



Dust Off Operations

by Major Pat Brady

Dust Off is the name applied to those medical evacuation resources responsible for helicopter ambulance operations in Vietnam. These are the observations of a Dust Off aircraft commander.



One outstanding aspect of the remarkable logistics effort in Vietnam has been the medical service. The resources devoted to the individual soldier's medical needs surpass any similar effort in man's history and have been more effectively and efficiently employed than ever before. It is not possible to isolate any one element of the medical team as the dominant contributor for this success, but the helicopter ambulance units, Dust Off—a term that I will use to describe tactical aeromedical operations by medical evacuation crews in the Republic of Vietnam—has probably been the common denominator in an exceptionally interdependent effort.

Time, of course, is a great adversary in Dust Off operations, but considerable progress has been made since the Franco-Prussian War when patients were moved by balloons. The helicopter had a dramatic impact in Korea; but even at that stage of technology, patients were remote from en route care, were generally exposed to the elements, and were often delayed by night, weather, enemy activity, terrain, and aircraft frailties. Night and weather missions were routine in Vietnam and the dangers from enemy action and terrain had been minimized by tactical flying techniques and the excellence of our machines. Dust Off brought a well-equipped medical facility to the battlefield.

No one can deny that the technological complexity and the uniqueness of medical operations merit special consideration and exemption from some of the doctrinal requirements imposed on more traditional Army operations. Not enough people know enough about either the aviation techniques or the medical techniques to standardize them according to the customary Army mold. Imagine the potential problems that could have resulted from an attempt to standardize techniques in an operation like Dust Off where both elements were mixed. There is a vagueness and lack of standardization in some areas of medical operations that deserve clarification and discussion.

I will make some observations on various aspects of Dust Off operations based on personal experience which certainly are limited and circumstantial and do not necessarily correlate to the experiences of others.

There is no "book" on Dust Off and I'm not sure there should be. Our experience has been too situational, but there is room for some standardization. This lack of standardization is annoying to the highly mobile tactical commander as he moves through different types of Dust Off coverage on various battlefields. But standardization must never be confused with rigidity which chokes innovation, one of the outstanding characteristics of Dust Off operations.

Let me begin by emphasizing the need for this operation to remain under medical command and control. It is a rare instance when a Dust Off pilot exercises his medical training by actually treating a patient; but he is constantly involved in battlefield triage, monitoring and directing en route care, and patient regulation. In addition to the obvious fruits of specialization, medical control of Dust Off frees the tactical commander to concentrate on other tasks, it insures that we will always budget and plan for this necessity, and ultimately, it prevents our patients from becoming hitchhikers. Non-medical helicopters should not be used for medical evacuations unless it is clearly in the patient's best interest.

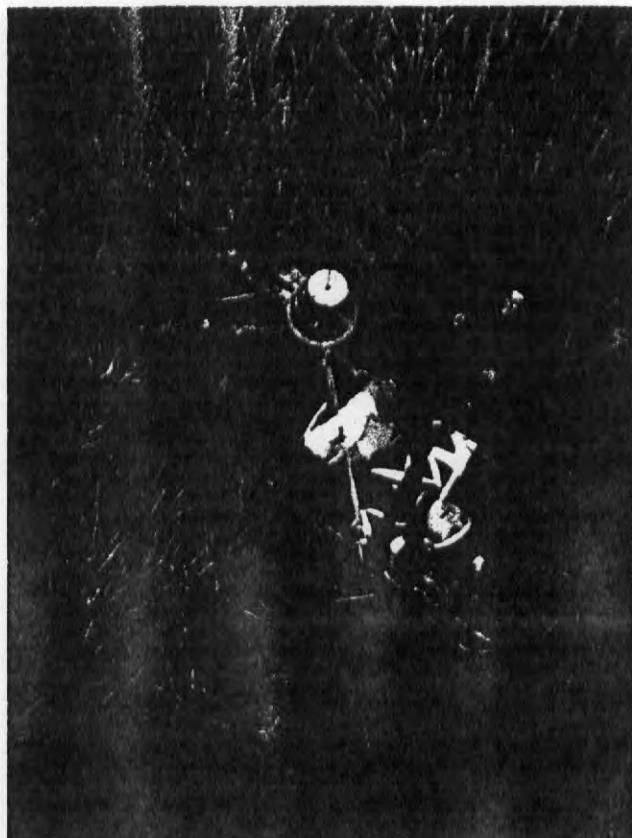
terest and, at the same time, a more efficient use of resources. Non-urgent patients present no problem, thus, resource efficiency is a prime consideration; but there is a tendency for any aircraft to grab urgent patients. Survival often depends on the time to particular *treatment* not necessarily the time to a medical facility—unless that facility is a Dust Off aircraft. Dust Off has all the equipment necessary to resuscitate and sustain life, but, more importantly, it has a medically trained crew that has exceptional experience in treating traumatic injuries and wounds. If it is quicker to put an urgent patient on Dust Off than in a hospital, he should be put there, even if it means an en route transfer.

