመመረቃ ፅሁፍና ለህትመት እንደሚጠቀም የርሶን ፍቃደኝነት በፅሁፍ ይጠይቃል። የተቀዳዉ መረጃ በምንም መልኩ ለሌላ ሰው አይተላለፍም።.

ጥናቱ ላይ ለመሳተፍ ፍቃደኛ ከሆኑ ለሰዉት ጊዜና ጉልበት ዕዉቅና ለመስጠት ያህል 50 የኢትዮጲይ ብር ይሰጦታል። ብሩ ልክ ውይይቱን እንደጨረሱ ፍትለፍት የሚሰጥ ይሆናል።

በጥናቱ ላይ ያሎትን ማንኛዉንም ጥያቄ ወይም አስተያየት ከፍ ብሎ በተጠቀሰዉ የፖስታ አድራሻ ወይም ለነርሶቹ ሪፖርት በማድረግ ጥያቄዎት በስልክ ቁጥር (+61 8 7221 8445), ወይም ኢ-መይል (emma.miller@flinders.edu.au) እንዲደርስ ማድረግ ይችላሉ።

ለትብብሮ እጅግ አድርጌ አመሰግናልሁ!

ከሰላምታ ጋር

ዶ/ር ኤማ ሚሌር

Letter of introduction (For service provider participants)

Date: ----------

Dear Sir,
This letter is to introduce Mr Terefe Gone who is a PhD student in the Department of Medicine and Public Health at Flinders University. He will produce his student card, which carries a photograph, as proof of identity.

He is undertaking research leading to the production of a thesis or other publications on the subject of HIV care for prisoners. Successful HIV care needs early finding of infected people followed by timely linkage to treatment in order to reduce progression of the virus. However, it is generally known that people in prison are underprivileged and often lack standard of health care including HIV treatment. Therefore, he is investigating differences in linkage to HIV treatment and its outcomes between people in the community and people in prison in Southern Ethiopia.

He would like to invite you to assist in this project, by granting an interview which covers certain aspects of this topic. No more than 45 minutes on one occasion would be required though some components of the interview may take longer to complete than the anticipated time.

Be assured that any information provided will be treated in the strictest confidence and none of the participants will be individually identifiable in the resulting thesis, report or other publications. While no identifying information will be published, anonymity cannot be guaranteed as other people will know who has participated. You are, of course, entirely free to discontinue your participation at any time or to decline to answer particular questions.

Since he intends to make a tape recording of the interview, he will seek your consent, on the attached form, to record the interview, to use the recording or a transcription in preparing the thesis, report or other publications, on condition that your name or identity is not revealed, and the recording will not be made available to any other person.

To partly compensate you for your time, you will receive 100 Ethiopian birr after the interview ends, which will be provided in cash.

Any enquiries you may have concerning this project should be directed to me at the address given above or by telephone on (+61 8 7221 8445) or e-mail (emma.miller@flinders.edu.au).

Thank you for your attention and assistance.

Yours sincerely
Dr Emma Miller

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project Number: 8362). For more information regarding ethical approval of the project the Executive Officer of the Committee can be contacted by telephone on 8201 3116, by fax on 8201 2035 or by email human.researchethics@flinders.edu.au.

የማሳወቂያ ደብዳቤ(ለባለድርሻ አካላት)

ቀን: ----------

ክቡር/ክብርት/አቶ/ወ/ሮ/ሪት ----------

ይህ ደብዳቤ በፍልንደርስ ዩኒቨርሲቲ በህክምናና ህብረተሰብ ጤና ት/ት ክፍል የፕ ኤች ዲ ታማሪ የሆኑት አቶ ተረፈ ጎኔን ለማስተዋወቅ የተፃፈ ነው። ግለሰቡ ተማሪነቱን ያረጋግጥ ዘንድ በፎቶ የተደገፈ መታወቂያ አብሮት ይገኛል።

ተማሪዉ በማረሚያ ተቋማት የኤች አይ ቪ ህክምና አገልግሎት ላይ ጥናት ያካሄዳል። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግር ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባችዉ ይስተዋላል። ስለሆነም ተማሪው ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ ሚመጡትን የጤና ችግሮች ልዩነት ያጠናል።

ተማሪዉ እርሶ ከአርባ አምስት ደቂቃ በማይበልጥ በኤች አይ ቪ ህክምና ዙሪያ በተዘጋጀ ቃለ መጠይቅ ላይ ለመሳተፍ በመስማማት ትብብር እንዲያደርጉ በአክብሮት ይጋብዞታል። ምንአልባትም አንዳንዶቹ ጥያቄዎች ከተገመተው ጊዜ በላይ ሊወስዱ ግን ይችላሉ።
እርሶ ቃለመጠይቁ ላይ የሚሰጡት መረጃ በከፍተኛ ጥንቃቄ በምስጥር የሚያዝ መሆኑንና ማንኛዉም ማንነቶን የሚለይ መርጃ እንደማይኖረው እናም የጥናቱ ዉጤት ስታተምም ሆነ የመመረቂያ ፅሁፉ ሲዘጋጅ ማንነቶ በምንም አይነት መልኩ እንደማይገለጽ አረጋግጥሎታልሁ። በርግጥ መቸም ቢሆን በፈለጉት ጊዜ ተሳትፎዎን የማቋረጥ እንዲሁም መመለስ የማይፈልጉትን ጥያቄ የመዝለል ሙሉ ነፃነት አሎት።

ተማሪዉ ቃለመጠይቁን ለጥናቱ እንዲያመች በካሴት መቅዳት ስለሚፈልግ እና የጥናቱ ዉጤት ማንነቶን በማይገልፅ ሁኔታ ለመመረቃ ፅሁፍና ለህትመት እንደሚጠቀም የርሶን ፍቃደኝነት በፅሁፍ ይጠይቃል። የተቀዳዉ መረጃ በምንም መልኩ ለሌላ ሰው አይተላለፍም።.

ጥናቱ ላይ ለመሳተፍ ፍቃደኛ ከሆኑ ለሰዉት ጊዜና ጉልበት ዕዉቅና ለመስጠት ያህል 100 የኢትዮጲይ ብር ይሰጦታል። ብሩ ልክ ውይይቱን እንደጨረሱ ፍትለፍት የሚሰጥ ይሆናል።

በጥናቱ ላይ ያሎትን ማንኛዉንም ጥያቄ ወይም አስተያየት ከፍ ብሎ በተጠቀሰዉ አድራሻ ወይም በስልክ ቁጥር (+61 8 7221 8445), ወይም ኢ-መይል (emma.miller@flinders.edu.au) ሊያደርሱልኝ ይችላሉ።

ለትብብሮ እጅግ አድርጌ አመሰግናልሁ!

ከሰላምታ ጋር

ዶ/ር ኤማ ሚሌር

Participant information sheet (For prisoner participants)

Title: 'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'

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Description of the study
This study is part of the project titled 'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'. HIV care process needs early finding of infected people followed by timely linkage to treatment in order to obtain successful viral suppression. However, it is generally known that people in prison are underprivileged and often lack standard of health care including HIV treatment. Therefore, this project will look at differences in linkage to HIV care and outcomes of antiretroviral therapy between people in the community and people in prison in Southern Ethiopia. Ultimately, the researcher hopes to reduce any gaps in care between the two settings. This project is supported by Flinders University, in the College of Medicine and Public Health.

Purpose of the study
This project aims to find out the difference in antiretroviral therapy outcomes including starting treatment after diagnosis, ability to take treatment and treatment failure between prisoners and the general population, with the intention of revealing contributing factors for each. It will also investigate prisoners' and stakeholders' views towards currently existing prison antiretroviral therapy system and the way forward to improving the service.

What will I be asked to do?
You are invited to attend a one-on-one interview with a researcher who will ask you a few questions regarding your views about HIV care utilization information including compliance with medication and challenges in accessing drugs, care and support. The researcher expects

that the interview will take no more than 60 minutes. But some components of the interview may take longer to complete than the anticipated time. The interview will be audio recorded using a digital voice recorder to help with reviewing the results. Once recorded, the interview will be transcribed (typed-up) and stored as a computer file at least for 5 years from the date of publication. On project completion, a summary of the outcomes of the project will be available on request from your health care centre and may then provide feedback via a postal address.

What benefit will I gain from being involved in this study?
While there may be no direct benefit to you, the sharing of your experiences may contribute to improving access to quality antiretroviral therapy where it is needed, including correctional facilities. Due to the involvement of stakeholders at different levels, it is hoped that opportunities will be created to reduce problems related to access and utilization of antiretroviral therapy in prisons in the future.

Will I be identifiable by being involved in this study?
We will be using participant code for data collection and your name for feedback provision through postal address. Your name will be de-identified at the end of data entry and will be replaced by specific study identification number. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers. While no identifying information will be published, anonymity cannot be guaranteed as other people will know who has participated.

Are there any risks or discomforts if I am involved?
The researcher anticipates minimal risk from your involvement in this study, however, given the nature of the project, some participants could experience emotional discomfort. If any emotional discomfort is experienced please inform the condition to a prison nurse to contact Mr Wondesen Abebe through phone no: +251916032070 for free counselling and support services. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researcher. While information will be treated with the strictest confidence by the researcher, any illegal activities disclosed during the research process will be reported to relevant authorities. Similarly, while upmost care will be taken not to reveal your identity, any mistreatment disclosed will be reported to relevant staff at health facilities and prisons.

How do I agree to participate?
Participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the interview at any time without any effect on your care, now or in the future. A consent form accompanies this information sheet. If you agree to participate please read (or listen, while the information is read out) and sign the form and give it back to the researcher or you can give audio recorded consent of participation.

Recognition of contribution / time / travel costs
If you would like to participate, in recognition of your contribution and participation time, you will be provided with a $AUD2.5 (50 Ethiopian birr) cash. This money will be provided to you face-to-face on completion of the interview.

How will I receive feedback?

On project completion, outcomes of the project will be available on your request from the prison health centre, so that you can forward your feedback to the principal researcher via post.
Thank you for taking the time to read this information sheet, and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number: 8362). For more information regarding ethical approval of the project only, the Executive Officer of the Committee can be contacted by telephone on (08) 8201 3116, by fax on (08) 8201 2035, or by email to human.researchethics@flinders.edu.au.

Amharic version of participant information sheet

የመረጃ ቅፅ(የታራሚዎች)

የጥናቱ ርዕስ: “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ”

አጥኚ/ዎች

አቶ ተረፈ ጎኔ
የህክምናና ህብረተሰብ ጤና ኮሌጅ
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የጥናቱ መግለጫ

ይህ ጥናት “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ” የሚል ፕሮጄክት አካል ነው። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግርን ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባችዉ ይስተዋላል።. ስለሆነም ጥናቱ በደቡብ ኢትዮጲያ ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ያጠናል። አጥኚው በሁለቱ ህዝቦች መሃከል ያለዉን ማነኛዉንም የኤች አይ ቪ ህክምና አገልግሎት አለመመጣጠን ለመቀነስ ያልማል። ለጥናቱ ድጋፍ ያደረገው የፍልንደርስ ዩኒቨርሲቲ የህክምናና ህብረተሰብ ጤና ኮሌጅ ነው።

የጥናቱ አላማ

ይህ ጥናት ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ለማጥናትና የችግሮቹን መንስዔ ለማወቅ ያታለመ ነው። በተጨማሪም ጥናቱ ከቫይረሱ ጋር የሚኖሩ ታራሚዎች እና ባለድርሻ አካላት አሁን ስላለዉ የኤች አይ ቪ ህክምና አገልግሎት ያላችዉን አስተያየት ብሎም ችግሩን በዘላቅነት ለመፍታት በቀጣይ መደረግ ስላለባችዉ የመፍትሄ አቅጣጫዎች ምልከታ ይዳስሳል።

ምን እንዳረግ እጠየቃለሁ?

