intubation may represent a valuable option in prehospital medicine when facing special circumstances.

**Declaration of interest**

None declared.

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**Prehospital analgesia: multimodal considerations**

Editor—I read with interest the recent article by Albrecht and colleagues1 regarding undertreatment of acute pain (oligoanalgesia) in adult trauma patients in the prehospital setting. Pain scores were examined retrospectively and oligoanalgesia was defined as a numeric rating scale >3 on hospital admission. The authors identified that oligoanalgesia occurred in 518 of 1202 patients (43%). This study adds significantly to the developing area of prehospital pain management; however, I would like to raise the following points.

The primary analgesic interventions assessed by the authors were the administration of fentanyl, ketamine, or both. There are non-pharmacological variables which have not been recorded. Spinal boards have been associated with prolonged immobilization and the risk of pressure sores.2 This may represent a confounding factor for patient discomfort and could contribute to increased pain scores, particularly on arrival at the trauma centre. The option of limb splinting for analgesia has not been discussed. This is especially significant as limb injuries occurred in the majority of the study population (66%).

Albrecht and colleagues comment on a group of 10 patients who were ‘over-sedated’ on arrival at hospital. These patients were excluded from the study. It is apparent from Appendix 2 that nine of these 10 patients had been treated with a benzodiazepine. This may highlight a potential safety issue with polypharmacy in the prehospital setting. This is difficult to comment on further as benzodiazepine dosages used are not provided.

Data regarding the use (or omission) of benzodiazepines in the main study population are not presented. This information may have been useful, especially when considering the safety of these drugs. Furthermore, psychological factors such as anxiety are associated with increased acute pain.3 Any anxiolytic drugs administered have the potential to influence not only pain scores but also the dosages of any other pharmacological agents used.

Albrecht and colleagues conclude that variations in individual practice contribute to oligoanalgesia. This may well be the case. However, the assessment of that practice should extend beyond investigating the use of single agents. An ideal study design might consider the multi-factorial nature of pain and prospectively evaluate a multimodal approach to prehospital analgesia, considering both non-pharmacological and pharmacological interventions.

**Declaration of interest**

None declared.

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**Reply from the authors**

Editor—We thank Dr McCarthy for his comments on our study,1 and his points are well taken. As our database does not contain non-pharmacological interventions, we were not able to adjust our analyses for the co-intervention of splinting. However, our rescue helicopters are almost exclusively equipped with full-body vacuum mattresses which provide greater stability and cause minimal pain when compared with spinal boards.2 We therefore believe that this factor is not a confounder of our results. Regarding benzodiazepines, they were administered to 9.1% of patients in the oligoanalgesia group and to 12.1% in the analgesia group, a difference which was not statistically significant (P = 0.09).

In the multivariate model, the administration of benzodiazepines significantly lowered the probability of oligoanalgesia, with an odds ratio of 0.6 (95% confidence interval: 0.3–0.9; P = 0.022), but it did not change the coefficients of the other variables. The administration of benzodiazepines acts as another predictor of oligoanalgesia, but not as a confounder. The retrospective design of our study leaves a significant amount of unexplained practice variation as shown...