COBATEST NETWORK DATA ANALYSIS PLAN

# INTRODUCTION

The COBATEST Network collects sociodemographic, behavioural and epidemiological data on clients attending community-based voluntary counselling and testing (CBVCT) services and being screened for HIV, hepatitis C or syphilis. The COBATEST Network began the monitoring and evaluation of CBVCT services in 2014 and now has 54 members in 23 countries.

# COBATEST NETWORK INDICATORS

One unique identifier (clientidentfier or cobatestid depending on the centre) will be assigned to each case and used to remove duplicates. For clients with two entries from the same day, the cases will be inspected and the most complete questionnaire will be included. For clients tested more than once in a year, the most recent test will be included. All the indicators will report number of people tested.

CBVCT 1: Number of clients tested for HIV with a screening test

Number of clients screened for HIV (*hivtestused!=. or screeningtestresult!=.*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 2: Proportion of clients who reported to have been previously tested for HIV

Reporting people previously tested for HIV (*evertested=1*) as a proportion of all people tested and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 3: Proportion of clients who reported to have been tested for HIV during preceding 12 months

Reporting people tested for HIV in the year prior to attendance at the CBVCT service (*testedlastyear=1*) as a proportion of all people screened for HIV and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 4: Proportion of clients who reported to have been tested for HIV at the same CBVCT facility during preceding 12 months

Reporting people tested for HIV in the year prior to attendance in same CBVCT (*testedlastyearsamecbvct=1*) as a proportion of all people tested and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 5: Proportion of clients with reactive screening HIV test result

Reporting reactive screening test results (*screeningtestresult=1)* as a proportion of all people tested and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 6: Proportion of clients with reactive screening HIV test result who were tested with confirmatory HIV test

For clients who have a reactive HIV test, confirmatory testing usually takes place in a healthcare facility with a fourth-generation test. Recording of this will depend on the client reporting back to the CBVCT or giving permission to be followed-up.

Reporting confirmatory tests performed (*confirmatoryhivtest=1*) as a proportion of all reactive screening tests (*screeningtestresult=1*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 7: Proportion of clients with positive confirmatory HIV test result

Reporting positive confirmatory test results (*confirmatoryhivtestresult=1*) as a proportion of all reactive screening tests (*screeningtestresult=1*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 8: Proportion of clients with confirmed HIV diagnosis who were linked to healthcare

The OptTest definition of linkage to care: the proportion of patients seen for HIV care (measured by first CD4 count and/or viral load and/or attendance date and/or treatment start date). Most CBVCT services collect linkage to care based on first attendance date at healthcare facility. Prompt linkage is: linkage within 3 months of diagnosis. Recording of this variable will depend on the client consenting to share this information either themselves or through the health system.

Reporting clients linked to healthcare (*linkagetohealthcare=1*) as a proportion of all reactive screening tests (*confirmatoryhivtestresult=1*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT 9: Proportion of clients who tested HIV positive at CBVCT sites who were diagnosed late

Late diagnosis is defined as CD4 cells count of <350 CD4 cell/mm3within three months after HIV diagnosis.

Reporting clients with CD4 count of less than 350 (*cd4count<350*) as a proportion of all clients with a confirmed positive HIV test result (*confirmatoryhivtestresult=1*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 1: Number of clients tested for [HCV or syphilis] with a screening test

To count number of clients, a CBVCT service specific clients’ unique identifiers must be used to eliminate duplicates. For an example of the unique identifier recommended by COBATEST, see Annex 1.

Number of clients screened for syphilis (*syphtestused!=. or syphscreeningtestresult!=.*) or HCV (*hcvtestused!=. or hcvscreeningtestresult!=.*) and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 2: Proportion of clients who reported to have been previously tested for [HCV or syphilis]

Reporting clients previously tested for syphilis (*syphevertested=1*) or HCV (*hcvevertested=1*) as a proportion of all people tested for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 3: Proportion of clients who reported to have been previously diagnosed with [HCV or syphilis]

Reporting people with previous syphilis (*sypheverdiagnosed=1*) or HCV (*hcveverdiagnosed =1*) diagnosis as a proportion of all people screened for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 4: Proportion of clients with reactive screening [HCV or syphilis] test result

Reporting people with reactive syphilis (*syphscreeningtestresult=1*) or HCV (*hcvscreeningtestresult =1*) screening result as a proportion of all people screened for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 5: Proportion of clients with reactive screening [HCV or syphilis] test result who were tested with confirmatory [HCV or syphilis] test

