

Partners For Life! Rich Charles



Rich Charles

Paramedic Rich Charles has been a MedFlight partner for 11 years. He also works for Lancaster Fire Department, where he has served as a full-time firefighter/paramedic for 16 years. Rich obtained his initial paramedic training through Lancaster Fire Department.

Rich was inspired to enter the public safety profession after watching his dad contribute 16 years as a volunteer firefighter at Harrison Township in Ashville, Ohio. He recalls walking past the fire station and watching his dad respond to an emergency call. This larger-than-life image had Rich hooked from that day forward.

Rich has a passion for teaching others. He is very engaged within MedFlight and provides educational offerings and landing zone safety courses for EMS and fire agencies throughout Ohio.

Rich is also active within his community. He joined the Medical Reserve Corp last year through the local Emergency Management Agency, to help provide children with the H1N1 vaccine. He also serves as a track coach for the Bloom-Carroll Middle School. Over the years, he has been a volunteer firefighter/paramedic with Circleville and Harrison Township Fire Departments in Pickaway County, and Bloom and Greenfield Township Fire Departments in Fairfield County.

Rich and wife Janet have been married 21 years. They have three daughters: Leslie, 19; Brooke, 17, and Maddie, 14. They reside in Carroll, Ohio.

Touching Base™

Spring 2010

MedFlight Enters ALS/BLS Business

MedFlight Branches Out to Better Serve Patients, Community and Member Hospitals

By Rod Crane, President/CEO



It's not widely known that MedFlight managed and operated Coshocton County EMS (CCEMS) for nearly a decade. That experience began with a request from the Coshocton County Commissioners. Initially, managing an ambulance service was not something we considered a strength, given the framework of our critical care transport organization. But after careful consideration and with the support of our owner hospitals, we took on the responsibility for CCEMS. We quickly achieved a high level of Advanced Life Support (ALS) and Basic Life Support (BLS) services for the region.

After we had strengthened the services at CCEMS, management responsibilities were returned to the county commissioners, at their request. During our tenure as stewards of CCEMS we learned a great deal about the ALS/BLS response system.



MedCare ambulances will provide transport in Franklin County.

In other areas, including Cleveland, Toledo, and parts of Michigan, hospitals are adding medical transportation as an extension of the hospital experience. There is now a greater emphasis on safety, consistency of operations and customer service.

As a result of our positive experience with CCEMS, the MedFlight Board of Directors expressed an interest in establishing an ALS/BLS service in

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Franklin County. In response, MedFlight explored entering the ALS/BLS market for three years. That research led us into a partnership with Community EMS of Southfield, MI. MedFlight and Community EMS (CEMS) have been vetting each other for 18 months. We agree there is a great opportunity for CEMS and MedFlight to jointly own Community EMS of Ohio (CEMSO) and operate under the new business identity MedCare Ambulance.

MedCare will work in association with our critical care services and our owner hospitals—The Ohio State University Medical Center, Grant Medical Center and Riverside Methodist Hospital—as well as other hospitals and partners that prefer an alternative standard of practice in ALS/BLS transportation. MedCare's mission is to serve hospitals and enhance the transportation experience in and out of our member hospitals.

MedCare will not be a 911 responder, and will limit ALS/BLS transportation services to within Franklin County. Although CEMS also operates ambulance services in partnership with Genesis Health in Zanesville and is a provider in Washington Court House, MedCare will operate as a stand-alone entity. Should the opportunity to expand beyond Franklin County present itself, MedCare will evaluate each scenario based on its merits.

The parent company of CEMS is Botsford Health System of Michigan. They have been in the ALS/BLS business for over 20 years and are a reputable not-for-profit provider currently operating in nine states. MedCare associates will be employed by CEMSO, but as a co-owner, MedFlight will have clinical and quality input, and CEMSO's dispatching services will be housed in MedFlight's Communications Center. All of the services will be provided by CEMSO under the name MedCare Ambulance.

MedCare Ambulance will receive oversight from a board of directors consisting of executives from The Ohio State Medical Center, Grant Medical Center, Riverside Methodist Hospital, MedFlight, Community EMS, and healthcare professionals from hospitals in the Detroit market. These executives focus on excellence in their professional roles on a daily basis. No other ambulance provider in Ohio will have the skill sets and *Patients First* focus that MedCare will have. Our hospitals expect the best transportation for their patients; MedCare plans to be the premier provider of private ALS/BLS services in Franklin County.

If you have questions about MedCare please contact MedFlight President/CEO Rod Crane at rcrane@medflight.com.

About MedFlight and *Touching Base*

MedFlight's mission is to care for and transport the critically ill and injured.

MedFlight publishes *Touching Base* twice each year. We are a private, not-for-profit company made possible by our consortium hospitals: Grant/Riverside Methodist Hospitals (owner), The Ohio State University Medical Center (owner), and Akron General Medical Center (sponsor).

MedFlight Executive Staff

Rod Crane President and Chief Executive Officer

Tom Allenstein Chief Clinical Officer

Howard Werman, MD Medical Director

Chuck Ansley Chief Financial Officer

Have an idea for a story?

Contact Samantha Primmer at 614.734.8026 or sprimmer@medflight.com with comments, story ideas or items for publication. All submissions are subject to editing.

