Using EMD for Acute Stroke Identification

* Bob Sinclair, PhD, Sr. Technical Editor & Research Specialist, NAEMD
* John R. Marler, MD, Medical Officer, NINDS

Stroke could become one of the defining elements of the driving force behind prioritized EMD. In recent years, thrombolytic therapy with tissue plasminogen activator (t-PA) to break down blood clots that precipitate “brain attacks,” has resulted in new hope for people who suffer stroke. Clinical studies have shown that, if given during the early stages of a stroke, t-PA can indeed improve outcomes for many stroke victims. The National Institute of Neurological Disorders and Stroke (NINDS), tPA Stroke Study Group, concluded in its 1995 paper, Tissue plasminogen activator for acute ischemic stroke, “Despite an increased incidence of symptomatic intracerebral hemorrhage, treatment with intravenous t-PA within three hours of the onset of ischemic stroke improved clinical outcome at three months.” Appropriate t-PA administration improves the long-term outcome in a significant number of patients. Overall, t-PA treatment is beneficial, despite the fact that it does cause serious intracranial bleeding in some patients. For 11 percent of patients, if they get to hospital rapidly, and are treated by a stroke team using thrombolytic drugs, they’ll go home rather than to a long-term care facility.”

Earlier interventions lead to improved patient outcomes (as “time is muscle” during acute MI, “time is brain cells” during stroke) and the goal should be a (continued on page 4)

Using Repetitive Persistence

* José Estevanell, EMT-P, EMD Instructor

Repetitive persistence has been shown to be the most effective method of reducing the caller’s anxiety to below the hysteria threshold. Nearly all EMDs agree that the calls in which repetitive persistence is most necessary are often the most unpleasant to process, and they are consequently the calls where it is hardest to use the technique. Why is it then, that a significant number of EMDs find themselves struggling with the repetitive persistence technique and unable to properly use it? Before we attempt an answer, let’s review the proper use of repetitive persistence.

Repetitive persistence is not simply repeating a request as you might with an errant child. It involves four specific features: The EMD must repeat, several times if necessary, a request for the desired action: “Sir, you must calm down...” The desired action must be supported by a justification that the caller will connect with: “…so we can help your daughter.” Each iteration of the request and its justification must be said using exactly the same words. Each iteration of the request and its justification must be said using exactly the same volume and tone of voice.

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From the President's Desk...

Academy Membership & Certification Categories

• Alexander Kuehl, MD, MPH, FACS, FACEP

Over the past few years we've had requests from several individuals to formally add a "general membership" category for the Academy. While official Academy certification as an EMD, EMD-Q, EMD Executive, or EMD Instructor is important for maintaining professional work credentials and demonstrating competence through testing and continuing education, in some individual cases this is not necessary. For students, those who have retired from EMD service, or individuals who are just interested in EMD and want to demonstrate support for the Academy's mission, the option to become a "general member" is an important alternative. This option allows for these people to remain on informational and publication mailing lists without having to maintain employment in the EMD industry or complete any continuing education or recertification program.

In response to these requests, the Academy Board of Directors has formally approved a new membership category where for dues of just $19 (or less) per year, individuals can support the Academy and stay in touch by receiving regular Academy mailings, announcements, and the official quarterly newsletter journal.

Additionally, a few dispatch agencies have requested the option of a three-year Academy membership and certification option rather than the standard two years. While this increases the length of time between testing and recertification intervals, in areas where other EMS certifications are awarded in three-year periods it makes recertification times consistent and easier to track. Therefore, we have also added a three-year recertification option in areas where the state, provincial, or other local government organization maintains a three-year EMS program. For these areas, the continuing education and recertification requirements will simply be prorated to include the extra year. This option will NOT be available in areas where a three-year recertification period is not part of the regular EMS program. Please contact your local EMS office about their policies.

Dr. Kuehl can be reached through the Academy, or directly at 518-562-2731 or via email: skuehl@cvph.org.

OFFICIAL ACADEMY MEMBERSHIP AND CERTIFICATION CATEGORIES:

The following is a summary of categories and costs for official Academy membership and certification:

1. **Member**
   - $19 annually, $35 for two years, or $49 for three years.

2. **Certified EMD**
   - $45 for initial two years, $45 for subsequent two years (or $67.50 for subsequent three years*).

3. **Certified EMD-Q**
   - $45 for initial two years (EMD certification is pre-requisite), $90 for subsequent two years, incl. EMD recertification (or $135 for subsequent three years*).

