

DPM NEWS

(585) 463-2900 | 44 Celebration Drive, Suite 2100 | mlrems@mlrems.org

Smoke Inhalation

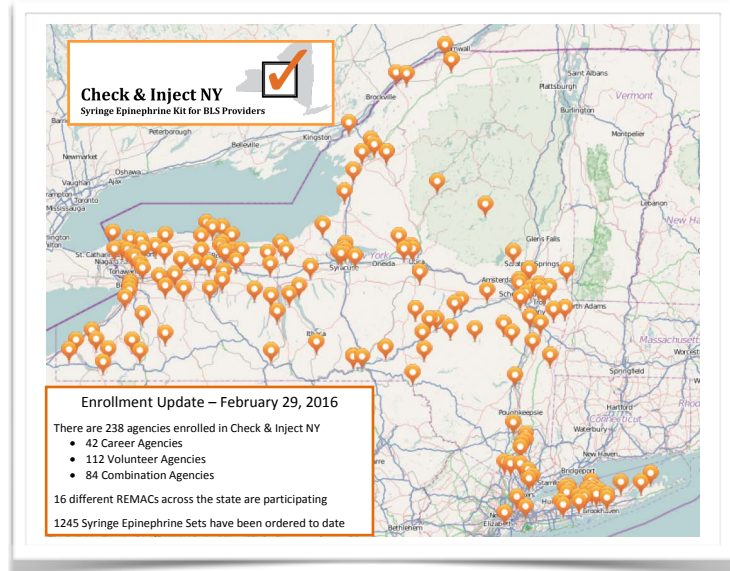
Smoke inhalation is the leading cause of fire-related death and first responders face this risk regularly. Are you prepared to use a Cyanokit, if indicated, to save a fellow first responder's life? Read Dr. Cushman's training update on page 5.

Chest Pain QI

The DPM recently reviewed 200 cardiac-related chest pains calls from local agencies. What are we doing well and what can we improve upon? Dr. Cushman and Ben Sensenbach break down the results on page 2.

BLS Preceptor Program

Have you ever wondered why we have a special program and required training for ALS preceptors but not for BLS preceptors? MLREMS recently approved a training program for BLS preceptors in our region that you might be interested in tapping into for your BLS agency. See page 3



Naloxone and Check & Inject

In the inaugural edition of DPM News, you read about the pilot program Check & Inject NY, an economic alternative to epinephrine auto injectors. This statewide initiative, a collaborative project between the Division of Prehospital Medicine and Albany Medical Center, has been receiving new enrollments by the day. The graphic above, created by Mike Meyer and Mindy Johnston, shows the wide reach of the program which is currently scheduled for an 18 month period and has already begun within our region.

The Division of Prehospital Medicine has also been hard at work training EMTs, fire fighters and law enforcement officers in the use of intranasal naloxone. Here is a breakdown of the naloxone uses within MLREMS for 2015:

EMS (BLS) - 6 EMS (ALS) - 239 FF - 142 LEO - 16

If you have any questions, comments or suggestions about this newsletter, please contact Eric Rathfelder at e.rathfelder@gmail.com

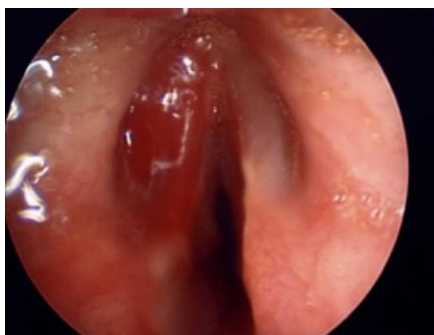
Visual Diagnosis - Hurt on the Outside, Hurt on the Inside

Elizabeth Murray, DO

This is the neck of a 7 y/o who slipped while climbing up the steps of a jungle gym.



She developed a hoarse voice, and, as you can see from the image below, swollen vocal cords.



QI Analysis - Chest Pain Management

Jeremy T Cushman, MD, MS, EMT-P

Benjamin Sensenbach, EMT-P

As part of our regional quality improvement program, we recently examined more than 200 calls from this past year in which you indicated the impression was cardiac related chest pain. Overall our care was very good, but this structured review also identified a few areas that we could improve upon. Here are the highlights:

Aspirin – We are doing very well with administering aspirin when it is indicated. It is important however, that if a patient has a contraindication, that it be documented as to why you chose not to give aspirin for a patient with chest pain concerning for a cardiac cause. In some cases, there were chest pain patients who did not receive aspirin by BLS or ALS but there was no documentation as to why. A more common issue, however, was that if a patient has taken a partial dose of aspirin, we should have the patient take additional aspirin to make the total dose 324 mg. Thus, if a patient takes 81 mg of aspirin prior to arrival, you should be giving them an additional 243 mg for both ALS and BLS providers.

Pain – Please remember to document the patient's initial and final pain score. Often we see patients with a complaint of pain, but the score is not documented which does not allow us to quantify why you did or did not give Nitro or narcotics and if you did, whether there was an improvement.

12-Lead EKGs – Be sure to document your 12-lead interpretations in the PCR, and remember that serial 12-leads are extremely valuable in identifying dynamic changes. Generally, if you have someone with chest pain of a suspected cardiac cause, every patient should get at least two interpretable (meaning the baseline is not a mess) 12-leads.

