



**International Center for AIDS Care and Treatment Programs-South Africa
Mailman School of Public Health, Columbia University**

TB/HIV Standards of Care

Standard Operating Procedures for assessing TB/HIV SOCs

Version 5 – November 2010

Developed by:

Dr. Sabine Verkuijl, Technical Advisor: TB/HIV integration

Contents

List of abbreviations.....	3
1. Introduction: Clinical Systems Mentorship	4
2. The TB/HIV integration Standards of Care	6
3. Sustainability	7
4. How to assess the TB/HIV Standards of Care	7
4.1. HIV entry point (SOC 1-3, 8-9)	7
4.1.1. Data collection form 1: TB screening of patients at enrolment in HIV care (SOC 1a, 2a and 3)	9
4.1.2. Data collection form 1: TB screening of patients at the last visit in HIV care or on ART (SOC 1b and 2b).....	10
4.1.3. Data collection form 1: Isoniazid Preventive Therapy (SOC 8).....	11
4.1.4. Data collection form 2: TB screening of patients at the last visit on ART (SOC 1c and 2c)	12
4.1.5. Data collection form 2: Isoniazid Preventive Therapy (SOC 9).....	12
4.2. TB entry point (SOC 4-7)	13
4.2.1. Data collection form 3: HIV Counseling and Testing for TB patients.....	14
5. TB/HIV SOC tabulation and calculation.....	16
5.1. Examples for calculating TB/HIV SOCs:.....	16
6. TB/HIV SOC analysis and feedback	17
6.1. Transfer of information from data collection forms to Facility feedback sheets.....	17
6.2. Root cause analysis.....	17
6.3. Intervention planning	18
6.5. Examples of evaluation of TB/HIV SOCs	18
6.5.1. SOC 1: TB screening for HIV patients at enrolment/last visit.....	18
6.5.2. SOC 2: Investigations of TB suspects	18
6.5.3. SOC 4: HIV Counseling and Testing for TB patients.....	19
6.5.4. SOC 5: HIV care enrolment for HIV-positive TB patients.....	20
6.5.5. SOC 3/6: CPT for HIV-positive TB patients.....	20
6.5.6. SOC 7: ART for HIV-positive TB patients.....	20
6.5.6. SOC 8/9: Isoniazid Preventive Therapy.....	21
REFERENCES.....	22
Appendix 1: ICAP South Africa Standards of Care (SOC) for TB/HIV Integrated Services.....	23
Appendix 2: Data collection form 1: TB screening (HIV care).....	27
Appendix 3: Data collection form 2: TB screening (ART care)	28
Appendix 4: Data collection form 3: HIV C&T for TB	29
Appendix 5: Facility feedback form 1: TB screening of patients in HIV care	30
Appendix 6: Facility feedback form 2: TB screening of patients in ART care.....	31
Appendix 7: Facility feedback form 3: HIV Counseling and Testing for TB patients.....	32

List of abbreviations

ACR	Adult Clinical Record
AFB's	Acid Fast Bacilli
AIDS	Acquired Immuno Deficiency Syndrome
ART	Anti-Retroviral Treatment
ARV's	Anti-Retrovirals
C&T	Counseling & Testing
CPT	Co-trimoxazole Prophylactic Treatment
CQI	Continuous Quality Improvement
CSM	Clinical Systems Mentorship
CTX	Co-trimoxazole
CXR	Chest X-ray
Dx	Diagnosis
ECDOH	Eastern Cape Department of Health
ELISA	Enzyme Linked Immuno Sorbent Assay
FNAB	Fine Needle Aspirate Biopsy
HIV	Human Immuno-Deficiency Virus
ICAP	International Center for AIDS Care and Treatment Programs
INH	Isoniazid (TB treatment)
IPT	Isoniazid Preventive Therapy
KP	Known (HIV) Positive
LSA	Local Service Area (sub-district)
N/A	Not applicable
NTCP	National Tuberculosis Control Programme
PICT	Provider Initiated Counseling and Testing
TB	Tuberculosis
SOC(s)	Standard(s) of Care
SOP	Standard Operating Procedure
VCT	Voluntary Counseling and Testing

1. Introduction: Clinical Systems Mentorship

The ICAP concept of site support is built upon the process of **Clinical Systems Mentorship**, a re-conceptualization of traditional clinical mentorship. Clinical systems mentorship (CSM) is a unified set of approaches and activities used by the site support team to focus on the broader health environment, or system. CSM involves a team approach, including people of different expertise and across cadres: individual health care providers, the health care team, and participants from each local site (in the context of the larger health care system and the community). With this broader focus, CSM moves beyond traditional mentorship, which has been geared toward promoting and enhancing the competency of providers with little attention to the work of other on-site providers (the team) or the external context (the site).

The ICAP model of HIV care defines the minimum package of services needed to provide high quality HIV care. The model of care also explicitly defines the model of service delivery to be comprehensive, family focused, and continuous.

The model is further characterized by:

- A focus on the family as the foundation of care
- Optimizing use of a multidisciplinary team of providers, lab and pharmacy staff, and administrative support staff
- An emphasis on adherence and prevention
- Strong linkages across various clinical services
- Strong linkages with community resources and organizations

The ICAP model of care consists of several clinical areas, which together define a minimum package for comprehensive HIV care. TB/HIV integrated care and treatment is one of these areas and includes:

- Screening for TB at enrolment into HIV care and at every visit thereafter
- Prompt evaluation of TB suspects
- Early HIV testing for TB patients of unknown HIV status
- Enrollment of TB/HIV co-infected patients into HIV care and treatment
- Cotrimoxazole preventive therapy for TB/HIV co-infected patients
- Isoniazid preventive therapy (IPT) for HIV infected patients without symptoms of active TB
- Assessment and enrollment of family members

Three stages of site development can be identified. These stages are defined by capacity at the site to act at increasingly higher levels of independence. In stage 1, the site is starting up, and is facing a great number of logistical issues. The clinical components of the program are being implemented during this stage and attention is placed on the elements of the model of care. These tasks usually require high levels of external support. Stage 2 begins when key programmatic elements have been fully implemented at the site. At this stage, care is being provided routinely and the site is able to consider the quality of services offered. Quality is assessed quantitatively, and poor quality is addressed with focused interventions. In stage 3, the site is now providing high quality services, and is relying much less on external assistance. The stages of development are illustrated in the figure below.

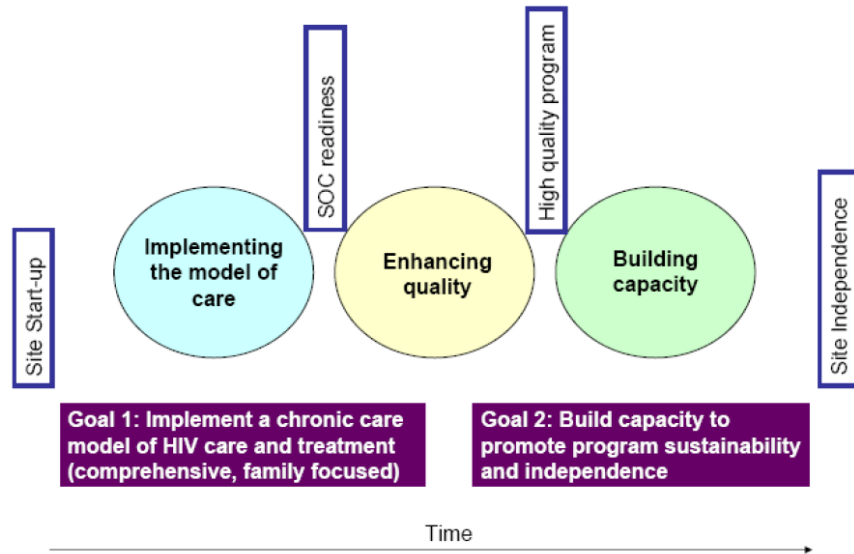


Figure 1: Stages of site development model

This SOP focuses on the second stage of the site development model: enhancing quality through the use of Standards of Care (SOCs), a framework for measuring the delivery of components of care in the model, assessing the quality of the care delivery, and developing guided activities to improve upon inadequacies.

The SOC framework is an essential element of Continuous Quality Improvement (CQI). It begins with assessing each element of care based on available data sources. The results are analyzed and the team discusses the results and works to develop priority interventions when services are inadequate. Finally, the measure is reevaluated to determine effectiveness of the intervention.

Figure 2 illustrates this process.

