

# **Ambulance Care of Prolonged Convulsive Seizures – a Survey**

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#### **Overview**

Seizures are a common cause for ambulance callouts in the UK. <sup>1</sup>

Most epileptic seizures occur in a pre-hospital setting, and of those who travel to hospital, most do so via ambulance. <sup>2,3</sup>

NICE Guidelines
(since 2012)

**Buccal midazolam** (or, if unavailable, IV/PR diazepam): first-line pre-hospital treatment for prolonged convulsive seizures <sup>4</sup>

Despite this, paramedics have reported issues regarding various aspects of seizure management, including <sup>3,5</sup>

System structured to **favour patient transfer** to hospital

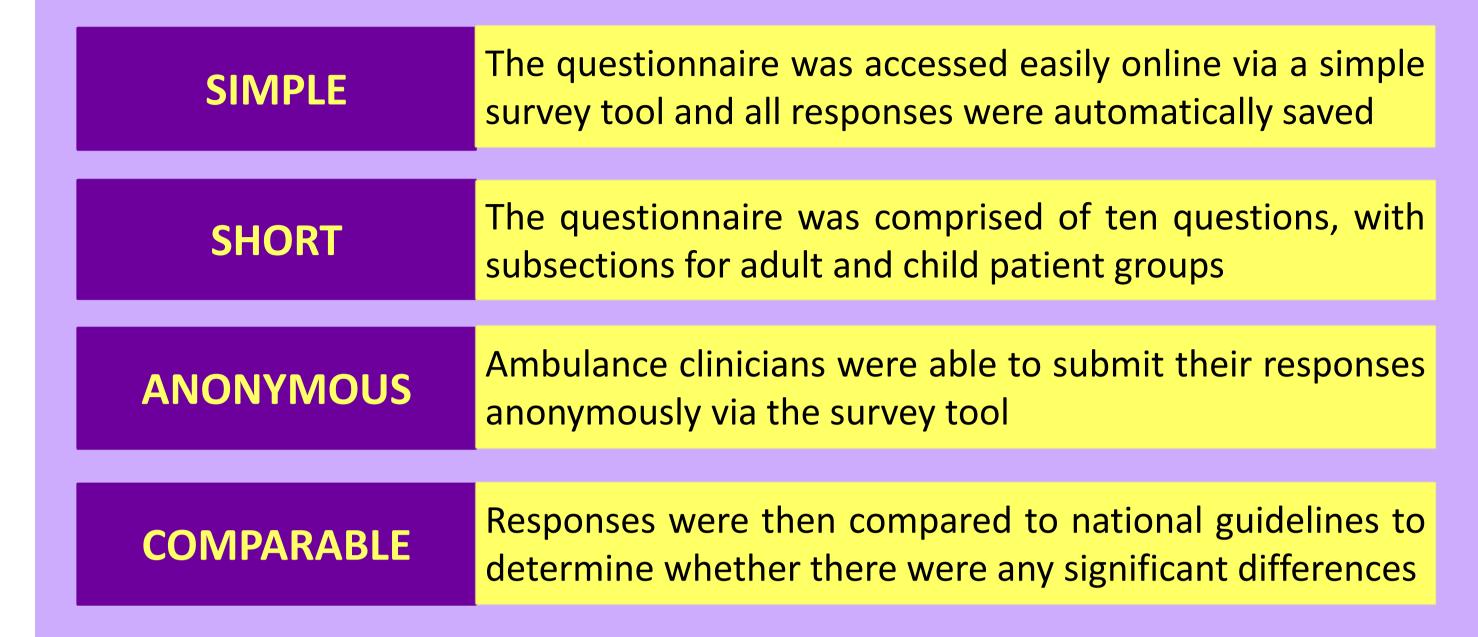
Seizure **training is limited** and potentially inadequate