እርሶ አጥኚው ማረሚያ ተቋማት ላይ ስላለዉ የኤች አይ ቪ ህክምና አጠቃቀም በተለይ የመድሃኒት አቅርቦትና አወሳሰድ እንዲሁም ድጋፍና እንክብካቤ ዙሪያ በሚያካሄደዉ የፍትለፍት ውይይት ላይ እንዲሳተፉ በአክብሮት ተጋብዘዋል። ተሳትፎዉ ፍጹም በፍቃደኝነት ላይ የተመሰረተ ነው። ውይይቱ ምንም እንኳን አንዳንዶቹ ጥያቄዎች ከተገመተዉ ጊዜ በላይ ሊወስዱ ቢችሉም ከአንድ ሰዓት በላይ እንደማይፈጅ ይገመታል። ውይይቱ ለጥናት ያመች ዘንድ በካሴት ይቀዳል። የተቀዳው ድምፅ ወደ ፅሁፍ ተቀይሮ ኮምፕተር ውስጥ ይቀመጣል። ድምፁ የሚጠፋዉ የተቀየረዉ ፅሁፍ በተሳታፊዉ ትክክለኛነቱ ከተረጋገጠ በኋላ ብቻ ነዉ። ፅሁፉ አሁን ባሉበት ማረሚያ ተቋም የፖስታ አድራሻ የሚደርሶት ይሆናል። ማኒኛዉንም ግብረመልስ መስጠት ስፈልግጉ በፖስታ ሳጥን ቁጥር 159 መላክ ይችላሉ።

ጥናቱ ላይ በመሳተፌ የማገኜው ጥቅም ምንድን ነው?

ምንም እንኳን ቀጥተኛ የሆነ ጥቅም ባይኖረዉም የእርሶ ያሎትን ልምድ ማካፈል የኤች አይ ቪ ህክምና በሚያስፈልግበት ሁሉ የማረሚያ ተቋማትን ጨምሮ አገልግሎቱን ለማሻሻል ትልቅ ፋይዳ ይኖረዋል። በተጨማሪም የአገልግሎቱ ባለድርሻ አካላት ከተለያየ ደረጃ ጥናቱ ላይ ስለሚሳተፉ የማረሚያ ተቋማትን የኤች አይ ቪ ህክምና ችግር ወድፊት ትርጉም ባለው መልኩ መቀነስ ይቻላል ብለን እናምናለን።

ጥናቱ ላይ በመሳተፌ ማንነቴ ይጋለጠል?

መረጃዉ በመለያ ቁጥር የሚሰበሰብ ሲሆን የጥናቱን ግብረ መልስ በፖስታ ቤት ለመላክ ያመች ዘንድ ስሞትን የምንጠቀም ይሆናል። መረጃዉ ወደ ኮምፕተር ከተላለፈ በኋላ በስሞት ምትክ ሌላ የጥናት መለያ ቁጥር ስለምንጠቀም ስሞት የሚሰረዝ ይሆናል። በዚህ ጥናት የሚሰበሰብ ማንኛዉም መረጃ ሆነ የጥናቱ ውጤት በከፍተኛ ጥንቃቄ ደህንነቱ በተጠበቀ መልኩ በተገቢዉ አጥኚዎች ዘንድ ብቻ የሚቀመጥ ይሆናል።

ጥናቱ ላይ ብሳተፍ ምን ጉዳት ይደርስብኛል?

አጥኚዉ እዚህ ጥናት ላይ በመሳተፎ የሚደርስቦት ጉዳት በጣም ዝቅተኛ እንደሆነ ያምናል። ነገር ግን በጥናቱ ምክኒያት አንዳንድ ተሳታፊዎች ስሜታችዉ ሊነካ ይችላል። ማኒኛዉም አይነት የስሜት ጉዳት ቢያጋጥሞት ኣባኮትን በዚህ አድራሻ +251916032070 አቶ ወንድወሰን አበበ ብለው ነፃ ምክር እና ድጋፍ አገልግሎት ያግኙ።. ማኒኛዉም ያልተመቾት ነግር ቢኖር እባኮትን ለአጥኚዉ ያሳዉቁ።

ጥናቱ ላይ ለመሳተፍ መስማማቴን እንዴት መግለፅ እችላለሁ?

ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ ነው። ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማይፈልጉትን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለጉት ሰዓት ሁሉ የመቋረት ሙሉ ነፃነት አሎት። ይህን በማድረጎም በማኒኛዉም የሚያገኙት አገልግሎት ላይ አሁንም ቢሆን ወደፊት የምደርስቦት ምንም አይነት ጫና አይኖርም። የተሳትፎ ስምምነት ዉል ቅጽ ከዚህ መረጃ ቅጽ ጋር አብሮ ተሰቶታል። ጥናቱ ላይ ለመሳተፍ ከተስማሙ እባኮትን የስምምነት ቅጹ ላይ ያልዉን መረጃ በደንብ አንብበው አልያም ሲነበብ በደንብ አድምጡው ቅጹ ላይ ከፈረሙ በኋላ ለአጥኚዉ ይመልሱ ወይም ጥናቱ ላይ ለመሳተፍ መስማማቶትን በቃል መግለጽ ይችላሉ።

ለሰዉት ጊዜ/ጉልበት ዕዉቅና መስጠት

ጥናቱ ላይ ለመሳተፍ ፍቃደኛ ከሆኑ ለሰዉት ጊዜና ጉልበት ዕዉቅና ለመስጠት ያህል 50 የኢትዮጲይ ብር ይሰጦታል። ብሩ ልክ ውይይቱን እንደጨረሱ ፍትለፍት የሚሰጥ ይሆናል።

ግብረ መልስ እንዴት ይወሰዳል?

የጥናቱ ማብቂያ ላይ የጥናቱ አጠቃላይ ዉጤት አሁን ባሉበት የማረሚያ ተቋም የፖስታ አድራሻ የሚደርሶት ይሆናል።

የመረጃዉን ቅጽ ስላነበቡ/ሲነበብ ስላዳመጡ እጅግ አርገን እያመሰገንን ጥናቱ ላይ እንዲሳተፉ ያቀረብንሎትን ግብዣ እንደሚቀበሉ ተስፋ እናደርጋለን።

Participant information sheet (For service provider participants)

Title: 'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'

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Description of the study
This study is part of the project titled 'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'. HIV care process needs early finding of infected people followed by timely linkage to treatment in order to obtain successful viral suppression. However, it is generally known that people in prison are underprivileged and often lack standard of health care including HIV treatment. Therefore, this project will look at differences in linkage to HIV care and outcomes of antiretroviral therapy between people in the community and people in prison in Southern Ethiopia. Ultimately, the researcher hopes to reduce any gaps in care between the two settings. This project is supported by Flinders University, in the College of Medicine and Public Health.

Purpose of the study
This project aims to find out the difference in antiretroviral therapy outcomes including starting treatment after diagnosis, ability to take treatment and treatment failure between prisoners and the general population, with the intention of revealing contributing factors for each. It will also investigate prisoners' and stakeholders' views towards currently existing prison antiretroviral therapy system and the way forward to improving the service.

What will I be asked to do?
You are invited to attend a one-on-one interview with a researcher who will ask you a few questions regarding your views about HIV care utilization information including patients' compliance with medication and challenges in accessing drugs, care and support.

Participation is entirely voluntary. The researcher expects that the interview will take no more than 45 minutes. But some components of the interview may take longer to complete than the anticipated time. The interview will be audio recorded using a digital voice recorder to help with reviewing the results. Once recorded, the interview will be transcribed (typed-up) and stored as a computer file at least for 5 years from the date of publication. You will be invited to comment on transcripts of the interview, and will also be provided with a summary of the study findings. You will be able to provide feedback by email, phone or mail.

What benefit will I gain from being involved in this study?
While there may be no direct benefit to you, the sharing of your experiences may contribute to improving access to quality antiretroviral therapy where it is needed, including correctional facilities. Due to the involvement of stakeholders at different levels, it is hoped that opportunities will be created to reduce problems related to access and utilization of antiretroviral therapy in prisons in the future.

Will I be identifiable by being involved in this study?
We do not need your name and you will be anonymous. Any identifying information will be removed, and your comments will not be linked directly to you. All information and results obtained in this study will be stored in a secure way, with access restricted to relevant researchers. While no identifying information will be published, anonymity cannot be guaranteed as other people will know who has participated.

Are there any risks or discomforts if I am involved?
The researcher anticipates few risks from your involvement in this study, however, given the nature of the project, some participants could experience emotional discomfort. If any emotional discomfort is experienced please contact Mr Wondesen Abebe through phone no: +251916032070 for free counselling and support services. If you have any concerns regarding anticipated or actual risks or discomforts, please raise them with the researcher. Moreover, while information will be treated with the strictest confidence by the researcher, any illegal activities disclosed during the research process will be reported to relevant authorities.

How do I agree to participate?
Participation is voluntary. You may answer 'no comment' or refuse to answer any questions, and you are free to withdraw from the interview at any time. Whether or not you decided to participate will have no negative impacts on your current or future employment. A consent form accompanies this information sheet. If you agree to participate please read and sign the form and give it back to me.

Recognition of contribution / time / travel costs
If you would like to participate, in recognition of your contribution and participation time, you will be provided with a $AUD5.00 (100 Ethiopian birr) cash. This money will be provided to you face-to-face on completion of the interview.

How will I receive feedback?
On project completion, outcomes of the project will be given to you through email so that you can forward your feedback to the principal researcher.

Thank you for taking the time to read this information sheet, and we hope that you will accept our invitation to be involved.