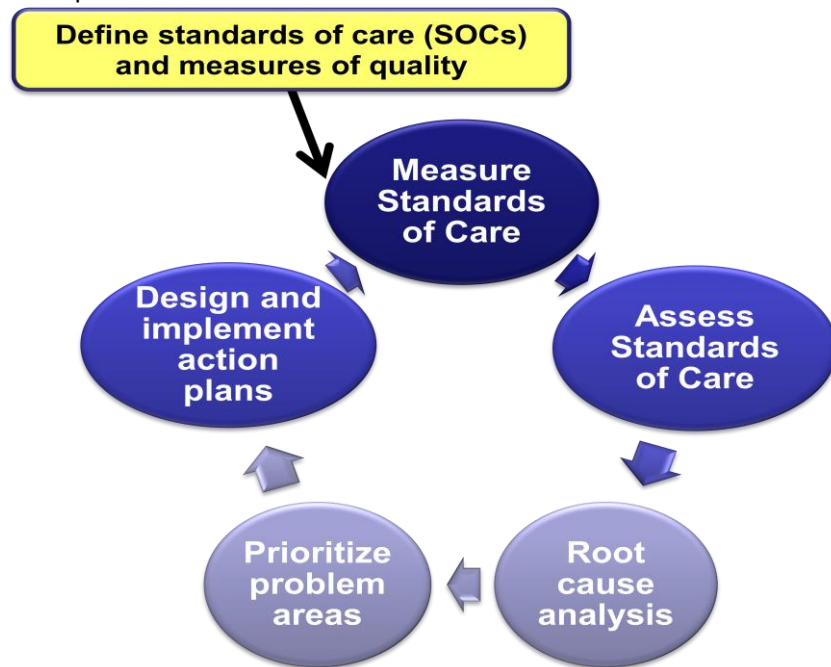


Figure 2: Working with Continuous Quality Improvement

This SOP provides guidance on how to assess the Standards of Care (SOCs) for TB/HIV integration.

2. The TB/HIV integration Standards of Care

The TB/HIV SOCs are subdivided by entry-point: there are three SOCs on the HIV entry-point related to TB screening for HIV patients (subdivided into a - for enrolment into HIV care, b - for the last visit in HIV care and c - for the last visit on ART) and three on the TB entry-point related to HIV counseling and testing of TB patients. Three second phase SOCs have been included in this version, to assess ART provision to eligible co-infected patients at the TB entry point as well as IPT for patients in care and on ART at the HIV entry point (SOC 7-9). The following table provides a summary of the TB/HIV SOCs, with the actual Standard of Care description and each indicator to be assessed.

Appendix 1 provides a full overview of the current TB/HIV standards of care: the definition, the indicator, the source of data, the numerator and denominator for calculating the indicator and the evaluation of results according to targets.

SOC no	Standard of Care	SOC indicator
HIV entry point		
1a	All patients enrolled in HIV care should be screened for TB at their first visit	% of HIV patients screened for TB at enrollment each quarter
1b	All patients enrolled in HIV care should be screened for TB at every visit	% of HIV patients screened for TB at their last visit each quarter
1c	All HIV patients enrolled on ART should be screened for TB at every visit	% of ART patients screened for TB at their last visit each quarter
2a	HIV patients who screen positive for TB symptoms ("TB suspects") should be appropriately evaluated for TB following national guidelines/algorithms	% of HIV patients who are TB suspects at enrollment that are appropriately evaluated using national guidelines
2b	HIV patients who screen positive for TB symptoms ("TB suspects") should be appropriately evaluated for TB following national guidelines/algorithms	% of HIV patients who are TB suspects at the last visit in HIV care that are appropriately evaluated using national guidelines
2c	ART patients who screen positive for TB symptoms ("TB suspects") should be appropriately evaluated for TB following national TB guidelines/algorithms	% of ART patients who are TB suspects at the last visit in ART care that are appropriately evaluated using national guidelines
3	All HIV patients diagnosed with active TB (through TB screening) should receive co-trimoxazole prophylaxis (CPT)	% of HIV patients diagnosed with active TB at enrolment (started) on CPT
TB entry point		
4	All TB patients should know their HIV status	% of TB patients with an HIV status recorded
5	TB patients who are HIV+ should be enrolled in HIV care	% of TB patients who are HIV+ enrolled in HIV care
6	All HIV-positive TB patients should receive co-trimoxazole prophylaxis (CPT)	% of TB patients who are known to be HIV+ during TB treatment (newly diagnosed and known positive) who are receiving CPT (started before or during TB treatment)
Second phase SOCs - NEW		
7	All co-infected patients eligible for ART should be started on ART during TB treatment	% of TB/HIV co-infected patients who are eligible for ART started on ART during TB treatment
7a	All co-infected patients eligible for ART should be started on ART after 2-8 weeks on TB treatment	% of TB patients who are HIV+ eligible for ART who are started on ART between 2-8 weeks of TB Rx
8	Patients enrolled in HIV care who were screened for TB and screened negative should be offered IPT	% of patients enrolled into HIV care who are eligible for IPT started on IPT
9	ART patients who are eligible for IPT should be offered IPT	% of ART patients eligible for IPT started on IPT

Table 1: Summary of ICAP South Africa TB/HIV SOCs

3. Sustainability

To ensure sustainability of the SOC assessment as part of Continuous Quality Improvement (CQI) it is important to involve facility and (sub) district staff in this process:

- Involve the Local Service Area (LSA) or District program manager for TB and HIV and the relevant PHC supervisors for the facility
- Explain the importance of continuous quality improvement and the ICAP Standards of Care to the site staff, including the facility manager/sister in charge of the facility, emphasizing the link with the Government Quality Assurance program
- Ensure buy-in and ownership by the facility staff
- Guide the facility staff in the actual assessment
- Provide detailed feedback on the assessment
- Facilitate root cause analysis by facility staff
- Facilitate development of action plans to address gaps

4. How to assess the TB/HIV Standards of Care

Data collection forms are available to assess each of the TB/HIV Standards of Care (see Appendix 2, 3 and 4). Form 1 should be used for patients in HIV (pre-ART) care, Form 2 for patients in ART care, and Form 3 for patients in TB care. Detailed instructions on how to complete these forms are provided in the sections below.

4.1. HIV entry point (SOC 1-3, 8-9)

SOCs 1-3 are assessed using 2 cohorts of patients: 1) those enrolled in HIV (pre-ART) care; and 2) those enrolled in ART care. The sample of facility-held records to be reviewed for these assessments should be determined using the HIV care and ART registers, respectively.

The data source for SOC 1-3 is the Adult Clinical Record (see Figure 3-6) or alternatively, any other facility-held clinical record that is in use in the facility.

Previous ART (tick)	<input type="checkbox"/> None <input type="checkbox"/> sdNVP <input type="checkbox"/> Dual Rx pMTCT <input type="checkbox"/> PEP <input type="checkbox"/> ARVs <input type="checkbox"/> Other (fill details under ARV regimen)				
Transfer In (tick)	<input type="checkbox"/> on ART <input type="checkbox"/> pre-ART	If on ART, facility:		Last CD4:	Date:
TB history	Treatment start date	Treatment stop date	Type (TBM,PTB, etc.)	TB treatment outcome^ (tick)	
				<input type="checkbox"/> C <input type="checkbox"/> TC <input type="checkbox"/> RF <input type="checkbox"/> RD	
				<input type="checkbox"/> C <input type="checkbox"/> TC <input type="checkbox"/> RF <input type="checkbox"/> RD	
^TB Rx outcomes: C=Cured TC=Treatment Completed RF=Treatment Failure RD=Defaulted (for definitions see ACR/NTCP guidelines)					

Figure 3: TB history section on the front page of the ECDOH Adult Clinical Record

OI Prophylaxis	Start Date	Stop Date	Reason*	Notes
Cotrimoxazole				
Fluconazole				
INH				
Dapsone†				
*Reason for stopping medications			† Dapsone in case of CTX allergy	
1=toxicity/side effects	3=treatment failure	4=poor adherence	6=drug out of stock	8=IRIS
2=pregnancy	(clinical/virological in notes)	5=illness, hospitalization	7=drug interactions	9=other (specify)

Figure 4: OI prophylaxis section on the front page of the ECDOH Adult Clinical Record

TB Rx	IPT	TB SCREEN (tick if present) ^							
On TB treatment (initial)	On TB treatment (cont.)	On IPT (INH)	Weight loss	Cough > 24 hours	Night sweats (drenching) > 2 weeks	Fever > 2 weeks	Swollen lymph nodes	Respiratory symptoms / chest pain	NO TB SYMPTOMS

Figure 5: TB screening questionnaire on page 3 of the ECDOH Adult Clinical Record

INVESTIGATIONS											
No of visit	Remember to do CD4 counts 6-monthly for HIV care patients and CD4/VL after 6 and 12 months and annually thereafter for ART patients			Creatinine clearance *	ALT	Hgb	HbsAg	RPR	Ca cervix screening (MAPAP)	Sputum x 3 (AFB/AFB/ cx)	Other labs / X-rays / investigations
	Date specimen taken	CD4 / CD4%	VL								
1										/ /	
2										/ /	
3										/ /	

Figure 6: Investigations section on page 5 of the ECDOH Adult Clinical Record

To assess the Standards of Care at the HIV entry point, the following steps need to be taken:

1. Identify the period to be reviewed. This is different for the patient cohort in HIV care and the patients on ART, due to the type of information that will be assessed (information on the first visit for HIV care, and on the last visit as well as patients on ART for at least 6 months for ART care). Table 2 below provides an overview of the quarters to be assessed.
 - a. **For patients in HIV care:** Take the completed quarter *prior to the last quarter*. For example, if the assessment takes place in November 2010, folders of patients enrolled in the quarter from April to June 2010 will be reviewed.
 - b. **For patients on ART:** Take the quarter *one year before the review date*. For example, if the assessment takes place in December 2010, folders of patients who started ART in the quarter from October to December 2009 will be reviewed.
2. Use the HIV care register (for Form 1) and ART register (for Form 2) to determine the sample size for each cohort. The sample size should be 10% of the total number of patients enrolled during the quarter under review, with a minimum sample size of 20.
3. Assemble a random sample of folders from patients enrolled in HIV care (for Form 1) or ART care (for Form 2) during the quarter under review. The easiest method to assemble a random sample of 10% is to take every tenth folder from the cohort of patients that you will be reviewing, based on the HIV care (pre-ART) or ART register entries.
4. Assess the patient folders for the information required using Data Collection Forms 1 and 2.

