Air & Surface Transport Nurses Association
Emergency Nurses Association
International Association of Flight and Critical Care Paramedics

Joint Position Statement

Responsible "Helicopter Shopping" Through Selective Resource Management

This Joint Position Statement was developed as an educational tool based on the opinion of the authors. It is not a product of a systematic scientific review. Readers are encouraged to consider the information presented and reach their own conclusion

Statement of the Problem

When hospitals have a patient in urgent need of transport to a higher level of care, and in situations in which a patient's life depends on rapid transport over long distances, helicopter air ambulance (HAA) services often are the best option. An HAA response, however, can be limited by weather conditions, equipment maintenance issues, landing zone availability, distance, flight team limitations, and/or other safety factors. With the growth of the air medical industry and the availability of multiple HAA providers, a practice known as "helicopter shopping," can occur in situations when safe transport may be limited by the above-mentioned factors. Helicopter shopping is defined as a process of making sequential requests to multiple HAA providers in an effort to secure air medical resources for a call response that some agencies turn down due to the factors described above.[1]

"*Selective resource management*," an updated phrase for this practice, includes not only helicopter shopping but also a closed loop feedback involving the requestor, the communications specialist, other HAA providers, and hospital staff. The intention of this updated phrase is to emphasize that patient transport is a shared responsibility, whereas "helicopter shopping" may seem to attribute responsibility or even *blame* solely on a requestor. A lack of selective resource management can increase the risk to flight teams and patients if communication breaks down and complete information is not provided to each service that is contacted. It is vitally important that information regarding previous requests for air medical transport and details about turndown be shared with subsequent program(s) so informed decisions can be made; this is a proactive approach to mitigating risk and/or raising awareness about risk.

This position statement describes the elements needed to safely arrange for transport and mitigate the risk associated with contacting multiple HAA providers, including requirements for notifying agencies of potential selective resource management. Additionally, this statement provides an overview of how crew resource management (CRM) and Just Culture play a role in communicating freely about issues of safety and how recent advancements in technology and the potential benefits and risks associated with modern technology impact transport. Overall, the goal of this joint consensus statement is to educate all impacted

parties about these potential issues involved in selective resource management to reduce pressure on transport team to accept a flight.

Background

HAA transport began in the United States in 1972 and has grown precipitously over the past 45 years. In 1980, there were fewer than 50 HAA providers. Twenty year later, there were 377 and by 2014, more than 1,500.[1] Today there are approximately 1,048 HAA providers operating in the United States. The industry has experienced rapid growth in the number of medical helicopters, flight hours, and the number of accidents that could have been prevented.[2]

Inclement weather is a major threat to HAA flights: HAA providers experience approximately 2.0 to 2.5 fatal accidents per 100,000 hours of flying, with 49% of medical helicopter crashes occurring at night.[3] Between 1998 and 2013, weather was a factor in 25% of all HAA accidents, and 67% of accidents involving weather resulted in fatalities.[4] Even with the addition of night vision goggles, this 49% is far more lethal, with 67% of crashes resulting in fatalities.[4] The National Transportation Safety Board also recognizes contributing factors to HAA crashes, including lack of operational control, pilot fatigue, and human factors, including helicopter shopping.[5]

The Federal Aviation Administration (FAA) hosted the HEMS Weather Summit in March 2006; its goal was to identify the helicopter EMS (HEMS)–specific issues related to weather products and services. Attendees explored possible regulatory improvements, weather product enhancements, and operational fixes, including the issue of helicopter shopping, specific to HEMS operations.

The Commission on Accreditation of Medical Transport Services requires all accredited programs to develop policies that discourage "shopping" by EMS agencies and hospitals.[6] This standard calls for policy language that specifically addresses how an HAA program should interface with other local programs after a weather turndown.

Factors Affecting the Request for Transport

Weather Checks

With the increase in the number of HAA services, often there is more than one option when requesting a transport. This abundance of choices can result in "helicopter shopping." At times, calling more than one HAA provider can be advantageous because one provider may be able to complete a transport when another cannot. For example, providers may come from different geographical locations, and the location of a storm and direction it is moving can affect one provider and not another.

Problems arise, however, when pilots are not aware that other HAA providers have turned down a flight due to weather conditions and thus they cannot make a fully informed decision. This vital information raises awareness and helps mitigate risk. The priority of a pilot is to complete every mission safely. When a sending facility is transparent, informing HAA providers that a request for transport already has been turned down due to weather, this valuable, time-critical information generally prompts pilots to look closer at weather conditions; this scrutiny, in many instances, has proved to be lifesaving.[7-9]

Software programs and websites such as weatherturndown.com are available to pilots and HAA operations. Many programs use a color-coded weather system, also called weather status, regarding their availability for transport. Three differentiating colors typically are used, green for "ok to go," yellow for "weather check with the pilot required," and red for "no go" or "not flyable due to weather." Prior to accepting a flight a pilot will evaluate current and forecast conditions at departure, en route and

destination locations. Depending on this weather information, the pilot will make a decision based on program, aircraft IFR certification, and FAA and personal weather minimums.

