

AirWaves

A Publication of West Michigan Air Care



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www.AirCare.org

Repeat Customer

Occasionally, Air Care will transport a patient that says, "I flew with you a few years ago." Recently, Air Care flew James Terry, a patient we had previously transported for trauma in 2006. We discovered this much later, however. At the time, James was unresponsive and gravely ill with septic shock...

James Terry's wife could not wake him up. The 60-year-old had fallen asleep in his chair the night before, as he often did, but by noon had still not awakened. She called an ambulance immediately. James had been to a doctor a few times recently for dehydration and obscure symptoms, but no one could figure him out.

Upon arrival at Three Rivers Health Emergency Department, Dr. Brian Bowditch, D.O., and Nurse Selenia Chartrand found James to be profoundly

sick with pneumonia. They intubated him and placed him on a ventilator. The infection had rapidly progressed and put his body into septic shock.

When the West Michigan Air Care crew arrived at his bedside in Three Rivers, James' blood pressure was 53/44 despite fluid boluses. The Air Care medical crew started a third IV to accommodate all the fluids and medications he needed immediately. They continued fluid boluses and started a vasopressor, Norepinephrine, to improve James' blood pressure. They also began antibiotics to fight the lung infection that was taking over his body.

Pneumonia patients tend to have low oxygen saturations even after intubation due to poor gas exchange deep in the alveoli. James' oxygen saturations were low at 86%. The medical crew placed James on

their Revel transport ventilator and adjusted his therapy to improve his oxygenation as they flew him to Kalamazoo.

By the time the James arrived at his destination in the Bronson Medical Intensive Care Unit (MICU) his oxygen saturations had improved to 91% and his systolic blood pressure was back in the normal range, above 90 mm Hg.

James remained critically ill for several days in the MICU. Gradually he overcame his infection, but it was a close call. He was even on dialysis for kidney failure for a short time, he says, but thankfully, his kidney function has significantly improved. Amazed at his miraculous turnaround, James' providers at Bronson delighted in talking to him as he neared discharge from the hospital.

"They would come back and say, 'Remember me? I took care of you when you were really sick.' And, of course, I just couldn't remember," says James.

He does, however, remember receiving great care at Bronson once he was awake.

"They did a fantastic job over there. I was treated with the utmost respect. I was really happy with the nursing care on every unit. They made my stay as enjoyable as it could have been," he says.

Déjà Vu

Before he left the hospital, James was visited by one of his Air Care flight nurses, Jan Eichel. She discovered this was not the first time James had flown with Air Care.

In May 2006, James had a farming accident in which his leg was injured in a rototiller. He freed himself and placed a tourniquet before being flown to Kalamazoo. Eight surgeries ultimately resulted in a below-knee amputation, which James persistently adapted to. There have been challenges, but thanks to a prosthetic limb, it has not slowed him down much in the years since.

(continued on page 2)



WINNER OF Vertical's Photo Contest!

Vertical magazine is the world's largest helicopter magazine, dedicated to spectacular photography and reporting from the field. Thanks to John Harris of Trident Photography for this outstanding photo, and to all our Air Care fans on Facebook for your support in this contest. John's Winter Wonderland photo of the Air Care helicopter beat out several other photos to take the top spot for "Photo of the Week" January 19th, 2015. See www.verticalmag.com/photography/potw

Repeat Customer

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A Resilient Spirit

After returning home from his recent hospitalization, James has kept moving forward and is up doing chores again. He sets small goals for himself and is sleeping well which is enabling him to gradually recover his strength.

"I'm still pretty weak and get tired easily," he says, but he works with it.



James Terry nears discharge at Bronson Hospital, and gets a visit from one of his Air Care flight nurses, Jan Eichel, Director of Clinical Operations. This was Day 8, an amazingly fast recovery considering how sick James was the day of his flight with Air Care.

James cuts wood for short periods and takes his time cleaning up his pole barn, breaking chores into manageable steps as his energy allows. His home was already handicap-accessible, a great convenience as he recovers his stamina.

James and his wife, Nancy, have been visited by a lot of family and most of their grandkids since James' return home. They are hoping to take a trip out west this spring with James' mother in her 40-ft motor home. Setting goals and plans is just part of James' attitude – to adapt and go on as before. His other travel plans? To become a "snow bird" and head south each winter!

