

TITLE: Heartland National Tuberculosis Center (HNTC) Regional Medical Consultation Services Plan

PURPOSE: This plan identifies roles and responsibilities and establishes guidelines for the delivery of HNTC medical consultation services within the Heartland Region. In addition, it addresses the associated issues of communication both within the HNTC and between the HNTC and individuals/organizations in the states that comprise the Heartland Region; the exchange of medical expertise as part of the medical consultation process and capacity development within the Heartland Region; regional marketing activities to increase awareness of consultation services; and evaluation of the quality of consultation services and their value to the end-user and the Heartland Region.

CORE REFERENCES:

1. Diagnosis and Treatment of Diseases Caused by Nontuberculous Mycobacteria, ATS, 2007
2. Diagnostic Standards and Classification of Tuberculosis in Adults and Children, CDC, 2000
3. Targeted Tuberculin Skin Testing and Treatment of Latent Tuberculosis Infection, CDC, 2000
4. Updated Guidelines for the Use of Rifamycins for the Treatment of Tuberculosis Among HIV-Infected Patients Taking Protease Inhibitors or Nonnucleoside Reverse Transcriptase Inhibitors, CDC, 2000 and 2004
5. Treatment of Tuberculosis; ATS, CDC, IDSA; 2003
6. Radiographic Manifestations of Tuberculosis – A Primer for Clinicians, Francis J. Curry National TB Center, 2003
7. CDC Recommendations Against the Use of Rifampin and Pyrazinamide for Treatment of LTBI – United States, CDC, 2003
8. Interactive Core Curriculum on Tuberculosis: What the Clinician Should Know, CDC, 2004
9. Targeted Tuberculin Skin Testing and Treatment of Latent Tuberculosis Infection in Children and Adolescents, Pediatrics, Vol. 114, No. 4, October 2004
10. Drug-Resistant Tuberculosis – A Survival Guide for Clinicians, Francis J. Curry National TB Center, 2<sup>nd</sup> Edition 2008
11. Tuberculosis Associated with TNF Alpha Blocking Agents, CDC, 2004
12. Controlling Tuberculosis in the United States; ATS, CDC, IDSA; 2005
13. Guidelines for the Investigation of Contacts of Persons with Infectious Tuberculosis; NTCA, CDC; 2005
14. Guidelines for Using the QuantiFERON-TB Gold Test for Detecting *Mycobacterium tuberculosis* Infection, United States, CDC, 2005
15. Guidelines for Preventing the Transmission of *Mycobacterium tuberculosis* in Health-Care Settings, CDC, 2005
16. Prevention and Control of Tuberculosis in Correctional and Detention Facilities: Recommendations from CDC, CDC, 2006

17. Regional Training and Medical Consultation Center (RTMCC) Cooperative Agreement (COAG), 2008
18. Plan to Combat Extensively Drug-Resistant TB; Recommendations of the Federal TB Task Force, CDC, MMWR, February 13, 2009, Vol. 58, No. RR-3
19. Amplification Tests in the Diagnosis of TB; Updated Guidelines for the use of Nucleic Acid, CDC, MMWR, January 16, 2009

PERSONNEL STRUCTURE:

1. Medical Director/Primary Medical Consultant: Barbara Seaworth, MD
2. Assistant Medical Director/Alternate Medical Consultant: David Griffith, MD
3. Nurse Consultants: Catalina Navarro, BSN; Debbie Onofre, BSN; Alisha Blair, LVN.
4. Administrative Specialists: Alysia Thomas, Delfina Sanchez

Note: Physicians and other health care practitioners with expertise in specific areas of tuberculosis prevention and control activities will be identified and eventually form a "consultation network" that can be called upon by the Medical and Nurse Consultants to provide consultation and/or technical assistance in their particular areas of expertise. This process will be developed in collaboration with the HNTC Advisory Committee and the TB Medical Consultation Group.

