EMS1

CLOSING THE GAPS

PLUG HOLES IN YOUR SKILLSET AND CRACKS IN YOUR BUDGET WITH THESE TIMELY TIPS ON LOW-VOLUME CALL TYPES AND GETTING GRANT FUNDING

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EDITOR'S NOTE

While it's essential that EMS providers stay on top of core clinical skills for the most critical calls, such as cardiac arrest or airway management, it's also important to keep up with the skills to address issues you may not see as often.

This eBook provides 10 things you need to know about mental health and community paramedicine, assessing and treating pain in children and treating burns – as well as key operational issues, including best practices for writing a successful grant application and how to use technology to grow your service to meet the community's need.

Use the knowledge and strategies in this guide to better understand these issues, then share it with your colleagues. Review your skills and tools, and consider how you can implement changes to make improvements.

– Kerri Hatt, EMS1.com Editor-in-Chief

ABOUT THE SPONSOR

Pulsara's easy-to-adopt communication platform connects EMS to the hospital with a tap, leaving behind archaic technologies that slow critical care coordination. Our platform seamlessly coordinates communication between the field (EMTs and paramedics) and between hospital staff (RNs, MDs, Techs, etc.) to improve the treatment times and outcomes for critical care patients. Pulsara's feature-rich mobile platform uses video chat, audio clips, instant messages, images, data and benchmarks to help teams treat their patients faster.

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10 THINGS

EMS providers need to know about responding to mental health calls

Community paramedics are pioneering new ways to care for mental health patients – here's how

By Sarah Calams

Since the COVID-19 pandemic, EMS providers have seen an alarming uptick in patients refusing to go to their doctor's office or the emergency room. Many others – including those with urgent conditions – have even been hesitant to call 911.

"We saw patients who were just foregoing all of their medical care – they were ignoring their emergency conditions," said James McLaughlin, director of the community paramedicine program at Ute Pass Regional Health Service District in Woodland Park, Colorado.

To ease his community's fears, McLaughlin introduced a new Healthcare Options Mobility and Engagement, or HOME, program, which pairs an in-home paramedic visit with a telehealth consult by a physician – like Dr. Jeremy DeWall, EMS medical director at Ute Pass Regional Health Service District.

The program was launched quickly, thanks to another program that was already in place: the Mental Health Assessment Program – otherwise known as MHAP – that is aimed at addressing patients' mental health concerns in their rural community.

For DeWall, one success story has made a lasting impression – both for him and for the community paramedics who responded to the scene. The call started with a routine fall risk assessment for an elderly patient. Upon arrival, the community paramedics also learned that the patient needed help for her substance use.

"The patient wanted help for that. We were able to fix her fall risk, get her a follow-up and on a better track with the alcohol use," DeWall said.

But their job wasn't done yet.

"It turns out her son, who was also in the home at the time of the call, also needed help for his alcohol use," he said. "We were able to intervene on two patients' lives to make them better at one time – all because we were checking on the home to help her with falling. Without this program, that would have never been found and, certainly, her son wouldn't have had care."

This is just one of many success stories since the implementation of the program.

As your EMS agency continues to respond to and provide care for patients, it's important to remember that many are still reeling from the impacts of the pandemic on their mental health and psychological well-being.

To help prepare your EMS providers who are responding to mental health calls, here are 10 things McLaughlin and DeWall have learned over the course of implementing their community paramedicine and mental health care programs.

1 YOU'LL BE ABLE TO HELP PATIENTS IN WAYS THAT OTHERWISE DID NOT EXIST

The healthcare system is complicated – so much so that many patients don't know where to begin or how to navigate through the system. As a result, patients turn to calling 911.

"They know that 911 will make their problem our problem right away," DeWall said. "And our goal is to do that in an effective manner and in a way that truly takes ownership of that patient's concerns."

On each call, EMS providers must make it a priority to:

1. Have a meaningful encounter with every single patient.
2. Convey how important the patient is to the provider, their organization and the community.

“Most patients we found in the rural setting have had horrific experiences with telehealth and don’t believe in it,” DeWall said. “But they believe in this program because there’s actually someone there touching them, listening to them, helping them with their environment, helping them navigate that follow-up that actually understands this community.”

The data doesn’t lie. According to their client satisfaction surveys, on a scale of 1 to 5, their average satisfaction score is 4.6.

“When you talk about a 4.6 out of 5 for a patient in a behavioral crisis, it tells me we’re doing something right,” McLaughlin said.

Moreover, McLaughlin continued that they’re seeing improved outcomes since they’re not seeing the same clients over and over and over again.

“They’re getting the definitive care that they need, and they’re getting set up with ongoing services,” he said.

DeWall agrees, mentioning the significance of getting the patient to the right place and treating them with dignity.

“You’re showing patients that you care and that they have dignity, even in those horrible times in their life,” he said. “And it prepares them to not only get the right care, but also be in a position to feel better and to be able to pursue a better life after.”

2 THESE TYPES OF CALLS AREN’T QUICK FIXES

Here’s a familiar scene: You just responded to a call for a patient who’s going through a behavioral crisis. Traditionally, the answer has always been simple: Take the patient to the

emergency room. But have you ever thought about what happens to that patient once they get to the ER?

"They're going to clear them and they're going to cut them loose. [The patient is] not going to get the definitive services that they need. They're not going to get the help that they need. And we're going to be back there tomorrow doing the same thing again," McLaughlin said.

That scenario has played out many times in McLaughlin's career. Now, he looks at providers' on-scene time to determine if they're a good fit for his program.

"I tend to find that the providers that stay on scene longer are the providers that I actually want, because they're the ones that are trying to figure it out," he said. "Slow it down, ask the right questions and actively listen to the person to understand their plight and their condition. It can really change outcomes."

Their paramedics, DeWall says, have embraced this type of response now that they've realized it's actually more efficient and better for the patient long-term.

It's important to understand, though, that many of these calls can take hours.

"We are working with somebody in a behavioral crisis. If you're dedicated to not forcefully removing them and you're dedicated to working with them to come up with a solution, that doesn't happen in 30 minutes or less. That takes time," DeWall said. "And it means coming alongside the client, making yourself a little bit vulnerable, actively listening to them and then working with them to come up with a solution."