James Terry's Recent Air Care Medical Crew:

- » Paul Mazurek, Flight Nurse
- » Jan Eichel, Flight Nurse
- » Mark Brynick, Chief Pilot
- » Steve RietKerk, Communications Specialist

James Terry's 2006 Air Care Medical Crew

- » Robert Mayberry, Flight Nurse
- » Donald Brauning, Flight Nurse



By Dawn Johnston, CFRN
Flight Nurse
West Michigan Air Care

Air Care Helps Region Meet AHA STEMI Targets

*A sure way to speed treatment of a heart attack is through prudent use of a helicopter. The new goal of the American Heart Association (AHA) is to rush a STEMI patient to the cath lab and inflate the balloon within 120 minutes of *first medical contact (FMC.)*

As of January 1, 2013, the American Heart Association (AHA) extended the 90-minute "door- to-balloon" time target to a 120-minute "FMC-to-balloon" time target. This new time target begins with the patient's first medical contact: when a STEMI patient is evaluated in an ER or EMS evaluates them at their home. The time target ends with balloon inflation to reopen the patient's blocked coronary artery in the heart catheterization lab.

Community hospitals with walk-in STEMI patients that call Air Care within 15 minutes meet the 120-minute "FMC-to-balloon" standard in the majority of cases. However in recent years, many patients who arrived at community hospitals by EMS without prior activation of Air Care had their FMC-to-balloon times exceed 120 minutes. This requires a closer look.

Even with crews working quickly, EMS treatment and transport to the local community hospital tends to use up most or all of the additional 30 minutes provided

When EMS Call Air Care for STEMI Patients...

Air Care provides the same treatment protocols as the community hospital while the patient is being flown to the cath lab. Now that's a great use of time!

by the AHA's new time target. One way to utilize this time more efficiently while dramatically reducing transport times is for EMS to call Air Care to the scene or the nearest hospital helipad, a practice some progressive EMS have already begun. After activation of Air Care, EMS can start IVs and provide pain control. Upon landing Air Care loads the patient, then administers Heparin and remaining therapies *while the patient is in the air.* Flying the STEMI patient directly to the cath lab provides a significant time savings AND the same treatment protocol as the community hospital!

Scene STEMI's

For example, Air Care had seven "scene STEMI" flights from January 2013 to December 2014, in which EMS called to have the helicopter pick up the patient directly from their ambulance. The distance from Kalamazoo to the scene ranged from 22 miles to 50 miles, and all of the flights had a FMC-to-balloon time of 102 minutes or less! These EMS personnel were confident in their STEMI-identification skills and successfully conveyed their findings to medical control.

By contrast, if EMS diverts to a local hospital, FMC-to-balloon time is much slower. Even in these cases, however, flight times of 10 to 20 minutes are an obvious help in meeting time targets, compared to a 45- to 90-minute drive by ground EMS. Calling Air Care will also prevent the loss of an ambulance from its service area for an extended period.

Time to Move!

Some key points to remember:

- » Activate Air Care as soon as a STEMI is recognized by EMS or ED personnel.
- » At the very least, put Air Care on standby for suspected STEMI en route to community hospitals by EMS.
- » Both Bronson Methodist Hospital and Borgess Medical Center automatically accept STEMI patients. You do not have to have a confirmed "accepting physician" to begin transport arrangements.
- » For fastest response, call Air Care directly! 1-800-922-1234

Time is muscle. Transferring scene STEMI's by Air Care can shorten FMC-to-balloon times and therefore, improve outcomes in this patient population.

