



Effective Communication in 21st Century Stroke Care

Does It Even Matter?





Conflict of Interest Statement

- **Jim Cole, LP, MAHE, NR-P, FP-C, CEMSO**
 - Regional EMS Coordinator – PeaceHealth
 - Chair, Oregon State EMS Committee
 - Critical Care Paramedic (FP-C) Oregon Coast
- **FINANCIAL DISCLOSURE: NONE**
- **UNLABELED/UNAPPROVED USES DISCLOSURE: NONE**



Objectives

- Understand EMS as a crucial partner in reducing time to intervention.
- Become familiar with prehospital metrics to improve outcomes.
- Identify mechanisms for timely, accurate communication in improving patient outcomes.



EMS as Crucial Partner

“Rampart...Rampart...This is Squad 51.”





1980's Pre-Hospital Stroke Care

- First Responders Arrive
- Needed order for all medical care via radio or phone
- IV D5W, Basic EKG, 100% oxygen
- Wait for ambulance to arrive (sometimes)
- Call hospital enroute (5 minutes out)
- Transport to “the hospital”
- No feedback to EMS



2000's Pre-Hospital Stroke Care

- First Responders Arrive
- Basic stroke assessment
 - FAST Assessment, IV NS @ KVO
 - 100% O2
- Wait for ambulance to arrive (sometimes)
- Call on Radio or phone 5 minutes out
- Transport to hospital with CT
- No feedback to EMS



2020 Pre-Hospital Stroke Care

- First Responders Arrive
- Strokes Assessment CSS/C-STAT/LSW in military time
 - IV@KVO, 12 lead, targeted O2 and BP Tx
- Alert receiving hospital electronically, preadmission of patient
- Wait for ambulance/helo to arrive (sometimes)
- Transport to hospital with CT and/or ELVO capability (definitive care)
- Receive ongoing feedback of pt. care