Timely 12-lead EKGs – One of my expectations is that you get a 12 lead EKG early – ideally within 10 minutes of patient contact. The reason is simple – in someone with chest pain, the most important thing we can do is identify a STEMI (ST-Segment Elevation Myocardial Infarction). A STEMI warrants rapid transport to the nearest cardiac catheterization lab and our goal for STEMI patients is to have them off the scene within 10 minutes of initial EMS contact. Yes, I know that is tough, but it is achievable if everyone is on the same page for what needs to

Research and CME Opportunity

If you would like to take a look at some research and earn CME credit,

Go to MLREMS.org>Training
-> CME Article Series

You will find:

1. EMS Provider Assessment of Vehicle Damage Compared to a Professional Crash Reconstructionist and
2. Efficacy of Anatomic and Physiologic Indicators vs Mechanism of Injury Criteria for Trauma Activation In Pediatric Emergencies

happen. The patient with an identified STEMI should be rapidly moved to the ambulance, and transport initiated. The rest can be done enroute. Now if that 12-lead EKG does not demonstrate a STEMI, then you have plenty of time (within reason!) to complete the interview, package, and perform appropriate interventions prior to transport. Since we are all on the same treatment team, it's important that we all understand what the goals of care are, and how critical our collective teamwork is in accomplishing them. Yes, I realize a 12-lead in 10 minutes and off the scene in 10 minutes for a STEMI is a significant goal, but one that I know you can achieve. If we get the EKG sooner, we can recognize the STEMI sooner, and get off the scene and to a cath lab sooner, which is what the patient needs as **time is muscle**.

Overall you continue to do a great job managing our chest pain patients. Please consider the areas we have discussed above and incorporate them into your practice – it's what moves our care from good to great!

BLS Preceptor Program

Eric Rathfelder MS, EMT-P

Our region has long had a policy in place for paramedics who wish to become ALS preceptors. In the beginning of 2015, the MLREMS Training & Education Committee learned from some

local BLS agencies of a need for a similar policy to guide the selection and development of BLS preceptors. For the past year, the Training & Education Committee worked on developing a policy that was approved and endorsed by MLREMS at the January 2016 meeting.

The BLS Preceptor Program is available to any BLS agency within the MLREMS system but is in no way mandatory. The Training & Education Committee created this program as a resource for BLS agencies to avail themselves of in order to assist in the development of competent, motivated BLS preceptors who have both the EMS knowledge and pedagogical knowledge required to be an effective preceptor. The program was modeled from the MLREMS ALS preceptor program.

The four main criteria listed within the policy are:

1. *Three years as a cleared EMT.* Effective preceptors should have a solid background knowledge of EMS, our local system, and the local environment of their agency.
2. *Approval of agency training director or chief.*
3. *Score of greater than 85% on protocol test.* Preceptors must know their craft and demonstrating a mastery of our local protocols is important. The protocol test is easily accessed through the MLREMS website and taken by the preceptor candidate at their convenience.



4. *Attend a regional preceptor training class.* ALS preceptor candidates must attend a 4-hour training class that addresses topics such as coaching, feedback, communication skills, learning styles, etc. This class, which is hosted by the Division of Prehospital Medicine, has been modified so it is now designed for both ALS and BLS preceptor candidates. This will be beneficial to both the BLS providers who now have access to the training and to the ALS providers who will have more opportunities to attend the class since it will be offered with greater frequency.

There are several preceptor training classes scheduled and they are listed at the end of this article. I've also attached the policy itself and an advisory issued by Dr. Cushman at the end of the newsletter. If you or your agency have any questions or suggestions, please feel free to contact me at eric.rathfelder@mlrems.org.

The three currently scheduled training classes will be held at the Division of Prehospital Medicine office (44 Celebration Drive, Suite 2100) which is located above Breathe Yoga in College Town off of Mt. Hope Ave. There is free parking in the lot north of the building or in the College Town parking garage. Each class is capped at 16 participants and you must register ahead of time with Mindy Johnston at 463-2900.

Monday, April 18 (1800-2200)

Tuesday, May 24 (1800-2200)

Saturday, June 4 (0800-1200)

Research Update

Courtney Jones, PhD & Heather Lenhardt, MBA, EMT-P

Simulation Grant

We are looking to have 200 ALS or BLS EMS providers volunteer to participate in a research study related to trauma simulation. Providers will be compensated for their participation and the simulations will be held at several different locations. You will be given a mini scenario and asked to complete a brief survey after the simulation. This study is expected to begin in May 2016. If you are interested in participating please contact Heather Lenhardt at heather_lenhardt@URMC.rochester.edu.

Community Paramedicine

The Greater Rochester Health Foundation grant award to Livingston County (LC EMS) and the National Institute of Health grant awarded to Henrietta Ambulance are well underway. We have currently enrolled 12 subjects for LC EMS. Enrollment for Henrietta has just started. We have sent 8 paramedics from both agencies to receive specialized training from Dr. Eric Coleman in Denver, Colorado. For more information about Community Paramedicine, see the article on *page 11*.

Pediatric Trauma Triage

REMINDER: If you have a patient that is 15 or younger who you treated at the scene and has ANY mechanism of injury, please help us and take a short survey with our research assistants after you have triaged your patient at Strong Memorial Hospital.

Current stats as of 2/11/2016:

- In Rochester, we have 1503 patients enrolled.
- In Wisconsin, they have 1810 patients enrolled.
- In Texas, they have 2245 patients enrolled.

Thanks for participating – keep up the great work!!

Kids Corner - Getting it Right When it Matters

Elizabeth Murray, DO

“Ironically, those most likely to fail in demanding situations are those who, in the absence of pressure, have the greatest capacity for success.”