**First medical contact (FMC): The date and time when the patient was first evaluated by either emergency medical services (EMS) or another healthcare professional.*



By Matt Heffelfinger, CFRN
Flight Nurse
West Michigan Air Care

(with Dawn Johnston, CFRN)

Congratulations! Physicians and Flight Nurses Publish

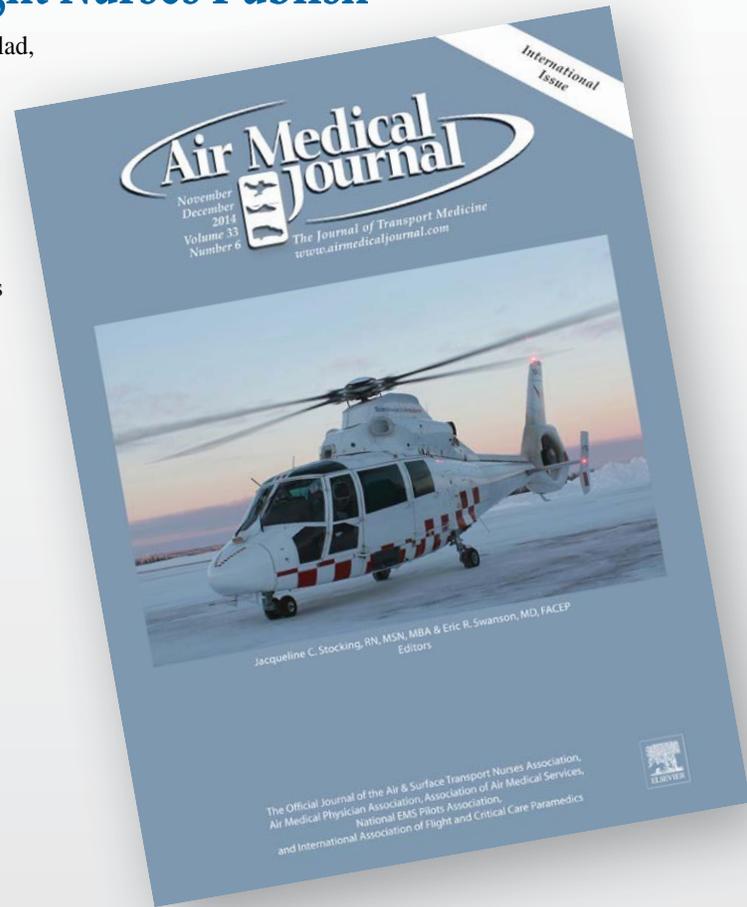
Congratulations to Dr. Kyle English, Dr. Will Selde, and Dr. Glenn S. Ekblad, and Flight Nurses Matt Heffelfinger, CFRN and Jan Eichel, CFRN on publishing in *Air Medical Journal*! Their article is entitled “Successful Airtaq® Use in an Air Medical Transport System.”

Airtaq® (Prodol Meditec) is an optical laryngoscope used by Air Care in addition to the Glidescope and direct laryngoscopy for intubation. Numerous studies have shown the Airtaq® device was an effective tool in performing intubations, however, one study questioned the effectiveness of the device if training was performed outside the operating room.

Our group subsequently examined success rates of the device when used by Air Care flight nurses after training on mannequins, and found the success rate to be higher than intubations performed by the same flight nurses using direct laryngoscopy. The conclusion of the study was that mannequin training outside the operating room was sufficient to implement the Airtaq® for our use.

