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Introduction

Delirium can increase mortality and length of hospital stay.
 It is prevalent in elderly, frail patients following emergency surgery.
 The Royal College of Anaesthetists (RCoA) states that older patients should be risk assessed and interventions taken to reduce post-operative delirium.
 Excessively deep anaesthesia may increase the risk of post-operative delirium. The use of depth of anaesthesia monitoring is recommended in the SIGN 157 national clinical guideline.
 The British Geriatric Society position statement on older patients undergoing emergency laparotomy recommends geriatrician-led multidisciplinary comprehensive geriatric assessment within 72 hours of admission to a ward.

Aim

Our aim was to compare current practice in the elderly, emergency laparotomy population in the Glasgow Royal Infirmary against the current best practice recommendations.

Method

Retrospective audit of emergency laparotomy patients, over 70 years of age, in a large city-centre teaching hospital.

Using the emergency laparotomy database we identified eight patients with documented post-operative delirium, and compared these to an age and sex matched group of eight patients without documented delirium.

We reviewed anaesthetic charts for:

- Documentation of Rockwood Clinical Frailty Scale
- Intra-operative risk factors for delirium:
 - Hypotension
 - Use of high-risk medications
 - Benzodiazepines
 - Antihistamines
 - Anticholinergics
 - Steroids
 - Age-adjusted Mean Alveolar Concentration (MAC) of volatile anaesthetic
 - Use of depth of anaesthesia monitoring

We reviewed medical notes for:

- Documented post-operative cognitive assessment
- Involvement of geriatricians

We compared the delirium vs no delirium groups.

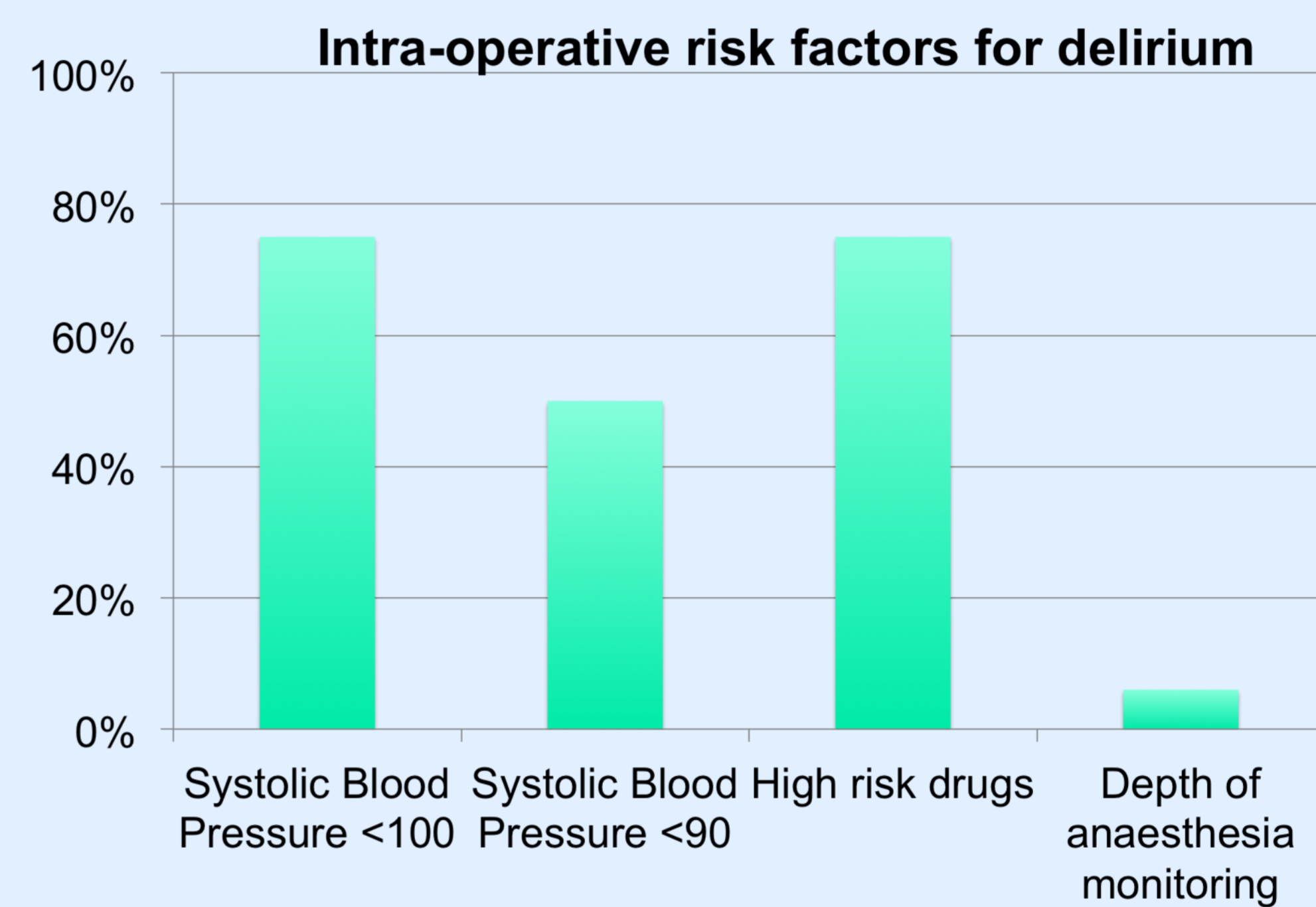
We created educational materials in an attempt to improve current practice.