The above quote comes from a really interesting paper by Sian Beilok at the University of Chicago who was able to demonstrate that even the brightest mathematicians could not solve relatively simple equations when they were put under a spotlight, especially if they were told that junior students completed the problems without difficulty. Paramedics, do you see a similarity? Ever feel that all eyes are on you?

How often do we hear our Firefighter colleagues provide a scene report indicating exactly what they are seeing? I argue that we should be doing the same in EMS, especially for the high acuity, low frequency events such as critically ill pediatric patients. This will help to ensure that all additional responders are on the same “mental page” to care for the patient. So how do we do that and does it really matter? In short, it’s easy and it does really matter.

Dr. Morgen Bernius (fun fact: Dr. Bernius lived in Brighton until middle school) and her colleagues completed a study looking at EMS Providers ability to correctly perform “EMS math”. Roughly half of the providers (n=246) used a pediatric code card (PCC) to help them choose the correct ET tube size and correct weight based medication dosages. The other half (n=277) did not. The group that used the PCC was right 94% of the time. The group without a reference was correct 65% of the time. Further, the use of a Broselow Tape has proven consistent with regard to estimated weights in the prehospital setting compared to the actual patient weight in the ED.

Here’s a quick review:

Measure the child using a Broselow Tape or Pediatape, ensuring that the child’s legs are fully extended. You measure from the child’s head to the child’s heel, not the toes. You can see below that when done correctly (image on left), the baby measures to the “red” zone. When done incorrectly (image on right), she measures to the “grey” zone. This is something that can be done by a BLS crew as part of the patient vitals.



Correct



Incorrect

Once a child’s “color zone” has been established, responding paramedics can use that information in conjunction with the MLREMS Code Card for Kids to quickly access medication dosages and equipment sizes without needing to perform any math.

It’s just that simple!

Medical Director Minute - Smoke Inhalation & Cyanokit Update

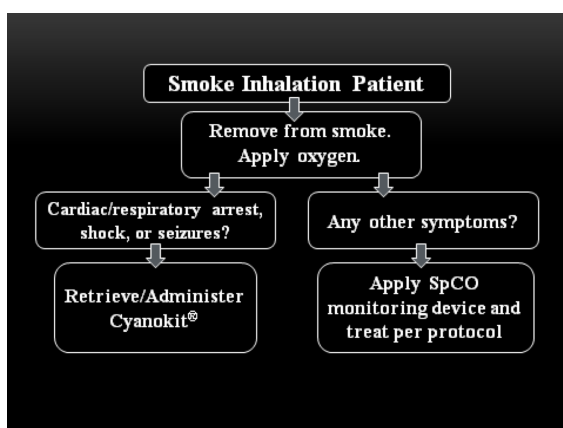
Jeremy T Cushman, MD, MS, EMT-P

Smoke inhalation is the leading cause of fire-related death, not burns. The two more toxic byproducts of combustion include carbon monoxide and cyanide. Cyanide is produced during combustion of plastics, cotton, wool, silk, and various polymers – all materials that are ubiquitous in our home and workplace. Although many of us have become attune to CO poisoning through the use of CO meters and pulse co-oximeters, cyanide remains a hidden killer. If you were to look at fire related deaths, there is no relationship between those caused by CO and those caused by cyanide. As there is no way to screen for the presence of cyanide in the field, we are left with recognizing that a victim of a fire could be poisoned by either, and we must take steps to treat.

As you know, carbon monoxide displaces oxygen from hemoglobin, making our red blood cells incapable of transporting oxygen to our tissues, and we essentially asphyxiate. Cyanide is a little sneakier, in that it binds to something known as cytochrome a₃, which is a protein in the mitochondria (the power plant of the cell) and prevents the cell from using oxygen – also asphyxiating the cell. So CO prevents oxygen from getting to the cell, cyanide prevents the cell from using oxygen. Either way, bad news.

A few years ago a product known as Hydroxocobalamin (Cyanokit ®) entered the market. As a biochemistry nerd, it's a pretty cool antidote in that hydroxocobalamin binds with cyanide to form cyanocobalamin, and thus reverses the effects of cyanide. I'm sure a few of you take cyanocobalamin every day, because it's otherwise known as Vitamin B₁₂.

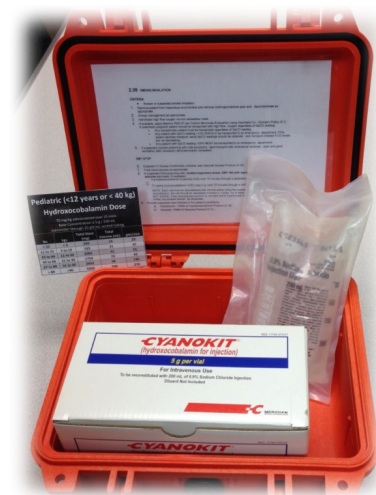
Cyanide toxicity is dramatic and immediate. Your protocol allows any paramedic in the system to administer the Cyanokit ® to a patient with an inhalational smoke exposure in a confined space such as a building or room – the chances of cyanide toxicity from an open air burn are extraordinarily small and you should be directed to other causes for their acuity. The patient also MUST have signs of cardiac/respiratory arrest, profound shock, or seizures. In this case, the potential for cyanide toxicity is high, and in addition to traditional BLS and ALS measures, consider administering the Cyanokit ®. So for example, if you have victim dragged out of a house fire with a few burns, but is pulseless and apneic, consider the Cyanokit ® (and oxygen of course). If you have a victim coughing and telling you their throat hurts, even if they are a little altered, they do need oxygen, but don't need the Cyanokit®. As coined by the developer of this newsletter, the reminder is: "Sick as s*@t - Cyanokit ®." A simplified algorithm is shown below:



Given that Cyanokits® are expensive (about \$800 a dose currently), we have to be wise in how we deploy them. In Monroe County, most kits have been placed on fire apparatus, with the belief that the fire apparatus is simply the delivery device (and will be on the scene of a fire). Livingston County has also expanded their kits amongst agencies to enhance coverage throughout the areas served. If you need a Cyanokit®, simply request one through your dispatch center who can dispatch the nearest, or remind

you that it may already be on scene. Both county dispatch centers maintain lists of what apparatus has kits – as the number of kits out there continues to increase.