During a certain period of every mission Dust Off is necessarily a sitting duck. Yet, despite the frequency of hits, I believe that disciplined enemy troops do respect the red crosses—when they can see them. At one time some Dust Off commanders, in order to reduce vulnerability, subdued their red crosses which they believed to be good targets. Subduing a red cross put Dust Off in the rather peculiar position of hiding something that was there only to be seen.

I think this same kind of rationale led a few Dust Off units to mount weapons on their aircraft or to carry an extra gunner to reduce vulnerability. Some disadvantages of this practice are obvious, such as weight and space; but the more serious disadvantages are not so obvious. First of all, the enemy in Vietnam was rarely seen and, even if seen, almost impossible to hit or suppress in most circumstances. More serious problems are that guns cause noise and confusion and create the possibility of firing into friendly lines. Dust Off is seldom aware of all the friendly positions and it is impossible to distinguish enemy from friendly fire—unless you get hit. Additionally, any respect "Charlie" may have had for the red crosses was subject to rapid deterioration when they shot at him.

In discouraging arms aboard Dust Off aircraft, I do not include the crew's individual weapons which are necessary for their survival. Crew members should be authorized both a hand gun and a rifle. They can't carry a rifle and a patient at the same time, but they still require protection in many circumstances. For these reasons I always tried to sell the "quiet approach"—no one shoots. No mad minute, no gunships, no spraying, just peace and quiet; then if you hear fire you can be sure it is the enemy, dodge a bit, and try another route in.

Perhaps no specific activity has caused more problems in Dust Off operations than transporting those killed in action. Dust Off's designated missions are the movement of patients and medical resources and crash rescue. The exclusion of those killed in action does not mean that Dust Off is prohibited from carrying the dead, as some have interpreted, but it does mean they



The hoist was indispensable for loading patients from areas where aircraft could not land.

are not required to. No mission statement, especially medical, should exclude *service* which is what Dust Off is really all about—Dedicated Unselfish Service To Our Fighting Forces. Surely, there are limitations, but a blanket refusal to carry the dead is not one of them.

Very often those killed in action are a serious detriment to the tactical objective. I can see no reason not to carry the dead when it will not interfere with service to the living, it will not present undue danger to the aircraft or crew, or the requesting unit has exhausted all other resources or it is a more efficient use of resources.

The regulation of patients should be governed by only one factor: *patient needs*. The aircraft commander must be the final authority on patient destination since he knows best the patient's needs. This rule excludes all others and includes all that is necessary. All military operations require pragmatic administration; and situations may arise that delay patient delivery, but no policy should do this.

One practice in Vietnam that I could not understand was the refusal by some units to overfly, or bypass, their clearing stations. They brought all patients, regardless of their condition, into the clearing station and required nonorganic aircraft for backhaul to the hospitals. In many instances a hospital was closer than the

clearing station.

Patients who cannot be stabilized by the Dust Off crew or patients who will be returned to duty after minor treatment should go to the physician at the clearing station, if he is closer. Mixed loads present no problem. The urgent patients go where their needs dictate and the back-to-duty patients wait, if necessary, for the ship to return home to the clearing station. In many instances clearing stations would call backhaul aircraft for "urgent" patients while organic aircraft sat on the ground next to the patient. The use of the organic aircraft could save many minutes in the patient's delivery to a hospital and considerably reduce the total flying time for that patient.

