Implementing Patient Centered Quality Management

By Mike Taigman

Best Practices
IN EMERGENCY SERVICES
Leadership Series

Contents

Implementing Patient-Centered Quality Management

About this series
This report is part of a continuing leadership series developed for Best Practices in Emergency Services. It started after a conversation with Mike Taigman revealed his concern that the vast majority of agencies in this country were going about quality improvement all wrong. We considered it so important Best Practices commissioned him to write this special educational series. *– Keith Griffiths, editor-in-chief.*

About the Author
Mike Taigman is the general manager for the American Medical Response Ventura County and Gold Coast Ambulance operations in California. He's part of the leadership team for Caring for Maria, AMR's national performance improvement collaborative. Mike is also an adjunct professor at the University of Maryland Baltimore County's graduate program in Emergency Health Services, where he wrote the curricula for and teaches their Quality Management course.

His EMS career began in 1974, working as an EMT. His jobs included paramedic, flight paramedic and field training officer in the Denver area before moving into leadership and consulting in 1988. Over the years Mike has worked with EMS organizations throughout the U.S., Canada, Australia, Israel, Palestine and Europe, helping them improve their performance. He earned his masters degree in organizational systems from Saybrook University in San Francisco, is certified as an improvement advisor by the Institute for Healthcare Improvement and is a Lean Six Sigma Black Belt.

Currently he works with 220 EMS professionals handling 45,000 911 calls per year in Ventura County, CA. They are in the process of synthesizing all seven hospitals, all of the first response fire EMS agencies, all three 911 ambulance services, the EMS Agency, and the Public Health Department into a single community wide patient center quality management system.

Best Practices Staff

Editor in Chief
Keith Griffiths

Editor
Carole Anderson Lucia

Best Practices In Emergency Services (ISSN 1540-9015)
is published monthly by
The National Emergency Services Institute
679 Encinitas Blvd., Suite 211
Encinitas, CA 92024 • Tel. 760-632-7375 • Fax 866-448-1436

emergencybestpractices.com

Subscription rates: USA: one year: $279; two years: $450 (save $108); outside the USA: Please add $10 per year.

Best Practices is a membership benefit of the
National EMS Management Association.

Part 1: Is your quality program all it could be?

"The best interest of the patient is the only interest to be considered."

— William J. Mayo, M.D.

Nearly every EMS system I've visited over the years vows to put patients first, to do anything for patients or to be patient-centered. Like most of us, I took that as a given. Of course we do that, I thought; our job, after all, is to take care of patients.

Then I heard Don Berwick, M.D., give his keynote speech at the Institute for Healthcare Improvement's National Forum in 2006. As IHI's founder, Dr. Berwick's annual speech is the kind of thing hospital CEOs and medical school deans line up for like they're going to see the Grateful Dead.

His opening words were, "Every hospital in America claims to be patient-centered. I'm here to tell you that's a lie." He went on to describe the things he sees in hospitals every day, like being told that he could not go into the cath lab with a friend who was terrified of the procedure; having his wife *woken up* to take her sleeping pill; and subjecting patients to wearing those oh-so-flattering hospital gowns.

Sadly, we have equivalent things that are not patient-centered designed into our EMS systems by protocol, culture or convenience.

HOW EMS IS NOT PATIENT-CENTERED

Here's one example that hits close to home for me: A friend of mine was being transported to a cardiac receiving center for an urgent catheterization when she asked the paramedic transporting her how she was doing. The medic replied, "Pretty good, considering I'm still awake 36 hours into my 48-hour shift." My friend, a safety engineer, was too frightened to ask if her partner driving the ambulance had also been awake that long.

Most normal (non-EMS) people think that working more than eight hours is exhausting, yet we see shift schedules that are 48 or even 96 hours in some EMS systems.

Need more examples? How about these kinds of statements, which are all too common in all too many EMS systems: "I'm sorry your husband can't ride in back with you" or, "This is going to hurt while we splint you, but don't worry—we will give you something for the pain once we get you into the ambulance." Or how about the fact that we strap people to hard plastic boards to cover our own tails more often than to protect their necks, or that we take everyone to the emergency department even when the neighborhood clinic could see them faster for a third of the cost, or that the only time most people ride in a vehicle facing backward is in an ambulance?

Walk into any EMS system in the country and ask how they are doing with airway management. Chances are they'll say something like, "We are 92% successful." When you ask what that number means, people will tell you, "92% of the people we try to intubate get a tube" or, "60% of our intubations are successful on the first try, but 92% get it eventually" or, "We are going away from intubation, and 92% have a successful supraglottic airway placed." The problem is that all these numbers and explanations are provider-centered, not patient-centered.

From the patient's perspective, their airway goes well beyond the trachea all the way down to the alveolar ducts. Yes, people in cardiac arrest and those with apnea from a heroin overdose have airway problems, but so do people with asthma, pulmonary edema and pneumonia. Patients want and need to have an airway that's open and free of gunk, and that easily exchanges air with the outside world and allows for well-oxygenated blood. While having an endotracheal tube or supraglottic airway placed may be part of meeting these needs, they are only part of the story. The full picture includes good assessment and may include sitting the patient up and delivering inhaled beta-agonists, CPAP, suction and the like. It's certainly a lot easier to count intubations, but it's time for us to measure results from a patient perspective.

If you should get broadsided by a drunk driver on your Harley Road Glide, shatter your femur and get your bell rung because your helmet is the size of a beanie, how many separate "quality" programs will have something to do with your care?

There is no standard way to measure these results, but it probably involves some combination of EtCO2, SpO2, respiratory distress scale and others. Maybe including a checklist that looks at the bundle of assessments and interventions necessary to produce and maintain an open, clean airway with a free flow of air would be the most patient-centered measurement.

QUESTIONING QUALITY

Almost every fire department, ambulance service, dispatch center, emergency department, cardiac cath lab and trauma center has some kind of "quality" program. If you should get broadsided by a drunk driver on your Harley Road Glide, shatter your femur and get your bell rung because your helmet is the size of a beanie, how many separate "quality" programs will have something to do with your care? The list would likely include dispatch, fire first response, paramedic ambulance service, emergency department, trauma team, radiology, lab, orthopedics, neurology, ICU and rehabilitation.

From your perspective as the patient, every one of these parts has to do a great job as part of your care process or you're not going to do as well as you could. Everything needs to work, and the process starts with having the tower that picks up the signal from the bystander's cell phone route the 911 call to a

primary PSAP, which needs to correctly identify the nature and jurisdiction of the crash to send the call to the proper secondary PSAP. Then the 911 call taker needs to capture the right location, assess the seriousness of your situation and tell the caller what to do for you until help arrives; then the dispatcher needs to alert the closest EMS resources. The process ends with you walking without pain or a limp. In between there will be splinting, transport, hopefully some opiates, X-rays, a CAT scan, labs, hospital food, someone helping you out of bed to stand for the first time and a whole lot more. From your perspective, the whole thing is one big system.

