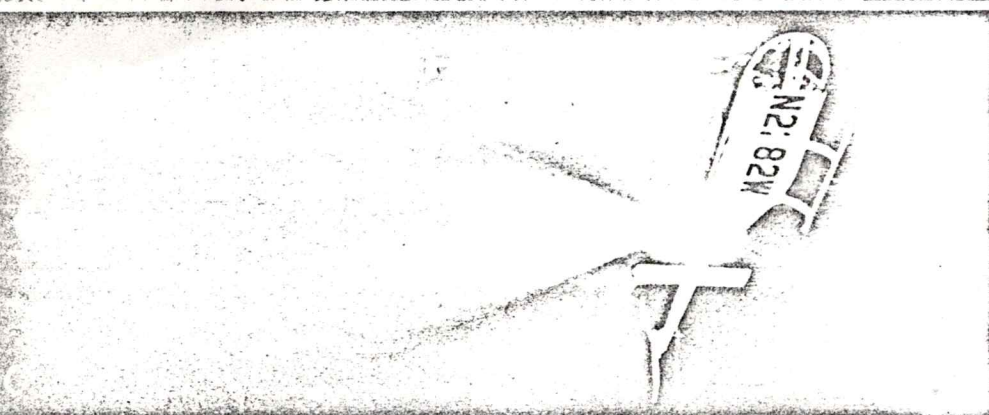


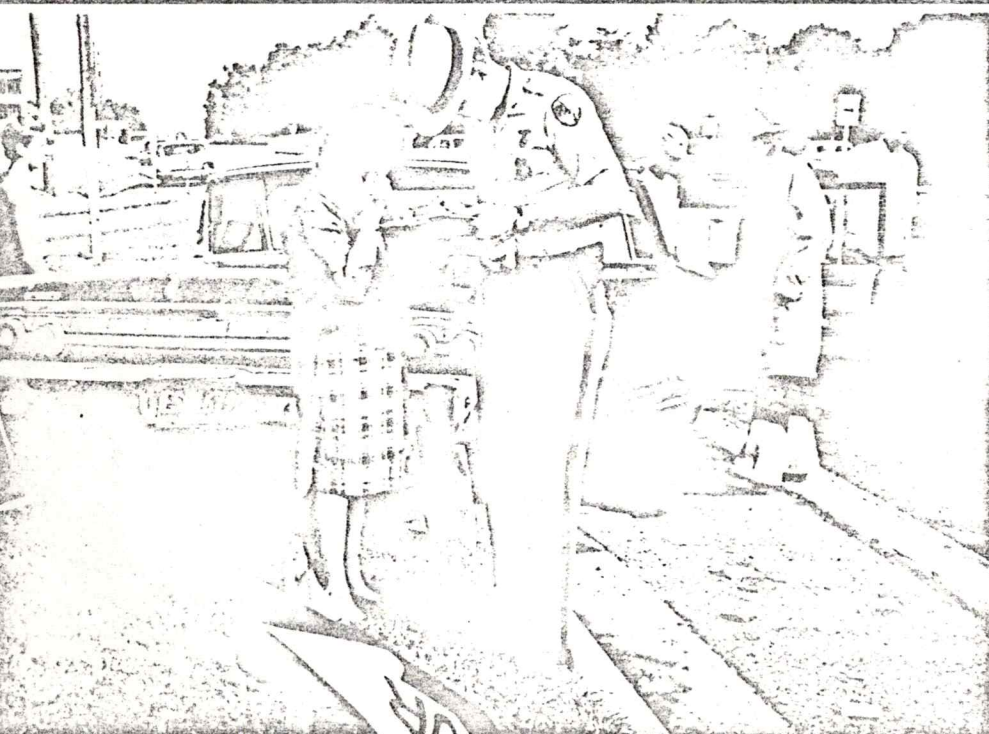


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Maryland's Airevac System Is Lifesaver



Accident victim is placed in litter-equipped JetRanger (top). Helicopter's powerful Nightsun light illuminates area (center). Motor vehicle collision injuries often require rapid, specialized treatment.—Photos courtesy of Maryland State Police and University of Maryland.