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Safety

Using “Soft Skills” to Manage Risk in EMS Operations

By Colin Henry, Director of Safety



Soft Skills Acronyms

AMRM: Air Medical Resource Management

CRM: Crew Resource Management

LOSA: Line Operations Safety Audit

SMS: Safety Management System

TEM: Threat and Error Management

In this article the term “Soft Skills” refers to the use of Air Medical Resource Management (AMRM), Crew Resource Management (CRM), Threat and Error Management (TEM), Risk Assessment and Safety Culture. All of these management skills can be utilized in air medical transport or any other type of patient transport program. Safe emergency medical transport is dependent on the daily use of Soft Skills.

Pilots train in the skills required to fly aircraft, and medical crewmembers train in the clinical skills required to perform their jobs. These are necessary skills that are required to function in these positions. However, as an industry, we do not spend as much time on Soft Skills training. These are the skills that we should have but that are not directly required to function in our positions. Soft Skills help prevent incidents and accidents related to human factors: errors that occur because a procedure or process was forgotten or disregarded; or, an individual did not have the knowledge to safely handle the task at hand.

These types of incidents appear frequently in final reports by the National Transportation Safety Board (NTSB). Incidents such as controlled flight into terrain (CFIT), loss of control (LOC), or pilot error. These accidents have elements of human factors that were not known or understood by those affected. Air ambulance accident statistics from 1988 to 2000 show that 64.7% were pilot/human related. Experts today estimate this number to be around 90% in the air medical transport industry. This demonstrates that Soft Skills are very important to safe outcomes in emergency medical service (EMS) operations.

AMRM is a derivative of CRM that gained momentum in the air medical industry in the 1990s. It is a method of making optimum use of the capability of individuals and aircraft systems to achieve the safest and most efficient completion of a flight. Air medical companies felt there was something missing from their training curricula after accidents occurred with experienced and highly trained pilots. Although some companies taught some form of aeronautical decision-making to pilots, that information was usually not shared with medical crewmembers and communications specialists. Some EMS operators



MedFlight crews are trained to apply “Soft Skills” in the air and on the ground.

researched practices at airlines to see what they were doing differently. They found that the CRM training in the classroom had transferred into the cockpit and become a standard working tool.

In the mid-1990s Delta Airlines collaborated with the University of Texas to study their CRM process. This study introduced TEM principles and Line Operations Safety Audit (LOSA) processes to airlines. Some airlines and hospital systems now employ TEM as a countermeasure for AMRM/CRM. For example, TEM countermeasures: planning, execution, and review/modify can be applied to evaluate in-flight communications. The skills learned in AMRM training are then better recognized, inherent threats and errors are managed, and potential for active failures and latent conditions is reduced.

In 2005 the Federal Aviation Administration (FAA) published an advisory circular to introduce Soft Skills training for air medical service operation team members: pilots, medical crew members, communications specialists and maintenance technicians. AMRM training covered several human factors related accidents and spent time discussing assertiveness, communication, team building and situational awareness. We now recognize the importance of reinforcing these principles through recurrent training and feedback. Later training modules of AMRM have introduced subjects such as

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complacency, stress and management of change.

MedFlight also employs “hard” safeguards such as night vision goggles, helicopter terrain awareness warning systems, checklists, and standard operating procedures. We must take these safeguards and effectively manage their inherent threats and errors using the principles of anticipation, recognition and recovery that are part of TEM training. MedFlight has been teaching the importance of hard and soft safeguards and the recognition of mistakes (skill-based, rule-based and knowledge-based) that all humans make. Our system allows for threats and errors to be reported, effectively managed and shared with all partners through case studies and lessons learned. We have expanded AMRM theories into workplace realities with emphasis on human characteristics. We are now in a position to audit and measure significant threats and errors in the workplace. This is accomplished through the LOSA process.

In 2006 the FAA published a notice that addressed risk assessment. They established the fact that, “helicopter emergency medical services operate in a demanding environment.” The FAA Inspector Handbook noted: “risks must be identified, assessed, and managed to ensure that they are mitigated, deferred, or accepted according to the operator’s ability to do so within the regulations and standards appropriate to the operation.” This concept has forced Part 135 operators to implement some form of risk assessment/risk intervention procedure. MedFlight uses a risk assessment tool for both ground and air transportation. We also offer a contingency management plan to our partners, so that transport strategies can be proactively accounted for and anticipated threats better managed. Research and experience has shown that contingency planning can account for fewer errors and in some cases even fewer mismanaged errors. Used effectively, the tool also allows any program to effectively manage and measure risk in their day-to-day operations. This process has been around for years in U.S. military operations.

None of the items mentioned will work unless your company/program has the right safety culture in

place. Dr. Robert L. Helmreich, a well-known human factors expert, says, “Culture represents the values, beliefs, and behaviors that are shared by members of a group.” Without the right culture, people will never hear the message nor will they be willing to comply with procedures or practices. This is where a company will see a large amount of procedural or rule-based mistakes, such as ignored checklists or failure to follow standard operating procedures. The company’s chief executive must set the stage for the right safety culture, and this value must be communicated effectively to all personnel to lay the foundation for any specific safety culture.

“Just Culture” is an environment/culture/understanding of how acceptability of individual behavior is determined and how accountability is evaluated. It is a shared responsibility and a balance between human factors, individual practices and system issues. Some advantages of a Just Culture are:

- It is of value to both justice and safety.
- It is good for company morale.
- It shows commitment to the organization.
- It gives people job satisfaction.
- It allows those persons who are willing to do that little extra to step inside that role.

