



INTEGRIS

TeleStroke Network

Extending real-time stroke expertise to Oklahoma rural hospitals for evidence-based treatment of acute ischemic stroke patients

TeleStroke Overview, Application and Pre-Site Survey

3500 NW 56th Street, Suite 200 - Oklahoma City, OK - 73112
405.945.4870 - TeleStroke@INTEGRISOK.com
www.INTEGRIS-TeleStroke.com

Welcome!

Thank you for your interest in joining the INTEGRIS TeleStroke Network.

With the recent changes from the Oklahoma State Department of Health for providing care to stroke patients, Oklahoma now requires that all facilities who accept stroke patients have access to a neurologist 24/7/365 for immediate consultative services. For most hospitals in rural Oklahoma, it is not feasible to have a neurological staff on-call 24 hours a day, which may lead to your hospital being bypassed by Emergency Medical Services (EMS). That's why the INTEGRIS "TeleStroke" team is using two-way interactive videoconferencing technology to assist rural Oklahoma hospitals when a patient presents in their emergency department who may be a candidate for Activase (tPA).

Joining the INTEGRIS TeleStroke Network will enable your staff to provide urgent clinical expertise to your community. This evidence-based practice has proven to be successful in reducing mortality and disability in acute ischemic stroke patients.

Along with the advantages for the patient of joining the INTEGRIS TeleStroke Network, your hospital will have access to our monthly INTEGRIS Stroke Grand Rounds and quarterly CME's hosted by Massachusetts General Hospital (MGH) Partners TeleStroke Center in Boston. This partnership will also enhance the good will and positive publicity for your hospital throughout your community and surrounding area.

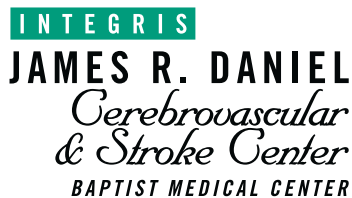
On behalf of the INTEGRIS TeleStroke staff, we hope you will consider joining our network and look forward to creating a successful and lasting relationship.

Best regards,

Lawrence Davis, MD
Medical Director

Charles Morgan, MD
Medical Director

Pam Forducey, Ph.D.
Director of Telehealth



Program Contacts

Pamela Forducey, Ph.D.
Director of Applications
(TeleStroke Program Director)
Phone: 405.713.4433
Cell: 405.550.3482
Email: pam.forducey@integrisok.com

Micha Leah Post
Telehealth Business Specialist
Phone: 405.945.4870
Cell: 405.568.9240
Fax: 405.951.9793
Email: mickie.post@integrisok.com

Lawrence W. Davis, MD
Medical Director of the INTEGRIS TeleStroke Network
Phone: 405.942.8586
Pager: 405.559-1997
Email: Lawrence.Davis@integrisok.com

Thomas Cole Purvis
Telehealth Technical Specialist
Phone: 405.951.2831
Cell: 405.568.9221
Fax: 405.713.2703
Pager: 405.559.1063
Email: thomas.purvis@integrisok.com



Every Second Counts: The Kathy Long Story

Kathy Long knows all about strokes. When she suffered one this past February, she was unable to move or speak. Luckily, her son was with her and he immediately called 911. EMSA rushed her to the INTEGRIS James R. Daniel Stroke Center at Southwest Medical Center, where physicians determined Kathy was a candidate for the clot-busting drug and administered tPA. Within hours, she had regained her movement and speech. Just a short week later, she was out of the hospital and back to her life.

Time is of the essence for stroke survivors - if treated quickly enough, the effects of a stroke can be decreased by as much as 30%. The INTEGRIS TeleStroke Network neurologists are specially trained to identify and treat stroke patients through electronic communication...saving time to decide if the patient needs tPA.

Every 40 seconds, someone in the US suffers a stroke. Unfortunately, not all hospitals have the necessary personnel, equipment and organization required to rapidly and effectively treat these patients. It's why the INTEGRIS "Code TeleStroke Team" is using videoconferencing technology to assist Oklahoma rural hospitals when a patient present in their emergency department and are a possible candidate for tPA.

What is TeleStroke?