Review date (quarter)	Patient folders to be assessed for HIV (pre-ART) care – FORM 1 (enrolled in quarter):	Patient folders to be assessed for ART care – FORM 2 (enrolled in quarter):
October – December 2010	April – June 2010	October – December 2009
January – March 2011	July – September 2010	January – March 2010
April – June 2011	October – December 2010	April – June 2010
July – September 2011	January – March 2011	July – September 2010
October – December 2011	April – June 2011	October – December 2010
January – March 2012	July – September 2011	January – March 2011
Etcetera	Etcetera	Etcetera

Table 2: Quarters for assessment of TB/HIV SOC: HIV entry point

4.1.1. Data collection form 1: TB screening of patients at enrolment in HIV care (SOC 1a, 2a and 3)

Steps to complete data collection form 1: (left section):

1. Exclude folders of patients who were already on TB treatment at the time of enrolment
2. Replace each excluded folder with another folder from the quarter under review, so that the sample size is maintained
3. Check whether the patient was screened for TB symptoms at enrolment
 - a. In facilities using the Adult Clinical Record (ACR) patients are considered to have been screened for TB at enrolment if there is a tick in the TB SCREEN section under any of the six symptoms or under “NO TB SYMPTOMS” in the first row (see figure 5)
 - b. In facilities without the ACR, check if there is any evidence of TB symptom screening
 - c. If the patient was screened, write “1” in the first column of the data collection form (TB screening at enrolment, SOC 1a); if not screened, write “0” in the first column
4. Check whether the patient screened positive for TB symptoms at enrolment
 - a. In facilities using the Adult Clinical Record this includes patients with a tick under any of the six symptoms in the TB SCREEN section in the first row (see figure 5)
 - b. In facilities without the ACR, check if there is any evidence of presence of TB symptoms
 - c. If the patient screened positive, write “1” in the second column
 - d. If the patient screened negative, write “0” in the second column
 - e. If the patient was not screened, write “N/A” in the second column
5. Check whether the patient who screened positive had appropriate investigations done for active Pulmonary or Extra-pulmonary TB
 - a. For patients with cough: 2 sputum smears and 1 sputum TB culture should be sent and results recorded (in the ACR in the INVESTIGATIONS section, see Figure 6) or available in the folder
 - b. For patients with TB symptoms without cough: evidence of referral for appropriate investigations with the results documented or available in the folder (e.g. FNAB, CXR, abdominal U/S, other)
 - c. If the patient who screened positive had appropriate investigations done, write “1” in the third column (Investigations, SOC 2a)
 - d. If the patient was not investigated or no results were recorded or present in the folder, write “0” in the third column
 - e. If the patient was not screened or screened negative, write “N/A” in the third column
6. Check whether the patient was diagnosed with any type of active TB
 - a. For facilities using the ACR: the diagnosis of TB can be found in the “DIAGNOSIS” section on page 6, and in the TB HISTORY section on the front page. Start of TB treatment

- should be indicated on the TB history section on the front page as well (see figure 3), together with a tick in the TB Rx column (under intensive phase) (figure 5)
- b. If the patient was diagnosed with active TB, write “1” in the fourth column in the data collection form (TB Dx)
 - c. If the patient was not diagnosed with active TB, write “0” in the fourth column in the data collection form (TB Dx)
 - d. If the patient was not screened, screened negative or was not investigated for active TB, write “N/A” in the fourth column in the data collection form (TB Dx)
7. Check whether the patient who was diagnosed with active TB was started or continued on co-trimoxazole (CTX) prophylaxis (CPT)
 - a. For facilities using the ACR, the CTX start date should be recorded in the OI Prophylaxis section on the front page (see figure 4)
 - b. If the patient was (started) on CTX, write “1” in the fifth column of the data collection form (CPT, SOC 3)
 - c. If the patient was not (started) on CTX (or no evidence was found for this), write “0” in the fifth column of the data collection form (CPT, SOC 3)
 - d. If the patient was not screened, screened negative, was not investigated for active TB or was not diagnosed with active TB, write “N/A” in the fifth column of the data collection form (CPT, SOC 3)
 8. Write any comments or other notes regarding the patient or the folder in the far right column

4.1.2. Data collection form 1: TB screening of patients at the last visit in HIV care or on ART (SOC 1b and 2b)

Steps to complete data collection form 1: (right section): continuation from 4.1.1.

1. This section should be completed for each patient that was assessed for SOC 1a and 2a, immediately after checking the information at the first visit, in such a way that the entire row for each folder is completed at once
2. This section should be completed for each patient with a subsequent visit after enrolment, **irrespective of whether the patient started ART or not**
3. Check whether the patient had a subsequent visit since enrolment into HIV care.
4. If the patient never returned after the enrolment visit, write “N/A” in the sixth column of data collection form 1 (TB screening at the last visit, SOC 1b)
5. If the patient was already on TB treatment at the last visit (meaning started before the last visit), write “N/A” in the sixth column of data collection form 1 (TB screening at the last visit, SOC 1b)
6. Check whether the patient was screened for TB symptoms at the last visit
 - a. In facilities using the Adult Clinical Record (ACR) patients are considered to have been screened for TB if there is a tick in the TB SCREEN section, under any of the six symptoms or under “NO TB SYMPTOMS”, in the last completed row (see figure 5)
 - b. In facilities without the ACR, check if there is any evidence of TB symptom screening for the last time the patient visited the facility
 - c. If the patient was screened, write “1” in the sixth column of the data collection form (TB screening at the last visit, SOC 1b)
 - d. if the patient was not screened, write “0” in the sixth column of the data collection form (TB screening at the last visit, SOC 1b)
7. Check whether the patient screened positive for TB symptoms at the last visit
 - a. In facilities using the Adult Clinical Record this includes patients with a tick under any of the six symptoms in the TB SCREEN section in the last completed row (see figure 5)

- b. In facilities without the ACR, check if there is any evidence of presence of TB symptoms at the last visit
 - c. If the patient screened positive, write “1” in the seventh column
 - d. If the patient screened negative, write “0” in the seventh column
 - e. If the patient was not screened, the patient had no visit since enrolment or the patient was already on TB treatment at the last visit, write “N/A” in the seventh column
8. Check whether the patient who screened positive at the last visit had appropriate investigations ordered for active Pulmonary or Extra-pulmonary TB
- a. Look for evidence that the appropriate tests were ordered (this could include notes in the ACR and/or pencil marks in the relevant INVESTIGATIONS section, see figure 6). As this is the last visit, results may not be available yet.
 - b. For patients with cough: 2 sputum smears and 1 sputum TB culture should be sent (in the ACR in the INVESTIGATIONS section, see figure 6)
 - c. For patients with TB symptoms without cough: evidence of referral for appropriate investigations (FNAB, CXR, abdominal U/S, other)
 - d. If the patient who screened positive had appropriate investigations ordered, write “1” in the eighth column (Investigations, SOC 2b)
 - e. If no investigations were ordered, write “0” in the eighth column (Investigations, SOC 2b)
 - f. If the patient was not screened, screened negative, the patient had no visit since enrolment or the patient was already on TB treatment at the last visit, write “N/A” in the eighth column (Investigations, SOC 2b)
9. Write any comments or other notes regarding the patient or the folder in the far right column

4.1.3. Data collection form 1: Isoniazid Preventive Therapy (SOC 8) – NEW

1. For those patients who did not screen positive at enrolment or at later visits: Check whether the patient did not have any contra-indications for Isoniazid Preventive Therapy (IPT). Contra-indications for IPT include active alcohol abuse and active liver disease as well as not successfully completing TB treatment previously. Patients who are eligible for ART and IPT at the same time should start ART first and IPT later.
- a. If the patient screened negative at enrolment or at any later visit and did not have any contra-indication for IPT and was not about to start ART, write “1” in the ninth column of data collection form 1
 - b. If the patient screened positive for TB symptoms or had any contra-indications for starting IPT, write “0” in the ninth column
 - c. If the patient was not screened at enrolment or at any later visit, write “N/A” in the ninth column
2. Check whether the patient was started on IPT since enrolment into HIV care
- a. In facilities using the ACR, the IPT start date should be recorded in the OI Prophylaxis section on the front page under INH (see figure 4), together with a tick under the IPT section on page 3 (see figure 5)
 - b. If the patient was (started) on IPT, write “1” in the tenth column of the data collection form (IPT, SOC 8)
 - c. If the patient was not (started) on IPT (or no evidence was found for this), write “0” in the tenth column of the data collection form (IPT, SOC 8)
 - d. If the patient was not screened, screened positive or had contra-indications for IPT, write “N/A” in the tenth column of the data collection form (IPT, SOC 8)