Just Culture adapts a systems view to errors and mistakes:

- It sees human error as a symptom, not a cause.
- It sees human error as an effect of trouble deeper inside the system.
- It turns to the system in which people work. For example, the design of equipment, the usefulness of policies and procedures, the existence of goal conflicts and production pressures.

All of the Soft Skills mentioned here should be a part of a company’s Safety Management System (SMS) in order to manage risk at the highest possible level. If all transport entities (BLS, ALS, MICU and air medical services) adopt these practices, both patients and crews win.

References

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MedFlight Minutes



Saving Lives Never Gets Old

Most people celebrate birthdays with parties, but not Rod Crane. MedFlight’s President/CEO planned a different kind of get-together for his birthday—a blood drive. The Rod Crane 65th Birthday Mobile Blood Drive took place during the week of March 8 at various donor sites throughout Central Ohio with a goal of collecting 65 units of blood.

The idea for the birthday blood drive was born when Rod realized he is old enough to be eligible for Medicare. He said of his transition into being a senior, “I wanted to make it worthwhile, not self-pity.”

Rod began his relationship with the American Red Cross in 1973 and to date he has donated 15 gallons of blood. The 65th Birthday Mobile Blood Drive is Rod’s way of reminding us that “Saving Lives Never

Gets Old.” He encouraged seniors to, “Get engaged and celebrate senior status in life by doing something that helps others.”

The Rod Crane 65th Birthday Mobile Blood Drive was a great success and collected a total of 710 productive units of blood.

Financial Grant Opportunities

The Federal Emergency Management Agency (FEMA) and the U.S. Dept. of Agriculture (USDA) are offering grant opportunities for EMS. Please see the following links for information.

- www.firegrantsupport.com
- www.rurdev.usda.gov



Education

2010 MedFlight Lecture Series

MedFlight’s monthly Lecture Series is offered the first Wednesday of each month at our Columbus Base classroom. All lectures are two hours in length and begin at 1400 hours (2 pm). The series ranges from pediatrics to adults, medical to trauma. Participants earn 2.0 CEUs. Lectures are free of charge and no pre-registration is required. MedFlight partners, community EMS and healthcare workers are welcome and encouraged to attend. For more information, contact Marti Radanovich in Education at 614.734.8041 or mradanovich@medflight.com. See www.medflight.com for updated course listings.

2010	Jun 2	Communicating with Older Adults with Dementia	Representative from Ohio Department of Aging
	Jul 7	Geriatric Trauma	Dr. Howard Werman MedFlight Medical Director
	Aug 4	Pediatric Burns	Dr. Renata Fabia Nationwide Children’s Hospital
	Sep 1	Asthma	Dr. Meg Chase Nationwide Children’s Hospital
	Oct 6	Considerations in Transport of Special Needs Children	Sherri Kovach, RN & Ann Hoffman, RN Nationwide Children’s Hospital
	Nov 3	Non-invasive Ventilation of the Pediatric Patient	Dr. Onsy Ayad Nationwide Children’s Hospital
	Dec 1	What to Expect when Called to Testify as a Witness at a Deposition or Trial	Linda Hines, RN, JD MedFlight Risk Manager

Partners for Life!

Inside Operations

STEMI Alert

A MedFlight Partner's Own Experience

By Mark Collins, Director of Operations



In 1989 I began flying a medical helicopter for Grant LifeFlight, based in Wellston. I remember hearing, "We don't do medical emergency runs." I wondered, "Why not?" Southeastern Ohio was the perfect region for medical emergency helicopter runs. The explanation involved "good data" that justified the use of helicopters for trauma, and "no data" justifying helicopter use for medical emergencies. Our Medical Director, Dr. Howard Werman, told me that, "In the early days, there was little evidence that most medical conditions were time-critical and there were few tools to identify STEMI or stroke."

The extent of my medical training was a two-week Army Aviation Medical Operations Course, designed to teach pilots and mechanics to assist and communicate with the flight medic on our Huey helicopter. I accepted the "good data, no data" explanation; but the whole thing still seemed counterintuitive to me.

In 1989 all medical emergencies went by ground transport to the closest hospital. Fibrinolytic agents such as streptokinase were utilized for reperfusion in the late 1980s. Many facilities managed the patient locally while the heart attack ran its course; only a few facilities were utilizing helicopter services to transport critically ill cardiac patients for catheterization.

My personal story began in February of 2003 when I woke on the day of my own cardiac arrest. I had every intention of making progress on our never-ending house renovation project. Finishing my ritual of an Atkin's breakfast and a cigarette, I heard my neighbor operating his tractor. He was clearing my driveway from the previous night's snowstorm. I grabbed my shovel to help. As I shoveled, I became lightheaded and my peripheral vision grayed. I went back inside and told my wife Nancy that I didn't feel good. She wanted to call EMS, but I didn't think that was necessary. She threw on some clothes and we departed for the hospital. Memories from that point on are few and gray. My next clear memory is at The Ohio State University Medical Center's Dodd Hall, ten days later.

I had not experienced chest or arm pain, chest tightness, pressure of any kind, or difficulty in breathing. My only symptom was the altered consciousness. During the previous month, I had experienced difficulty breathing immediately following lying down at night, and cigarette reduction had alleviated the problem.