This research project has been approved by the Flinders University Social and Behavioural Research Ethics Committee (Project number: 8362).
For more information regarding ethical approval of the project only, the Executive Officer of the Committee can be contacted by telephone on (08) 8201 3116, by fax on (08) 8201 2035, or by email to human.researchethics@flinders.edu.au

የመረጃ ቅፅ(የባለድርሻ አካላት)

የጥናቱ ርዕስ: “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ”

አጥኚ/ዎች
አቶ ተረፈ ጎኔ
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የጥናቱ መግለጫ

ይህ ጥናት “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ” የሚል ፕሮጄክት አካል ነው። ዉጤታማ የኤች አይ ቪ ህክምና የቫይረሱን ተጠቂዎች ሳይዘገይ በወቅቱ ለይቶ ህክምና እንዲጀሚሩ ማስቻልን ይጠይቃል።. ነገር ግን እንደሚታወቀዉ ማረሚያ ተቋም የሚገኙ ሰዎች የኤች አይ ቪ ህክምና እጥረትና የአጠቃቀም ችግርን ጨምሮ ሌሎች የጤና ችግሮች ስደርሱባቸዉ ይስተዋላል።. ስለሆነም ጥናቱ በደቡብ ኢትዮጲያ ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ያጠናል። አጥኚው በሁለቱ ህዝቦች መሃከል ያለዉን ማነኛዉንም የኤች አይ ቪ ህክምና አገልግሎት አለመመጣጠን ለመቀነስ ያልማል። ለጥናቱ ድጋፍ ያደረገው የፍልንደርስ ዩኒቨርሲቲ የህክምናና ህብረተሰብ ጤና ኮሌጅ ነው።

የጥናቱ አላማ

ይህ ጥናት ማረሚያ ተቋምና ከማርሚያ ተቋም ዉጭ ባሉ ከቫይረሱ ጋር የሚኖሩ ሰዎች መሐክል ያልዉን የኤች አይ ቪ ህክምና አቅርቦት፣ አጠቃቀምና ተያይዘዉ የሚመጡ የጤና ችግሮች ልዩነት ለማጥናትና የችግሮቹን መንስዔ ለማወቅ ያታለመ ነው። በተጨማሪም ጥናቱ ከቫይረሱ ጋር የሚኖሩ ታራሚዎች እና ባለድርሻ አካላት አሁን ስላለዉ የኤች አይ ቪ ህክምና አገልግሎት ያላችዉን አስተያየት ብሎም ችግሩን በዘላቅነት ለመፍታት በቀጣይ መደረግ ስላለባችዉ የመፍትሄ አቅጣጫዎች ምልከታ ይዳስሳል።

ምን እንዳረግ እጠየቃለሁ?

እርሶ አጥኚው ማረሚያ ተቋማት ላይ ስላለዉ የኤች አይ ቪ ህክምና አጠቃቀም በተለይ የመድሃኒት አቅርቦትና አወሳሰድ እንዲሁም ድጋፍና እንክብካቤ ዙሪያ በሚያካሄደዉ የፍትለፍት ውይይት ላይ እንዲሳተፉ በአክብሮት

ተጋብዘዋል። ተሳትፎዉ ፍጹም በፍቃደኝነት ላይ የተመሰረተ ነው። ውይይቱ ምንም እንኳን አንዳንዶቹ ጥያቄዎች ከተገመተዉ ጊዜ በላይ ሊወስዱ ቢችሉም ከአርባ አምስት ደቂቃ በላይ እንደማይፈጅ ይገመታል። ። ውይይቱ ለጥናት ያመች ዘንድ በካሴት ይቀዳል። የተቀዳው ድምፅ ወደ ፅሁፍ ተቀይሮ ኮምፕተር ውስጥ ይቀመጣል። ድምፁ የሚጠፋዉ የተቀየረዉ ፅሁፍ በተሳታፊዉ ትክክለኛነቱ ከተረጋገጠ በኋላ ብቻ ነዉ። ፅሁፉ በኢ-ሜይል አድራሻዎ የሚደርሶት ይሆናል። ማኒኛዉንም ግብረመልስ መስጠት ስፈልግጉ በኢ-ሜይል አድራሻ terefegone@gmail.com መላክ ይችላሉ።

ጥናቱ ላይ በመሳተፌ የማገኘው ጥቅም ምንድን ነው?
ምንም እንኳን ቀጥተኛ የሆነ ጥቅም ባይኖረዉም የእርሶ ያሎትን ልምድ ማካፈል የኤች አይ ቪ ህክምና በሚያስፈልግበት ሁሉ የማረሚያ ተቋማትን ጨምሮ አገልግሎቱን ለማሻሻል ትልቅ ፋይዳ ይኖረዋል። በተጨማሪም የአገልግሎቱ ባለድርሻ አካላት ከተለያየ ደረጃ ጥናቱ ላይ ስለሚሳተፉ የማረሚያ ተቋማትን የኤች አይ ቪ ህክምና ችግር ወድፊት ትርጉም ባለው መልኩ መቀነስ ይቻላል ብለን እናምናለን።

ጥናቱ ላይ በመሳተፌ ማንነቴ ይጋለጠል?
መረጃዉ በመለያ ቁጥር የሚሰበሰብ ስልሆነ ማንነቶን የሚገልጽ መረጃ አይወሰድም። ማኒኛዉም ማንነቶን የሚገልጽ መረጃ ካለ የሚጠፋ ሲሆን እርሶ የሚሰጡትም ሃሳብ ከማንነቶ ጋር በፍፁም አይገናኝም። በዚህ ጥናት የሚሰበሰብ ማንኛዉም መረጃ ሆነ የጥናቱ ውጤት በከፍተኛ ጥንቃቄ ደህንነቱ በተጠበቀ መልኩ በተገቢዉ አጥኚዎች ዘንድ ብቻ የሚቀመጥ ይሆናል።

ጥናቱ ላይ ብሳተፍ ምን ጉዳት ይደርስብኛል?
አጥኚዉ እዚህ ጥናት ላይ በመሳተፎ የሚደርስቦት ጉዳት በጣም ዝቅተኛ እንደሆነ ያምናል። ነገር ግን በጥናቱ ምክኒያት አንዳንድ ተሳታፊዎች ስሜታቸዉ ሊነካ ይችላል። ማኒኛዉም አይነት የስሜት ጉዳት ቢያጋጥሞት ኣባኮትን በዚህ አድራሻ +251916032070 አቶ ወንድወሰን አበበ ብለው ነፃ ምክር እና ድጋፍ አገልግሎት ያግኙ።. ማኒኛዉም ያልተመቾት ነግር ቢኖር እባኮትን ለአጥኚዉ ያሳዉቁ።

ጥናቱ ላይ ለመሳተፍ መስማማቴን እንዴት መግለፅ እችላለሁ?
ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ ነው። ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማይፈልጉትን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለጉት ሰዓት ሁሉ የመቋረት ሙሉ ነፃነት አሎት። ይህን በማድረጎም በማኒኛዉም የሚያገኙት ጥቅማጥቅም እንዲሁም ሥራዎት ላይ አሁንም ቢሆን ወደፊት የሚደርስቦት ምንም አይነት ጫና አይኖርም። የተሳትፎ ስምምነት ዉል ቅጽ ከዚህ መረጃ ቅጽ ጋር አብሮ ተሰቶታል። ጥናቱ ላይ ለመሳተፍ ከተስማሙ እባኮትን የስምምነት ቅጹ ላይ ያልዉን መረጃ በደንብ አንብበው ቅጹ ላይ ከፈረሙ በኋላ ለአጥኚዉ ይመልሱ።

ለሰዉት ጊዜ/ጉልበት ዕዉቅና መስጠት
ጥናቱ ላይ ለመሳተፍ ፍቃደኛ ከሆኑ ለሰዉት ጊዜና ጉልበት ዕዉቅና ለመስጠት ያህል 100 የኢትዮጲይ ብር ይሰጦታል። ብሩ ልክ ውይይቱን እንደጨረሱ ፍትለፍት የሚሰጥ ይሆናል።

ግብረ መልስ እንዴት ይወሰዳል?
የጥናቱ ማብቂያ ላይ የጥናቱ አጠቃላይ ዉጤት በኢ-ሜይል አድራሻዎ የሚደርሶት ይሆናል።
የመረጃዉን ቅጽ ስላነበቡ እጅግ አርገን እያመሰገንን ጥናቱ ላይ እንዲሳተፉ ያቀረብንሎትን ግብዣ እንደሚቀበሉ ተስፋ እናደርጋለን።

Participant consent form (Prisoner participants)

'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'

I….....being over the age of 18 years hereby consent to participate as requested in the …… for the research project with the title listed above.

1. I have read/understood the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
    - I may not directly benefit from taking part in this research.
    - Participation is entirely voluntary and I am free to withdraw from the project at any time; and can decline to answer particular questions.
    - The information gained in this study will be published as explained, and my participation will be anonymous and confidential.
    - Whether I participate or not, or withdraw after participating, will have no effect on any treatment, sentencing or service that is being provided to me.
    - Whether or I participate or not, or withdraw after participating, will have no effect on my current employment
    - I may ask that the audio recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

Participant's name…….....

Participant's signature……Date……...

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name…….....

Researcher's signature……...Date…….

Amharic version of participant consent form

የጥናት ተሳትፎ ስምምነት ቅጽ(ለታራሚዎች)

የጥናቱ ርዕስ: "የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ"

እኔ…..ዕድሜዬ ከ18 ዓመት በላይ ስሆን ከላይ ርዕሱ ላይ በተጠቀሰው ጥናት ላይ ለመሳተፍ መስማማቴን ቀጥሎ ባለዉ መልኩ እገልፃልሁ።

1. የተሰጠኝን መረጃ ማንበቤን
2. የጥናቱ ዝርዝር ሂደትና ተያይዘው ሊከሰቱ የሚችሉ ጉዳቶች በሚያረካኝ ልክ ገለጻ መደረጉን
3. ቃለመጠይቁ በካሴት እንዲቀዳ መስማማቴን
4. የመረጃና የስምምነት ቅጾች ኮፒ ለቀጣይ ጊዜ ማጣቀሻነት መያዝ እንደምችል መረዳቴን
5. እንዲሁም ከዚህ ቀጥለዉ የተዘረዘሩትን ሃሳቦች መረዳቴን አረጋግጣለሁ፡
    - ጥናቱ ላይ በመሳተፌ ቀጥተኛ ጥቅም እንደማላገኝ
    - ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ መሆኑንና ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማልፈልገውን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለኩት ሰዓት ሁሉ የመቋረት ሙሉ ነፃነት እንዳለኝ።
    - ምንም እንኳን በጥናቱ የሚገኘዉ መረጃ በተገለፀው መልኩ የሚታተም ቢሆንም ጥናቱ ላይ መሳተፌ ምስጥር መሆኑንና ማንነቴን የሚገልፁ ማናቸውም መረጃዎች የሚጠፉ መሆኑን
    - ጥናቱ ላይ ብሳተፍም ባልሳተፍም ወይም ጥናቱን በመሃል ባቋርጥም ይህን በማድረጌ በማኒኛዉም የማገኛቸው አገልግሎቶች ላይ አሁንም ቢሆን ወደፊት የምደርስብኝ ምንም አይነት ተጽዕኖ እንደለለው።
    - ቃል መጠይቁን በፈለኩ ሰዓት ማቆም እንደምችልና ማቋረጥ እንደምችል እንዲሁም ከጥናቱ እራሴን ማግለል እንደምችል ለዚህም ምንም የሚደርስብኝ ተፅዕኖ አለመኖሩን

የተሳታፊ ፊርማ ……ቀን ……...