4.1.4. Data collection form 2: TB screening of patients at the last visit on ART (SOC 1c and 2c)

Steps to complete data collection form 2:

1. Exclude folders of patients who were already on TB treatment at the last visit on ART (meaning that they started TB treatment before their last visit and were still on TB treatment at that time)
2. Exclude folders of patients who had no visit recorded after starting ART
3. Replace each excluded folder with another folder from the quarter under review, so that the sample size is maintained
4. Check whether the patient was screened for TB symptoms at the last visit
 - a. In facilities using the Adult Clinical Record (ACR) patients are considered to have been screened for TB if there is a tick in the TB SCREEN section, under any of the six symptoms or under “NO TB SYMPTOMS”, in the last completed row (see figure 5)
 - b. In facilities without the ACR, check if there is any evidence of TB symptom screening for the last time the patient visited
 - c. If the patient was screened, write “1” in the second column of data collection form 2 (TB screening at the last visit on ART, SOC 1c)
 - d. If the patient was not screened, write “0” in the second column (TB screening at the last visit on ART, SOC 1c)
5. Check whether the patient screened positive for TB symptoms at the last visit on ART
 - a. In facilities using the Adult Clinical Record this includes patients with a tick under any of the six symptoms in the TB SCREEN section in the last completed row (see figure 5)
 - b. In facilities without the ACR, check if there is any evidence of presence of TB symptoms at the last visit
 - c. If the patient screened positive, write “1” in the third column of data collection form 2 (TB screening at last visit on ART, right column)
 - d. If the patient screened negative, write “0” in the third column (TB screening at last visit on ART, right column)
 - e. If the patient was not screened, write “N/A” in the third column (TB screening at last visit on ART, right column)
6. Check whether the patient who screened positive at the last visit had appropriate investigations ordered for active Pulmonary or Extra-pulmonary TB
 - a. Look for evidence that the appropriate tests were ordered (this could include notes in the ACR and/or pencil marks in the relevant INVESTIGATIONS section, see figure 6). As this is the last visit, results may not be available yet.
 - b. For patients with cough: 2 sputum smears and 1 sputum TB culture should be sent (in the ACR in the INVESTIGATIONS section)
 - c. For patients with TB symptoms without cough: evidence of referral for appropriate investigations (FNAB, CXR, abdominal U/S, other), see figure 6
If the patient who screened positive had appropriate investigations ordered, write “1” in the fourth column of data collection form 2 (Investigations, SOC 2c)
 - e. If no investigations were ordered, write “0” in the fourth column (Investigations, SOC 2c)
 - f. If the patient was not screened or screened negative, write “N/A” in the fourth column (Investigations, SOC 2c)
7. Write any comments or other notes regarding the patient or the folder in the far right column

4.1.5. Data collection form 2: Isoniazid Preventive Therapy (SOC 9) – NEW

1. For those patients who did not screen positive at the last visit or previous: Check whether the patient did not have any contra-indications for Isoniazid Preventive Therapy (IPT). Contra-

indications for IPT include active alcohol abuse and active liver disease as well as not successfully completing TB treatment previously.

- a. If the patient screened negative at the last/previous visit and did not have any contra-indications for IPT, write “1” in the fourth column of data collection form 2
 - b. If the patient screened positive for TB symptoms or had any contra-indications for starting IPT, write “0” in the fourth column
 - c. If the patient was not screened at the last/previous visit, write “N/A” in the fourth column
2. Check whether the patient was started on IPT since starting ART
- a. In facilities using the ACR, the IPT start date should be recorded in the OI Prophylaxis section on the front page under INH (see figure 4), together with a tick under the IPT section on page 3 (see figure 5)
 - b. If the patient was (started) on IPT, write “1” in the tenth column of the data collection form (IPT, SOC 9)
 - c. If the patient was not (started) on IPT (or no evidence was found for this), write “0” in the tenth column of the data collection form (IPT, SOC 9)
 - d. If the patient was not screened, screened positive or had contra-indications for IPT, write “N/A” in the tenth column of the data collection form (IPT, SOC 9)

4.2. TB entry point (SOC 4-7) - UPDATED

The SOCs for the TB entry point should be assessed in all facilities with a TB clinic providing TB treatment according to the National TB Control Programme (NTCP).

The data source for SOC 4 through to 7 is the HIV status section on page 3 of the blue facility-held TB record (NTCP GW 2012), as shown in Figure 7.

The screenshot shows the 'HIV-Status:' section of a form. It contains the following fields and options:

- Counselled:** Radio buttons for Y, N, and *KP.
- Tested:** Radio buttons for Y, N, and *KP. A legend indicates *KP = Known Positive.
- Test Date 1:** A date picker (d, m, y, y, y, y).
- Result:** Radio buttons for P (Positive), N (Negative), and KP (Known Positive).
- Test Date 2:** A date picker (d, m, y, y, y, y).
- Result:** Radio buttons for P (Positive), N (Negative), and KP (Known Positive).
- Cotrimoxazole:** Radio buttons for Y, N, and Prior.
- Start Date:** A date picker (d, m, y, y, y, y).
- Referred for CCMT/HIV care:** Radio buttons for Y and N.
- Referred to:** A text field with the instruction '(Please specify facility name)'. Below this is a line for a signature or name.
- ART:** Radio buttons for Y, N, and Prior.
- Start Date:** A date picker (d, m, y, y, y, y).
- CD4-Count:** A text field for numerical input.

Figure 7: HIV status section in page 3 of the blue TB card (GW 2012)

The sample of facility-held records to be reviewed for the assessment should be determined by using the TB register in the facility.

To assess the Standards of Care at the TB entry point, the following steps need to be taken:

1. Identify the period to be reviewed. As for the HIV care SOCs, this should be the completed quarter **prior to the last quarter**, so if the assessment takes place in January, the quarter from July to September will be reviewed). This allows folders to be up to date and information on patients who are tested later during their initial phase of TB treatment to be included as well. Refer to table 3 for an overview.

2. Use the TB register to determine the size of the sample of patient folders to review. The sample size should be 10% of the total number of patients registered in the quarter under review, with a minimum sample size of 20.
3. Assemble a random sample of blue cards from patients registered during the quarter under review. The easiest method to assemble a random sample of 10% is to take every tenth folder from the cohort of patients that you will be reviewing, based on the TB register entries.
4. Assess the patient folders for the information required using data collection form 3

Review date (quarter)	Patient folders to be assessed (enrolled in quarter):
October – December 2010	April – June 2010
January – March 2011	July – September 2010
April – June 2011	October – December 2010
July – September 2011	January – March 2011
October – December 2011	April – June 2011
January – March 2012	July – September 2011
Etcetera	Etcetera

Table 3: Quarters for assessment of TB/HIV SOCs: TB entry point

4.2.1. Data collection form 3: HIV Counseling and Testing for TB patients – NB UPDATED

Steps to complete data collection form 3:

1. Include all patients who are registered as cases in the TB register (exclude clients on chemoprophylaxis only), irrespective of whether or not they were tested before they were diagnosed with TB – **NB UPDATED**
2. Check whether the TB patient has a test result recorded (“Y” or “KP” for tested in HIV status section, see figure 7)
 - a. If tested, write “1” in the first column of the data collection form (HIV status, SOC 4)
 - b. If not tested (“N” or blank for tested in HIV status section in blue card, or an HIV negative result that is over 3 months old), write “0” in the first column of the data collection form (HIV status, SOC 4) – all other columns will be N/A after this
3. Check whether the TB patient who had an HIV test recorded, tested HIV positive (“P” or “KP” under test result in HIV status section, see figure 7)
 - a. If the patient is (known) HIV positive, write “1” in the second column of the data collection form (HIV status, right column)
 - b. If the patient is HIV negative, write “0” in the second column of the data collection form (HIV testing, right column) – all other columns will be N/A after this
 - c. If the patient did not have a test result recorded, or was HIV negative more than three months before the TB diagnosis, write “N/A” in the second column of the data collection form (HIV status, right column) – all other columns will be N/A after this
4. Check whether the TB patient who tested HIV positive was enrolled for HIV care (tick under referred for CCMT/HIV care in HIV status section and CD4 result recorded under CD4-Count, see figure 7).
 - a. Do not accept as enrolled into HIV care if only a tick is placed under referred for CCMT/HIV care in the HIV status section or if only the CD4 count is recorded
 - b. If “Y” ticked for Referred for CCMT/HIV care and CD4 recorded, write “1” in the third column of the data collection form (patient management, SOC 5)