Nancy said we got stuck behind large snowplows while en route to Memorial Hospital of Union County. With the hospital in sight, I began having what Nancy first thought was a seizure, but it soon became obvious I was having a cardiac event and I went unresponsive. The last 100 yards took forever and involved a couple of precordial thumps. The ER report

MedFlight landed on Memorial's pad at 09:17 and took off for Riverside Methodist Hospital in Columbus at 09:33. It doesn't get much better than a 16-minute ground time for an intubated, unstable patient. They landed at Riverside 11 minutes later. Ground transport that day would have taken at least an hour.

notes, "On arrival at the emergency department bay, she was blowing her horn and flashing her lights. ER personnel responded to her aid and found the patient to be apneic and pulseless." It was 08:27.

The ER report goes on: "Patient was wheeled to the emergency department with cardiopulmonary measures in progress. On arrival the patient was receiving cardiopulmonary resuscitation and closed chest compressions. The patient was given a quick look with the monitor, which showed ventricular fibrillation

and the patient was immediately countershocked at 120-150 and 200 biphasic energy units. An endotracheal tube was placed. A right internal jugular was established and an amp of epinephrine was administered via the endotracheal tube as well as

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through the IV. Countershocks were continued as well as close cardiopulmonary resuscitation.” The ER staff requested a helicopter at 08:51, weather was approved at 08:52. Nancy told me that she thinks I was defibrillated eight times. She got nervous when she overheard one of the ER staff ask, “How long has he been down?” My chest was sore for two weeks after I left Dodd Hall from the chest compressions. I want to thank Dr. Victor Trianfo and his medical team J. Heil, H. Spain, K. Daniels, M. Reichart, M. Riedmiller, and J. Wilson for their phenomenal efforts in saving my life. If I have forgotten anyone, I apologize.

MedFlight landed on Memorial’s pad at 09:17 and took off for Riverside Methodist Hospital in Columbus at 09:33. It doesn’t get much better than a 16-minute ground time for an intubated, unstable patient. They landed at Riverside 11 minutes later. Ground transport that day would have taken at least an hour. The helicopter resulted in my being catheterized a minimum of an hour sooner. Flight crew Gwen Schiederer and Dave Knopp first started flying with me in 1993. I owe them an apology: no one ever wants to provide care to a friend and coworker. I can’t thank Gwen, Dave, and pilot Dan Michael enough.

The Riverside Emergency Department notes chart triage at 09:51 with final notes ending with transfer directly to the Catheterization Lab. The catheterization report findings included 100% occlusion of the left anterior descending artery with a stent placed in the proximal/mid LAD as well as initiation of IABP support. I remained on a balloon pump and a ventilator for several days. The fine work that Dr. Yahner and his team in the ED and Dr. Chapekis and his team in the Cath Lab was carried on in the Intensive Care Unit (ICU), step down, and rehab units for weeks and months to come. There are so many people to thank, including those who kept Nancy and me in their prayers.

Rehabilitation begins with understanding your situation. Mine was a loss of heart muscle characterized by an ejection fraction of 25%, and anoxic brain injury. After a nine-day stay at Riverside, I was transferred to OSU’s Dodd Hall to address the latter. Several years later my wife produced something I wrote during my stay at Dodd Hall. The writing was unsteady and injured, the kind I often see in our patient surveys here at MedFlight. Brain injured people do not realize they have issues. I remember feeling impatient. Records indicate the caregivers were frustrated with me. They mention that, “he did have good insight into his deficits.” It is difficult

Rehabilitation begins with understanding your situation. Mine was a loss of heart muscle characterized by an ejection fraction of 25%, and anoxic brain injury.

to accept that you and the world that you knew are now different. The providers were concerned that I would be, “operating power tools,” among other dangerous activities before I was ready. They had good reason to worry. They established clear return to work goals and set up a program of outpatient occupational-type therapies designed to meet those goals. The

nine days at Dodd Hall were invaluable.

Ten weeks after the heart attack my doctors let me begin cardiac rehab at Riverside’s McConnell Heart Health Center. The lifestyle counseling and training provided at the McConnell Center are a part of my life today. My ejection fraction improved to 35%. I returned to work part-time in June and full-time in July.

When I returned to work my boss asked me if I would like to write an article about my experience. I declined. I realize now that I was one of the early beneficiaries of the STEMI alert program and can only hope that our change in philosophy regarding medical scene runs will benefit other patients (as it did me) in the future.

Partners for Life!

Inside Operations

The MedFlight Difference

By Todd Bailey, Director of Business Development



These days it's not uncommon for another air or ground transportation company to emerge in your area. The essential question is: Who should you call to insure that your patient receives the best care during transport? After all, it could be a family member or friend in these situations. Regardless of who the patient is, they deserve the best possible care and outcome.

MedFlight, as well as many other long-standing, not-for-profit, hospital-based air-and-ground critical care transport services, have served Ohio for many years. Historically, urban hospitals placed helicopters and Mobile Intensive Care Units (MICUs) in various regions of Ohio, sometimes at a financial loss, to extend care to rural counties where time was crucial, and where first responders and small hospitals had limited resources. Many of these bases also invested in value-added contributions like education for first responders, hospitals and law enforcement, while encouraging strong collaboration with local hospitals to build what are now some of the best medical transportation networks in the country.