In patient-centered systems, you won't hear people say, "Outcomes are beyond the control of EMS" or, "We knew the patient needed to be immobilized, but the first medic on scene is in charge and we weren't first." We are all responsible for contributing to outcomes and results. We must have communication practices that encourage people to speak about concerns and encourage others to hear those concerns and give them due consideration. Just like in an aircraft where crew resource management is practiced, a management system that makes optimal use of all available resources—equipment, procedures and people—to promote safety and operational efficiency is essential in EMS.

In patient-centered systems, the distinction between good clinical care and good customer service is out of place. Good customer service is a component of good clinical care and vice versa. In patient-centered systems, how a patient feels is not only used for diagnostic information; it's used to assess the level of suffering and to identify opportunities to help people feel better and get better.

Let Dr. Berwick's words guide us as we explore new ways to think about patient-centered quality management systems over the next few issues: "Others have struggled to find a proper definition of patient-centeredness. Three useful maxims that I have encountered are these: (1) The needs of the patient come first. (2) Nothing about me without me. (3) Every patient is the only patient." BP

Part 2: The missing 'I': Putting improvement back into the quality improvement equation

It's been 25 years since the EMS world started talking about quality improvement as opposed to quality assurance. During that time we've been preaching the importance of focusing on systems rather than individuals, gathering data and using evidence.

Almost every EMS system has something with the word *quality* in it: a quality plan, a peer review QI committee or a quality improvement manager. Yet when you ask most EMS leaders what their "quality whatever" has made better, shoulders shrug and the subject changes. Somewhere along our path we seem to have forgotten the improvement part of quality improvement.

Around the same time EMS started talking about QI, Don Berwick, M.D., and some colleagues founded the Institute for Healthcare Improvement. They engaged a group of rock star statisticians from Associates in Process Improvement in Austin, Texas, and adopted their Model for Improvement as the vehicle for making healthcare better across America and the rest of the world. This simple yet powerful model holds the key to making things better.

HOW THE MODEL FOR IMPROVEMENT WORKS

The first step is to write an AIM statement. Thousands of costly EMS ideas would be derailed if leaders just stopped and asked their team, "What are we trying to accomplish?"

Take my own example. A couple of years ago, some members of my clinical team wanted to change all of our cervical collars to a fancy new brand whose name shall remain anonymous. They excitedly strapped one on me in the day room exclaiming, "See how much better this is!"

When I asked them, "What are you trying to accomplish?" they said, "Better cervical immobilization." That's when I asked the second question in the model: "How will we know that a change is an improvement?" They looked at me as if I'd just asked them to calculate the core temperature of the sun using a nail file, a broken mirror and an out-of-juice C-battery.

What is the measure of inadequate spinal immobilization? The first one that comes to mind is the number of patients who were able to move their arms and legs before we cared for them who are now paralyzed due to something that happened during care/transportation. So I asked the clinical manager to run a report counting the number of patients each month who had their spinal cord transected during our care for the past two years. There weren't any. In fact, no one could remember that happening in the past 20 years. How many complaints have we had from emergency physicians or nurses about inadequate spinal immobilization? None. How about from patients? None.

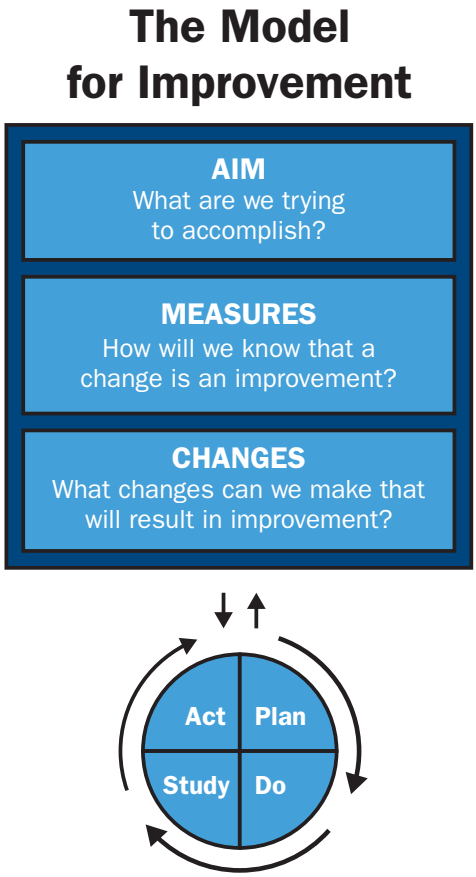
Management guru Peter Drucker said, "You can't manage what you can't measure." Dr. Edward Deming, the father of performance improvement methods, used to say, "In God we trust, all others must bring data." If you're not able to measure (qualitatively or quantitatively) what you're trying to improve, it's impossible to know if you've made something better.

I ask this question regularly when visiting with EMS systems that want to add rapid sequence induction (RSI) to their protocols: How many patients per month in your system are unable to have their airway managed and suffer

a worse outcome as a result? I've yet to have a single leader show me a graph with this data. If you can't answer this question, then you have no business contemplating RSI.

The third question is where you brainstorm ideas for improvement based on your AIM and measurement criteria—but only after you have completed the first two steps! Too many changes in EMS start with this third step, often after folks return from the exhibit hall at the latest EMS conference.

One clue that an idea has skipped the first two questions is any statement that starts with, "We really need to get [fill in the blank]." Our industry is full of really cool solutions looking for problems, so this is the place to brainstorm improvement ideas. You'll make better progress if you push yourself and your team to come up with at least three, but hopefully more, ideas. Too often we stop after one—or we craft an improvement project around the idea we're most attached to. My favorite is, "If we did everything on the iPad Mini, the world would be perfect."



Adapted with permission from *The Improvement Guide: A Practical Approach to Enhancing Organizational Performance*, by Gerald J. Langley, Ronald D. Moen, Kevin M. Nolan, Thomas W. Nolan, Clifford L. Norman and Lloyd P. Provost.

PUTTING IT INTO PRACTICE

Let's put this model together with a real-world example from AMR's Ventura County, Calif., operation.

Question 1: What are we trying to accomplish?
Answer: Measurably decrease suffering for the patients we serve.

Question 2: How will we know that a change is an improvement?
Answer: A higher percentage of our patient care reports will show a decrease in suffering.

It's important to be specific about how, exactly, measurement will happen, so we will measure this by taking a random sample of 100 patient care reports each month and evaluating them for documentation of the nature and severity of suffering (pain, nausea, shortness of breath, anxiety, etc.); an intervention of some kind designed to decrease the suffering (CPAP, morphine, Zofran, etc.); and a post-intervention reassessment of the suffering. The numerator will be the number of patients in the monthly sample where the PCR demonstrates a reduction or elimination of suffering.