A system of transport of critically ill and injured persons in helicopters of the Maryland State Police Aviation Section has proved so successful that many other states have requested assistance from Maryland in setting up their own aviation units.

With only two helicopters (Bell JetRanger 206A) and four two-man crews (pilot and observer, both highly trained as emergency care specialists) the Aviation Section, in the last nine months of 1970, performed 197 medical transports to the University of Maryland Hospital in Baltimore which has developed a Center for the Study of Trauma that provides critical patients the best immediate treatment available in the United States.

(Editor's note: Maryland State Police have added a third JetRanger since this article was written.)

Concurrently, the helicopters carried out police duties, including traffic and criminal surveillance, search, location and rescue, and apprehension of lost, missing, wanted or stolen persons or property.

The man who directs this activity is Lt. Frank D. Hudson, Chief of the Aviation Section. Hudson told *Government Executive*: "Over the years, we have watched persons with life threatening injuries or illness die at the scene awaiting an ambulance; die on their way to the nearest hospital, or die in that hospital due to inadequate facilities, personnel and equipment to offer the necessary immediate care and treatment for survival.

"Roughly 40 percent of the persons killed in Maryland die in hospitals and half of these could have likely been saved if promptly and properly diagnosed and treated," Hudson continued. "Still, present policy seems to be to transport most injured, without regard for the severity of their injuries, to hospitals whose chief distinction is being nearest to the scene. When or if the receiving doctor feels the injury is too severe to be treated in his facility, the patient is transported to another hospital (providing he has survived thus far). This adds up to an appalling waste of time, which can be ill-afforded by the person with the life threatening injury or illness."

To help overcome the problem the Trauma Center was established. Treatment centers of this caliber are enormously expensive and difficult to staff. Rapid development of additional trauma centers cannot be expected so, says Hudson: "It is im-

perative that safe, rapid transportation be provided to persons with life threatening injury or illness so the services of the Center can be made available."

The Trauma unit reports the survival of at least 64 persons received would have been in doubt if helicopter transport had not been available. Medical authorities indicate that a seriously injured accident victim should be in the hospital within 30 minutes (with 60 minutes the outside practical limit) of the mishap.

"With the surface traffic of today and insufficient medical facilities equipped to handle the severely injured," says Hudson, "the lightweight, high-speed helicopter is the most effective and economical way to avoid congestion, cover the distances involved and assure that highway injured do receive needed treatment in time.

"Better service can be provided. The most obvious area that needs strengthening is the education of and acceptance by police, ambulance, and medical authorities of the fact that the best interest of the patient can be served. Some units are still guarding what they believe are their prerogatives. This causes some critical patients to be taken to an outlying hospital (and often held there) instead of going directly to a major trauma unit. Accreditation of hospital emergency departments could go a long way toward solving this problem."

Hudson reports that at present his service can only transport persons from accident scenes (on a 24-hour basis) in the five counties surrounding Baltimore. These five counties contain half of Maryland's 3,728,900 population. Twenty percent of Maryland's 10,577 square miles of land and inland waters are covered, plus a good part of the 1,726 square miles of Chesapeake Bay that lie in Maryland.

"While we learn," Hudson says, "to better utilize available equipment, personnel and systems, more high quality emergency facilities with trauma units will be needed. Quick response helicopter service will also be needed statewide. Tentative studies indicate that as few as seven fully manned helicopters could provide definitive statewide service."

The operation, as it stands today, was inaugurated March 18, 1970. One of the helicopter units is available for statewide service depending on the situation in the primary five-county area. Each helicopter is

equipped with two portable litters, oxygen, resuscitating and suction unit, and other medical facilities. A one-hour trip by land ambulance is reduced to 20 minutes by air.

Missions performed included response to motor vehicle accidents, industrial accidents, gunshot victims, heart attack victims, and removal of serious cases from outlying hospitals. Four babies were transported. Of the four, one died five hours later. The remaining three, in the opinion of the Intensive Care Unit for Premature Babies opened November 1 by Baltimore City hospitals, would not have survived without the helicopter service, due to the time savings over land ambulance.