I have been an employee of MedFlight for 13 years, but prior to that I worked at a large trauma center in Columbus. Back then I was reminded daily of the mission-oriented focus to bring these expensive but needed services to communities. I recall one leader's comment in the early 1990s that has stuck with me as I continue to support MedFlight's mission. He was asked about the value of the helicopter service, since it was a costly venture for the hospital. He answered, "That helicopter is a billboard symbolizing our mission



to communities throughout Ohio; that we care about their patients during their most vulnerable hour, and we will continue that mission." MedFlight continues that mission at a very high level of safety and quality today.

In 2002 a change in the Medicare Fee Schedule changed the landscape for traditional high-quality air medical providers. While the intent to assist long-standing air medical providers with reimbursement assistance helped, the increased fee schedule provided avenues for new for-profit and nontraditional players to enter the market and compete directly with the existing high-quality, hospital-owned programs. Experts in Ohio's healthcare industry thought citizens were well-covered by existing helicopters, but out-of-state, for-profit entrants were not deterred due to their ability to make money via lower cost delivery models and economies of scale.

The proliferation of many new providers establishing themselves to compete with traditional hospital-based programs coincidentally resulted in more accidents nationally, due to the sheer increase in medical helicopters throughout the nation. An article series in the Washington Post¹ last August highlights the fact that there were seven medical helicopter crashes resulting in 29 victims in 2008, the highest fatality rate on record. Furthermore, the article went on to say that according to the data, "Working on a medical helicopter is the second most dangerous job in America, behind only commercial fishing." Through it all, MedFlight's dedicated and highly-trained professionals have maintained very high levels of

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The MedFlight Difference

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safety rivaling any program in the country.

Today, competition is fierce between for-profit and not-for-profit, hospital-based helicopter providers. Nonetheless, you can be assured that MedFlight continues to provide safe, high-quality care. MedFlight helicopters and mobile intensive care units are dedicated to the highest industry standards, including our *Patients First* focus regarding safety and quality care.

Safety

- We practice zero tolerance toward safety violations and have an exceptional safety record.
- We utilize a centralized dispatch center based in Columbus.
- We have a Safety Management System (SMS) modeled after the airline industry.
- We have an experienced, on-site Director of Safety & on-site Risk Manager, committed to practicing superior safety at MedFlight.
- We utilize real-time satellite tracking technology to track each mission.
- We use night vision goggles to increase low light and night visibility.
- We are enhancing our vehicle graphics to provide better visibility and safety.

Excellence

- We are accredited and committed to the following regulatory agencies and professional associations that set national or state-wide standards: Commission on Accreditation of Medical Transport Systems (CAMTS), Association of Air Medical Services (AAMS), Ohio Medical Transportation Board (OMTB).
- Our entire medical team is certified and licensed (RN, EMT-P, BLS, ACLS, ITLS, PALS, NRP, or other advanced certifications). Our dispatchers are also Certified Flight Communicators.
- Our care providers have extensive experience

in both emergency and critical care (10 years average of critical care experience).

- We provide the most advanced critical care technology and skills available (IABP, LVADs, Ventilators capable of CPAP/BIPAP and pressure control/support, and Transvenous Pacers).
- We provide dispatch “Alert Criteria” specialization and care for Heart (STEMI), Stroke, Trauma and Vascular patients.
- We have dedicated critical care back-up helicopters and ground options.

Accountability

- We have a quality assurance/improvement plan, including local Medical Director oversight.
- We have experienced Medical Directors in all clinical areas of expertise.
- Our critical care transport teams have immediate access to medical control during every transport.
- We utilize “pre-transport” and annual surveying and measurement tools.

Integrity & Tradition

- We dispatch the most appropriate helicopter and MICU to serve requestors and their patients.
- We have provided over 15 years of demonstrated excellence in Ohio.
- We have direct ties with tertiary care centers, utilizing an active feedback system, to strengthen patient outcomes and transport process.
- We have provided over 15 years of on-site landing zone safety training and clinical education programs for first responders and hospital professionals.

As MedFlight celebrates our 15th anniversary this year, we want to thank you for making us one of the best air and ground critical care transportation companies in the country.

1 The Washington Post. *Fatal Flights*, (August 21, 2009). Retrieved March 25, 2010 at <http://www.washingtonpost.com/wp-srv/special/nation/medical-helicopters/fatal-crashes.html>

Partners for Life!

Inside Operations

Auto-Launch Speeds Response Time

By Stewart Corbin, Director of Communications



MedFlight has enhanced our *Patients First* Auto-Launch program to better serve our pre-hospital and hospital partners. With Auto-Launch, MedFlight obtains physician acceptance and bed availability information while the requested transport is en route to the patient's location. This process offers better overall service for requestors and faster access to MedFlight's highly trained and experienced clinicians.

The following conditions activate the MedFlight Auto-Launch process when we receive a scene or hospital request for helicopter or Mobile Intensive Care Unit (MICU) transport:

- Trauma
- Acute myocardial infarctions
- Acute strokes
- Vascular compromised symptoms

In the past, MedFlight offered Auto-Launch only with the requestor's approval. In response to feedback from first responders and sending hospitals, MedFlight has committed to the Auto-Launch program for all time-sensitive patients. Some dispatches may end up being cancelled while en route to a scene, and MedFlight may incur additional expense, but we believe Auto-Launch is the right thing to do for patients.