Question 3: What changes can we make that will result in improvement?
Answer: In the case of suffering reduction, improvement ideas might include:

- Adding Ondansetron to the medications carried by crews to treat nausea
- Encouraging non-pharmacologic interventions for orthopedic pain like cold compresses, elevation and splinting
- Changing the morphine dosing protocol from 2–4 mg to a weight-based 0.1 mg/kg
- Expanding the use of CPAP beyond pulmonary edema to asthma, pulmonary infections, CO poisoning, etc.
- Provide myth-busting pain management education that deals with perceived drug seekers, abdominal pain and the limited ability of healthcare providers to assess pain severity using anything other than the patient's own pain rating

MOVING ON TO PDSA

The last part of the Model for Improvement involves a series of Plan, Do, Study, Act (PDSA) tests to learn about the effectiveness of your improvement ideas. For clinical improvements, it is important that only changes supported by the scientific literature be on the list. Improvement ideas that are not supported by science need to be properly researched with full IRB patient protection before they can be considered for use in an EMS system.

The objective of PDSA testing is to learn what really produces beneficial results in your system before anything is implemented. One secret is to start with the smallest, quickest test you can imagine and then do several small, rapid PDSA cycles to quickly learn what works and what does not.

Now, granted, lots of people have written about PDSA cycles over the years and the descriptions can sound a little intimidating. Here's a just-what-you-need-to-know version:

Plan: Briefly describe what you're going to try and how you're going to measure the results, then make a prediction about what will happen. For example, on ambulance 421 B shift, we are going to have them give weight-based morphine to the next patient they have with pain and they will measure the pre-medication and post-medication pain scale. We predict that their 1–10 pain scale will drop at least two points.

Do: Carry out the Plan.

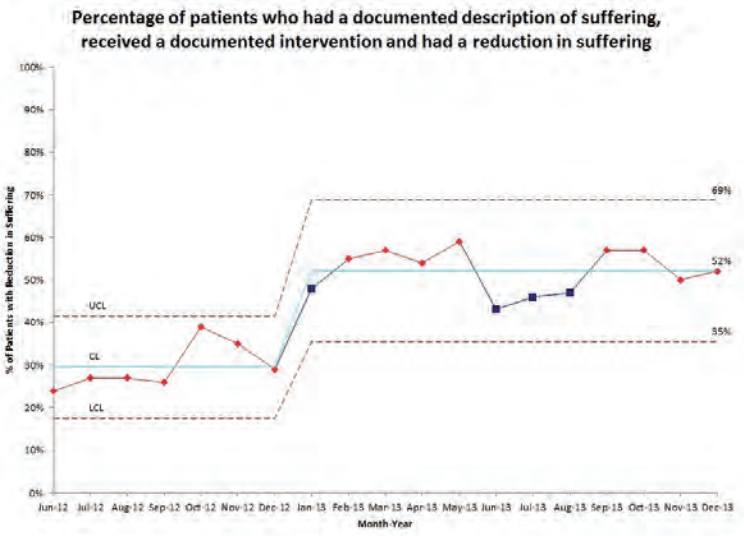
Study: Compare the result with your prediction and capture any ancillary learning. For example: We had a 27-year-old male with a fractured tib-fib from a mountain bike crash. His pain was 7 pre-medication and 2 post-medication. The morphine made him nauseated and the medic thought that it was easy to calculate the dose.

Act: Here you'll do one of three things:

- Adopt the change as successful
- Adapt the change and try another PDSA
- Abandon the change as unsuccessful

In our example we might decide to adapt the weight-based morphine dosing protocol to include the administration of Ondansetron to manage the nausea, provide pain management myth-busting education and encourage non-pharmacologic interventions for pain.

The concept is to continue doing PDSA cycles until your "degree of belief," as shown by the results you're able to produce, indicate that it is time to implement one or more of the changes systemwide. Too often, EMS systems implement interesting ideas without these testing cycles, which is how we got MAST pants, esophageal gastric tube airways and high-dose epinephrine. BP



Part 3: Keeping your system healthy is like keeping your patients healthy.

When you're taking care of people who are sick or hurt, there are generally accepted guidelines and tenets which, if followed, produce good results for patients: 1) Proper treatment starts with an accurate diagnosis, which is usually based on a good history. 2) You've got to monitor vital signs regularly while the patient is under your care, make sure that your treatment matches the diagnosis, reassess and adjust your treatment based on response to what you do, and do no harm.

If you're leading a system that cares for folks who are sick or injured, similar guidelines apply: 1) Make sure you understand the problem before you try to fix it. 2) Monitor the "vital signs" of your system's key processes. 3) Make improvements that are effective (produce the desired results), sustainable and cost-effective, and that don't make things worse.

MEASURE WHAT'S ESSENTIAL

As you build a dashboard of vital measures for your system, keep in mind that 10 or 12 that cover all of your system's key processes is better than a thick report. As Robert Lloyd from the Institute for Healthcare Improvement says, "There are many things in life that are interesting to know. It is far more important, however, to work on those things that are essential to quality than to spend time working on what is merely interesting."

One way to think about what's essential is to make a list of the vital functions in your system which, if they failed, would have a major negative impact. Here are a few to consider:

- Clinical care (this will likely need more than one measure)
- Safety
- Fleet management
- Call taking and dispatch
- Customer satisfaction
- Recruitment and retention of employees
- Response time performance
- Materials management
- Billing

DEFINE WHAT THE MEASUREMENT MEANS

It's also important to have an operational definition for your measures. In other words, everyone needs to know what the label means in practice. For example, if you are measuring "response time," the operational definition must include

when the clock starts and stops—at the time of the first ring in the primary PSAP to when the wheels of the transport rig stop moving at the scene based on AVL data. Or if you're measuring the effectiveness of your management of patients where time has a direct impact on outcomes such as STEMI, the operational definition for the measurement might be, "Time from onset of symptoms to reperfusion of the occluded coronary artery."

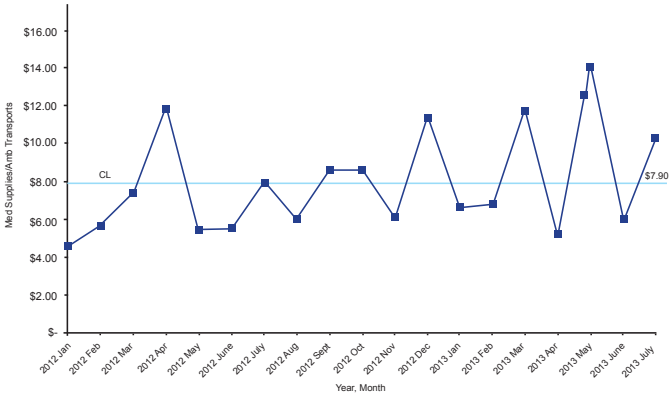
I've heard a lot of EMS folks say, "We don't control what happens before we get there or what happens at the hospital, so we should only be accountable for what we control." If your measurement system is designed to judge how good you are, then measuring only what you control makes sense. However, if your measurement system is designed to be patient-centered, focused on improving results for patients, then measurements should be designed from the patient's perspective. Remember that just because something can be monitored does not mean that it should be. I can't count the number of EMS systems that can provide a report on their IV success rate, yet it is hard to find scientific evidence that IV success correlates with improved clinical outcomes.