As a result, it's not uncommon for their paramedics to be on scene for two hours.

"The answer is not always the ED. There are better choices for some of this, and I think the biggest thing we've seen is the patient is satisfied," said McLaughlin. "We've seen the outcomes. We've seen the fact that we can actually treat people in different places and get them to the right place."

3 YOU'LL UNDERSTAND YOUR COMMUNITY'S NEEDS LIKE NEVER BEFORE

To understand your patients, you must understand your community. For McLaughlin, that meant starting with a community needs assessment to get a clearer picture of his patients' needs.

"You need to get out there and meet with your partners, your critical access hospitals, your local hospitals, your urgent cares, your home healthcare agencies, your doctor's offices. I don't think you can truly understand your community's needs until you do that," he said.

Additionally, agencies and providers must understand the local resources that are available to their patients.

"Our community paramedics have more success at efficiently getting people to psychiatric and substance use disorder care than the hospitals do," DeWall said. "This team has better relationships and better efficiency at doing it than the hospitals do because of those relationships they've built over the years."

And once an agency understands what their community's needs are, then they need to have a clear and concise approach on how they're going to address it.

"Understand who your partners are, talk with them, share your vision with them, ask them where they might be helpful in this process and where they bring value to it. Tell them, 'This is what we're going to do, and here's the outcome we hope to have related to that,'" McLaughlin said.

Everything else will follow, he says, including the program's success.

"We don't pretend to be the answer to everything. We're not the experts of everything

– we can't possibly be – but we know how to navigate people," he said. "We know how to work with people upstream, actively listen to them, understand what their needs are, motivate them and then navigate them to the appropriate resources downstream."

4 TALK LESS AND LISTEN MORE

EMS providers are good at listening in order to respond to the situation, but many patients, especially those in crisis, need their providers to actively listen to their story.

"Find a way to learn active listening," said McLaughlin, "and make sure that you let them know that you heard what they're saying and that you understand what they're saying is important."

Active listening, he said, slows things down and gives paramedics time to process.

"If you accept them as the expert on their lives and actively listen to them," said McLaughlin, "then they'll come to you, ask you questions and you can guide them in the right direction."

This important tool, he says, has not only helped with their behavioral health clients, but all their patients across the board.

5 ALWAYS GO WITH YOUR GUT

You've heard it a million times. That "gut feeling" is based on a provider's experiences – it's the thing that tells you something isn't right.

In community paramedicine, listening to that "inner voice" is still vital.

"We're setting out into new roles, but it doesn't mean that because your gut is telling you something doesn't feel right, you shouldn't listen to it," McLaughlin said.

6 TO MEET THE NEEDS OF YOUR COMMUNITY, TAKE STEPS TO BETTER MIRROR IT AS WELL

Today, EMS agencies are realizing the value of adopting a diversity and inclusion plan.

"It's important to have a diverse workforce and to have a workforce that's inclusive," said McLaughlin. "And one that is not only the makeup of our community, but the makeup of the clientele that we come into contact with as well. Because when you have an open and diverse culture, you have ideas coming from all different directions – not just from one approach."

7 YOU'LL BE ABLE TO FOLLOW UP WITH YOUR PATIENT AND MAKE REFERRALS FOR BETTER QUALITY OF CARE

Follow-up is paramount when it comes to mental health. A communication platform that connects providers in various phases of treatment, like Pulsara, can help EMS providers check on a patient's progress after the call.

"We can go in later and do a follow-up visit with them, either by telehealth or in person," McLaughlin said, "and then we can keep track of all the referrals that we do. Just because a patient had a visit with a doctor, it doesn't mean that's all they need."

Getting patients set up with additional services is important, McLaughlin says, especially for those in rural areas who are geographically isolated.

"It's important to have all of those resources and understand what those resources are in your community, and to have a referral partnership in place with them so that you can make those referrals," he said.

8 YOU WON'T BE ABLE TO ADDRESS A PATIENT'S EVERY NEED RIGHT AWAY

This is a tough one for any EMS provider to come to terms with, but McLaughlin says it's a concept community paramedics must accept.

"Relapsing is part of the illness, but it's an illness like any other illness," he said. "It's no different than cancer or heart disease, and until we really embrace that concept as a country and as a community, then we're never going to be able to have honest conversations around what's going to help these folks."

That's why an ambulance ride to the ER, he says, may not always be the best solution. Instead, community paramedics can help patients get set up with services directly to help get them through that crisis.

9 THESE CALLS WILL REIGNITE YOUR PASSION FOR EMS

DeWall says he became a paramedic because he had a passion for EMS. However, he now understands from a medical director standpoint just how easy it is to get burned out.

"I can tell you that a lot of physicians get burned over throughout their career, especially in emergency medicine," he said. "And while what we're doing is a lot of work, it's really reigniting the passion in myself and in other colleagues for what we're doing and for our careers, too."

Seeing that spark, DeWall says, makes it all worth it.

"It's pretty exciting because we're doing something new to help the community," he said.

10 REMEMBER TO TAKE CARE OF YOURSELF, TOO

The work a community paramedic does day in and day out is hard, especially when it comes to behavioral health. That pressure can weigh a provider down over time.

McLaughlin realized this and came up with a unique approach:

"We identified that after nine months, that's when our folks really started to feel the pressure of the community paramedic approach," he said. "So, now we give them a three-month break and they go back to the 911 side and work on their 911 skills."

This three-month break, he says, has fostered resiliency in their providers.

"It's important that they get some time away from the community paramedic side," McLaughlin said. "It mixes up the challenges, the scenes and their skills. Those 911 skill sets are important, and we want our providers to be good at both skill sets. To do that, we have to give them exposure to both and give them that mental rest." 1

10 THINGS YOU NEED TO KNOW ABOUT PEDIATRIC ANALGESIA

Make a plan for treating pediatric pain that includes managing unfamiliarity and stress in both the patient and their parents or caregivers

By Jonathan Lee

The most complete definition of pain is “an unpleasant sensory and emotional experience associated with, or resembling that associated with, actual or potential tissue damage.”[1] It is a highly complex and subjective condition in any patient.

With pediatrics, this complexity is intensified by the fact that paramedics don’t encounter pediatric patients as frequently, creating more unfamiliarity and stress. Challenges related to paramedic training and exposure to pediatrics often lead to myths and misconceptions. Here are 10 important things every provider should know about managing pain in children.

