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## Air Transport in Paediatric Trauma: Should Parents Come Too?



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Helicopter emergency medical service (HEMS) crew members and other pre-hospital clinicians must make on-site decisions about whether to allow parents to accompany children from the scene of paediatric trauma to hospital. The presence of a parent during this critical and frightening time is likely a positive influence for the injured or ill child, although staff must always remain mindful of aviation safety and the risk of transporting additional people under stressful conditions.

A recent review of studies, which touch upon these issues, evaluates the factors which influence outcomes for the patient, parents and clinicians. The review appears in the latest edition of the *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*.

### Pre-Hospital Staff Considerations

Trauma treatment for the paediatric patient is often a lifelong process involving physical and psychological healing. For many injured children, the journey from the scene of an accident to hospital takes place in an emergency medical service (EMS) vehicle; in some cases, helicopter is the quickest way to reach medical facilities and physicians. Depending on the nature of the trauma, parents may be present at the scene and wish to accompany their child to hospital.

Studies which have looked at the impact of parental accompaniment of paediatric patients on pre-hospital staff report no increase in stress during the critical transfer for an overwhelming number (96 to 98 percent) of respondents. This is especially important for airborne hospital transfers, because any stress additional to that caused by the presence of an ailing patient can compromise the safety of the flight itself.

### “Aviate Before You Medicate”

In one study cited in the review, four percent of HEMS staff reported adverse events during the transfer of a paediatric trauma patient whose parent accompanied him or her to hospital. In those cases, the parent became aggressive or ill during the flight, a scenario which adds to the burden of HEMS crew members. It is also possible for anxious parents to further stress an injured child. Given the noisy environment which does not facilitate communication during flight, HEMS staff must be sure that such events are unlikely to occur when a parent travels.

“Aviate before you medicate” is the adage of HEMS pilots and crew, and since medical staff participate in flight duties the presence of untrained people can be a dangerous distraction. Absent any threatening behaviour, however, clinicians do well to remember that the patient is on a journey that involves immediate medical care

but also their emotional wellbeing. The presence of a family member is likely to comfort the patient, unless the parent is negatively influencing the patient or staff.

### **Post Traumatic Stress Disorder and Emotional Recovery**

Beyond the small risk posed by additional passengers to the effective performance of HEMS staff, it is necessary to examine the influence of parental accompaniment on the injured child. Although no study has specifically looked at the impact of a parent's presence on the child during and after the transfer to hospital, there is some consensus about the advantage of having a parent at the hospital when the child arrives.

For the injured child entering a hospital environment with its unfamiliar personnel, imposing machinery and possibly invasive treatments, the absence of a parent can cause this to be a continuation of the initial traumatic experience. Injury severity and trauma magnitude correlate positively with post-traumatic stress disorder (PTSD), but peri-traumatic events may also be risk factors for PTSD, although no study has labelled parental separation as one such factor. It should also be noted that paediatric trauma can trigger PTSD in parents following a child's accident: 20 percent of mothers and 12 percent of fathers experience long-lasting effects of the child's trauma. This, in turn, can affect the child's long-term prognosis for psychological healing.

### **Case-By-Case Considerations**

The presence of a family figure on the flight to hospital and afterwards can influence the wellbeing of the child, physically as well as emotionally, far into the future. The potential of parental accompaniment during a traumatic experience to help both the patient and the parent, with negligible negative effect on the HEMS crew, is worthy of future research. Mandating parental accompaniment cannot be formally recommended at this time, however, considering the small risk posed by the presence of additional passengers in an airborne clinical environment.

Rather, decisions will continue to be made on a case-by-case basis, considering a host of assessment factors: the emotional state of both patient and parent, injury severity, flight distance and the availability of other means of transport to hospital. HEMS crew members almost always do well to allow parental accompaniment, since the flight leads directly into the hospital experience, something a child may find frightening without family support. When HEMS transport is not possible, parental accompaniment is even more strongly recommended, since the absence of any flight risk tips the scale in favour of lasting benefits to both patient and parent, outweighing any impact on staff stress levels.

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