Once you have an unambiguous definition of what you're measuring, you need access to the data and the sampling strategy to collect it. It's much easier to start with available data than to impose on your people new ways to document things.

PRESENT YOUR INFORMATION IN A USABLE WAY

Some EMS measurements are expressed as a percentage, such as the percentage of cardiac arrest patients who receive bystander CPR. For these it is helpful to carefully define both the numerator and denominator of the measure. The denominator could be all cardiac arrests where CPR was performed at any time (excluding obvious death), from any cause, run in the system each month. The numerator would be the subset of these patients who had CPR being performed on them when the first responding EMS crew arrived.

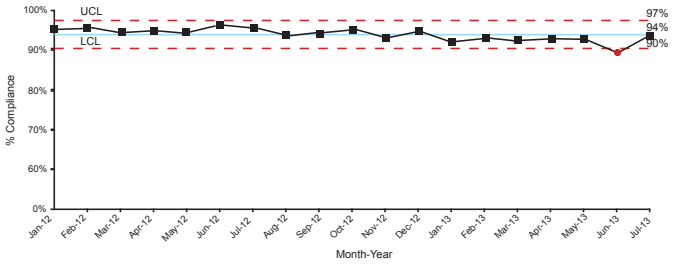
Other things are best measured by count, such as the number of critical vehicle failures per month. This could be defined as anytime an EMS vehicle suffered a mechanical failure while responding to, at the scene of, or while transporting a patient.



I recently spoke with a colleague who was looking at a pie chart of her system's performance and said, "My boss is going to go ballistic when he sees this." What you want to do is display the performance data in a way that accurately tells the story, guides the viewer to react appropriately and captures a dynamic view of the process. Bar charts, pie charts and those dang color-coded gauges/traffic lights are all static ways to display data and should be banned from all quality-related activity. Dynamic performance data should always be displayed in its naturally occurring time order on a run chart or on a Shewhart control chart. Take a look at this run chart, which shows the average cost of medical supplies per call:

If you apply the right mathematical formula to a run chart, it will add upper and lower control limits creating a Shewhart control chart. Several software programs will do this for you; my favorite is QI Macros, an Excel template that provides lots of powerful analysis tools for a reasonable price.

The chart below is an example of a Shewhart control chart that monitors response time performance.



Most people will look at charts like these and instantly start describing what they see and sharing their theories about why some dot is different from another dot. It's important to train the folks who will read these charts how to analyze them.

There are several good books that can provide you with in-depth information about this kind of analysis, but my favorites are *Data Sanity* by Davis Balestracci; *The Improvement Guide* by Gerald J. Langley, Ronald Moen, Kevin M. Nolan, et al.; and *Understanding Variation* by Donald Wheeler.

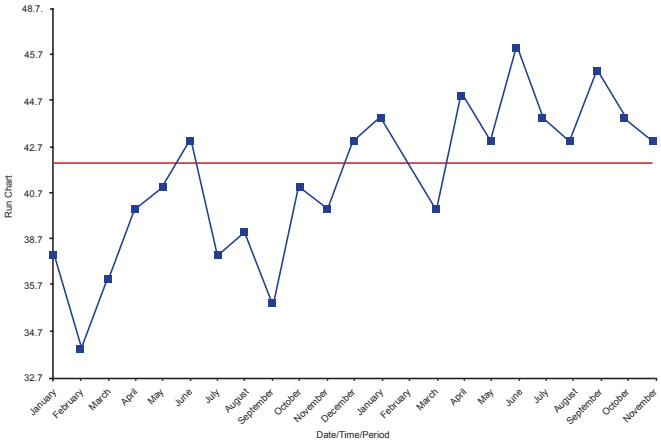
Here are the essential things to keep in mind when looking at these charts:

- **As Davis Balestracci said: "Given two different numbers, one will be larger."** This might seem like an idiotically simple observation, yet I've sat in thousands of meetings where some important person focused on why one number was different from another. From a statistical perspective, having one number larger than the other usually does not mean anything.

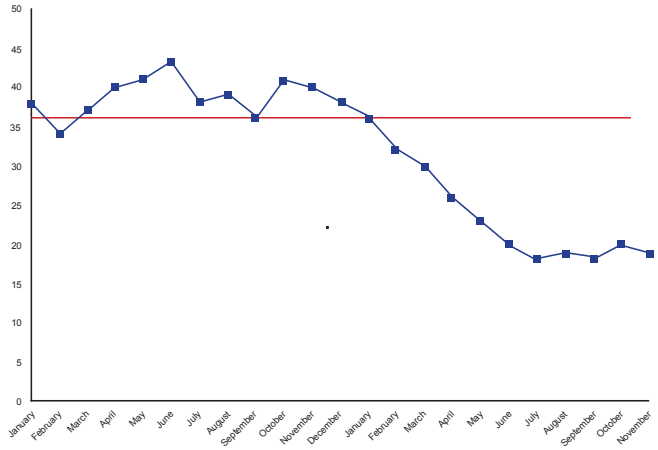
- **The key distinction is differentiating common cause from special cause variation.** All processes have variation, including the amount of time it takes a dispatcher to launch an ambulance after the 911 line rings and the number of employees who are injured on the job each month. Common cause variation is those differences that are just a normal part of the process; special cause variation is generated by something outside the normal process. For example, I used to live about 25 minutes from work. Sometimes it would take me 26 minutes, other days 23. These differences in travel time were just an inherent part of the process, thus common cause variation.

  Or consider this example: One day as I was riding to work on my motorcycle, I watched a sedan t-bone a pickup truck in the driver's door. The driver was one of the EMTs who worked on our team. I assisted with his treatment and jumped in the helicopter to help during transport to the trauma center. A field supervisor gave me a ride back to my bike and I rode the rest of the way to work. That morning it took me 2.5 hours because something outside the normal process caused things to be different, hence special cause variation.

- **The main reason to make a distinction between common and special cause variation is to guide you to ask the proper questions of the data.** For common cause variation you can ask, "Is this good enough?" For special cause variation you can ask, "What happened here?" W. Edwards Deming said that asking "What happened here?" with common cause variation was equivalent to "tampering," which leads to bad management decisions. These bad decisions often make performance worse.



- **The vast majority of analysis can be accomplished with three simple tests for special cause variation.** Look to see if the data has any trends, which is six or more dots continuously ascending or descending.



Look to see if there are any runs—that is, eight or more continuous dots above or below the median.

On a Shewhart control chart, if you have a dot above the upper control limit or below the lower control limit, it is special cause variation. The answers to the analysis questions, "Is this good enough?" or, "What happened here?" will help your leadership team make much better decisions on what needs to be improved and what what they can let ride.