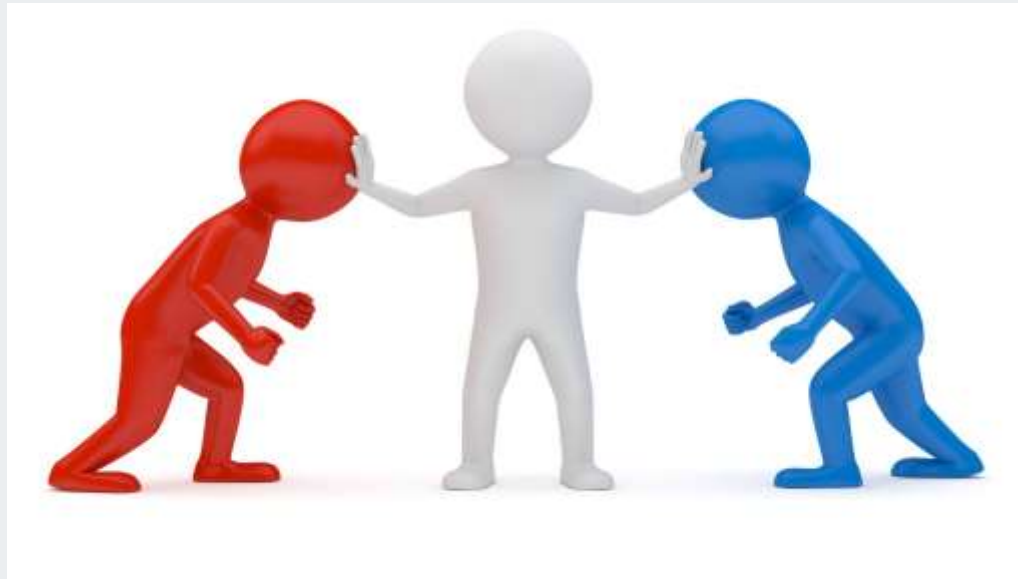


In Other Parts of the World/US

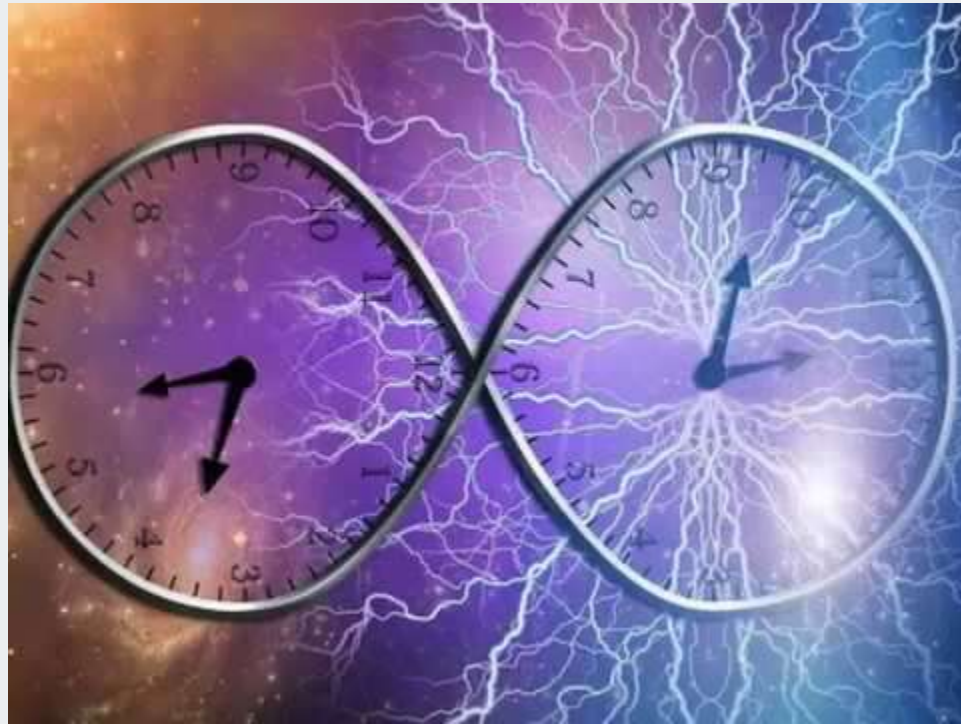
- Mobile CT/Stroke Units
 - Paramedic, CT Tech, Stroke Nurse
 - rTPA in field if indicated
 - Transport to hospital based on findings/capabilities of that receiving hospital
- Developing brain ultrasound halo to detect cerebral hemorrhage (5 pounds/batteries)



Agency versus Agency



Where Does Your System Live in the Space-time Continuum?





Silos of Communication

- Hospitals traditionally focus on THEIR DOOR to Needle time.
- EMS focuses on supportive care and rapid transport
- Hospital gives little to no feedback on patient outcomes to improve EMS system performance
- EMS gives verbal bedside report and puts up ePCR on a password controlled website



An elderly couple is riding bicycles through a field of tall, golden grass at sunset. The woman on the left is wearing a light pink top and dark pants, and the man on the right is wearing a plaid shirt and khaki pants. They are both smiling and looking towards each other. The background is a soft, golden glow from the setting sun, creating a warm and romantic atmosphere.

If this was someone you loved...

What if...





Prehospital Metrics

- Dispatch to arrival at patient side
- At pt side to completed CSS/C-Stat
- Time from Assessment to hospital alert
- Alert to Recognition
- Most appropriate transport mechanism utilized (ground versus air)
- Adequate actionable pt info. Transmitted
- Use most objective and mutually beneficial communications tool.



Hospital Response

- Receive alert and acknowledge
- Determine appropriate team response
- Pre-register patient when appropriate
- Allow workflow to adjust to fastest time into CT
- Identify roadblocks to pt Dx and Tx
- Communicate back to EMS throughout and or a timely case summary with findings

What if everything worked to the best advantage of the patient?

- Informed public of BE-FAST-called 911
- Rapid, skilled 9-1-1 response
- Detailed neuro exam/findings
 - Last known Seen Well in Military Time
 - CBG
 - Hx
 - Photo ID and 12 Lead
- Earliest possible alerting of appropriate receiving facility based on best science
- Coordinated EMS and hospital language/metrics
- Real-time, factual and objective information to key individuals at the hospital with immediate feedback to EMS crews

- Preregistration of patient
- Pre-arrival review of patient records/available at bedside including EMS comms
- Immediate transport into CT suite with point of care blood testing with EMS waiting
- If ELVO, EMS transports with stroke team to the cath lab or if not, to the stroke care team
- EMS assessment/treatments able to physically follow patient through process with ongoing feedback and outcome loop.



Good Relationship is Good Medicine


- Who are WE?
 - Communicate new EMS and ED and Stroke Providers
 - Build interdisciplinary team of all stakeholders
 - Understand each other's abilities and limitations
 - Determine which solos exist
 - Build bridges and connections
 - Share information objectively and openly





Practical Steps

- Monthly or bi-monthly EMS/Hospital Committee
- Share metrics and outcomes
- Mutually respect each other
- Communicate changes early
- Plan on improvement together
- Train and practice together
- Share each other's experiences

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- Identify current metrics that are meaningful to improve patient care and safety
 - Perform gap analysis
 - Choose 2 metrics to focus on and collect data
 - Provide continuous feedback objectively and with recommendations for improvement
 - Once those metrics are met, pick the next two and random audit previous metrics
 - Recognize excellence, not perfection

The Communication Conundrum





Leverage Technology

- Investigate tools that marry prehospital to hospital accurate information sharing
- Utilize communication strategies that start at the house and finish in the ICU
- Have experienced and knowledgeable team members that know how to work collaboratively.
- Share outcomes and what changes brought them about



