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# FLIGHT ROUNDS

A Program of the  
Milwaukee Regional  
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SPRING 2002

[www.flight4life.org](http://www.flight4life.org)



## A SECOND CHANCE

**Kathi Knop, RN**

*Flight For Life - Northern Illinois, Flight Nurse*

**O**n July 23, 1999, 17-year-old Jeffrey Hensel was on his way home to Lake Forest after a hair cut to join his family on a weekend fishing trip when he swerved to avoid “something” and struck a tree. The Lincolnshire-Riverwoods Fire Department was dispatched to the scene. Enroute they requested Flight For Life – Northern Illinois based on reports they were hearing from police. The paramedics found Jeff unconscious with shallow respirations and were assisting his breathing with a bag valve mask when FFL landed at a remote landing zone in the nearby forest preserves. Scott Anderson, EMT-P and I elected to intubate Jeff in the ambulance using Rapid Sequence Induction (RSI) to protect his airway before loading him into the helicopter for the transport. It was an extremely hot day and everyone in the close quarters of the ambulance was dripping with perspiration and extremely concerned about our patient’s chance for survival.

Within 50 minutes of the crash, Jeff was at Lutheran General Hospital receiving Level I trauma care. He remained in a coma for a month and wasn’t able to return home until November. His parents later recalled that it was like having a newborn baby. He had to learn to talk and walk all over again. He has no memory of the event, which is one his parents wanted to forget.

While playing golf in Waukegan on a Sunday morning this past summer, Mr. Hensel heard several helicopters overhead and learned that there had been a serious accident requiring three aircraft on route 41. Ironically, I was also the flight nurse that day. At first he was overwhelmed by the memories brought forth by the sound of the aircraft but then realized that without that sound, Jeff might not be alive today.

# 2000/2001 UPCOMING EVENTS/CONFERENCES

## TNS Refresher Course September 4 and 5, 2002

## Emergency Services Conference September 16, 17, and 18, 2002

Flight For Life is hosting its 18th annual Emergency Services Conference: Trends and Issues 2002. Locations: September 16 6p - 10:15p Racine, WI; September 17 6p - 10:15p Mundelein, IL; September 18 8:45a - 1p Mundelein, IL; and September 18 6p - 10:15p Hartford, WI. Brian Dale, EMT-P and Captain with the Salt Lake Fire Department in Utah will present Angels Among Us - Assessment and Treatment of the Pediatric Patient and That's the Way the Cranium Crumbles.

For more information, call Terry Hirsch at (414) 805-6427.

## Safety Inservice August 17, 2002

The Wisconsin helicopter will offer a safety inservice for pre-hospital personnel in August 2002. The location of the inservice will be Froedtert Hospital. Upon completion of the inservice, personnel are eligible to sign up for a ride along shift with the Flight For Life staff.

Participation in this program is open to pre-hospital personnel in the following counties: Dodge, Fond du Lac, Jefferson, Kenosha (north of Hwy 142), Milwaukee, Ozaukee, Racine, Sheboygan, Walworth, Washington, and Waukesha.

To register, call Terry Hirsch at (414) 805-6427.

## PHTLS

Stay tuned for more information.



NORTHERN ILLINOIS  
MEDICAL CENTER



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## That's my job...

**Lisa Heinz, RN**

*Flight For Life - Wisconsin, Flight Nurse*

Last summer, while packing for a weekend camping trip, my boyfriend Vince asked me if we could leave my rather large First Responder bag at home. "It takes up a lot of room and we have a lot to pack." What? Leave my security blanket at home? No way! My reply was: "Sorry dear. I would feel really bad if we came across an accident and I didn't have any supplies. Don't worry, I'll pack the truck so everything fits." Once on our way northbound (3 hours later than anticipated), the clouds darkened and it started to rain.

We were only a half hour away from our destination when suddenly traffic slowed. I could see a squad car and one other vehicle well off the road and up on the embankment. As we pulled over, I realized this accident had just occurred. Out of the truck with my "security blanket" I scrambled and kicked into flight nurse mode. Scene size up revealed that the vehicle off the road, a 1998 Camaro, had been t-boned by a Ford Ranger. The cab of the truck had been entirely separated, though in one piece yet and still on the road, from the chassis which was upside down in the ditch. No structural intrusion to the cab was noted and the driver was out and already speaking with another officer. There were other "Good Samaritans" that had also stopped and were waving me up to the Camaro on the embankment. The passenger was complaining of difficulty breathing. The driver, a young girl approximately 20 years old, was complaining of low back pain. Both had their seatbelts still on and the airbags had been deployed. The two back seat passengers were out of the vehicle and "walking wounded." Local EMS and fire agencies were on their way, ETA unknown. I began my assessment of the passenger and directed Vince to get the portable O<sub>2</sub> from my bag. The patient was in her mid 50s, awake, alert but confused, and pale. Her respiratory rate was shallow at 30 per minute. She had an open, bleeding deformity/suspected fracture to the right forearm, a large laceration to the upper forehead, and her legs were pinned under the dash. I immediately applied the O<sub>2</sub> and manually stabilized her C-spine. Her husband, one of the back seat passengers, was standing next to me. I directed him on maintaining the immobilization so I could quickly apply a pressure dressing to her head laceration and place a "Sam Splint" with a dressing to the forearm to control the bleeding. A quick radial pulse check revealed a weak pulse at around 100/minute. I kept my "third eye" on the driver during this and was able to ask her a few questions, which assured me she was doing ok, so far at least. All along I kept thinking it would be a good idea to call a helicopter to the scene.