1 PEDIATRIC PAIN IS NOT WELL MANAGED

Pain is common in children, with more than a third of out-of-hospital pediatric patients complaining of pain. Two-thirds of that pain is described as intense or severe.[2] Despite this, children often go without analgesia in the prehospital environment.[3]

This trend is not limited to the prehospital environment. One study of emergency department patients with long bone fracture or burns showed that young age (6 months to 24 months) was associated with receiving no analgesia.[4]

Poorly managed pain has consequences well beyond the patient's time in the back of the ambulance. Alterations in brain development and stress response can persist throughout childhood, and even routine procedures in the very young can alter future pain perception.[5]

2 UNDERSTANDING PAIN IS ESSENTIAL IN TREATING PAIN

While there are many theories, the biopsychosocial model suggests that all illness has three major components.[6] The model has direct applications to understanding and treating pain:

- The **biology** of pain includes things like tissue damage, inflammation and sensory nerve stimulus.
- The **psychology** refers to how a person understand the signals received from the nervous system.
- **Socially**, things like relationships and environmental stressors affect not just the pain experience, but how it is expressed.

3 PAIN IS DIFFERENT IN CHILDREN

Age and level of development have important impacts on how pain is experienced by children. Biologically, there are big differences within the nervous system (especially in newborns). For example, newborns have a weaker inhibitory nervous system. In adults, this "turns down the volume" on noxious stimulus once it has been received by the brain.

Psychologically, a child's ability to understand pain develops along with age and experience. Limited communication skills make describing pain more difficult. Socially, children rely heavily on parents and caregivers both for support as well as cues on how to navigate new situations.

4 AVOIDING PAIN IS THE FIRST STEP IN TREATING PAIN

The benefits of painful procedures such as blood glucose checks and IV starts require careful consideration. Will the procedure improve the care provided to the patient? Will deferring the procedure to the hospital put the patient at increased risk?

Children with a history of highly emotional responses to pain experience more distress during IV initiation and may benefit from having the procedure done in the more controlled environment within the hospital.[7]

5 PAIN NEEDS TO BE ASSESSED TO BE TREATED

Being able to identify and quantify pain is important. The verbal numeric scale – "On a scale of 1-10, how bad is your pain?" – is a common tool for paramedics, but it may be developmentally inappropriate for younger children who can't yet quantify their pain with a number.

In this case, a number of published tools, such as the Oucher and FACES scales, use pictures to help young children identify their level of pain. These tools are readily available and are easy to use.[8] A variety of scoring systems are also available to patients who are nonverbal due to either age or medical condition. If these tools are not readily available, a simplified VNS – "Are you having a little bit of pain or a lot of pain?" – is also an option. Parental perception of pain may also be helpful.[9]

6 TREATING ANXIETY IS AN IMPORTANT PART OF TREATING PAIN

The influence of anxiety on pain is incredibly complex, and it extends beyond the patient. One example of a simple approach to minimize this anxiety is the set of CARE principles shown in the table below.[9]

The higher the level of anxiety, the more the patient will benefit from intervention. Parent needs should also be addressed, as higher

Show the patient you CARE to help manage anxiety

The goal of the CARE principles is to empower families and patients with empathy and information to help mitigate and reduce the risk of anxiety and trauma in children.

CHOICES	Provide power in a powerless environment.	"Would you like me to listen to your heart first or your lungs?"
AGENDA	Let the patients and family know what to expect, and what is expected of them.	"I am going to put these stickers on you to help me measure your heart beats. Then we are going to go to the hospital in the ambulance. Your mom will be with you the whole time."
RESILIENCE	Identify patient strengths.	"What worked best for you in the past?"
	Reframe negatives	"Tell me about your favorite thing to do."
EMOTIONAL SUPPORT	Recognize and normalize fears and responses.	"It can be scary to meet new people." "You look worried – it's OK to ask me questions."

Adapted from Lerwick 2016

parental anxiety leads to higher level of distress in children as well.[7]

7 CONSIDER NON-PHARMACEUTICAL TREATMENTS

Basic comfort measures, such as bandaging, splinting and ice or heat, are available to every level of provider and should not be overlooked. Deep breathing, nonprocedural talk, humor and coping statements are beneficial when used by providers and parents alike during needle-related procedures.[11] Distraction is also effective during painful procedures.[7]

In neonates, a number of simple interventions have been well researched. Consider swaddling, providing a soother or allowing the baby to breastfeed during procedures such as IV starts. These interventions have demonstrated to reduce crying time and heart rate.[5]

8 CONSIDER NON-NARCOTIC TREATMENTS

Pain that is refractory to initial treatment steps should be evaluated for non-narcotic analgesia. Broadly speaking, these fall into two categories: acetaminophen and non-steroidal anti-inflammatories (NSAIDs). Both classes of drugs provide analgesia, but through different mechanisms. For example, acetaminophen does not have the anti-inflammatory properties of NSAIDs. This means that acetaminophen can typically be given simultaneously with an NSAID to improve effectiveness.

In newborns, 24% oral sucrose has been extensively studied and provided two to four minutes of analgesia for use with painful procedures.[5] It is often packaged in 1-2ml containers so that it can be administered one drop at a time. While these are not commonly found in the prehospital world, dextrose solutions of 20-30% could easily be prepared from an amp of D50W and are proven to have a similar effectiveness.

9 CONSIDER NARCOTIC TREATMENT OPTIONS

Commonly available narcotics include drugs like hydromorphone, morphine and fentanyl.[8] These strong opioids are generally reserved for moderate to severe pain, as they tend to have more immediate side effects.

As their name implies, narcotics generally provide analgesia as a result of their actions on opioid receptors. This class of drug is not better or worse than other forms of analgesia, it is just different. Pain relief can often be improved by combining narcotics with acetaminophen or NSAIDs.

10 HAVE A PLAN TO MANAGE PAIN

Having a stepwise approach to managing pain means treatment will be consistent and comprehensive:

1. Assess for the presence and severity of pain. This is necessary to both justify treatment as well as assess the effectiveness of interventions.
2. Consider non-pharmaceutical interventions. This includes addressing patient and family anxiety, as well as providing basic comfort measures. These options are available to all providers and are the initial steps of care for any child in distress. It is important to document these steps.
3. Consider non-narcotic interventions such as acetaminophen or NSAIDs.
4. Consider narcotic analgesia for patients with moderate to severe pain. This can be done simultaneously with the other steps, but it should never be done instead of the other steps.