4. **Certified EXECUTIVE**
   - $45 for initial two years with subsequent years equivalent to the "member" category above (one, two, or three year terms).

5. **Certified INSTRUCTOR**
   - $45 for initial two years (EMD certification is pre-requisite), $90 for subsequent two years, incl. EMD recertification and part of the tuition for the Instr. Update (or $135 for subsequent three years*).

*A three year recertification is available ONLY in areas where the state, provincial, or local government EMS organization supports a 3-year recertification program.
Accreditation for Seven More EMD Centers...

The Academy congratulates the following individuals and their exceptional EMD centers for documenting and completing Academy Accreditation as an EMD "Center of Excellence" (numbered in Accreditation order by the listed formal approval date):

19th Intergraph Public Safety,
Melbourne, Victoria, AUSTRALIA
Trevor Walker and Frank Sassone
— 1/21/98

20th Rochester-Monroe County O.E.C.,
Rochester, New York
Richard W. Rusho and Sharon Murray
— 3/31/98

21st Cumberland County O.E.C.,
Fayetteville, North Carolina
Ken Curry and Ronald "Doc" Nunnery
— 4/14/98

22nd South & East Wales Amb. NHS Trust,
Gwent, Wales, U.K.
Graham Davies and David Lyden
— 4/17/98

23rd AMR of Connecticut,
New Haven, Connecticut
Phil Caco and Robert Latorraca
— 4/24/98

24th Gaston County Telecom. Center,
Gastonia, North Carolina
Tom Riley and Ken Beach
— 5/20/98

25th AMR of Evansville,
Evansville, Indiana
Sherry Snodgrass and Jerry Key
— 5/21/98

For more information about the "20 Points" of Academy Accreditation, call 800-960-6236.

PRINCIPLES OF EMD New Limited Offer:

The Second Edition of the Principles of Emergency Medical Dispatch textbook will be shipping in time for Navigator '98! A special thank you to those who have waited patiently for this important new release. We are confident you'll find this text has been worth the wait. It is more than double in size and full of the most current and comprehensive information available anywhere about EMD—including MPDS Version 10.3.

To celebrate this eagerly-awaited release, now through August 31st, Medical Priority Consultants, Inc. will be offering this Academy-endorsed textbook at the special pre-release price of $39 each (plus shipping and handling). Credit cards and government purchase orders accepted. Call today for further details and to reserve your copy: (800) 363-9127, or see <http://www.medicalpriority.com>.

NIH Nat'1 Stroke Symposium Book:

In anticipation of MPDS Version 10.3, the Academy has made special arrangements with the National Institutes of Health, National Institute of Neurological Disorders and Stroke (NINDS) for each Agency who has at least one currently certified EMD to receive a FREE printed copy of the proceedings from their December 1996 "National Symposium on Rapid Identification and Treatment of Acute Stroke." This important compendium includes the paper by Drs. Zachariah and Dunford, et al., entitled, "Dispatch Life Support and the Acute Stroke Patient: Making the Right Call." You should have received your copy of the complete symposium book by the time you read this. If not, please call (301) 496-5924 or you can download the proceedings from the "health information" section of their website via <http://www.ninds.nih.gov>.

DISPATCH! is the official publication of the National Academy of Emergency Medical Dispatch (NAEMD), a nonprofit, membership organization for Emergency Medical Dispatcher training curricula and EMD standards. The Academy awards Accreditation as a "Center of Excellence" to agencies that comply with all Academy standards, and provides EMD, EMD-Q, and Executive Recertification for individual applicants that pass the respective examinations. Through its College of Fellows and other internal committees, the Academy addresses itself to scientific issues related to EMD. The College of Fellows is also responsible for the ongoing assessment and modification of the Advanced Medical Priority Dispatch System (AMPDS) Protocols.

Using EMD for Acute Stroke Identification

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90-minute time to treatment, rather than the latest acceptable treatment time of three hours.

This short window for effective intervention has led to the widespread realization that, as stated in USA Today, “People having strokes should be treated with the same urgency as those suffering heart attacks.” Patient groups are calling for “...a major overhaul of outmoded stroke responses nationwide, upgrading stroke to a time-dependent, urgent medical emergency.” This publicity has led to many agencies proposing that for all requests that report stroke-like symptoms, response be upgraded to an obligatory lights-and-siren (L&S) mode both to the scene and during transport of the patient.