No access to patients' **medical histories** or epilepsy information

Decisions led by **paramedic experience** rather than published guidelines

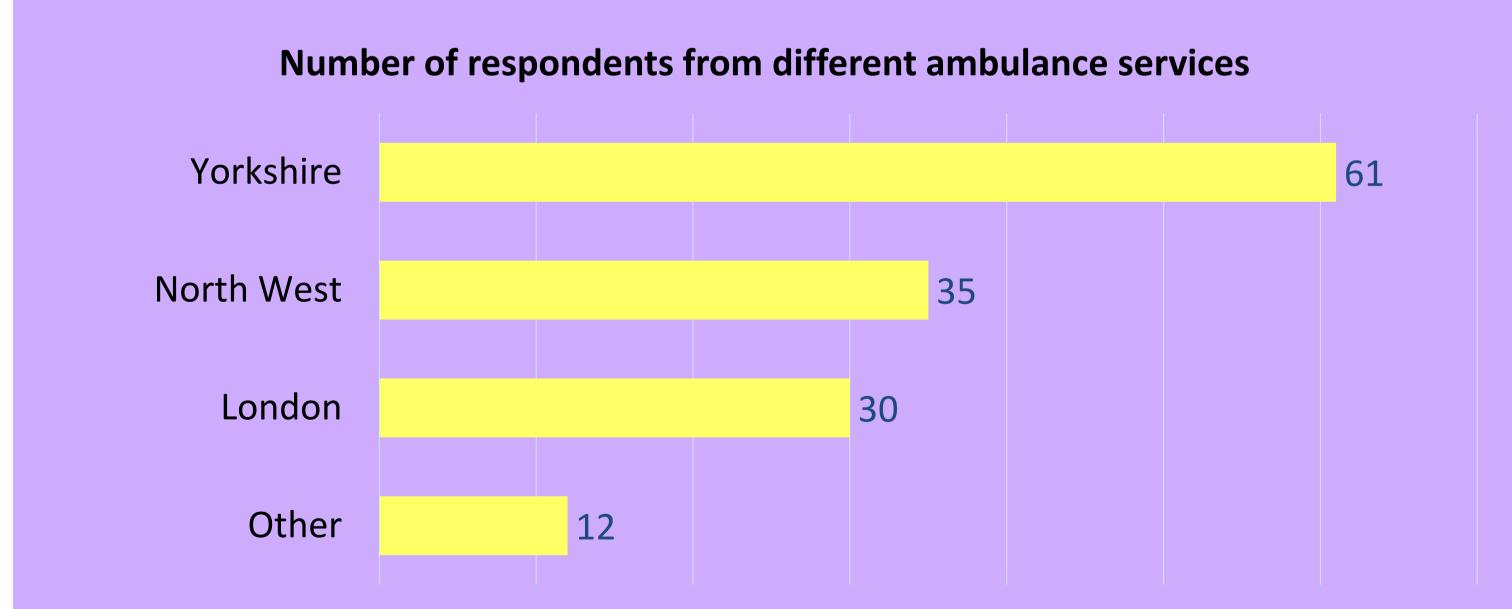
In 2015, the Joint Royal Colleges Ambulance Liaison Committee seizure guidelines were judged to be incomplete, specifically concerning patient conveyance to hospital and the cost-ineffectiveness of treatment guidelines. <sup>6</sup> An update was published in 2016. Until now, there had not been a study of the extent these guidelines are being followed by paramedics.