Remember that the pain experience is much different for children than it is for adults. Just because the patient cannot or does not tell you about pain does not mean they aren't experiencing it. But don't be intimidated. Using these steps, you can effectively assess and manage your pediatric patients' pain.

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GET STARTED

10 THINGS YOU NEED TO KNOW ABOUT TREATING BURNS

The most important initial care step is to stop the burning process, but it's also critical to know how to identify the type of burn and estimate the total area affected to help select the most appropriate destination for the patient

By David Wright

You and your partner are responding to a 911 call. Dispatch informs you that your patient suffered a burn. There is no additional information available at this time because the caller is quite panicked.

Your mind starts to race. Maybe it's a child who pulled a hot pot of noodles on top of themselves. Maybe it's a teenager playing with gasoline. Maybe it's a firefighter who was battling a fire. Maybe it's a grandparent who fell on a space heater.

No matter the situation you find when you arrive on scene, there are a few basic principles that apply to all burn patients. Here are 10 things EMS providers need to know to better assess and treat burns.

1 BURNS ARE COMMON

Every year, approximately 1.1 million Americans suffer burns that are severe enough to seek medical attention. Every 23 minutes a person sustains a burn, and every two hours someone dies from a burn injury.[1] These burns often occur in the home, and many of them are classified as preventable.

2 MOST BURNS ARE PREVENTABLE

Most people are at home when they sustain these burn injuries. According to Stanford Children's Hospital, many of these burns can be avoided with basic household safety precautions.[2] While most Americans have a household escape plan (60%), only 25% have reportedly practiced it.

Prevention is the best strategy to avoiding serious burns, as smoke alarms can reduce your chance of burn death by 50%.1 One thing EMS clinicians can do is look for smoke detectors when they respond to calls. Most local fire departments have free smoke detector programs, and this strategy alone can be lifesaving. Other opportunities exist through partnership with the fire department and open houses, where burn prevention and safety precautions can be taught.

3 STOPPING THE BURN IS THE MOST IMPORTANT THING

When a person experiences a burn injury, the most important initial care step is to stop the burning process. This may seem obvious, but the initial burn cause may transfer to other flammable objects.

Make sure to cool the area to stop skin burns. Clean towels soaked in cool (not cold) water often work well. After approximately 15 minutes, remove the wet towels and replace with clean dry coverings. Also make sure to keep the rest of the patient warm, as you don't want them to become hypothermic.

Don't forget to remove clothing that may be smoldering and ensure that the patient is away from the original ignition source.

4 IDENTIFY THE BURN

Correctly identifying the type and severity of the burn will assist you in determining the initial treatment, as well as the ultimate destination for the burn patient.

Burns have two basic classifications: the depth/severity of burn (superficial, partial thickness and full thickness) and the etiology of the burn (thermal or inhalation). Thermal burns are further subdivided into scalds, contact, flame, chemical and electrical burns.[3]

Inhalation burns or burns that involve the airway are serious concerns for airway compromise. Closely monitor the airway, as the need to secure the airway (frequently via endotracheal tube) is often necessary to avoid loss of airway later in the clinical course.

Partial or full thickness burns covering a large percentage of the body often benefit from skilled management at a burn center, where a burn team comprising medical experts, social workers, therapists and psychosocial experts is available.[4]

5 PAINLESS ISN'T ALWAYS BETTER

Pain is usually a bad thing when examining patients, but burns can be tricky. It is important to evaluate if the patient is in pain when assessing burn victims.

Sensory nerves that send pain signals to the brain are located under the outside epidermal layer of the skin. When a person suffers minor burns, these are activated, but deeper partial thickness and full thickness burns often destroy the nerve endings, rendering them unable to send pain signals to the brain.

The Rule of Nines (TBSA estimation)

Child	Adult
• Arm (each) - 9%	• Arm (each) - 9%
• Head & Neck - 18%	• Head & Neck - 9%
• Leg (each) - 14%	• Leg (each) - 18%
• Anterior Trunk - 18%	• Anterior Trunk - 18%
• Posterior Trunk - 18%	• Posterior Trunk - 18%

Patients who appear to have a severe burn but are not complaining of a lot of pain are at high risk for complications due to the burn injury.[5]

6 DETERMINE HOW MUCH BURN IS PRESENT

Another key component of burn treatment hinges on your use of the Rule of Nines (see below) to estimate the total body surface area burned (TBSA). Establishing the TBSA affected will often affect the destination (burns greater than 10% TBSA often go to burn centers) and treatment plan.

Don't forget that only partial thickness and full thickness burns are used to assess the severity of fluid loss.[6]

7 DON'T FORGET ABOUT THE AIRWAY

The airway consists of the nasal and oral passages and is obviously very important to evaluate – after all, it is first in the ABCs of the initial assessment – and it is no different in the burn patient. Burns to the airway can be subtle and require a thorough evaluation to assure there is no damage to the airway structure.

Unrecognized airway burns can be deadly, leading to a "cannot intubate, cannot ventilate" situation that will likely end up requiring an emergent surgical airway.[7] Airway management and evaluation should be performed early and should be continuously monitored for acute changes.