Reporting people who had a confirmatory syphilis (*syphconfirmatorytest=1*) or HCV (*hcvrnatest =1*) test as a proportion of all people who had a reactive screening result (*syphscreeningtestresult/ hcvscreeningtestresult=1*) for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 6: Proportion of clients with [HCV or syphilis] diagnosis of active infection

Reporting people who had a diagnosis of active syphilis (*syphconfirmatorytestresult=1*) or HCV (*hcvconfirmatorytestresult=1*) infection as a proportion of all people who had a reactive screening result (*syphscreeningtestresult/ hcvscreeningtestresult=1*) for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

CBVCT STI 7: Proportion of clients with [HCV or syphilis] diagnosis of old infection

Reporting people who had a test result of old/cured infection for syphilis (*syphconfirmatorytestresult=2*) or HCV (*hcvconfirmatorytestresult=2*) as a proportion of all people who had a reactive screening result (*syphscreeningtestresult/ hcvscreeningtestresult=1*) for the respective disease and stratified by *gender*, *agegroup2*, *msm*, *sw*, *pwid*, *migrants*. Clients can be counted in more than one of the following; *msm*, *sw*, *pwid*, *migrants*.

# DATASET

Cobatest.org extraction for period 1 January 2018 – 31 December 2018 merged with disaggregated datasets submitted before 31 March 2019. Aggregated datasets submitted before 31 March 2019.

# INCLUSION/EXCLUSION CRITERIA

Clients aged 16 or over. Information available on any test (HIV/ hepatitis C/ syphilis).

# VARIABLES

Outcome variables

Screening test result (HIV, hepatitis C, syphilis).

Previous HIV test

Explanatory variables

Unique identifier: It is recommended that centres use the COBATEST unique identifier (Gender (0=male, 1=female, 2=transgender) + date of birth + number of older brothers + number of older sisters + initial letter of mother’s name) or their own unique identifier that permits the identification of people who return to the site for testing.

Sociodemographic: date of birth or age, sex, foreign national, country of birth, year of arrival to country, tourist or resident.

Reasons for testing: risk exposure, control screening, window period since last test, clinical symptoms.

Reasons for using CBVCT service

Risk behaviours: sex of partner(s), condom use in last sexual relation, exchange of drugs or money for sex, STI diagnoses, previous detention in jail, unprotected sex with person at higher risk, intravenous drug use, sharing injecting materials.

Testing behaviours: ever tested for HIV, date of last test, result of last test, previous hepatitis C diagnosis, previous syphilis diagnosis.

Test results: (HIV, hepatitis C, syphilis) confirmatory test result, linkage to healthcare following reactive HIV test.

# STATISTICAL METHODS

Some of the variables in the dictionary are constructed from variables in the COBATEST tool data extraction.

ageinyears=(datevisit-dateofbirth)/365.25

msm=1 if gender=1 & sexwith\_inlast12months=1(men)| sexwith\_inlast12months=3(women and men)

msm=2 if gender=2 & sexwith\_inlast12months=1(men)| sexwith\_inlast12months=3(women and men)

msm=2 if gender=1 & sexwith\_inlast12months!=1(men)& sexwith\_inlast12months!=3(women and men)

swgen=1 if gender=1 & sw=1

swgen=2 if gender=2 & sw=1

swgen=3 if gender=3 & sw=1

testedlastyear=1 if ((datevisit-dateoflasttest)/365.25)<1

testedlastyear=2 if ((datevisit-dateoflasttest)/365.25)=>1

STATA 14 is used to analyse the data.