Many technology options

- Pulsara
- EMS Charts
- State Hospital Hub
- Auto-fax
- ESO health Data Exchange



Three Principles

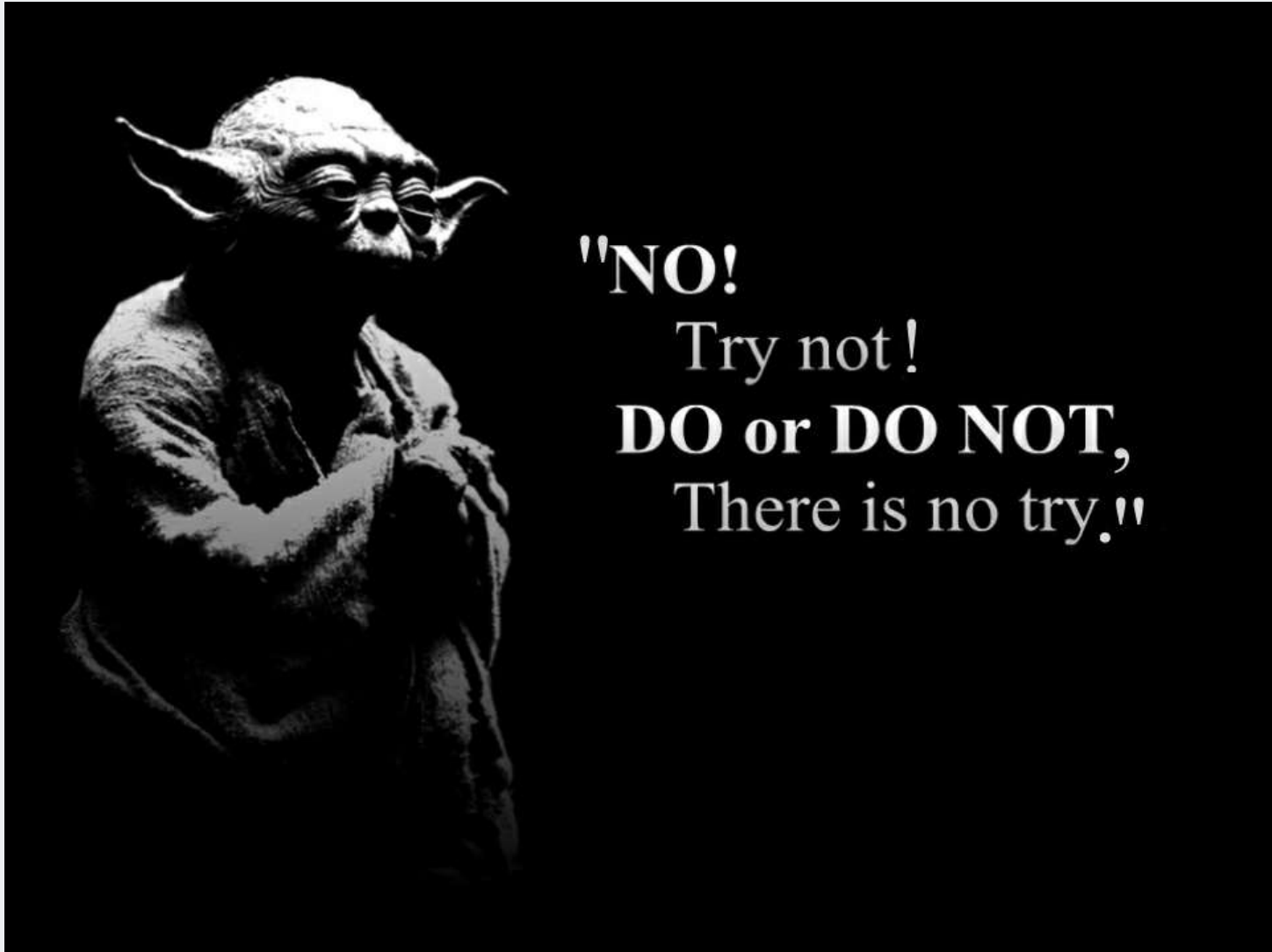
1. Does this improve care patient care in a safe and evidenced fashion?
2. Is it reasonable in cost, training, and ability to reliably perform?
3. Is it safe for the patient and the caregiver?



First Steps

1. Form or utilize monthly committee
2. Identify the work of that committee
3. Have prehospital and hospital metrics and data objectively and honestly shared
4. Allow for dreaming
5. Start.

PERFECTION IS THE ENEMY OF GOOD ENOUGH!



"NO!
Try not!
DO or DO NOT,
There is no try!"



In Summary

- EMS is a crucial partner in reducing time to intervention.
- You're familiar with prehospital metrics to improve outcomes.
- We've identified mechanisms for timely, accurate communication in improving patient outcomes.



Questions?

Thank you.

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Jim Cole

jcole3@peacehealth.org

541-222-1794

www.peacehealth.org/EMS