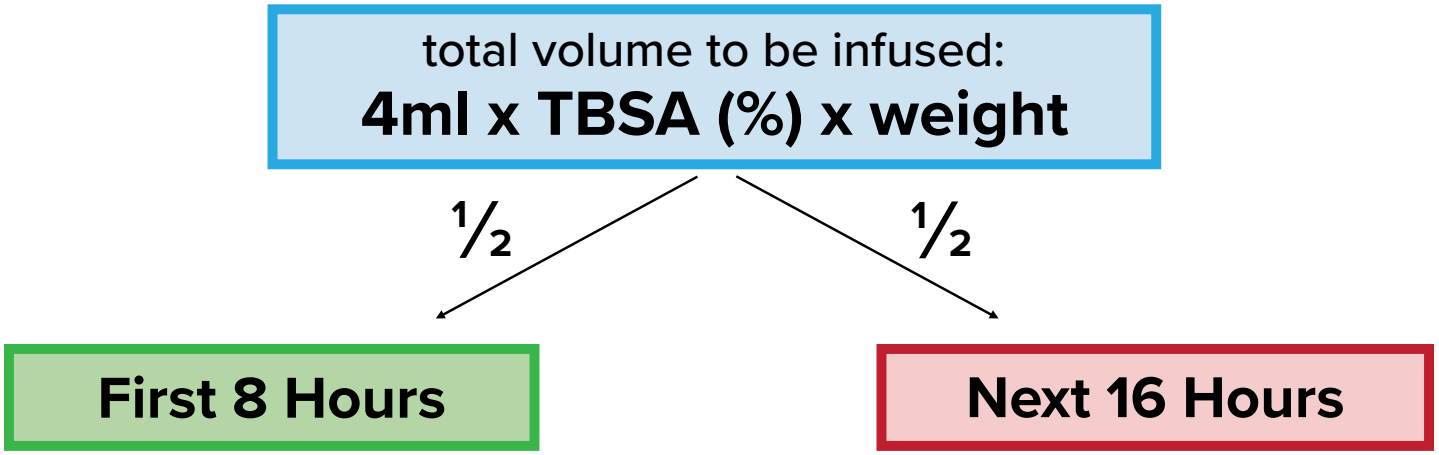
8 DESTINATION AND HOW YOU GET THERE IS IMPORTANT

You take trauma to a trauma center and pediatrics to a pediatric center, so why not take burn patients to a burn center? Severe burns, as dictated by local protocols, should be transferred to a burn center. It is important to know your regional centers and the requirements for burn center transport.[8]

9 FLUID, FLUID, FLUID

Another problem caused by the disruption in the skin surface is water retention. Dehydration is common in patients with significant partial thickness or deep thickness burns. The use of TBSA and the Parkland Formula (see below) can be a valuable starting place for fluid resuscitation and management. Fluid resuscitation is critical in the initial management of moderately to severely burned patients, especially in those with >20% TBSA, as mortality in these patients is known to be significantly higher.[6]

To calculate the total amount of fluid to be infused, multiply 4 milliliters times the patient's body weight in kilograms times the TBSA. This will be the total infusion over the first 24 hours. Half of that infusion goes in over the first eight



hours, while the other half is infused over the next 16 hours.

10 KEEP BURNS CLEAN AND DRY

After initially stopping the burning process, you should keep the wound clean and dry.[9] During transport, you may want to cover the wound to keep it clean and keep the patient covered. This will preserve heat, prevent hypothermia and assist in infection prevention over time.

Keeping burn wounds clean and dry is essential for infection prevention, as approximately 10,000 Americans die from burn-related infections per year.[1]

BONUS TIP: KEEP THE PATIENT WARM

The E in ABCDE is exposure, which is important for evaluation of the burn patient – but after the initial exposure, it is important to cover the patient because the skin is an important component of maintaining temperature regulation, and burn patients can become hypothermic in a very short amount of time.[10] Those at the highest risk are those with altered mental status, such as those who receive rapid sequence intubation or have a documented Glasgow coma scale score of <8.[11]

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10 THINGS YOU NEED TO KNOW TO PREPARE A SUCCESSFUL GRANT APPLICATION

This step-by-step guide will help you plan, prepare and apply for grant funding to support your EMS organization

Many public safety organizations find themselves with tight budgets, asked to do more with less – especially with declining tax revenues and increased calls for service during the pandemic. Grant funding is a good way to supplement your annual budget, and there are plenty of resources, whether public (state, federal and local) or private (foundations, corporations, etc.).

The coronavirus pandemic significantly challenged and strained our nation's healthcare system, including EMS agencies from coast to coast. Lawmakers have enacted legislation providing about $5.3 trillion to help mitigate the economic burden. In particular, the American Rescue Plan Act of 2021 provides aid to help first responders and healthcare professionals.

If you are just beginning your search for grant funding or are familiar with grants but unsure of how to prepare an application, here are 10 best practices for success when searching for and applying for grant funds:

1 START WITH THE END IN MIND

As the late, great Yogi Berra said, if you don't know where you're going, you might not get there. A firm understanding of how the funding you seek will impact your organization and the patients you serve is foundational to success in the grant world.

Start by identifying the current needs and problems you are trying to solve. From there, establish the goals or what you want to accomplish with the funding. Defining your needs and goals brings focus to your efforts and helps to both engage and align the key stakeholders in step two.

2 ASSEMBLE YOUR GRANT TEAM

To give your project velocity, meet deadlines and allocate resources efficiently, identify key stakeholders early on. These individuals will play essential roles in researching grants, collecting data and completing and submitting your agency's applications:

Champion: Defines needs, sets goals, lobbies for support. This could be you, or you in partnership with your EMS chief or other leader.

Project Manager: Identifies grant opportunities, maintains administrative and registration requirements, coordinates stakeholders, compiles memorandums of understanding and ensures timely submission of applications.

Grant Writer: Develops the application's narratives, identifies and collects data to support the narratives and submits the application.

Post-Award Manager: Ensures that all reporting/purchasing requirements and project deliverables are met after the award is accepted.

3 FORMULATE A STRATEGIC PLAN

Planning is key to the success of any grant application. With your needs and goals as a

guide, identify the measurable objectives, as well as the steps, products and services that will help you achieve them.

Your strategic plan can be a formal or informal process. A formal process includes multiple stakeholders closely examining data and constructing a formal document outlining the plan. Your city, county or agency may already have a formal strategic plan in place that you can draw on to draft this document. An informal process may consist of having stakeholders identify a list of needs for the upcoming year.

4 GATHER DATA

To support the goals and objectives outlined in your strategic plan, you'll need quantitative and qualitative data that validates your organization's need for funding. This information includes but is not limited to:

- Organizational history (mission statement, background, etc.).
- Demographics (population, average household income, etc.).
- Clinical and performance metrics (time to first contact, CPR performance, wall times, etc.).
- Financial information (operational budget or audits).

This information will help you focus your searches on grant opportunities that best address the needs of your community or organization.

