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# Resuscitation Orders in the Perioperative Setting

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*CAI Delaney Medal Presentation*  
*16th June 2020*





# Introduction

- ❖ Advance Healthcare Directives are gaining more clarity in state legislation in Ireland
  - Assisted Decision-Making (Capacity) Act, 2015 <sup>1</sup>
- ❖ Greater prioritisation of a patient's decision-making capacity
  - HSE's National Consent Policy, 2019 <sup>2</sup>
- ❖ Resuscitation orders containing *do not attempt resuscitation* (DNAR) decisions are encountered in the perioperative setting
- ❖ Variable perceptions among anaesthesiologists towards the binding nature of resuscitation orders<sup>3</sup>



1. Assisted Decision-Making (Capacity) Act (No. 64 of 2015). Access via: <http://www.irishstatutebook.ie/eli/2015/act/64/enacted/en/print>

2. National Consent Policy, HSE, 2019. Version 1.3. Access via: <http://52.169.106.200/eng/about/who/qid/other-quality-improvement-programmes/consent/national-consent-policy-hse-v1-3-june-2019.pdf>

3. Keon-Cohen Z, Myles PS, Story DA. A survey of Australian and New Zealand anaesthetists' attitudes towards resuscitation orders in the perioperative setting. *Anaesth Intensive Care* 2017. 45:3



# Study Objective

- ❖ To ascertain knowledge, perception and practices of anaesthesiologists working in Ireland with respect to resuscitation orders containing DNAR decisions in the perioperative setting



- ❖ Resuscitation orders include:
  - ❖ Medical practitioner-documented not for resuscitation (NFR) orders
  - ❖ Patient-led Advance Healthcare Directives (AHDs) containing DNAR decisions



# Study Design



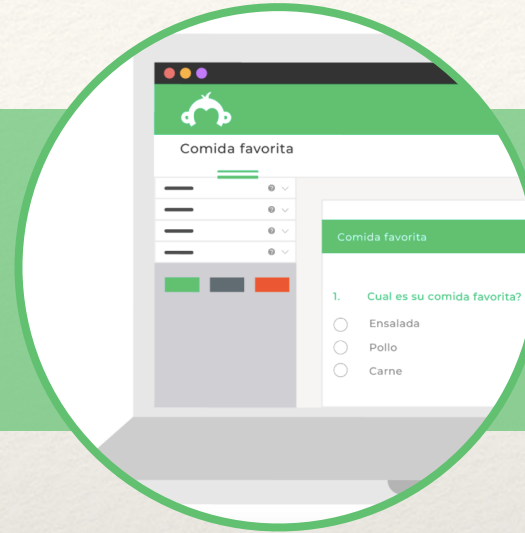
## Cross-sectional online survey

- Cloud-based software
- 30 questions
- Five key areas:
  - demographics
  - knowledge
  - training
  - discussion
  - practice



## Ethics approval via MMUH Institutional Review Board

- Local-level pilot survey



## Nationwide survey

- Adult, public training hospitals
- Email invitations to participate



## Results collection and data analysis

- Collated using encrypted de-identified URL address
- Compared responses from consultants and trainees
- Chi-square test, two-sided P value of  $<0.05$



