Management of Tuberculosis for LDS Missionaries

Public Health Committee
TB Committee

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Management of Tuberculosis for LDS Missionaries

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MANAGEMENT OF TUBERCULOSIS FOR LDS MISSIONARIES

GOALS

1. Identify all *prospective missionaries* with ***active tuberculosis**** before entry into MTC. Prospective missionaries with a diagnosis of active tuberculosis will have mission service deferred until ***successful treatment of disease**** is documented.
2. Identify all missionaries with active tuberculosis at entry into the MTC. Provide infection control, diagnostic services, and ***appropriate therapy****(see *Treatment Section,* pg. 4*)*.
3. Identify all missionaries who develop active tuberculosis during mission service, provide initiation of proper therapy, and arrange for a medical release, if appropriate.
4. Identify all prospective missionaries with ***latent tuberculosis infection* (LTBI)***. All missionaries with LTBI meeting ***risk criteria for treatment**** will be offered treatment during their mission service, including ***surveillance for adverse drug reactions**** where appropriate.
5. Identify all missionaries ***at risk for LTBI**** during mission service, provide or arrange for appropriate skin testing, and offer LTBI treatment as indicated.
6. Identify all returning missionaries with LTBI. All returning missionaries with LTBI will be referred for treatment per the standard of care in their home communities.
7. Maintain statistical records of rates of LTBI and active cases of tuberculosis among missionaries and report to public health authorities as appropriate.

*DEFINITIONS**

1. ***Active tuberculosis*: ** Bacteriological, radiographic and/or clinical evidence of active TB, i.e. positive culture for *M. tuberculosis,* ***or*** positive sputum for acid fast bacilli, ***or*** positive reaction to tuberculin skin test (TST) ***and*** radiographic and/or clinical evidence of current disease, e.g. cough more than three weeks, fever, fatigue, unexpected weight loss, coughing up blood, chest pain, loss of appetite, or night sweats.
2. ***Successful treatment of disease:*** Documented completion of a treatment regimen approved by the American Thoracic Society (2002 Consensus Report) with exceptions for alternative standards of care prevailing in an affected missionary's home country (see *Treatment Section*, pg. 4).
3. ***Latent tuberculosis infection (LTBI):*** Positive reaction to tuberculin skin test with no clinical, radiographic or bacteriologic evidence of active TB.
4. ***Risk criteria for treatment*: ** Individuals who test *positive to TST* and are judged to be at *high risk for TB* (see criteria listed in *Diagnostic Evaluation* Section under *TST Testing, Section ii-a,b,* see pg. 2*)*, and medical high risk conditions, *Section A-4,* see pg. 2). All missionaries at high risk for active TB are strongly encouraged to take LTBI treatment and may have mission service deferred if treatment is refused.
5. ***Surveillance for adverse drug reactions:*** Each month the missionary will be questioned about the following symptoms -- loss of appetite, nausea/vomiting, dark urine, yellow skin, persistent unusual sensations of the hands or feet, persistent fatigue, fever lasting 3 or more days, abdominal tenderness along the right lower rib cage, easy bruising, bleeding, or joint pain. Answers will be recorded on the *Missionary TB Medication Tracking Report* form (see pg. 15) and missionary will initial form and report to Mission Health Coordinator.
6. ***At risk for LTBI*:**
7. ***Close contact with an active tuberculosis case*** - at least 12 hours total in the same household or room with a documented active TB case, even if accumulated over several visits;
8. ***TB risk medical conditions -*** diabetes mellitus, silicosis, and chronic renal failure, weight loss of more than 10% below ideal body mass index, gastrectomy, and jejunoileal bypass;
9. ***High risk congregate setting -*** residing or working in any of the following institutional settings -- hospital, homeless shelter, correctional facility, nursing home, or residential facility for persons at risk for TB, such as AIDS.

DIAGNOSTIC EVALUATION
for Active and Latent Tuberculosis

A. Screening Assessment of Risk Factors

1. History of exposure to active TB: close contact of at least 12 hours in the same household or room with a documented active TB case (can be accumulated over several visits).
2. Living in a country with high prevalence of tuberculosis.
3. Exposure to conditions with increased risk of TB: residing or working in institutional settings—hospital, homeless shelter, correctional facility, nursing home, or residential facility for persons at risk for TB, such as AIDS patients.
4. Medical history of conditions with high risk of TB: diabetes mellitus, silicosis, chronic renal failure, weight loss of more than 10% below ideal body mass index, gastrectomy, and jejunoileal bypass.

B. Performance & Interpretation of Tuberculin Skin Test (TST)

Tuberculin Skin Test

(Intradermal injection of 5 TU (tuberculin units) or 2 TU of PPD by Mantoux technique)

1. **< 5 mm** of induration on Tuberculin Skin Test (TST): always considered negative.

