Pre-hospital pain management in adults: a service evaluation of the Scottish Ambulance Service

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Introduction

The Scottish Ambulance Service (SAS) receives over 1.5 million calls a year and responds to over 500,000 emergency incidents per year[1]. Oligoanalgesia (a lack of, or ineffective analgesia provision) has been reported in a number of areas of healthcare. Published pre-hospital literature suggests that it exists in the pre-hospital environment[2]. Research has shown a lack of formal pain assessment as a causal factor[3]. A number of epidemiological factors are suggested as influencing analgesia provision[3]. No pain related audit has ever been completed within the SAS. Therefore, the current situation within Scotland is unknown.

Aim

To use service evaluation methodology to evaluate adult pain management within the SAS. This was in order to establish current practice with a view to identifying areas for improvement.

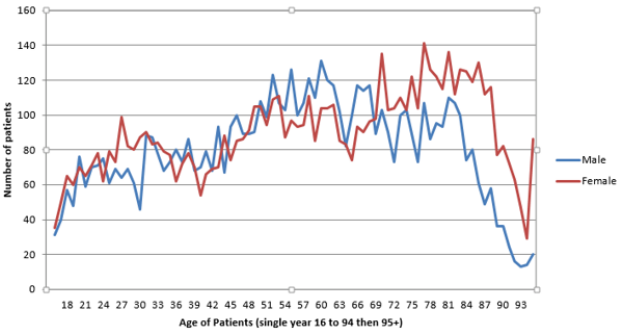
Introduction

One month of anonymised, retrospective data was extracted from SAS databases. Patients were included if they had a pain score recorded in the form of a Numeric Rating Scale (NRS) or had received analgesia. Patients in pain were further identified by using a key word search on free text areas of the patient records. The data extracted related to pain assessment and management and epidemiological factors. Basic statistical analysis utilising MS Excel was used to analyse the data.

Results

The SAS attended 40,800 emergency incidents within the chosen time frame with 33.3% of patients being identified as in pain. 66.1% received a formal pain assessment in the form of a NRS. The likelihood of presenting with pain increased with age. 26.1% of patients in pain received analgesia, with females being more likely to receive analgesia than males. Entonox was the most commonly used analgesia being provided to 44.8% of patients who received analgesia.

Patients presenting with pain, by age and gender



Rates of specific analgesia administration

Analgesic	Administrations	Percentage (male and female)	Male (% and total)	Female (% and total)	*p*-value
Entonox	1623	44.8%	9.7% (n=623)	13.9% (n=1000)	0.00001
Morphine	1258	34.7%	9.2% (n=594)	9.3% (n=664)	0.460172
Paracetamol	1153	31.8%	8.1% (n=520)	8.8% (n=633)	0.054799
Ibuprofen	165	4.6%	1.1% (n=70)	1.3% (n=95)	0.0968

Conclusion

Oligoanalgesia appears present within the SAS with significant numbers of patients not having their pain assessed and significant numbers of patients not receiving analgesia The SAS should consider measures that would address this and promote the understanding of the importance of pain management. These could include investigating educational initiatives that would increase understanding as well as introducing Key Performance Indicators for pain management.

References

1. The Scottish Ambulance Service. 2020. *Annual Reports and Accounts for the year ended 31 March 2020*.

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3. Lord, B. 2010. *Factors affecting paramedics' assessment and judgement about pain experienced by patients in a community based health setting.* [Online] Available at: https://figshare.com/articles/Factors_affecting_paramedics_assessment_and_judgement_about_pain_experienced_by_patients_in_a_community_based_health_setting/5044459 [Accessed: 20 April 2020]

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