5 GET TO KNOW YOUR AGENCY'S POINT PERSON (AOR)

Most grant programs require approval from the applying agency's Authorized Official Representative in order to submit and receive awards. The AOR is the individual with legal authority to sign grant documents, enter into contracts and execute documents. This can be the city manager, the fire chief or EMS medical director, county judge or others.

If the grant cycle is already open, as in the case of the American Rescue Plan, seek approval immediately from your agency's or organization's leadership. If you have planned ahead and determined other potential grant programs to apply to for the year, plan to seek approval within one to two months of the application period's start date.

6 MAKE SURE YOUR AGENCY HAS ALL REQUIRED REGISTRATIONS IN PLACE

Applying for grants comes with a lot of administrative requirements, such as an up-to-date System for Award Management (SAM.gov) registration or some other form of registration your agency will need before being applying.

Any entity receiving federal funding must have an active SAM registration. Many states will have their own registration requirements as well. If these requirements are not complete at the time of application, you will not be allowed to apply.

A quick way to determine if your organization has all the necessary components in place is to see if it has received funding in the past. USA Spending.gov is the "official open data source of federal spending information" with a keyword award search tool and other useful resources. This can be helpful in identifying programs you already qualify for and where you might want to direct your efforts.

Below is a list of common registrations required to submit grant applications, including common federal application portals and administrative requirements with important links:

SAM.gov – System for Award Management

- Identify your point of contact/AOR.
- NEW: Get your organization's 12-character Unique Entity ID, required for registration, searching and data entry in SAM.gov. (This replaces the DUNS Number, no longer used by SAM.gov).
- Create a Grants.gov account and assign roles.
- Registration can take anywhere from three to five weeks.
- Requires yearly maintenance to ensure it stays active/renewed.

FEMA Portal (FEMA GO)

- AOR should have permission to submit the application.
- Login will be an email address and secure password.

Unique State Agency Portals

- Check your state government's website for specific grant programs managed by states (i.e. the state health department or federal HHS funding).

7 DO YOUR HOMEWORK

Once you have determined the needs of your agency, drafted your strategic plan and identified your AOR, the next step is to begin your search for potential grant programs. The project your organization establishes will help determine what grant programs are the most relevant. Here are a few resources to help you find the right grants opportunity for your needs:

Straight to the Source: Visit Grants.gov to search for every grant program available at the federal level. Set up an account and subscribe to specific programs in order to be kept informed. The key document you'll want to read is the Notice of Funding Opportunity or NOFO. It contains all of the pertinent information for each grant.

ARPA Fiscal Recovery Funds: As mentioned earlier, the Coronavirus State and Local Fiscal Recovery Funds authorized by the American Rescue Plan Act of 2021 provide aid to first responders and healthcare providers related to the impacts of the pandemic. Look at your state, county and

city government websites to see how these funds can be accessed for your needs.

State Administering Agencies: For state-funded and federal pass-through grant programs, the State Administering Agency is responsible for creating the solicitation and application, as well as establishing the awards process. Each SAA decides how to apply and who is awarded. (Check your state government websites to find this information.)

Grants Databases: Both free and fee-based databases are available, such as EMSGrantsHelp. These typically include descriptions of each grant, plus category listings and a search function.

Here are a few tips to keep in mind when performing your search:

- Break down your search to different levels/types of funding sources: federal, state, local or foundation/corporate programs.
- Search with the specific project you would like to implement in mind. For instance, is the funding sought for equipment, personnel, training or a combination thereof?
- Cultivate relationships with program managers.
- Sign up for grant program newsletters and attend webinars that provide guidance on getting funded.

Once you find your target opportunities, be sure to sign up for email notifications, check the websites regularly and reach out to the programs' points of contact if you need more information. Double-check the opening dates, deadlines, eligibility requirements and deliverables to avoid missed opportunities.

8 VERIFY YOUR ELIGIBILITY

When you find a grant program that aligns with your project's scope, it is important to ensure that your organization is eligible to apply. Often, eligibility is restricted by type of organization or geographic location. For instance, are those entities eligible to apply only extended to nonprofit organizations? If so, partnering with a nonprofit will be beneficial.

Be sure to review reporting requirements for each grant you apply for. These reports are due after the award is accepted and intended to ensure that the award will cover the cost of the project. If the award won't cover the whole amount, you should develop a plan to fund the remainder of your project's cost.

9 DEVELOP YOUR INVESTMENT JUSTIFICATION STATEMENT

Using key information, such as data and financial summaries taken from your strategic plan, the investment justification should explain the extent of the problem you aim to address and how the project to be implemented will meet your needs. This is the heart of your application.

When developing your investment justification, it is important to consider whether you are applying to an equipment or programmatic grant program:

Equipment grants focus on providing funding for agencies/departments with equipment needs. For example, the ARP provides funds to support public health services and programs to contain and mitigate the spread of COVID-19, including but not limited to PPE purchases, vaccination programs, testing, public health surveillance (such as monitoring for variants) and more.

Programmatic grants focus on providing funding to develop or expand programs or services to a targeted population in order to solve an identified problem. As the applicant, you can identify what to include in the budget, with some restrictions, as long as the budget request is an allowable cost that is justified within the project narrative and shown to be an essential request that addresses solving the problem. This can include community paramedicine expenses, such as expanded telemedicine services or programs to

address behavioral healthcare needs exacerbated by the pandemic, including mental health treatment, substance abuse treatment and services or outreach to promote access to health and social services.