2. **5-14mm** of induration: considered negative or non-reactive unless:
   a. HIV infected, close contact with documented TB case, has radiographic evidence (fibrosis) of prior TB disease, on current steroid therapy (equivalent of 15 mg/day of prednisone for at least 1 month), is an organ-transplant recipient, o r immunosuppressed for other reasons: with these risk factors, induration of **5mm** or more is considered positive!
   b. Injection drug use, documented TST conversion to positive within the previous two years, association with a high-risk congregate setting (working or residing in hospital, homeless shelter, correctional facility, nursing home or residential facilities for persons at risk for TB (such as AIDS patients), with these risk factors, induration of **10mm** or more is positive!
   c. For returning missionaries, an **increase** of induration of **10mm** or more over initial pre-mission TST will be considered a positive TST (if result of initial TST is not known, apply risk factors in sections a & b above).
   d. With a history of BCG vaccination, and contact with an active case of tuberculosis or residence in a high prevalence country, induration of 10 mm or more is considered positive.

3. **≥ 15mm** of induration always considered a positive test.

4. **TST cannot be obtained:** Then individual must have **clinical examination** for signs and symptoms of tuberculosis (see C-1 below), and a **chest X-ray.** If there is no evidence of active tuberculosis, missionary may be assigned anywhere.

C. Pertinent Historical Information

1. History of symptoms or signs of active tuberculosis:
   a. cough of more than three weeks
   b. coughing up blood (hemoptysis)
   c. unexplained weight loss
   d. fever and/or night sweats
   e. unexplained fatigue
   f. loss of appetite/anorexia
   g. chest pain/especially pleural

2. Medical conditions with increased risk of TB: diabetes mellitus, silicosis, chronic renal failure, weight loss of more than 10% below ideal body mass index, gastrectomy, jejunoileal bypass.

D. Physical Examination

1. Physical evidence of pulmonary disease: wheezing, pulmonary rales, friction rub, decreased breath sounds.
2. Unexplained fever, adenopathy, neck stiffness.
3. Jaundice, hepatosplenomegaly, tenderness at rib margins.
4. Rashes, papules, erythema nodosum, etc.

E. Chest X-ray

1. Radiographic Evidence of Active Lung Disease: pulmonary infiltrates fibrosis, cavitation, hilar or mediastinal adenopathy, suggesting active disease.
2. Calcified nodes or nodules (Ghon complex), pleural thickening (scarring) suggesting remote disease.

F. Bacteriologic Tests f or Active Tuberculosis

1. Examination of sputum for acid fast bacilli .
2. Culture of sputum specimen for *Mycobacterium tuberculosis* .

CDC Classification System for TB

Class	Type	Description
0	No TB exposure Not infected	No history of exposure Negative reaction to tuberculin skin test
1	TB exposure No evidence of infection	History of exposure Negative reaction to tuberculin skin test
2	TB infection No disease	Positive reaction to tuberculin skin test Negative bacteriologic studies (if done) No clinical, bacteriological, or radiographic evidence of active TB
3	TB, clinically active	*M. tuberculosis* cultured (if done) Clinical, bacteriological, or radiographic evidence of current disease
4	TB Not clinically active	History of episode(s) of TB **Or** Abnormal but stable radiographic findings Positive reaction to the tuberculin skin test Negative bacteriologic studies (if done) **And** No clinical or radiographic evidence of current disease
5	TB suspected	Diagnosis pending

TREATMENT OF TUBERCULOSIS

A. Active Tuberculosis

1. *Prospective missionaries* who are diagnosed with **active tuberculosis** will be treated by local physicians until they are considered non-contagious.
2. Missionaries who are diagnosed with active tuberculosis (Class 3) while on their mission or at a MTC with the above diagnostic criteria, will be isolated, and managed per American Thoracic Society/CDC Protocol. This includes treatment with isoniazid, rifampin, Pyrazinamide, and ethambutol for two months and until they are judged non-contagious in consultation with the Area Medical Advisor. They must complete 6 months of therapy with two drugs (isoniazid and rifampin) either at home or on mission assignment, unless alternative standards of care prevail in the missionary's home country.
3. Airline travel: LDS missionaries with **active tuberculosis** will not be transported until treatment response renders them non-infective. If a missionary with newly identified active tuberculosis has traveled by air with a flight time greater than 6 hours during the symptomatic period, notice of the event will be given to the relevant airline.

B. Latent Tuberculosis Infection (LTBI)

1. LTBI Treatment Criteria

a. All missionaries going through the Provo MTC and serving in the USA or Canada will have a PPD, and if positive, will be offered treatment for LTBI.

b. Missionaries with high risk factors who test positive with TST (see *TST Section B-2-a* and *B-2-b,* see pg. 2) are strongly encouraged to take LTBI treatment and may have mission deferred if treatment is refused.

c. Missionaries who have a positive TST, but do not have high risk factors will not be offered LTBI treatment unless such care is considered the community standard where they are serving or is required by public health regulations where the missionary is serving, including local requirements to report and receive treatment for LTBI.

d. Missionaries with a positive TST who have no risk factors may accept or refuse LTBI treatment (see *Treatment Consent and Treatment Refusal* forms, pgs. 13-14) and may serve anywhere.

e. North Americans going to international missions who are newly diagnosed with LTBI will receive treatment if safe monitoring can be maintained.

f. LTBI treatment should be considered for any BCG-vaccinated person whose skin test reaction is equal to or greater than 10mm if they have had contact with an active case or were born or resided in a high TB prevalence country.