RANGE OF SERVICES: Both medical and nursing consultation, as well as technical assistance in various aspects of TB prevention and control will be provided at no cost to physicians, nurses and other health care professionals in the thirteen states and two Big Cities that comprise the Heartland Region. HNTC consultants will maintain expertise and the ability to respond to requests for medical and nursing consultation and/or technical assistance in the following areas:

1. Diagnostic evaluation of TB suspects
2. Treatment of LTBI and TB disease
3. Treatment of drug resistant TB cases
4. Diagnostic and treatment approaches to cases of delayed bacteriologic, clinical and/or radiographic response to therapy
5. Treatment failure
6. Relapse of TB disease
7. Adverse drug effects: GI upset, rash, hepatitis, other
8. Diagnosis and treatment of LTBI and TB disease in children and adolescents
9. TB in the setting of HIV infection
10. Management of patients with significant coexisting conditions: renal insufficiency, hepatic disease, pregnancy, other
11. Non adherence with treatment

12. Investigation, evaluation and treatment of contacts to an infectious TB case
13. Responding to a tuberculosis outbreak
14. Infection control measures to reduce transmission of tuberculosis
15. Nurse case management
16. MDR-XDR TB

ACCESSING SERVICES: Health care providers may access consultation and technical assistance services by one of several methods:

1. Referral from the existing medical consultation process within each state
2. Referral from the CDC Call Center
3. Referral from other RTMCC's
4. Contacting the HNTC directly via telephone. Calls preferably come to either a dedicated toll-free telephone number in San Antonio (800-TEX-LUNG or 800-839-5864) or to a Nurse Consultant: Catalina Navarro (210-531-4569); Debbie Onofre (210-531-4539); or Alisha Blair (210-531-4546). Clinicians may also contact one of the HNTC Medical Consultants directly. Phone numbers are provided on the HNTC website, as well as promotional literature.
5. Contacting the Medical Consultants ([barbara.seaworth@dshs.state.tx.us](mailto:barbara.seaworth@dshs.state.tx.us)) ([david.griffith@uthct.edu](mailto:david.griffith@uthct.edu)) or the Nurse Consultants ([catalina.navarro@uthct.edu](mailto:catalina.navarro@uthct.edu), [debbie.onofre@uthct.edu](mailto:debbie.onofre@uthct.edu), [alisha.blair@uthct.edu](mailto:alisha.blair@uthct.edu), directly via email. Email addresses are provided on the HNTC website and in promotional literature.

HOURS OF OPERATION: The consultation line is staffed Monday – Friday, from 8:00 AM until 5:00 PM, Central Time. After business hours, voice mail service is available. Voice mail messages will be returned within one business day by the Medical Consultant or a Nurse Consultant.

CONSULTATION PROCESS: Although some requestors may prefer to contact the Medical Consultant directly by telephone or email as described above, it is anticipated that the majority of requests seeking consultation or technical assistance will be by telephone call or e-mail and will be routed first through a Nurse Consultant to facilitate collection of pertinent data and prioritizing of the request. The following process describes that most likely scenario:

1. Calls not answered initially by a Nurse Consultant or Medical Consultant will be returned within one business day.
2. Evaluate appropriateness of the request and refer to other resources, as indicated. See "State Specific Consultation Processes", below, for additional guidance. Requests may also be referred to another RTMCC, if appropriate.
3. Determine case information required; suspense and follow-up receipt of information. Potential case information to be collected is described below. The extent of information to be collected will be based upon the complexity of the case and the reason for the consultation request:
  - a. Contact information for individual requesting consult, to include:

(1) Name

- (2) Discipline
  - (3) Organization
  - (4) Phone number
  - (5) Fax number
  - (6) Email address
  - (7) Mailing address
  - (8) If other than treating physician, the name of the treating physician and his/her contact information
- b. Patient's name and DOB, if caller is willing to provide this information
  - c. Reason for consult request
  - d. History of present illness: review of events from patient's initial presentation proceeding chronologically up to the present time. Depending on the nature of the consult, this may be relatively uncomplicated or may be highly complex. As back-up documentation, request copies of state reporting forms, hospital admission history and physical, hospital discharge summary and any other consults accomplished.
  - e. Prior LTBI/TB history
  - f. Tuberculin skin test (TST) history, current TST date and results, and IGRA results and dates
  - g. Chest x-ray/CT/Other diagnostic imaging: request written reports
  - h. AFB smear and culture results, antibiotic sensitivity results and pathology results, if appropriate
  - i. Treatment regimen(s), to include start, stop and restart dates. Review the following information: directly observed therapy (DOT), self-administration, adherence, intolerance, adverse drug reactions, etc.
  - j. Laboratory monitoring/HIV status: baseline and periodic laboratory monitoring results. Copies of laboratory reports may be requested, if indicated. If HIV seropositive, request viral load(s) and CD4 count(s).
  - k. Medical history/Co-morbid conditions/Surgical history, if applicable
  - l. Medication history (prescription, over-the-counter, folk), concentrating on medications that increase risk of progression to active TB disease, cause significant drug-drug interactions or increase risk of TB medication toxicity
  - m. Social and individual risk factors for LTBI and/or TB disease
  - n. Current weight, to include gain or loss in response to therapy
  - o. Summary of contact investigation if pertinent to consult