The Kit itself has been standardized and we've included photo's for your reference. There are also two training videos – one for all levels (Fire, BLS and ALS) about the kit and indications for use, and one is



specifically for ALS provider that goes through how to assemble and administer the kit. Both are available on MLREMS under Special Patient Populations at <https://www.mlrems.org/training/new-additions/>. Please become

familiar with the indications and administration of these kits, as this knowledge may very well save a colleague's life.



Is Pain Truly the Fifth Vital Sign?

Christopher Galton, MD, NRP

Treating pain is one of the more difficult subjects in prehospital medicine. Assessment of the patient whose chief complaint is pain challenges our ability to withhold judgment and maintain the necessary objectivity. Until a tool becomes available to objectify pain across all patients uniformly, EMS providers will be stuck with our current tools, which are poor at best. Fortunately, the highly diverse population of patients that are treated within the MLREMS system gives us plenty of chances to treat pain and discomfort.

When most EMS providers think about treating pain, we ubiquitously think of opioids. Although opioids are one option to provide patients with appropriate analgesia, they are only one part of a larger list of modalities. I chose the word “modalities” for a very specific reason. Physicians are taught to think about managing pain from a “multi-modal” perspective. Specific to EMS, we frequently rely completely on opioids even though other modes of analgesia are available. Some examples of multi-modal analgesia include: adequate immobilization of an injured extremity, hot or cold packs, nitrates, maximizing the position of comfort, acetaminophen, non-steroidal anti-inflammatories, neuroleptics, transdermal local anesthetics, nitrous oxide, μ receptor agonist/antagonists, NMDA receptor antagonists, and α_2 agonists. This list is far from comprehensive, but demonstrates that managing pain is not solely based on opiate administration. Our patients would frequently benefit from utilizing this multi-modal methodology.

Unfortunately, not all of these modalities are available in the prehospital environment. This is mostly related to our need to treat highly acute pain versus managing chronic pain. The acute nature of our patients frequently necessitates the use of opioids. For decades, the primary opioid medication utilized by EMS was morphine sulfate. For those of you who don't know,



morphine was first isolated at the beginning of the 19th century and it has remained relatively unchanged in over 200 years. Prior to its use in EMS, morphine and its derivatives were primarily used as recreational drugs at home and in opium dens around the world.



Within the last 15 years, EMS providers have starting using synthetic opiates, such as fentanyl and hydromorphone. They are all powerful analgesic medications that can provide a significant reduction in pain and discomfort. Each medication comes with unique benefits and drawbacks, which necessitates accurate assessment by paramedics to determine which of the available opiates is the correct medication for the patient they are presented with.

The larger and potentially more challenging question is who should be treated and when should that treatment occur. If the answer to this question was simple, I would probably be looking for another subject to

write about. Generally speaking, patients who have pain and discomfort should receive multi-modal analgesic therapy from EMS if the treatment does not prevent other lifesaving therapies from being performed. In the past, there have been many barriers to EMS providers treating pain. Some of those barriers I have heard in my career include: the EM physician needs to assess the patient first, starting an IV for analgesia seems counterintuitive, the respiratory depression could kill them, pain is a good vasopressor, the patient is a drug seeker, 10/10 pain is the only type worth treating, and my favorite, their vitals didn't indicate that they were in pain.



It is imperative that we remember pain is a patient driven symptom of an underlying pathology. Until we get the "pain meter" that plugs into our EKG machines and yields objective data, we are obligated to treat pain and discomfort with the tools that we have available. I would encourage you to adopt a few new ideas in your practice. These are the same ideas that I use when treating pain both as a paramedic and physician. First, unless I have a very specific reason not to treat a patient (which will be very specifically documented), I actively try to treat a patient's pain using multi-modal therapies, to a goal pain score of 3 or less. Second, I think a reasonable goal for the treatment of pain in the EMS setting should be a reduction of the patient's pain score by more than three points. These ideas will be consistent with the goals of the physicians that you will be dropping your patients off to and puts us all on the same page for expeditious treatment in the EM setting.

Adequate analgesia is a reasonable goal in EMS and we have the tools available to improve our performance. The management of pain and discomfort became significantly more important for hospitalized patients in the last twenty years. I think it's time that EMS started to take the treatment of pain and discomfort more seriously as well. The tools that we have available to treat pain are far better than what Johnny and Roy used to have. Let's not "turf" the responsibility of analgesia to someone else downstream. We need to step into the twenty first century and take prehospital analgesia as seriously as we take things like ACS and strokes.



Getting an Accurate and Meaningful Pulse Oximetry Reading

Michael Meyer, EMT-P

To some of us, the thought of not having a pulse oximeter in the jump bag may be inconceivable. It may even be as foreign as those stories your parents have told you about having to get up from the couch to change TV channels. Although the idea of oxygen saturation was first experimented with as early as the mid 1930s, it was not until the 1980s that technology became commercially available and allowed us to have what we know as the pulse oximeter of today.