2. Medications

a. **Isoniazid**
300 mg/day for 9 months

b. **Pyridoxine (vitamin B6)**
25 mg/day with isoniazid only to missionaries with conditions in which neuropathy is common, such as diabetes, uremia, malnutrition, HIV infection, and seizure disorders.

or

c. **Rifampin**
10 mg/kg (600 mg maximum) daily for 4 months.
Expect orange color of urine, tears, and stools.
Do not wear soft contact lenses while taking rifampin.

3. Prescribing Instructions

a. Do not give medicines to persons with history of liver disease.
b. If liver disease is suspected, obtain baseline AST and ALT tests before medication use.
c. Give a 9 month supply of INH or a 4 month supply of Rifampin to the missionary.
d. Additional information can be found in "*Mission Health Coordinator Instructions for Treatment of*

Latent Tuberculosis Infection" form, (see pg. 12).

4. **Precautions and Surveillance during LTBI Treatment**
   a. *Isoniazid* and *rifampin* are contraindicated in anyone with liver disease or dysfunction. Missionaries on LTBI treatment should not take more than 4 grams of *acetaminophen* per day.
   b. The missionary will record daily medication on the monthly *Missionary TB Medication Tracking Report* form (see pg. 15), which is delivered monthly to the M*ission Health Coordinator*, who is responsible for surveillance of medications taken and *adverse side effects* experienced! It is desirable to have the missionary's companion directly observe and monitor the taking of medications (DOT= directly observed therapy).
   c. Each month the missionary will be questioned about the following symptoms:
   Loss of appetite, nausea/vomiting, dark urine, yellow skin, persistent unusual sensations of the hands or feet, persistent fatigue, fever of over 3 days, abdominal tenderness along the right lower rib cage, easy bruising, bleeding or joint pain (reported on *Missionary TB Medication Tracking Report).*

5. **Choice of LTBI Treatment**
   a. Missionaries whose home or mission is in an area known to have INH resistant TB or who cannot take isoniazid and who need LTBI treatment will be placed on *rifampin* for 4 months.
   b. Missionaries from all other areas of the world who can take isoniazid (i.e. do not have liver dysfunction or disease) and who need LTBI treatment, will be given isoniazid.
   c. Missionaries who cannot take either isoniazid or rifampin will need consultation by a TB physician specialist on the Public Health/Tuberculosis Committees.

MANAGEMENT PROCEDURES

Prospective Missionaries

a. All prospective missionaries will receive a medical examination at the time of application for mission service. Unless otherwise specified, a TST must be included with the examination.
b. Persons with active tuberculosis will be referred for treatment and will not be considered for missionary service until such time as they are non-infectious for TB as documented by a written statement from a competent medical authority. These missionaries must be monitored for drug compliance and completion of therapy.
c. Prospective missionaries with positive TST, but without evidence of active TB (i.e. *LTBI*) who are at *low risk* for developing TB should be offered the option of treatment (per standard of care in their home country or where they will serve a mission) if there is little risk of drug toxicity. Those who choose to forgo treatment must sign a statement (see pg. 14) indicating that they accept the risk inherent in refusing therapy (i.e. risk of developing active TB at some future time). Mission assignment should not be affected by the presence of LTBI in a low risk person.
d. All senior missionaries should have a two-step tuberculosis skin test. If the initial test is negative, a repeat test should be performed in 2-3 weeks.
e. Missionaries with LTBI and moderate or *high risk factors* (see *TST Section B-2-a and B-2-b*, pg. 2) should be placed on appropriate therapy before departing for their initial mission assignment. Mission assignments should include consideration of each missionary's individual medical needs.

Missionaries at MTC:

a. Missionaries arriving at a MTC to begin mission service who have lived in a country with high prevalence of tuberculosis during the past 5 years will be asked to undergo tuberculosis screening, including:
   1. Interview for symptoms of active tuberculosis (see *Diagnosis Evaluation Section, C-1,* pg. 2),
   2. Tuberculin skin testing (see *Diagnostic Evaluation Section B 1-4, TST*, pg. 2),

3. Chest X-ray, and
4. Other diagnostic clinical tests as indicated.

b. Missionaries who have symptoms suggestive of TB, or physical or radiographic evidence suggestive of active tuberculosis will be isolated until diagnosis is ruled out or they have received 2 weeks of four drug therapy with clinical response.

c. All cases of active tuberculosis identified at an MTC will be reported to the Public Health Committee and to the appropriate local public health authority.

d. All missionaries from developing countries or without a PPD test, going through MTC at Provo and serving in the USA and Canada, will have a PPD and, if positive, will be offered treatment for LTBI.

e. All missionaries from North America going through the MTC at Provo with a positive TST and serving abroad will be offered treatment for LTBI if safe monitoring is available.

f. All international MTCs will have a reliable program to screen for tuberculosis in missionaries arriving from high prevalence countries. This must include readily available facilities to do reliable chest X-rays or PPD screenings. Treatment for LTBI will only be offered if it is the standard of care in the country where the missionary is serving.

