

DEPARTMENT OF THE ARMY
HEADQUARTERS, WALTER REED ARMY MEDICAL CENTER
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NARMC Pamphlet
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Medical Services
CLINICAL GUIDELINES FOR TELEPATHOLOGY

- 1. History.** This is a new North Atlantic Regional Medical Command (NARMC) pamphlet.
- 2. Applicability.** The Clinical Guidelines for Telepathology provides Telepathology support to fixed land sites within the NARMC.
- 3. Purpose.** This Clinical Business Practice is provided as a guide to the successful implementation and operation of the Army Medical Department (AMEDD) Telepathology Program.
- 4. References.**
 - a. MedMicroscopy 2.0 Quick Reference Guide, © Trestle Corporation.
 - b. MedMicroscopy SERVER Hardware Installation Manual, © Trestle Corporation.
 - c. Summary of MedMicroscopy Server Installation Guide, August 2002.
 - d. Clinical Guidelines for Telepathology by The American Telemedicine Association, Special Interest Group of Telepathology, May 1999.
- 5. Definition.** For the purpose of this document, Telepathology will be defined as electronic, multimedia communications between pathologists for the purpose of primary diagnosis and diagnostic consultation second options. It may also extended to include similar diagnostic communications between other physicians (non-pathologists) and a laboratory staff qualified laboratory personnel – trained technicians, technologists, or a pathologist's assistants – and a remote pathologist and when the laboratory personnel is under the supervision of a pathologist.
- 6. Background.** Pathologists have been sending each other cases for diagnostic second opinion for may years. This collaboration has traditionally involved the sending of stained slides, unstained slides, tissue blocks, wet tissue, pathology reports and cover letters via courier or through conventional mail. The system has worked well, and is the "gold standard" by which diagnoses are compared between institutions. In defining guidelines for second options Telepathology, pathologists should borrow whenever possible, from the workflows and responsibilities set up in the courier based system.
- 7. Scope of Care**
 - a. The AMEDD Telepathology Program provides support to fixed land sites within the AMEDD using the Trestle Corporation © MedMicroscopy System. The MedMicroscopy system consists of a slide display station that is referred to at the "Broadcast" system (Dell Workstation) and of "Viewing" stations (User's Wintel Personal Computer (PC) that access the "Broadcast" system).

A number of "Broadcast" systems have been installed throughout the AMEDD and pathologist from the Walter Reed Army Medical Center (WRAMC) and the Armed Forces Institute of Pathology (AFIP) as well as other senior pathologists throughout the AMEDD can access them.

b. The primary purpose of the Telepathology Program is to provide quick second opinions, especially for those sites that only have a single pathologist supporting the facility. The secondary purpose of this system is to display unique specimens for education purposes. Each MedMicroscopy system can have up to 10 viewing stations dial into it at one time and view the posted slide.

8. Diagnostic Responsibility.

a. In primary, Telepathology diagnosis, specimens at a referring site are diagnosed by pathologists at a remote site (consulting pathologist). The medical responsibilities for a site initiating a Telepathology session for primary diagnosis are similar to those of a laboratory sending glass slides by courier or conventional mail to another pathologist for primary diagnosis in a traditional environment. The diagnostic effort and responsibility resides entirely with the pathologist at the remote site.

b. In second opinion Telepathology, diagnostic effort and responsibility resides with both the pathologist at the local site (referring pathologist) and the pathologist at the remote site (consulting pathologist).

9. User Responsibilities. This document outlines the responsibilities of several stakeholders of the Telepathology Program to include: the Pathology Consultant to the Surgeon General, AMEDD Telepathology Project Director, AMEDD Telepathology Project Manager, Referring Facility Chief of Pathology, Referring Pathologist, Consulting Facility Chief of Pathology, Consulting Facility On-Call Pathologist.

a. Pathology Consultant to the Surgeon General.