Pilot and Aircraft Capabilities

Other considerations are taken into account during a weather check. Pilots must abide by rules that govern flying an aircraft by vision or by instruments, and as such, the terms used to describe these two categories are visual flight rules (VFR) and instrument flight rules (IFR).[10-13] Under VFR, a pilot is solely responsible for maintaining visual separation from both terrain and traffic. [10,11] Most HAA flights are conducted at altitudes 3,000 feet above ground level. IFR consists of a set of rules and regulations established by the FAA to govern flight under conditions in which flight by outside visual reference is not possible.[10,14] For an IFR flight, a flight plan must be filed and cleared for a specific route by air traffic control; IFR flight plans must either "break out" into VFR conditions or go to a destination with an appropriate approach plate. Both the pilot and the aircraft need to be certified to fly IFR. Regardless of whether an HAA provider is licensed for VFR or VFR/IFR, there are restrictions regulated by the FAA. Individual HAA providers also may have stringent regulations on weather criteria that must at minimum meet FAA regulations.

Pilots and HAA providers should inform requesting facilities that the forecast weather on the route does not meet established minimums for safe flight. Requesting facilities should be encouraged to share that kind of information when making subsequent requests to HAA providers. Communication is absolutely key. If a flight is turned down, each subsequent request should note the information obtained from the preceding turndown(s). This information should include any turndowns for weather by VFR and especially IFR aircraft if known to the caller.

Safety Culture

Aviation safety decisions are very different from medical decisions, and this distinction is vitally important. The pilot-in-command makes a determination if a mission is a "go" or "no go"; the pilot should never be given information on the patient's condition when faced with this decision. This ensures that the decision to accept a mission will be based on safety and not influenced by patient condition. For each mission, the pilot conducts a preflight risk assessment; the only information necessary regarding a patient is the patient's location and the patient's weight so the decision to accept the mission will not be influenced by patient condition. Regardless of currently available weather products or aircraft equipment, this information should be presented to the pilot in such a way that an appropriate course of action is selected based on available information. HAA providers must create a strong safety culture that supports good judgment and decisions made by the pilot.

Crew resource management (CRM) principles factor into the decision to accept a transport. HAA providers should have a policy that encourages clinical team members and communications specialists to raise issues regarding a safety concern without fear of punitive action. The policy also must include language regarding zero tolerance for punitive action against members of the transport team for declining of a mission or voicing concerns.[15,16] Just Culture and CRM principles support the ability of flight teams to communicate freely about issues, including assessments of safety compared to the value of a specific transport, without fear of punishment or retribution. Just Culture defines three duties: a duty to produce an outcome, a duty to follow a procedural rule, and a duty to avoid unjustifiable risk.[17] Pilots, clinicians, and communications specialists have a responsibility to speak up if they are asked to take a flight that violates a procedural rule (weather minimums) or the mission presents an unjustifiable risk. This responsibility to speak up can sometimes conflict with the duty to produce an outcome (ie, patient transport).

EMS Perspective

EMS plays a vital role in the stabilization, treatment, and transport of critically ill and injured patients. EMS teams are occasionally dispatched to transport a patient who requires skills outside their scope of practice or resources outside their program capabilities.[12] In these situations, EMS programs often request an HAA provider to dispatch a helicopter to their location. All parties involved have the best interest of the patient in mind. Some circumstances, however, such as inclement weather, limited visibility, and darkness, present considerable risk, making it unsafe for a flight team to accept a mission. EMS programs must consider the safety of all persons involved in HAA transport. If two competing agencies are involved in a request for transport, EMS agencies should provide, at a minimum, turndown information to all HAA providers involved in a request for transport. Every subsequent HAA provider has a right to know that another agency has turned down a flight. This information should be shared between programs both locally and regionally. HAA programs should encourage pilots to communicate with one another locally when these challenging situations arise.