MedFlight has committed to Auto-Launch for all time-sensitive patients.

MedFlight's experienced communications team will facilitate calls to the desired receiving hospital, or find the most appropriate facility if none is requested. If an appropriate MedFlight resource is not available at the time of your request, our communications team will activate the next closest CAMTS* accredited critical care program. As always, MedFlight will check the weather and complete our industry-standard safety checks before any flight is launched.

If you choose not to utilize the Auto-Launch service, please inform us at the beginning of the request. If you have questions regarding the Auto-Launch program, please contact Todd Bailey or Stewart Corbin at 614.734.8001. For urgent requests call our Communications Center at 800.222.LIFE (5433).

*Commission on Accreditation of Medical Transport Services

Inside Operations

Not Reading This Could Bankrupt You

Protecting Yourself Financially in the Event of an Accident

By Chuck Ansley, Chief Financial Officer



Time and time again I've observed a situation that negatively impacts our patients: they become responsible for their own medical bills even though they have good insurance. This can happen to anyone without proper protection.

If you or your family members are injured in an accident that is another party's fault, your medical insurance will not cover you. This is standard practice for medical insurance policies. The rationale is that the party at fault is responsible for paying the medical bills, and thus it is not an obligation of your medical insurer. If the other party is an uninsured or under-insured motorist (UUM), your UUM coverage kicks in. But this usually has a limit of \$50,000 or \$100,000, depending on your auto policy.

As an example, let's say you're involved in a car accident that is not your fault, and you and your child are seriously injured. Your medical bills top

\$200,000. The at-fault party has the state minimum liability coverage of \$25,000, a low-paying job, and no assets. You have \$50,000 in UUM coverage. This leaves \$125,000 of bills not covered by any insurance or the at-fault party. You are left responsible for this amount.

How can you protect yourself from this situation? Talk with an insurance agent. Many companies have an umbrella liability policy that extends coverage to \$1,000,000 over your home and auto liability policies. Affordable coverage is usually available for UUM under an umbrella policy.



An insurance gap can lead to financial stress after an accident.

MedFlight Implements Electronic Medical Record

By Greg Schano, Transport Nurse



Healthcare delivery has grown evermore complex. A leading challenge for modern health delivery systems and providers is to improve outcomes while minimizing expenses. Studies reveal a need for high-functioning healthcare information infrastructures, because there is "... more to know, more to do, more to manage, more to watch, and more people involved than ever before."¹

In March, MedFlight implemented an electronic medical record (EMR). The planning process for EMR began in earnest one year ago when a multidisciplinary committee of formal and informal leaders, staff and managers alike, came together for brainstorming sessions. Standardized criteria with weighted values for evaluating software were developed and vendors presented their products.

MedFlight selected the Zoll RescueNet® ePCR (electronic patient care record). MedFlight has enjoyed a productive working relationship with Zoll since implementing their RescueNet® computer-aided dispatch (CAD) product in 2006. When combined, RescueNet® CAD and ePCR provide a very robust system.

EMR helps clinicians do their work and do it better. At MedFlight, EMR builds on three organizational



Medic Brian Linn updates records while in flight.

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MedFlight Implements Electronic Medical Record

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strengths: safety, quality, and patient care. EMR promotes safety by ensuring a consistent approach to documentation, predominantly by ensuring important data fields are populated consistently. It enhances an already vigorous quality assurance (QA) program by adding a third level of quality measurement running in the background. MedFlight's other two levels of QA include 100% chart review for specific metrics by peer clinicians, and a review of a subset of charts by an adult and/or pediatric medical director.

EMR improves patient care by ensuring a consistent approach to documentation and producing a final

document that contains critical information in a format that is easy to read and interpret. Moreover, MedFlight's collaboration with The Center for Medical Transport Research and other research organizations will be expanded by mining data for research purposes, thereby improving patient outcomes. Data is also reported automatically to government agencies (i.e. EMSIRS) for statewide statistical reporting. Finally, EMR increases efficiencies at MedFlight by automating workflows.

1 Institute of Medicine. *Crossing The Quality Chasm*, (March, 2001). Retrieved March 24, 2010 at www.nap.edu/html/quality_chasm/reportbrief.pdf

Research

Learning About Safety Through Stories

By Dr. Cathy Jaynes, Director of The Center for Medical Transport Research



The Center for Medical Transport Research has initiated a program of digital storytelling to enhance safety in air medical transport. An important element of developing a Safety Culture is the intent to support learning that is inclusive of everyone in the organization. It begins with the vision of developing wisdom that addresses both the heart and the mind, providing individual practitioners and organizations with the capacity for flexibility in the face of change. We believe that a visual and personal account of a safety situation from a transport peer holds great impact and can lead to positive changes in attitude and behavior in the transport community. We believe that there are many examples of "what safety looks like."

Our first Safety Story workshop was held in San Jose, California, in conjunction with the 2009 Air Medical Transport Conference (AMTC). Participants came with a story to share from programs across the country. The participants enthusiastically proposed that safety education include the use of one or more of these

videos in conjunction with lectures to provide better understanding, knowledge and compliance to the industry's safety concepts. To quote one of the participants in the workshop: "this is the new face of safety education."