TeleStroke provides real-time expert neurological assessment of patients presenting with stroke-like symptoms in your hospital's emergency department. This expertise-on-demand can help you rapidly evaluate and treat potential acute stroke patients. All of our stroke experts are trained in the practice of TeleStroke and participate in our TeleStroke quality assurance program. For some hospitals, the TeleStroke service augments existing hospital-based neurologic coverage to help provide 24/7 coverage all year long; for other hospitals, it is the only neurologic expertise consistently available. For many communities, telemedicine is an important building block for developing a comprehensive stroke care system that reaches its citizens. With acute stroke expertise available "virtually" at the bedside, you won't need to immediately transfer possible stroke patients elsewhere for evaluation, and the patients don't lose precious time until the administration of tPA or other critical therapy.

In the INTEGRIS TeleStroke Network, specialists use videoconferencing technology to remotely examine the patient, confirm the diagnosis, interpret the brain images and provide recommendations to your hospital's staff physicians just as if they were at the bedside. **TeleStroke helps your hospital give the right treatments to the right patients at the right time.** Some patients may stay at your hospital, while others may transfer for additional treatment to INTEGRIS Southwest Medical Center or INTEGRIS Baptist Medical Center or another primary stroke center nearby.

What happens when we activate the TeleStroke Network for a patient?

When a patient with stroke-like symptoms presents at your emergency department, you follow the standard acute stroke protocol and call our on-call stroke neurologist. We then immediately begin the assessment of your patient

The INTEGRIS TeleStroke neurologist contacts you by phone to review the case and initiate a videoconference call if appropriate. After the videoconference is established, your emergency department physician provides additional information about the patient. The stroke neurologist will then review the patient's presentation with your emergency department physician and staff will perform a focused neurological assessment.

Upon completion of the exam, the TeleStroke specialist reviews the brain images and then discusses the findings with you. **Together you decide on the best plan of care.** The findings and recommendation of the stroke neurologist are stored securely on the TeleStroke Network web site and are available for you to print out and place in the patient's medical record.

Why should my hospital join the TeleStroke Network?

According to the Oklahoma State Department of Health, to be “stroke-ready” your hospital must be able to provide immediate neurological consultation services for stroke patients 24/7 or your facility may be bypassed by EMS. Most rural hospitals are not able to support a staff of neurologists to meet the criteria.

By becoming a member of the INTEGRIS TeleStroke Network, your hospital will receive 24-hour acute stroke expertise-on-demand. Being a primary stroke center, allows the rural hospitals to collect fees for the administration of tPA. With the new MS DRG’s, there are three levels of reimbursement. The average reimbursement for each patient that receives tPA is \$13,215 (\$9,580 - \$17,707).

Other advantages include access to the monthly INTEGRIS Stroke Grand Rounds CME and the MGH Partners TeleStroke CME network, which provides quarterly CME credits with interactive questions and answer sessions.

Submitting your application and pre-site survey

To submit your hospital application and pre-site survey, choose one of the two options below:

- 1.) Fax your pre-site survey and documents to 405-713-2703
- 2.) Scan and e-mail your pre-site survey and documents to telestroke@integrisk.com

Once we have received your pre-site survey, we will review the information and call your Team Leader to schedule an implementation meeting with our staff, evaluate your emergency department space, equipment options, and discuss the next steps needed to bring the INTEGRIS TeleStroke Network to your hospital.

TeleStroke Implementation

Upon subscribing to the network and execution of the contract, your hospital will receive an implementation manual with all the necessary information to swiftly initiate the program at your hospital. Some of the implementation tasks include:

- Physician credentialing at your hospital
- Approval of the TeleStroke clinical orders at your hospital
- Installation of a OneNet T1 line (if your hospital does not already have one or enough available bandwidth)
- Local Area Network wiring to the exam room is pulled and tested
- Ordering of a videoconferencing unit and mounting option (The INTEGRIS TeleStroke Network requires the purchase/lease an H.323 compliant videoconferencing unit with far end camera control and pan/tilt/zoom lens - See Technical Requirements and Recommendations)
- Clinical and technology training with our staff
- Mock TeleStroke drill with a mock/simulated patient before your go live date