(1) Briefs the Surgeon General on all aspects of the Telepathology Program.

(2) Makes the selection where telepathology will be deployed to throughout the AMEDD.

b. AMEDD Telepathology Director.

(1) Oversees the purchase and deployment of all Telepathology systems within the AMEDD.

(2) Ensures that the selected Telepathology system is evaluated and validated to support the Army's pathology mission.

(3) Ensures that the deployed systems are delivered with a one-year software support agreement that goes into effect after the initial 90-day warranty period.

(4) Acts as the initial clinical point of contact for all technical problems with the MedMicroscopy System and coordinates with the Project Manager and the vendor's technical representatives to correct the problems.

c. AMEDD Telepathology Project Manager.

(1) Coordinates to get the Telepathology equipment on the Army Property Book.

(2) Coordinates with the participating site Property Book Office (PBO) for the shipment of the equipment to the PBO facility and that all transfer paperwork is complete.

(3) Coordinates to have the equipment shipped to the participating facility.

(4) Coordinates to have the system accredited and that the AMEDD and Department of Defense (DoD) network will support the application traffic.

(5) Coordinates with WRAMC and the participating site Information Management (IM) Office to ensure the IM Office is aware of the project, that the network security processes are followed, the appropriate network drops available, and that the system is configured to run on the participating sites local area network. Further coordinates all firewall issues for each participating sites both at that site and the assigned reviewing sites.

(6) Coordinates with the participating site all logistical requirements, verifying the site is prepared for the equipment.

(a) Coordinates with the participating site Medical Maintenance Shop to ensure Shop personnel are aware of the system at their facility as they may be called to support the system in cases where unexpected hardware problems occur such as the equipment falling off the table and being damaged or equipment fuses blowing because of site power problems.

(b) Coordinates the development and maintenance of the Web-based Telepathology consult management system for use by all sites.

(c) Provides first line Telepathology help desk support to participating sites.

(d) Coordinates between the participating site and the vender for all technical problems, ensuring technical problems are resolved.

(e) Maintains a log of all technical problems reported.

(f) Coordinates with equipment installation teams as well as deploys to install equipment at participating sites. Trains site staff in the operation of the system while on-site.

(g) Tracks and reports Telepathology site usage and Trouble Log results.

d. Referring Facility.

(1) Chief, Department of Pathology.

(a) Ensures the participating site has identified and prepared the location for the Telepathology equipment to include, as a minimum a 2' by 4' table for the equipment, two duplex outlets (4 plugs), a local area network (LAN) drop with Internet access, a telephone in the area to allow the referring pathologist to coordinate live with the consulting pathologist during the live operation of the microscope.

(b) Responsible for having the MedMicroscopy Scope System on their hand receipt once the equipment is installed.

(c) Responsible for ensuring the Annual Software Support Subscription is up to date. This is a local site responsibility. The estimated cost for this subscription is \$4,500 per year, which includes 24/7 telephonic troubleshooting support and any new release or software upgrade available during the subscription. (The project provides the first year support.)

(2) Referring Pathologist.

(a) Accesses and completes the appropriate Web-based Telepathology Request Form entering all required information and submits the information to the secure database server. Typically slides are read at AFIP, WRAMC or the Tripler Army Medical Center (TAMC). (See Consulting Facility section for points of contact.)

(b) Upon coordination with the consulting facility, sets up the Telepathology Broadcasting System on the agreed upon date and time.

e. Consulting Facility.

(1) Points of Contact:

(a) Armed Forces Institute of Pathology (AFIP):

POC: Chief, TelePathology Department

(202) 782-2884, DSN 662

ALT POC: Telepathology Coordinator, TelePathology Department

(202) 782-2882, DSN 662

<https://www3.afip.org>

(b) Walter Reed Army Medical Center (WRAMC):

POC: Telepathology Director, Pathology Department

(202) 782-3520, DSN 662

<https://consult.wramc.amedd.army.mil>

(2) Chief, Pathology Service

(a) Establish a regular schedule for the pathologist to answer the consult activity. Ensure the scheduled pathologist is aware of his/her responsibilities for answering consults.