EMS personnel arrived as I was getting the first full set of vitals on the passenger and beginning a secondary assessment. Her initial BP was 130's/80's. Decreased breath sounds on the right were noted as well as right lateral chest wall tenderness. I began to think of all the other injuries this patient could have. Rib fractures? Liver injury? Pelvic fracture? As I introduced myself and gave report to the EMS personnel, I expected to be told that they had things handled and that we could leave. I told them I was an EMT but didn't tell them I was also a flight nurse. The driver was not pinned and was able to be removed quickly for transport. I looked skyward and tried to ascertain if the weather was "fly-able." I ran over to Vince, (who is also one of our pilots from Milwaukee), to get his opinion. He answered, "You never know unless you call. That's what pilots do, Lisa. We make the weather decisions." I asked one of the EMTs what their protocol was for requesting a helicopter to the scene. It was then that I informed them that I was a flight nurse with Flight For Life. The call for a helicopter was then placed. I said a prayer. "Please God, let that helicopter come and don't let this patient die in front of us." One of the EMTs pointed out a huge double rainbow in the sky. I hoped this was a response to my prayer.

It took approximately 30 – 40 minutes to extricate our patient. Our patient was still awake and alert but confused. She was now hypotensive and tachycardic. No change in lung sounds was noted. She complained of pelvic tenderness with palpation. I placed the IV and squeezed in almost an entire liter by the time the helicopter landed. After a quick report to the crew, we "hot loaded" the patient.

As Vince and I gathered my bag, the EMS crew thanked us. We continued on our way. We were silent for quite awhile when Vince said, "Well, I guess it was a good idea to keep that big ol' bag in the truck after all."

Her injuries included: a skull fracture, right rib fractures, right pneumothorax, fractured right forearm, right tib/fib, pelvis and coccyx. I said a prayer for her recovery and rehab process. About a week later, I received a phone call from the county sheriff's department thanking us for stopping and helping. My reply was, "That's my job. I help people."

A few months passed when I received a letter from our patient. She had spent a total of 33 days in the hospital and is still in the rehab process. We converse on occasion via e-mail. She is very thankful and has referred to me as her guardian angel. I'm very touched she feels that way. And again I reply with "That's my job..."

### A Second Chance continued

It was then that he decided it was time to revisit July 23, 1999, long enough to thank the people who rescued Jeff from the near-fatal crash. He contacted the Lincolnshire-Riverwoods Fire Department who made arrangements with Flight For Life to meet Jeff and his family.

Jeff and his family were introduced to a roomful of Lincolnshire-Riverwoods paramedics, emergency dispatchers, and me. "I want to thank each and every one of you personally for saving my life," Jeff told us. "Without you, I wouldn't be here today". There wasn't a dry eye in the room as he continued to thank us over and over again. Hugs were plentiful between Jeff, his parents, and the rescuers. His sense of humor had all of

us laughing at the same time! Jeff told us "I don't get upset about things anymore, life to me now has a new meaning".

It is a rare occasion when a critical patient returns to thank those who were involved in their rescue. Most patients want to forget the accident and fear that meeting those who rescued them may bring back bad memories they have tried to suppress. I thanked Jeff and his family for taking the initiative to meet and thank us that night. In the five years and over 400 transports with Flight For Life, this was only the second time I experienced such a rewarding meeting. Although none of us expect to be held in esteem for the work we do on a daily basis, it is extremely gratifying to be able to see the results of our intense efforts to make a difference.

## Use of Protective Eyewear

**Sharon Purdom, RN**

*Flight For Life - Northern Illinois, Flight Nurse*

**Stu McVicar, EMT-P**

*Flight For Life, Wisconsin, Flight Paramedic*

According to nationwide statistics, nearly 70% of all reported eye injuries were caused by flying objects. Of these, 60% of the objects were smaller than the head of a pin. Besides the obvious items, such as dust and debris, EMS personnel working around a helicopter at the scene, also need to consider other larger items that may be improperly secured, or not secured at all, that can become airborne in the rotor wash of the helicopter. In an effort to provide an additional margin of protection, safety glasses are the recommended way to protect ourselves from not only airborne particles but also from mucocutaneous contact with blood and other bodily fluids. OSHA defines an exposure as contact with potentially infectious material that can be transmitted through the eyes, mouth, mucous membranes, non-contact skin, or other parenteral route. When utilizing Standard Precautions, it means that we treat ALL human blood and other certain bodily fluids as potentially infectious for HIV, HBV, and other blood borne pathogens.