So, what did people do before pulse oximetry? Believe it or not, patients were assessed with a stethoscope and physical exam to determine their respiratory status. When more specific information was needed, possibly by the Emergency Physician, an arterial puncture to obtain 'blood gases' was done to obtain oxygen saturation.

We need to remember that pulse oximetry is another tool for our assessment arsenal. As with any tool, there are limitations. In order to use the tool correctly, we need to understand how it works, and what limitations are present. If not, any result or reading we obtain cannot be trusted as accurate.

So how do we obtain an accurate pulse oximetry reading? Isn't it as simple as just putting the finger thingy on my patient's finger? Well, yes . . . and no. The physical application is just that simple. Clip the probe on and wait for the numbers to appear on the display. But why are there numbers, as in more than one number on the display? And what is this blinking light for? Aren't we just measuring the pulse oximetry? I guess the manufacture just wants to make our jobs easier and gave us a heart rate too . . .

Actually, it's not quite that simple. The pulse rate, and occasionally a blinking light or bouncing LED bar are included in the display of most pulse oximeters today. They are present to assist us in ensuring that the pulse oximeter reading is accurate. After applying the pulse oximeter, check the pulse (usually a radial pulse) in the same extremity. Compare the palpable heart rate you feel and the read-out on the pulse oximeter – if they are equal, or within a beat or two, the SpO₂% reading is accurate. If the two differ substantially, then your pulse oximeter doesn't have an adequate flow and is essentially guessing at the SpO₂%.



If your pulse oximeter has a blinking light or bouncing LED, those flashes should also coincide with the palpable heart rate. As the features increase, you may also notice that the lights progress from red to yellow to green as the heart rates get closer to matching. Although a nice feature, it is no substitute for the palpable heart rate. You should check with the manufacturer's instructions to determine the specifics for your agency's equipment – they are all similarly different.



Advanced monitoring, typically found on cardiac monitors and newer portable SpO₂ devices have options to display a waveform on the screen. A visible waveform, regular and uniform, can replace the need for assessing a palpable pulse – but I'd still want to check a pulse at least once to make certain.

As good medical providers, we will need to assess our patients and understand what this pulse oximetry value means in the context of our assessment. We will always treat the patient, not the numbers. That being said, we should review why the numbers may not coincide with our assessment.

Cautions to 'normal' readings with signs of poor respiratory status:

1. Carbon Monoxide – the presence of CO will give a SpO₂ reading that is artificially high. This occurs because hemoglobin has a greater affinity for oxygen, and thus displaces O₂ on the hemoglobin.
2. Cyanide – the presence of CN will give a SpO₂ reading that is artificially high. This occurs because while there is O₂ present on the hemoglobin, it may not be able to be passed on and used by the tissues.
3. Anemia (Sickle Cell or acute blood loss) – the reading should be an accurate value for the SpO₂. The provider must understand that only a limited number of cells are available to carry O₂ on hemoglobin, and thus less O₂ is available to the tissue.

Other than to correct the underlying problem, there is very little to be done to generate more representative numbers of the patient's actual respiratory state. An accurate and complete history and assessment are essential in the management of these patients.

Cautions to artificially low readings - factor affecting the acquisition of your readings:

1. Poor perfusion
 - Shock
 - Temperature
2. Light Impedance – anything that blocks or disrupts light source
 - Acrylic nails and/or nail polish
 - Calluses of the skin
 - Bruising
 - Misaligned probe – typically disposable probes

In these instances, we as providers can attempt to obtain more accurate readings by warming extremities or using an alternate site or techniques to place the probe. Since the probe works by passing infrared light from point A to point B, simply placing the probe sideways can bypass acrylic nails or nail polish. Similarly, a disposable (typically pediatric) probe not sized properly, and thus not providing a straight path from light source to sensor, will often offer misleading values.

Taking all we have discussed into consideration, a good pulse oximeter reading is useful, as long as the necessary steps are taken to ensure the reading is accurate, and we understand the limitations of our equipment. With that understanding, and remembering not to let numbers take the place of good assessments, we can all continue to provide high quality care to all our patients.

Introducing . . .

What is your position in the Division of Prehospital Medicine and for how long have you been there?

I serve as the Administrative Assistant to the Division, and I've been a part of the team for about a year and a half now. In addition to the day to day operations at the Division, I serve as the project manager for the Check & Inject NY program, and the coordinator for the Emergency Medicine Resident EMS rotation.



Mindy Johnston

What types of things are you involved in related to EMS?

Before working for this office, although I had the utmost respect for our first responders, I didn't have much involvement with them. After working here, it's my goal to audit some EMT classes so that I can broaden my educational background and perspective which will be valuable in some of the projects that we work on through the division.

What are your interests outside of work?

Outside of work, I spend a lot of time with my three nephews and two nieces. I enjoy reading and sewing during spare time, and I'm never adverse to a Netflix marathon!

How did your career lead you here?

I began my career at the University of Rochester in the what was then the short stay unit, then transferring over to the observation unit continuing to climb the ladder as a lead ambulatory patient representative as a part of the Emergency Department. I then transferred over to Pediatric Cardiology and spent two years there as a Secretary IV. Looking for an opportunity to continue to grow, I saw the position open in the Division of Prehospital Medicine, again, part of the Emergency Department. After reading the description, I knew that this would be the place for me. During my time away, I had missed the Emergency Department. The feel of the department is drastically different than what else I had experienced and I wanted to get back to that team feel. This position has proved to be dynamic and challenging, providing opportunities to participate in things I would never dream I would ever be able to being a clerical team member. As I tell anyone who asks, I have the coolest job in the world.