(b) Monitor the consult system to ensure consults are responded to in accordance with established standards of "four hours".

(c) Manage the Peer Review subsystem, ensuring an appropriate number of consults are reviewed.

(3) On-Call Specialist

(a) The on-call pathologist is responsible for answering all Telepathology consult requests for his/her assigned period.

(b) Upon reviewing the consult information in the Web-based system, the pathologist will review the actual slide at the remote site using the Viewing Station Software on their PC.

(c) Upon making a diagnosis, the AFIP pathologist will enter the diagnosis onto a faxable form and transmit the results via facsimile (FAX) to the requesting site. The WRAMC or other Medical Centers (MEDCEN) pathologist will enter the diagnosis into the Web-based system, thereby completing the record for the consult.

10. System Requirements. The Telepathology system is comprised of a Broadcasting Station and a Viewing station. The Broadcasting station is located at the remote site that requests a review of an existing pathology slide. The Viewing station is used by the consulting pathologist to access the displayed slide.

a. Broadcasting Station: The MedMicroscopy broadcasting station is a vendor specific system that is a Federal Drug Administration (FDA) approved Class I medical device. The system is comprised of a Dell Workstation with a 17" flat panel monitor, an Olympus BX50 microscope, a Panasonic GP-KS1000 Digital Processing Color Microcamera, and the © Trestle Corporation "Black Box" used to connect the three other pieces of equipment together.

b. Viewing Station: The viewing station software runs on the Windows NT4 or Win 2000 Professional operating system with a 233 MHz Pentium II or greater processor and must have at least 32 megabytes (MB) of memory. The viewing station runs under the Internet Explorer browser version 5.5 or higher. The user must download the MedMicroscopy viewing software from <https://consult.wramc.amedd.army.mil>. This link is updated as new versions of the viewing station are released.

11. HIPAA, Data Integrity, and Security. By its nature, the Telepathology encounter involves transmission and storage of confidential patient information. The Telepathology Program was designed to be compliant with the Health Insurance Portability and Accountability Act (HIPAA). Though it is understood that no security system is foolproof and that the specific security mechanisms are needed, we have taken appropriate measures to ensure patient and provider privacy and confidentiality through a number of security measures that include:

a. Limited Access: Each Broadcasting Station is placed behind the site's firewall. Only selected Internet protocol (IP) addresses are authorized access to the system, where the user is only able to access the image on the stage of the microscope. No personal /patient identification is available.

b. Encryption: A Web-based system utilizing 128-bit encryption is used to request and respond to Telepathology consult requests.

c. System Authentication: Each user desiring to submit or respond to a Telepathology consult MUST first register and be authorized to use the secure Web based application. Upon authorization, the user is provided a unique Userid and Password.

d. User Tracking: All access to the Web based Telepathology application is tracked and logged. The audit log is only available to the application System's Administrator.

e. Archiving: All consult information is backed up by the database server hosting organization, such that AFIP will backup the AFIP database server and WRAMC will backup the database server at WRAMC.

f. Certification: The Telepathology Program documentation was submitted to the WRAMC Directorate of Information Management for the DoD Information Technology Security Certification and Accreditation Process (DITSCAP) and was granted an Interim Authority to Operate (IATO) on 10 August 2002 by the NARMC Chief of Staff. Additionally, MEDCOM has tasked the United States Army Medical Information Systems and Services Agency (USAMISSA) to conduct a security review that will provide authorization for the Telepathology Program to operate throughout the entire MEDCOM.

12. Consult Generation Process

a. To initiate a consult to AFIP: Complete the 128-bit encrypted AFIP Form 288-R located at <https://www3.afip.org>, to include all required fields.