- c. If “N” ticked for Referred for CCMT/HIV care or section left blank and/or no CD4 recorded, write “0” in the third column of the data collection form (patient management, SOC 5)
 - d. If the patient was not counseled or not tested or tested HIV negative, write “N/A” in the third column of the data collection form (patient management, SOC 5)
5. Check whether the TB patient who tested HIV positive was (started) on co-trimoxazole (co-trimoxazole “Y” or “prior” ticked in HIV status section, see figure 7)
 - a. If “Y” or “prior” ticked under co-trimoxazole, write “1” in the fourth column of the data collection form (patient management, SOC 6)
 - b. If “N” ticked under co-trimoxazole, or section left blank, write “0” in the fourth column of the data collection form (patient management, SOC 6)
 - c. If the patient was not counseled or not tested or tested HIV negative, write “N/A” in the fourth column of the data collection form (patient management, SOC 6)
6. Check whether the HIV-positive patient was not yet on ART at the start of TB treatment and if not yet on ART, whether he/she was eligible for ART treatment (based on CD4 count below 350 cells/mm³ and/or stage 4)
 - a. If the HIV-positive TB patient was not yet on ART at the start of TB treatment and is eligible for ART based on the CD4 count and/or the WHO stage, write “1” in the fifth column of the data collection form (ART for HIV+ TB patients, SOC 7)
 - b. If the HIV-positive TB patient was already on ART (“prior” ticked for ART in HIV status section in blue TB card) or is not eligible for ART (as per current ART guidelines in the case of a CD4 count over 350 cells/mm³), write “0” in the fifth column of the data collection form (ART for HIV+ TB patients, SOC 7)
 - c. If the patient was not counseled or not tested or tested HIV negative, or the eligibility cannot be assessed due to the CD4 count and/or WHO stage not being recorded, write “N/A” in the fifth column of the data collection form (ART for HIV+ TB patients, SOC 7)
7. Check whether the HIV-positive TB patient who is eligible for ART was started on ART during TB treatment
 - a. If the co-infected patient who is eligible for ART started ART during TB treatment (“Y” ticked for ART in HIV status section in blue TB card), write “1” in the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7)
 - b. If the co-infected patient who is eligible for ART did not start ART during TB treatment (“N” ticked for ART in HIV status section in blue TB card or none of the options ticked), write “0” in the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7)
 - c. Write “N/A” in the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7) if the patient is not eligible for ART, or the patient was already on ART at the start of TB treatment
8. Check whether the HIV-positive TB patient who is eligible for ART was started on ART between 2 and 8 weeks after starting TB treatment
 - a. If the co-infected patient who is eligible for ART started ART after 2-8 weeks of being on TB treatment (“Y” ticked for ART in HIV status section in blue TB card and date of starting ART falls between 2-8 weeks after the TB treatment start date), write “1” in the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7a)
 - b. If the co-infected patient who is eligible for ART did not start ART during TB treatment or more than 8 weeks after starting TB treatment (“N” ticked for ART in HIV status section in blue TB card or none of the options ticked or ART start date more than 8 weeks after TB treatment start date), write “0” in the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7a)

- c. Write "N/A" the sixth column of the data collection form (ART for HIV+ TB patients, SOC 7a) if the patient is not eligible for ART, or the patient was already on ART at the start of TB treatment
9. Write any comments or other notes regarding the patient or the folder in the far right column, including observations on linkages between TB and HIV clinic, ART eligibility and management, etc.

5. TB/HIV SOC tabulation and calculation

Steps to tabulate the information and calculate the SOC indicators:

1. For all three TB/HIV SOC data collection forms, add all number "1"s in the total row at the bottom
2. Each total has a code allocated to it
3. Use the formula in the second-to-last row (labeled "Calculation") to calculate the actual indicator (all formulas to be multiplied by 100%)
 - a. The SOC indicators are those in the columns indicating SOC and are in non-shaded boxes
 - b. Formulas in shaded boxes and between brackets are non-SOC indicators and are optional

5.1. Examples for calculating TB/HIV SOCs:

Figure 8 and 9 below provide examples of calculations of the indicators, based on the numbers in the total row. The total number of charts reviewed in these examples was 20.

	1. TB screening at enrolment		2. Investigations	3. TB Dx	4. CPT
	SOC 1a		SOC 2a		SOC 3a
Patient file no	Pt screened for TB at enrolment (any symptoms or "NO SYMPTOMS" ticked) 0=NO 1=YES	Patient screened positive for any TB symptom N/A (not screened) 0=NO 1=YES	Patient who screened positive for TB symptoms had appropriate investigations done for PTB or EPTB N/A (not screened or screened neg) 0=NO 1=YES	Patient diagnosed with any type of active TB N/A (not screened/ screened neg/no invest.) 0=NO 1=YES	Patient diagnosed with TB and on CPT N/A (not screened/ screened neg/no invest./no TB) 0=NO 1=YES
Total	15	6	5	3	3
Code	a.	b.	c.	d.	e.
Calculation	a/total#	(b/a)	c/b	(d/c)	e/d
Percentage	15/20 = 75%	6/15 = 40%	5/6 = 83%	3/5=60%	3/3=100%

Figure 8: Example of calculations of TB screening SOCs at enrolment: Data collection form 1

Patient file no	1. HIV status		2. Patient management		3. ART for HIV+ TB patients	
	SOC 4		SOC 5	SOC 6		SOC 7
	TB patient with a known HIV status (newly tested or previously tested with known results, pos or neg)	Patient with HIV positive test result recorded N/A (no test result or HIV neg more than 3/12 ago) 0=NO 1=YES (positive)	HIV positive TB patient enrolled into HIV care (referred for CCMT/HIV care and CD4 recorded) N/A (no test result/tested HIV neg) 0=NO 1=YES	HIV positive TB patient receiving co-trimoxazole (CPT) (On CPT prior to starting TB treatment or newly started on CPT) N/A (no test result/tested HIV neg) 0=NO 1=YES	HIV+ TB patient eligible for ART (based on CD4 and/or WHO stage) not yet on ART at start of TB treatment N/A (no test result/ HIV neg/on ART at the start of TB treatment/no info on CD4/WHO stage) 0=NO 1=YES	HIV+ TB patient eligible for ART started on ART during TB treatment N/A (not eligible/already on ART at start of TB treatment) 0=NO 1=YES
Total	18	12	10	11	8	3
Code	a.	b.	c.	d.	e.	f.
Calculation	a/# charts reviewed	b/a	c/b	d/b	e/b	f/e
Percentage	18/20 = 90%	12/18 = 67%	10/12 = 83%	11/12 = 92%	8/12 = 67%	3/8 = 38%

Figure 9: Example of calculations of HIV Counseling and Testing for TB patients SOCs: Data collection form 3, SOC 4-7

6. TB/HIV SOC analysis and feedback

The results of the TB/HIV SOCs should now be transferred onto the facility feedback sheets (included in Appendix 5, 6 and 7) and discussed further, with the aim of developing an action plan to address gaps in the quality of care.

6.1. Transfer of information from data collection forms to Facility feedback sheets

1. Use the TB/HIV Facility feedback sheet to summarize the SOC assessment
2. Summarize the findings from Data collection form 1 in Facility feedback sheet 1 (TB screening of patients in HIV care), using the corresponding codes and calculations
3. Summarize the findings from Data collection form 2 in Facility feedback sheet 2 (TB screening of patients in ART care), using the corresponding codes and calculations
4. Summarize the findings from Data collection form 3 in Facility feedback sheet 3 (HIV Counseling and Testing for TB patients), using the corresponding codes and calculations
5. If results from a prior assessment are available, they can be recorded on the facility feedback sheet in the “previous result” column, to assess change in SOC performance over time

6.2. Root cause analysis

1. Conduct root cause analysis together with the multidisciplinary team (MDT) at the facility
 - a. As the facilitator, the site support team should ask “**Why**” questions to identify underlying issues and root causes
2. Discuss the results of the evaluation
3. Identify challenges and barriers to quality
4. Brainstorm about potential solutions and suggested interventions/next steps
5. List/catalogue suggestions
6. After all of the suggestions have been catalogued, assist the MDT with ranking the list in order of priority on the facility feedback sheet
 - a. The most important problems that must be addressed
 - b. Problems that can be easily fixed
 - c. When possible look for “high priority/easy fixes”
 - d. Long term issues that need to be addressed but may take more time

6.3. Intervention planning

1. The site support team should facilitate development of a step-wise plan to address the issues listed
2. Site staff should decide who is responsible for the activities needed to address the issues
3. Time-frames should be assigned to the activities
4. These action points should be documented on the facility feedback sheet
5. A copy of the facility feedback sheet should be kept on site

6.4. Follow-up

1. After an agreed-upon time interval, team members should meet to report back on progress made
2. Reassess the SOCs
 - a. At least quarterly
 - b. Shorter intervals may be needed depending on the situation
3. The site support team should encourage the site when progress has been made

6.5. Examples of evaluation of TB/HIV SOCs

6.5.1. SOC 1: TB screening for HIV patients at enrolment/last visit

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools
Is the ACR or another clinic-held record in use? Is the ACR/clinic record used correctly? Is the TB screening questionnaire in the ACR/clinic record being used? Is a separate TB screening questionnaire used? How? How often is the TB screening section used? Is the TB screening information transcribed into the HIV care and ART registers? Do providers understand the importance of screening PLWHA for TB? If someone is suspected as having TB, is the infection control policy adhered to? Do patients receive information about TB-HIV co-infection and TB transmission?	(Re) introduce the ACR and the TB screening questionnaire Provide in-service training on the use of the ACR and TB screening questionnaire Provide mentoring to nurses on TB screening in the consultation room Update registers to include information about TB screening, diagnosis, and treatment. Train staff to record new information Develop infection control protocol for TB suspects (and TB patients seen in C&T) that includes triaging, separation and adequate ventilation Offer patient education about TB-HIV co-infection	ACR with integrated TB screening tool SOP for TB screening SOP for data abstraction from the ACR into the HIV care and ART registers (Revised HIV care and ART registers) Patient education material