## Design and Setting



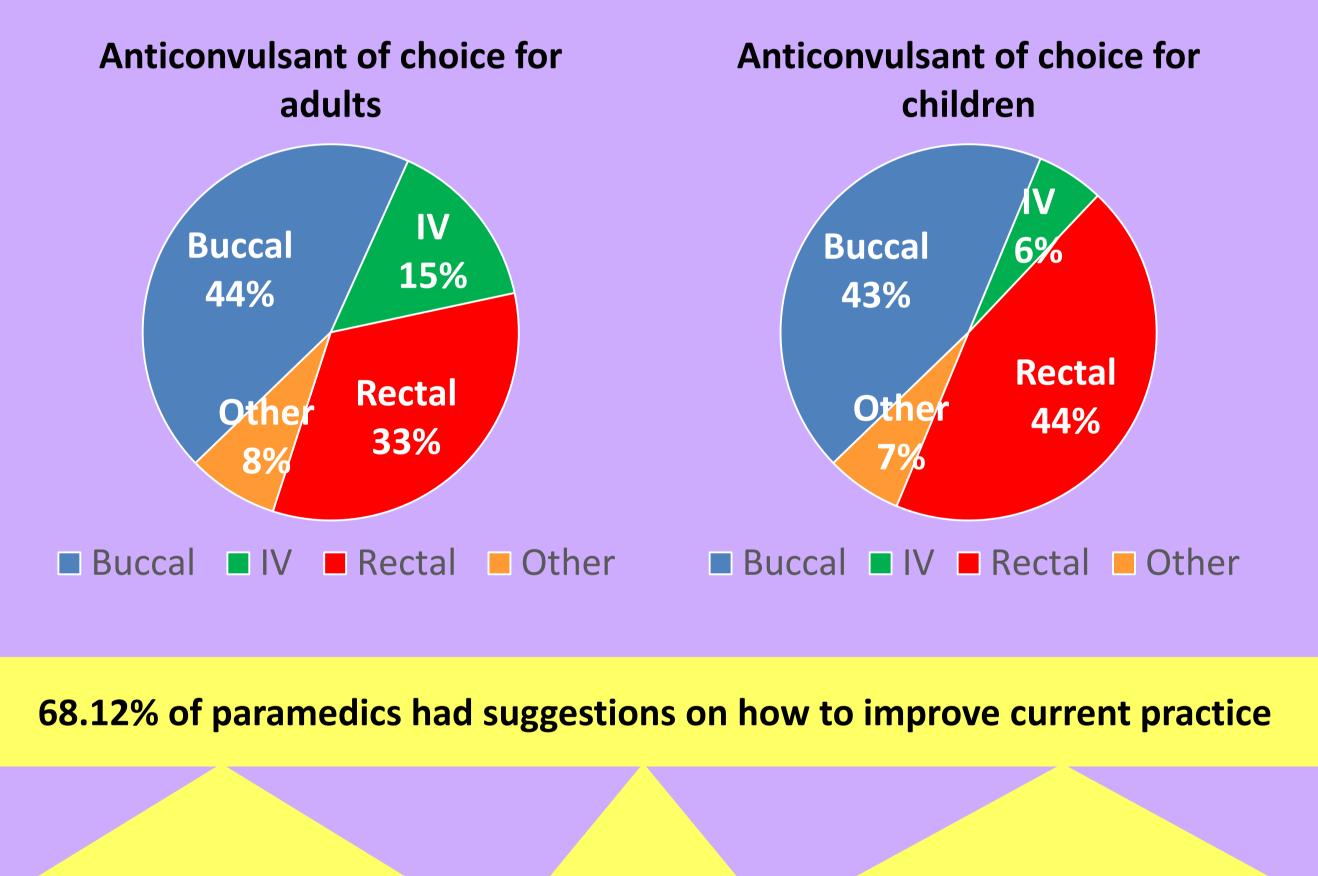
### **Participants**

138 paramedics from seven UK ambulance services chose to complete the questionnaire after being informed about it by their ambulance service.



#### Results

94.03% of respondents were aware of when a seizure requires anticonvulsant therapy. Most ambulances only stocked diazepam; this was always administered when the patient did not possess rescue medication. Ambulance diazepam was also used in over 50% of cases when individual rescue medication was available. Paramedics were likelier to choose rescue medication for children.



16% requested more training on all aspects of seizure care, including initial assessment and airway management

50% wanted buccal midazolam stocked in ambulances

13.82% requested patient information sheets owned by the patient or caregiver, to aid assessment and treatment decisions

#### References

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  •2. Alldredge BK et al. A comparison of lorazepam, diazepam, and placebo for the treatment of out-of-hospital status epilepticus. NEJM. 2001;345(9):631-
- •3. Burrell L et al. Decision-making by ambulance clinicians in London when managing patients with epilepsy: a qualitative study. Journal of Emergency Medicine. 2013;30(3):236-40.
- •4. National Institute for Health and Care Excellence. Epilepsies: diagnosis and management (clinical guideline 137); 2012 (updated 2016) [Available from https://www.nice.org.uk/guidance/cg137.
- •5. Sherratt FC et al. Paramedics' views on their seizure management learning needs: a qualitative study in England. BMJ Open. 2017;7(1): e014024.

  •6. Osborne A et al. Pre-hospital care after a seizure: Evidence base and United Kingdom management guidelines. Seizure. 2015;24:82-7.

### Conclusion

In this sample, paramedics seldom had midazolam available to use, and whilst first-line medication was always chosen, practice varied with regard to which medication to use and when during the treatment of prolonged convulsive seizures. More is needed to ensure optimal patient management and outcomes to reduce the incidence of status epilepticus and keep people with prolonged seizures out of hospital.