The Center for Medical Transport Research has instituted a video library of Digital Safety Stories on our website at www.tcmtr.org. A curriculum is being developed so that the videos can be used for safety education. Interest has boomed in developing this media for educational purposes as well as the identification of themes important to safe operations in the air and on the ground. We'll have additional opportunities to gather stories at the 2010 AMTC, and planning for regional workshops is underway.

Community Profiles

Partners in Excellence: Wyandot Memorial Hospital

By Thad Turano, Business Development Coordinator



Wyandot Memorial Hospital is a progressive, not-for-profit, acute care hospital in Upper Sandusky, Ohio. The hospital opened in 1950 and offers a 24-hour emergency department, 16 medical and surgical beds, six intensive coronary care beds and three obstetrical beds. In a time when many health care organizations are owned by large companies, Wyandot Memorial is proud of its local ownership and leadership.

Ty Shaull, Wyandot Memorial's Chief Operating Officer, stated, "Because Wyandot Memorial Hospital is the only hospital in our county, we are the first stop for folks needing emergency care. Our ability to make one call to MedFlight for a patient transfer is crucial for our ability to provide a quick response for heart attacks, strokes and other situations where time is a factor."

MedFlight is proud to serve as Wyandot Memorial's *Partner for Life*, providing air and ground critical care transportation when needed.



Wyandot Memorial serves Upper Sandusky and surrounding communities.

Quick Action by Dispatchers and EMS Save Patient's Life

By Thad Turano, Business Development Coordinator

It was a cold February morning when Morrow County 911 dispatchers received a call for help. A man was chopping wood in a remote area and something had gone wrong. Morrow County Medic 3 responded but could not locate the patient. A MedFlight helicopter was placed on stand-by while the Big Walnut Joint Fire District also responded.

Dispatchers used a Phase II Wireless Tracking System to pinpoint the patient's location through his cell phone. Morrow County EMS Medics Melissa Fink, Carol Sayre, and Ryan Stroll, along with members of the Big Walnut Joint Fire District, were then able to locate him. He was trapped under wood that was submerged in water, and was becoming hypothermic in addition to his injuries.

Once the patient was extricated, deep snow made it difficult to transport him to the landing zone. He was placed in a Stokes basket within a makeshift sled and brought to the awaiting MedFlight helicopter, which transported him to The Ohio State University Medical Center. The patient had a great outcome thanks to the teamwork among the Morrow County Dispatchers, Morrow County Medic 3 and EMS 9, and the Big Walnut Joint Fire District.

Jeff Sparks is Chief of Morrow County EMS, which currently covers 414 square miles of territory and completes an annual run volume of 3,800. MedFlight is proud to continue our long-standing relationship with our Morrow County *Partners for Life!*



Morrow Co. Medics Melissa Fink (left) and Carol Sayre

Case Study

Sepsis: The New Frontier in Critical Care Transfers

By Howard Werman, MD, Medical Director



A 73 y.o. female with a history of atrial fibrillation coronary artery disease, hypertension and hypothyroidism presents to an outside hospital, complaining of weakness and shortness of breath. Physical examination reveals an elderly female with moderate respiratory distress, respiratory rate of 24 breaths per minute, rales in the right upper chest, an irregular heart rate and no peripheral edema. Her vital signs are remarkable for a blood pressure of 96/74, HR 120 and irregular, and a temperature of 95.5°F.

How would you proceed in the care of this patient? What are your immediate concerns?

Sepsis and septic shock are emerging problems in health care, especially in an aging population. Septic shock is the 10th leading cause of death in the United States with nearly 750,000 cases of sepsis and 380,000 ICU admissions. In the next 10 years, it is estimated that over 1 million cases will be seen annually in US hospitals. Severe sepsis and septic shock result in a high mortality of between 30-60% and annual costs of over \$17 billion. As newer, more aggressive approaches emerge to care for these individuals, it is quite possible that 'sepsis centers' will emerge as the next area of specialty care.

Sepsis is part of a larger immune response described as the systemic inflammatory response syndrome (SIRS). By definition, the patient must exhibit two or more of the following symptoms in SIRS:

- Fever of more than 38°C or less than 36°C
- Heart rate of more than 90 beats per minute
- Respiratory rate of more than 20 breaths per minute or a PaCO₂ level of less than 32 mm Hg
- Abnormal white blood cell count (>12,000/ μ L or <4,000/ μ L or >10% bands)

Obviously, not all of these findings can be determined by field or transport personnel. When SIRS is caused by a presumed or proven infection, this defines sepsis. Common sources of infection leading to sepsis include the urinary tract, respiratory tract (pneumonia), abdomen and skin (cellulitis or abscess). Many patients have multiple sites of infection and others have no obvious site of infection at all (only bacteria in the bloodstream). When there is evidence of organ failure such as altered mental status, respiratory distress or cardiac compromise, then the term 'severe sepsis' is appropriate. The most serious part of this spectrum is 'septic shock' in which the patient fails to achieve a blood pressure of 80 mmHg despite adequate fluid resuscitation and pressor agents.

