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Unnecessary flight risks?

Review of 26 fatal medevac crashes shows many didn't involve life-or-death missions

By Robert Little

October 23, 2008

The medical helicopter crash in Prince George's County that killed four people last month was one of more than a dozen fatal crashes nationally during the past six years that raise doubts about whether the victims ever needed to leave the ground.

A review by The Baltimore Sun of crash records and other documents on the 26 fatal medevac crashes in the United States since 2003 shows that many did not involve urgent, minutes-from-death missions. At least eight involved patients who waited longer for a helicopter than a ground ambulance might have needed to drive them to a hospital. And at least six were for patients discharged soon after a helicopter dropped them off at a hospital, or who survived a lengthy ambulance ride after the helicopter sent to get them went down.

The recent history of medevac crashes also includes heroic accounts of late-night flights to retrieve critically ill or injured people in foul weather and urgent missions such as transferring a sick woman from an underequipped hospital in rural Alaska or plucking a young hiker with heat stroke off a mountain in Utah. In the wake of last month's deaths, Maryland officials have repeatedly defended the state's 4,500 annual flights as safe and necessary for saving lives, even if some flights appear unnecessary in hindsight.

But one patient who died after an accident in Arkansas had waited in an ambulance for more than an hour for a helicopter that was to fly him 35 miles. Another victim with a broken leg waited while three helicopters tried to fly through fog, even as ambulance drivers offered to take her to a hospital.

In four cases, including the Sept. 28 incident in Forestville, patients survived not only their initial condition but a subsequent helicopter crash.

Half of the 26 fatal medevac accidents occurred during missions to transfer patients between hospitals - one for a distance of 10 miles - and many of the transferred patients waited hours from the time a helicopter was called until it arrived and was ready to take off again, records show.

Officials at the state agency that oversees emergency medical care in Maryland plan to convene a panel of national specialists to review the state's medevac system and recommend potential improvements. The National Transportation Safety Board will hold a public hearing next year to explore the potential causes of a sharp increase in fatal medevac crashes, including eight this year.

But a growing list of medical specialists are planning their own national dialogue. While regulators such as the NTSB and the Federal Aviation Administration focus on issues of maintenance and safety each time a helicopter crashes, some doctors say that a critical review of helicopter flights from the medical perspective is overdue.

"I'm all for heroes - for the firefighters who climbed up the stairs while the World Trade Center was falling down or anyone else who risks their life to help people," said Dr. Jeffrey P. Salomone, deputy chief of surgery at Grady Memorial

Hospital in Atlanta, and chairman of an American College of Surgeons committee that considers guidelines for pre-hospital emergency care. "But it's a real tragedy to think someone could die trying to help a patient who didn't have a life-threatening injury to begin with."

"I remember a patient, an 11-year-old boy, who flew in from a motor vehicle accident and was just standing there, and I asked him, 'Are you hurt?' and he looked at me and said no," said Dr. Marc R. Matthews, trauma director of the Maricopa Medical Center in Phoenix.

"It's that kind of laxity that can get people killed," Matthews added. "It's unintentional, of course, but it's dangerous and it needs to stop."

The records of helicopter crashes do not always include detailed medical information, and doctors caution that the complexities of each case often are not apparent from the paperwork. Police accounts of the fatal collision of two helicopters in Flagstaff, Ariz., in June, for instance, do not reveal that one of the patients onboard, a firefighter bitten by a spider, was apparently in anaphylactic shock, a condition that can be quickly fatal without advanced care.

But the records do show that patients sometimes are not in such dire medical condition that a few minutes - or even a few hours - would make a difference.

For example, a 71-year-old man injured in a vehicle rollover in Arkansas last year waited with an ambulance crew for more than an hour before a helicopter came to fly him 35 miles. He died from injuries received when the aircraft crashed soon after takeoff.

In June, a 58-year-old in Huntsville, Texas, with a ruptured aortic aneurysm waited more than two hours for a helicopter to take him to a Houston hospital, 72 miles away. He and three crew members died when the helicopter crashed into the woods two minutes into the flight.

In the case of Alicia May Goodwin, 27, who was hit by a truck on South Carolina's Interstate 26 in 2004, ambulance crews offered over the radio to drive her to a trauma center 48 miles away, according to records from the Newberry County Sheriff's Department. They were told to wait for a helicopter - the third to attempt the flight on a foggy July morning. More than an hour later, Goodwin and three medevac crewmembers died in a crash less than a mile away. Before the helicopter crash, Goodwin had suffered what medics and her family's attorney described as a serious leg injury but was not in any immediate danger.

"All the medical experts we could find said she was stable and coherent," said Jeffrey R. Harris, a Georgia attorney who won Goodwin's family an undisclosed settlement from the helicopter's operator. "Getting her into an ambulance and to a trauma center would have been easier."

Some advocates of helicopter transport say a simple assessment ignores one of the key benefits of a medevac system - minimizing the amount of time that patients spend in transit. Because providing medical care can be difficult inside an ambulance or inside a helicopter, limiting the duration of the trip can be the most important concern.

"Think of a hospital as a safe zone," said Jonathan Godfrey, transport coordinator for the Children's National Medical Center in Washington. "When a patient leaves the hospital to go to another hospital, whether by ambulance or

by air, the resources available to the medical crew are greatly diminished."

Godfrey, a registered nurse, was the sole survivor of a 2005 crash into the Potomac River, which happened after he and his crew delivered a cardiac patient from Frederick to Washington. The patient, Godfrey said, benefited from the helicopter trip's speed and advanced care, and even the crash has not caused him to question the medical value of flying.

Some recent crashes illustrate the kinds of cases that Godfrey describes.

A flight that crashed in 2004, killing four people, was ferrying a 3-month-old child with pneumonia about 300 miles across rural Texas. The child was in respiratory distress, according to news accounts, and the 1 1/2 hour flight to advanced care might have taken more than four hours by ground.

The flight of a 60-year-old woman with an infection and low blood pressure across Alaska, which crashed last December on the way to a hospital in Anchorage, would have required a ground ambulance to take either a ferry or a 400-mile detour around Prince William Sound.

But the potential medical benefits are not always so apparent. In Falkner, Miss., a helicopter responding to a traffic accident crashed after experiencing mechanical trouble. The patient, who had what the local fire chief described as "a pretty bad leg injury," was driven 57 miles to a trauma center in Tupelo without incident.

Maryland has implemented a change since last month's crash that is designed to limit the number of flights that are not medically necessary. Patients with obvious severe injuries are flown whenever helicopters offer a "clinically significant reduction in transport time," but more questionable cases now require consultation with doctors at the receiving hospital.

But specialists outside Maryland say they will pursue a broader re-evaluation of helicopters for medical transport, particularly as examples mount of flights that might not have benefited the patients onboard.

"Every time a helicopter crashes, there's always this emotive, knee-jerk reflex from the community that everything's OK," said Matthews. "I could understand if a crash was an infrequent event, but it seems like there's a new one every few weeks."

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