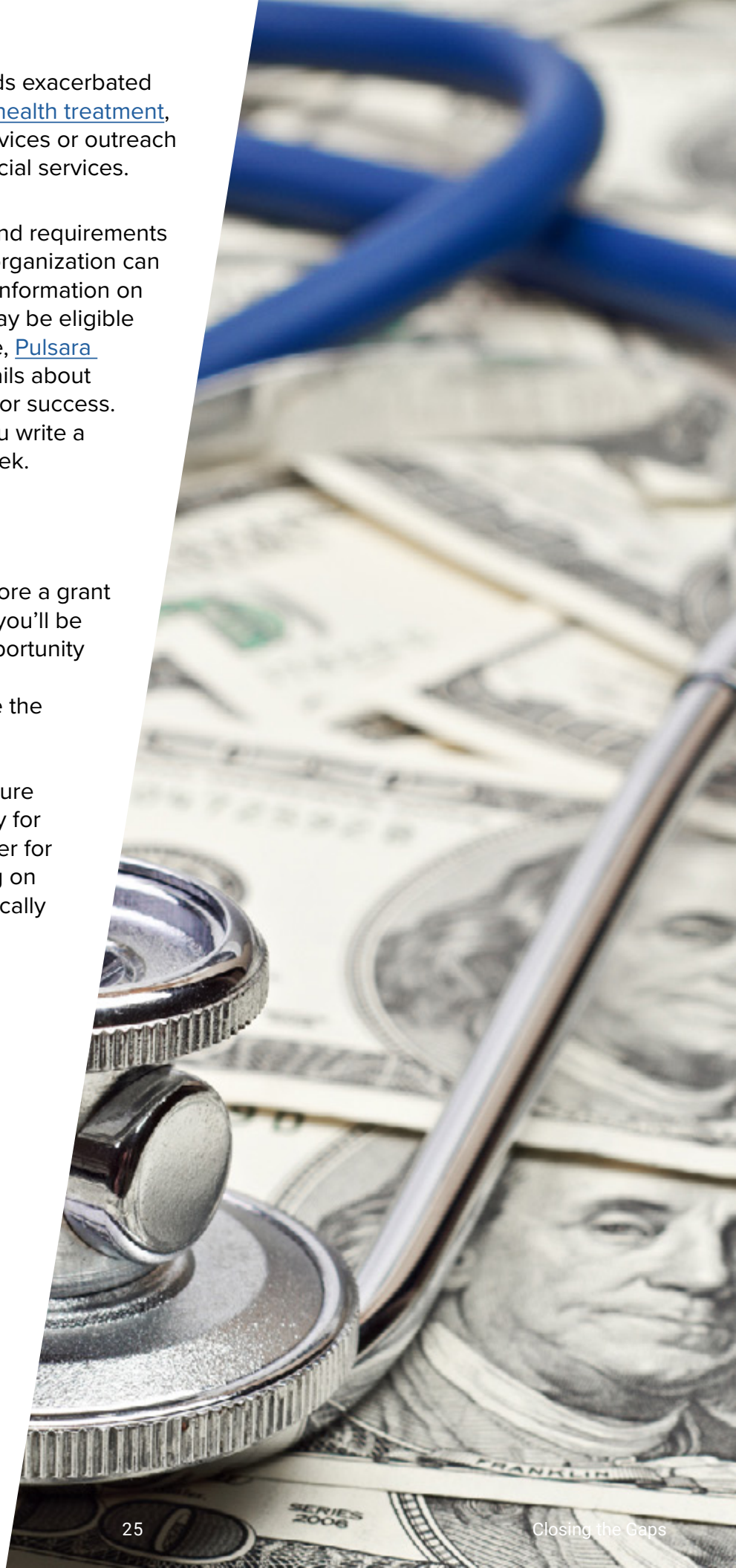
Navigating the labyrinth of resources and requirements in an effort to secure funding for your organization can be tricky. Vendors can provide helpful information on which of their products and services may be eligible for grant funding and how. For example, Pulsara provides a free funding guide with details about current funding opportunities and tips for success. They'll also partner with you to help you write a compelling case for the funding you seek.

10 SUBMIT AND TRACK YOUR APPLICATION

The lion's share of the work occurs before a grant cycle even opens. By planning ahead, you'll be prepared to pounce as soon as the opportunity opens and quickly gather the required documents and signatures to assemble the application components.

Once you submit your application, be sure to check the application portal regularly for additional requests from the grant maker for information/documentation. Depending on the grantor, award notifications are typically made four to six months after the application is submitted. 1

Visit Pulsara for more information, to download a free guide to funding and connect with their team members who can help guide you through the application process.



THE TIME IS NOW:

LEVERAGING MOBILE TECHNOLOGY TO CREATE SYSTEMS OF CARE THAT SCALE

Networked communications unite the care team on a single, secure communication channel, elevating the timeliness and quality of care

By Cynthia Bradford Lencioni

Imagine that you are a paramedic in a rural region who has been summoned by 911 dispatch to the scene of a home accident. All you know is that there is a patient with suspected burns who is counting on you to save his life. When you arrive on scene, you quickly determine that your patient is a young child, about 8 years of age, with third-degree burns on at least 20% of his body, including his upper torso and head. He is deteriorating rapidly into shock.

Given the extent of his injuries, you realize that per protocol, he needs immediate transport to a burn center. As your partner begins to start an IV, you radio the regional command center to provide the patient's status and urgently request critical-care transport via air ambulance. Precious seconds turn into minutes as you stand by waiting for a reply from the command center with an ETA for the air ambulance team.

Meanwhile, the command center for your region telephones the neighboring region's command center to request the transport because, unfortunately, your region lacks its own helicopter. The command center for the neighboring region creates a new patient case in their CAD system and eventually dispatches the helicopter to you. You are unaware of the dispatch, however, until they make another phone call to let your command center know that the helicopter has been dispatched and your command center radios you to pass the information along.

At the same time, your region's command center makes a telephone call to the burn center in yet another region to provide all this information yet again. Lacking another way to communicate in real time, the air ambulance team must make another radio report to the burn center to establish communication once they initiate patient care and transport. Even after the young patient arrives at the burn center, additional phone calls and radio reports among the multiple organizations and teams involved in the care are needed to close the communication channels – from ambulance to command center, from command center to command center, command center to air ambulance, command center to burn center and air ambulance to burn center.

And yet, despite the urgency in an emergency scenario such as this, none of these communication pathways are open to everyone on the care team, let alone open at the same time as you have been providing care.

As you drive back to your station, you think about your patient. You wonder whether he made it to the burn center and what his status is. But that would be yet another phone call or two, and you wish there were a better way for everyone to be on the same page as you prepare for your next run…

This scenario is, unfortunately, all too familiar to those who provide prehospital critical care. Hospital providers can also identify with it. From the missed radio report to the page sent to the wrong team member to the time spent not

knowing whether the cath lab is ready for your patient, most hospitals' disjointed communication approaches contribute to fragmentation, delays and breakdowns.

