Building and Sustaining a Telestroke Network: It’s More than Technology

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REACH Access™ Enterprise Telemedicine Platform

One Platform
Multiple Service Lines
- Stroke
- Acute Neurology
- Psychiatry
- Cardiology
- Pulmonology
- Pediatrics
Building and Sustaining a Telestroke Network

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Building & Sustaining a Telestroke Network: Part 1

Strategic Planning, Market Research, Justifying Resources & Organizational Structure

Liz Cothren, MSN, RN, CNS-BC, CCRN, CNRN
AVP, Telemedicine – Ochsner Health System

Ochsner Health System

- Ochsner Health System is southeast Louisiana’s largest non-profit, academic, multi-specialty, healthcare delivery system.
- 13 owned and managed hospitals, and over 50 health centers.
- Ochsner employs more than 15,000 employees, over 900 physicians in over 90 medical specialties and subspecialties.
- Patients from every state and more than 90 different countries choose Ochsner for advanced care.
TeleStroke Outcomes

Reporting period: August 2009 – December 2014

- Total consults: 4,030
- Diagnosis of AIS: 2,076

**Average tPA Utilization**

- Non-PSC: 25%
- PSC: 6%
- Ochsner TeleStroke: 4%

**Hemorrhagic Conversion Rate**

- National Average: 5%
- Ochsner TeleStroke: 6%

**Door to Consult Initiation**

- Average Time (Minutes): 75, 80, 85, 90, 95, 100

**Door to Needle**

- Average Time (Minutes): 8
In the Beginning...

- Reasons a hospital system may elect to begin a TeleStroke system include:
  - Clinical vision of physician
  - Strategic outreach for health system
  - To optimize physician staffing issues
  - CSC Certification recommendations
- TeleStroke clinical design recommendations and outcomes are well documented.
- It’s the right thing to do...

Build the Team

- Blue members are Core Team for alignment and vision
- Others are critical considerations
Assemble a Road Map

- Determine the first priority of your TeleStroke program
  have S.M.A.R.T. goals
- Review current state of infrastructure (Silos!)
- Conduct a resource assessment
- Review market analysis
- Calculate ROI
- Identify pilot site
- Test
- Activate

CASE STUDY: Road Map for Strategic Outreach Plan

- Develop a TeleStroke program that partners
  with 5 external hospitals >25 miles
- Review current state of infrastructure (Silos!)
- Conduct a resource assessment
- Review market analysis (Competition, Needs)
- Calculate ROI
- Identify pilot site (Key partner for quick win)
- Test
- Activate
Market Analysis

- Leverage market data to support the need for your TeleStroke program
  - Business Analysts can assist with trends in hospital discharge and payment data for your region which can help build your business case
    - Hospital specific info valuable for partner selection
  - DOH, AAN and CMS can provide information on hospital services provided and areas of MD shortages
  - Government Relations can help identify trends in medicaid and healthcare policy

Calculating ROI

- Should we charge for this service?
- Will our MD’s be paid ‘extra’ to provide this service?
- Will incremental transfers count towards bottom line?
- If a procedure is done in Radiology, does it count towards the program value?
- Involve Chief FUN Officer early
- Telemedicine is about the patient
- ROI considerably easier if physician employed in a group practice model
- ROI should be considered for the Hub and Spoke
Justify your Resources

- 2 words: SCALABLE & SUSTAINABLE
- Verify that you have enough staff before you start
- Key sound bytes:
  - You are ADDING a service
  - Customer service cannot fail
  - It is outward facing
  - You are Building for the Future at xxx Health System
  - Exportable to other service lines

- OHS: If you build it, they will come
  - 2013 – 20 services @ 20 hospitals
  - 2014 – 109 services @ 41 hospitals

Organizational Structure

Key Recommendations if No Telehealth Dept:

- Stroke Coordinator → Neurology/Clinical Operations
- Administrative Leader → Dyad Clinical Partner

- Ideal State: Single Telehealth Dept who interacts with each of the following to ensure maximum growth of program:
  - Executive leadership
  - Clinical MD and Admin leaders
  - Support Services
Organizational Structure @ OHS

Warren Thomas
President and CEO

Mark Meliz
Sr. VP Strategy & Business Development

Richard Mains, MD
Chief Innovation Officer

Lisa Collins
AVP, CoreConnect360

David Houghton, MD
Natural Health

Jennifer Knebel
Mgmt. Solution Dev.