# Results



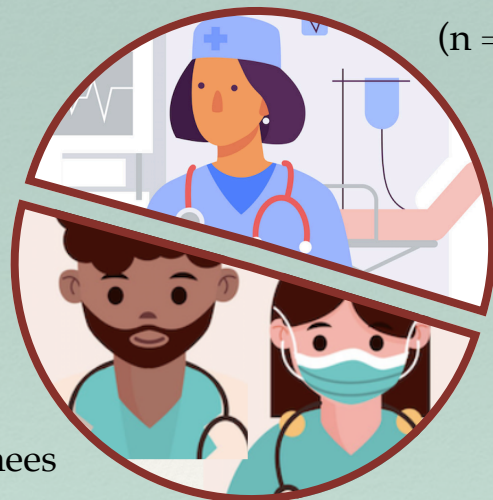
# Demographics

# Knowledge



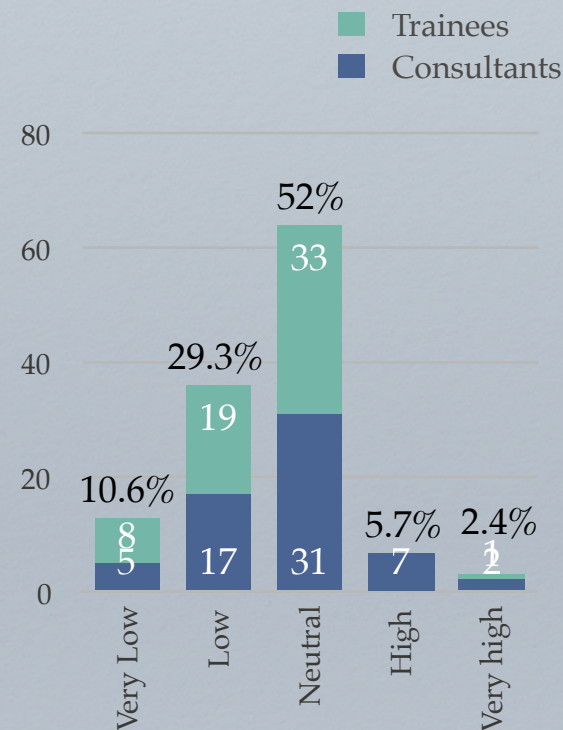
- 11 training hospitals
- 555 recipients
- 29% response rate (n=161)
- 76.4% completion rate (n=123)
  - only completed responses analysed
  - n = 123

Consultants  
(n = 62)



Trainees  
(n = 61)

What is your level of knowledge on AHDs in Ireland?



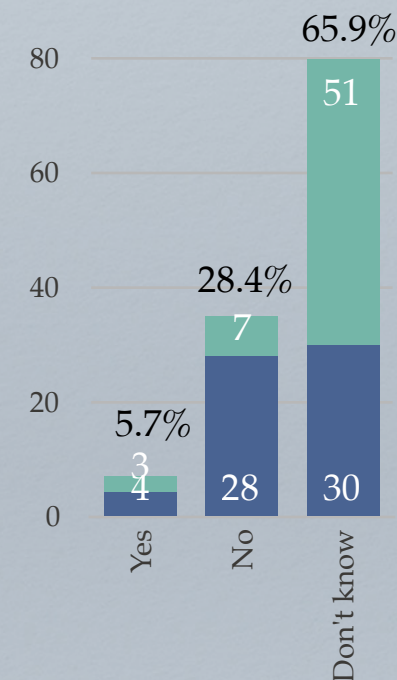
$X^2 (4, n = 123) = 5.69, p = .220$   
No statistically significant difference



In your current hospital, is there local hospital policy for the perioperative management of:

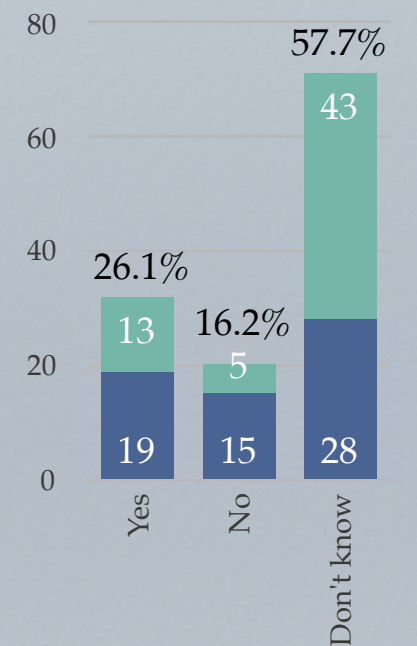
AHDs containing a DNAR decision

NFR orders



$X^2 (2, n = 123) = 18.18$   
 $p = .001$

Statistically significant difference



$X^2 (2, n = 123) = 9.29$   
 $p = .009$

Statistically significant difference



Trainees  
Consultants



# Knowledge

My sources of knowledge on the applicability of resuscitation orders in the perioperative period include:



