**Star of Life**

**Region VII**

On September 19th, 2016 after running some evening errands Timothy

Smith’s life drastically changed direction. As he tops the hill approaching his

home, he feels something break on his vehicle and he immediately loses

control of his steering and begins to drift toward the side of the road. Every

attempt he makes to slow and correct the car causes further loss of control.

The car drifts off the road onto what was first level ground, then into the ditch

where the truck begins to roll several times after he hits a culvert. Incredibly,

the Honda SUV is back on the roadway.

“Once the vehicle stopped, I had so much adrenaline running through

my body that I thought that I was going to be okay. My dog, Abby, was my

main priority at that point. My truck was lyin’ on the driver’s side, so there

was no getting’ out that way. I tried breakin’ the glass in the windshield. Once

that plan failed, I heard a car pull up and stop. Much to my surprise, my niece

and her husband were the help that arrived on the scene first. They helped

me climb out the back hatch of the vehicle, but as I was getting myself and

Abby out of the vehicle, I gashed the inside of my right knee on something.

Once I went to stand up my head was swimmin’ and I immediately passed out.

When I came to, my niece asked for Duwana’s, she’s my wife, her cell phone

number. I was able to give her the number, but suddenly, I started to have

trouble breathing and talking was too much effort as I was almost overcome

by the feeling of blackin’ out again.”

At 6:19 PM we get called to a rollover car accident about 25 miles

away in the northern part of the county. Paramedics Chip Doyle and Tracy

Callahan from Gibson County EMS Medic 3 are dispatched to the scene of the

accident, as are First Responders: AEMT Jessie Shanklin, EMRs Cindy

Shanklin, Tony Washam, Kris Todd, and Fire-fighters Michael Johnson,

Michael McKenny, Cameron Reasons, Shawn Barber, and Shawn Denton—all

from Gibson County Fire & Rescue. Deputy Josh Hayes of Gibson County

Sheriff’s Office and Tennessee Highway Patrol Trooper Brian Cook are setting

up the scene safety. Jessie’s there first. As we pull in, we find an SUV lying in

the opposing lane of traffic, up on the driver's side with the front right wheel

and axel missing. We survey the scene and assess the patient, Timothy Smith.

By report from the first responders, he has “turned purple and stopped

breathing six times” since exiting the back hatch of the SUV. We apply oxygen

immediately. We secure his c-spine. The first responders report that there’s

a contusion, or bruise, developing over the center of his chest like he hit the

steering wheel. There are lacerations on his cheek, right hand and knee, but

no other obvious injuries . . . until we remove his shirt in the ambulance. Man,

there’s this peculiar mottling of the skin in the center of his back . . . what the

heck is that? We radio in that the patient has had multiple episodes of turning

blue and purple and then passing out and there’s this weird mottling on his

back. Capillary refill is 5 seconds; he’s drifting into shock. With his

respiratory effort and symptoms, we suspect a possible lung injury, however

breath sounds are clear and equal and oxygen saturation is 100%. He is

becoming increasingly anxious and when we try to lay him down flat he

complains, “I’m not feeling good. Can’t breathe.” He repeatedly asks to sit up

and wants to roll onto his side. His pale color and mottled back suggest he is

not circulating oxygen appropriately. In paramedic school we were taught

that when a patient presents with these signs and symptoms, there is either a

problem with the pump (heart) or a problem with the container (body). This

patient definitely has a problem with his pump. We need a helicopter and

we’ve got to get this guy to a Level I trauma center. Dispatch is on it.

It is just another routine shift at Air Evac 007 in Jackson, TN. Flight Nurse Emily Pecaitis, Flight Paramedic Ross Roberts and pilot Aaron Myers have just completed shift change and are wrapping up our flight briefing for the evening shift. There’s talk about world and local news, what we’re going to watch on TV, and most importantly­­— what’s for dinner? Our plans are interrupted when the tones go off. The Air Evac dispatchers that night Paramedic Austin Brooks and EMT Kristin Springer have just received a request for a scene flight in Gibson County.