የጥናቱን አላማ ለተሳታፊዉ በተገቢዉ መልኩ ማስረዳቴንና ተሳታፊዉም ተያይዘዉ ያሉትን ጉዳዮች በመረዳት በነፃነት ፍቃደኝነታቸውን መግለፅቸውን አረጋግጣለሁ።

የአጥኚው ስም …….…….....

የአጥኚው ፊርማ ……..ቀን……

Participant consent form (Service provider participants)

'HIV care continuum in prisons: initiation, adherence and outcomes of antiretroviral therapy amongst prisoners in South Ethiopia'

I….....being over the age of 18 years hereby consent to participate as requested in the …… for the research project with the title listed above.

1. I have read/understood the information provided.
2. Details of procedures and any risks have been explained to my satisfaction.
3. I agree to audio recording of my information and participation.
4. I am aware that I should retain a copy of the Information Sheet and Consent Form for future reference.
5. I understand that:
    - I may not directly benefit from taking part in this research.
    - Participation is entirely voluntary and I am free to withdraw from the project at any time; and can decline to answer particular questions.
    - The information gained in this study will be published as explained, and my participation will be anonymous and confidential.
    - Whether I participate or not, or withdraw after participating, will have no effect on any treatment, sentencing or service that is being provided to me.
    - Whether or I participate or not, or withdraw after participating, will have no effect on my current employment
    - I may ask that the audio recording be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.

Participant's name…….....

Participant's signature……Date……...

I certify that I have explained the study to the volunteer and consider that she/he understands what is involved and freely consents to participation.

Researcher's name…….....

Researcher's signature……....Date…….

የጥናት ተሳትፎ ስምምነት ቅጽ(ለባለድርሻ አካላት)

የጥናቱ ርዕስ: “የህግ ታራሚ መሆን በኤች አይ ቪ መድሃኒት አጀማመር፣ አወሳሰድ እንዲሁም የህክምናዉ ዉጤት ላይ ያለዉ ተፅኖ፥ በደቡብ ኢትዮጲያ”

እኔ.….....ዕድሜዬ ከ18 ዓመት በላይ ስሆን ከላይ ርዕሱ ላይ በተጠቀሰው ጥናት ላይ ለመሳተፍ መስማማቴን ቀጥሎ ባለዉ መልኩ እገልፃልሁ።

1. የተሰጠኝን መረጃ ማንበቤን
2. የጥናቱ ዝርዝር ሂደትና ተያይዘው ሊከሰቱ የሚችሉ ጉዳቶች በሚያረካኝ ልክ ገለጻ መደረጉን
3. ቃለመጠይቁ በካሴት እንዲቀዳ መስማማቴን
4. የመረጃና የስምምነት ቅጾች ኮፒ ለቀጣይ ጊዜ ማጣቀሻነት መያዝ እንደምችል መረዳቴን
5. እንዲሁም ከዚህ ቀጥለዉ የተዘረዘሩትን ሃሳቦች መረዳቴን አረጋግጣለሁ፡
    - ጥናቱ ላይ በመሳተፌ ቀጥተኛ ጥቅም እንደማላገኝ
    - ተሳትፎው ሙሉ በሙሉ በፍቃደኝነት ላይ የተመሰረተ መሆኑንና ለመጠይቁ መልስ የለኝም ማለት፣ መመለስ የማልፈልገውን ጥያቄ መዝለል እንዲሁም መጠይቁን በፈለኩት ሰዓት ሁሉ የመቋረት ሙሉ ነፃነት እንዳለኝ።
    - ምንም እንኳን በጥናቱ የሚገኘዉ መረጃ በተገለፀው መልኩ የሚታተም ቢሆንም ጥናቱ ላይ መሳተፌ ምስጥር መሆኑንና ማንነቴን የሚገልፁ ማናቸውም መረጃዎች የሚጠፉ መሆኑን
    - ጥናቱ ላይ ብሳተፍም ባልሳተፍም ወይም ጥናቱን በመሃል ባቋርጥም ይህን በማድረጌ በማኒኛዉም የማገኛቸው አገልግሎቶች ላይ አሁንም ቢሆን ወደፊት የምደርስብኝ ምንም አይነት ተጽዕኖ እንደለለው።
    - ቃል መጠይቁን በፈለኩ ሰዓት ማቆም እንደምችልና ማቋረጥ እንደምችል እንዲሁም ከጥናቱ እራሴን ማግለል እንደምችል ለዚህም ምንም የሚደርስብኝ ተፅዕኖ አለመኖሩን

የተሳታፊ ፊርማ ……ቀን ……...

የጥናቱን አላማ ለተሳታፊዉ በተገቢዉ መልኩ ማስረዳቴንና ተሳታፊዉም ተያይዘዉ ያሉትን ጉዳዮች በመረዳት በነፃነት ፍቃደኝነታቸውን መግለፅቸውን አረጋግጣለሁ።

የአጥኚው ስም ……..……..

የአጥኚው ፊርማ ……..ቀን……

Appendix 5.1: Quality assessment results for quantitative studies included in the systematic review

Article	Selection Bias	Study Design	Confoun-ders	Data Collection Methods	Withdraw als and Drop-Outs	Global Rating
A. Linkage to care/ART Initiation Studies						
Lucas et al (2016)	+/-	-	-	-	x	-
Mostashari et al (1998)	+/-	-	-	-	x	-
Monarca et al (2015)	+/-	-	-	-	x	-
White et al (2001)	+/-	-	+/-	-	x	-
Bick et al (2016)	-	-	-	-	x	-
Sgarbi et al (2015)	+/-	-	-	-	+/-	-
Makombe et al (2007)	+/-	+/-	-	-	+/-	-
Culbert et al (2016)	+/-	-	+	+	x	+/-
Jaffer et al (2012)	+/-	-	-	-	x	-
Pérez-Molina et al (2002)	+/-	-	+/-	-	x	-
Seth et al (2015)	+/-	-	-	-	x	-
Altice et al (2001)	+/-	-	+	+/-	x	+/-
B. ART adherence Studies						
Soto Blanco et al[a] (2005)	+/-	-	+/-	+/-	x	+/-
Milloy et al (2011)	-	+/-	+	+	x	+/-
Soto Blanco et al[b] (2005)	+/-	-	+/-	+/-	x	+/-
White et al (2006)	-	-	-	+	+	-
Palepu et al (2004)	+	+/-	+	+	x	+
Paparizos et al (2013)	-	-	-	-	x	-
Ines et al (2008)	+/-	-	-	+/-	x	-
Subramanian et al (2016)	-	-	-	+/-	x	-
C. ART outcomes studies						
Davies and Karstaedt (2012)	+/-	+/-	-	-	x	-
Eastment et al (2017)	-	-	-	-	x	-
Meyer et al (2015)	+/-	+/-	+	-	x	+/-
Meyer et al (2014)	+/-	+/-	+	+/-	x	+
Mpawa et al (2017)	+/-	-	+/-	-	x	-
Nasrullah et al (2016)	+	-	+	-	x	-
Palepu et al (2003)	-	+/-	+/-	-	x	-
Stephenson et al (2005)	+/-	+/-	+/-	-	x	+/-
Springer et al (2004)	+/-	+/-	-	-	x	-
Chan et al (2015)	-	-	-	-	x	-
dos Santos Bet et al (2018)	+/-	+/-	+/-	-	-	-
Westergaard et al (2011)	-	+/-	+	+/-	-	-
Telisinghe et al (2016)	+	+/-	-	-	x	-
Meyer et al (2014)	+/-	+/-	+/-	-	x	+/-

+ Strong; +/- Moderate; - Weak; **x** Not applicable

Global rating: **Strong:** No weak rating; **Moderate:** one weak rating; **Weak**: two or more weak ratings

Appendix 5.2: Abstract of a paper on factors affecting optimal adherence to antiretroviral therapy and viral suppression amongst HIV-infected prisoners in South Ethiopia

AIDS Research and Therapy

Multilevel of factors affected optimal adherence to antiretroviral therapy and viral suppression amongst HIV-infected prisoners in South Ethiopia: a prospective cohort study

--Manuscript Draft--

Manuscript Number:	ARTY-D-21-00101
Full Title:	Multilevel of factors affected optimal adherence to antiretroviral therapy and viral suppression amongst HIV-infected prisoners in South Ethiopia: a prospective cohort study
Article Type:	Research
Funding Information:	
Abstract:	Objectives Maintaining optimal adherence and viral suppression in people living with HIV (PLWHA) is essential to ensure both preventative and therapeutic benefits of antiretroviral therapy (ART). Prisoners bear a particularly high burden of HIV infection and are highly likely to transmit to others during and after incarceration. However, the level of treatment adherence and viral suppression in incarcerated populations in low-income countries is unknown. This study aimed to determine the prevalence of non-adherence and viral failure, and contributing factors amongst prisoners in South Ethiopia. Methods A prospective cohort study was conducted between June 1, 2019 and May 31, 2020 to compare the level of adherence and viral suppression between incarcerated and non-incarcerated PLWHA. The study involved 74 inmates living with HIV (ILWHA) and 296 non-incarcerated PLWHA. Background information (including sociodemographic, socioeconomic, psychosocial, behavioural, and incarceration related characteristics) was collected using a structured questionnaire. Adherence was determined based on the participants' self-report and pharmacy refill records. Plasma viral load measurements undertaken within the study period were prospectively extracted to determine viral suppression. Univariate and multivariate regression models were used to analyse data. Results While prisoners had a significantly higher pharmacy refill adherence compared to non-incarcerated PLWHA (89% vs 75%), they had a slightly lower dose adherence (81% vs 83%). The prevalence of viral failure (VF) was also slightly higher (6%) in ILWHA compared to non-incarcerated PLWHA (4.4%). The overall dose non-adherence (NA) was significantly associated with missing ART appointments, level of satisfaction with ART services, patient's ability to comply with a specified medication schedule and types of methods used to monitor the schedule. In ILWHA specifically, accessing ART services from a hospital compared to a health centre, an inability to always attend clinic appointments, experience of depression and a lack of social support predicted NA. VF was significantly higher in males, people of age 31to 35 years and in those who experienced social stigma, regardless of their incarceration status. Conclusions This study revealed that HIV-infected prisoners in South Ethiopia were more likely to be non-adherent to ART doses and to develop viral failure compared to their non-incarcerated counterparts. A multitude of factors were found to be responsible for this requiring multilevel intervention strategies focusing on the specific needs of prisoners.
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Order of Authors Secondary Information:	
Opposed Reviewers:	
Additional Information:	
Question	**Response**
Is this study a clinical trial?<hr>A clinical trial is defined by the World Health Organisation as 'any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes'.	No
Are you submitting this manuscript to an Article Collection?	No

Appendix 5.3: A paper on qualitative exploration of factors influencing early antiretroviral therapy initiation amongst HIV-infected prisoners in South Ethiopia

Fuge *et al. BMC Public Health* (2021) 21:1463
https://doi.org/10.1186/s12889-021-11499-w

BMC Public Health

RESEARCH ARTICLE Open Access

Various structural factors influenced early antiretroviral therapy initiation amongst HIV infected prisoners: a qualitative exploration in South Ethiopia

Terefe Gone Fuge*, George Tsourtos and Emma R. Miller

Abstract

Background: Early initiation of antiretroviral therapy (ART) reduces the development of acquired immunodeficiency syndrome (AIDS), non-AIDS related comorbidities and mortality, and prevents transmission. However, the prevalence of delayed ART initiation amongst prisoners in sub-Saharan African countries is high and the contributing factors to this are relatively unknown.