We believe that in most situations the small time savings of a L&S response to the scene will not alone make a significant difference in stroke outcomes and that the initial response should be the same as for chest pain in the absence of symptoms which suggest the patient is arresting. For chest pain without these symptoms, CHARLIE (not DELTA) determinants drive responses for the cardiac age-range patient. We believe the similarities between stroke and acute MI warrant changes in the MPDS stroke protocol, #28, now that there is an intervention that significantly improves the outcome for many stroke patients if given soon enough.

In stroke, the situation is in many ways analogous to acute MI. Therefore, we believe there should be more parity between the stroke and chest pain protocols by upgrading the stroke dispatch protocol to drive determinants that are similar to the CHARLIE determinants on the chest pain protocol. However, protocol 28 (stroke) does not warrant the DELTA drivers we use in protocol 10 (chest pain). These DELTA determinants are driven by priority symptoms that suggest the patient is arresting and requires on-scene treatment within two or three minutes.

If a patient is arresting, effective on-scene intervention (defibrillation) by first responders can make an enormous difference, but the window of opportunity is extremely short. On-scene intervention for stroke patients is still very limited and will likely remain so until the on-scene use of neuroprotective drugs can be shown to be effective. In the meantime, the existing CHARLIE determinants do not imply that stroke (or MI without evidence of arrest) is not time-sensitive, but rather that it is reasonable to respond to stroke and acute MI without L&S and to only respond with L&S when there is evidence that the chest pain patient is deteriorating or arresting.

A stroke patient should call 9-1-1 as soon as symptoms appear, hence a need for increased public awareness and education. Pepe, et al., in their 1998 paper, Ensuring the chain
In 1996, the Academy stated, "It is the temporary position of the Academy that, at this time, no changes are necessary within protocol 28's Key Questions, Post Dispatch Instructions, or Determinant Codes. However, in light of changing science, we recommend the addition of a new Axiom #5 within the additional information section, to state:
'The adoption of in-hospital administration of clot dissolving drug therapies may require special assignment of units equipped to evaluate patients for this therapy in areas adopting it for trial and on-going treatment. Based on the current consensus recommendation to provide this treatment within 3 hours of the occurrence of stroke symptoms, the use of lights-and-siren (HOT) responses is generally not indicated at the present time unless priority symptoms are present."

More recently, at the 1998 Council of Research meeting the Council recommended several additional modifications that emphasize the availability of thrombolytic treatment, but also recognized that other elements in the survival chain (such as pre-notification of stroke response teams at the receiving hospital and eliminating unnecessary ALS procedures at the scene) will have greater impact on stroke survival. Further, the Council stood by the 1996 recommendation that L&S responses are not generally indicated for stroke when priority symptoms are not present.

Since the 1998 Council of Research meeting, the Academy has continued to examine the stroke issue in great detail. For a number of reasons, the Council of Standards has now established an age-dependent triage for stroke and stroke-like symptoms. In MPDS v.10.3, the protocol 28 determinants appear as follows:

As with all MPDS determinant-driven response modes, local medical control has the final word on who, when, and how field personnel actually respond. Due to differences in response configuration options, available facilities, and local driving conditions, this situation may be somewhat different among systems. While any delay in the stroke patient's chain of recovery is undesirable, in most circumstances the extra time taken by a COLD response to the scene is a very small portion of the total (call-to-treatment) time. Stroke is a time-sensitive medical emergency and should be responded to with a sense of urgency comparable to that used in response to chest pain suspected to be due to myocardial infarction. Therefore in the absence of additional priority symptoms, for both chest pain and stroke the Academy recommends dispatching an ALS-level response without the use of L&S (see "Response Determinant Methodology" protocol). As more data on thrombolytic treatment becomes available, the precise nature of t-PA's time criticality will become clearer. For now, it appears that the benefits of the small time savings of an L&S response may not outweigh its additional risks.

Dr. Bob Sinclair is Senior Technical Editor and Research Specialist for the Academy. Dr. John Marler was project officer for the National Institute of Neurological Disorders and Stroke (NINDS) rt-PA study and editor of the NINDS "Proceedings of a National Symposium on Rapid Identification and Treatment of Acute Stroke" described on page 3 of this newsletter.

References:
WORLD-CLASS LODGING only $89/night!

All Navigator '98 sessions will be held at the Snowbird Cliff Lodge, near Salt Lake City, Utah (home of the 2002 Winter Olympics). A limited block of rooms is reserved at the Navigator conference rate of just $89/night (single or double occupancy). These same rooms sell for $300/night during ski season. Condominium units are also available. Reservations are on a first-come, first-served basis and we cannot guarantee space. Reserve your spot today by calling:

Snowbird Central Reservations: (800) 453-3000.  
Cliff Lodge Front Desk: (801) 742-2222.