Anything else you would like the EMS community to know about you or your job?

I am always looking for more opportunities to better serve our EMS Community through the Division, so if there's anything you would like to see, please don't hesitate to contact me. Also, if there are learning opportunities that you believe I would benefit from in terms of EMS knowledge, please send them my way!

Community Paramedicine: What is it and How is it Being Used Here?

Heather Lenhardt, MBA, EMTP

What EMS Agencies are Doing This?

In our region, community paramedicine is being implemented at two EMS agencies: Livingston County EMS and Henrietta Volunteer Ambulance. These programs are funded by two research grants with the overarching goal to reduce repeat ED visits among the elderly.

Why Do We Need This?

Older adults use the ED as an important source of acute care, making 20 million visits annually. Unfortunately, they do poorly after being discharged home from the ED, with 20% having repeat ED visits within 30 days. The ED-to-home transition has been identified as a cause for these avoidable poor outcomes, but interventions to improve this transition have had inconclusive outcomes and have suffered from feasibility, sustainability and scalability problems.

The widely accepted and validated Care Transition Intervention (CTI) improves the hospital-to-home transition and decreases hospital readmissions. The CTI uses coaches to support patients being discharged home by teaching them how to manage their health. Applying the CTI to the ED-to-home transition is a natural extension of the concept. We believe that community paramedics are the logical resources to coach these older adults.

How Does it Work?

Older adults being discharged home from the ED will be offered the CTI program. Community paramedics, specifically chosen and trained paramedics, will deliver the coaching services through one in person visit and three phone calls over the 30 days after ED discharge. The coaching will specifically ensure that patients understand the “red flags” that indicate a worsening of their condition, implement medication changes, and obtain follow up from their physicians.

Through this program, we will address a significant deficiency in the delivery of quality care for a uniquely vulnerable population: the ED-to-home transition of acutely ill older adults who do not require hospital admission. We will use an innovative approach by adapting the widely available and efficient CTI, which has been validated for hospital-to-home transitions, and deliver the services using paramedics, an underused, highly-skilled, and highly-respected resource present in all communities. Upon completion, this research will provide critical empiric evidence on the effectiveness and cost-effectiveness of this intervention, with specific implications for ultimate sustainability and dissemination.

A Sampling of Upcoming Training

For a more complete training calendar, please see the Training section of MLREMS.org.

March 29-March 30: Training - EPC

April 8-9: STEP Conference

April 10-11: AMLS

April 18: Preceptor Training

May 2: Bioterrorism: Mass Prophylaxis Preparedness & Planning (MGT-319)

May 5: Bioterrorism: Mass Prophylaxis Preparedness & Planning (MGT-319)

May 14-15: PHTLS

May 18-19: Bioterrorism: Mass Prophylaxis Preparedness & Planning (MGT-319)