Results

Only 25% of patients had a frailty score recorded.

There was no significant difference identified between the delirium vs no delirium groups.

Modifiable risk factors were present in all patients:



Age-adjusted MAC ranged from 0.8-1.4.

38% of patients had no cognitive assessment recorded.

38% of patients who developed delirium had multidisciplinary geriatric involvement.

Conclusion

Our audit identified inadequate risk assessment, intra-operative management and identification of delirium.

We are implementing a delirium bundle including:

- Multidisciplinary education of frailty scoring
- Delirium recognition with CAM-ICU and 4AT scoring
- A flowchart including the M.I.N.D.D visual aid for intra-operative management (figure 1) to be displayed in emergency theatres

We will then re-audit to assess improvement.

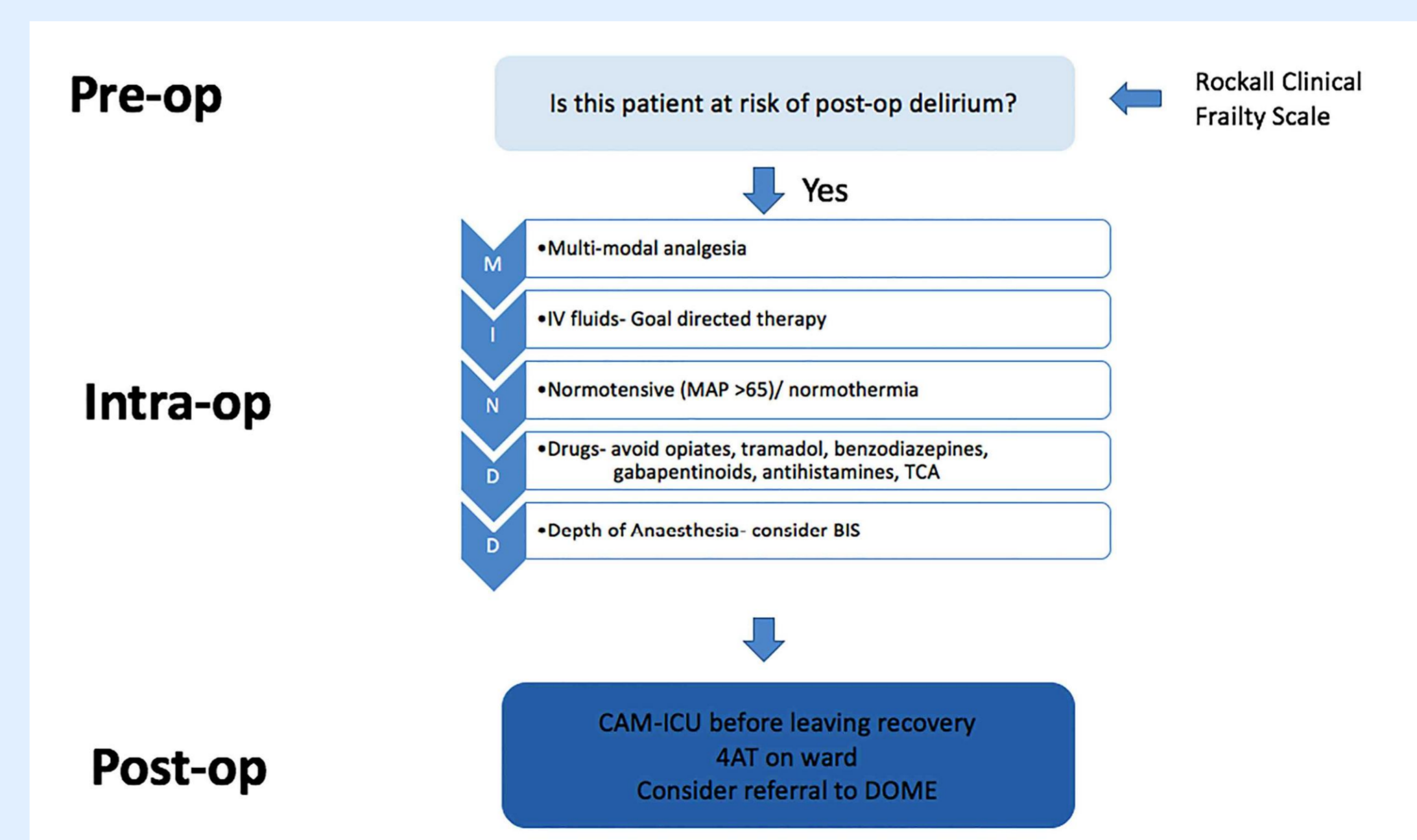


Figure 1. Flowchart including the M.I.N.D.D visual aid

References

SIGN. SIGN 157: *Risk Reduction and Management of Delirium*. Edinburgh. March 2019.
 RCoA. *Guidelines for the Provision of Anaesthesia Services for Preoperative Assessment and Preparation*. Available from: <https://www.rcoa.ac.uk/gpas/chapter-2#section-3.3> [Accessed 07/04/2021].
 British Geriatric Society. *BGS Position Statement: Older patients undergoing emergency laparotomy*. Available from: <https://www.bgs.org.uk/resources/bgs-position-statement-older-patients-undergoing-emergency-laparotomy> [Accessed 07/04/2021].