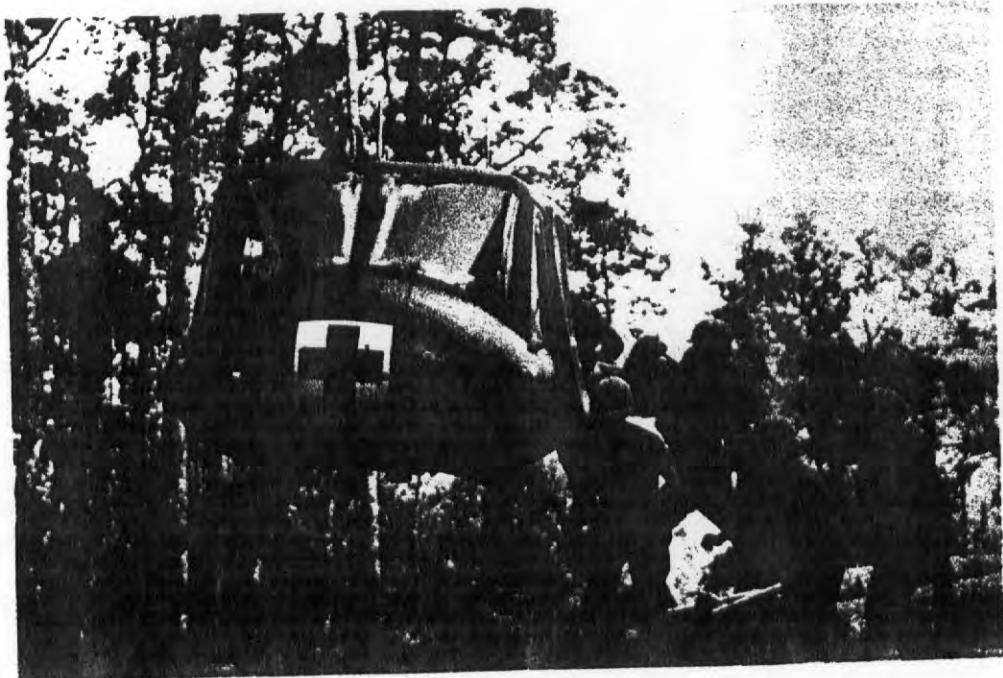
Some situations may preclude bypassing the clearing stations. In Vietnam we could. It may also be that distances and battlefield conditions preclude backhaul by organic aircraft. In Vietnam it would not. My point is that our system should be designed with flexibility to adapt to *all* battlefields not *a* battlefield. If this is not possible then our system must be flexible enough to adjust for the current battlefield. Patient's needs provide a rather infallible guide in this respect, and rules or procedures that interfere with patient needs should be ignored, or changed.

Our system of patient classification—or categories of precedence—in Vietnam underwent several radical changes but remained unrealistic. Originally there was no system. Next, the following categories of precedence were tried—*urgent*, meaning immediate attention within two hours; *priority*, meaning attention within twenty-four hours; and *routine*, meaning attention within forty-eight hours. Later, *urgent* was used to mean immediate to save life or limb; *priority* to mean four hours or the

patient becomes urgent; and *routine* to mean no expected deterioration for several hours. Some use has been made of the tactical *urgent* classification for those patients whose condition was not urgent but whose immediate removal was necessary for tactical reasons.

It should be realized that no system will work perfectly. Often those who classify patients are not qualified to do so. There is not necessarily a correlation between expressions of pain and the seriousness of the wound. Additionally, few soldiers, qualified or not, will call a wounded buddy *priority* and risk waiting four hours when he can say *urgent* and wait fifteen minutes. Overclassification can be a curse on Dust Off operations during periods of great patient flow, low aircraft availability, or both. It has also caused some pilots to push themselves too far for patients they thought were urgent but who were not.

