

OFFICE OF PREHOSPITAL CARE NEWSLETTER

QUALITY

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What is quality?

- "An inherent or distinguishing characteristic"
- "A personal trait, especially a character trait"
- "Having a high degree of excellence"

I believe all three of these definitions are something that we strive for every day. I like to think that each of us believes that on every call we provide the highest quality EMS care. But do we really? How do we know? How can we measure whether or not we are providing quality medical care?

Quality Assurance and Quality Improvement are two terms often used interchangeably to describe any systematic process of examining whether a product or service being produced is meeting specified requirements. Nearly all industries (including healthcare) participate in some type of Continuous Quality Improvement program in order to assure that their customers are receiving the highest quality product. In certain high-tech industries, more than 50% of products are discarded because they do not meet certain quality indicators. We rely on these industries to do this, else our computers, iPods, and BlackBerry's wouldn't be as integral a part of our lives as they are. Similarly, we expect a certain level of performance from those who serve us, like the customer service representative you call for a problem ("This call may be monitored for quality improvement...").

When Quality Assurance (QA) is mentioned in same phrase as EMS, there is typically a long silence followed by a tremendous amount of anxiety. We tend to very quickly put up a mental wall, unwilling to accept criticism that the care that we provided could be better, or worse yet, was not consistent with a protocol. There are a number of reasons for this,

the most important of which is the simple fact that we do not like to be criticized. Our typical response: "I've been doing this for 15 years and nobody has ever complained - I know how to provide quality care and I'll be damned if you come in here and start telling me how to do things". Okay, so maybe a little over-the-top, but if you catch me on a bad day after a rough call, that might be my answer.

First, QA is not just reviewing PCRs and criticizing them. QA should focus on the "process" rather than the individual, recognize both internal and external "customers," and promote the need for objective data to analyze and improve care. Admittedly, EMS is a difficult field to ensure quality, for there are few objective measures of care. Cardiac arrest mortality, response time, adherence to protocols are the most objective, but there is so much more to quality care than just that. One of the most frequently identified problems with EMS care is our documentation. As you recall from an article a few months ago, documentation is just as vital to patient care as is the oxygen we administer. The purpose of QA is not to determine that Jeremy is a poor documenter, but rather identify the portions of documentation that Jeremy has a problem with, ensure that Jeremy understands that his documentation does not meet the expectations of the agency (and why they don't meet that expectation), and provide Jeremy with the tools (mentorship, sample PCRs, remediation) in order to improve his ability to document.

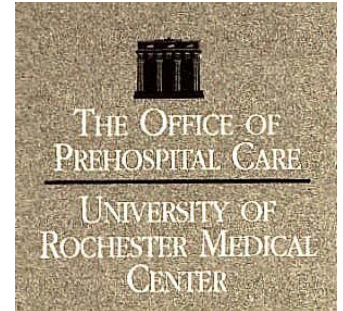
Humans are inherently error-prone. The purpose of a QA program is to help us recognize our errors and prevent them from occurring in the future by using education (not suspension or sanctions unless education has failed us) to enhance our

ability to provide quality care. What's more important, however, is the trends in care and documentation that are observed throughout the agency (or region) that identify problems not with providers, per se, but rather with the protocols, policies, procedures, or teaching (or lack thereof) given to providers. In my experience, system errors are much more common than individual personnel problems. That is, the root cause of the individual not meeting the quality of care standard does not lie in the personality, intelligence, or integrity of the provider, but rather the information and guidance given to the provider by the protocols, agency, region, or training. However without identifying the error in the individual, we could not realize the error lay in the system.