We gather our equipment and blood products and sprint to the aircraft to prepare for the flight, while Myers completes required paperwork and files for flight approval. Six minutes and we are in the air. En route we receive scene and landing zone information from Gibson County E911 dispatchers Beth Peay and Beth Rudd and EMT Tim Cupples. Gibson County EMS provides a detailed patient report. It’s a trauma scene—single MVC rollover with heavy damage, patient self-extricated from vehicle, bystander assistance. On exam he has altered mental status, a positive loss of consciousness, BP = 88/63. Pulse = 147. Respirations = 36/min. He’s hypotensive and has recurring shortness of breath. We anticipate the need for possible intubation and begin calculating the medication dosages and ventilator settings per our company protocols. We discuss possible injuries and needed treatments. First responders continue to communicate with us via radio and confirm they have safely secured a landing zone that is appropriate and within walking distance to the patient and scene. Aaron puts us down at 1852.

Upon entering the ambulance, we begin our primary assessment. The patient is fully immobilized with spine precautions. He has two large bore IVs with fluids running. A non-rebreather with O₂ is in place. He is alert and oriented but restless, wide-eyed, repetitive, and expressing impending doom. Blood pressure is 88/63 and heart rate’s in the 140’s. Heart tones are audible and not muffled. There is tenderness over his sternum and right chest wall. Additionally, there’s a significant, expanding contusion to his middle chest. We are extremely concerned about his narrow pulse pressure, that’s the difference between his systolic and diastolic numbers. The hair on the back of my neck goes up. Putting all these signs together I’m extremely concerned for the possibility of a cardiac injury.

As a team, we fly together often and our intuitions pick up each other’s emotions and feelings on just about everything. There is a dread sense of urgency among everyone crowded into that ambulance. We start discussing strategies; specifically, do we take the precious time to intubate prior to loading onto the aircraft or due to his unstable condition do we “scoop and run?” We all agree that this guy needs definitive treatment NOW and it’s a 45 minute flight to Regional One. If intubation or blood transfusion is required, we can complete those in flight. All this assessing, evaluating and decision-planning has happened in the crowded ambulance in the six minutes since we entered. We decide: we’re goin’ . . . now.

Just before loading the patient on the aircraft, we lose a blood pressure. “Shoot! Did I make the right decision?” We load and secure as I pop in a third IV and squeeze in another liter of normal saline. It’s 8 long minutes until we get another one. 90/66. “Geez! Did I make the right decision?” The blood pressure climbs a little higher with the next cuff cycle. “Thank you, Jesus! Just get us down.” Cautiously, we give some Fentanyl for pain and his BP is 110/64 and his pulse comes down into the 120s. Though there appears to be improvement in the patient’s condition, this is a scary situation. This guy just doesn’t look right. That bruise on the front and back of his chest. His sense of impending doom. The hypotension. The presentation is unsettling.

We give our first report to Regional One with an approximate 20 minute ETA. Because Emily has worked in the Shock Trauma unit at Regional One Health since 2008, she makes the call. From her experience working there, she suspects that her report will not get us Level I status; however, she is adamant that the patient is critical. But, there is push back.

She radios a report 6 minutes prior to landing to update the staff on the patient’s condition. Pecaitis again expresses concern that the patient has high suspicion for thoracic trauma that is supported by the patient’s mechanism, presentation, affect, chest contusion, mottled posterior chest, and vitals. She requests that a physician meet and assess the patient in the trauma hallway upon their arrival. Memphis MedCom reassures us that the trauma physician has been apprised.

