Torbay and South Devon NHS
NHS Foundation Trust

AUDIT ON THE MANAGEMENT OF PROLONGED EPILEPTIC SEIZURES IN THE COMMUNITY AND HOSPITAL SETTING

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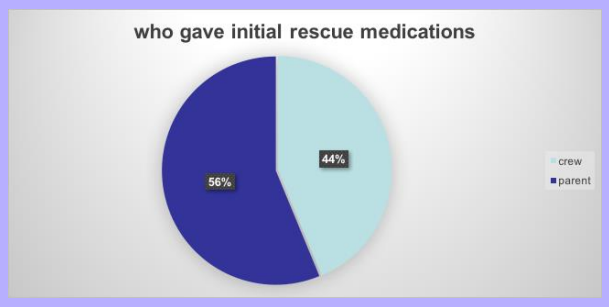
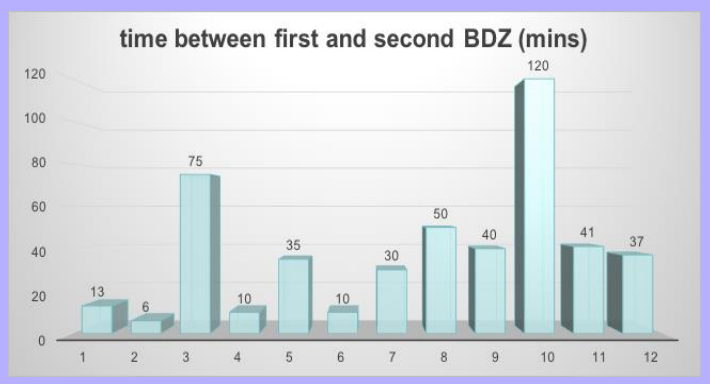
"Time is Brain"[1]**.**Status epilepticus (SE) in children is associated with mortality and morbidity[2]. Treatment of prolonged epileptic seizures in non-hospital setting can be challenging, however timely intervention has been shown to reduce the incidence of prolonged seizures and improve neurological outcome [3].

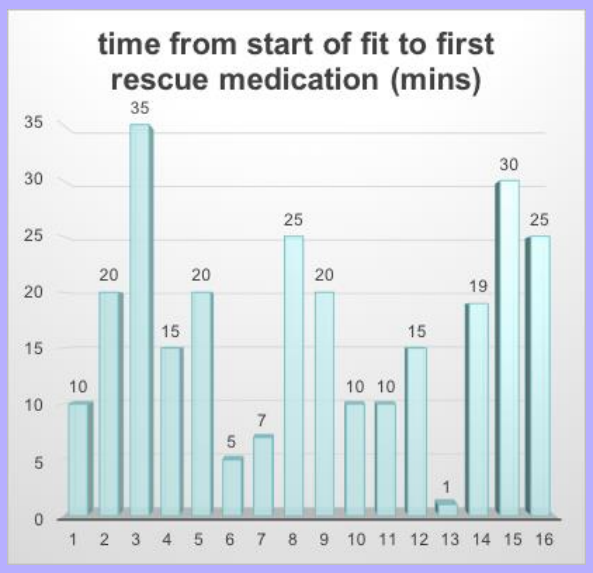
Aims: To look at the management of prolonged seizures (SE) in the community in our local area (Torquay and South Devon) and subsequent treatment in hospital setting (Torbay Hospital)

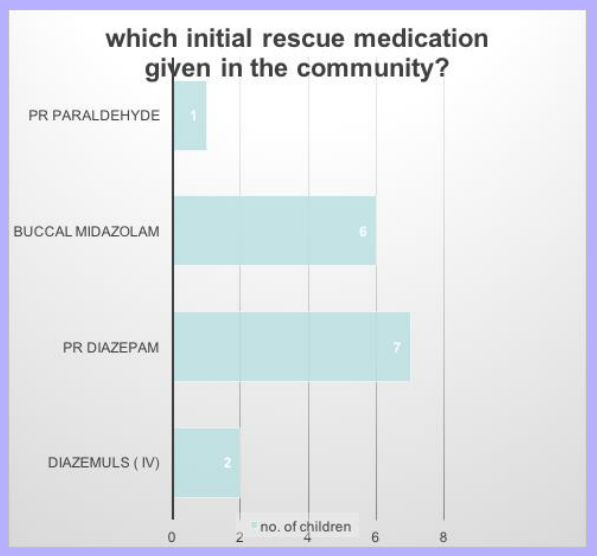
Standards: We audited the standards of care as per APLS guidance[4] on SE and NICE 2012 Epilepsy Guidelines [5].

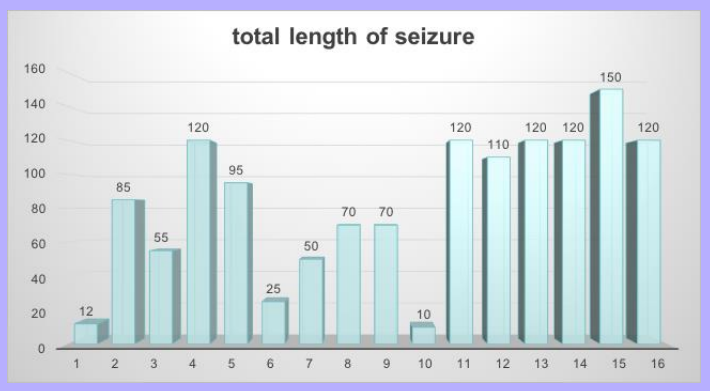
Data Collection: We looked at the admissions for SE to Torbay Hospital between October 2015 and October 2016. 17 admissions (15 different children) were retrospectively analysed











Findings:

- In all, except one case, initial rescue medication was given in the non-hospital setting. 6 patients (30%) received buccal midazolam, 7 (40%) rectal diazepam, 1 rectal Paraldehyde, 2 IV Diazepam.
- In all cases parents administered buccal Midazolam, even if ambulance crew was present.
- In 6/17 patients (30%) rescue medication was given at </= 10 minutes
- Mean length of time from beginning of seizure to rescue medication was 15 minutes.
- 13/17 received a second benzodiazepine; 4/13 received the second dose in transit.
- Only 2 patients had the second dose within 10 minutes from first.•
- Mean length of time from first to second dose of benzodiazepines was 35 minutes.
- Mean total length of seizures was 85 minutes.

Conclusion:

Treatment of seizures in community remains challenging:

- Only a minority of patients in our cohort received the first and, above all, the second dose of benzodiazepines in a timely manner.
- Buccal midazolam is currently the recommended first line medication in non-hospital setting in the UK and our emergency protocols reflect this choice. However, ambulance crews are still using rectal Diazepam creating a discrepancy in care, despite updated national guidelines for ambulance services[6].
- Treatment of SE in hospital can sometimes be suboptimal impacting on the overall duration of the seizure

Outcome:

- We have updated the individual emergency plans for those patients who have experienced prolonged seizures (> 5 minutes), giving advice on when to give a second dose of benzodiazepines.
- Preliminary re-audit results of 4 episodes of SE in the same children have shown appropriate timing of the first and second dose of benzodiazepines in the community in all 4 episodes, and administration of step 3 medications within a mean of 40 minutes from start of the seizure. This confirms that clear emergency protocols and training of carers can be effective.

References

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