6.5.2. SOC 2: Investigations of TB suspects

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools

<p>Are TB evaluation services available? On-site or off-site? Is there a referral system for TB evaluation? What relationship/coordination exists between HIV C&T and TB clinic? Who is responsible for TB evaluation? Are results for patients referred for TB evaluation communicated back (how?) Are NTCP algorithms in place for TB diagnosis? Are sputum jars available? Are spot specimens taken or are patients required to return with a sample? What is the turn-around time for results? Are other diagnostic resources available (chest x-ray, FNAB etc.) Are investigation requests and results documented in the patient's folder? Are TB suspects who are HIV+ encouraged to bring in family members who are HIV positive and may have been exposed to TB?</p>	<p>Develop algorithms to evaluate TB suspects based on NTCP guidelines</p> <p>Train clinicians to appropriately evaluate TB suspects</p> <p>Develop referral system for TB evaluation</p> <p>Consider escorting HIV+ patients who are TB suspects for TB evaluation at time of positive screening</p> <p>Collaborate with TB clinic staff and facility management to incorporate TB clinicians into multidisciplinary team</p> <p>Train clinicians evaluating TB suspects referred from HIV C&T to inquire about HIV positive family members or partners who may have been exposed to TB</p>	<p>National Guidelines and algorithm for TB evaluation and diagnosis,</p> <p>TB assessment and diagnosis (clinical, lab, radiology) training materials</p> <p>TB evaluation checklist</p> <p>Appropriate laboratory equipment or linkage to laboratory facility</p> <p>Referral and feedback forms</p> <p>Referral letter for partner and family members</p> <p>TB suspect register</p>
--	--	---

6.5.3. SOC 4: HIV Counseling and Testing for TB patients

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools
<p>Are patients with unknown HIV tested for HIV? Are HIV rapid test kits available at TB program location? How long does it take to get ELISA results back to the patient? Who carries out HIV testing and counseling? Is there a private room for HIV counseling? Are patients provided with any pre-test education? What is the approach to HIV C&T (PICT, opt-out, VCT)? Does the TB register contain information about HIV testing and status? Do patients receive information about TB-HIV co-infection and HIV transmission/prevention?</p>	<p>Incorporate HIV testing into protocol for TB treatment;</p> <p>Rollout HIV testing by testing every patient with unknown status seen for a follow-up visit until HIV status is documented for all current TB patients</p> <p>Offer one-stop HIV testing with immediate results and post-test counseling at time of TB clinic visit</p> <p>Identify and train 2-3 clinic staff to perform HIV rapid tests and provide post-test counseling</p> <p>Work with hospital administration to designate or partition a private room for HIV testing and counseling</p> <p>Institute HIV testing group education for TB clinic patients</p> <p>Institute PICT for TB patients</p> <p>Train staff on recording HIV info in blue TB cards and TB register</p>	<p>National HIV counseling and testing training course</p> <p>Testing and counseling script (positive and negative result versions)</p> <p>Testing protocol and checklist including pretest education and post-test counseling</p> <p>NTCP clinic held records and TB register</p> <p>Patient education material – posters, brochures, flipcharts, partner-testing invitations, etc...</p>

6.5.4. SOC 5: HIV care enrolment for HIV-positive TB patients

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools
<p>Is there a system to refer TB patients testing HIV+ into HIV care?</p> <p>Does it include follow-up on enrollment status?</p> <p>Do providers of TB and HIV services coordinate care and treatment regimens?</p> <p>What happens when TB patients are referred to HIV care and do not enroll?</p> <p>Is the HIV section in the blue TB card updated with enrolment information?</p> <p>Are medical records linked or kept together?</p>	<p>Develop referral system for TB patients to HIV C&T that includes feedback mechanism for TB treatment provider (CPT, enrolment into care, CD4 count, ART)</p> <p>Ensure TB clinic participation in HIV care coordination team meetings</p> <p>Create tracking system to follow-up on TB patients referred to HIV C&T or HIV care</p> <p>Co-locate or link TB and HIV services, including pharmacy and lab</p> <p>Consider escorting HIV+ TB patients to HIV C&T or HIV clinic at time of diagnosis</p>	<p>NTCP blue cards and TB register</p> <p>Referral and feedback forms</p> <p>SOP for referring TB patients that test HIV+</p> <p>Multi-disciplinary team training materials</p>

6.5.5. SOC 3/6: CPT for HIV-positive TB patients

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools
<p>Is there a national policy on CPT?</p> <p>Is CTX available at the facility?</p> <p>If yes, where is CPT prescribed and/or provided? (TB clinic, HIV C&T, both)</p> <p>Who prescribes CPT?</p> <p>Are TB/HIV staff trained on national policy?</p> <p>Is the CPT section in the TB register completed?</p> <p>Is information on CPT recorded in the blue cards?</p>	<p>Train TB and HIV providers on the importance of CPT and eligibility criteria</p> <p>Develop system to coordinate treatment so that all co-infected patients receive CPT. (ie, patient doesn't slip through the cracks when each service provider thinks it is prescribed by the other)</p> <p>Consider system to centralize TB and HIV medication pickup through one pharmacy, or integrate CPT distribution with TB medication distribution in TB clinic</p> <p>Update register, patient information page, or other tracking system to include information about CPT and train staff to record new information</p>	<p>National Guidelines and algorithm for CPT</p> <p>SOP for TB-HIV co-infected patients indicating who prescribes CPT and where it is distributed</p> <p>NTCP blue cards and TB register</p>

6.5.6. SOC 7: ART for HIV-positive TB patients - NEW

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools

<p>Are the latest national ART guidelines available? Is ART available in the facility? If not, how easy is it to access the nearest treatment site? If yes, where is ART prescribed? Are the TB and HIV clinics physically integrated? Are patient TB and HIV files kept together? Are TB staff trained on ART? Who prescribes ART? Is there a functional MDT in the facility? How often does it meet? Does the MDT discuss co-infected patient management? Is HIV related information recorded in the blue cards? Is HIV related information recorded in the TB register? Is the register updated with new HIV related information? What are the steps taken for an eligible patient to start on ART?</p>	<p>Training of TB and HIV providers on integrated management of TB and HIV</p> <p>Establish functional MDT's:</p> <ul style="list-style-type: none"> - Case discussions of co-infected patients - Updating of TB and pre-ART/ART registers - Effective communication between TB and HIV staff <p>Consider physical integration of TB and HIV clinics (one-stop shop) (paying attention to TB infection control aspects)</p>	<p>National TB and ART guidelines</p> <p>NTCP blue cards</p> <p>TB register</p> <p>HIV clinical record (ACR or other)</p> <p>Data feedback</p>
--	--	--

6.5.6. SOC 8/9: Isoniazid Preventive Therapy - NEW

Questions to consider in evaluating SOC	Strategies for Improving SOC	Support Tools
<p>Is INH available? Have staff been trained on IPT? Are the latest IPT guidelines available? Are job aids available on IPT? How are TB screening questions asked? Is TB screening done routinely? Are patients screened for contra-indications (liver disease/alcohol abuse)? When are symptomatic patients reassessed for IPT eligibility? Is patient information available on IPT? Is health education provided on IPT? Is IPT related information recorded in patient files (ACR)? Is IPT related information recorded in the PHC and HIV registers (Pre-ART and ART)? How are patients on IPT followed up?</p>	<p>Training of HCW on IPT and TB symptom screening</p> <p>Training of lay HCW on IPT</p> <p>Health education on IPT</p> <p>Ensure reliable INH supply (both 100mg and 300mg tablets)</p>	<p>National IPT guidelines</p> <p>IPT flow-charts</p> <p>PHC tick register</p> <p>Pre-ART and ART register</p>

REFERENCES

Clinical systems mentorship, the ICAP guide to site support. ICAP Clinical Unit, International Center for AIDS Care and Treatment Programs, Columbia University, New York, 2007

National Tuberculosis Management Guidelines 2008, National Department of Health, Pretoria, South Africa, 2009

Appendix 1: ICAP South Africa Standards of Care (SOC) for TB/HIV Integrated Services

ICAP Standards of Care (SOC) for TB/HIV Integrated Services		Quarterly Measure of SOC (Quality of Care Indicator)	Numerator	Source of information	Evaluation of Program Quality		
			Denominator		Result of Quarterly measure of SOC		
					Actions		
1a	All patients enrolled in HIV care should be screened for TB at their first visit	% of HIV patients screened for TB at enrollment each quarter	# HIV patients enrolled in the past three months screened for TB at enrollment	<ul style="list-style-type: none"> Adult clinical record (ACR)/other clinical record HIV care (pre-ART) register Quarterly ICAP M&E report 	<60%	60-90%	>90%
			# HIV patients enrolled in past three months		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
1b	All patients enrolled in HIV care should be screened for TB at every visit	% of HIV patients screened for TB at their last visit each quarter	# HIV patients enrolled in the past three months screened for TB at the last visit	<ul style="list-style-type: none"> Adult clinical record (ACR)/other clinical record HIV care (pre-ART) register (Quarterly ICAP M&E report) 	<60%	60-90%	>90%
			# HIV patients enrolled in past three months		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
1c	All HIV patients enrolled on ART should be screened for TB at every visit	% of ART patients screened for TB at their last visit each quarter	# HIV patients started ART in the quarter under review screened for TB at the last visit	<ul style="list-style-type: none"> Adult clinical record (ACR)/other clinical record ART register (Quarterly ICAP M&E report) 	<60%	60-90%	>90%
			# ART patients enrolled in the quarter under review		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target