As we roll into the trauma hallway, **a nurse and physician** meet us and perform a triage assessment. They were reluctant to place the patient in the trauma room. “They don’t get it! We witnessed the wreckage. We’ve been with this guy for an hour. I’ve had a finger on his pulse. They know me, damn it! I work here.” It’s sort of a one-sided conversation and we’re getting nowhere with these guys. Meanwhile, the patient needs to be in there! In the trauma bay! As we express our concerns and the argument continues, we instinctively, though subtlety, begin to slowly push the patient’s stretcher toward the trauma room. They give in and the shock trauma activation is announced and the patient assessment and diagnostic testing is underway.

Initially the chest x-ray and FAST (**F**ocused **A**bdominal **S**onograpy for **T**rauma) showed no abnormal findings. However, the patient had again become hypotensive with tachycardic. The trauma attending shared our concerns of possible injuries and reassured us that we had made the right decision in following our intuition and that the patient was where he needs to be.

Now, Tim is prepped for surgery. The surgeon informs him that the studies have revealed a sternal fracture and large pericardial effusion, that’s blood in the sac around his heart. Emergency surgery is mandatory, if they are to save Tim’s life. Tim’s family has not arrived yet. He has to make the decision alone and sign the permit as he’s being rolled back into the OR. The outcome is uncertain. It’s now 2245, 4½ hours since the wreck.

Timothy Smith’s pulmonary artery and right ventricle have been damaged in such a manner that the full repair of his injuries cannot be completed at Regional One Health. After 3½ hours in the OR and a phone discussion with a cardiac surgeon at a neighboring hospital, a decision is made to transport Smith by ambulance to nearby Methodist University Hospital to complete the surgery. The transport is to be done with Tim’s chest still open and a single clamp on his heart chamber to keep it from rupturing. Members of the surgical team accompany Smith to Methodist University in the ambulance, where the waiting cardiac surgical team gives Tim’s wife and family the difficult news that there is at best a 50-50 chance of survival from this injury. It’s now 0345, 9½ hours since the crash.

Three more hours in surgery and there are problems. The only option for the surgical team is to sew an artificial patch onto the right ventricle because the tear in the heart is too large to be closed and still be possible to come off bypass. During the two heroic surgeries, Smith has received 16 units of blood transfusion products all red-tagged (that means it may not be his type); there was no time for a type and cross-match of his own blood. As he is transported to the Cardiac ICU, now the questions are: Can Tim survive the **surgical** assault on his body in addition to the injuries from the wreck? The risk of shock lung? The risk of over-whelming infection? The risk of a transfusion reaction? The risk of renal failure? The risk of by-pass pump brain injury?

Two days later and after endless attention to Tim’s medical condition, the

Cardiac Surgery ICU staff begins the trials to awaken Smith and wean his

numerous life support meds and devices. Miraculously, and I mean

miraculously, he is extubated later that same day. After two days of rescue,

resusucitation, reparative heart surgery and critical care interventions to

avert the numerous anticipated complications of all those life-saving

procedures, Tim begins to talk and he remembers . . . everything! . . . all the

events that have transpired. Incredibly, only eight days later he is discharged

home.

In his nomination Jonathan Wood, the program director at Air Evac

Lifeteam 007 wrote: “This run is a perfect example of the impact that can be

made on patient and family by highly trained, medically proficient providers

that understand their role as patient advocates. From the initial call to the

patient arrival in surgery, clinical decision making, teamwork across agencies,

excellent communication and true concern for the patient led to this patient

returning to his life and family. This display of patient-centered attitude

assured that Mr. Smith was correctly navigated through the EMS system from

moment of contact with First Responders until the moment he was on the

Shock/Trauma table at the closest Trauma Center.”

It is for these reasons that Gibson County E911, Gibson County EMS, Gibson

County Fire & Rescue, Gibson County First Responders, Gibson County

Sheriff’s Department, the Tennessee Highway Patrol and Air Evac

Lifeteam 007 receive the 2017 Star of Life Award for Region 7.

Director Tidwell will now present to Tim his “Certificate of Life” that reads: “It

is hereby certified and solemnly attested that Timothy Smith survived a life-

threatening event on September 16th, 2016. This certificate commemorates

the first day of the rest of your life.”