Missionaries in Mission Field

a. Unless local standards of care supervene, missionaries who develop active tuberculosis while serving a mission will be managed per the American Thoracic Society/CDC protocol with advice from the assigned tuberculosis physician specialist on the Tuberculosis Committee. They may be medically released as soon as they pose no risk to others while in transit home as determined in consultation with the Area Medical Advisor.

b. The responsible Area Medical Advisor will report each case of active tuberculosis to the Tuberculosis Committee and will conduct a tuberculosis contact investigation (to include TST 3 months after initial case identification for all close contacts of the affected missionary who are known to be TST negative) in order to identify and treat any other missionaries with active disease, identify and treat missionaries with LTBI, and discover, if possible, the source of the tuberculosis infection.

Missionaries Departing from Mission

a. Upon departure from their assigned mission, all missionaries will receive a copy of the "Missionary Tuberculosis Screening Report" with instruction from the mission president to arrange for tuberculosis skin testing as soon as possible after returning home or in areas where PPD testing is not available a mission exit chest x-ray should be done if available.

b. All returning missionaries should have a tuberculin skin test; including those with a history of positive TST and/or BCG vaccination, unless contraindicated by history of strongly positive TST.

c. Those whose TST results are positive may require further studies and/or treatment, which will be the responsibility of the missionary's family in consultation with their local health care provider and/or public health department.

d. A copy of the "*Missionary Tuberculosis Screening Repor t*" (see pg. 19) should be sent to Church Health Services, as indicated on the form.

Duties of TB Surveillance Personnel

A. MTC Medical Directors

1. Maintain adequate supplies o f properly stored 5 TU-PPD (*or 2 TU-PPD if 5 TU not available*), syringes and other items needed to conduct TST on all missionaries from countries with high prevalence of tuberculosis.
2. Interview each missionary at risk for symptoms of tuberculosis to determine the risk of active TB. (See protocol in section on *Diagnostic Evaluation, A. Screening Assessment of Risk Factors, and C-1. History of Symptoms or Signs of Active Tuberculosis (*pg. 2*)).*
3. Missionaries diagnosed with active tuberculosis, shoul d be returned home, if possible, on four-drug therapy or placed in a medical facility with adequate isolation until they are non-contagious on anti-TB therapy.
4. Arrange for necessary clinical investigation of all possible cases of active tuberculosis in order to definitively establish or rule out that diagnosis.
5. Maintain supplies of medications for treatment of both active tuberculosis and LTBI.
6. Report all cases of active tuberculosis to the Missionary Tuberculosis Committee.
7. Make treatment decisions in consultation with the assigned TB physician specialist on the Public Health/Tuberculosis Committees.
8. Follow protocol for treatment of LTBI including DOT and surveillance for adverse drug effects. Pyridoxine, (25 mg/day, see pg. 4 B-2-b) is used with INH only in individuals with conditions in which neuropathy is common.
9. Inform all Area Medical Advisors of missionaries coming to their area on LTBI treatment.

B. Area Medical Advisors

1. Maintain access to adequate supplies of PPD, syringes and other items needed to conduct TST for all missionaries with close contact to a documented active case of tuberculosis. *If a skin test is performed and is positive, obtain a chest X -ray.*
2. Arrange for clinical investigation of all missionaries exhibiting symptoms of active tuberculosis in order to definitively establish or rule out that diagnosis.
3. Maintain (or have access to) supplies of necessary medications for treatment of both active tuberculosis and LTBI.
4. Assure that each missionary with LTBI identified during contact investigation has a chest radiograph.
5. Make treatment decisions in consultation with the assigned TB physician specialist on the Public Health/Tuberculosis Committees.
6. Train mission office staff to follow protocol for treatment of LTBI, including DOT and surveillance for adverse drug reactions.
7. Assure that mission office staff will stop LTBI therapy if an adverse drug reaction is suspected.
8. Clinically investigate all possible cases of adverse drug reactions among missionaries on LTBI therapy.
9. Continually remind all mission office staff to issue to each missionary at the time of release and departure a copy of the *Missionary Tuberculosis Screening Report* form (see pg. 19) with appropriate instructions.
10. Report each case of active tuberculosis and LTBI to the Public Health/Tuberculosis Committees.
11. Report the findings of each tuberculosis investigation to the Public Health/Tuberculosis Committees.
12. *Send copies of Missionary TB Medication Tracking Reports received each month from Mission Health Coordinators (mission president's wife), to Church Health Services, 132 South State # 200, Salt Lake City, UT 84111.*

C. Mission Office Staff (Mission Health Coordinator) *(it is anticipated that the mission president's wife will often take primary responsibility for the following duties)*