# DICTIONARY

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data collected for M&E CBVCT** | | **Variable name** | **Values** | **Format** |
| Centre | | centros | 2 digits | Number |
| Date of test |  | datevisit | dd.mm.yyyy | Date %td |
| COBATEST Identifier | | cobatestid | According to CBVCT definition | String |
| Clients' unique identifier | | clientidentifier |  | String |
| Gender | | gender | 1 male, 2 female, 3 transgender | Number |
| Age | Age in years | ageinyears | 2 digits, . missing | Number |
| Date of birth | dateofbirth | dd.mm.yyyy | Date %td |
| Age group | agegroup | 1 <25years old, 2 25+ years old, . missing | Number |
| Age group | agegroup5 |  | Number |
| Key population at higher risk | Men who have sex with men | msm | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Sex workers | sw | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Sex worker gender | swgen | 1 msw, 2 fsw, 3 tsw, 4 not sw, . missing | Number |
| People who inject drugs | pwid | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Migrant | migrant | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| HIV - Ever tested before | | evertested | 1 yes, 2 no, 3 does not know, . missing | Number |
| Date of last test | | dateoflasthiv | dd.mm.yyyy | Date %td |
| HIV - tested in 12 months prior to visit | | testedlastyear | 1 yes, 2 no, 3 does not know, . missing | Number |
| HIV - tested in same CBVCT in 12 months prior to visit | | testedlastyearsamecbvct | 1 yes, 2 no, 3 does not know, . missing | Number |
| Result of last test | | resultlasthiv | 1 positive, 2 negative, 3 don't know, . missing | Number |
| Unprotected sex in last 12 months with | SW | unprotectedsw | 1 yes, 2 no, 3 does not know, . missing | Number |
| IDU | unprotectedidu | 1 yes, 2 no, 3 does not know, . missing | Number |
| HIV+ partner | unprotectedhiv | 1 yes, 2 no, 3 does not know, . missing, . missing | Number |
| MSM | unprotectedmsm | 1 yes, 2 no, 3 does not know, . missing | Number |
| Screening HIV test performed, e.g. rapid HIV test or ELBAtest | | screeninghivtest | 1 yes, 2 no, . missing | Number |
| Screening HIV test result | | screeningtestresult | 1 reactive, 2 non-reactive, . missing | Number |
| Confirmatory HIV test performed | | confirmatoryhivtest | 1 yes, 2 no, 3 don´t know, . missing | Number |
| Date of confirmatory test | | dateconfirmatorytest | dd.mm.yyyy |  |
| Confirmatory HIV test result | | confirmatoryhivtestresult | 1 positive, 2 negative, 3 inconclusive, . missing | Number |
| Linkage into healthcare system | | linkagetohealthcare | 1 yes, 2 no, 3 don´t know, . missing | Number |
| CD4 count at entry into healtcare (count) | | cd4count | 4 digits, . missing | Number |
| Date of CD4 count at entry into health care | | datecd4count | dd.mm.yyyy | Date %td |
| HIV Test used | | hivtestused | 1 blood rapid test, 2 oral rapid test, 3 conventional test, . missing | Number |
| Syphilis - Ever diagnosed before | | sypheverdiagnosed | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Syphilis - Ever tested before | | syphevertested | 2 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Syphilis - tested in 12 months prior to visit | | syphtestedlastyear | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Syphilis - tested in same CBVCT in 12 months prior to visit | | syphtestedlastyearsamecbvct | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| Syphilis - Screening test result | | syphscreeningtestresult | 1 reactive, 2 non-reactive, . missing | Number |
| Syphilis - Confirmatory test performed | | syphconfirmatorytest | 1 yes, 2 no, 3 don´t know, . missing | Number |
| Syphilis - Confirmatory test result | | syphconfirmatorytestresult | 1 active infection, 2 old infection, 3 negative, 4 not known, . missing | Number |
| Syphilis - Test used | | syphtestused | 1 rapid test, 2 conventional test, . missing | Number |
| HCV - Ever diagnosed before | | hcveverdiagnosed | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| HCV - Ever tested before | | hcvevertested | 2 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| HCV - tested in 12 months prior to visit | | hcvtestedlastyear | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| HCV - tested in same CBVCT in 12 months prior to visit | | hcvtestedlastyearsamecbvct | 1 yes, 2 no, 3 does not know, 4 does not want to tell, 5 not asked, . missing | Number |
| HCV - Screening test result | | hcvscreeningtestresult | 1 reactive, 2 non-reactive, . missing | Number |
| HCV - RNA test performed | | hcvrnatest | 1 yes, 2 no, 3 don´t know, . missing | Number |
| HCV - Confirmatory test result | | hcvconfirmatorytestresult | 1 active infection, 2 old infection, 3 negative, 4 not known, . missing | Number |
| HCV - Test used | | hcvtestused | 1 blood oral test, 2 rapid blood test, 3 conventional test, . missing | Number |

**DATA SUBMISSION TIMING AND PROCESSES**

During the first month of the year, the coordinating centre requests that all centres using the online data collection tool confirm that their data is updated. Once all sites have confirmed, the data is extracted from the website [www.cobatest.org](http://www.cobatest.org) and prepared according to the dictionary.

During the first three months of the year, the coordinating centre requests that all sites submitting disaggregated data prepare their dataset in Excel according to the COBATEST specifications for submission via email.

During the first three months of the year, the coordinating centre requests that all sites submitting aggregated data prepare their indicators in Excel according to the COBATEST specifications for submission via email.

All members are asked to be available to answer queries on their dataset during the cleaning period.

The coordinating centre processes the data and constructs a common database using the disaggregated datasets, using a homogenous structure (see dictionary).

For a detailed description of the structure, tables and fields that make up the COBATEST database, see the document COBATEST data dictionary.

**CALENDAR DATA ANALYSIS**



## Appendix 1