Technology Requirements and Recommendations

Videoconferencing Unit Recommendation

In an effort to simplify implementation of technology, the INTEGRIS TeleStroke Network team has evaluated a variety of telemedicine vendors in order to determine which videoconferencing units would be the most compatible in our health care environment. Each spoke hospital will be responsible for the purchase or lease of an H.323 compliant device (such as Polycom or Tandberg) with the ability for far site pan, tilt, and zoom (PTZ) control. If your hospital already has a videoconferencing unit that could be designated for TeleStroke, our INTEGRIS IT staff will need to test and approve the unit prior to TeleStroke implementation. Videoconferencing units and accessories can be purchased or leased through a variety of vendors. INTEGRIS Telehealth has a list of preferred vendors. A yearly equipment maintenance contract is highly suggested in order to mitigate significant interruption of service due to hardware failure.

Below is the recommended unit that can be used for the INTEGRIS TeleStroke Network:

Polycom QDX 6000

The Polycom QDX 6000 videoconferencing system delivers high quality DVD resolution video and CD quality audio. This unit has a separate camera with pan, tilt, and zoom capabilities and works with both widescreen (16:9) and standard TVs (4:3). The unit also has two microphones that can be placed in multiple spots around the exam room or optional ceiling mounted microphones can be purchased separately. The estimated purchase price for this unit is \$3,449.25 or leased for \$90 a month for 48 months, plus tax and shipping.



Mobile Cart and Mounting Recommendations

During the pre-initiation phase, we recommend that your hospital identify a TeleStroke exam room/bay area in your Emergency Department. Knowing that space can be limited, we are recommending several options to fit the space available in your ED. The products listed below are suggestions of what can be used for TeleStroke, but please note that our team is receptive to discussing other products or configurations to meet the specific needs of your facility. The INTEGRIS TeleStroke Network team and your selected vendor can collaborate with you to customize a mobile cart or wall mount package.

Mobile Cart Option – AVTEQ Video Cart

This video cart can accommodate a 37" to 65" LCD TV. It is standard with 5" dual wheel casters, including wheel locks for optimum mobility, 100% solid steel construction, cable management tray for clean wiring, and an adjustable camera shelf. The cart does not include a TV or videoconferencing unit (purchased separately). The estimated purchase price for this mobile cart is \$849.00, plus tax and shipping.



Wall Mount Option - AVTEQ Wall Mount Bracket

AVTEQ has designed a complete wall mount solution that would be a great option for a small ED exam room. This unit requires no floor space and can be mounted on the wall opposite of the patients' bed. The minimum suggested TV size for the wall mount is 37 inches. This wall mount does not include a TV or videoconferencing unit (purchased separately). The estimated purchase price for this wall-mount is \$599.00, plus tax and shipping.



It is the responsibility of your hospital to purchase an LCD TV for either of these options. We suggest a 37" LCD TV for the best viewing in the exam room. You can purchase this from any local retailer or online vendor.

Wide / Local Area Network Information for Hospitals Inside of the INTEGRIS Health System

For hospitals inside of the INTEGRIS Health network, the INTEGRIS TeleStroke Network team and IT Network Services will work with your IT staff to evaluate any network infrastructure and bandwidth upgrades that need to take place for your hospital to join the INTEGRIS TeleStroke Network. It will be your responsibility to pay and coordinate the installation of the Local Area Network wiring to the exam room, but Network Services will work with your IT staff to determine if the connection leaving your hospital will be stable enough for video transmission.

Wide / Local Area Network and Bandwidth Requirements for Hospitals Outside of the INTEGRIS Health System

The INTEGRIS TeleStroke Network is committed to facilitating quality evidence-based emergent stroke care via two-way interactive video telecommunication technology. In order to accomplish this, we require that all spoke hospitals have a minimum of one T1 connection to OneNet (Oklahoma's official telecommunications network), to which the videoconferencing equipment can be connected. If your facility already has an established OneNet connection, our Telehealth team will consult with your IT staff to evaluate bandwidth usage (to determine if your existing connection is sufficient to accommodate video). If your hospital does not have a OneNet connection or your available bandwidth is not adequate, we will recommend that your hospital purchase a new T1 connection from OneNet that will be used primarily for the transfer of video and radiological images.

It is also recommended that your videoconference unit has a static public IP address. We highly suggest that your video unit is separate from as much mixed or non-prioritized network traffic as possible and is connected directly to the Wide Area Network router or a 100/1000 switch connected to the Wide Area Network. The fewest network breakpoints possible makes technology troubleshooting easier.