Part 4: How to deal with unusual occurrences

A crew responds to a 1 a.m. call at a sleazy bar on "an injury, probably from a fight." The smell of cheap beer and bodies that don't have a lot of experience with soap greet the crew as they walk in the front door. At the end of a long row of bar stools sits a guy on the floor, leaning against the antique jukebox playing "One Bourbon, One Scotch, One Beer." He's got a dazed look in his eyes, a jaw that appears to be dislocated and a couple of bloody teeth on his torn shirt. As the dual-medic crew makes their way through the crowd, a well-oiled man taps one of them on the shoulder and says, "Hey, doc, does this need stitches?" as he thrusts his hand in front of the medic's nose.

The medic looks at the small scratch and says, "Just go wash your hands—you don't need stitches," and continues toward her patient. They immobilize the guy with the busted jaw and transport him to the closest hospital.

Three days later, the man with the scratch on his knuckle shows up at the same hospital complaining of a fever and a painful arm. His left arm is massively swollen and red. Within a half-hour of checking in and after telling the resident that "the paramedic said I didn't need stitches," his blood pressure plummets and he arrests. The cause of death is ruled sepsis due to bacterial cellulitis, to which the man's diabetes had predisposed him.

These types of calls are known as unusual occurrences, sentinel events, medical errors or "60-60 cases" (in which the TV show *60 Minutes* shows up at your office or you're sued for $60 million). Whatever they're called, they happen in all EMS and healthcare systems.

In the early days of EMS quality assurance programs, the entire goal was to find these bad things and the EMTs or paramedics who caused them. Then we would punish, remediate or educate to make things better. While we now know that this game of Whack-A-Mole does not produce much in the way of improvement, there is still a need for a mechanism to work through these unusual situations in progressive EMS quality improvement systems. Let's take a look.

DISCOVERY

This type of situation can come to your awareness through a phone call from a hospital clinical professional, notification from another agency, a subpoena from a plaintiff's attorney, a call from a local newspaper, a customer complaint, a routine chart audit or some other channel. However you find out about it, the very first thing you should do is take action to minimize the damage, danger or risk to patients, family members, the public and your team. While most situations will be over by the time your leadership team learns about them, if a situation is still unfolding, you should do what you can to stop things from getting worse or help them get better before worrying about the investigation.

The goal of an investigation is to learn what actually happened as clearly as possible. It is not intended to punish, terrify or get you to replace Gibbs on the TV show *NCIS*.

One of the first things you should do is compile a checklist of people you should bring into the loop depending on the type of issue involved. Consider your medical director, government regulator, risk and safety manager, hospital liaison, police commander, dispatch manager, etc. If the situation has the potential to result in a lawsuit, it is also a good idea to bring your organization's legal counsel or your malpractice carrier's legal counsel into the loop early. They can guide you on the management of the investigation and documentation.

Above all, you want to avoid having you or one of your employees sitting in a courtroom three years from now with a large PowerPoint slide projected next to the jury and judge of an e-mail someone on your team sent that says, "This guy is a smelly, uninsured, homeless, drunk schizophrenic who didn't want to get in the ambulance. What were we supposed to do—take him home for a shower and a meal?"

CENTRAL HUB

It's important to have a person on your team to serve as the central hub for investigations. They don't need to do the actual investigating, but they should keep all of the records related to the situation, keep track of timelines and database the results.

INVESTIGATION

The goal of an investigation is to learn what actually happened as clearly as possible. It is not intended to punish, terrify or get you to replace Gibbs on the TV show *NCIS*.

The hardest part of investigating incidents is resisting the urge to believe that you know what happened before you've completed your investigation. Seasoned paramedics who have spent their entire careers assessing patients with limited tools, coming to a quick "working diagnosis" and then implementing treatment have the hardest time with this waiting. Most of these situations are not active emergencies, so it's possible to take some time and really look at all perspectives before deciding that you know what happened.

Gather all of the relevant documents, including patient care reports, dispatch records, 911 calls and dispatch tapes, base station call-in records and tapes, supervisor incident reports, etc. It's useful to have the people involved prepare written incident reports about what happened as soon as possible after the event.

There are a few things that increase your chances of learning as much of the truth as possible about a situation during oral interviews with the people involved:

1. Make the conversation as comfortable as possible. The more frightened an employee is during an oral interview, the harder it will be for that employee to paint a comprehensive and accurate picture of what happened. A relaxed conversational style and the intention to put the interviewee at ease help. It also helps to lay all of your cards on the table at the beginning of the conversation. For example: "We got a call from the ICU at Our Lady of Great Agony Hospital about a call you ran two days ago, where the 23-year-old was thrown from his motorcycle. According to your PCR, you splinted his fractured tibia and gave him morphine for his pain before turning him over to the helicopter team. He arrived at the trauma center without spinal immobilization and they found an unstable C-4 fracture. While he can still move his legs, he has lost some feeling. As you can imagine, they are very concerned and we need to understand exactly what happened."

Some managers like to hold things back to see if they can catch people in a lie. While this strategy might identify more liars, it does not lead to an accurate understanding of what really happened.

If the employee is a member of a union or a group that has a collective bargaining agreement (CBA), it is likely that they have a right to have a representative with them during the interview. These requirements are known as Weingarten rights based on a 1975 U.S. Supreme Court decision. It's important to respect this right and to follow your CBA's language and your past practice about notifying the employee of his or her rights and allowing for representation.

It's helpful to set the expectations with the employee and union representative at the beginning of the meeting. It is not the role of the union rep to argue the case during the investigation; they can file a grievance after the meeting. Their primary role is to provide moral support for the employee and to ensure that the employee is treated fairly. They can also take notes and in some cases help clarify questions, but they are not to interfere, answer for the employee or play amateur lawyer.

2. It's useful to have a list of topics you'd like to learn about before the interview. It also may be useful to have a list of questions specific to the situation. Having at least two leaders participate is a good idea so one can take detailed notes.
3. Ask simple, open-ended questions early in the interview. For example: "Tell me about this call from the beginning."
4. Avoid leading questions like, "Isn't it true that you've always disliked taking people to Our Lady of Great Agony?" Avoid compound questions like, "Why did you decide not to immobilize, and who authorized you to give 18mg of morphine? Lastly, avoid accusatory questions like, "Why are the patient's Percocet tablets in your shirt pocket?"
5. Start by interviewing people individually rather than in a group. Each person has a unique perspective, and if they hear someone else's version first, it naturally influences what they say. You can always chat with them as a group after the individual interviews.
6. At the end of the interview, it's useful to ask if there is anyone else you should talk to. It's also helpful to summarize what you've been told during the interview to allow for any additions or modifications. Close by letting the interviewee know what the next steps are and if there is anything you need from them, such as confidentiality or a written statement.