Hospital Perspective

Hospital-based physicians and nurses share the EMS and HAA teams' concerns for the primacy of safety for the patient and the transport teams, and agree that it is imperative that turndown information be provided if more than one HAA provider is contacted. Hospital-based staff also agree with the division of labor described in the above section on Safety Culture and also delineated by the FAA in their regulation of HAA operations,[18] namely that hospital-based physicians and nurses decide whether a patient needs air transport, and pilots and flight teams decide whether air transport is safe. Hospital-based health care providers are not qualified to make decisions about aviation safety and do not have a flight team's knowledge, experience, or weather-related information.[1,19,20]

Given how charged this topic can become, hospital staff who call more than one HAA provider are not willfully or ignorantly gambling with the lives of flight team members, as has often been the characterization.[7,8.21] Rather, they make requests in the interest of the patient, with the assumption that pilots and flight teams are the experts on transportation safety and will render an expert's decision about the safety of the flight. That said, hospital-based staff also recognize that they have an obligation to be transparent about all available information related to the flight, and any information related to prior turndowns in particular. In addition, education programs are needed that train staff in the risks associated with weather decisions and aviation terminology.

Enhanced Communication and Operational Control

In the interest of working together toward increasing the safety of HAA operations, the phrase "helicopter shopping" does an injustice to not only the problem, but also to the hospital- and EMS-based staff who request HAA services. The phrase clearly conveys that the problem is that hospitals and EMS agencies "shop" for helicopters—a sentiment often expressed by those within the HAA community.[4,7,8,21-25] However, the solutions proposed by the HAA community have identified one of the problems to be a failure to communicate turndown information.[1,19,20, 26-28] In some cases, this disparity has resulted in hospitals and EMS agencies being publicly blamed for weather-related accidents in which the pilots had full knowledge of weather turndowns prior to launch.[22, 29-33] If the problem is that hospitals and EMS staff are "shopping" (ie, calling more than one HAA provider), then the problem needs to be clearly stated as such and steps need to be taken to ensure that hospitals and EMS agencies only ever call one HAA provider. If, however, the problem has been stated accurately as hospital and EMS personnel not passing on turndown information, and if feasible solutions to the problem include encouraging[28] or requiring[19] that the reasons for turndown be conveyed or obtained in every subsequent request, then the phrase "helicopter shopping" does little more than assign blame for weather-related accidents to hospital and EMS staff, who all agree are unqualified to make weather-related assessments and "go" or "no-go"

decisions. As previously stated, the ultimate decision rests with the pilot-in-command and/or in conjunction with operational controllers.

In aviation, operational control is well defined in FAR Part 1: "Operational control, with respect to a flight, means the exercise of authority over initiating, conducting, or terminating a flight."[34]

In exercising operational control, a certificate holder must always know the location of aircraft and who is flying it, ensure that pilots and aircraft meet all legal requirements, and ensure that all training is complete. A certificate holder conducting Part 135 operations may delegate the authority to exercise operational control of a specific flight to the pilot-in-command, but the ultimate responsibility rests with the certificate holder.

Effective 2016, certificate holders authorized to conduct HAA operations, with 10 or more *helicopter* air ambulances assigned to the certificate holder's operations specifications, were required to have an operations control center staffed by operations control specialists who, at a minimum, provide two-way communication with pilots, provide pilots with weather briefings, assist pilots in mitigating any identified risk prior to the start of the mission, monitor the process of the flight, and participate in the preflight risk analysis.[35] The FAA also encourages smaller HAA operators to implement operation control centers and adopt this collaborative approach in an effort to further increase HAA safety.

Conclusions

HAA operators have a responsibility to evaluate all factors pertaining to flight safety for every request they receive, regardless if it has been turned down by another operator. A requesting facility or agency has no way of knowing whether the factors that caused one HAA operator to turn down a request also apply to another operator at a different location, with a different aircraft, and different pilots.

Communications centers should routinely ask if other HAA operators have already been called. Hospital-based and EMS providers understand that more effective communication related to environmental risks, including prior safety-based turndowns can help make HAA flights safer. They fully support the call to inform HAA operators of all known reasons that a previous HAA provider turned down a request for transport.[26] Knowledge of prior turndowns can facilitate a more thorough assessment of risk factors and a more conservative approach to decision making.

Joint Association Position

ASTNA, ENA, and IAFCCP support responsible "helicopter shopping" via appropriate selective resource management, consisting of the following measures:

- A shared focus on proactive risk mitigation and proper resource management, including proactive communication of any identified factors that might impact mission safety

- Acknowledgement that proactive communication is the shared responsibility of both sender and receiver and that all transport services should work cooperatively, setting aside competitive influences, to ensure the focus remains on proactive communication and mission safety

- Provision of ongoing education for all parties involved in patient transport processes, emphasizing proper selective resource management and safety issues affecting HAA providers and patients

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This joint statement also has been endorsed by the Air Medical Physician Association (AMPA) and the Association of Critical Care Transport (ACCT).

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