

APPENDIX G MONITORING DURING TREATMENT FOR ACTIVE TB DISEASE AND LATENT TB INFECTION

Table G-1, Summary of routine monitoring requirements during treatment for latent TB infection and active TB disease.

Required Intervention	Baseline	During LTBI Treatment	During Active TB Disease Treatment	Rationale
Side Effect Symptom Inquiry	YES	<ul style="list-style-type: none"> Monthly or at each visit if on directly observed therapy (DOT) Record on DOT checklist 	<ul style="list-style-type: none"> At each visit Record on DOT checklist 	<ul style="list-style-type: none"> To identify symptoms of potential medication side effects Side effects must be reported to YCDC TB Control
Physical Examination	YES	PRN	PRN	<ul style="list-style-type: none"> If signs or symptoms of medication side effects
Social Monitoring	YES	At each visit	At each visit	<ul style="list-style-type: none"> To identify potential issues with adherence, alcohol use, housing, nutrition, etc.
Blood Work	See Table G-2 , G-3 & G-4	See Table G-2 , G-3 & G-4	See Table G-5	<ul style="list-style-type: none"> Screening for known risk factors for hepatotoxicity Monitoring for liver toxicity Children rarely experience liver toxicity
Visual Acuity and Colour Discrimination	YES if taking ethambutol	N/A	Test vision monthly while on ethambutol See Table G-5	<ul style="list-style-type: none"> Ethambutol can cause visual toxicity that manifests as changes in visual acuity and red/green colour discrimination
Sputum Specimens for TB Testing	YES	<ul style="list-style-type: none"> As directed by YCDC TB Control 	See Table G-5	<ul style="list-style-type: none"> Result from 2 month sputum specimen used to determine length of treatment Result from end of treatment sputum specimens used to document cure

Required Intervention	Baseline	During LTBI Treatment	During Active TB Disease Treatment	Rationale
Chest X-Ray	YES	<ul style="list-style-type: none"> As directed by YCDC TB Control (see Table G-2, G-3 & G-4) 	<ul style="list-style-type: none"> As directed by YCDC TB Control (see Table G-5) <p>For respiratory TB cases:</p> <ul style="list-style-type: none"> Chest x-ray is usually repeated for respiratory TB cases at end of 2nd & 4th month of treatment and at completion of treatment 	<ul style="list-style-type: none"> Use to assess response to treatment
Adherence	N/A	Record doses on DOT checklist. Notify YCDC if concerns asap		<ul style="list-style-type: none"> FAX DOT checklists to YCDC TB Control ever 2 weeks
Dispensing Medications	N/A	Individually tailored	Directly Observed Therapy (DOT)	
Reordering Medications	YES	YCDC TB Control monitors medication supplies for all clients on treatment through Panorama		Medications are shipped from BCCDC Vaccine and Pharmacy Services to the client's community
Teaching	YES	Before treatment start and as needed throughout treatment		e.g.: indications for treatment, medications, side effects, monitoring requirements, etc.



Table G-2, Isoniazid (INH) – Summary of baseline testing and ongoing monitoring for clients taking INH for LTBI treatment

NOTE: Copies of test results should be sent to YCDC TB Control. Consult YCDC TB Control about abnormal baseline blood test results.

Actions	Baseline	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6	Month 7	Month 8	Month 9
Engagement of most responsible health care provider	✓									
Clinical assessment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adherence assessment		✓	✓	✓	✓	✓	✓	✓	✓	✓
Chest x-ray*	✓									✓
Weight**	✓									
Lab testing: HB1Ac ^φ , HIV [§] , Hepatitis B [§] & Hepatitis C [§] screen	✓									
Lab testing: AST note: testing of clients under 16 is only done when recommended by TB Services										
16 to 34	✓									
35 to 50	✓	✓								
Over 50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Any age with risk factors for drug induced hepatitis ^Ω	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

* A CXR done within the last **6 months** may be used for baseline assessment, unless the client is immune compromised, then a CXR within the last **3 months** is required. The month 9 CXR is generally only required for clients with TB -related abnormalities noted on their initial chest x-rays.

** Baseline weight is generally sufficient. However monthly monitoring of weight is indicated for clients less than 5 years, low weight adults / adults who lost a significant amount of weight prior to starting or during treatment.

Ω See section [8.6.1](#) for common risk factors for drug-induced hepatitis

φ Not required if already identified or as per existing screening recommendations (ie Diabetes, Type 2—CANRISK guidelines and 2018 Clinical Practice Guidelines, Screening for Diabetes in Adults, Diabetes Canada Clinical Practice Guidelines Expert Committee)

§ Not required if already documented positive or prior result on file and no identified risk since previous testing. Testing of clients under 16 is only done when recommended by TB Service



Table G-3, Rifampin – Summary of baseline testing and ongoing monitoring for clients taking rifampin for LTBI treatment

NOTE: Copies of test results should be sent to YCDC TB Control. Consult YCDC TB Control about abnormal baseline blood test results.

Actions	Baseline	Month 1	Month 2	Month 3	Month 4
Engagement of most responsible health care provider	✓				
Clinical assessment	✓	✓	✓	✓	✓
Adherence assessment		✓	✓	✓	✓
Chest x-ray*	✓				✓
Weight **	✓	✓	✓	✓	✓
Lab testing: Hb1Ac ^ϕ , HIV [§] , Hepatitis B [§] & Hepatitis C [§] screen	✓				
Lab testing: AST, total Bilirubin, CBC, note: testing of clients under 16 is only done when recommended by TB Services					
16 to 34	✓				
35 to 50	✓	✓			
Over 50	✓	✓	✓	✓	✓
Any age with risk factors for drug induced hepatitis ^Ω	✓	✓	✓	✓	✓

* A CXR done within the last 6 months may be used for baseline assessment, unless the client is immune compromised, then a CXR within the last 3 months is required. The month 9 CXR is generally only required for clients with TB -related abnormalities noted on their initial chest x-rays.