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Annie Sebald
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Marc Wypons
RN Clinical Performance

Katie
RN Clinical Performance

Wendi Crevits
Customer Service

Audience Polling Question #1
Building & Sustaining a Telestroke Network: Part 2

Hub infrastructure, Funding opportunities, Regulatory requirements and reimbursement plans

Paula J. Meyers, MSN, RN, SCRN
OhioHealth

Neuroscience Tower at Riverside

- 9 story Neuroscience patient tower
- All private beds
- Scheduled to open in 2015
Vision

- Access to Care Model
- Cost Savings Model
- Access to Market Model

Funding Opportunities

- Grants
  - Federal – USDA, CMS, HRSA, National Library of Medicine
  - State - Safety grants, Wellness grants
  - Research – NIH, CMS
- IT Grants
  - Private
  - Technology based – Verizon, Microsoft,
- Foundation
  - Private
  - Philanthropists
Regulatory Requirements

Reimbursement

- Federal
- State
- Private
Infrastructure

The Hub & Spoke Model

- The “hub” the center affiliated with the expert stroke provider

- The “spoke” a center affiliated with the HUB
Ten Steps

- Needs Assessment
- Build a long term financial plan
- Create a convenient & effective environment
- Mainstream technology into standard process
- Plan & assure effective training

Ten Steps (continued)

- Full time coordinator(s), an effective leader & cheerleader
- Project Plan
- Measurement
- Publish or present
Dedicated Support Staff

- Medical Director
- Director of Operations
- Ongoing Relationship Manager
- ASLS / EMS Education Coordinator
- IT Support Analyst
- Administrative Assistant / Data Entry

eICU Model

- Partner hospital initiates consult

- eICU critical care nurse joins consult

- Once need for Neurologist identified, eICU contacts on call Neurologist
Kick Off Meeting

- Multidisciplinary team participates in kick off meeting
- Partner Hospital recommended participants
- Initial overview given, then break into subgroups
- Marketing & Media
- IT
- Clinical
- Go Live

Summary

- Well oiled onboarding process
- Well oiled consult process
- Dedicated resources
  - Stroke Network Resources
  - IT Resource
- Multifaceted Customer Retention program
Building & Sustaining a Telestroke Network:
Part 3

Establishing Relationships, Expectations,
Contracting and Credentialing

Ellen Debenham, RN, CCRC
Medical University of South Carolina
Program Overview

- **2008** - 6 hospitals - pilot project with external grant funding
- **2012** - Expanded to 15 hospitals
  - 3-4 Consults/day
- **2014** - 7 Partners have achieved PSC status
- **2015** - 16 Active sites and 2 new contracts
  - Expanding to offer acute and scheduled general neuro consults
  - and post tPA tele rounds
  - 4-5+ stroke consults/day - 15 consultants in call pool

MUSC Telestroke Data

5348 Tele Consults from May 2008 to January 2015

- 50% Ischemic Strokes - 32% treated with tPA
- 38% Other Neuro Diagnosis
- 12% Other

24% of consults transfer to MUSC -

- 42% receive some level of advanced care
  - 12% undergo an intra-arterial procedure
  - 4% undergo a Carotid Endarterectomy
  - 6% undergo some other form of neurosurgery
  - 37% are cared for in the Neuro ICU
Many Models

Partner sites of all types – be flexible

- 20 bed critical access hospitals - Urban 400 bed PSC hospitals
- No neuro coverage – local in house neurology
- 24/7 Acute stroke coverage – ED +/or in-patient consults
- Acute stroke coverage for vacations and weekends
- Guaranteed acceptance of all stroke transfers or transfer of only potential NIR candidates
Establishing Partners

All about Personal Relationships

- First contact may be a CEO, CNO, Director of Quality, staff nurse or ED Doc

**GO Visit** and have a face to face meeting

- Present data that includes estimated # consults, program outcomes and services offered – answer questions

**ED Physician engagement is critical**

Setting Expectations

**Identify local Champions**

- Top Administration
- Physician Leader
- RN Leader - Stroke Coordinator, ED Manager or member of quality team
  - Primary contact for telestroke program, implementation, staff education, patient follow up

**Share data – both ways!**

- Establish time goals for each step of the call process
- Send regular reports with benchmarks, local data and blinded program wide data
- Visit each site quarterly
- Praise the good, offer suggestions – it takes teamwork
Establishing Call Guidelines

Important to have agreement from all consultants and NIR when setting up call guidelines – time windows

Questions to ask Hub Team -
- Should the site get CT results before they call?
- What are the guidelines for potential NIR candidates?
- How will calls for non stroke pts be handled?
Keys to Sustainability

- Physicians available to take call
- Partner sites with enthusiasm
- Dedicated staff to support program
- Support from administration
  - Hub and Spoke

Financially secure business model for Hub and Spoke

- Hub increases number of procedures – Higher billing/patient
- Spoke charged a daily fee based on ED volume
- Spoke admits more patients locally with support from Hub

Keeping Everyone Happy

Identify needs of partner sites

- Support local stroke coordinator
- Initiatives to admit more patients locally
- Stroke education opportunities
- Expand services to meet sites needs

Identify needs of consultants

- Laptops and 4G wireless cards
- Flexible scheduling
- Back up coverage and supportive team approach
- Stipend for after hours call
Contracts

It can take months to complete a contract

- We offer a general telemedicine contract with addendums for each specialty service

- 2-3 years with a 60 day termination clause for either party

Specify your expectations and send a final signed copy to your Site Champions

“The Hospital understands that the purpose of this contract is to specify services for the evaluation of patients with suspected stroke of very recent onset for the purpose of thrombolysis or other urgent treatment…”

“The Hospital agrees to work with MUSC to monitor for appropriate use of this consultative service and follow up on any quality improvement items identified by MUSC based on reports from MUSC consultants.”
Credentialing

Most time consuming step of adding a new site or MD
- 2-6 months for traditional credentialing

CMS and The Joint Commission standards allow for credentialing by proxy
- Credentialing by proxy is becoming more popular.
  - Takes time to implement at a site
  - Change by-laws – committees meet infrequently
  - Once established 30-60 day turnaround
    Definitely worth pursuing!