(1) Special instructions for requesting a dynamic consultation are as follows:

(a) The field corresponding to the number of images sent should be completed with the numerical digit "1".

(b) In the comment section identify the case as a "© Trestle Corporation".

(c) Provide either the IP address or the domain name for the microscope.

(2) When you have completed the online form, press the button marked "Submit Form and Proceed to Image Upload Page". Your case will be assigned a "Telemedicine Tracking Number" (TTN). An empty, pre-addressed email wrapper should appear in your browser. Copy the TTN that was assigned to your case into the subject: line. This will allow us to match your submitted form with your case images.

(3) All submissions MUST be accompanied by the completed AFIP Consultation Request Form. All consultation requests received between 0700 and 1500 hours Eastern Standard Time (GMT -5.0) will receive results via FAX within one to four hours. Any case received after 1500 hours will be processed on the following business day.

(4) If you would like to discuss the case with the consultant during the slide review, or if the case requires special "immediate" handling, please contact departmental personnel at 202-782-2882 / 2884 prior or immediately subsequent to its submission.

b. To initiate a consult to WRAMC or another AMEDD MEDCEN: Complete the 128-bit encrypted Consult Generation Screen located at <https://consult.wramc.amedd.army.mil>. The Web page is self explanatory.

13. Consult Response Process.

a. For AFIP Consults:

(1) Once the case information has arrived on the AFIP server, personnel at the AFIP telemedicine department will transfer the submitted form to the AFIP Intranet and remove it from the publicly accessible server. At this time, the initial connection will be made to the machine on which the consultation slide(s) reside to ensure that an appropriate connection for consultation is available.

(2) Once this connection is completed, the AFIP consultant will be notified that the case is ready for review, and the AFIP 288-R (Consultation Request Form) will be delivered to the Accessions Branch for entry into the Pathology Information Management System (PIMS) and generation of a unique case accession number and initiation of a patient record.

(3) AFIP consultants will review and diagnose the case within the 4-hour timeframe for telemedicine cases as outlined by AFIP Regulation 40-14 (Electronic consultation Service). The consultant will attempt to contact the contributor by telephone during the review if requested by the contributor.

(4) Consultants will provide diagnosis and comments following slide review to the AFIP Telemedicine Support Specialist via internal web form or in handwritten form for transcription and generation of a telepathology report.

(5) All telepathology reports will be returned to the contributor by facsimile. In cases in which facsimile connection cannot be expediently made, the diagnosis may be rendered via telephone, or by email. As email is inherently an insecure medium, the email message will not contain any patient identifying information, simply the diagnosis and comment blocks from the consultation report.

b. For WRAMC and other AMEDD MEDCENS:

(1) Once the case information is submitted to the WRAMC server, an email is automatically sent to the AMEDD Telepathology Director at WRAMC or his delegate. The consult request will be assigned to a staff pathologist for action.

(2) WRAMC or AMEDD MEDCEN consultants will review and diagnose the case within the 4-hour timeframe. The consultant will attempt to contact the contributor by telephone during the review if requested by the contributor.

(3) The consultant will enter the diagnosis into the Web-based system and once complete, the system will automatically send an email to the requestor stating the consult has been reviewed. The consult process is not complete until the referring physician accesses the response from the telemedicine consult management system at <https://consult.wramc.amedd.army.mil>.

14. Record Keeping. Record keeping is conducted through the secure Web-base application developed and maintained by either the AFIP or WRAMC who will maintain their respective Web and database servers.

15. Workload Credit. Individual clinics determine how to count for workload credit following local clinical guidelines.

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The proponent agency of this publication is the office of the North Atlantic Regional Medical Command, Walter Reed Army Medical Center, Telemedicine Directorate. Users are invited to send suggestions and comments on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, Walter Reed Army Medical Center, ATTN: MCAT-CL-T, 6900 Georgia Avenue N.W., Washington, DC 20307-5001.

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