*Previous clinical experience*  
62.6%



*Personal reading*  
43.9%

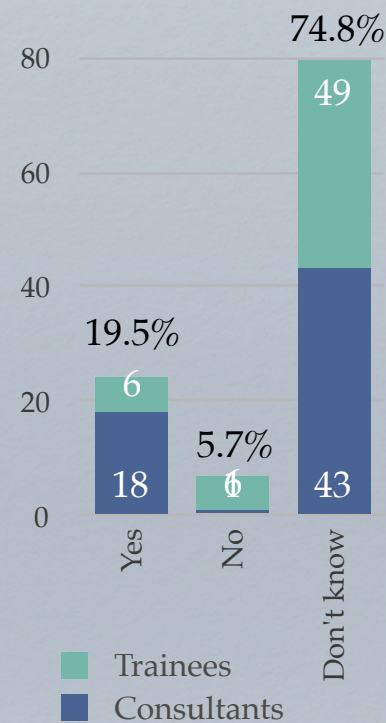


*Formal training from college*  
12.2%



*Workplace training*  
4.9%

Are there published guidelines for resuscitation orders in the perioperative period?

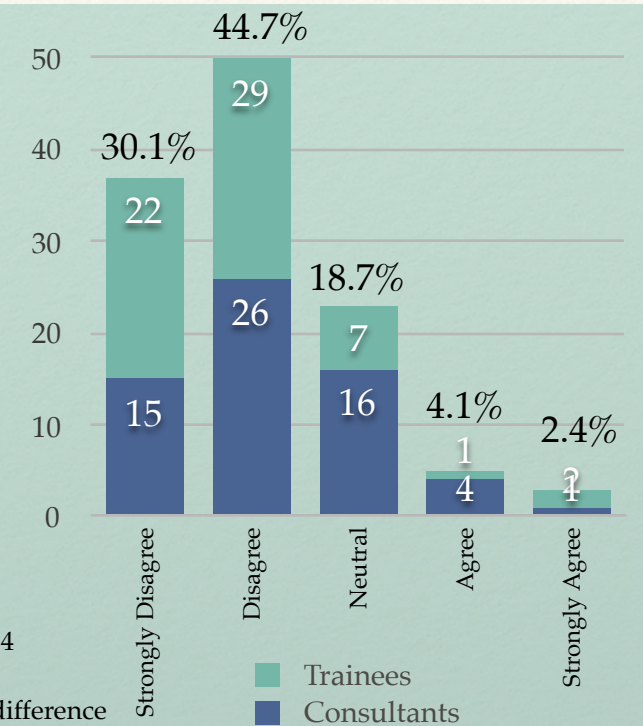


$X^2 (2, n = 123) = 9.96$   
 $p = .006$   
Statistically significant difference



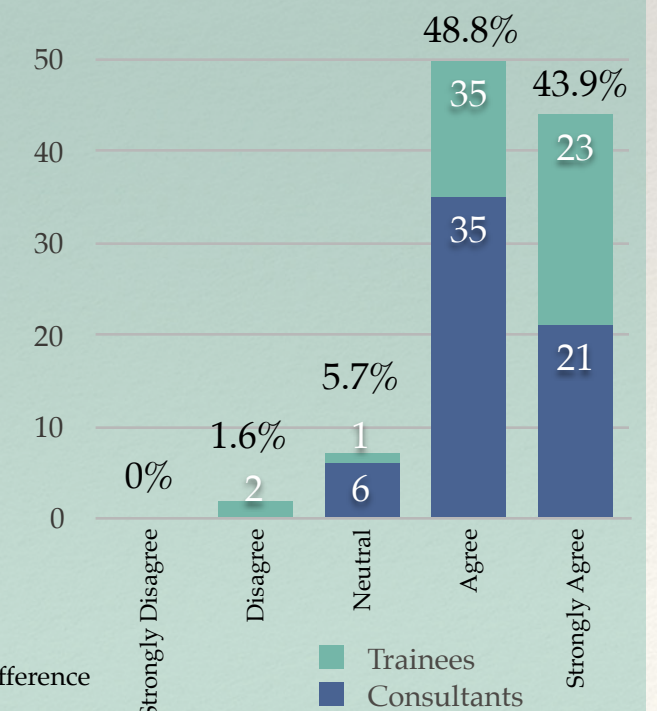
# Training

I receive adequate training on resuscitation orders and their applicability in the perioperative setting from my workplace / college