- p. How the caller became aware of HNTC consultation services (CDC website, HNTC website, referral from state or local health department, etc.)
4. Prepare case summary, attach accompanying documentation and forward to a medical consultant for review and discussion.
  - a. Summarize case orally or via e-mail for Medical Consultant
  - b. If more than one consult request is pending, determine priority of request with input from the Medical Consultant.
  - c. Organize and coordinate collection of additional information as requested by the Medical Consultant.
5. Complete initial entry in consultation/technical assistance tracking spreadsheet. Initial entry will include:
  - a. Date of consult request
  - b. Name and credentials of requestor
  - c. Requesting agency, city and state
  - d. How the caller became aware of HNTC consultation services
  - e. Patient's initials
  - f. Brief narrative case description
  - g. Date of initial response to consult request
6. Once the Medical Consultant has contacted the requestor, the HNTC response to the inquiry is determined by the nature of the request and the stated preference of the requestor. Recommendations may take the form of a written consult, an email reply or telephone consultation:
  - a. Written consult:
    - (1) Written responses will be prepared within three to five business days following the date of the initial request (within three days for at least 80% of requests)
    - (2) Once the consult is dictated by the Medical Consultant, the Administrative Specialist produces a written draft and returns it to the Medical Consultant for review. Following the Medical Consultant's review, the consult is prepared by the Administrative Specialist in final form for signature.
    - (3) Once the consult is signed by the Medical Consultant, the Administrative Specialist makes distribution by faxing copies to, as appropriate, the requestor, the treating physician or other health care provider, the local health department and the TB Controller or other appropriate public health authority of that state. The original consult is mailed to the requestor (Note: see "End-User Satisfaction" described below). A copy of the consult is retained for the patient's consult record, and a copy is forwarded to the Nurse Consultant for review.

- (4) If a case is judged by the Medical Consultant to be of significant public health importance, e.g., an extensive contact investigation surrounding a case of multi-drug resistant TB, he/she may elect to communicate directly with the State TB Control Program to facilitate the public health response.
    - b. Email reply: The Medical Consultant incorporates the recommendations in an email to the requestor. A copy of the email is sent to the TB Controller or other appropriate public health authority of that state and to the Nurse Consultant for review and eventual inclusion in the patient's consult record.
    - c. Telephone consultation: The Medical Consultant will summarize the discussion and recommendations on the telephone consult worksheet. A copy of the worksheet is forwarded to the Nurse Consultant for review and eventual inclusion in the patient's consult record. If indicated, an email will be sent to the TB Controller or other appropriate public health authority of that state to inform them of the recommendations made.
7. The Administrative Specialist initiates a consult record for each consult for which the nurse consultant or medical consultant identifies a need to maintain a record. This record includes all documentation received or developed in the process of preparing the consult and the HNTC reply (written consult, email reply, telephone consult worksheet). HNTC replies and accompanying documentation for requests for technical assistance or those involving cases for which patient identifying information (name/DOB) is unknown are filed by state and year in the medical consultation file area.
8. Prior to initial filing, the consult record is forwarded to the Nurse Consultant for review. The Nurse Consultant will determine if follow-up is indicated, and initiate a case management suspense record to suspense follow-up activities, if appropriate. The Nurse Consultant will also complete the remaining information for that consult entry on the consultation/technical assistance tracking spreadsheet:
  - a. Date of final reply to consult request
  - b. Reply format: written consult, email, telephone discussion, fax/mail, ward/clinic evaluation
9. The Nurse Consultant returns the consult record to the Administrative Specialist for filing in the medical consultation file area.

**CONFIDENTIALITY:** All patient information is maintained and communicated in a secure and confidential manner.

**REPORTING:**

1. CDC reporting: semi-annual (January, July) reporting will be in the format required by the CDC and will be based primarily upon analysis of the data entered in the consultation/technical assistance tracking spreadsheet and the end-user satisfaction survey response spreadsheet.
2. The HNTC will also produce a semi-annual (January, July) report for the TB Controllers in each of the Heartland Region states and large cities. This report will summarize regional medical consultation data in a format similar to the CDC report described above, as well as provide a state specific line listing of the requests for consultation/technical assistance received from their state derived from the consultation/technical assistance tracking spreadsheet.