2a	HIV patients who screen positive for TB symptoms (“TB suspects”) should be appropriately evaluated for TB following national guidelines/algorithms	% of HIV patients who are TB suspects at enrollment that are appropriately evaluated using national guidelines	# of HIV patients who are TB suspects at enrollment in HIV care that are appropriately evaluated using national guidelines	<ul style="list-style-type: none"> • Adult clinical record (ACR)/other clinical record • HIV care register • Quarterly ICAP M&E report 	<75%	75-90%	>90%
			# of HIV patients who are TB suspects at enrollment in HIV care		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
2b	HIV patients who screen positive for TB symptoms (“TB suspects”) should be appropriately evaluated for TB following national guidelines/algorithms	% of HIV patients who are TB suspects at the last visit in HIV care that are appropriately evaluated using national guidelines	# of HIV patients who are TB suspects at their last visit in HIV care that are appropriately evaluated using national guidelines	<ul style="list-style-type: none"> • Adult clinical record (ACR)/other clinical record • HIV care register • Quarterly ICAP M&E report 	<75%	75-90%	>90%
			# of HIV patients who are TB suspects		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
2c	ART patients who screen positive for TB symptoms (“TB suspects”) should be appropriately evaluated for TB following national TB guidelines/algorithms	% of ART patients who are TB suspects at the last visit in ART care that are appropriately evaluated using national guidelines	# of ART patients who are TB suspects a their last visit in ART care that are appropriately evaluated using national guidelines	<ul style="list-style-type: none"> • Adult clinical record (ACR)/other clinical record • HIV care register • Quarterly ICAP M&E report 	<75%	75-90%	>90%
			# of ART patients who are TB suspects		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target

3	All HIV patients diagnosed with active TB (through TB screening) should receive co-trimoxazole prophylaxis (CPT)	% of HIV patients diagnosed with active TB at enrolment (started) on CPT	# of HIV patients newly diagnosed with active TB (started) on CPT	<ul style="list-style-type: none"> • Adult clinical record (ARC)/other clinical record • HIV care register • Quarterly ICAP M&E report 	<70%	70-90%	>90%
			# of HIV patients with active TB		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
4	All TB patients should know their HIV status within the first 2 months after starting TB treatment	% of TB patients with an HIV test result recorded	# TB patients with an HIV test result recorded	<ul style="list-style-type: none"> • Blue TB cards • (Quarterly ICAP M&E report) 	<80%	80-90%	>90%
			# TB patients in first 2 months of TB treatment		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
5	All TB patients who are HIV+ should be enrolled in HIV care	% of TB patients who are HIV+ enrolled in HIV care	# of HIV+ TB patients (newly diagnosed and known positive) enrolled into HIV care (referred plus CD4 assessment)	<ul style="list-style-type: none"> • Blue TB cards • TB register • (Quarterly ICAP M&E report) 	<70%	70-90%	>90%
			# of HIV+ TB patients (newly diagnosed and known positive)		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
6	All HIV-positive TB patients should receive co-trimoxazole prophylaxis (CPT)	% of TB patients who are known to be HIV+ during TB treatment (newly diagnosed and known positive) who are receiving CPT (started before or during TB treatment)	# of TB patients who are known to be HIV+ during TB treatment (newly diagnosed and known positive) who are receiving CPT	<ul style="list-style-type: none"> • TB register • Blue TB cards • (Quarterly ICAP M&E report) 	<70%	70-90%	>90%
			# of TB patients known to be HIV+ during TB treatment (newly diagnosed and known positive)		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target

7	All co-infected patients eligible for ART should be started on ART during TB treatment	% of TB/HIV co-infected patients who are eligible for ART started on ART during TB treatment	# of TB/HIV co-infected patients started ART during TB treatment	<ul style="list-style-type: none"> Blue TB cards TB register Clinical record ART register 	<70%	70-90%	>90%
			# of TB/HIV co-infected patients eligible for ART		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
7a	All co-infected patients eligible for ART should be started on ART after 2-8 weeks on TB treatment	% of TB patients who are HIV+ eligible for ART who are started on ART between 2-8 weeks of TB Rx	# of TB/HIV co-infected patients started ART 2-8 weeks after starting TB treatment	<ul style="list-style-type: none"> Blue TB cards TB register Clinical record ART register 	<70%	70-90%	>90%
			# of TB/HIV co-infected patients eligible for ART		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
8	Patients enrolled in HIV care who were screened for TB and screened negative should be offered IPT	% of patients enrolled into HIV care who are eligible for IPT started on IPT	# of patients in HIV care who started IPT	<ul style="list-style-type: none"> Clinical record HIV care register (pre-ART register) 	<70%	70-90%	>90%
			# of patients in HIV care eligible for IPT		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target
9	ART patients who are eligible for IPT should be offered IPT	% of ART patients eligible for IPT started on IPT	# of ART patients started IPT	<ul style="list-style-type: none"> Clinical record ART register 	<70%	70-90%	>90%
			# of patients on ART		Evaluate this month	Prioritize and evaluate as part of next 3 month work plan	On target

Appendix 2: Data collection form 1: TB screening (HIV care)

Facility name: _____ Collected by: _____ Date evaluated: ____/____/____
 Period evaluated: ____/____/____ to ____/____/____

SOC TB/HIV: TB screening for HIV-infected patients; IPT for patients in HIV care											
NB: EXCLUDE CHARTS OF PATIENTS ALREADY ON TB TREATMENT AT THE TIME OF ENROLMENT!											
Patient file no	At enrolment into HIV care					At the last visit in HIV care or on ART			Isoniazid Preventive Therapy		Notes / Comments
	1. TB screening at enrolment		2. Investigations	3. TB Dx	4. CPT	1. TB screening at the last visit		2. Investigations	IPT		
	SOC 1a		SOC 2a		SOC 3	SOC 1b		SOC 2b		SOC 8	
	Pt screened for TB at enrolment (any symptoms or "NO SYMPTOMS" ticked)	Patient screened positive for any TB symptom	Patient who screened positive for TB symptoms had appropriate investigations done for PTB or EPTB	Patient diagnosed with any type of active TB	Patient diagnosed with TB and on CPT	Pt screened for TB at last visit in HIV care or on ART (any symptoms or "NO SYMPTOMS" ticked)	Patient screened positive for any TB symptom	Patient who screened positive for TB symptoms had appropriate investigations ordered for PTB or EPTB	Pt screened negative for TB symptoms without contra-indications for INH	Patient started on IPT	
	N/A (not screened)	N/A (not screened or screened neg)	N/A (not screened/ screened neg/no invest.)	N/A (not screened/ screened neg/no invest./no TB)	N/A (no visit since enrolment or on TB treatment before the last visit)	N/A (no visit or on TBRx or not screened)	N/A (no visit or on TBRx or not screened or screened neg)	N/A (not screened)	N/A (not screened or screened pos or contra indications)		
	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES	0=NO 1=YES		
1											
2											
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
Total											
Code	a.	b.	c.	d.	e.	f.	g.	h.	k.	l.	
Calculation	a/# charts reviewed	(b/a)	c/b	(d/c)	e/d	f/(# charts reviewed - pts on TBRx at last visit)	(g/f)	h/g		l/k	
%										(all x 100%)	

Appendix 3: Data collection form 2: TB screening (ART care)

Facility name: _____ Collected by: _____
 Period evaluated: ____/____/____ to ____/____/____

Date evaluated: ____/____/____

SOC TB/HIV: TB screening for HIV-infected patients on ART; IPT for ART patients (on ART for at least 6 months)							
NB1: EXCLUDE CHARTS OF PATIENTS ALREADY ON TB TREATMENT AT THE LAST VISIT!							
NB2: EXCLUDE CHARTS OF PATIENTS WITHOUT A VISIT AFTER STARTING ART!							
Patient file no	TB screening at the last visit on ART			Isoniazid Preventive Therapy		Notes / Comments	
	1. TB screening at the last visit on ART		2. Investigations (ordered)	3. IPT			
	SOC 1c		SOC 2c		SOC 9		
	Patient screened for TB at the last visit on ART (any symptoms or "NO SYMPTOMS" ticked)	Patient screened positive for any TB symptom	Patient who screened positive for TB symptoms had appropriate investigations done for PTB or EPTB	Pt stable on ART for at least 6 months who screened negative for TB symptoms without contra-indications for INH at the last visit	Patient started on IPT		
	0=NO 1=YES	N/A (not screened) 0=NO 1=YES	N/A (not screened or screened neg) 0=NO 1=YES	N/A (not screened) 0=NO (screened pos or contra-ind) 1=YES	N/A (not screened or screened pos or contra-indications) 0=NO 1=YES		
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
Total							
Code	a.	b.	c.	d.	e.		
Calculation	a/# charts reviewed	(b/a)	c/b		e/d	(all x 100%)	
Percentage							

