

Pre-Hospital Communication and Stroke Care

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Objectives

- Present questions that will allow you to assess your local prehospital system, in its current state, for stroke care currently being delivered by EMS
- Understand the pieces of your local system and your role in it for managing stroke
- List the steps to implementing a prehospital stroke protocol
- Discuss the challenges and opportunities of implementing prehospital stroke protocols

Assessing Your Current System

Start by asking yourself a few questions...



- In what Medical Control Authority (MCA) are you located?
- In what Region (1–8) are you located?
- What hospitals and communities participate in your current EMS system?

Assessing Your Current System

- **Who are your Prehospital Personnel?**
 - Private EMS
 - Volunteer
 - Municipal (Fire Dept)
- **What is the training level of the EMS Providers in your community?**
 - Paramedic
 - EMT–Specialist
 - Basic EMT
 - Medical First Responder

WHO TRANSPORTS?

Assessing Your Current System

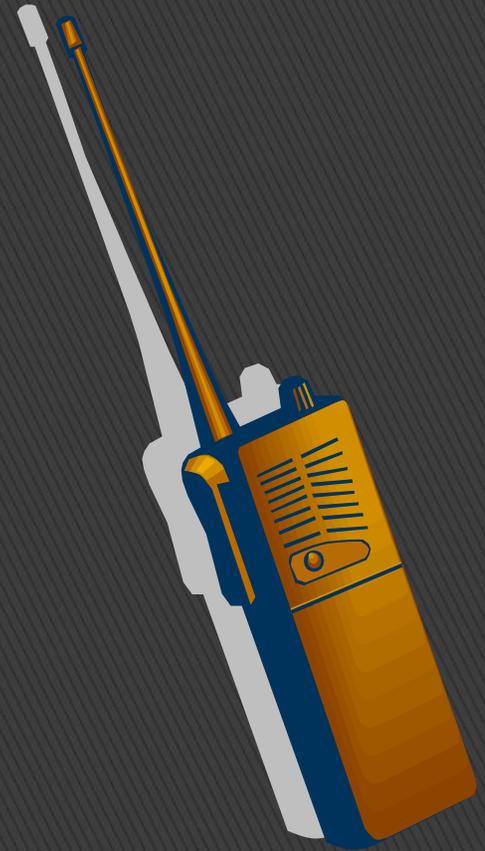
- **Who are the members of your local Medical Control Authority (MCA)?**
 - Determine the leadership of your local MCA and State Region
 - MCA EMS Medical Director
 - Other area hospital nursing and physician directors
 - Public health and emergency management leadership (County)
 - **Create a database within each category**
 - Can usually easily obtain through MCA

Assessing Your Current System

- **What hospital leadership is engaged in this issue?**
 - EMS Physicians
 - ED Nurse Managers
 - ED Paramedics and EMS Coordinators (RN, EMT-P)
 - Stroke Team/Neuroscience Staff Members
- **What level of input do the hospitals in your MCA contribute?**
- **Which area hospitals are Joint Commission Stroke Centers?**

Assessing Your Current System

- What methods of prehospital communication are utilized most frequently?
 - 800 MHz Radio
 - Cellular Phone
 - HEAR Radio
- What are the communication protocols for your area?
 - Is every arrival called in?
 - None?
 - Only level one patients?



Assessing Your Current System

- **Does a Stroke / CVA Protocol already exist in your area?** If not, has the State Protocol been considered?
- Are Trauma Centers / PCI Centers to receive patients outside of their service area based on prehospital condition?
- Are Stroke Centers in your service area similarly prepared to receive such “out-of-area” patients?

Implementing A Prehospital Stroke Protocol

- Educate, Educate, Educate!
- **Provider buy-in is paramount**
- Education and QA/QI must be linked in a positive, patient care enhancing paradigm
 - Punitive, authoritative QA/QI rarely works

Implementing A Prehospital Stroke Protocol

- **Essential elements of any Stroke Protocol:**
 - Time of onset documentation and communication when patient last known to be normal.
 - **Cincinnati Prehospital Stroke Scale** documented and communicated
 - Facial Symmetry
 - Arm drift
 - Speech/articulation
- Time sensitive nature of disease should be emphasized within protocol

Implementing A Prehospital Stroke Protocol

- Protocol should also reflect routine EMS prehospital care and documentation as well
 - Airway, breathing, vital signs, general appearance and any changes in route.
 - EMS interventions: Oxygen, IV Fluids, airway suctioning, cardiac rhythm monitoring



Implementing A Prehospital Stroke Protocol

- **Education–Your Most Immediate Need**
 - ASLS–Advanced Stroke Life Support
 - Developed by University of Miami
 - Free materials provided by the State of Michigan
 - Prepackaged or “canned” presentations
 - Stroke Rapid Response by the National Stroke Association
 - Google search
 - Michigan Society of EMS Instructor/Coordinators



Challenges

- **Stroke Outcomes**

- Nature of disease means variable outcomes
- Data indicates that Stroke Centers give more TPA and provide more advanced procedures, but convincing “landmark study” yet to be published which would end debate about the benefit of stroke centers
- Ongoing debate continues even among ED Physicians and Neurologists in Stroke Centers



Challenges

- Must overcome the fear Providers have of doing things new and untested...fear of criticism and being viewed as ineffective
- **Cincinnati Stroke Scale must be easily performed and reproduced**
 - This maximizes intra-operable reliability and seriousness with which ED personnel receive stroke patients
 - It is often an afterthought or not done due to lack of training



Challenges

- **Receiving ED Staff response needs to be appropriate**
 - If we treat providers in cavalier fashion, they will leave with the message that stroke is not as important as Trauma Care, PCI or similar
 - **Lack of urgency -> Lack of concern -> Lack of respect for provider and patient**
- **We must not undermine our own providers and protocols**

Conclusions

- Begin by assessing your current system and identifying it's current assets
- Identify those in your system caring for stroke patients and their capabilities
- Know your own hospital's role and capabilities
- Implement a prehospital stroke protocol with emphasis on EMS Provider education and buy-in

Conclusions

- Use QA/QI committee or team to audit the implementation of the protocol
- Understand the nature of the debate surrounding stroke care and TPA
- Monitor and adapt to the current literature
- Admit that the nature of disease complexity makes stroke outcomes more variable than PCI or Trauma



QUESTIONS?

Thank You!