When deciding on the type of safety glasses to use, it is important to find ones that provide good peripheral vision. Proper safety glasses will also allow for air to circulate between the eye and the lens of the glasses. Only 18% of all EMS personnel (excluding those who wear corrective eyewear) wear protective eyewear when treating patients. Nobody can predict when an eye injury will take place, but it's estimated that 90% of all eye injuries could have been prevented if safety glasses had been worn.

## The Limitations of IFR

**Craig Lunaas**

*Training Pilot, Augusta Helicopters*

*Check Airman, CJ Aviation Systems*

Helicopter programs consider a number of factors when evaluating the decision whether to operate their aircraft VFR or IFR. To the EMTs on the ground or the physicians in referring facilities, what is the difference? They want rapid and safe transport for their patient. So what do all the aviation acronyms mean, and how do they affect the decision to fly or not to fly?

**Q. *What is the difference between "IFR" and "VFR?"***

**A.** IFR stands for "Instrument Flight Rules" and VFR stands for "Visual Flight Rules." IFR and VFR refer to the type of flight plan that the pilot has filed and the weather required to remain legal on that flight plan. Actual weather conditions during the flight can vary greatly, however, and that is why it is also important to understand "IMC" and "VMC." IMC means "Instrument Meteorological Conditions," and VMC means "Visual Meteorological Conditions." IMC and VMC are defined by federal regulations and pertain to the minimum cloud ceilings, visibility and cloud clearances required to operate on an IFR or VFR flight plan legally and safely.

A VFR helicopter is limited to VMC, regardless of the type of flight plan, unless an emergency is declared. An IFR helicopter can file an IFR flight plan, and with an ATC (air traffic control) clearance can operate in either VMC or IMC. An IFR helicopter on a VFR flight plan is limited to VMC, the same as a VFR helicopter.

## 2000 Scene Call of the Year Award

The 7<sup>th</sup> Annual Flight For Life Scene Call of the Year Award for 2000 were presented to the Arlington Heights Fire Department and the City of Kenosha Fire Department. This award was developed to recognize and honor the outstanding contributions to patient care by EMS professionals throughout southeastern Wisconsin and northern Illinois.

Applications were sent to all departments who utilized the Flight For Life helicopters at the scene to transport a critically injured patient in 2000. Criteria for the EMS award include: scene safety, triage decisions, complex planning and accident scene management, integration of the helicopter into the call and utilization of skills that went beyond the “call of duty” to treat the patient.

Flight For Life – Wisconsin recognized the City of Kenosha Fire Department as recipients of the 2000 Scene Call of the Year for Wisconsin. The award was presented during the 17<sup>th</sup> Annual Flight For Life Emergency Services Conference.

Early one winter morning, the fire department was dispatched to a motor vehicle crash with injuries. The weather was very cold, with temperatures below zero. Scene assessment showed a pickup truck pinned underneath a semi-tractor/trailer, with the driver of the pickup unconscious, pinned under the truck’s steering wheel. Flight For Life was dispatched to the scene.

It was quickly apparent that the driver needed immediate intervention to establish an airway, as his breathing was slow and gasping. In an extremely awkward position while under the most challenging of conditions, an emergency cricothyroidotomy was performed by one of the paramedics at the scene. The patient was then extricated and stabilized, and immediately transferred by ambulance to a rendezvous location with the helicopter. This teamwork expedited the patient’s rapid transport to the Trauma Center at Froedtert Hospital in Milwaukee, where the trauma surgeons were extremely impressed with the pre-hospital care rendered at the scene. Quick, decisive action at the scene saved this patient’s life!

Flight For Life-Northern Illinois presented its award to the Arlington Heights Fire Department on November 19<sup>th</sup> at the headquarters station for an accident involving 3 cars and a funeral hearse that occurred on Friday, October 13<sup>th</sup>, 2000. One of the victims in the

accident was Police Officer Chuck Tiedje who was trapped in his squad car after being t-boned by a hearse that had ran a red light. Upon arrival, the fire department found the officer in critical condition and three other possible patients.

The Buffalo Grove and Palatine Fire Departments were immediately called in for mutual aid. Recognizing the critical nature of the officer’s injuries, and the extrication effort that would be involved, Flight For Life- Northern Illinois was dispatched to the scene. After a quick assessment by the flight crew, he was “hot loaded” into the waiting helicopter and transported to Lutheran General Hospital. All of this occurred in the “Golden Hour of Trauma”.