Methods: Qualitative interviewing was employed to understand the prisoners' lived world with regard to initiating ART and associated barriers and facilitators in the South Ethiopian prison system. We interviewed seven (five male and two female) inmates living with HIV (ILWH) and eleven stakeholders who had a role in human immunodeficiency virus (HIV) care provision for incarcerated people. A phenomenological approach was used to analyse the interview data in which meaning attributed to the lived experiences of the participants was abstracted.

Results: In this study, participants discussed both barriers to, and facilitators of, early ART initiation during incarceration. The barriers included a lack of access to voluntary counselling and testing (VCT) services, poor linkage to care due to insufficient health staff training, uncooperative prison security systems and loss of privacy regarding disclosure of HIV status. Insufficient health staff training and uncooperative prison security systems both contributed to a loss of patient privacy, ultimately resulting in treatment refusal. Although most participants described the importance of peer education and support for enhancing HIV testing and treatment programs amongst prisoners, there had been a decline in such interventions in the correctional facilities. Service providers suggested opportunities that a prison environment offers for identification and treatment of HIV infected individuals and implementation of peer education programs.

Conclusions: Our study identified crucial barriers to and facilitators of early ART initiation amongst prisoners, a key HIV priority population group. Interventions that address the barriers while strengthening the facilitators may enhance a greater utilisation of ART.

Keywords: Antiretroviral therapy, Initiation, Prisoners, South Ethiopia, Qualitative interviewing

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Background

Incarceration rates have been increasing rapidly in sub-Saharan African (SSA) countries including Ethiopia [1, 2]. Socioeconomic and political circumstances such as unemployment, economic inequalities and widespread conflict (leading to an imprisonment of political opponents and related offenders) are important drivers of incarceration in the countries [3, 4]. In Ethiopia, there are currently 113,727 people in prison giving an imprisonment rate of 127 per 100,000 population, which is one of the highest rates in East Africa [2].

The prevalence of human immunodeficiency virus (HIV) in prison populations of SSA countries is much higher than in the general population [5–7], with prevalences up to 13 times higher reported in some countries [5]. In Ethiopia, the prevalence of HIV in prison populations is more than four times higher than in the general population [8]. While there have been reports of unprotected homosexual practices, including rape and sex bartering in the SSA prisons [9–13], pre-incarceration unprotected heterosexual intercourse is the main risk factor for HIV infection in prisoners [9, 11, 14, 15].

Early antiretroviral therapy (ART) initiation; i.e. commencing ART immediately after the infection occurs [16] or as World Health Organization (WHO) defines: initiating ART at higher CD4 count and/or lower clinical stages [17] not only reduces the development of acquired immunodeficiency syndrome (AIDS) and non-AIDS related comorbidities and mortality [18, 19], but also prevents transmission of HIV infection in the community by reducing viral concentration in people living with HIV (PLWH) [20, 21]. Imprisonment provides a unique opportunity to implement comprehensive HIV care programs including timely ART initiation, as PLWH who may otherwise not access health care can be readily reached. High treatment initiation rates have been reported in prison settings, although this is only where there exists an established structure for HIV care [22–24].

In many nations, however, inmates living with HIV (ILWH) often have delayed treatment initiation despite bearing the highest burden of infection and the potential for HIV transmission in the community upon release. Various structural, social and individual level factors have been reported to adversely influence ART initiation for prisoners. Identified structural factors include: a lack of standard HIV care in the prison system [25–29], lack of trust in health care providers [30, 31], loss of privacy [32], discriminatory treatment by prison staff and protracted processes involved in clinic visits [26–28, 32–34]. Social factors, such as stigmatisation by prison officers and fellow inmates, are also found to adversely influence treatment initiation for prisoners [32, 35]. Moreover, a lower likelihood of treatment initiation has been reported in prisoners who believe that ART is unsafe and ineffective in treating HIV [30, 35, 36].

Specific factors contributing to delayed ART initiation amongst prisoners in low- and middle-income countries are unclear. The few available studies that have investigated this issue [25–29] suggested that suboptimal HIV care in the prison system might have caused delay in ART initiation. The purpose of this study was therefore to explore barriers to, and facilitators of, early treatment initiation amongst HIV infected prisoners within the context of South Ethiopia.

Methods

Study setting

South Ethiopia, which is also administratively called Southern Nations, Nationalities and People's Region (SNNPR), is home to 23 of 126 prisons present in Ethiopia [37]. According to SNNPR Prison Commission data [38], the annual imprisonment rate in the region was104 per 100,000 population as of March 2020, with a total prison population of 24,628.

Four SNNPR prisons and respective public health care facilities offering ART services for the prisoners were included in the current study. The prisons were selected based on the number of inmates they house and socio-cultural diversity amongst their prisoner populations. The prisons are located in the central part of Ethiopia and accommodate people originating from diverse areas of the region and the country. This is believed to enhance the representativeness of information beyond the included prisons. The prisons had a daily average number of approximately 5500 inmates, with an average daily entry of 15 persons in each prison [38]. The prisons serve both male and female prisoners in separate units. The majority of prisoners were male, accounting for an average of 96% of the total prison population.

All four prisons had health clinics that were equipped with basic health care materials and health care staff, including psychologists. The prison health care staff mostly consisted of nurses, health officers and laboratory technicians who provided basic care, including first level diagnostic and treatment services for emergency cases and acute illnesses commonly encountered in Ethiopia such as malaria and tuberculosis. None of the clinics operated comprehensive ART services. However, they occasionally offered voluntary counselling and testing (VCT) services and referred identified HIV-infected inmates to nearby ART facilities for treatment initiation [39].

Design

Qualitative in-depth interviewing using a phenomenological approach was undertaken to explore the lived experiences of HIV infected prisoners regarding ART

initiation in the prison context. In-depth semi-structured interviews were also employed to explore the service providers' experiential account of the existing HIV care provision strategy.

Participants

Our aim was to purposively target ILWH and relevant service providers who met study eligibility criteria. ILWH participants were those who were 18 years or older and had initiated ART after prison entry. In addition, the prisoner participants were required to be fluent in Amharic language (a widely spoken language in Ethiopia) in order to maintain verbal fluency and clarity of ideas to the interviewer.

The service provider group included adults (≥18 years of age) who were members of prison health care staff, ART service providers, prison officers, and prison and health administrators. Participants of this group were selected based on their role in the process of HIV care provision. The prison health care staff were health professionals working within the prison health care system and had experiences of performing HIV test and linking HIV infected prisoners to care, whereas the ART service providers were those who were providing HIV treatment for incarcerated and non-incarcerated people at the selected public health care facilities. The prison officers were members of prison security who were often involved in the facilitation of prisoners' HIV care accessing. The prison administrators were the higher officials of the prisons managing the overall administrative issues of the institutions including HIV care, whereas the health administrators were health agents in the respective Zonal Health Departments who were providing technical as well as material support for the prison health care system. All service provider participants had over 6 months' working experience in their respective positions.

Data collection

The interaction between the interviewer and participants was open-ended, in order to create sufficient room for reflections [40, 41], however an interview guide was used to preserve the focus of the discussions on issues and processes related to ART initiation in the prison context (see Additional file 1). The interview guide was constructed in relation to the literature review and the research question. The interview guide for prisoners asked questions related to physical and social environments promoting and hindering early ART initiation, and personal contexts regarding inmates' understanding and perception towards ART. Service provider participants were asked to provide accounts of what they had noticed during their engagement with the provision of HIV care for incarcerated people.

Eighteen participants from the four selected prisons and respective supporting health care facilities participated in the in-depth interviews including: seven (five male and two female) prisoners, two prison health care staff, three ART service providers, two prison officers, two prison administrators and two health agents. The number of participants was determined based on theoretical saturation and a diversity of participants with regard to prison settings, role in the provision of care as well as range of experience [42].

Prisoners were interviewed in a private secured place by the principal researcher (TGF); either in a prison clinic or a room near to it. Due to security concerns in prison settings, prison health care staff guided the researcher to contact the prisoners in order to obtain consent for voluntary participation when they made their regular clinic visits. The principal researcher retrieved clinic appointments of all eligible prisoners from medical registers prior to the commencement of the interviews. This was believed to minimise a potential bias due to the involvement of the health staff in the participant selection process. In addition, the health staff played no role during consent and interviewing processes. Service provider participants were interviewed in their respective offices in private. Prisoner interviews took up to 60 min whereas that of the service provider took a maximum of 50 min. All interviews were audio recorded and field notes were taken on observations (tacit knowledge), comments, unclear ideas and emerging insights [40, 43]. The principal researcher initially transcribed the audio recorded interview data in Amharic language and then translated into English for analysis.

To ensure reliability and credibility of the interview data, the interview guide was initially piloted with individuals from the target population (two for prisoner participants and one for each category of service provider participants) at institutions other than the study sites. This allowed identification of elements that supported the objectives of the study, inclusion of relevant concepts that had not been considered previously and modification of those which were found to be incomprehensible to the participants. The pilot interviews also enabled the interviewer to explore unanticipated circumstances involved in the interviewing process within prison context [41]. Rapport was established with both prisoner and service provider participants through sharing of the interviewer's experience in issues related to HIV care while retaining the distance essential to explore their views.

Analysis

Analysis of data was conducted iteratively throughout the interviewing process. The analysis employed a phenomenological approach so as to contextualise abstract

meanings attributed to the lived experiences of the participants regarding ART initiation in the prison system [44, 45]. Meaning was attached to a particular phenomenon by participants, but inferred using relevant antecedent theories [44].

Data were initially understood through repeated readings of transcripts and review of field notes for tacit information [40]. Themes were first drawn from the data through detection of shifts in meaning and comparison of emerging themes within and between transcripts [40, 45, 46]. There was consensus, after discussion and debate, on most of the themes identified from triangulating perspectives and interpretations between three analysts (a male postgraduate student (TGF), one female academic (ERM) and one male academic (GT)). The themes were coded and juxtaposed in a chronological order of events and conceptual relationships using NVivo12 qualitative data analysis software [47].

Interpretations were made by comparing emerging concepts horizontally within and between the different categories of participants (i.e. amongst prisoner participants and between prisoner and service provider participants), prison settings and phenomena, and vertically between the themes (emic categories) and theoretical concepts (etic categories) in terms of recurrence, patterns and relationships [40, 48].