$X^2 (4, n = 123) = 7.14$   
 $p = .129$   
No statistically significant difference

Formal training on resuscitation orders and their applicability in the perioperative setting would be beneficial to my practice



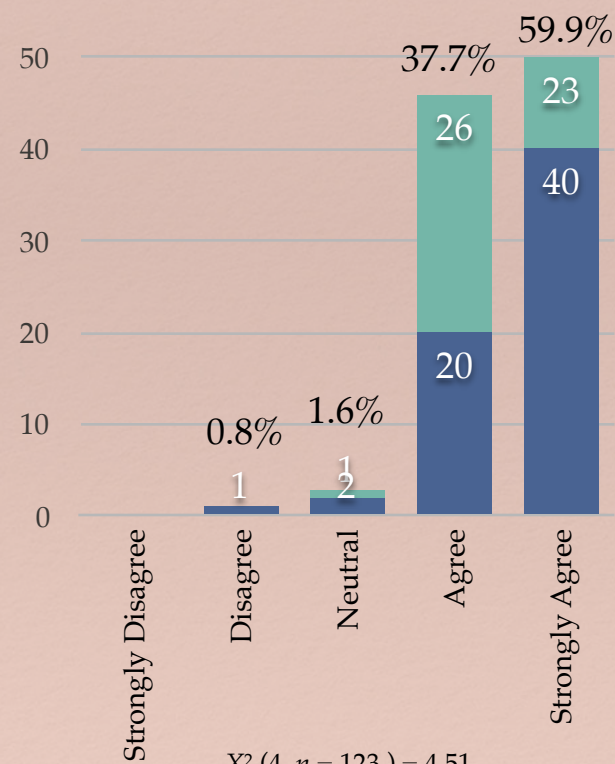
$X^2 (4, n = 123) = 4.61$   
 $p = .329$   
No statistically significant difference



# Discussion



A statement of the patient's wishes and understanding of treatment limitations including preferred resuscitation status is an important part of perioperative care

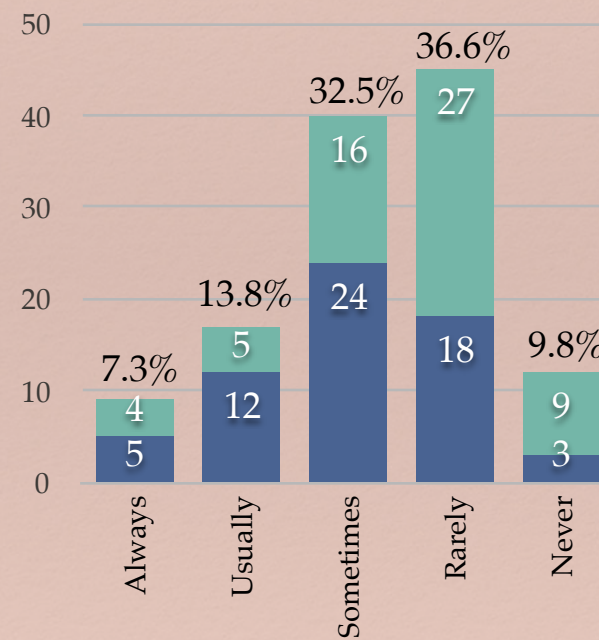


$X^2 (4, n = 123) = 4.51$   
 $p = .341$

No statistically significant difference



I initiate discussions with patients about their potential treatment limitations or goals in the perioperative period