1. Through the Area Medical Advisor, assure an adequate supply of LTBI treatment medications for

missionaries serving in the mission.
2. Stop LTBI treatment if adverse drug reactions are suspected.
3. Report monthly to the Area Medical Advisor concerning LTBI treatments and surveillance for adverse drug reactions by forwarding the completed *Missionary TB Medication Tracking Report* forms for each missionary on LTBI treatment. *Copies should also be sent to Church Health Service, 132 South State, #200, Salt Lake City, UT, 84111.*
4. Report immediately to the Area Medical Advisor each suspected case of active tuberculosis (i.e. a missionary with symptoms of tuberculosis).
5. Provide each missionary a copy of the *Missionary Tuberculosis Screening Report* form at the time of release and departure from the mission field, with instructions to arrange for TST upon arrival at home.

D. Tuberculosis Physician Specialist on t he Public Health / Tuberculosis Committees:

1. Maintain current knowledge of tuberculosis treatment and diagnosis (American Thoracic Society/CDC protocol)
2. Maintain regular contact with Area Medical Advisors and MTC medical directors in assigned regions.
3. Respond to questions about tuberculosis by end of next business day (if possible).
4. Participate in and accept assignments at monthly committee meetings.

E. Missionary Tuberculosis Screening Report Form Coordinator:

1. Receive and compile all *Missionary Tuberculosis Screening Report* forms. Forms can be obtained from your local Distribution Center. Order numbers are: English 31966-00; Spanish 31966-002; French 31966-140.
2. Provide quarterly and annual summary statistics by area (or as needed by mission) of:
   a. number of missionaries released, divided by home location
   b. number and percentage of missionaries reporting post-mission TB screening
   c. number and percentage of missionaries completing TB screening with *positive TST*
   d. number and percentage of missionaries with *positive TST* receiving adequate treatment per American Thoracic Society/CDC protocol by home location.
3. Attend and participate in monthly Tuberculosis Committee meetings

F. Chair, Tuberculosis Committee

1. Serve as liaison of the Tuberculosis Committee to the Public Health Committee.
2. Assure that the document, *Management of Tuberculosis for LDS Missionaries,* remains current.
3. Assure accuracy of statistical reports for the tuberculosis program.
4. Serve as chair of the monthly Tuberculosis Committee setting the agenda and making assignments to committee members. May also serve as Tuberculosis Physician Specialist.

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INTERPRETATION OF TUBERCULIN SKIN TESTS

I. <5 mm of induration on Tuberculin Skin Test (TST) (5TU and Mantoux method)*
Always considered a negative test.

II. 5-14 mm of induration on TST (5TU and Mantoux method)
Considered a negative (non-reactive) test unless:

a. HIV infected, close contact of documented active TB case, has radiographic evidence (fibrosis) of prior TB disease, on current steroid therapy (the equivalent of 15 mg/day prednisone for at least 1 month), is an organ transplant recipient, o r for other reasons is immunosuppressed. (If a person has any of these risk factors, a TST with **5 mm** or more of induration is considered positive.)
b. Injection drug use, documented TST conversion to positive within the previous two years, association with a high risk congregate setting (working or residing in a hospital, homeless shelter, correctional facility, nursing home, or residential facilities fo r persons at risk for TB (such as AIDS patients)). If a person has any of these risk factors, a TST with **10 mm** or more of induration is considered positive.
c. For returning missionaries, an **increase** of induration of **10mm** or more over initial pre-mission TST will be considered a positive TST (if result of initial TST is not known, apply risk factors in sections a & b above).
d. With a history of BCG vaccination and contact with an active case of tuberculosis or residence in a high prevalence country, induration of 10 mm or more is considered positive.

III. ≥15 mm of induration on TST (5TU and Mantoux method)
Always considered a positive test.

IV. When TST cannot be obtained
Must have clinical examination for signs and symptoms of tuberculosis (cough for more than 3 weeks, coughing up blood, fever, fatigue, night sweats, unexpected weight loss, chest pain, o r loss of appetite) and chest X-ray. If no evidence of active tuberculosis is identified, m issionary may be assigned anywhere.

Treatment of positive TST
Persons with risk factors identified in paragraph II A and II B above are strongly encouraged to take Latent TB infection (LTBI) treatment (see *Treatment of Latent Tuberculosis Infection*, see pg. 4) and may have mission service deferred if treatment is refused. Missio naries who have a positive TST but do not have risk factors will not be offered LTBI treatment by the LDS Church Missionary Department, unless such care is considered the community standard or is required by public health regulations where the missionary is serving. Missionaries with a positive TST who have no risk factors may accept or refuse LTBI treatment (see treatment consent and treatment refusal forms) and may serve anywhere.

***NOTE: 2 TU strength PPD is an acceptable alternative in countries w here 5 TU is not available. Interpretation of the TST is no different when 2 TU is used.**

Treatment of Latent Tuberculosis Infection

Prescribing and monitoring instructions for Area Medical Advisors for the use of isoniazid (INH) and rifampin

Medications

Isoniazid

300 mg/day for 9 months,

Pyridoxine treatment with isoniazid will be given at a dosage of 25 mg/day only to missionaries with conditions in which neuropathy is common e.g. diabetes, uremia, malnutrition, HIV-infection, and seizure disorders.