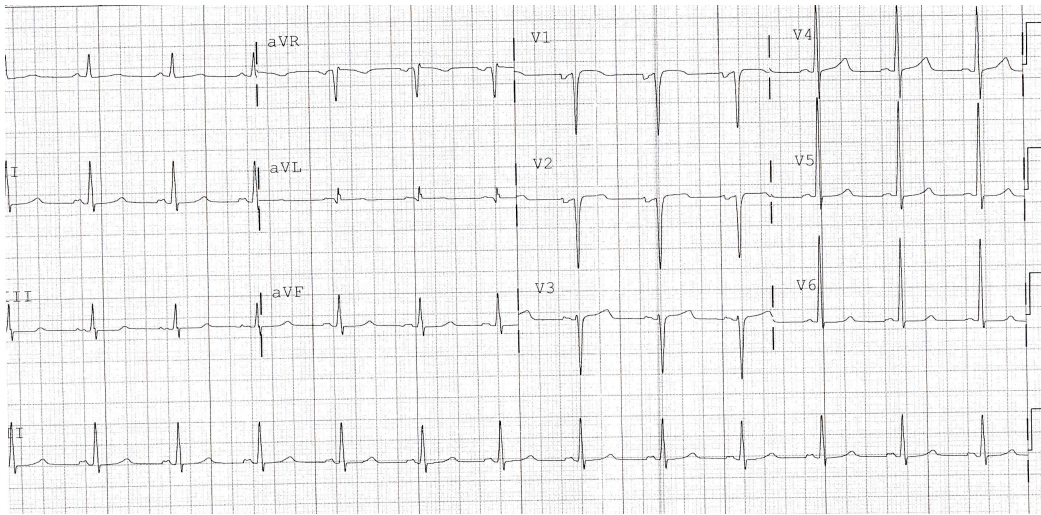
May 24: Preceptor Training

June 4: Preceptor Training

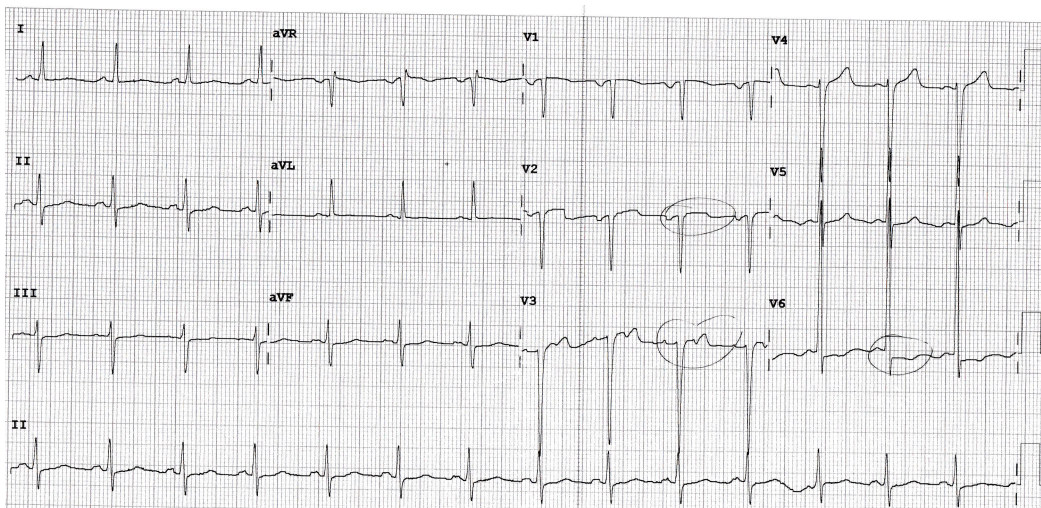
12-Lead Scenario

Ben Ostrovsky, MD

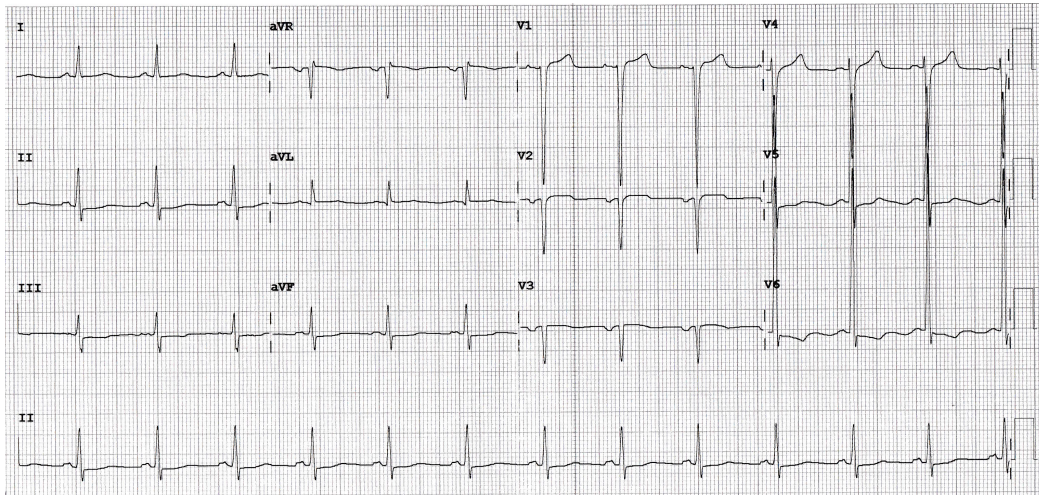
The 12-leads below are from a 60 y/o female patient complaining of shortness of breath and chest pain for a few hours. I have included a baseline EKG from the patient's file which is convenient for comparison but, even without the benefit of this baseline, the initial EKG should be recognized as abnormal and the changes that occur throughout these 12-leads over about 30 minutes do not require comparison to the patient's "normal" EKG. It doesn't take much effort to keep the patient hooked up to the 12-lead during transport to repeat the EKG if the patient gets better or worse. We shouldn't just be looking for the acute STEMI, but also looking for any T-wave or ST segment changes that occur after treatment with nitrates or other pain control.



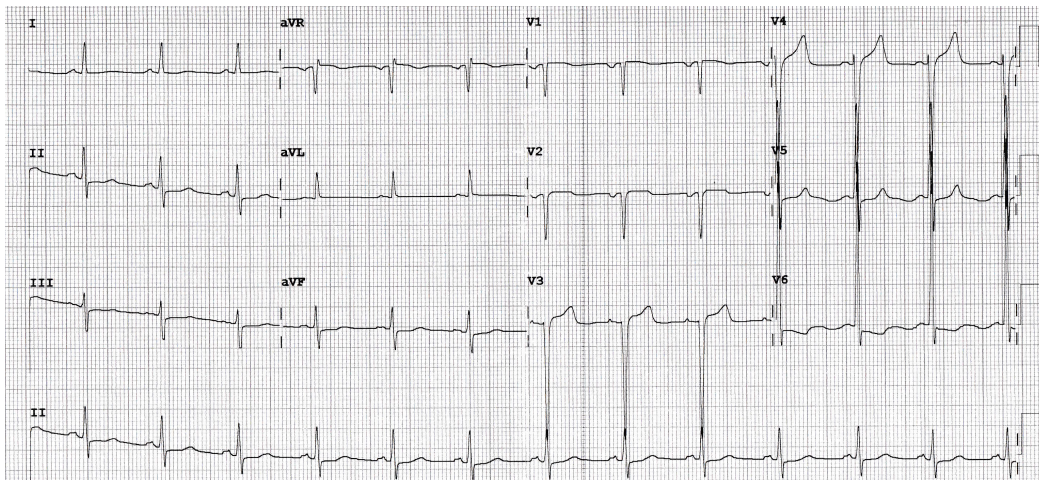
Patient's baseline EKG from file.