FORGING CONNECTIONS FOR FASTER COMMUNICATION

The patching together of traditional, fragmented healthcare communication channels that open and close during a patient event – radios, telephones, pagers, faxes, emails – causes inevitable delays that negatively impact patient care. Look at how many unconnected communication channels there are for a single patient event, much like the one discussed above.

This is a highly inefficient telephone/radio game to play when the stakes could not be any higher. One patient transfer alone can involve numerous – and often redundant – telephone calls, radio reports and other communications, creating a repetitive, error-prone process where precious time is lost at a time when your most critically ill patients need it the most.

It is very difficult, if not impossible, to create a shared consciousness or unity of effort for critical patient events using traditional communication channels. It is also challenging for care providers to create an accurate clinical picture via radio or telephone – when a photograph of an injury is worth a thousand words.

As an industry, we focus on uniting data – but often not in real time with patients' continuity of care, resulting in fragmented communications that fail to fully leverage modern technology when every second counts. We should be focusing on the team members, logistics and the right communication methods that will unite the care teams around the patient's needs, accelerating lifesaving care.

The solution to this problem is networked communication, hosted on interconnected mobile and online technologies. This type of system can power a rapid, multi-directional flow of information among many-to-many relationships and unite the care team on a single, secure communication channel. Each channel is created

specifically for each patient event, enabling team members to dynamically build the care team and even add other teams, organizations or individuals on the fly.

Sometimes, changing circumstances mean that additional team members, such as a specialist physician or mental health provider, need to be added to the patient channel for a consult or collaboration. The result is a single source of truth for all communication related to the case. The team then has a shared consciousness of the situation through the exchange of synchronous and asynchronous information: data, group messaging, live and recorded audio and video, images, exchange of facility capacity and readiness status, push notifications to all team members, alert acknowledgments and transport ETA based on GPS. Nothing less than these capabilities will be able to create situational awareness and shared consciousness for the entire care team.

In addition, the same networked communication will ensure that all care team members have shared consciousness around the patient's outcome after the event, creating the ability to inform all care teams in real time. It also provides the necessary data for quality improvement and quality assurance review.

CREATING A SINGLE SYSTEM OF CARE

In order to ensure the highest quality of patient care in the shortest amount of time, it's imperative to unite care teams across a system of care. A flexible communication and telehealth platform is unsurpassed in facilitating this level of complex care coordination across organizations and geographies.

By uniting care teams for every patient event, networked communication enables systems of care that scale across time and geography. Whether it's used for a patient case requiring a simple, one-to-one interaction, or for a multi-region event involving multiple organizations and one-to-many or many-to-many communication, a dynamic, interconnected communication system scales to meet the specific needs of the situation.

Used consistently for local, regional and national stress events, this type of system is much more effective than traditional communication methods. Such a system's ability to bridge communication and coordination across all organizations participating in patient events – especially when surge events strain the system's capacity – reveals the platform's power, flexibility and scalability.

Siloed teams and linear communication foster missed information and lead to medical errors, and the issue is not unique to the United States, or to any other state, country or region. The communication crisis in healthcare is a global issue where technology has been a limiting factor until recently. More precisely, the absence of an efficient, unified communication system has hamstrung clinical teams in even the most high-stakes and critical moments of providing care.

Today, though, leading healthcare systems are creating improved risk and safety profiles by eliminating antiquated, non-integrated communication technologies. Instead of one-to-one, open and closed communication with radios, telephones and pagers, networked mobile communication opens the door to one-to-many and many-to-many communications within patient channels. These channels can be created and used simultaneously and for the duration of the patient event.

By connecting previously siloed teams and organizations in real time, networked communication supports faster, better coordination and the otherwise more difficult load balancing of available healthcare, transportation and other emergency resources across public safety, ambulance, hospital and affiliated healthcare teams within the system. Time to treatment can be optimized and communication errors minimized, with the attendant quality and cost improvements that are demonstrated in the literature.

PROVIDING BETTER PATIENT CARE

Enhanced communication has been proven to improve the time to assessment, transport and treatment for critically ill patients. Systems of care that scale work for any patient method of arrival (ambulance, walk-in or in-patient) and for all time-sensitive emergencies. Any organization, team or individual can participate in a patient channel for communication that will enhance intra- and inter-organizational team communications. It is the resultant network, combined with the flexibility of the system, that allows the network to scale beyond routine interactions to enable all the interactions and communication needed during a stress event.

We can do more to help healthcare providers better prepare for the patient's arrival by improving their visibility into the patient's condition in the field. We can do more to facilitate the ability of facility staff and remote providers to collaborate on decisions about what care is needed and to determine whether and to which facility a patient's transfer is most appropriate. We can do more to help healthcare teams to reduce medical errors and delays by reducing miscommunication. We can do more to provide opportunities for feedback that improve care.

The time is now for change in system planning, performance and delivery to take a new view of leveraging mobile communications technology to unite distributed healthcare teams. In doing so, we will elevate the timeliness and quality of care for those in most desperate need of the best coordinated care when seconds count. Higher quality at a lower cost will undoubtedly bring more value to any healthcare system that endeavors to make the best use of limited resources and achieve the Quadruple Aim. The time is now. 1

RESOURCES

EMS1.com: Community Paramedicine

EMS1.com: Mental Health

EMS1.com: Pediatric Care

Pulsara on EMS1.com

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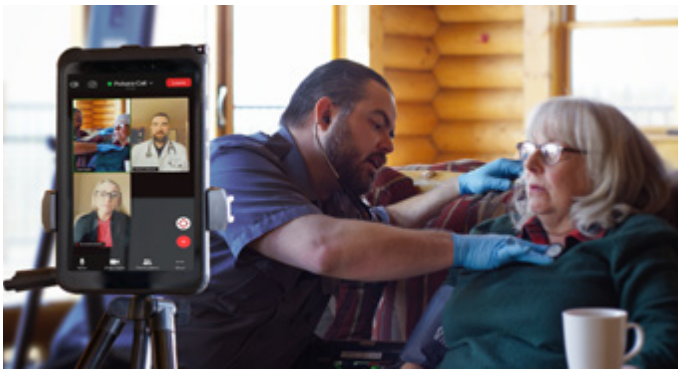
Pulsara Grants Help



How video streaming benefits everyone involved in an EMS call

How can EMS agencies leverage technology for growth and evolution?