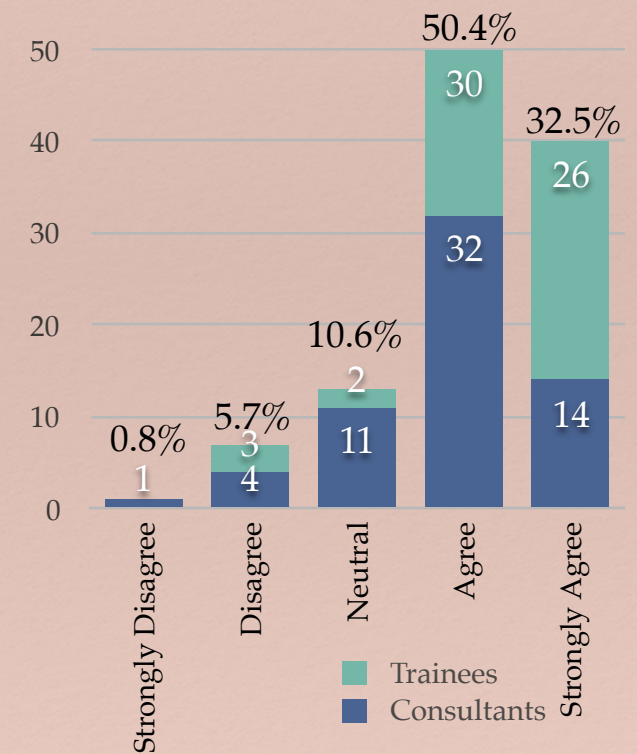


$X^2 (4, n = 123) = 9.39$   
 $p = .052$

No statistically significant difference



A lack of familiarity with resuscitation orders and their applicability in the perioperative period is a barrier to a discussion with the patient