OR

Rifampin

600 mg/day for 4 months

Expect orange color of urine, tears, and stools

Do not wear soft contact lenses while taking rifampin

Prescribing Instructions:

1. Do not give medicines to persons with history of liver disease.
2. If liver disease is suspected, obtain baseline AST and ALT liver tests before medication use.
3. Give a 9 month supply of INH, or a 4 month supply of rifampin, to the missionary (see *Missionary Health Coordinator Instructions,* pg. 12).

Mission Health Coordinator Instructions for Treatment of Latent Tuberculosis Infection

1. Missionary will arrive in the mission with a full supply of medication to treat latent tuberculosis infection.*

2. The Mission Health Coordinator** is responsible for ensuring the following:
   a. Sufficient *Missionary TB Medication Tracking Report* forms (see pg. 15) for the duration of treatment are distributed to missionary.
   b. Instruct missionary to record medication dosage taken **daily**.
   c. Instruct missionary's companion to observe medicine being taken daily and initial *Missionary TB Medication Tracking Report* form on days observed.
   d. Instruct missionary to submit completed *Missionary TB Medication Tracking Report* form to the Mission Health Coordinator at the **end of each month**.
   e. Missionary being treated for latent tuberculosis, will report any of the following conditions to the Mission Health Coordinator **immediately**:
      - Dark brown urine
      - Jaundice (white of eye becomes yellow)
      - Loss of appetite
      - Recurrent nausea/vomiting
      - Recurrent abdominal pain
      - Recurrent fever lasting 3 or more days
      - Numbness or tingling in the hands or feet
      - Easy bruising or bleeding
      - Unusual fatigue

3. Mission Health Coordinator will instruct missionary to **stop taking medication** if:
   a. Dark urine and/or yellow eyes are reported.
   b. Two or more conditions (see 2e above) are reported.
      - **Report these findings to the Area Medical Advisor immediately.**

4. The Mission Health Coordinator should do the following on a **monthly basis**:
   a. Ask missionary if they have any of the symptoms found in 2e above. Keep record of missionary's response on ***Health Coordinator TB Medication Tracking Report*** form, (see pg. 16).
   b. If there are no contraindications (adverse side-effects, see 2e above), the missionary can continue on medications.
   c. Mission Health Coordinator will collect and forward copies of the ***Missionary TB Medication Tracking Report form and the Health Coordinator TB Medical Tracking Report form to their Area Medical Advisor <u>and</u> to Church Health Services, 132 South State, Salt Lake City, Utah 84111; phone 801-240 3635; fax 801-240-1661***.
   d. The Area Medical Advisor is responsible for:
      i. reviewing the reports,
      ii. taking appropriate action, and
      iii. consulting with Church Health Services if necessary.

*Person infected with tuberculosis bacterium, but person does not have active disease nor is he/she contagious
**Usually the mission president's wife

Informed Consent for Latent Tuberculosis Infection Treatment

<table>
<tr><td>Missionary Name</td><td>Mission</td></tr>
<tr><td>Missionary Release Date (mm/dd/yr)</td><td>Mission Health Coordinator</td></tr>
<tr><td>Mission Area Medical Advisor</td><td>Home Stake</td></tr>
<tr><td>Home Ward</td><td rowspan="2">Home Address</td></tr>
<tr><td>Home Telephone</td></tr>
</table>

Dear Missionary:

Your recent medical evaluation and tests have shown that you have been infected by the bacterium that causes tuberculosis. Currently your infection is dormant and not a danger to you or those with whom you come in contact. However, if not treated, you have a 1 in 10 chance of developing active TB during your lifetime.

It is recommended that you be treated with the medications isoniazid or rifampin that will kill the tuberculosis bacterium. The medications may have side effects (see list below). These side effects must be reported to the person who is following your care. In about 1% of cases, the medications can cause liver inflammation. The inflammation will stop when the medications are discontinued.

You will receive sufficient medication for a nine-month period and are asked to keep a daily medication dosage record, which will be provided, for the full treatment period. You will also be asked by the Mission Health Coordinator if the following conditions occur before a new supply of medication is provided:

- Dark brown urine
- Jaundice (white of eyes become yellow)
- Loss of appetite
- Recurrent nausea/vomiting
- Recurrent abdominal pain
- Recurrent fever lasting 3 or more days
- Numbness or tingling in the hands or feet
- Easy bruising or bleeding
- Unusual fatigue

Your signature below indicates you understand the risk of developing tuberculosis; and that you understand the usefulness of taking isoniazid or rifampin for the probable prevention of tuberculosis. You also understand that the medicines have a 1% possibility of causing liver inflammation. That careful reporting of any problems you have with the use of the medicines can prevent the development of liver inflammation.