Another fear is that of the "witch hunt." It is imperative that a QA program (and the committee that typically oversees it) be developed with objectivity and balance. Although the purpose of QA is to improve the overall quality of care provided by an agency and in doing so identify many system factors that should be improved upon, it will inherently identify individuals who need more guidance than others. Certain structure and policy can ensure that such a program meets these goals while ensuring equity and fairness. For example, even at the regional level, although the Regional Medical Director can immediately suspend an individual from practicing EMS (under very strict, written guidelines) their decision must be ratified by a committee of peers. Although this is

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Don't be a Minimizer: Avoiding the Trap of Minimizing Symptoms

Rollin J. (Terry) Fairbanks, MD, MS, EMT-P

As an EMT or AEMT I'm sure that you identify with the fact that your specialty as a medical provider is emergency medicine. One of the worst things that can happen to any of us in emergency medicine is to become a "minimizer." A minimizer is a provider, (whether an EMT, intermediate, level 3, paramedic, nurse, PA, Nurse Practitioner, or physician), who minimizes patients' signs and symptoms to be the most benign thing it could be, rather than the worst. But in fact the best thing we can do for our patients in EMS is to assume the worst. Minimizers are typically those with "medium" experience on the street (not newbies, but not old dogs). Many of us go through a stage of being minimizer but then later recover.

Almost all problems have a differential diagnosis which includes benign causes and serious causes. It is rare that we can rule out the serious causes without an involved workup. For example, take the 49 year old chest pain patient, with only one risk factor (smoking), who has reproducible, sharp, right-sided chest pain. Non cardiac, right? Wrong. This guy was actually having an MI. If you said right, then you might be a minimizer. You should have been thinking "MI, dissection, pneumothorax, or PE until proven otherwise."

Worse than being a minimizer, is being a "myth-guided minimizer." Let me focus on chest pain to help convince you about this danger. There are some myths that are very hard to break. One of the most common is the belief that chest pain of cardiac origin is not reproducible. Actually, research shows that reproducible chest pain is just about as likely to be cardiac as non-reproducible chest pain is. In fact, I'd suggest that it's a useless part of the physical exam, and that there's really no need to document it. That's different, of course, than documenting point tenderness in a patient who just got hit in the ribs with a bat.

There are several studies that dispel the myth of reproducible chest pain having any use as a physical exam finding, but a study that appeared in JAMA last year summarizes this and several other chest pain

myths. [1] This study reports a systematic review of the medical literature looking at evidence surrounding certain characteristics of chest pain presentation in acute coronary syndromes. Besides concluding that the presence of stabbing, positional, or reproducible chest pain characteristics are of MARGINAL value in predicting non-cardiac origin, they noted that using response to nitroglycerine administration as a sign of cardiac disease is "truly mythological." Have you ever ruled out cardiac causes based on pain not relieved by nitro? Then you may be a minimizer...

I've said that many of these factors are useless in predicting the seriousness or chest pain, so what *should* guide your clinical judgment about chest pain? Radiation of the pain did have a strong positive likelihood ratio, which means that if it's there, it's fairly concerning, BUT, don't be fooled into thinking that it's absence is reassuring. You can also consider the risk factors. Remember that there are five major risk factors for heart disease (cholesterol, smoking, diabetes, hypertension, and family history). But even for those without any risk factors, a 12-lead EKG should be performed on every chest pain patient (or other suspected cardiac patient) over the age of 40.

Basically, there is no single element of the chest pain history or physical exam that, if taken in isolation, can indicate to you that chest pain is less likely to be something bad. So don't let yourself go down that path. On the other hand, it is appropriate to let certain factors, like radiation of pain, sweating, and risk factor profile) *increase* your suspicion.

There is also plenty of evidence to say that the presence of reproducible chest pain does not make a pulmonary embolism any less likely. [2] So there's lot's of "badness" that could be causing reproducible chest pain. Don't be a minimizer when you come across it.