Reflexivity was considered important for the analysis regarding the influence that the primary researcher (a male Ethiopian post graduate student who had no previous experience of imprisonment) may have had during his interactions with prisoner and service provider participants, and while analysing and interpreting the interview data. The researcher belonged to the same ethnic background and shared many of the same cultural practices from which most of the prisoner participants originated, which might have given him to some extent an insider role to access the culture and ask participants more meaningful questions [49, 50]. While the potential difference in socioeconomic and educational status between the researcher and prisoner participants might have impacted the trustworthiness of data, the researcher's previous research experiences in the same settings [51] offered him an opportunity to understand the research context [49, 50]. The researcher constantly maintained a journal of the research process encompassing experiences, emotions and change in attitudes towards participants and how this could impact data [52]. Data were interpreted by triangulating the perspectives of two other researchers (non-Ethiopian male and female academics) which could potentially reduce bias due to the researcher's view of prisoner participants in terms of accessing HIV care within the context of the study setting [50, 53]. Participants were provided with the summary of the results and asked to verify the accuracy of the results (member-checking) when data interpretation was completed [41, 50, 54]. Whereas prisoner participants were provided with the results through their prison's postal address, an email address was used for service provider participants. All participants verified the accuracy and agreed with the results.

Results

Participant characteristics

Prisoner participants had a median age of 36.5 years. Most (five) of the prisoners reported elementary school (1-8th grade) as their highest educational attainment. Five inmates had been incarcerated for more than 1 year and another five were diagnosed with HIV after prison entry. Of prisoner participants who reported their likely mode of infection, the majority reported engaging in unprotected heterosexual intercourse prior to their imprisonment. Most (five) reported one or more years' experience of living with HIV (with an overall median experience of 2.8 years) and using ART.

All prison health care staff and ART service providers had tertiary qualifications in health care. The prison health staff had nine or more years' experience of working within the prison health care system, whereas the ART service providers had over 6 months' experience of providing ART services. Prison officers, on the other hand, had two or more years' experience of managing inmates' visits to external health care facilities to access HIV care. Prison and health administrators were also experienced officials who had been managing and providing technical and material support for the prison health care system for four or more years.

While prisoners discussed best practices and challenges they experienced during initiating ART from structural, sociocultural and personal perspectives, service provider participants added diverse points of view to prisoners' perspectives and described the pros and cons of the existing HIV care provision strategy for incarcerated people. Accordingly, we identified four themes as barriers to, and two themes as facilitators of, early ART initiation after analysing the in-depth interview data. Included under each theme are selected quotes that are representative reflections for the majority of participants. Pseudonyms (letters) are used instead of real names of the prisons, health care facilities and health departments in order to prevent potential identification of persons providing the information.

Barriers to early ART initiation

Lack of access to HIV testing

The prison systems lacked testing facilities which would support early identification of HIV infected prisoners and linkage to care. New cases were

detected only passively through ad hoc campaigns undertaken by external agencies, and when inmates requested testing due to severe sickness, suggesting an advancement of the infection. One prisoner reported:

> *"My weight had been reduced severely but unfortunately I hadn't realised that. I hadn't known but something started to appear on my thigh [Showing his thigh]; um----something like weight loss, and it had just started making me dizzy when I had walked for a while, and tingling on the endings, then I was told I had the virus after being tested. They called me to the clinic, there is a clinic if you have seen it, and they called me there and gave me a piece of advice and took me to the hospital." (Male prisoner, age: 30's-40's; Prison 'B').*

Other prisoners also reported having waited until an external agency came to the prison and performed testing, although they had noticed some possible signs of the infection and so wanted to have the diagnosis:

> *"I got tested when [external] health professionals undertook a testing campaign. I was so sick long before I was aware of my status. There were times when testing campaigns were undertaken. A lot of inmates still want to have the test but they [prison health staff] often say 'We don't have test kits'." (Female prisoner, age: 50's-60's; Prison 'B').*

Service provider participants supported the reports of inmates that there were inconsistencies in HIV testing services. This meant that inmates often undertook delayed testing at external health care facilities despite exhibiting symptoms suggestive of infection. Alternatively, they could incidentally be diagnosed through ad hoc testing campaigns undertaken by external agencies. A prison officer acting as a treatment facilitator described:

> *"-------at least when they [prisoners] repeatedly come to our clinic with the same case, we take them straight to the hospital when their condition remains unimproved. No one has been dispatched from here to begin treatment there. But once, people from the Region [a health agency from the Regional State] took their blood for HIV testing and sent back the result via the Post Office." (Male prison officer, age: 30's-40's; Prison 'B').*

Health agencies lacked faith in prison health care staff to undertake HIV testing despite the fact that they had been trained, and so denied test kits. Thus, HIV diagnostic services were external to the prison health care system and provided exclusively by public health care facilities. This represented a missed opportunity for prison health care staff to offer testing services and utilise the trust they had built with inmates through regular contacts, to perform the task. A prison nurse reported the following:

> *"---- we had a training on the new kits because you have to have training whenever a new kit is launched, but they [health agents] were not happy to provide us the new kits assuming that we hadn't had the training. They said, 'We will do it ourselves.' I don't mean they shouldn't perform testing but it would be better if it was performed by the prison itself because it is with us whom the prisoners make contact with, every day; it is us whom they trust more. It's better when a person gets served by the professional whom he trusts more." (Female prison nurse, age: 20's-30's; Prison 'C').*

Another prison nurse regretted that she was not able to undertake entry HIV testing for incoming prisoners due to an insufficiency of test kits, despite the fact that the majority of prisoners were eager to have the test:

> *"-------It should have been [regarding offering prisoners voluntary HIV testing at entry], but we didn't do that. By the way, all prisoners are voluntary to have HIV test, I can say. Many of them ask for testing when they come to the OPD (Outpatient Department). Seventy-five percent of them are very willing but I don't have test kits, I am short of test kits. I just tell them, 'Remind me when kits are available!'" (Female prison nurse, age: 30's-40's; Prison 'B').*

Prison officials confirmed a poor level of diagnostic services available in prisons and explained the process of testing prisoners for HIV. According to these participants, HIV testing occurred only rarely and usually in conjunction with international events such as on "World's AIDS Day" or when external agencies carried out testing campaigns. A prison administrator elaborated on what he observed at his prison regarding HIV testing activities:

> *"Mostly--- is it on the 22nd of November? [referring to World's AIDS Day]; it occurs on the 22nd of November, and when there is a request by the Regional [Prison] Commission for an overall testing [program] including the staff, and umm-----in collaboration with the Zonal Health Department; they support us test kits." (Male prison administrator, age: 40's-50's; Prison 'C').*

ART service providers and health agents also described that HIV diagnoses were made external to the prison health care system. They reported that the majority were conducted through incidental campaigns organised by outside agencies in the general community which gave no guarantee that inmates who were about to be released could access. Prison health care staff played little or no role on this, apart from referring prisoners to outside health care facilities when their health worsened. One ART service provider stated:

> *"It is not actually the health professionals there [at the prison] who undertake testing and link positive cases, rather it is often through campaigns carried out by the City Health Unit, the Hospital or partners." (Female ART service provider, age: 30's-40's; Health Facility 'A').*

Health agents felt a responsibility for making sure that every prisoner who volunteered for HIV testing received an opportunity ahead of his/her release. However, they were uncertain how effective they were in relation to the prison health care staff's performance:

> *"We do nothing! [regarding pre-release HIV testing]; We don't know when he gets out. We never know; we never know [Laughs]! We have no any plan to test people who get out of prison, to be honest. We can't work being there as a routine work. Umm-----they [prison health care staff] don't ask us for help regarding educating people who come out of the prison." (Male health agent, age: 40's-50's; Health Department 'A').*

In prison settings where onsite HIV testing rarely occurred, it was found to be only secondary to other health care activities. This impacted on the identification of HIV infected prisoners especially among new arrivals as the prison health care staff often gave a priority to other medical duties. A prison nurse described the situation and she recommended the presence of a separate office equipped with its own trained professionals to provide an effective diagnostic service:

> *"-----they [new prison entrants] often come after 5pm from police stations; there is a high work load even if you want to perform [HIV]testing. It requires its own separate office and a professional who would undertake this work only. Many people may arrive at a time, more than a dozen of people! On one hand, it is not suitable to host them as there are people being served here [at the clinic]. I think it would be nice if there was a separate room and HIV trained professional who would perform this job; would be effective in identifying people who enter here every day." (Female prison nurse, age: 30's-40's; Prison 'B').*

Inability of health staff to make timely care linkage

Prisoners who were able to be detected as HIV infected, either through testing campaigns or an opt-in diagnosis at a prison clinic, were not always provided their test results at the testing sites. They were often kept waiting for long periods of time. Prisoners described the circumstance that they were referred to a nearby public health care facility to learn about their HIV status, despite having the test in the prison:

> *"The prison nurse made some part of the examination and told me that they had no kits to undertake a complete diagnosis so that he referred me to the nearby health centre. I had been told there that I was infected with HIV." (Male prisoner, age: 30's-40's; Prison 'D').*

Another prisoner who tested positive in a campaign by external agencies said:

> *"---------Then they [prison health care staff] called me to the clinic as it was a secret, they didn't tell me anything except offering me an enveloped paper. Then they sent me there [to a hospital] and they [ART service providers at the hospital] had counselled me a lot and asked some questions." (Male prisoner, age: 30's-40's; Prison 'B').*

ART service providers at external health care facilities described similar situations and found prisoners who were referred through such a system were confused about their test results after they realised that they were HIV infected. The service providers related the prison health staff's inability to declare test results with an insufficiency of skills related to provision of appropriate counselling and referral services:

> *"I have experienced something like this: He [a prisoner] was diagnosed there [at prison clinic] and we found him positive here and he said, 'I was diagnosed there but I have not been told this!' We just thought that it might be due to a counselling problem by the health staff and we counselled him and let him start the treatment." (Male ART service provider, age: 40's-50's; Health Facility 'B').*

Another ART service provider gave an account of a prison health care staff member's failure to offer proper post-test counselling adding their pejorative description of inmates' being infected with HIV:

"Umm---there was a prisoner who had newly been identified as HIV infected; I think there is some problem with the prison health staff; I don't know whether it is due to a knowledge gap or being frightened; they don't clearly let them know about their HIV status. Umm---they don't tell them they have HIV virus rather they say like, 'Your blood is turbid!' We found the guy when he came to the Eye Clinic." (Female ART service provider, age: 20's-30's; Health Facility 'C').

A prison nurse acknowledged the problems associated with not letting inmates know their test results, and the fact that she never declared HIV test results to HIV positive prisoners; rather she referred them to nearby public health care facilities:

"I mean, we don't even let him [a prisoner] know his test result, although not recommended. We advise him, 'I have tested you here but better you go to the health centre because they have more advanced testing equipment so that you can be more certain about your result!' Then they test him again and offer him ART." (Female prison nurse, age: 20's-30's; Prison 'C').

ART service providers noticed significant delays even when such referrals were made that were not in accordance with standards of effectiveness and timing adhered to by other non-ART community health care facilities:

"Among individuals who had been tested there [in prison], there are people who came after a month, two months, and even after four months. It is very difficult and requires a strong referral system. We have inter-ward and inter-facility linkage systems; other district health facilities do it in that way and we would have done the counselling here if they had told us the results even if they wouldn't let the client know his result; if they let us know even using a piece of paper, or just sent it to us through the Post Office." (Male ART service provider, age: 40's-50's; Health Facility 'B').