The Officer Tiedje spent 1 month in a coma, 2 months in the hospital, and has endured 14 surgeries thus far. He continues to recover from what some of his physicians felt were non-survivable injuries. It is his intent to return to the job that he was trained for and loves once his surgeries are completed.

This call brought forth an additional element for the personnel at the scene that day, the stress of an accident involving “one of our own”. Each of the individuals involved responded to the challenge with the teamwork, professionalism, and expertise required to make a difference in Officer Tiedje’s outcome.

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## 2003 FLIGHT FOR LIFE CALENDAR

Flight For Life produces an annual calendar for distribution to hospitals, fire departments, and rescue squads. Production has begun for our 2003 calendar and we need your help in obtaining quality photographs. The photos can be from a prehospital or hospital setting. The photos must meet certain criteria for use in the calendar. If you have a photograph for publication, call Tammy Chatman at (414) 778-4573 or Claire Rayford at (414) 778-6098 **PRIOR** to submission. A signed release will be required. Credit will be given to the photographer in the calendar.

With your assistance, 2003’s FFL calendar will be as visually exciting as the 2002 calendar. Thanks for your help!

**Q. Can a helicopter fly in different types of weather utilizing IFR?**

A. No. Helicopters are all limited by the same types of weather, the difference being that IFR helicopters can sometimes plan IFR flights in IMC to airports that are reporting ceilings and visibility lower than that required for VFR, i.e. flying from one airport to another.

**Q. What is the minimum ceiling height and visibility for liftoff with both VFR and IFR?**

A. This question has many answers. Not only is it often different between operators, but sometimes the answer changes several times in the course of one flight! We are governed in this area by federal regulations, individual "operations specifications" issued by the FAA, exemptions to federal regulations, memorandums of understanding, and letters of agreement. Here is a simplification of the basics.

A VFR helicopter must operate in VMC outside of controlled airspace. A 1,000 ft. ceiling and 3 miles visibility would be considered "basic VFR," however the operations specifications issued by the FAA allow each operator to set lower VFR minimums. These minimums can be as low as 500-foot ceilings and 1-mile visibility during the day or 2 miles at night; however, many programs elect higher minimums due to local terrain and/or weather patterns for safety reasons.

An IFR helicopter must follow the same VFR rules unless an IFR flight plan is filed and an ATC clearance is received. This clearance allows the IFR helicopter to operate in IMC to a destination airport. The weather at the destination either has to be clear enough for a visual descent in VMC or the airport has to have an instrument approach available. An instrument approach allows the aircraft to descend out of IFR altitudes and land visually.

**Q. What types of weather can helicopters not fly in? IFR? VFR?**

A. Again, all helicopters have the same limitations. We cannot fly in or near thunderstorms or in icing conditions, and we certainly cannot operate in extreme weather such as tornadoes and high winds.

**Q. Does IFR allow you to fly in icing conditions, and is there any equipment that would allow it?**

A. IFR does not allow flight in icing conditions. Flight in icing conditions requires an entire aircraft certification. For example, one piece of equipment such

as a heated windshield would not certify the aircraft. Flight in icing conditions without a certified aircraft would be an emergency situation. There are no EMS helicopters that are currently certified to fly into known icing conditions.

**Q. How do weather radar or storm scopes assist, and what are their limitations?**

A. For the most part, weather radar "sees" precipitation. The heavier the rainfall, the bigger the storm, and the assumption is that there will be associated lightning. A storm scope, on the other hand, displays electrical activity but not rainfall. The key point to either system is that they are used by helicopters for thunderstorm avoidance only; it does not allow passage through thunderstorms.

**Q. Can you fly to a hospital utilizing IFR?**

A. Only if the weather is clear enough to descend from the minimum IFR altitude and land under VFR conditions or the hospital has an approved instrument approach procedure.

**Q. Can you fly to the scene of an accident utilizing IFR?**

A. No, you cannot.

**Q. Why do some flight programs have different minimums than other programs?**

A. FAA regulations and exemptions are written for everyone. Local weather minimums, however, are set by the program and the operator and approved by the FAA. Some programs elect to establish higher minimums than other programs because of local weather patterns and/or terrain considerations.

**Q. With these different VFR minimums, would the program with higher minimums be safer?**

A. In theory, yes. In practical application, not always. The overwhelming majority of weather-related accidents were attributed to pilot error, being continued flight into weather conditions below program minimums. Pilots and medical crews must constantly remind themselves that they cannot pick up every patient and run a safe program at the same time.

If you or your agency has any additional questions regarding weather and VFR/IFR flight, please contact Flight For Life. We will be happy to answer any questions you may have.