

# An Evaluation of Anaesthesia NCHDs' knowledge of Emergencies in Anaesthesia

R McCarthy, M Ryan  
University Hospital Galway

## Introduction

**Anaphylaxis, Malignant Hyperthermia and Intravenous (IV) Local Anaesthetic Toxicity** are some of the major emergencies that can occur in anaesthesia.

The Royal College of Anaesthetists have published guidelines outlining the necessity for an **anaesthetist to have a working knowledge** of how to manage these emergencies<sup>1</sup>.

The pertinence of this is emphasised when the **annual NCHD "changeover"** in Ireland occurs in July and trainees are landed in an entirely new environment, lacking in knowledge of their surroundings and the location of emergency medication.

## Objective

To evaluate the **knowledge** of the Anaesthesia NCHDs in University Hospital Galway (UHG) on the **initial management strategies** of Anaphylaxis, Malignant Hyperthermia and IV Local Anaesthetic Toxicity.

## Method

A **seven-question online survey** was formulated and distributed among the Anaesthesia NCHDs in UHG during August 2020.

Information was gathered on whether they knew the **initial dose** of the **initial drug** given in each of the three following emergencies; Anaphylaxis, Malignant Hyperthermia and IV Local Anaesthetic Toxicity.

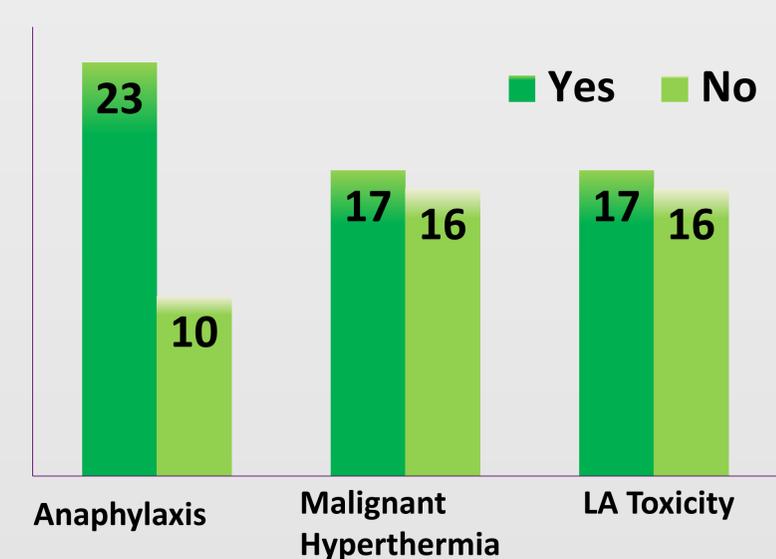
They were then asked **where they would locate the guidelines** on the management of each of these emergencies and finally, where they would **locate the initial drug** used in each scenario. This data was analysed.

## Results

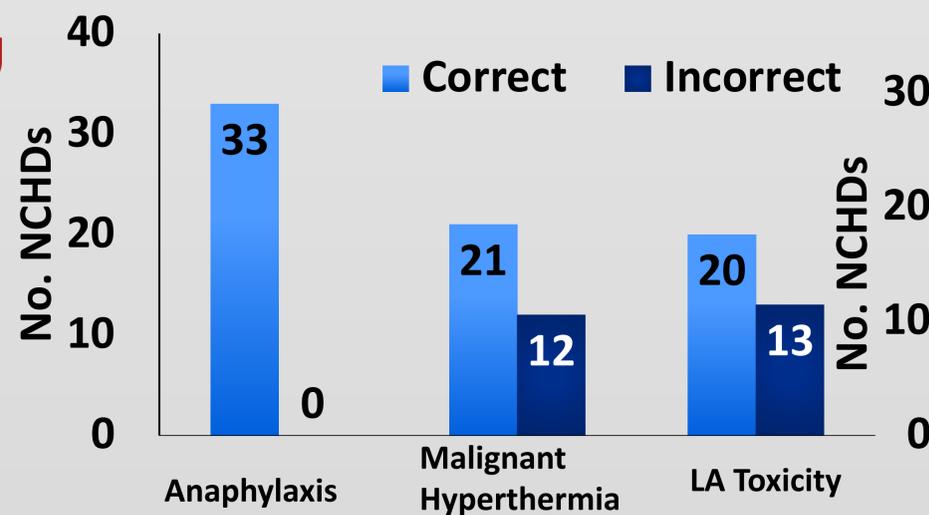
**33 Anaesthesia NCHDs** responded to the survey. **100%** knew the initial drug and dose used in Anaphylaxis. **21 (64%)** knew the initial drug and the exact loading dose used in Malignant Hyperthermia. **20 (61%)** knew the initial drug and the exact loading dose used in IV Local Anaesthetic Toxicity. (Graph 1)

**20 (60%)** knew where to locate **guidelines** on the management of these emergencies. (Graph 2)

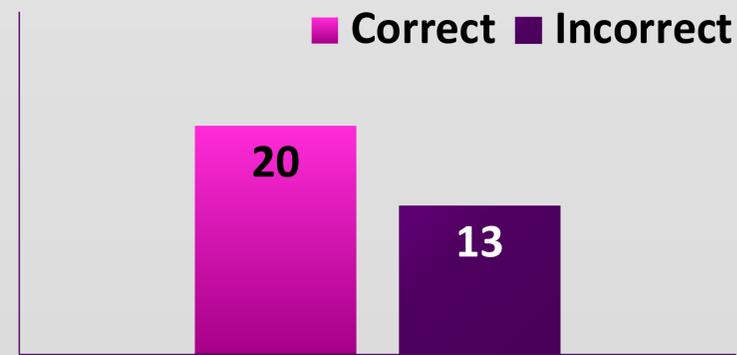
**23 (70%)** knew the exact location of adrenaline. **17 (52%)** knew the location of Dantrolene. **17 (52%)** knew the location of Intralipid. (Graph 3)



**Graph 3: Knowledge of Initial Drug Location**



**Graph 1: Initial Drug and Dose for each Emergency**



**Graph 2: Knowledge of Guideline Location**

## Conclusion

Evidently, there is a significant **deficit in knowledge** among NCHDs of these emergencies. Further education and hospital-specific information regarding emergencies in anaesthesia is required to be provided to NCHDs. This should be **incorporated into the orientation** of new NCHDs in the department so as to establish a safer and more informed working environment.

## References

1. RcoA, *Guidance for the provision of anaesthesia services for intra-operative care*, 2009
2. AAGBI, *Quick Reference Handbook*, 2019.