And don't forget that there is just as high a rate of bad things happening to patients with a psychiatric history as to those without. Chalking conditions up to "psych" is a sign of being a minimizer. Having a psych history is not

protective against coronary artery disease, PEs, or pneumothorax for example, so chest pain and difficult breathing in a patient with a history of anxiety attacks may not be an anxiety attack. (By the way, having any of these acute problems causes an adrenalin release which would make any patient feel anxious). Sometimes when dispatch information says something like "49 year old patient having an anxiety attack and chest pressure" the crew arrives at the scene already having determined in their mind that the patient is having an anxiety attack. But anxiety attack should be a diagnosis of exclusion, which means it can not be made in the field in most circumstances. When you think about it, having a large pulmonary embolus causes chest pain, shortness of breath, AND it would make any normal person very anxious. It also mimics hyperventilation (low ET_{CO}2, chest pain, etc). So a careful evaluation should be performed by the ALS provider, and documentation should make it clear that the provider considered the bad stuff as they thought through to their working diagnosis.

Remember, in emergency medicine and EMS it is our job to assume the worst. This discussion about the need to be suspicious of chest pain can be applied to almost any chief complaint that we encounter in EMS. Let the workup in the ED or hospitalization rule out the bad stuff, and don't put yourself in a position of liability by being a minimizer. **Be suspicious!**

References:

- [1] Swap CJ. Nagurney JT. Value and limitations of chest pain history in the evaluation of patients with suspected acute coronary syndromes. JAMA. 294 (20):2623-9, 2005 Nov 23.
- [2] Le Gal G. Testuz A. Righini M. Bounameaux H. Perrier A. Reproduction of chest pain by palpation: diagnostic accuracy in suspected pulmonary embolism. BMJ. 330(7489):452-3, 2005 Feb 26.

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a rare circumstance, we can see where such structure is vital to keep each individual on the committee relatively powerless but as a whole the committee has the ability to objectively balance each other. This ensures that the provider is given every benefit and one individual (including the Medical Director) does not have the ability to arbitrarily suspend or sanction someone under the guise of "quality of care" without due process.

So, you've been doing it "this way all along and it never caused a problem" now why is it

a problem? For years, many agencies have not had a QA program, and therefore in many cases assumed that if their care was poor, they would hear about it. First, this is quite reactionary, and exactly the thing that a QA program is designed to do – proactively identify areas of concern so they can be improved before they become an issue. Second, without a QA program, we have no idea that we were making the mistake to begin with. Perhaps I have been placing a c-collar on the wrong way for 15 years, and because no-one told me, I assumed it was the correct way. Not exactly the way we

like to ensure "quality" care, is it.

What I hope you glean from this rant is that quality assurance, when designed properly, can improve your ability to provide care through identifying critical gaps and creating educational programs to meet them. Most importantly, the end goal of any quality assurance program is to ensure that every provider meets and exceeds the same standard of care – which in the end is what we owe our patients who entrust our lives to us.

Riding Safe: Seat belts in the back of the rig

Rollin "Terry" Fairbanks, MD, MS, EMT-P, Jeremy T. Cushman, MD, MS, EMT-P

"A seat belt in the back of the rig?!"
"I didn't even know they were there!"
"Who wears a seatbelt in the back of the rig?" I've heard it many times, but read to the end of this, and I bet I'll make you think twice about not buckling up in the back of the rig.

Most of you (I hope) wear seat belts at all times in the front of the rig, but how many of you wear seat belts when you're in the back? It may sound radical, but when you consider the facts, you realize that we should all be wearing a seatbelt in the patient compartment whenever possible. Granted, when you're working a code, or a critical case, many patient care tasks are impossible to do with your seatbelt on in the back of the ambulance, so it's not always possible with current restraint design. But how often are you taking care of a critical patient? We know that the vast majority of patients are routine, and except for a vital sign check or two, you can sit back (with your seat belt on) and write your PCR on the way to the hospital.

Let's consider the facts: The fatality rate for EMS workers is twice the national average, and similar to the fatality rate for law enforcement. 74% of EMS worker fatalities are transportation related. 11% of EMS worker fatalities are cardiovascular—meaning too many EMS workers smoke, something you probably already took notice of. Oh, and only 4% of EMS worker fatalities are due to biohazards, yet you always wear gloves, don't you?