Version 5, Nov 2010

Appendix 4: Data collection form 3: HIV C&T for TB

Facility name: _____ Collected by: _____
 Period evaluated: ____/____/____ to ____/____/____ Date evaluated: ____/____/____

SOC TB/HIV: HIV counseling and testing for TB patients								Notes / Comments
NB: INCLUDE ALL TB CASES IRRESPECTIVE OF HIV-STATUS AT THE START OF TB TREATMENT!								
1. HIV status		2. Patient management		3. ART for HIV+ TB patients				
SOC 4		SOC 5	SOC 6		SOC 7	SOC 7a		
TB patient with an HIV status recorded (newly tested or previously tested with results available, pos or neg) 0=NO 1=YES	Patient with HIV positive test result recorded N/A (no test result or HIV neg more than 3/12 ago) 0=NO (negative) 1=YES (positive)	HIV positive TB patient enrolled into HIV care (referred for CCMT/HIV care <u>and</u> CD4 recorded) N/A (no test result/tested HIV neg) 0=NO 1=YES	HIV positive TB patient receiving co-trimoxazole (CPT) (On CPT prior to starting TB treatment or newly started on CPT) N/A (no test result/tested HIV neg) 0=NO 1=YES	HIV+ TB patient eligible for ART (based on CD4 and/or WHO stage) not yet on ART at start of TB treatment N/A (no test result/ HIV neg/on ART at the start of TB treatment/no info on CD4/WHO stage) 0=NO 1=YES	HIV+ TB patient eligible for ART started on ART during TB treatment N/A (not eligible/already on ART at start of TB treatment) 0=NO 1=YES	HIV+ TB patient eligible for ART started on ART <u>during the first 2 to 8 weeks</u> of TB treatment N/A (not eligible/already on ART at start of TB treatment) 0=NO 1=YES		
Patient file no								
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
Total								
Code	a.	b.	c.	d.	e.	f.	g.	
Calculation	a/# charts reviewed	b/a	c/b	d/b	e/b	f/e	g/e	
Percentage							(all x 100%)	

Version 5, Nov 2010

Appendix 5: Facility feedback form 1: TB screening of patients in HIV care

TB/HIV Facility feedback sheet 1: TB screening of patients in HIV care; IPT for patients in HIV care										
Facility name: _____			Date evaluated: ____/____/____							
Period evaluated: ____/____/____ to ____/____/____			SOC assessment number: _____		Version 5, Nov 2010					
SOC indicators and results: TB screening										
SOC 1										
All patients enrolled in HIV care and treatment should be screened for TB at every visit						Result (tick)				
						<table border="1"> <tr> <td><60%</td> <td>60-90%</td> <td>>90%</td> <td>Previous result:</td> </tr> </table>	<60%	60-90%	>90%	Previous result:
<60%	60-90%	>90%	Previous result:							
a. Proportion of HIV patients screened for TB at enrolment	Numerator (a): <input type="text"/>	Denominator (# charts reviewed): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
b. Proportion of HIV patients screened for TB at the last visit in HIV care or on ART	Numerator (f): <input type="text"/>	Denominator (# charts reviewed less # pts on TBRx at last visit): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
Comments:										
.....										
.....										
SOC 2										
HIV patients who screen positive for TB symptoms ("TB suspects") should be appropriately evaluated for TB following national TB guidelines/algorithms						Result (tick)				
						<table border="1"> <tr> <td><75%</td> <td>75-90%</td> <td>>90%</td> <td>Previous result:</td> </tr> </table>	<75%	75-90%	>90%	Previous result:
<75%	75-90%	>90%	Previous result:							
a. Proportion of HIV patients who are TB suspects at enrolment that are appropriately evaluated using national TB guidelines	Numerator (c): <input type="text"/>	Denominator (b): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
b. Proportion of HIV patients who are TB suspects at the last visit in HIV care or on ART that have investigations ordered according to national TB guidelines	Numerator (h): <input type="text"/>	Denominator (g): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
Comments:										
.....										
.....										
SOC 3										
All HIV patients diagnosed with active TB (through TB screening) should receive co-trimoxazole prophylaxis (CPT)						Result (tick)				
						<table border="1"> <tr> <td><70%</td> <td>70-90%</td> <td>>90%</td> <td>Previous result:</td> </tr> </table>	<70%	70-90%	>90%	Previous result:
<70%	70-90%	>90%	Previous result:							
Proportion of HIV patients diagnosed with active TB at enrolment who are (started) on co-trimoxazole prophylactic therapy	Numerator (e): <input type="text"/>	Denominator (d): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
Comments:										
.....										
.....										
SOC 8										
Patients enrolled in HIV care who were screened for TB and screened negative should be offered IPT						Result (tick)				
						<table border="1"> <tr> <td><70%</td> <td>70-90%</td> <td>>90%</td> <td>Previous result:</td> </tr> </table>	<70%	70-90%	>90%	Previous result:
<70%	70-90%	>90%	Previous result:							
Proportion of patients enrolled into HIV care who are eligible for IPT who started on IPT	Numerator (l): <input type="text"/>	Denominator (k): <input type="text"/>	Result: <input type="text"/>	<input type="text"/>	%	%				
Comments:										
.....										
.....										
If not on target, what are the root causes (keep asking why until you find the root cause)?										
						Action points				
1.....										
2.....										
3.....										
4.....										
5.....										
6.....										
7.....										
8.....										
9.....										

Appendix 6: Facility feedback form 2: TB screening of patients in ART care

TB/HIV Facility feedback sheet 2: TB screening of patients in ART care; IPT for ART patients

Facility name: _____
 Period evaluated: ____/____/____ to ____/____/____

Date evaluated: ____/____/____
 SOC assessment number: _____

Version 5, Nov 2010

SOC indicators and results: TB screening for ART patients (last ART visit only)
 SOC 1c

All HIV patients enrolled on ART should be screened for TB at every visit on ART

c. Proportion of HIV patients on ART screened for TB at the last visit

Numerator (a):

Denominator (# charts reviewed):

Result: %

Result (tick)			Previous result:
<60%	60-90%	>90%	
<60%	60-90%	>90%	%

Comments:

SOC 2c

ART patients who screen positive for TB symptoms ("TB suspects") should be appropriately evaluated for TB following national TB guidelines/algorithms

c. Proportion of ART patients who are TB suspects at the last visit that have investigations ordered according to national TB guidelines

Numerator (c):

Denominator (b):

Result: %

Result (tick)			Previous result:
<75%	75-90%	>90%	
<75%	75-90%	>90%	%

Comments:

SOC 9

ART patients who are eligible for IPT should be offered IPT

Proportion of ART patients who are eligible for IPT who started on IPT

Numerator (e):

Denominator (d):

Result: %

Result (tick)			Previous result:
<70%	70-90%	>90%	
<70%	70-90%	>90%	%

Comments:

If not on target, what are the root causes (keep asking why until you find the root cause)?	Action points
	1
	2
	3
	4
	5
	6
	7
	8
	9

Appendix 7: Facility feedback form 3: HIV Counseling and Testing for TB patients

TB/HIV Facility feedback sheet 3: HIV Counseling and Testing for TB patients

Facility name: _____
 Period evaluated: ____/____/____ to ____/____/____

Date evaluated: ____/____/____
 SOC assessment number: _____

Version 5, Nov 2010

SOC indicators and results: HIV Counseling and Testing for TB patients SOC 4

All TB patients should know their HIV status

Proportion of TB patients who have an HIV-status recorded
 Comments:

Numerator (a): Denominator (# charts reviewed): Result: %

Result (tick)			Previous result:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<80%	80-90%	>90%	%

SOC 5

TB patients who are HIV positive should be enrolled in HIV care

Proportion of TB patients who are HIV+ enrolled in HIV care (definition: patients with a tick under referred for CCMT/HIV care and a CD4 result in the blue TB card)
 Comments:

Numerator (c): Denominator (b): Result: %

Result (tick)			Previous result:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<70%	70-90%	>90%	%

SOC 6

All TB patients who are HIV positive should receive cotrimoxazole prophylaxis

Proportion of TB patients who are HIV+ who are on CTX prophylaxis (CPT)
 Comments:

Numerator (d): Denominator (b): Result: %

Result (tick)			Previous result:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<70%	70-90%	>90%	%

SOC 7

All co-infected patients eligible for ART should be started on ART during TB treatment

Proportion of TB patients who are HIV+ eligible for ART who are started on ART during TB treatment
 Comments:

Numerator (f): Denominator (e): Result: %

Result (tick)			Previous result:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<70%	70-90%	>90%	%

SOC 7a

All co-infected patients eligible for ART should be started on ART after 2-8 weeks on TB treatment

Proportion of TB patients who are HIV+ eligible for ART who are started on ART between 2-8 weeks of TB Rx
 Comments:

Numerator (g): Denominator (e): Result: %

Result (tick)			Previous result:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<70%	70-90%	>90%	%

<i>If not on target, what are the root causes (keep asking why until you find the root cause)?</i>	<i>Action points</i>
	1
	2
	3
	4
	5
	6
	7
	8