ASSESSMENT

Once you've gathered the documents and interviewed the relevant people, it's time to come to a conclusion about what happened. This assessment should include:

- Who was involved?
- What happened?
- When did it happen?
- Where did it happen?
- Why did it happen? Explain the influences and thought processes of the people involved.
- How did it happen? Here you explain how the system, process and management practices contributed to the situation.

Jon Swanson, executive director of Metropolitan Emergency Medical Services in Little Rock, Ark., says there are errors of the heart and errors of the mind. Errors of the mind can be corrected through education, coaching and support. Errors of the heart—in which someone just does not care to do the right thing—are difficult to correct and may be best dealt with by helping the person find another way to make a living.

David Marx, creator of Just Culture, divides assessments into three categories: human error, which is a slip or mistake that should result in support; risky behavior, where the risk may not be recognized or is thought to be justified and should result in an educational intervention; and reckless behavior, where there is intentional risk-taking that should result in disciplinary action, including the possibility of termination.

SYSTEMS VIEW

W. Edwards Deming, creator of the Plan, Do, Check, Act process, said more than 90% of problems are caused by systems, processes and senior management, while employees control less than 10%. With that in mind, it's important at this stage to look carefully for the system dynamics that caused or contributed to this situation. It's very easy to get caught up in the "blame the person" game even though the biggest improvement will come from system and process changes.

ACTION

Once you have a full understanding of what happened, the impact of process and system dynamics on what happened, and the subtleties of individual contribution, it's time to take action. In some cases the action is to do nothing and pray that this unusual situation does not happen again. In others it will mean changing a process, such as requiring oil checks at the beginning of every shift after an engine blew because it was low on oil. In still others it will mean putting together a performance improvement plan for the individuals involved. Whatever intervention you decide on, it is important to monitor things afterward to make sure that it resulted in improvement and that you can address any unintended consequences.

DATA

Lastly, it is important to record in some kind of database what happened, the people involved, the assessment about contributing factors and the actions taken. As this database builds, it will enable you to identify patterns that might point to system issues that are hidden when individual situations are viewed alone. BP

Part 5: Do your leadership principles and practices support quality improvement?

When I'm teaching classes for EMS and fire service leaders, I'll often start by asking a few questions.

Q: While you're here in this room, are people calling 911 back in your community?
A: Yes.

Q: Are call-takers answering calls, following protocols, dispatching the proper resources and providing pre-arrival/post-dispatch instructions?
A: Yes.

Q: Are your clinical professionals responding, doing assessments, and providing treatment and transportation if needed?
A: Yes.

Q: Is preventive maintenance being done on your vehicles, are people being scheduled for open shifts, and are bills being prepared and sent out?
A: Yes.

Q: So are you telling me that all of the vital functions of your system are going on right now without your participation?
A: Yes.

Q: So what good are you? What value do you provide?
A: [Uncomfortable silence with people looking around, shifting in their chairs.]

What value do you or can you provide as a leader if all the vital functions of your organization run just fine without you? It's a scary question, and if you're willing to ponder it, you're likely to come up with concepts that will improve your effectiveness. Following are some of the ideas that have emerged from my thinking and learning about leadership and quality management during the past few decades.

IT'S ALL ABOUT THE BASICS

I think EMS leadership can be boiled down to this: Your job is to set the direction for the future, watch the system, support the vital processes to keep them running smoothly and make improvements. I've found this simple yet powerful five-question framework really helps me stay centered:

1. **Why are we here, and why do we exist?** This is your purpose. It is not for your wallet cards or wall posters. To be effective, this answer must live in the conversations and daily actions of folks on your team. One example—"To reduce or relieve suffering and improve health"—is pretty easy for the people on a team to align with.
2. **Where are we going?** This is your vision, a crystal-clear image of a state that does not yet exist that you and your team are working toward making a reality. One hint: Vision statements that say things like "____ is the premier EMS system on or off the earth" don't give folks anything tangible to work toward. Physio-Control's vision—"A world in which no one dies suddenly as a result of an acute, treatable medical event"—while incredibly challenging, is clear and specific. It gives people something to work toward.
3. **What guides your day-to-day decisions and actions?** These are your values, the things that matter most. The STAR CARE Guidelines written by Thom Dick more than two decades ago serve as one of the best examples of strong values. Safe, Team-Based, Attentive to Human Needs, Respectful, Customer Accountable, Appropriate, Reasonable and Ethical—it says it all.
4. **How are we doing?** These are your key performance indicators, which we discussed in the October issue.
5. **What are you doing to make things better?** These are your improvement projects, discussed in August.

IT'S MORE IMPORTANT TO BE A LEADER/FACILITATOR THAN A BOSS

Leadership author Peter Block said, "Most of our organizations and communities are parent-child, boss-subordinate, mayor-citizen conversations—we think that matters. We think the boss-subordinate relationship matters, but I don't think that it does."

My bias is that once a person buys into the vision that they are the boss and are smarter, more powerful and more important than the other people on their team, they are destined to lose their way.

Leadership guru Peter Drucker said, "Most of what we call management consists of making it difficult for people to get their work done." As you think about your role as a leader, it's helpful to make a commitment to yourself that you'll focus on making work easier for folks rather than harder. It helps if you see yourself as a leader/facilitator rather than a boss.

GO FOR COMMITMENT, NOT BUY-IN

Have you ever used the phrase "buy-in"? As in, "We're going to have a meeting this afternoon to get buy-in from the C shift for the new summer uniform."

I attended a small workshop several years ago led by Peter Senge, Ph.D., an MIT professor and the author of *The Fifth Discipline*. One of the people in our circle said something about how frustrating it was to get employees to buy into the system changes we were discussing. Dr. Senge stopped the group and invited us to explore what "buy-in" really means. He said that buy-in is a description of a level

of employee involvement in a change effort. He described four levels:

6. **Terrorist** Someone who is actively working to sabotage what you're trying to accomplish. For example, I once rode with a crew in Queens as part of a consulting job. During the check-out, the paramedic opened the side compartment and cried, "I hate these new stair chairs!" He proceeded to take the stair chair out and lay it on the street. He then got in the ambulance and backed the rear duals over it. He picked up the mangled stair chair and crammed it back in the side compartment. Calling his supervisor on the portable radio, he said, "Our stair chair seems to be broken. Can you bring us another? I'd like it to be one of the old models, as these new ones don't work well."
7. **Buy-in** What you get from folks at this level is non-terrorism. You get no active support—only people who stand back and watch.
8. **Enrolled** This literally means putting your name on the roll: signing up. People who are enrolled will take active steps to make the change a success.
9. **Committed** These folks are in the Get out of my way, we are going to make this work mode when it comes to implementing change. Cultural anthropologist Margaret Mead said, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." Change is nearly impossible without a few committed people leading the charge. In my experience, people will not commit to my ideas; they are much more likely to commit to ideas that they had a hand in crafting.