Another ART service provider compared care linkage efforts made by the prison health care system and community non-ART sites, identifying a high likelihood of delays among incarcerated people even if the diagnosis was performed by similar health agencies:

"The issue of care linkage is the usual complaint. Prison campaigns have been undertaken and positive cases were identified; but if it was in the community, there would have been a high chance of being immediately linked to care. For instance, if a positive case is found in a community campaign, one can easily bring him here, and health professionals can also easily bring them if found here in the hospital. However, the situation at the prison is really hard." (Female ART service provider, age: 30's-40's; Health Facility 'A').

A prison nurse also described the presence of considerable delays in care linkage while attempting to assemble patient inmates to send them to external health care facilities en masse:

"If they [prisoners] are found to be positive today, I will call them today. However, the number of people matters when we send them to the hospital. If not urgent, I will suspend patients who have an appointment today for tomorrow to include them. If so, I'll look at the appointment and say, 'I'll send you on this day!' I say, 'Stay ready!' it won't be longer than a maximum of a week." (Female prison nurse, age: 30's-40's; Prison 'B').

Uncooperative prison security system

Prison security's denial of inmate requests for external health care facility visits played a role in causing delays in care linkage. It tended to discourage newly identified HIV-infected prisoners from pursuing ART initiation and even to deny that they were infected. One prisoner described how he noticed his friend dissuading himself from ART initiation because of the emotional trauma he experienced as a result of prison security's procrastination about his health care facility visit:

"One day, they [prison security] gave him [newly identified HIV infected inmate] an appointment and let him be back. He became very offended since then. 'You didn't take me out at my appointed time so I don't want to go again!' he refused. They had declined to take him to the health centre a couple of times due to a cloudy weather. He got frustrated because of this and he was even saying, 'I don't have the virus!' [Laughs]." (Male prisoner, age: 40's-50's; Prison 'B').

A health agent also reported a prison officers' denial of external health care facility visits as a barrier to accessing care amongst HIV infected prisoners:

"Sometimes these people [HIV-infected prisoners] may not come [to an external health care facility] by themselves because they have low access to outside environment. At times the prison officers refuse to

bring them to the health facilities." (Male health agent, age: 50's-60's; Health Department 'C').

Loss of privacy regarding HIV status

Prisoners sometimes refused to be initiated on ART due to concerns about loss of privacy during procedures at external health care facility visits, as well as negative attitudes displayed by prison officers during the process. One prison nurse shared her experience in relation to this while assisting newly identified HIV infected inmates to start ART, proposing onsite ART services as an ideal approach to avoid such difficulties:

"---------This was the main reason why the guy we talked about earlier refused to start treatment. He had been tested here and the prison officers tried to take him to the health centre. He replied, 'I don't want to go there!' It is a very bureaucratic procedure. They should be tested and start their treatment here at the OPD (Outpatient Department). It reduces mistreatment for the prisoners." (Female prison nurse, age: 20's-30's; Prison 'C').

Another prison nurse described the occurrence of privacy loss during call-backs of HIV positive inmates to let the inmates know their test results, because of the involvement of a third party (prison officers and other prisoners):

"------If so [referring to being tested positive], we'll call [back] and let them [prisoners] know. But when they are called out alone, other inmates become suspicious. If you say to someone [a police officer], 'Get a person with this number!' he himself will be suspicious. There is something like, 'He was called because he has the virus!'" (Female prison nurse, age: 30's-40's; Prison 'B').

On some occasions, HIV positive prisoners were not directly informed about their test results, but prison officers were informed about the results prior to taking them to public health care facilities. On these occasions, prisoners were unaware of why they had been escorted to the external health care facility until informed by the ART service provider. One ART service provider described:

"It was one of the guarding police who told me, 'He [a prisoner] has tested positive [Whispering]!': 'He came here after being diagnosed there [at prison clinic]!' The man didn't know, but the guarding police knew. The prisoner says nothing. It's just the person pulling him in and out." (Male ART service provider, age: 40's-50's; Health Facility 'B').

Facilitators of early ART initiation

Peer education and support

Participants discussed the importance of peer education and support for having an early diagnosis and status disclosure to access care in the prison environment. Peer support of ILWH was identified as an essential source of information and a means through which the more experienced ILWH convince newly diagnosed inmates to start treatment. As a prisoner who had been using ART in prison for about 4 years said:

"We are the ones to help them [HIV infected prisoners who refused to be initiated on ART]. If we seniors advise them, they will take it easy and start their medication. Otherwise, they fear to ask and may get worst." (Male prisoner, age: 40's-50's; Prison 'B').

Although ILWH highlighted the significance of sharing their experience of living with HIV and indicated their intention to perform the course of action, it appeared to be challenging for them to participate in peer education activities that were seldom held in the correctional facilities. They encountered an interference by people without HIV experience in the educational programs that was apparently unnoticed by prison officials. A prisoner discusses:

"Yes, it [referring to World's AIDS Day] is celebrated here once in a year, but when that occurs, it is mainly city gangsters who engage in the ceremonial activities. They just interfere in every activity, they know how to dance, how to talk, and then they will be paid! They are the ones who dance and teach, no one who lives with HIV has ever come in. There is no one to coordinate us. They [prison officials] still remain unresponsive."

"I am willing personally [to share his life experience with others]. I don't even teach at a ceremony, why not they print my name out in newspapers! I will teach them "Why and how it occurs!" But it was not given to me, it was given to the gangsters. They don't know the extent that I know about the situation, it is just an intrusion." (Male prisoner, age: 30's-40's; Prison 'B').

A prison nurse who had previously run an HIV prevention office described the cessation of HIV education programs at her institution despite the commitment of ILWH to educate fellow inmates. She attributed blame for the interruption to a disregard for the program by prison administration and health agencies:

"There had been tea-coffee programs. We used to be provided with two-percent of the total institutional budget for a monthly tea-coffee program; an exciting program! Umm----the Zonal Mainstreaming Officer used to attend the program [I don't know who is in charge of the Office currently; might have been changed], and provide us with brochures, music CDs, and teaching leaflets. The prisoners [living with HIV] also used to write a poem, and it was really a vibrant ceremony. It has been interrupted now, otherwise it was an exciting activity." (Female prison nurse, age: 20's-30's; Prison 'C').

Prison health care staff did not always feel it was their responsibility to undertake HIV education programs:

"It's just like you sit in the clinic and do the work you are supposed to do, but there is nothing else you can feel as a responsibility [regarding HIV education]. We didn't have love and unity. There was no thought to each other within the team rather fault finding. Then you would go out having done your work to which you are accountable for. That has created the gap." (Female prison nurse, age: 30's-40's; Prison 'B').

Both prison and health administrators blamed supporting agencies and the government for a reduction in allocation of resources related to HIV prevention and control activities. It was assumed that the infection had meaningfully declined in the community, which eventually evoked restriction of funds by donor agencies. Having announced the decline of the infection in the community, the government did not appear to have the capacity to implement the programs on its own, which had previously been operated by donor agencies in the main. However, the infection continued to spread at an epidemic level, particularly among the most at risk populations. A health agent described the active HIV prevention and control programs that previously existed at the Zonal level, and the anticipated risks that health agencies would likely face in attempting to achieve the goal of ending the AIDS epidemic by 2030 if funds by donor agencies remained restricted:

"There is no one to be asked [for funds] like before. Everyone is short of funds. HIV has been assumed to decline but it has not actually; it has been disseminating like a wild fire [Laughs]! A lot had been done at schools, districts and neighbourhood level including prisons. Following these all efforts, the Ethiopian government declared that HIV had been reduced by 70%; [consequently] the budget has declined considerably since then. The Global Fund and supports of USAID have been shifted to other issues leaving the country to deal HIV issues on its own.

While the national government announced HIV had been reduced, be it for political purpose or not, but it still remains at the epidemic stage. According to the international definition, the prevalence of more than 1% in the general population is considered as an epidemic. But there are cities in our country with a prevalence of more than 5%. Hosanna [the City where his office located] itself has documented over 2%, the land where HIV was assumed to be absent. In this sense, the government and the people got distracted. It has set to do that again but it is not going to be effective by the government's only capacity. Although the government is saying, 'HIV will be stopped by 2030' it's getting harder." (Male health agent, age: 40's-50's; Health Department 'A').

A prison administrator added:

"Generally, as there has been a decline in HIV related activities, particularly in relation to the recent slogan, 'Our achievements on decline'; there must be awareness creating work to enhance this through umm----drama, umm------conversations and other means to create knowledge amongst high risk groups such as drivers, soldiers, and others groups like prisoners; both men and women need to know that it [HIV infection] occurs due to lack of precautions to protect oneself." (Male prison administrator, age: 40's-50's; Prison 'C').

In addition to the decline in the emphasis on HIV-related issues at national level, prison administrations and health agencies failed to work collaboratively or demonstrate appropriate understanding that prisoners are among the most at risk populations for HIV transmission:

"Not that much in this regard [participation in the development and implementation of HIV related plans at the Zonal level]; they don't invite us in what [HIV related plans] they have developed" (Male prison administrator, age: 40's-50's; Prison 'C').

The same prison official discussed the apparent gap in HIV education activities existing between his institution and health agencies, and his perception that it was partly attributable to the prison administration's lack of mandate to make direct contact with health agencies. He proposed he was forced by the circumstance from involvement in the implementation of HIV-related programs at Zonal level:

"As I said it before, we have no a mandate to directly attract NGOs (non-governmental organisations) to our institution or contact Regional Health Bureau because we are responsible to the Regional Prison Commission. It should be decentralised but still they are the ones who contact NGOs to give us holistic trainings wherever they come from. For instance, you came here after having reported to the Regional Prison Commission! So?" (Male prison administrator, age: 40's-50's; Prison 'C').

Imprisonment as an opportunity for early ART initiation

Service provider participants discussed the prospects that incarceration could offer for early treatment of HIV infection. A health agent viewed incarceration as an opportunity to identify and initiate ART for HIV-infected individuals who otherwise might have been difficult to reach:

"For instance, sometimes you may not find HIV-infected people at health facilities but you may find them at prisons. They may refuse to start ART as they might have tested [positive] at private clinics. Thus, prisons provide a good opportunity to capture such cases which would benefit the patient as well as the community at large." (Male health agent, age: 50's-60's; Health Department 'C').

One prison nurse appreciated the importance of vicarious experiences of the valuable outcomes of ART that a prison environment offered ILWH. She provided more weight to positive and negative outcomes in fellow ILWH in changing their behaviour than education provided by health care providers. In her perception, it helped ILWH understand the health benefits of ART and decide to initiate:

"It is not because we have educated them [prisoners] correctly or advised them, 'the medication does this in your body, it reduces viral load, it boosts your immunity', but they learn from the people inside. For example, I've experienced this: many had just been so drained and their body got back to normal after they had started the medication. Many others have learned from this. They believe that 'Mr 'X' was like this so nothing happens to me!'" (Female prison nurse, age: 30's-40's; Prison 'B').