Signature	Date
Witness	Date

Return to: Church Health Services
132 South State, Suite 200
Salt Lake City, Utah 84111

or: Fax 801-240-1661

Refusal for Latent Tuberculosis Infection Treatment

Missionary Name	Mission
Missionary Release Date (mm/dd/yr)	Mission Health Coordinator
Mission Area Medical Advisor	Home Stake
Home Ward	Home Address
Home Telephone	

Dear Missionary:

Your recent medical evaluation and tests have shown that you have been infected with the bacterium that causes tuberculosis. Currently the infection is dormant and not a danger to you or those with whom you come in contact. However, if you are not treated you have a risk of 1 in 10 chance of developing active TB during your lifetime.

We recommend that you be treated with the medications isoniazid or rifampin. These drugs kill the tuberculosis bacterium.

I understand the risk of developing tuberculosis in my lifetime if I do not take the treatment. I refuse to take medication for the treatment of latent tuberculosis.

Signature	Date
Witness	Date

Return to: **Church Health Services**
132 South State, Suite 200
Salt Lake City, Utah 84111

or: Fax 801-240-1661

Missionary TB Medication Tracking Report

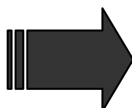
For the month of ________________________

Missionary Name	Mission
Missionary Release Date (mm/dd/yr)	Health Coordinator Phone
Mission Area Medical Advisor	Missionary Home Address
Missionary Home Ward	
Missionary Home Stake	Missionary Home Telephone

The missionary in question should do the following:

1. Record on a **daily** basis that medication was taken by filling in the date on the daily log below. Your companion should observe you taking the medication and confirms this by initialing each day of observation. **(<u>IMPORTANT</u>: Missionary must take TB medication on a daily basis for the full period of time prescribed if the TB organism is to be killed. Otherwise there is a 1 in 10 chance of getting active tuberculosis during one's lifetime.)**
2. Stop medication immediately and report symptoms to Health Coordinator immediately if:
   a. you experience dark urine and/or jaundice (white of the eye becomes yellow),
   b. two or more of the conditions below are experienced.

Must Be Completed



Circle 'yes' or 'no' for each item below and date when appropriate			If yes, date of occurrence
Dark brown urine	Yes	No	
Jaundice (white of eye becomes yellow)	Yes	No	
Loss of appetite	Yes	No	
Recurrent nausea/vomiting	Yes	No	
Recurrent abdominal pain	Yes	No	
Recurrent fever lasting 3 or more days	Yes	No	
Numbness or tingling in the hands or feet	Yes	No	
Easy bruising or bleeding	Yes	No	
Unusual Fatigue	Yes	No	

3. Date medication was discontinued ______________________________ completed ____

Daily Log of TB Medication Taken:

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____
Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____
Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____
Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____
Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____	Date___/___/___ ☐ TB medicine Initial_____

<u>Missionary</u>: Immediately forward completed copy of the *Missionary TB Medication Tracking Report* to your Mission Health Coordinator.
<u>Mission Health Coordinator</u>: Immediately forward completed copies of the *Missionary TB Medication Tracking Report* and *Health Coordinator TB Medication Tracking Report* forms to your Area Medical Advisor and fax the same information to Church Health

Health Coordinator TB Medication Tracking Report

(For use by the Health Coordinator **ONLY**)

For the month of ______________

Missionary Name	Mission
Missionary Release Date (mm/dd/yr)	Health Coordinator Phone
Mission Area Medical Advisor	Missionary Home Address
Missionary Home Ward/Branch	
Missionary Home Stake/District	Missionary Home Telephone (with area code)

1. Record missionary's response on table below: Date Medication Started: _________________

Must Be Completed

Circle 'yes' or 'no' for each item below and date when appropriate			If yes, date of occurrence
Dark brown urine	Yes	No	
Jaundice (white of eye becomes yellow)	Yes	No	
Loss of appetite	Yes	No	
Recurrent nausea/vomiting	Yes	No	
Recurrent abdominal pain	Yes	No	
Recurrent fever last 3 or more days	Yes	No	
Numbness in the hands or feet	Yes	No	
Easy bruising or bleeding	Yes	No	
Unusual Fatigue	Yes	No	

2. Health Coordinator will instruct missionary to **stop medication** if:
   - Dark urine and/or yellow eyes are reported.
   - Two or more of the conditions (see #1) are reported.
   - Report these findings to the Area Medical Advisor **immediately**.

Medication Discontinued

Name of Medication	Date Medication Discontinued	Date Medication Completed
Area Medical Advisor		
AMA follow-up plan (if any)		

Checklist

- ☐ Received completed 'Missionary TB Medication Tracking Report' form.
- ☐ Distributed new 'Missionary TB Medication Tracking Report' form if not contraindicated.