BE EMPATHETIC AND HONEST

If I'm not actually caring for patients, taking blood pressures, holding hands and giving D-50, my job is to take care of the people, processes and partnerships that do. Relationships—your ability to listen, learn from, support and influence other people—is key to leading a system that takes good care of the ill and injured. Of all the relationship competencies, there are two that I believe are essential to effectiveness: empathy and the ability to have difficult conversations.

A few years ago, an EMS operation decided to close four 24-hour shifts because of fatigue and change them to 12-hour shifts. The employee meeting about the change had pre-riot energy when the leadership team walked in the room. This is the kind of situation where empathy and the ability to hold difficult conversations separate eagles from road-kill pigeons.

The boss opened the meeting with this statement: "I can sense some anger and frustration in the room. There's no doubt this change will mess up many of your lives. Some of you have long commutes, childcare arrangements, school schedules and second jobs, all of which will be disrupted by this change. It sucks." The violent energy in the room drained instantly—the leader had recognized their emotions and said most of the things that had been boiling in their minds since they learned of the change. This allowed them to have a frank, civil conversation about the rationale behind the change—protecting employee safety—and how they could work together to make it less painful.

> Once a person buys into the vision that they are the boss and are smarter, more powerful and more important than the other people on their team, they are destined to lose their way.

Empathy is the ability to recognize that someone else is experiencing an emotion like anger, fear, joy, disgust or happiness. In leadership situations, the practice of empathy involves recognizing that someone is feeling an emotion, getting a sense of what that emotion is, acknowledging that you've recognized what they are feeling and, if it's an emotion of suffering, offering a bit of compassion.

There are some traps in the world of empathy. For instance, some leaders believe that if they acknowledge the emotion, they are agreeing with it. Yet understanding that someone is frustrated because they can't get the shift they want is not the same as agreeing to change their shift. Others make the mistake of pronouncing the other person's emotion as if it were fact by saying something like, "You're frustrated." It's much more effective to share your emotional observation as a question: "You seem frustrated?" This allows the person you're talking with to clarify how they feel using their own language.

IT'S ALL CLINICAL

One of the realities of EMS is that it is the delegated practice of medicine. My medical director for most of my front-line paramedic career was Norm Dinerman, M.D. He used to talk about blowing up a large poster of his license to practice medicine and hanging it on the wall of our Denver Paramedic Division day room. He said, "I'd put a sign under it that says, 'This rides with you today and every day. Please take good care of it.'" He spent many years in school, lots of money and mind-boggling study time to earn the right to practice medicine, and he allowed all of us to practice on his license.

That perspective has been a central part of my approach to EMS leadership. The way I see it is that our responsibility is to as closely as possible replicate our medical director's practice of medicine for every patient we care for. To do this effectively requires that the leaders in an EMS system, if they are not the medical director, have a solid relationship with their top doctor. If your medical director is currently

practicing medicine, one secret to really understanding his or her approach to the practice of medicine is to shadow him or her for a shift.

It's all clinical. My friend Thom Dick wrote an article for JEMS magazine several years ago titled, "Who Saves the Most Lives?" Just under the title was a photo of the lead mechanic for Hartson's Medical Service in San Diego, where Thom worked. The article went on to describe how, regardless of how well trained and equipped the paramedic, if their response vehicle fails, the patient suffers.

All aspects of an EMS organization are necessary to support clinical care, including recruitment, HR, fleet maintenance, supply management, training, billing and more. If there is something in your organization that could disappear and not affect clinical care, it might be time to ditch it.

Another thing Thom said to me while sitting on a rock behind his house: "EMS people get lied to for a living. They can smell B.S. a mile away. You can't lie to them ever." Over the years I've found that people appreciate it when you tell them the un-sugar-coated, non-politically sensitive, non-corporate-speak truth. It's amazing what people can do together if they trust each other. BP

Part 6: Resources to help you get there

Many of you have asked what you can do to learn more about healthcare quality and leadership. Here, in the last article of this series, we provide you with resources to help you do a deep dive into these topics. Remember, if EMS is to become a good partner in the healthcare world of the future, then those of you who are drawing the line for the cutting edge to follow will need to be able to think like hospital CEOs and chief medical officers. Here are a few suggestions to get you started.

BOOKS

***Transforming Healthcare Leadership: A Systems Guide to Improve Patient Care, Decrease Costs, and Improve Population Health* by Michael Maccoby, Clifford L. Norman, C. Jane Norman and Richard Margolies**

If you read only one book on healthcare leadership during the next decade, make it this one. It synthesizes the best information available on extraordinary leadership, the science of improvement and the Institute for Healthcare Improvement's Triple AIM and mixes it with a bit of Zen magic to create a wonderful read.

These authors are sought out by award-winning healthcare organizations worldwide for their expertise. Jam-packed with actionable wisdom, this book aims to help healthcare leaders "avoid imminent extinction, avoid threats that could seriously damage or destroy their organization, and to improve effectiveness." Here are a few examples:

- "Making it easy to do the right thing and hard to do the wrong thing shifts efforts away from blaming individuals working in a poorly designed system to developing and managing a strategically aligned system-wide improvement effort." It is time for us to quit having QI people sit in the corner with a red pen marking mistakes on patient care reports. It's much more effective to focus our energy on changing the systems we work in to make it easy to do the right things.
- "What is leadership? Leaders are people others follow. If no one follows you, you are not a leader. If you have followers, you are a leader. Leadership is a relationship. Good leadership means people willingly follow a leader who is working to further the common good, the well-being of all stakeholders. Good leaders make followers into collaborators. Leadership implies a relationship that cannot be handed off to anyone else."
- "Predictions are based on theories. Any theory we have represents our current knowledge about how some aspect of the system works or what we believe will happen in the future (foresight). When is our theory valid enough to begin testing our ideas for change? When leaders make theories (or hypotheses) explicit, this will guide people in an organization as they carry out targeted improvement efforts to accomplish the vision, which is a prediction about the ideal future of the organization. When leaders state their theories or assumptions, this also helps people design tests to validate these theories and make improvements from the results of these tests."

One of the most powerful things you can do as a leader is to point out that someone's declaration of the way things are is actually a theory. For example, a paramedic FTO recently stated, "I know when someone's manipulating the system with BS complaints to get pain meds." Actually it's her *theory* that it is possible to recognize drug seekers. Theories are testable, and it turns out that her theory did not hold up to scrutiny.

Think about all the theories you've heard declared as fact in EMS: Short scene times save lives; paramedics don't diagnose; people who are hemorrhaging need IV fluids to keep their BP up, etc.

For more information, visit maccoby.com and pkpinc.com/index.html.

***Out of the Crisis* and *The New Economics* by W. Edwards Deming**

My bias is that it is always a good idea to read the original source of the progressive ideas you're interested in. Deming is the epicenter of and foundation for most of the performance improvement thinking in healthcare. Although he passed away 20 years ago, his ideas are still considered radical and progressive by many traditional managers.