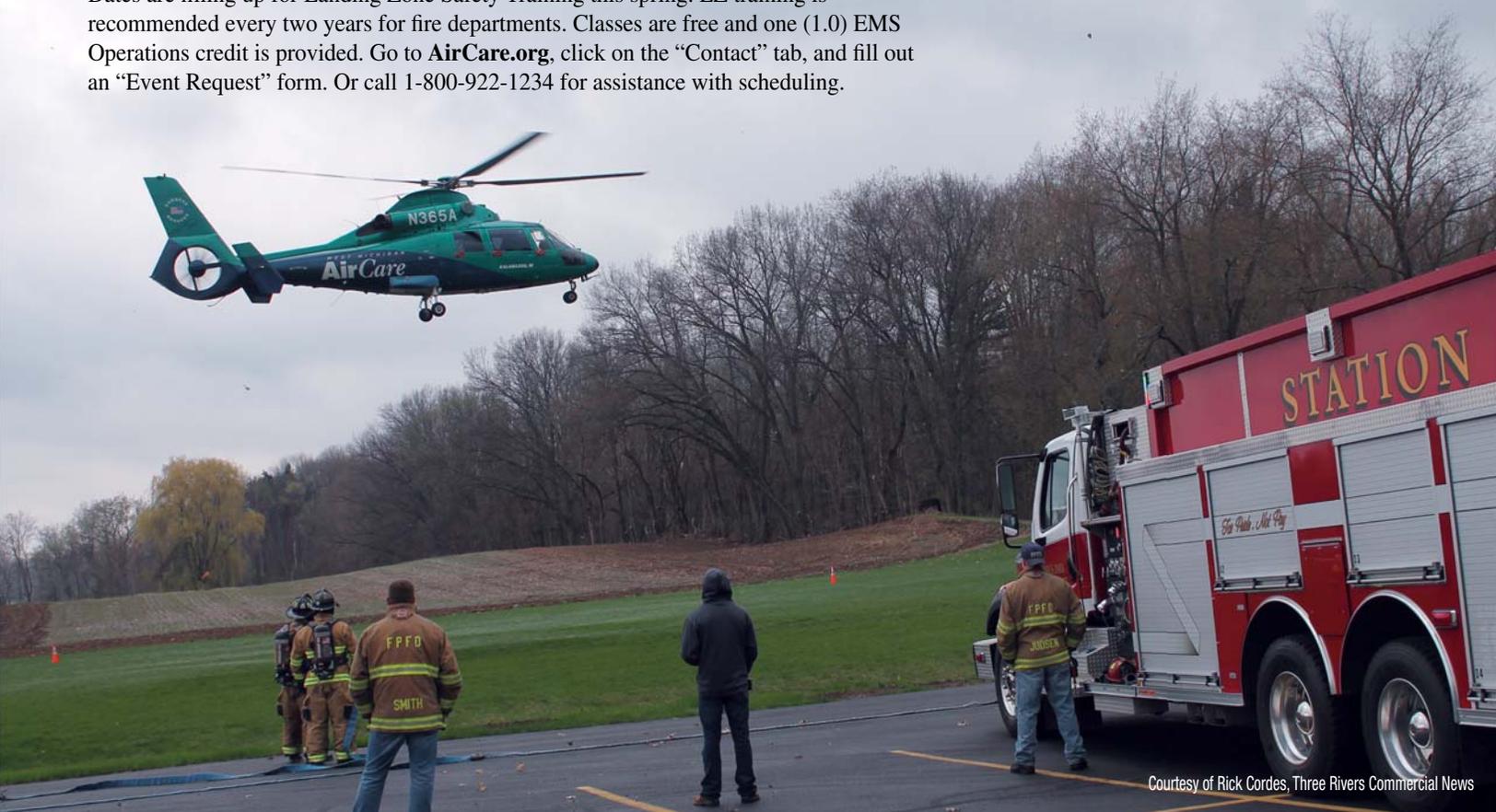
In 2013 the study poster was shown at the Society of Critical Care Medicine (SCCM) conference and at the national Air Medical Transport Conference (AMTC.) Many hours of hard work were necessary throughout the research process to bring this project to publication and we commend the authors and their teamwork!

See the article in *Air Medical Journal*, Volume 33, Issue 6, November–December 2014, Pages 331–334.
ScienceDirect.com/science/article/pii/S1067991X14001928



LZ Class Scheduling in Progress!

Dates are filling up for Landing Zone Safety Training this spring. LZ training is recommended every two years for fire departments. Classes are free and one (1.0) EMS Operations credit is provided. Go to AirCare.org, click on the “Contact” tab, and fill out an “Event Request” form. Or call 1-800-922-1234 for assistance with scheduling.



Air Care Website has a New Look!

Go to AirCare.org to find:

- » The latest news at Air Care!
- » ACLS, PALS or BLS class schedules!
- » Photos of the Air Care helicopter!
- » Request forms to invite Air Care to your event!
- » Online store!



Get Our Mobile Website on Your Phone!



On your phone, go to AirCare.org/mobile and save the "AC" icon to your home screen.

- » Review how to set up a landing zone.
- » Use the Fly Guides to see if a patient needs air transport.
- » Call to request the helicopter.



Find electronic copies of AirWaves at our website: AirCare.org

Please email comments to AirWaves Editor and Flight Nurse Dawn Johnston at dmjohnston@aircare.org.



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PO Box 50406
 Kalamazoo, MI 49005-0406
 (269) 337-2505 Phone
 (269) 337-2506 Fax

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