$X^2 (4, n = 123) = 10.04$   
 $p = .039$

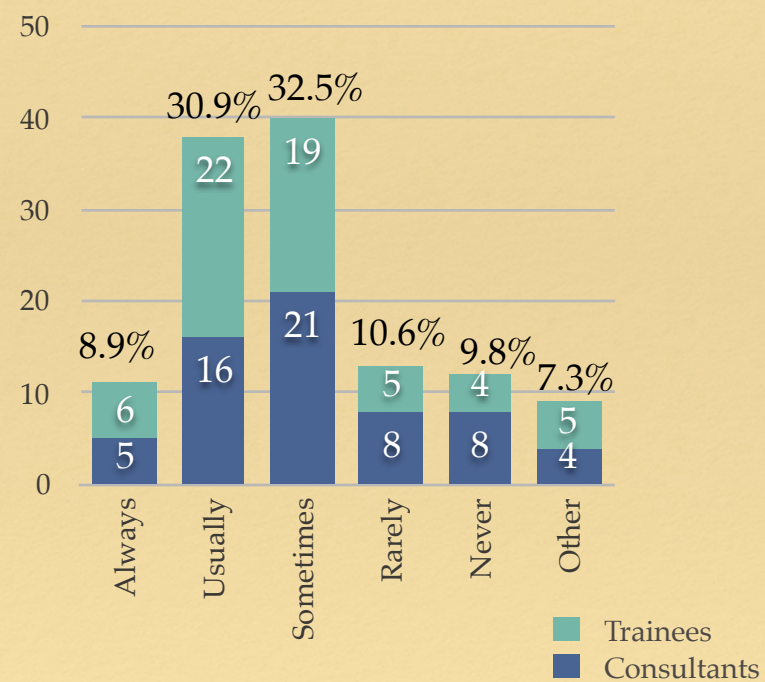
Statistically significant difference



# Practice



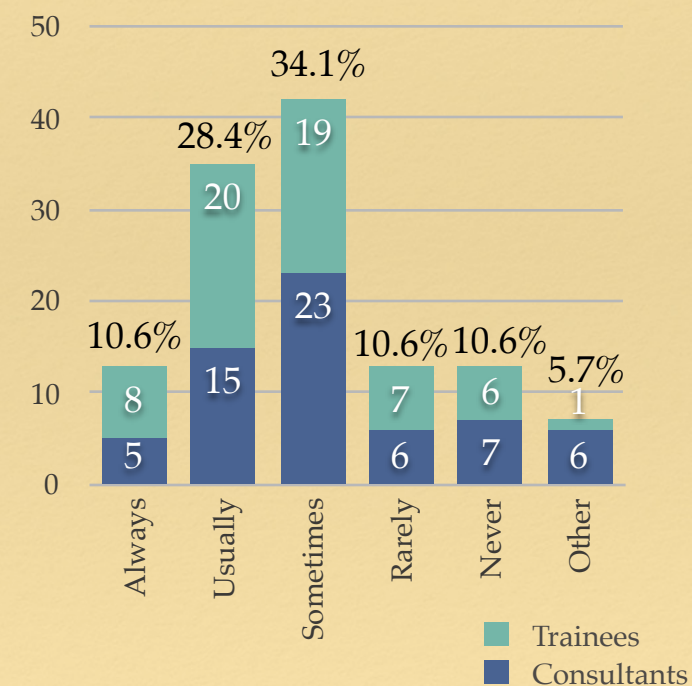
AHDs containing DNAR orders should be suspended in the perioperative period



$X^2 (4, n = 114) = 3.13$   
 $p = .536$   
 No statistically significant difference



NFR orders should be suspended in the perioperative period

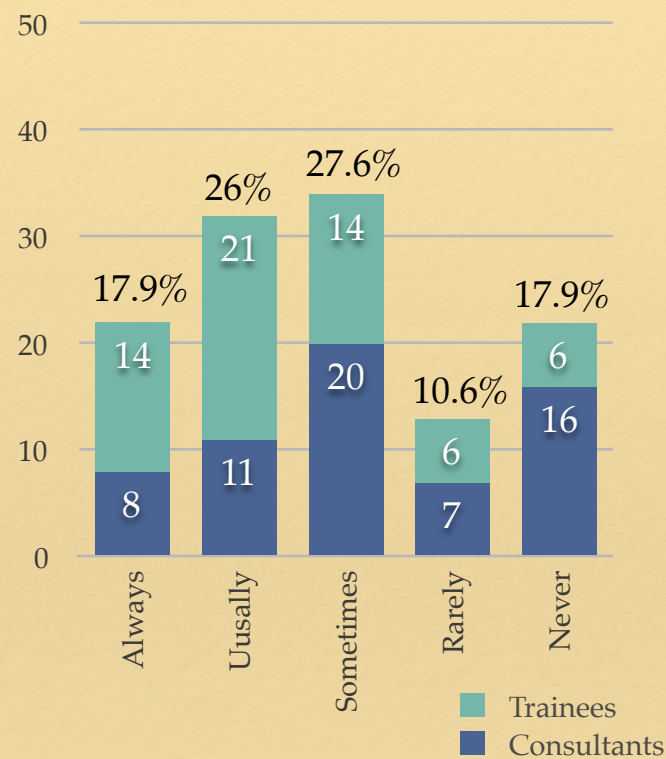


$X^2 (4, n = 116) = 1.81$   
 $p = .771$   
 No statistically significant difference