Seven body organs used in transplants were transported. Immediate movement of such organs is essential due to rapid deterioration and immediate need. Eight emergency blood transports were made to patients who started severe hemorrhaging while undergoing emergency operations.

Each of the two helicopters flew an average of 3.38 hours every day. Additional crews have been developed. By the end of May, both aircraft were fully manned 24 hours a day by four crews each.

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The expanding use of helicopters as aerial ambulances and the life-saving aspects of quick transportation have been documented in a report by R. Adams Cowley, M.D., program director of the University of Maryland's Center for the Study of Trauma.

The report attributes the recovery of person seriously injured or ill to rapid transport by litter-equipped Bell JetRangers owned and operated by the Maryland State Police. Physical conditions of patients in the report ranged from multiple trauma to congestive heart failure.

Of 22 patients air-lifted during the month of June, 1971, 19 have recovered.

Dr. Cowley points out that the important life-saving factor is to get the patient as quickly as possible to a modern, fully-equipped medical facility.



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COVER

Mack Truck's twin-engine Bell Two-Twelve rests on ramp as a light-turbine JetRanger approaches Manhattan's East 60th Street Heliport. (See Rotor Briefs). On the back cover, Palm Beach (Fla.) County's litter-equipped JetRanger delivers a patient to the roof of Good Samaritan Hospital, West Palm Beach.

ROTOR BRIEFS

You Name It, They'll Do It

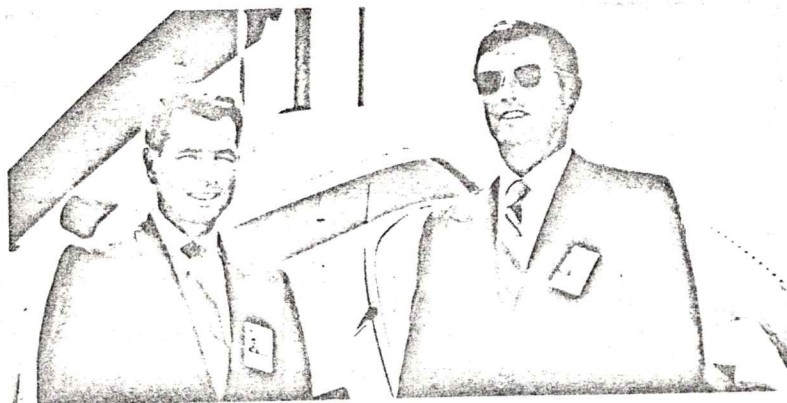
Add this to unusual helicopter errands: A South African Air Force 'copter took part in evacuation of 200 crocodiles from Lake St. Lucia, Natal, to a new home. Seems that increasingly salty water was killing off their usual diet of freshwater fish. How'd the helicopter crew handle the sharp-toothed crocs, some of which weighed 1,000 pounds? Very carefully.

Heliports, Helipads Added

U.S. Steel has dedicated its 64-story building in Pittsburgh with the world's highest rooftop heliport. Other new ones include Manufacturers National Bank in Detroit, Thomas Jefferson University Hospital in Philadelphia, Lutheran Medical Center in Cleveland and St. Joseph Hospital, Memphis, which also is adjacent to St. Jude Children's Research Hospital.

Business Is Good at 60th Street

Pan Am's East 60th Street Heliport in New York had 1,725 movements during June, an 82 per cent increase over June, 1970. It's used by about 50 different private, corporate or commercial helicopter owners within a 150-mile range of the city.



North American Rockwell Pilots Clay Alexander, left, and Evan Thomas, have received 500,000-Mile Safety Awards from the National Business Aircraft Association. Both began accident-free skeins in Bell 47J-2's and continued them in light-turbine JetRangers. They're the second and third pilots to qualify for the award with all-helicopter time. First was J. A. Van Der Vliet, Public Service of Indiana, now a Million Miler.

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