3. The Nurse Consultants are responsible for compiling the data and drafting the reports.

STATE SPECIFIC CONSULTATION PROCESSES: Each state within the Heartland Region maintains some level of capability to provide medical consultation and technical assistance for TB control activities and the medical management of TB patients within the state's jurisdiction. A number of state TB Control Programs have a salaried TB Physician Consultant, who often serves as the State TB Controller/Control Officer. Other states have identified and entered into formal or informal agreements for consultation services with physicians in various academic and/or private practice settings who have expertise in the medical management of TB patients.

The goal of the HNTC medical consultation service is to compliment and not supplant the existing state consultation and technical assistance process. In that light, HNTC medical consultation staff will align their activities with the state specific processes described in the State Specific Consultation Processes.

MEDICAL CONSULTATION REGIONAL MARKETING ACTIVITIES: General and targeted marketing activities are instrumental in increasing awareness and utilization of HNTC medical consultation services in the Heartland Region. Ongoing marketing activities will include:

1. Excellence in Customer Service and Meeting Customer Expectations: although activities geared to increasing awareness of services are important, developing the processes necessary to respond in a timely manner to the needs of our customers and instilling credibility and confidence in our medical consultations are crucial to endorsement of our services and referral of cases for consultation by TB Control Program staff in the Region, particularly TB Physician Consultants. As the Regional Medical Consultants Group is formed, and networking activities are developed, its members will validate the value of the consultation service and communicate this to other clinicians within their states.
2. Activities at Workshops and Conferences:
  - a. Brochures describing training, product development and medical consultation services will be available at each HNTC-sponsored training event. These will be reinforced by announcements by HNTC staff and accompanying PowerPoint presentations. Similar activities will be conducted at national and regional programmatic conferences as these opportunities arise (NTCA, National Unidos, Four Corners TB Controllers, etc.).
  - b. TB Program staff throughout the Region will be encouraged to provide information about HNTC services when they appear before groups within their jurisdiction (local health department staff, physician groups, infection control practitioners, laboratorians, school nurses, correctional health care personnel, etc.).
3. Web-Based/Internet Activities:
  - a. HNTC has developed and will maintain an extensive website describing available medical consultation services. This is the primary responsibility of the HNTC Website Coordinator with input from the Medical and Nurse Consultants. Included will be a link to each state's TB Control Program website and the consultation services available there. TB Controllers/Control Officers are encouraged to post a link to the HNTC website on their state's TB Control Program website, as well as on the websites of academic partners and other stakeholders in their state.
  - b. Each quarterly e-newsletter (HNTC TBeat) features a case study and accompanying teaching points designed to highlight the medical consultation activity and provides information on accessing HNTC medical consultation services. Clinicians are able to

request they be added to the distribution list for the e-newsletter by completing and returning the consultation survey card included in each consultation letter mailing.

4. **Products and Tools:** wide dissemination of products such as the TB Core References Set on CD-ROM and clinical tools to assist in the medical management of patients with latent TB infection or TB disease serves to market HNTC medical consultation services by highlighting the nursing and medical expertise available through the Heartland Center. In addition, the collaborative relationships which develop between HNTC staff and our partners within the Region during the development and field testing of these products also highlights and broadcasts the expertise and services available through HNTC.
5. **Clinical and Programmatic Mini-Fellowships:** although primarily intended to enhance the skills of clinicians and other TB Program staff, these fellowships also serve to increase the awareness and the utilization of consultation services as attendees interact with HNTC staff and TCID clinicians and develop the basis for an ongoing consultative relationship once they return to their home state.

**MEDICAL CONSULTATION SERVICES EVALUATION:** The evaluation of medical consultation services occurs in three separate but interrelated realms of activity, (1) internal assessment of the quality of the consult and the process which produced it, (2) measurement of end-user satisfaction with the consultation services received, and (3) evaluation of overall value to the Heartland Region.