# Practice

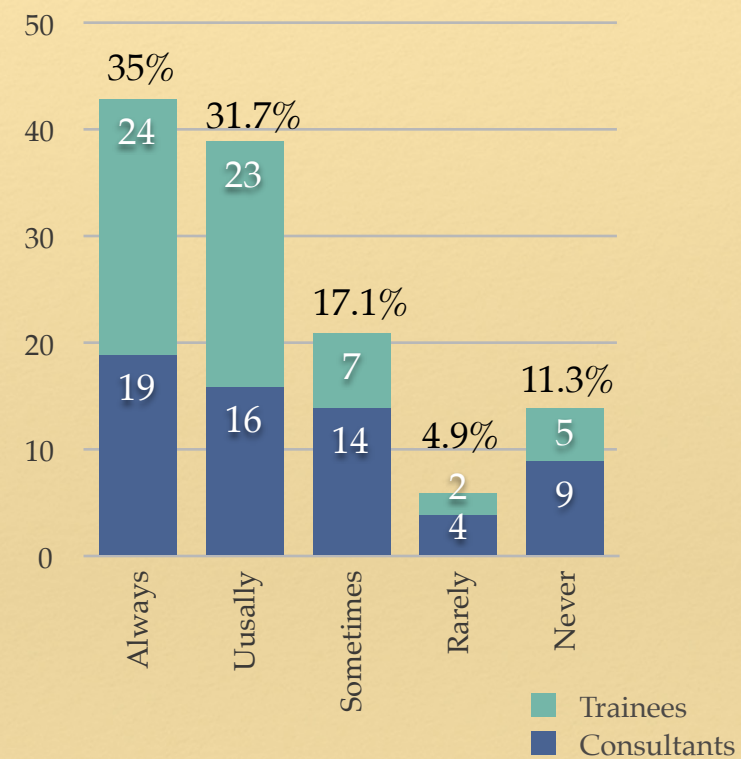
In the event of **any** arrest in theatre or recovery, theatre staff should initiate resuscitation irrespective of an order stating otherwise



$X^2 (4, n = 123) = 10.43$   
 $p = .034$   
 Statistically significant difference



In the event of arrest **secondary to iatrogenic complications**, theatre staff should initiate resuscitation irrespective of an order stating otherwise



$X^2 (4, n = 123) = 5.97$   
 $p = .201$   
 No statistically significant difference





# Conclusions



- Self-reported knowledge is low
- Familiarity with local hospital policy & published guidelines is poor



- Limited perioperative engagement in conversations with patients about potential treatment limitations or goals



- Perception of adequacy of training is low



- A statement of the patient's preferred resuscitation status is an important part of perioperative care



- Trend towards suspension of orders
- Preference for the initiation of resuscitation in theatre despite presence of a documented DNAR decision



# Recommendations



- Education on published guidelines <sup>4,5</sup>



- Meaningful communication
- Patient-centred conversations
- Formal review of resuscitation order in the context of anaesthesia provision<sup>6</sup>



- Structured, formal training
- Preparation for nuanced situations



- Re-iterate patient's right to self-determination



- Reconsider ethical and legal implications of automatic suspension of DNAR decisions
- Understand what the law requires of us

4. AAGBI. Do Not Attempt Resuscitation (DNAR) Decisions in the Perioperative Period. May 2009. <http://dx.doi.org/10.21466/g.DDITPP2.2009>

5. American Society of Anaesthetists Committee on Ethics, 2001. Ethical guidelines for the anesthesia care of patients with do-not- resuscitate orders or other directives that limit treatment. Access via: <http://www.asahq.org/~media/sites/asahq/files/public/resources/standards-guidelinesethical-guidelines-for-the-anesthesia-care-of-patients.pdf>

6. Resuscitation Council, Decisions Relating to Cardiopulmonary Resuscitation. A Joint Statement from the British Medical Association, the Resuscitation Council (UK) and the Royal College of Nursing, London: 2007. Access via: [www.resus.org.uk/pages/DNAR.htm](http://www.resus.org.uk/pages/DNAR.htm)



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# References

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1. Assisted Decision-Making (Capacity) Act (No. 64 of 2015). Access via: <http://www.irishstatutebook.ie/eli/2015/act/64/enacted/en/print>
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5. American Society of Anaesthetists Committee on Ethics, 2001. Ethical guidelines for the anesthesia care of patients with do-not-resuscitate orders or other directives that limit treatment. Access via: <http://www.asahq.org/~media/sites/asahq/files/public/resources/standards-guidelinesethical-guidelines-for-the-anesthesia-care-of-patients.pdf>
6. Resuscitation Council, Decisions Relating to Cardiopulmonary Resuscitation. A Joint Statement from the British Medical Association, the Resuscitation Council (UK) and the Royal College of Nursing, London: 2007. Access via: [www.resus.org.uk/pages/DNAR.htm](http://www.resus.org.uk/pages/DNAR.htm)