Within these two books you'll learn about his System of Profound Knowledge, his 14 Key Principles and his Seven Deadly Diseases. I guarantee that as you read, you'll think about which of the deadly diseases your organization suffers from right now. For more on Deming, check out deming.org.

The Improvement Guide **by Gerald J. Langley, Ronald Moen, Kevin M. Nolan, Thomas W. Nolan, Clifford L. Norman and Lloyd P. Provost**

These are the guys who created the Model for Improvement that's been adopted by the Institute for Healthcare Improvement as their core framework for improving healthcare worldwide. The authors of this book served as Dr. Deming's staff/partners as he taught his principles all over the world. It's considered by most people in healthcare quality management to be the bible of making things tangibly, measurably better. Visit tinyurl.com/k76499t for information.

Data Sanity: A Quantum Leap to Unprecedented Results **by Davis Balestracci**

When I introduce Davis at conferences I usually say, "If Deming and the Reverend Billy Graham had a child, it would be Davis." His passionate approach to making data analysis simple and accurate is reminiscent of church revivals.

His book, *Data Sanity*, is written for physician practices but easily translates to the world of emergency services. It makes complex improvement statistics accessible to, entertaining and usable by "normal people." Visit davisdatasanity.com to subscribe to his free Data Sanity newsletter.

The Fifth Discipline **by Peter Senge**

Peter is one of the most engaging speakers and writers I've ever encountered. He's an MIT Sloan School of Management professor and is known for helping to introduce systems thinking to the masses. He's also the creator of the "Learning Organization" concept. Several of his presentations are available on YouTube.

His book, *The Fifth Discipline*, describes five disciplines that leaders should develop competency with:

1. Personal Mastery: Clarifying personal vision, focusing energy and seeing reality.
2. Shared Vision: Transforming individual vision into shared vision.
3. Mental Models: Bring to the surface internal pictures and understand how they shape actions.
4. Team Learning: How to suspend judgments and create dialogue.
5. Systems Thinking: Fusing the four disciplines, from seeing parts to seeing wholes.

Peter is also the founder of the Society for Organizational Learning. Visit solonline.org.

Escape Fire: Designs for the Future of Health Care **by Donald M. Berwick, M.D., and Frank Davidoff**

Dr. Berwick is the founder and served for 20 years as the president of IHI. Most recently he served as administrator of the Centers for Medicare and Medicaid Services and is currently running for governor of Massachusetts. He's without a doubt the most effective leader in healthcare worldwide.

This book is a collection of essays that were each delivered as the opening keynote presentation for the Institute of Healthcare Improvement's annual National Forum. I've been attending this conference for 19 years and the crowd that gathers early to get a good seat for Berwick's opening presentation is rivaled only by Grateful Dead fans. I was fortunate to see most of these presentations live and they are just as inspiring to read.

In addition to the book, there is a powerful movie based on Berwick's views. Visit escapefiremovie.com for information, as well as the Escape Fire First Aid Kit, designed to help keep you out of the healthcare system.

Designing Social Systems in a Changing World **by Bela H. Banathy**

Dr. Banathy was one of my professors and this book was the text for my Systems Thinking class. While it is the most challenging book on this list, it is worth the effort, showing you how to look at systems from several perspectives. Each view helps you better understand how things work and how they might be changed for improvement.

Zen and the Art of Motorcycle Maintenance: An Inquiry into Values **by Robert M. Pirsig**

I know some of you will see this title and think, "Yep, Taigman's finally lost it." While philosophy is not for everyone, this wonderful autobiography about a father and son's motorcycle ride across America explores the concept of quality better than anything else I've read. It also teaches problem-solving and the philosophy of science.

Endurance: Shackleton's Incredible Voyage **by Alfred Lansing**

This page-turner is a true story of polar exploration and survival. The leadership example set by Shackleton will inspire you, as the teamwork that his leadership produces resulted in one of the most remarkable survival stories ever written.

ORGANIZATIONS

The Institute for Healthcare Improvement is the gold standard for leadership and performance improvement in hospitals worldwide. You can spend weeks unpacking the information on their website: ihi.org. Here are a few highlights:

- IHI's Open School provides the opportunity to learn about the science of improvement online with colleagues from all over the world.

- Held every year, IHI's National Forum hosts thousands of healthcare leaders including hospital CEOs, deans of medical schools, presidents of all the colleges of medicine like ACEP, major insurers, representatives from more than 40 countries, and a small handful of EMS leaders, all of whom gather to learn about and create massive improvement in healthcare worldwide.
- IHI's Improvement Advisor Course is a one-year course that is the equivalent of a master's degree in the science of improvement. So far only a few EMS folks have completed the program, including consultant Joe Penner; Sheri Lambeth and Jonathan Studnick, Ph.D., from MEDIC in Charlotte, N.C.; Dave Williams, Ph.D.; and yours truly.

The Agency for Healthcare Research and Quality has a website that's jam-packed with resources and information: ahrq.gov. You can sign up for their free Research Activities Newsletter, a great resource for what's happening in all areas of healthcare quality, at tinyurl.com/mv6x997.

JOURNALS

American Journal of Medical Quality: ajm.sagepub.com/content/current.
Journal for Healthcare Quality: tinyurl.com/6d7x9e9.

COLLEGES

The strongest program in quality improvement is the Deming Scholars MBA at the Fordham Graduate School of Business in New York. Visit tinyurl.com/mj8ebes.

For EMS graduate education, I recommend the Emergency Health Services program at the University of Maryland Baltimore County. (In the spirit of full disclosure, I teach here.) For information, visit tinyurl.com/m8ja4ky.

AWARD PROGRAMS

The Baldrige Performance Excellence Program is the nation's highest award for performance improvement/excellence: nist.gov/baldrige/. Most states have a state level version of this award; EMS systems in Florida, Oklahoma and California have been winners of state level awards.

PUBLISH YOUR WORK

One of the hallmarks of a true profession and a true professional is a growing body of knowledge. In medicine, research is published in peer-reviewed journals based on standards. Quality improvement projects can also be published in peer-reviewed journals as long as they follow the Standards for Quality Improvement Reporting Excellence (SQUIRE) guidelines. Visit squire-statement.org/guidelines for information.

There are many more resources that were not included in this article. If you'd like help learning about specific things in leadership or quality management, I'm happy to suggest resources. Drop me an e-mail at mtaigman@gmail.com. BP

"Patient centered" is not just a slogan, it means putting real people at the center of what you do. These folks are alive today because the whole Ventura County EMS system including bystanders, dispatchers, first responders, paramedics, to emergency department staff, cardiologists, cath lab team, and rehabilitation all worked together to focus on them — M.T.

Best Practices
IN EMERGENCY SERVICES

www.emergencybestpractices.com

Best Practices in Emergency Services is published by the National Emergency Services Institute.
It is a membership benefit of the National EMS Management Association (nemsma.org.)