Registration questions can be answered by calling the Academy directly at (800) 960-6236.

MPDS VERSION 10.3

As part of the conference, join us Saturday morning for detailed overviews and technical discussions on the latest MPDS Version 10.3 updates effecting:

- Protocol 28 — STROKE
- Protocol 18 — HEADACHE
- Protocol 16 — EYE PROBLEMS
- Protocol D — CHOKING — INFANT/CHILD

Immediately following the MPDS technical discussions Snowbird kicks off its annual GRAND OKTOBERFEST celebration, brimming with German food, drink, dancing, music and crafts. Runs through Labor Day. Free Admission.

CONTINUING EDUCATION

All sessions earn hour-for-hour Continuing Dispatch Education (CDE). Attend Navigator and recertify!

- 24-Hour EMD Course, Mon. 8/31–Wed. 9/2
- 12-Hour EMD-Q Course, Wed. 9/2–Thur. 9/3
- 8-Hour Executive Course, Tues. 9/1

- Leader Summit (expanded), Wed. 9/2–Thur. 9/3
  A newly expanded and revised professional forum for reviewing and discussing issues related to the future of telephone-delivered, non-traditional, out-of-hospital medicine. Various presenters, plus open discussion time.

- Manager Seminar, Wed. 9/2–Thur. 9/3
  A day & a half focused squarely on communication center operations and hands-on management, with presentations about conflict and stress, quality and TQM, and staffing. Various presenters, plus a special half-day CDE Program Workshop on the 3rd.

- EMD Conference, Thur. 9/3–Sat. 9/5
  The Leader, Manager, and EMD focus tracks provide an array of perspectives from various public safety communication leaders. Includes open “user group” technical discussions on MPDS Version 10.3.
Repetitive Persistence
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These guidelines may sound simple enough, but very often when an EMD is asked why she or he is not using repetitive persistence correctly, the first answer is usually “I don’t know.” When EMDs are asked to elaborate, we often hear responses such as, “it doesn’t seem natural,” or, “it doesn’t feel like it will work.” As the evidence is to the contrary—repetitive persistence does indeed work—we need to examine why some of us feel this way.

The answer may lie with our prior exposure to repeated messages: when repetition is involved, messages are usually re-stated in different ways. We have been conditioned to expect this variation since a very early age. Under normal circumstances, if a message needs to be repeated it is desirable to change the way it is delivered to ensure it is properly received. For example, a mother trying to keep her child from going into the cookie jar might repeat a “stay out” message in different ways: “Joey, you are to stay away from the cookie jar until tomorrow,” then, “Joey, you cannot have any more cookies from the jar today,” and finally, “Joey, the cookie jar is off limits to you for the rest of the day.” Under the normal conditions of everyday life, if the sender deemed the message important enough, repetition in succession would not be uncommon—but the wording and tone of delivery would likely be varied.

Anyone who has taken an educational methodology course will recognize that changing the wording, inflection, volume, and tone of a message is good communication technique. The repetition—even if it is delivered in rapid succession—is almost never presented in the same way. Repetition with variation normally helps the listener to receive the message the way it was intended. Since this is the way we are accustomed or “conditioned” to receive messages, we eventually adopt these same techniques and use them in our communications with others.

The EMD’s non-visual emergency situation is, however, different from normal circumstances. To use repetitive persistence properly, EMDs are required to do the complete opposite of what they have been doing (under normal circumstances) all their lives. They are suddenly expected to ignore a lifetime’s conditioning to vary repeated messages and instead use a technique that feels alien and wrong. No wonder repetitive persistence feels like it won’t work. No wonder it doesn’t feel natural when we try to use it.

As EMDs, we need to keep in mind that the circumstances surrounding our use of repetitive persistence are not normal: the message receiver (caller) is far from being in a normal state of mind. When callers are highly stressed, overly anxious, or perhaps even hysterical, it is nearly impossible for them to be receptive to normal communication techniques. From their perspective, any variation in the wording of the request or in the volume or tone of the EMD’s voice implies uncertainty or indecision on the part of the EMD. This, in turn, reinforces the caller’s belief that the situation is hopeless, leads to increased hysteria and further prevents the EMD from taking control of the call, calming the caller, and offering an appropriate response.