1. **Quality Assurance:**

- a. The consultation/technical assistance tracking database is the primary tool used to assess timeliness of responses to requests for consultation and technical assistance. Database data entry is described above in "Consultation Process". The database provides aggregate data for determining average time to initial and final responses. The HNTC goal is to provide an initial response within one business day of the initial request for consultation and a written response, when requested, within 3-5 business days. The Nurse Consultant will compile this metric as a component of the required CDC semiannual reporting. The database also allows the Nurse Consultant to track the progress of individual consults through the consultation process. The database will be updated as described, above, and reviewed daily by the Nurse Consultant to identify consults requiring follow-up.
- b. TB Medical Consultants from the component states and other physicians providing expertise in the medical management of TB patients in the Region are networked into an informal group referred to as the Heartland Regional Medical Consultants Group. Members of this group are targeted for distribution of products and clinical tools, the quarterly e-newsletter, clinical updates, and are invited to participate in periodic case teleconferences. Selected members of this larger group also attend periodic meetings/targeted training in San Antonio with the HNTC Medical Consultants. One focus of this group will be the establishment of an informal peer review process using a case review format in which cases consulted by the State and Regional Medical Consultants will be discussed.
- c. A sampling of written consults generated by the HNTC Medical Consultants will be reviewed quarterly by selected Texas Center for Infectious Disease staff physicians. This review will consider measures such as completeness of recommendations, usefulness of recommendations, and adherence of recommendations to accepted guidelines and/or best practices. Records selected for review will be identified by the HNTC Nurse Consultant after discussion with the HNTC Medical Consultant. The reviewer's comments will be documented on a cover sheet attached to the consultation, returned to the HNTC Medical Consultant for review, and then recorded in database format electronically by Administrative Staff for later analysis and

CDC/other external reporting. An alternative peer review process can also be implemented in which the two HNTC Medical Consultants review, quarterly, a random sampling of the consultations generated by their fellow HNTC Medical Consultant. The process for documentation of the review and entry into a database format would be similar in both review schemes.

- d. The quality of pediatric consultations is enhanced by incorporating the expertise of two pediatric specialists, Dr. James McAuley and Dr. Kim Connelly Smith, when complex pediatric cases are encountered by the HNTC Medical Consultant. As necessary, the HNTC Medical Consultant asks these pediatric specialists to review the case and offer opinions prior to final recommendations being made by the HNTC Medical Consultant.
2. End-User Satisfaction: assessment of end-user satisfaction with the medical consultation process is targeted to those clinicians receiving formal, written consultations, and is accomplished via the use of postage paid survey cards (“bounce back cards”). Procedures to be followed are:
- a. Each formal written consultation (dictated by the Medical Director, processed by Administrative Staff and mailed to the requestor) will be assigned a tracking number. The tracking number will be entered on the accompanying bounce back card (TN: \_\_\_\_).
  - b. A numbered bounce back card will be included in the envelope with each formal written consultation prior to mailing.
  - c. As completed bounce back cards from the requestor are received at HNTC, they will be screened by designated Administrative Staff:
    - (1) Cards with “Excellent” ratings in all areas and without written comments will be entered in the survey database. If the requestor indicates that they want to be added to the listserv for the HNTC e-newsletter, Administrative Staff will forward the card to designated Training/Education Staff for inclusion in the listserv. If not, the card will be discarded.
    - (2) Cards with any rating less than “Excellent” and/or written comments will be entered in the survey database and forwarded to the Nurse Consultant within one business day for his/her review and follow-up, as appropriate.
  - d. The Nurse Consultant will review any cards with less than “Excellent” ratings and/or written comments and, if appropriate:
    - (1) Place a follow-up telephone call to the requestor to further clarify and resolve any areas of dissatisfaction.
    - (2) Track written comments on improvements/additional services and make recommendations on corresponding process changes to the HNTC Medical Director, Assistant Medical Director and Executive Director.
    - (3) Once follow-up is completed, the Nurse Consultant will forward cards with e-mail addresses to be entered in the e-newsletter listserv to the responsible Training/Education Staff.

- e. Semiannually, the Nurse Consultant will produce an aggregate report of response rates, survey responses and resulting process changes for review by the HNTC Management Team and inclusion in periodic CDC and other external reports.
3. Overall Value to the Heartland Region: HNTC will conduct an assessment of overall value of medical consultation services in the Heartland Region will be scheduled for December of each year.

HEARTLAND REGION MEDICAL CONSULTATION CAPACITY DEVELOPMENT: efforts to increase medical consultation capacity within the Region are focused primarily on the Regional Medical Consultants Group (RMCG), whose members are identified by TB Controllers/Control Officers and through requests for medical consultation. These activities include:

1. HNTC clinical mini-fellowships conducted at the Texas Center for Infectious Disease or off-site in coordination with one of our partner states
2. TB Intensive Course
3. Electronic distribution of the quarterly HNTC e-newsletter, clinical updates, clinical tools and other products to facilitate the medical management of TB patients
4. Distribution of the core TB References Set on CD-ROM with HNTC website updates
5. Periodic case review teleconferences
6. Periodic meetings of selected members of the RMCG to identify and prioritize activities for capacity development and make recommendations to the HNTC Advisory Committee
7. Targeted training for Medical Consultants at regional meetings