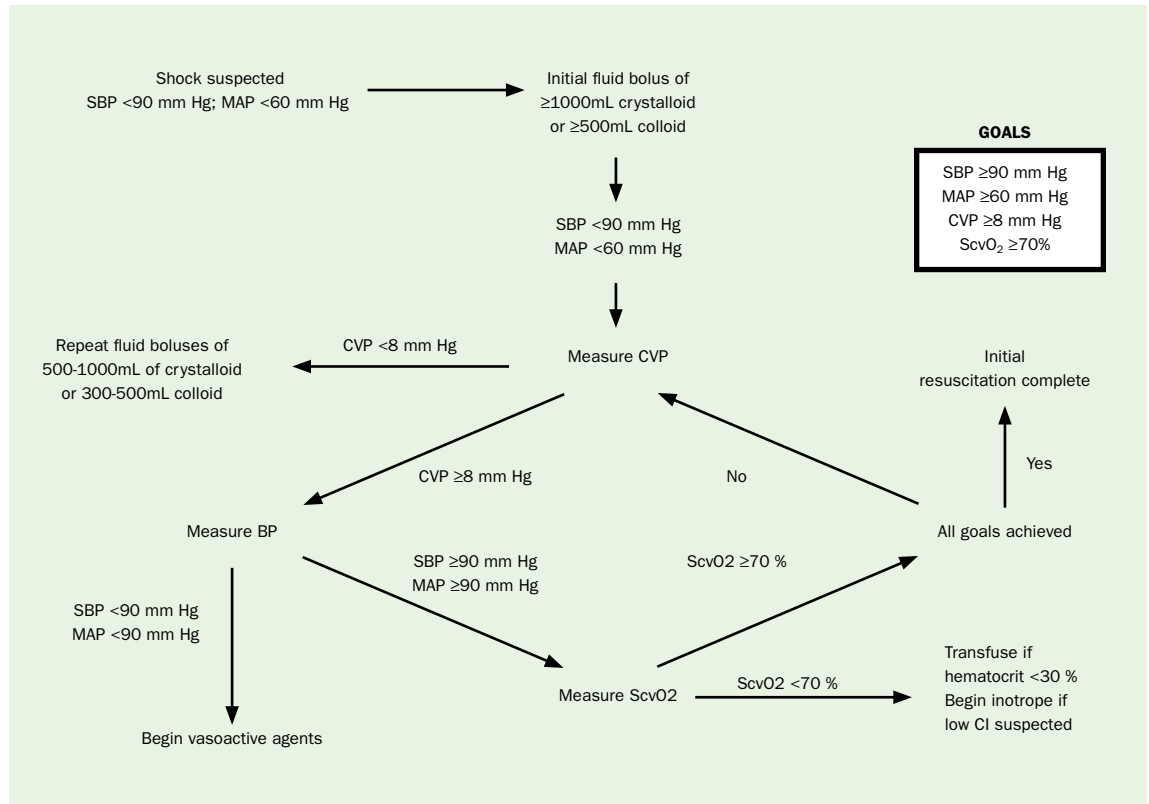
The rate of septic shock increases significantly in patients over age 50 years. Other risk factors for sepsis include being male, alcoholism,

immunocompromised state (cancer, HIV, transplant) and other co-morbid diseases such as diabetes, hypertension, COPD or coronary artery disease.

Based on the definitions described above, the diagnosis of septic shock can only be suspected in the prehospital environment. In addition to fever (or hypothermia), tachypnea, tachycardia and signs of shock (diaphoresis, decreased mental status, dry skin and mucous membranes), other findings include those specific for the suspected infection (rales in pneumonia, flank pain in pyelonephritis, abdominal pain in abdominal infections or rash in skin infections).

As with many other critical illnesses, it is becoming clear that the outcome of patients with severe sepsis or septic shock is dependent on early intervention. Addressing the ABC's is of paramount importance to a good outcome. Establishing an airway is critical in such patients. At a minimum, patients who can maintain a patent airway should receive high flow oxygen. Remember that one of the hallmarks of shock is the inadequate delivery of oxygen and nutrients to the tissues—therefore, maximizing available oxygen is essential. Similarly, endotracheal intubation immediately results in a significant reduction in the body's oxygen and nutrient demand by removing the energy consumed in the work of breathing. Finally, attention should be focused on the patient's fluid status. Patients with septic shock typically have large fluid deficits (up to 10 L in the first 24 hours). The initial therapy should include a bolus of 1000 ml of normal saline. If the patient has known cardiac disease or has evidence of cardiac compromise from severe sepsis, repeated boluses of 300 ml can be given. Pressors such as dopamine should be considered but only after adequate fluid therapy has been administered. A minimum goal of achieving a systolic BP of 90 mmHg or mean arterial pressure of 60 mmHg is acceptable.

The patient should be transported to a facility capable of close intensive care monitoring. Early goal-directed therapy (EGDT) has been shown to



Early goal-directed therapy (Inf Disease Clinics North America 2009; 23(3):485-501).

decrease in-hospital length of stay and patient mortality. This involves rapid administration of antibiotics, monitoring of central venous pressure (CVP), ventilatory and circulatory support, selective use of steroids and administration of special agents such as drotrecogin alpha (Xigris) which works through its anti-inflammatory and anti-clotting properties.

The patient was intubated upon arrival to the Emergency Department. Her initial studies revealed a white blood cell count of 25,000 and an initial ABG with a pH of 7.13 and HCO3 = 14. A chest radiograph showed a right upper lobe pneumonia. Her hospital course included an ICU admission where she received early goal-directed therapy, broad-spectrum antibiotics and Xigris. She did, however, improve and she was discharged on day 12 to a skilled nursing facility.