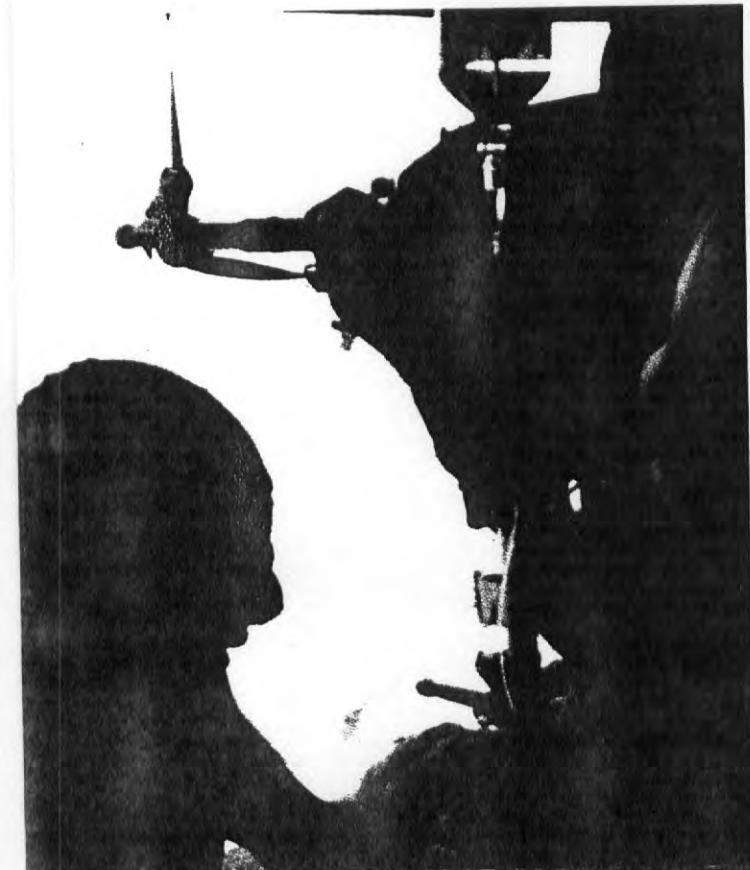
The answer to overclassification is twofold: equal pilot reaction time to *all* classes of patients and continual education of those served. Very few soldiers will call a *priority* patient *urgent* if they know that Dust Off will get there just as quickly for either classification and that a truly *urgent* patient may suffer if a limited resource is expended uselessly on an overclassified patient. Education is a mission-by-mission process—right after the pickup both discrepancies (overclassification) and policy (equal reaction time) must be brought to the attention of the requestor. Additionally, all missions must be carefully documented and any noted trends by particular units to abuse the service must be quickly corrected. I have never really understood the reason for three categories of patients. Actually, there are only two: *urgent* and *non-urgent*. All missions should be flown as *urgent*, resources permitting, and the requestor



Dust off aircraft could usually make a successful pickup if an area were secure enough for ground troops to stand up to load patients.



Dust Off flying is extremely demanding. Missions must be flown regardless of terrain and weather (above). Rapid response and en route care often means the difference in patient survival.



“. . . a special word about the “Dust Offs”—beyond the call of duty was sort of routine to the way they lived. That’s the great part and it must have been a great thing for our people.”

should be allowed to put a time qualification on non-urgent patients, depending on the situation.

I have emphasized reaction time but it deserves re-emphasis. Dust Off must continually strive on all missions to reduce the time in becoming airborne.

Once airborne, the unit having the patient should be called as soon as possible. A quick call not only eases the concern of those with the patient and the patient as well, but also it allows maximum time for coordination, because often the mission request is not accurate or it has been modified. An early call helps minimize time on the landing zone, too—usually a vital factor in mission success.

Equal reaction time is not just a daytime answer, it applies to night missions as well. Many pilots argue against the *non-urgent* night missions since night flying presents added dangers. Why risk increasing our casualties under these conditions? Unfortunately, combat goes on at night and, while we must respect the dark, we should not fear it. Night flying requires a proficiency that comes only with practice—not avoidance. In my experience with units who flew all missions at night, I cannot recall one nonhostile night injury. Luck perhaps, but night missions can become routine and it seems likely that those who fly them routinely will be safer than those who do not. Additionally, night missions are often tactically safer, and many areas that are too “hot” in daylight are readily accessible in the dark.

Many soldiers who have served in Vietnam have had occasion to request Dust Off assistance and even though the required information is mostly commonsense, there is often considerable confusion. Let me run down that critical check list—

- Location, call sign, and radio frequency. Each element is important, but so is its order. The location, call sign, and radio frequency of the patient should be transmitted first. This information is readily available and is enough to complete the mission. The location is usually given in alphanumeric coordinates, but in some instances, a descriptive location, such as “LZ Mary Lou,” will save time.