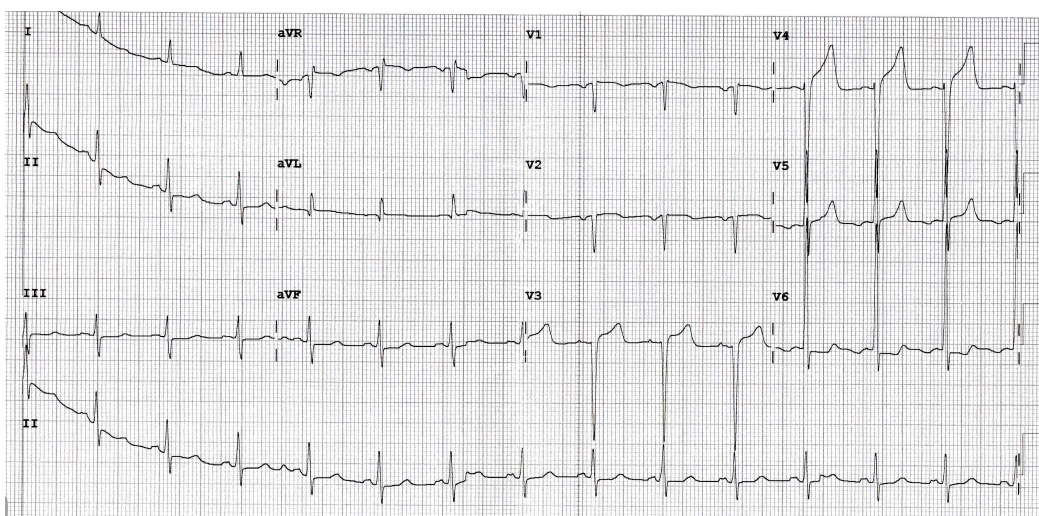
Initial EKG at 12:10 AM. Biphasic T wave in V₃ (wells sign) and ST depression in V₆.



EKG taken at 1:40 AM after some improvement after treatment with nitro.



Patient's symptoms then worsened and nitro was ineffective. Notice increasing ST elevation V3 and V4 in this EKG taken at 1:54 AM.



Patient's symptoms continued to worsen and the ST elevation in V3 and V4 increased in this EKG taken at 2:04 AM.

Patient was taken to the cath lab for treatment of her STEMI.



Advisory 16-02: BLS Preceptor Program

To: All MLREMS providers

Date: March 1, 2016

Please review the attached BLS Preceptor Program Policy. The BLS Preceptor Program is available to any BLS agency but is in no way mandatory. The MLREMS Training & Education Committee created this program as a resource for BLS agencies to avail themselves of in order to assist in the development of competent, motivated BLS preceptors who have both the EMS knowledge and pedagogical knowledge required to be an effective preceptor. The program was modeled after the MLREMS ALS Preceptor Program.

Preceptor classes are currently scheduled for April 18, 2016 1800-2200, May 24, 2016 1800-2200, and June 4, 2016 0800-1200, and future classes will be posted on the training calendar at www.mlremrs.org. With any with any questions, please do not hesitate to contact MLREMS Training and Education Committee Chair Eric Rathfelder at eric.rathfelder@mlrems.org or our office.

Jeremy T. Cushman, MD, MS, EMT-P, FACEP
Regional Medical Director

web www.mlrems.org
phone (585) 463-2900
fax (585) 473-3516

office
44 Celebration Drive, Suite 2100
Rochester, NY 14620

mailing
601 Elmwood Avenue, Box 655
Rochester, NY 14642



9.33 BLS Preceptor Program

BLS PRECEPTOR PROGRAM

The BLS preceptor program outlined below is available to agencies within the MLREMS system. Participation is optional and at the discretion of individual agencies.

Philosophy

The Monroe-Livingston Region desires to assist in the development and fostering of a cadre of experienced BLS providers to precept new BLS providers in the MLREMS region. As such, desired qualities of a BLS preceptor include:

1. A competent, experienced EMT dedicated to being a lifelong learner
2. Excellent interpersonal skills with a specific emphasis on coaching and mentoring
3. Demonstrated professionalism including high ethical standards, appropriate administrative ability, continuous development, consistent adherence to standards of care, and knowledge of quality assurance

Recommended Preceptor Eligibility

1. Certified EMT provider actively practicing for a minimum of 3 years
2. Recommendation of agency training director or chief
3. Score of 85% or greater on the MLREMS protocol exam taken no more than 6 months prior to the date of application
4. Completion of any required regional training as outlined by MLREMS or REMAC

Preceptor Training

1. Preceptor candidates will receive the following minimum initial training by attending a regional preceptor training class:
 - a. Skill development and evaluation of adult learners
 - b. Coaching and providing appropriate feedback
 - c. Interpersonal communication skills
 - d. Curriculum familiarity and stages of development
 - e. Administration of the learning process
 - f. Use of evaluation forms
 - g. Confidential feedback to agency
 - h. Professional behavior

Maintaining Status

1. Meet all required regional training as outlined by MLREMS, REMAC, or the regional medical director
2. No outstanding agency or regional quality assurance concerns

It is strongly recommended that agencies do not overburden preceptors by limiting their preceptor time to a maximum of 2/3 of their scheduled road time.



<i>BLS Preceptor Process Checklist</i>

- ____ 1. Three years as a cleared EMT (*date of clearance* _____)
- ____ 2. Approval of agency training director or chief (*signature* _____)
- ____ 3. Score of greater than 85% on protocol test (*score* _____), can be found at:
<https://mlrems.org/provider/protocols/>
- ____ 4. Attend a regional preceptor training class (*date of training* _____)
- Name _____
- Agency _____
- Date of Application _____

Provide this completed checklist to your agency training director