So while life has conditioned us to vary the wording and presentation of a repeated request, EMDs must fight this tendency. This is best accomplished by mentally preparing before each call. Along with “wiping the mental slate clean,” the EMD should use this preparation time to focus on correctly applying repetitive persistence when the time comes.

Years of “conditioning” cannot be broken overnight. It takes discipline and training to learn and apply a new habit, but by understanding why repetitive persistence is a difficult technique, an accomplished EMD should be able to fully master it in a short time.

Using repetitive persistence, to some, is inherently difficult, but another phenomenon—the fact that the calls that need it most are often unpleasant and difficult to process—can make it even harder. A distraught caller, in addition to failing to respond to the EMD’s requests, is also likely to be abusive or to use threatening language. This puts additional stress on the EMD and leaves her or him less able to maintain a calm, controlled, and consistently-toned voice. When the caller is abusive, the EMD should use the “detachment technique.” This consists of floating the call by listening to the message without hearing (or reacting to) the insults. Once the EMD has become detached from the caller’s emotions, repetitive persistence is used to take control of the call and calm the caller. In essence, the detachment technique and repetitive persistence become buffers between the caller’s aggression and the EMD. The following are other important points to remember when using the detachment technique:

- The caller doesn’t know you, so it’s not personal!
- The caller’s behavior would be the same regardless of who answered the phone.
- The caller is asking for help, therefore, pay attention to the message, not to the way it is delivered.
- Remain calm and do not raise your voice; losing your cool and raising your voice attaches you to the call.

In your mind, picture the caller as somebody in pain, with his or her arms open, pleading for help.
Repetitive Persistence
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the caller to suspect that the dispatcher is neither professional nor competent, and therefore unable to help. Increased emotion is a likely outcome.
Just as you can predict certain "re-freak" events, you can also expect the caller (even an initially calm caller) to be pushed towards or over the hysteria threshold whenever the EMD exhibits inappropriate behavior, such as:
• The EMD does not properly prepare the caller to receive the protocol's questions.
• The EMD implies no help will be sent until the protocol's questions are answered.
• The EMD ignores the caller's concern about receiving help and fails to reassure the caller.
• The EMD demeans, judges, or insults the caller.
• The EMD questions the caller's integrity.
• The EMD uses any kind of offensive or confrontational language.

An EMD should never be guilty of these actions. It is of little consequence to properly apply repetitive persistence if it is the EMD's demeanor that is triggering the caller's loss of control.
The bottom line? I will leave with you the following key characteristics of a successful repetitive persistence user:
• An EMD who fully commits, in advance of the call, to project total professionalism.
• An EMD who believes that repetitive persistence will help when dealing with a hysterical caller.
• An EMD who learns to use the detachment technique when the caller uses abusive or threatening language.
• An EMD who accepts the challenge to take control of each call and to properly use repetitive persistence whenever necessary.
• An EMD who works to remain in control so an EMD-induced "re-freak" event cannot occur.

Variations of repetitive persistence or other repetition-type techniques have been used in psychology and psychiatry for many years. It is a widely used and enormously successful approach to solving communication problems in many situations. EMD is the perfect place to apply this time-tested technique. Commit to perfecting repetitive persistence and you'll become a better emergency medical dispatcher.

Lt. Estevanell is an Academy EMD Instructor & Q.A. Officer for the City of Miami F.D., an Accredited Center of Excellence.

Upcoming Courses
For more info. on these and other EMD Certification Courses call Medical Priority: (801) 363-9127:

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Footnotes:
The following organizations offer training & services of interest to Academy EMDS.

University of Iowa—EMS Learning Resource Ctr.
Mike Hartley 319-335-2397
www uiuc.edu/pdinfo/EMSRC

U of Alabama—Huntsville
Rick Beck 205-551-4413

U. of South Alabama
Phyllis Vinson 334-639-1070

Rogers University
Larry Brewer 918-343-7635

Columbus State Comm.
Dr. David Braxton 614-228-1745

Palm Beach Community
Dr. Steve D'Amico 561-439-8213

North Carolina Comm.
Dr. James Wills 919-542-1705

Phoenix College (AZ)
Dr. K. Lewis 602-285-7207

Memorial Hospital EMS
(205) 349-8213

Mid-America Safety
Dr. Donald Griesenauer 309-765-0911

Mtn. EMS (Susanville, CA)
Dr. James Wills 919-542-1705

Acadian Amb. (Lafayette, LA)
Dr. David Braxton 614-228-1745

Team Dispatch (FL)
Dr. Charles Brown 727-467-9000

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