



“This is Why God Made Helicopters”

April 24th, 2010 started out like a normal Saturday for Mark and Jennifer Soper and their sons Luke, 3, and Jackson, 14 months. Jennifer, a labor and delivery nurse at Lakeland Regional Medical Center, was no stranger to



Jackson Soper, after his recovery.

dealing with bumps and bruises with these two active boys at home. So when Jackson took a tumble at about 11:30 that morning and struck the back of his head, there were no initial indications of the roller coaster ride that awaited them.

After Jackson fell he cried briefly, but seemed otherwise uninjured. About 90 minutes later, however, Jackson began crying and was inconsolable. “His eyes were closed and he just kept crying,” Mark recalled. “Then he threw up a couple of times and we watched the color drain from his face right

in front of us.” That’s when Jennifer knew something was terribly wrong.

The Sopers arrived at Lakeland Regional Medical Center’s Emergency Department 2 hours after Jackson’s fall. Triage nurse Linda Calahan was the first to see Jackson. “He was listless in [Jennifer’s] arms and I immediately took him back to the trauma room,” Linda recalled. Nurse Adrianna Retberg and Dr. Dan Chaffee were quick to evaluate Jackson and an immediate CT scan of the head was ordered. It was read by the radiologist and the results relayed to Dr. Chaffee. Jackson had suffered a significant head injury and had a serious and life-threatening condition: an epidural hematoma. Jackson had a large blood collection in the left rear portion of his head. This was a deeply concerning finding for anyone, let alone a small child. The collection of blood within the skull was slowly compressing Jackson’s brain causing him to lose consciousness.

Dr. Chaffee contacted trauma surgeon Dr. Paul Blostein at Bronson Methodist Hospital in Kalamazoo and began making arrangements to transport Jackson to The Children’s Hospital at Bronson. Jackson was in need of immediate neurosurgical intervention. The best option was determined to be rapid helicopter transport and West Michigan Air Care was activated.



Jackson’s Nurse, Adrianna Retberg

The call was received at 2:45 p.m., and within 10 minutes the crew was in the air en route to St. Joseph. Upon arrival at the Emergency Department at approximately

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Car Versus Train in Battle Creek Helicopter Utilization

West Michigan Air Care appreciates the dedication of the many medical first responders, police agencies, paramedics and medical control authorities that utilize Air Care for their critical trauma and medical patients. This was recently highlighted during an air rescue with Springfield Public Safety, Battle Creek City Fire Department and LifeCare Ambulance near Battle Creek.

The patient, a restrained male driver, had been involved in a car versus train accident with entrapment. Air Care was placed on standby early in the rescue efforts due to the significant damage present to the vehicle. This four-minute early standby enabled Air Care to retrieve blood products, prep for departure, and ultimately launch within four minutes of activation.

During Air Care’s standby, heavy extrication was completed and the patient assessment by LifeCare Ambulance personnel Paramedic Matt Wilson and EMT Emily Garrett revealed acute and progressive difficulty with breathing. Concern was present that the patient may require skills and protocols that were beyond those available to the ground EMS operations. These included RSI (rapid sequence induction) if intubation became necessary as well as chest tube thoracostomy in order to stabilize his condition. Air Care was immediately launched and a landing zone (LZ) was prepared near the accident scene on the grounds of the Springfield Public Safety. Within minutes of the LZ being secured, Air Care was on the ground. Springfield

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LaGrange County Revival

41-year-old Leroy Miller had just finished a hearty lunch at his family's Amish farm on Saturday, December 4th, 2010 when he abruptly fell to the floor, lifeless. His startled family immediately called for help and Leroy's brothers began CPR. Firefighters and EMS arrived and defibrillated Leroy within 13 minutes. After three defibrillations and a short period of asystole,

neuromuscular blockers to prevent shivering which reverses cooling. Leroy was placed on mechanical ventilation and his vital signs were closely monitored including end tidal CO2 readings. When the medical crew performed follow-up ECGs, they discovered why Leroy had suddenly collapsed: the ECGs were positive for Wolff-Parkinson-White Syndrome, a rare and often lethal dysrhythmia.

CPR he received were painful, but it was a small price to pay for such a good outcome. Later during his stay at Bronson, Leroy went to the cardiovascular lab and received an "ablation", in which the small portion of the heart responsible for the dysrhythmia was treated with a laser. This procedure prevents lethal heart rhythms from recurring. On Friday, December 18th, the Miller family invited all the rescue crews to return and celebrate by preparing another hearty Amish meal!

Our hats off to the rescuers from Parkview-LaGrange EMS and Shipshewana Fire, and also Bronson Methodist Hospital for their partnership in improving patient outcomes.

Leroy's attending flight crew: Flight Nurse Dawn Johnston, Flight Nurse Kevin Ferguson, and Pilot in Command Shawn Maxwell



At left is Parkview-LaGrange EMS team Mike Yoder and Kim Jarrett. At right are Shipshewana firefighters Michael Brothers, Lyle Wingard, Mark Lambright, Matthew Schwartz, and Keith Roth.

Leroy was met in the ED by emergency, cardiology and critical care physicians along with many nurses and other assisting personnel. Air Care's medical crew provided full report and Leroy was eventually moved to the Medical Intensive Care Unit for continued treatment.