Lessons Learned

- A dedicated clinical and administrative team is essential
- Set expectations at implementation
- Shared data and accountability provides best structure and outcomes
- Stroke education must be ongoing – high staff turnover
- Involve EMS in all training and data reports
- Always have a friendly contact in the ED – Visit often
- Plan for downstream impact at Hub
  - Emergency Department
  - hospital units + ICU Beds
  - Rehab Needs
  - Outpatient follow-up
Penn State Hershey

LionNet

- 1st partner go-live: July 2012
- 14 partners
- 1700 consults
- 140/month
- 6 stroke neurologists
- 3-tier call schedule
- 92% of consults
- 3 vascular neurosurgeons
- tPA treatment rate: 24%
- IA intervention rate: 5%
- Transfer rate: 17%
Driving High Quality Outcomes

Data Sharing

Monthly:
- Electronic data

Bi-Monthly:
- Network Coordinator meeting
  - Data use strategies
  - Best practice sharing
  - Networking

Quarterly:
- Site visit
  - Med Director & LionNet Coordinator
- Metrics Review
- Case review
  - Exemplary cases in poster format for display
- Updates
  - Network
  - Guidelines, regulatory

Annually:
- Hub specialists
  - Stroke neurology
  - Neurosurgery
  - Interventional
  - Intensivist
  - Nursing
  - EMS
- Recognition for best D2N, D2C
- State of the Network
  - Year in review, future plans

Driving High Quality Outcomes

Staff Competency: Hub Providers

- Education – network plan
- Training – use of software
- Technology – new laptops

- Technology updates
- Monthly updates re: network growth, consult volume, partner news
- Process review
  - Video of “optimal” consultation for review
  - Report cards

Competent Provider?
Driving High Quality Outcomes

Staff Competency:
Partner Sites
- ED providers and hospitalists
- Nurses/techs/unit clerks

- Education
  - Network plan
  - Cerebrovascular anatomy
  - Stroke care standards
- Training
  - Use of cart
  - Consultation Process

- Mock consults
- Pocket cards with algorithms, process maps
- Pre- & post- surveys
- Cart meetings – usually early/late in day
- Video of “optimal” consultation for review

Developing Clinical Expertise

Improving Nursing Practice Through Telestroke Partnerships
Driving High Quality Outcomes

“Reluctant consultants”
“Grumpy ED docs”
“Inconsistent expectations”
“Personnel changes”
“Miscommunication”
“Resource changes”
“Technology glitches”
“Cart overuse/underuse”
“Time/personnel requirements”
“Mergers & acquisitions”

Keeping Up With Changing Trends

- Technology
  - Computers → tablets → smartphones
  - Carts vs remote tele-presence
  - Contracted vendors vs homegrown
- Provider Resources
  - Advanced Practice Clinicians
  - Contracted, remote consultants
- Regional Competition
- Regulatory Considerations
  - TJC, CMS, state-specific rules, EMS resources
- Payer Patterns/Requirements
  - Telemedicine consultation
  - Follow-up? Via telemedicine/email/phone
Growing and Sustaining the Network

- Strategic plan for growth – geography, size, volume?
  - Return on investment
    - Metrics, outcomes, downstream revenue
  - Expansion of population services
    - Can one model work for all patient types?
    - Ensure that you can deliver what you promise
  - Internal Resources: Personnel, equipment
- Data management and reporting
  - Internally & externally
  - Benchmarking outside of the network

It’s not just about technology...

Building and Sustaining a Telestroke Network

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Webinars

*Save the Date*

**Using Telemedicine to Triage Patients for Intraarterial Treatment of AIS**
Mid to Late May - TBD

*On-Demand Webinars*

1. **Telemedicine Partnership Excellence**
   Best Practices from OhioHealth

2. **Telestroke Program Evolution:**
   Best Practices from Georgia Regents Medical Center

3. **Building a Successful Telestroke Program:**
   Lessons Learned at Penn State Hershey

4. **Prevent Telemedicine Pitfalls:**
   How to Identify and Mitigate Fraud and Abuse and Other Legal Risks

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Whitepapers:

1. **Best Practices for Establishing a Telemedicine Network**

2. **Executive Guide to Selecting a Telemedicine Platform**
   How to Choose Pragmatically for Today and Prepare Strategically for Tomorrow

3. **Using Telemedicine to Enhance Meaningful Use Qualification**

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New Case Studies

1. Penn State Hershey  
   Journey to State-of-the-Art Telemedicine

2. Georgia Regents University  
   Telestroke Program Evolution

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Thank you for your participation