A minimum bandwidth of 384kbps is required for our TeleStroke consultations, but a video connection of 512kbps or greater, is optimal. This will allow for smoother video and audio transfer and will minimize the chance of delays during a TeleStroke consultation.

Exam Room Preparation

Local Area Network Wiring Location in Exam Room

Local Area Network wiring for the videoconferencing unit should be placed on the side of the room where the foot of the bed will be located. This will reduce the amount of wiring that will be lying on the ground during a TeleStroke consultation. If your unit is wall-mounted, we suggest that the wiring is placed behind the TV so that it is hidden.

Mobile Videoconferencing Unit Placement

The camera should be positioned at the foot of the bed so the entire patient may be seen on the video screen. This includes assessment of the lower limbs, so leg elevation can be adequately assessed remotely.

The camera should be shifted to the patient's right side to allow view of the bedside examiner and patient simultaneously. The physician should examine from the patient's right side at the head of the bed whenever possible. It may be useful to mark the camera cart position with tape on the floor of ER bay.

Wall-Mounted Videoconferencing Unit Placement

The camera and TV should be mounted on the furthest wall from the foot of the patient's bed on the right side to allow view of the bedside examiner and patient simultaneously. For wall-mounted configuration, we suggest not using a TV smaller than 37 inches to allow for better viewing of the hub neurologist in the exam room. The emergency room physician should examine from the patient's right side at the head of the bed whenever possible.

Room Lighting

Adequate lighting is essential for the video conferencing equipment to function properly. The brighter the lights, the less information is required to transmit the images. Therefore, make sure the room is adequately lit, and that light is directed toward the patient.

Microphone Placement

Make sure the microphone is placed near the patient in a stable location, so it will not be frequently moved and cause audio distortion.

Speaking

Depending on the speed of the connection, it may be necessary to communicate in a more formal manner to avoid speaking simultaneously between the remote and bedside examiners.

It may be necessary to pause for 1 second allowing time for the other party to respond. This will only occur in instances where bandwidth is constrained and the speed of the connection must be reduced.

Radiology/CT Imaging

For hospitals that join the INTEGRIS TeleStroke Network, they will need the ability to send a non-infused CT scan of the head in less than 30 minutes to our PACS Imaging Server. During the implementation process, the INTEGRIS TeleStroke Network team and the INTEGRIS PACS Administrator will work with your radiology department to configure settings that will allow for your scans to be received into our server. Our team will identify any potential problem areas, verify that your CT imaging device is sending virus-free images, and provide you with the destination IP addresses of our server for your device to route to. This will enable you to send us CT images. After your device is configured, we will do several tests to make sure all connections are working. If your hospital is outside of the INTEGRIS Health system, additional configuration steps may be required for connection.

After your hospital has completed its implementation phase and is live in the network, we will establish a regular testing schedule with your radiology department to ensure we do not have transmission issues during a "Code Stroke".

Preferred Technology Vendors

Smart Communications (SKC)

Greg Mannis – Account Executive
1630 E. 30th Place
Tulsa, OK 74114
Phone: 918.521.5131
Email: Greg.Mannis@skccom.com

Ford Audio and Video

Dave Vezina – Sales Account Manager
4800 West I-40
Oklahoma City, OK 73128
Phone: 405.945.2010
Email: vezid@fordav.com

AVL Systems Design

Danny Nix – Sales Manager
14901 Bristol Park Blvd.
Edmond, OK 73013
Phone: 405.749.1866
Email: Dnix@avl1.com

Physician Credentialing

Please forward a copy of this sheet to your Medical Staff Office.

The neurologist that will provide care must be credentialed at your hospital. We have standard credentialing materials and can submit these documents to you.

They include:

- Oklahoma Uniform Credentialing Application
- Oklahoma State Medical License
- State Controlled Substance Certificate
- Federal DEA
- Driver's License
- Recent Photo
- CV
- CME list
- Malpractice Insurance Face Sheet
- Clinical Privileges Application
- List of Peer References

Please contact the TeleHealth Business Specialist to begin the process and review the forms specific to your hospital. We will gather signed copies from our neurologists and return them to you.