A few days after his cardiac arrest, Leroy was doing well. He had been extubated and was getting up to walk. His broken ribs from the effective



*By Dawn Johnston, RN, NREMT-P, CFRN
Flight Nurse
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Leroy's heart started to beat again on its own. EMT-Paramedic Kim Jarrett of Parkview-LaGrange EMS started an intraosseous (IO) line and intubated Leroy. Her partner EMT-Basic Mike Yoder, assisted.

Limited by weather constraints to the south, Kim called WMAC to fly Leroy quickly to Bronson Methodist Hospital in Kalamazoo. By the time Air Care landed in one of the Millers' farm lots, Kim and Mike had performed an ECG, started a peripheral IV, and instituted neuroprotective post-arrest cooling measures with cold normal saline. During Leroy's flight with Air Care, the crew continued cooling measures with cold saline, ice packs, and temperature monitoring. They also administered sedation and

Nice Shot!

Thanks to Michael Hubbard for snapping this photo of Air Care departing a scene at a dirtbike track in Bloomingdale.



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Email photos to photo@aircare.org*

“This is Why God Made Helicopters” *(continued from page 1)*

3:15 p.m., Jackson’s condition had continued to deteriorate to the point that he required breathing assistance and intubation. He was given medication to keep the pressure and swelling inside his head as minimal as possible. Jackson was loaded onto a pediatric backboard and a neck immobilization collar was applied. Thirty minutes later, Jackson was ready to leave the ER. Jennifer and Mark were tearful and anxious as they accompanied Jackson to the helipad to say goodbye.



Triage Nurse Linda Calahan and Dr. Dan Chaffee

During transport to Bronson, Jackson’s vital signs were closely monitored. He was given medication for sedation and a reassessment of his pupils revealed that they were now unequal, a change from his initial assessment in the ER. This was a sign that the blood collection was likely expanding and beginning to compress the brain stem. His heart rate and blood pressure were becoming difficult to manage. A call was placed while in flight to update Bronson’s trauma team of the change in little Jackson’s condition. Upon arrival at Bronson’s ER at 4:25 p.m., the decision was made to go straight to the operating room where neurosurgeon, Alain Fabi, was awaiting Jackson’s arrival.

By the time Mark and Jennifer arrived at Bronson, Jackson was already well into his surgery. Afterwards, he was taken to the Pediatric Intensive Care Unit under the care of Dr. Robert Beck, where Jackson’s breathing tube was removed and Jackson began to wake up.

Jackson remained at Bronson for five days and was discharged home on April 29th. Aside from some issues with nausea during his hospital stay, Jackson’s recovery was relatively uneventful. The Sopers expressed their gratitude saying, “He has made a complete recovery thanks to the quick diagnosis in Lakeland’s ED, the amazing flight team at Air Care, Dr. Fabi who performed the lifesaving surgery on my son and everyone [else] involved. He is just fine and back to running, jumping, climbing and enjoying life. We are so blessed to have him.” Dr. Beck summarized Jackson’s experience by saying, “This is why God made helicopters.”

*Jackson’s attending flight crew:
Flight Nurse Sara Sturgeon,
Flight Nurse Kevin Ferguson,
Pilot in Command Rick Morley.*



*By Sara Sturgeon
Flight Nurse
West Michigan Air Care*

Car Versus Train in Battle Creek – Helicopter Utilization *(continued from page 1)*

Public Safety was able to keep the LZ secure which allowed the medical crew to immediately disembark the running aircraft and proceed to the patient’s side while the pilot continued the shutdown procedure of the aircraft. Following report and assessment, the patient was loaded without difficulty and the aircraft departed the scene only 16 minutes after first touching down.

Thanks to the rapid pre-alert by Battle Creek City Fire Department and Springfield Public Safety, and the comprehensive trauma assessment by LifeCare Ambulance, the patient was en route to a tertiary trauma center, Borgess Medical Center in Kalamazoo, with a flight time of only 9 minutes. This saved the patient 23 minutes (based on an estimated 32-minute ground transport time from LZ location) and provided

the patient with a medical crew that could provide definitive treatment for both the head injury and the respiratory difficulty during the transport if needed.

It is this type of collaboration between police agencies, fire departments, ground EMS units and Air Care that improves patient outcomes. Air Care would like to offer our new “Fly Guides” for any Police, Fire or EMS department in order to assist them in making the right choices at the right time for the right patient. The “Fly Guides” can be found at www.aircare.org under the “When to Request” tab. Air Care will

also be distributing copies for your dispatch centers, police/fire/EMS units and community hospitals in the near future. Thanks again for your dedication and perseverance in providing the best pre-hospital care.



*By Kevin Franklin, CFRN/EMT-P
Flight Nurse
West Michigan Air Care*



Left to right: PSO Dan Hillman, PSO Stephen Herbstrieth and Sergeant Kevin Callahan of Springfield Public Safety Department.

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***CE Credits**

15.5 Contact Hours have been provided by the Air & Surface Transport Nurses Association (Certificate #2009-12). ASTNA is an approved provider for the California Board of Registered Nursing CEP 13575.

Approved by the Continuing Education Coordinating Board for Emergency Medical Services (CECBEMS). CECBEMS Activity #08-CECB-F2-0849. CEH Number and Type: 15.0 Advanced.

This program has been reviewed and is approved for a maximum of 16 hours of AAPA Category 1 CME credit by the Physician Assistant Review Panel.

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