One female prisoner reported having HIV diagnosis after prison entry, which she was incapable of performing before imprisonment even if she was suspicious about being infected due to her partner's death related to HIV:

"I was not diagnosed even after his [her husband's] death, when I was outside prison. Then this crime was committed, came into prison; it was after my prison entry that I got diagnosed." (Female prisoner, age: 50's-60's; Prison 'B').

Discussion

In this study, we identified and explored various barriers to and facilitators of early ART initiation amongst prisoners in South Ethiopia. Among the barriers identified, there was a lack of enduring strategies and resources that ensure access to HIV testing which led prisoners to commence ART only at advanced stages of their infection. Ensuring access to voluntary and confidential HIV testing for prisoners is an essential component of efforts to reach universal access to HIV prevention, treatment and care [55]. This enables the HIV key population to undergo early diagnosis, which is an important prerequisite for timely ART initiation [17], improved treatment outcomes [18, 19] and reduced risk of infection for others [20, 21].

Participants reported that HIV testing was usually only available upon the prisoners' request (also known as opt-in or risk-based approach). Such approaches are less effective in correctional settings resulting in delayed diagnosis and linkage to care, and provide a little opportunity to reach prisoners before they return to the community [56–58]. In South Ethiopia, the majority (86%) of prisoners return to the community within less than 2 years of imprisonment [51], which could make an effective implementation of opt-in approach challenging. A number of other institutional and social factors also affect prisoners' ability to request testing. As stated by some prisoner participants, they often faced refusal from health care providers and prison officers when they tried to seek testing. In addition, due to widespread social stigma and discrimination against HIV both in the community and prison settings, individuals who suspect they may be infected with HIV are generally less likely to request testing [55, 59–62].

In contrast, several intervention studies suggest the effectiveness and feasibility of implementing VCT in prison settings in high- and low-income countries. For example, opt-out based provider initiated counselling and testing (PICT) approach has been associated with higher testing rates in many prisons when integrated into routine prison health care systems [23, 24, 58, 63]. This approach is also known to increase rates of linkage to care and ART initiation especially in HIV infected prison entrants [23]. Adaptation of the Seek, Test, and Treat (STT) strategy [64] which involves identification and offering of ART to all HIV-infected individuals, may further ensure universal access to testing and treatment services for all infected prisoners.

Insufficient training for prison health staff on pre- and post-test counselling resulted in delay in the feedback of test results and linkage of HIV-infected prisoners to external ART sites. ART service providers confirmed greater delays in care linkage for prisoners relative to people who were tested at non-ART sites in the community. Training of prison health staff is an essential step in scaling up access to HIV testing, care and treatment for prisoners [55]. This is supported by public health recommendations in international guidelines in relation to training and reassigning tasks to lower level health care workers to enhance testing coverages in HIV key populations [17, 65]. Such approaches are also found to be efficient and effective in increasing testing rates in prisons in low-income countries, particularly when coupled with peer education programs [63].

Given the congregated living conditions in the prisons (up to 150 inmates accommodated together in a cell measuring 100m^2) [51], patient privacy was lost on various occasions. Loss of privacy occurred while declaring test results and transportation to external health care facility to access care, which led prisoners to refuse treatment. Prison officers' negative perceptions towards HIV infected prisoners during the process of external health care facility visits also contributed to loss of privacy and delays in care linkage. That they allowed third parties to be privy to prisoners' HIV status through openly feeding back test results, indicates that prison health care staff lacked skills in ensuring patient privacy and confidentiality.

Studies in low-income countries also reported accessing HIV care from external health care facilities and the associated prison officers' uncooperativeness as major causes for loss of privacy and missing clinic appointments amongst HIV infected prisoners [66]. Conversely, higher rates of linkage to care and ART initiation were achieved through an onsite ART approach in many prisons [22, 23, 67], which was also supported by most service providers in this study. There are no legal grounds to ensure medical privacy for prisoners in Ethiopia, and it seems to be a difficult task given the circumstances related to accessing care in groups and a congregated living environment. However, provision of appropriate counselling for prisoners during diagnosis and reducing social stigma by creating awareness about HIV amongst members of the prison community may encourage consented discloser. Training in patient privacy and confidentiality for prison staff who are involved in the provision of HIV care could improve undisclosed inmates trust and, consequently, uptake of ART [55].

The majority of participants described the importance of peer education and support programs for early diagnosis and treatment of HIV infection in prisoners. Such programs not only offered ILWH an opportunity to share each other's experiences of living with HIV in a prison environment, but also served as a route to influence those who lacked motivation to commence treatment. At the time of the interviews, however, there had been a gradual decline in HIV education and social support initiatives in the prisons. This was explained as being due to a lack of resources and administrative support, and poor collaboration between prison authorities and external health agencies.

Social support and education initiatives involving peers are highly recommended in correctional settings to enhance HIV testing and to access care [14, 68]. Prisons represent important organisational contexts to identify HIV infected individuals and implement peer education programs to enhance early treatment initiation [69]. Prison HIV prevention and control programs should be an integral part of community information, education and communication programs, and prison authorities should establish strong linkages with these community-based health agencies, in addition to developing plans to assure appropriate resource for supporting well organised peer support and education programs [68].

This study explored important factors influencing early ART initiation among prisoners, but does have some notable limitations. Most prisoner participants had been using ART for many years and this might have affected their recall in relation to their experiences when initiating ART. At the time of the study, there were no identified HIV-infected prisoners who had not already initiated on ART, which may have impacted on identification of all barriers to treatment in this setting and represents an area for future studies. While a number of crucial concepts emerged through consultation with service providers regarding the effectiveness of the existing HIV care provision strategy, incorporating higher level health agencies (e.g. representatives from the Regional Health Bureau and Ministry of Health) might have deepened our understanding of the policy perspectives of HIV care in the prison settings. Although most structural factors identified and explored in this study have been interpreted as strongly influencing prisoners infected with HIV, a quantitative survey with a large sample size is now required, based on these qualitative results, to provide a representative sample regarding the determinants of early ART initiation.

Conclusions

Participants in this study discussed both barriers to, and facilitators of, early ART initiation in prisoners. The barriers include a lack of access to HIV testing services, poor linkage to care due to insufficient health staff training, uncooperative prison security systems and loss of privacy regarding HIV status. Insufficient health staff training and uncooperative prison security both

contributed to loss of patient privacy, which resulted in treatment refusal. Although most participants described the importance of peer education and support for enhancing HIV testing and treatment programs amongst prisoners, there had been a decline in such interventions in the correctional facilities due to lack of resources and administrative support. Service providers identified opportunities offered by the prison environment for identification and treatment of HIV-infected individuals and implementation of peer education programs. Timely initiation of ART amongst inmates is likely to be enhanced through interventions that ensure access to voluntary and confidential (opt-out based) HIV testing and care, peer education and support programs, and training of health care providers and other prison staff who are involved in HIV care provision.

Abbreviations

AIDS: Acquired Immunodeficiency Syndrome; ART: Antiretroviral therapy; HIV: Human Immunodeficiency Virus; CD4: Cluster of differentiation-4; ILWH: Inmates living with HIV; PICT: Provider initiated counselling and testing; RHB: Regional Health Bureau; SBREC: Social and Behavioural Research Ethics Committee; SNNPR: Southern Nations, Nationalities and People's Region; SSA: Sub-Saharan Africa; VCT: Voluntary counselling and testing; WHO: World Health Organization

Supplementary Information

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Additional file 1. Prisoners and service providers interview guide. An interview guide for prisoners, prison officers, prison health staff, ART service providers, prison and health administrators.

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Authors' contributions

TGF conceived the research idea; conducted the interview; analysed and interpreted data; drafted the manuscript. GT and ERM participated in the coding of the interview data and subsequent revisions of the manuscript. All authors read and approved the final paper.

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Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

This study received ethical approvals from Flinders University, Social and Behavioural Research Ethics Committee (SBREC) (Project Number: 8362) and Ethical Review Board of SNNPR Health Bureau. Formal permissions were obtained from the SNNPR State Prison Administration and Regional Health Bureau (RHB), and consent was obtained from each correctional and health care facility authority. All potential participants were informed during recruitment that participation was entirely voluntary and the interviewer was a neutral individual who had no service provision role in any of the study prisons and health care facilities. Participants engaged in the study after details of procedures and any risks including the amount of time they would spend had been explained to their satisfaction and written consent was confirmed by signature.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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Publisher's Note

Appendix 5.4: Abstract of a paper on qualitative exploration of the barriers and facilitators of optimal HIV care in South Ethiopian prison system

PLOS ONE

Imprisonment for South Ethiopian people living with HIV presents a double health burden: exploring the barriers and facilitators of optimal HIV care

--Manuscript Draft--

Manuscript Number:	
Article Type:	Research Article
Full Title:	Imprisonment for South Ethiopian people living with HIV presents a double health burden: exploring the barriers and facilitators of optimal HIV care
Short Title:	Incarceration and HIV treatment
Corresponding Author:	Terefe G Fuge, MSc Flinders University Hossana, South Ethiopia ETHIOPIA
Keywords:	Imprisonment, antiretroviral therapy, adherence, barriers, facilitators, South Ethiopia
Abstract:	AbstractBackground: Optimal adherence to antiretroviral therapy (ART) is crucial for ensuring treatment benefits as well as prevention of further transmission. However, whilst the prevalence of ART non-adherence in prison populations is considered to be high in many countries, little information is available about its predisposing circumstances in resource limited countries. We explored the barriers to and facilitators of ART adherence amongst inmates living with HIV (ILWHA) in South Ethiopia with the aim of contextualising this significant public health problem and to make advances towards optimal HIV care. Methods: We conducted qualitative in-depth interviewing with eleven ILWHA (eight male and three female ILWHA) and eleven service providers (seven male and four female service providers). Audio recorded interview data were transcribed verbatim in Amharic language, translated into English and coded based on emerging themes. A phenomenological approach was employed to abstract meaning attributed to the prisoners' lived experiences in relation to ART adherence and service providers' experiential account regarding HIV care provision. Findings: Several themes emerged in relation to barriers of ART adherence amongst ILWHA in South Ethiopia: limited access to standard HIV care, insufficient health staff support, uncooperative security system, loss of patient privacy, a lack of status disclosure due to social stigma, depression related to imprisonment and food supply insufficiency appeared to negatively influence adherence. In addition to a unique opportunity offered by an imprisonment for some ILWHA to refrain from health damaging behaviours, the presence of social support in the prison system facilitated ART adherence. Conclusions: This study identified important structural, social and behavioural factors that can both hinder and enhance ART adherence amongst ILWHA in South Ethiopia. Given the high prevalence of HIV infection in prisoners and the potential of transmission to others during and after incarceration, policy and practice development is required to address the barriers to ART adherence and to also strengthen the enablers with regard to an asset-based approach.
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Additional Information:	
Question	Response
Financial Disclosure Enter a financial disclosure statement that describes the sources of funding for the work included in this submission. Review the submission guidelines for detailed	The author(s) received no specific funding for this work.