All correspondence related to credentialing, including requests for signature and documentation will be processed by the TeleHealth Business Specialist. Please do not send requests directly to the neurologists.

It is our recommendation that your program not go live until credentials are granted to all participating TeleStroke physicians. However, if your hospital wants to initiate TeleStroke before this process is complete, we suggest that you provide temporary privileges to our neurologists based on your medical staff by-laws while the credentialing process takes place.

Please contact the TeleHealth Business Specialist if you have any questions about the credentialing process.

Hospital Application

Hospital Name _____

Affiliation (if applicable) _____

Address _____

City _____ Zip Code _____

Main Hospital Phone number _____

Emergency Department Phone Number _____

How many beds does your hospital have? _____ How many beds are in your Emergency Department? _____

Does your hospital have access to helicopter or airplane transportation? YES NO

Hospital Staff Contacts

Implementation Team Leader

(This will be our main contact at your hospital to setup meetings)

Name _____
Phone _____
Email _____

Hospital President or Chief Executive Officer

Name _____
Phone _____
Email _____

Chief Nursing Officer

Name _____
Phone _____
Email _____

Emergency Department Director or Manager

Name _____
Phone _____
Email _____

Pharmacy Director

Name _____
Phone _____
Email _____

Radiology Director

Name _____
Phone _____
Email _____

Information Technology Director

Name _____
Phone _____
Email _____

Video Conferencing Device Technical Contact

Name _____
Phone _____
Email _____

Credentialing Contact

Name _____
Phone _____
Email _____

Clinical Education Contact

Name _____
Phone _____
Email _____

Pre-Site Survey ~ Clinical Questions

Please have your Clinical Leader work with your emergency department staff to answer the questions below:

1.) Can your radiology department scan and transmit a non-infused CT scan of the head in less than 30 minutes?

YES NO

2.) Do you have any staff trained in the National Institute of Health Stroke Scale (NIHSS)?

YES NO

If yes to question 2, how many NIHSS trained personnel are on each shift?

1st Shift _____ 2nd Shift _____ 3rd Shift _____

3.) Do you have any staff who are trained to administer Activase (tPA)?

YES NO If yes, how many? _____

4.) Do you have any staff who are trained in the dosing and IV administration of Activase (tPA) for acute ischemic stroke?

YES NO If yes, how many? _____

5.) Do you currently have stroke specific patient quality measures in place?

YES NO If yes, please attach a copy with your survey

6.) Do you currently have a "Code Stroke" process in place for emergency department patients with acute ischemic stroke?

YES NO If yes, please attach a copy with your survey

7.) Do you currently have protocols and an order set in place for Activase (tPA) med administration for acute ischemic stroke?

YES NO If yes, please attach a copy with your survey

8.) Can you provide six months of Activase (tPA) stroke data from your facility?

YES NO

9.) Can you provide six months of "Code Stroke" tracking logs from your facility?

YES NO

10.) Are the following medications available at your hospital? (Check all that are available)

IV Labetalol Nicardipine Infusion Nitropaste tPA (Activase) IV Diphenhydramine IV Famotidine
 IV SoluMedrol Acetaminophen (tablets and suppository).

Pre-Site Survey ~ Technical Questions

NOTE: The technical questions below are for non-INTEGRIS Health hospitals only. INTEGRIS Health hospitals only need to complete and submit the hospital application and clinical questions on the previous pages.

Network Infrastructure

Does your hospital currently have the required OneNet connection to your facility? YES NO

Does your hospital have a router in place that can separate the videoconferencing unit from mixed or non-prioritized network traffic? YES NO

Can you provide a public IP address for your videoconferencing unit? YES NO

Is your emergency department already wired with network jacks in your exam rooms that can be used for TeleStroke video use only? YES NO

Bandwidth

Can your network meet the minimum bandwidth of 384kbps for video and audio transmission? YES NO

Does your hospital have enough available bandwidth for our optimal connection speed of 512kbps? YES NO

Network Firewall Specifics

What brand of firewall do you have? _____

Model number: _____

Version number: _____

Video Device Information

Does your hospital have an H.323 compliant videoconferencing device that can be used for TeleStroke? YES NO

If yes, please provide the following information:

Vendor: _____

Make: _____

Model: _____

Current Software Version: _____