- Number and type of patients. For example, six

*Off . . . the medevacs . . . Courage above and
it in e to them. It was a daily thing, part of the
id i t meant so much to every last man who
rt o r not, he knew Dust Off was there. It was*

**—General Creighton W. Abrams
Chief of Staff, United States Army**

litter, two ambulatory. This information, together with patients' needs, determines the number of aircraft dispatched. Current aircraft can carry six patients on litters, but it is usually configured to carry three in combat, with a fourth on the floor. However, patients are seldom put on litters in a combat situation regardless of their condition—it is far too time consuming and limits available space considerably. This practice does not adversely affect the patient except the rare cases where patients have neck or back injuries. These patients should be transported on litters. When litters are not used, it allows Dust Off to carry more patients per load, thus more efficiently using resources and reducing crew exposure.

- **Tactical disposition.** The aircraft commander needs to know, Where is the enemy? or Where was he? and Where and What is his weaponry? This information and the terrain are the pilot's greatest benefactors. Dust Off will land as long as there is a reasonable chance for a successful pickup. A good guideline is if ground personnel can stand up in the landing zone to load the patients, Dust Off should be able to make a successful pickup.

- **Patient categories of precedence.** This element is designed to allow more effective and efficient use of resources. I covered it before, but again I emphasize the importance of education and reaction time.

- **Type of injury, wound, or illness.** This provides valuable advance information to the medical system so that it can allocate, prepare, or acquire the necessary resources to meet the patient's needs.

- **Marking at pickup site.** The site may be marked with anything that is visible from above. Smoke is best in daytime but should be adjusted for terrain and light. Whatever color smoke is used should be identified by the pilot after it is thrown and then verified by the ground. Those on the ground should not identify the color as they throw it. This keeps the pilot, who may be some distance from "friendlies," from getting sucked into an enemy area in case communications are compromised. A mirror is okay in daylight and when used in combination with a flashlight at night. A strobe light is best at night. Flares are satisfactory but they burn out and can be dangerous if popped when the pilot is on short

final. A flashlight is always good, and if possible, it is better to have two, one with a colored lens.

- **Special equipment (or supplies needed at the site).** The aircraft is usually completely equipped for any type of mission, but it may not have a hoist since they currently are detachable. In the future we may have similar equipment.

- **Weather.** Weather has been one of the most significant contributors to Dust Off accidents, often because of pilot inexperience. Pilots engaged in Dust Off operations need to know as much about the weather as possible—not to cancel or delay missions but to insure that the most experienced pilots fly them. The requestor should also notify Dust Off pilots of other flight hazards such as wires, dust, stumps, or holes.

It is important when dealing with foreign casualties to understand as much as possible about their medical system and capabilities. In Vietnam, for example, families should be kept together if at all possible. If not, they could be separated forever. Very often the men were gone and when the mother was evacuated no one was left to care for the children. If the children were evacuated, they could never find their way home again—some adults couldn't. Additionally, family members were often a valuable resource to the overcrowded Vietnamese facilities. They provided care for the patient which often was not available otherwise.

Dust Off has been one of our greatest assets in Vietnam, not only for the service it provided to our troops but also for the great example it provided for our allies. Dust Off demonstrates a concern for the individual, a willingness to run risks and expend resources on his behalf. This concern is vital in the Vietnam type of conflict and is a great selling point for our system. There is no limit to Dust Off's potential in civilian-military relations and international goodwill during natural disasters.

Now is the time to consolidate our experiences, while they are fresh. Let's determine what we have actually learned and see if we can avoid repeating our early errors and the painful process of relearning. **ALOG**

Major Pat Brady, recipient of the Medal of Honor, relates that his most significant achievement was the evacuation of over 5,000 patients during his two tours in Vietnam. Major Brady is a medical service officer and a rotary wing pilot. He holds a B.A. degree in Psychology from Seattle University and an M.B.A. degree from the University of Notre Dame. His current assignment is in the Office of Management Analysis, ODCSLOG, Department of the Army.