

### Background:

Apparent Life-Threatening Events (ALTE) phenomenon in infants are concerning for both caregivers and medical professionals, accounting for between 0.6% -1.7% of ED presentations annually<sup>1,2</sup>.

*Apparent life threatening events (ALTE) describe a non-specific group of symptoms, frightening to the on-looker, comprising a combination of apnoea, colour change, marked change in muscle tone and coughing or gagging<sup>3</sup>*

It is essential to correctly identify an ALTE event at first contact in order to evaluate and refer appropriately due to risk of underlying conditions. This study aimed to examine the level of awareness of ALTE among medical practitioners on the frontline.

### Patients & Methods:

A survey about awareness and basic knowledge of ALTE was undertaken in a UK district general hospital. It was given to all doctors and nurse practitioners working in the paediatric and emergency departments (ED). Only those aware of ALTE were asked further knowledge questions.

**Acknowledgments:** We wish to thank the responding colleagues for completing the survey. This work forms part of a thesis submitted for a MSc at University of Edinburgh

### Results:

33 practitioners responded (40% response rate)  
3 were excluded leaving a total of 30 (97% doctors);  
–17 (57%) paediatrics vs 13 (43%) ED

#### Awareness (N = 30)

21 (70%) were aware of ALTEs (fig 1) - Significantly more in paediatrics than ED; 15 (71%) vs 6 (29%),p 0.013 (fig 2). There was a weakly positive correlation between time from graduation & awareness (N = 26, R = 0.22, p 0.27)

#### Evaluation of knowledge (N = 21)

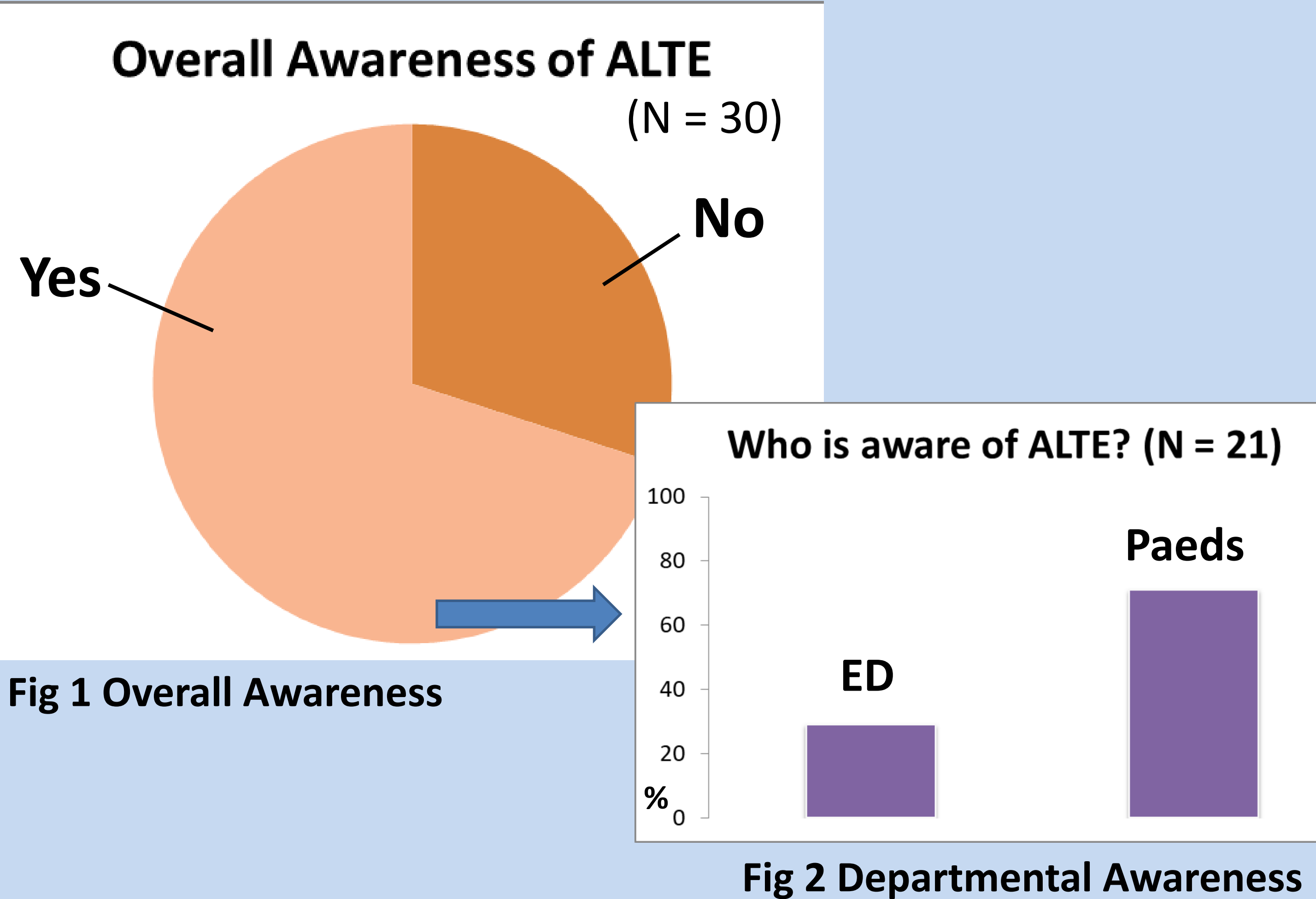
18 (90%) recognised risk factors for an underlying cause.

Table 1 shows percentages of respondents identifying if each presenting symptom was likely or not to be found in an ALTE. 28-62% incorrectly marked non-ALTE symptoms as likely.

Symptoms/Signs	‘Likely’ presenting feature of ALTE
Floppy episode	20 (95%)
Colour change (blue)	19 (90%)
Colour change (pale)	18 (86%)
Pause in breathing for 20 secs	17 (81%)
Carer calling ambulance	16 (76%)
Tone change (stiff/rigid)	15 (71%)
Gagging following feed	13 (62%)
Pause in breathing 5 secs	13 (62%)
Twitching	11 (52%)
Coughing until breathing difficulty	9 (43%)
Rolling of eyes	9 (43%)
Excessive sleepiness	8 (38%)
Screaming/crying	6 (28%)

ICD 10  
criteria

Table 1: Diagnostic criteria for ALTE



### Discussion:

This is a small local study, making it difficult to extrapolate to other areas. However it does show variations in knowledge and practice; and that better knowledge and management of ALTE comes with experience. It also demonstrates that ED staff are less aware than paediatric staff.

### Conclusion:

There is a need for improved education and supervision, especially of junior doctors in ED, regarding ALTE. Further study is required to determine any wider national education deficit.

**References:**  
1. Davies F, Gupta R. Apparent life threatening events in infants presenting to an ED department. Emerg Med J. 2002 Jan;19(1):11-6  
2. Semmekrot BA, van Sleuwen BE, Engelberts AC, Joosten KF, Mulder JC, Liem KD, et al. Surveillance study of apparent life-threatening events (ALTE) in the Netherlands. Eur J Pediatr 2010; 169: 229–36.  
3. Tieder JS, Bonkowsky JL, Etzel RA et al. Brief Resolved Unexplained Events (Formerly Apparent Life Threatening Events) and Evaluation of Lower-Risk Infants. Pediatrics. 2016; 137 (5): e20160590