Furthermore, if you look just at transportation-related occupational deaths, the fatality rate of EMS workers is almost twice that of police and fire (see the accompanying graph, from

Maguire et al, Ann Emerg Med 2002). And studies have shown that most serious or fatal injuries in EMS occur in the rear of the ambulance. 65% of these involve a serious head injury (probably from being thrown around in the back, unrestrained).

So as an EMS worker you are more than twice as likely to die at work than the average Joe (or Josette), and if it happens it's overwhelmingly likely it'll be in an MVC. In fact, although MVCs

Our region is on the cutting edge of many safety initiatives, but we most often focus on patient safety. Let's be on the cutting edge of this crew safety issue. There is increasing momentum on a national level to encourage EMS providers to wear seatbelts in the back of the rig. National regulators and the ambulance manufacturing industry needs to do their part and make ambulance patient compartments



are the most common cause of death at work in the US, EMS has twice the national rate.

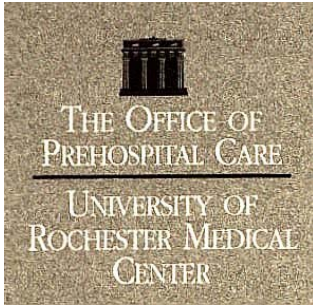
Now let's consider the injury rate. According to statistics from the Department of Labor, EMS workers have a higher injury rate than workers in *any other* private industry. The EMS rate is almost 6 times that of other health services personnel, and 50% higher than firefighters.

As EMS providers you often witness the effect of unrestrained vehicle occupants in a crash. Considering the fact that EMS vehicles are more likely to be involved in a crash than any other vehicle on the road, why are we almost always unrestrained in the back of the ambulance?

more safe. In the meantime, I encourage you to be a role model in this movement. Please buckle up, whether you're in the front or in the back.

For further information, visit the website

www.objectivesafety.net. And, if you like drama, check out the footage on this video which was found on the www.EMSclosecalls.com website: <http://www.firefighterclosecalls.com/downloads/SeatbeltNOBS.mpg>.



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Specific Hospital Issues—Contact Information

OPC receives numerous phone calls for specific hospital issues. We encourage agencies to contact the hospital directly. Below is the contact information, which is also listed on the MLREMS website.

Highland Hospital—Dr. Hilmi or Dr. Cunningham

John_Hilmi@urmc.rochester.edu
Michael_Cunningham@urmc.rochester.edu

Lakeside Hospital—Dr. Kasaraneni

395-6095 ext 4205 OR
Manmadharao.kasaraneni@lakesidehealth.com

Rochester General Hospital—Dr. Elsen

922-3846 OR
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275-1106 OR
Pamela_Parnapy@urmc.rochester.edu

Unity Hospital—Dr. Biernbaum

723-7035 OR
rbiernbaum@unityhealth.org

Recently a study was published in Annals of Emergency Medicine (Vol 50, No 3) that looked at two types of laryngoscope blades: a metallic reusable and a plastic single-use blade. The study showed the following results:

First attempt intubation success rate:

Metallic Blade 84%, Plastic Blade 76%

Incidence of difficult intubation (defined by difficult score greater than 5):

Metallic Blade 6%, Plastic Blade 15%

Good laryngeal view (Comack and Lehane Classes I and II):

Metallic Blade 83%, Plastic Blade 67%

Alternate airway use (Gum Bougie or LMA):

Metallic Blade 4%, Plastic Blade 12%

ALS agencies may want to think about these results and their own experiences when deciding which blades to use. As always, check with your medical director if you have any questions.

Upcoming Events

Visit our website @ www.mlrems.org

As a reminder, the PCRnet fax server has been shut down. All agencies should be using electronic charting or electronic data submission. If your agency still has questions, please contact Sheri Adam at OPC.