** Baseline weight is generally sufficient. However monthly monitoring of weight is indicated for clients less than 5 years, low weight adults and adults who lost a significant amount of weight prior to starting or during treatment

^Ω See section [8.6.1](#) for common risk factors for drug-induced hepatitis

^ϕ Not required if already identified or as per existing screening recommendations (ie Diabetes, Type 2—CANRISK guidelines and 2018 Clinical Practice Guidelines, Screening for Diabetes in Adults, Diabetes Canada Clinical Practice Guidelines Expert Committee)

[§] Not required if already documented positive or prior result on file and no identified risk since previous testing. Testing of clients under 16 is only done when recommended by TB Services

Table G-4, Isoniazid and rifapentine (3HP) - Summary of baseline testing and ongoing monitoring for clients taking 3HP for LTBI treatment

NOTE: Copies of test results should be sent to YCDC TB Control. Consult YCDC TB Control about abnormal baseline blood test results.

Actions	Baseline	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Engagement of most responsible health care provider	✓												
Clinical assessment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Adherence assessment		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Chest x-ray*	✓												
Weight **	✓												
Lab testing: Hb1Ac ^Φ , HIV [§] , Hepatitis B [§] & Hepatitis C [§] screen	✓												
Lab testing: AST, total Bilirubin & CBC	✓				✓				✓				✓

* A CXR done within the last 6 months may be used for baseline assessment, unless the client is immune compromised, then a CXR within the last 3 months is required. The month 9 CXR is generally only required for clients with TB -related abnormalities noted on their initial chest x-rays.

** Baseline weight is generally sufficient. However monthly monitoring of weight is indicated for clients less than 5 years, low weight adults and adults who lost a significant amount of weight prior to starting or during treatment

Ω See section [8.6.1](#) for common risk factors for drug-induced hepatitis

Φ Not required if already identified or as per existing screening recommendations (ie Diabetes, Type 2—CANRISK guidelines and 2018 Clinical Practice Guidelines, Screening for Diabetes in Adults, Diabetes Canada Clinical Practice Guidelines Expert Committee)

§ Not required if already documented positive or prior result on file and no identified risk since previous testing. Testing of clients under 16 is only done when recommended by TB Services

Table G-5, Summary of baseline testing – ongoing monitoring requirements for clients taking standard TB treatment

NOTE: Copies of test results should be sent to YCDC TB Control. Consult YCDC TB Control about abnormal baseline blood test results.

Actions	At Baseline *	End week 1	End week 2	End week 3	End month 1	End month 2	End month 3	End month 4	End month 5	End month 6
HIV serology ^Ω	✓									
AST, Total Bilirubin	✓		16+		16+	16+	16+	16+	16+	
Serum creatinine	✓	Ongoing recommendations for testing beyond baseline will be provided if taking ethambutol and/or pyrazinamide, and symptomatic or at risk for renal toxicity								
CBC	16+		16+	16+	16+	16+	16+	16+	16+	
Hepatitis B ^Ω , Hepatitis C ^Ω , HgbA1C ^Ω	16+									
Uric Acid	Not routinely required at baseline or during treatment, if taking pyrazinamide and symptomatic for gout contact YCDC									
Weight (kg) ^Ψ	✓									✓
Check dosing against current weight	✓									✓
Snellen chart and Ishihara colour tests	If includes ethambutol	Repeat monthly while regime includes ethambutol. Inform YCDC and refer to ophthalmology if evidence of visual abnormality or ongoing use of ethambutol								
Sputum for TB testing (AFB smear and culture)	3 (all cases)	Submit 3 sputum samples every 2 weeks until AFB smear is negative (respiratory TB only) [†]				3 (respiratory TB only)				3 [†] (respiratory TB only)
Chest x-ray [◇]	✓ (all cases)					✓ (respiratory TB only)		✓ (respiratory TB only)		✓ (respiratory TB only)

See following page for footnotes related to this table

Table G-4, Summary of baseline testing - ongoing monitoring requirements for clients taking standard TB treatment continued (footnotes):

- * Results from blood tests done within 30 days prior to treatment start date can be used as baseline measurements provided they are within normal limits. Notify YCDC TB control for clients with hepatotoxicity risk factors (see [Section 8.6.1](#)).
- ** When existing blood test results include ALT and no AST, ALT may be used at baseline. Indicate if result is outside of local reference range. Also see guidelines for monitoring abnormal AST levels ([Section 8.6.2.3](#)).
- 16+ Routinely required only for cases 16 years of age or older.
- Ω Not required if already documented positive, or in the case of HbgA1C, identified.
- Ψ Monthly monitoring of weight is indicated for pediatric clients, low weight adults or those adults who lost a significant amount of weight prior to starting or during treatment.
- ◇ Consult for guidance on the management of children unable to spontaneously produce sputum. Gastric lavage is typically recommended in young children. See [Appendix E](#) (sputum collection).
- ^ A CXR in the past 2 weeks can be used for baseline assessment.
- † YCDC TB control will consult BC CDC TB Services if AFB smear-positive or culture-positive after 2 months of treatment. End of treatment specimens should be submitted if possible, however it is not necessary for clients to undergo sputum induction for this purpose.