- **Forward completed copies of *Missionary TB Medication Tracking Report* and the *Health Coordinator TB Medication Tracking Report* to your Area Medical Advisor. Please <u>fax</u> the same information to:**

  Church Health Services **phone: 801-240-3635; fax 801-240-1661**
  132 South State, Suite 200

Salt Lake City, Utah 84111

Presumed Active Tuberculosis Case and Consultation Report

Area Medical Advisors should complete this form whenever there is a presumed active tuberculosis case or need for consultation related to a missionary. This form should immediately be faxed to **Church Health Services in Salt Lake City at fax number 801-240-1661**. When in need of consultation, please contact your Tuberculosis Committee member based on their area of geographical responsibility. They are as follows:

Europe and North America Missions: Donald Wright, Ph.D. (hm) 801-785-4035; dnwright70@msn.com

- **Africa and Latin America Missions**: Larry Wright, MD (hm) 801-277-7179; ldlwright@comcast.net
- **Asia and Pacific Missions**: Dixie Baines (hm) 303 741-1185 (cell) 303-906-4515; rdbjrtennis@aol.com

Please print clearly

Missionary's Name	Missionary I.D. #	Mission
Home Stake/District	Stake/ District President	Stake/ District President phone
Parent /Guardian	Parent/Guardian Phone	Parent/Guardian Address
Date case was first reported	Name of person reporting case	Name of person taking report
AMA name	AMA home phone	AMA cell phone

1. How was tuberculosis diagnosis established (history, examination, laboratory)? ___________________

____

____

____

2. Current therapy: ____

____

____

3. Proposed future therapy: ____

____

4. CDC Classification of case: ____

5. Notes (record dates of receipt of follow-up information on index case and investigation of close contacts below):

____

____

____

____

____

____

____

CDC Classification System for TB

Class	Type	Description
0	No TB exposure Not infected	No history of exposure Negative reaction to tuberculin skin test
1	TB exposure No evidence of infection	History of exposure Negative reaction to tuberculin skin test
2	TB infection No disease	Positive reaction to tuberculin skin test Negative bacteriologic studies (if done) No clinical, bacteriological, or radiographic evidence of active TB
3	TB, clinically active	*M. tuberculosis* cultured (if done) Clinical, bacteriological, or radiographic evidence of current disease
4	TB Not clinically active	History of episode(s) of TB **Or** Abnormal but stable radiographic findings Positive reaction to the tuberculin skin test Negative bacteriologic studies (if done) **And** No clinical or radiographic evidence of current disease
5	TB suspected	Diagnosis pending

THE CHURCH OF
JESUS CHRIST
OF LATTER-DAY SAINTS

Missionary Tuberculosis Screening Report

CHURCH HEALTH SERVICES
132 S STATE ST STE 300
SALT LAKE CITY UT 84111-1506
UNITED STATES OF AMERICA

Instructions

Exposure to tuberculosis is a potential problem for all missionaries. Early detection and therapy are important. Returning missionaries from high-risk areas are required to receive tuberculin screening if it is available in their home area.

Mission President

- ☐ In your release interview, please emphasize to each missionary the need for tuberculin testing.
- ☐ Have your secretary complete the "Missionary's Personal Information" section and distribute copies.
- ☐ Make sure the missionary signs the medical release section.
- ☐ Give the original to the missionary, send the canary to the stake president with the release certificate, and send the pink to the parents or legal guardian.

Missionary

- ☐ When you return home, immediately receive a tuberculin test at the nearest public health facility.
- ☐ If you have already tested positive for tuberculosis, have a chest X-ray performed. Most public health facilities provide tuberculosis screening free or at minimal cost. (If testing is not available at a public health facility, see a qualified physician.)
- ☐ If your test is positive, you may also need a chest X-ray.
- ☐ Submit the completed form to your stake or district president within 15 days after you return home.

Stake or District President

- ☐ Returning missionaries are to submit the results of their tuberculosis screening to you within 15 days after they return home.
- ☐ If the missionary has lost the original form, you may give him or her your copy to take to the screening.
- ☐ Test results require approximately 3 days.
- ☐ If a missionary has already tested positive for tuberculosis, a chest X-ray should be performed.
- ☐ When the missionary gives you the completed form, you should send it immediately to the address listed above.

Missionary's Personal Information To be completed by the mission secretary.

Full name	Release date	Mission
Street address (mailing address where missionary can be contacted after release)		Telephone (with area code)
City, state or province, country, postal code		
Stake or district to which the missionary will be reporting		

Test Results To be completed by the health care provider.

Please screen this person with a PPD skin test and, if positive, a chest X-ray. If the person has already had a positive skin test, only a chest X-ray is necessary.

Date of test	Testing facility or physician	Telephone (with area code)
Address (street address, city, state or province, country, postal code)		
Test given (request a 5 TU Mantoux test)	Test results (recorded in mm of induration)	X-ray results (if needed). If abnormal, please attach X-ray report.
Treatment given or recommended		
Follow-up plans (if any)		

Signatures

Missionary (releases the screening results for personal and public health purposes)	Date
Health care provider (certifies completion of the screening)	Date

WHITE—Missionary (at release) PINK—Parents or Legal Guardian of the Missionary
CANARY—Missionary's Home Stake or District President (accompanying release letter)

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