

Barrier Precautions for Obstetric Spinal Anaesthesia in the UK: An OAA National Survey

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1 Introduction

The use of sterile gowns for spinal anaesthesia is standard practice in the UK however gowns are not worn routinely in many other countries.

Ongoing efforts to decrease the environmental impact of anaesthesia have prompted re-evaluation of the role of gowns for single-shot spinal anaesthesia (1).

This survey aimed to assess current practice in obstetric anaesthesia in the UK and the acceptability of any potential change in guidance.

2 Methods

A ten-question survey was distributed electronically to all active UK OAA members and responses were collected over a two-week period in November 2024.

The survey assessed the:

- Use of gowns and face masks for single shot spinal anaesthesia during elective and emergency obstetric care
- Rationale underlying the respondents' choices (*Figure 1*).
- Willingness to perform spinal anaesthesia without a gown if supported by guidelines.

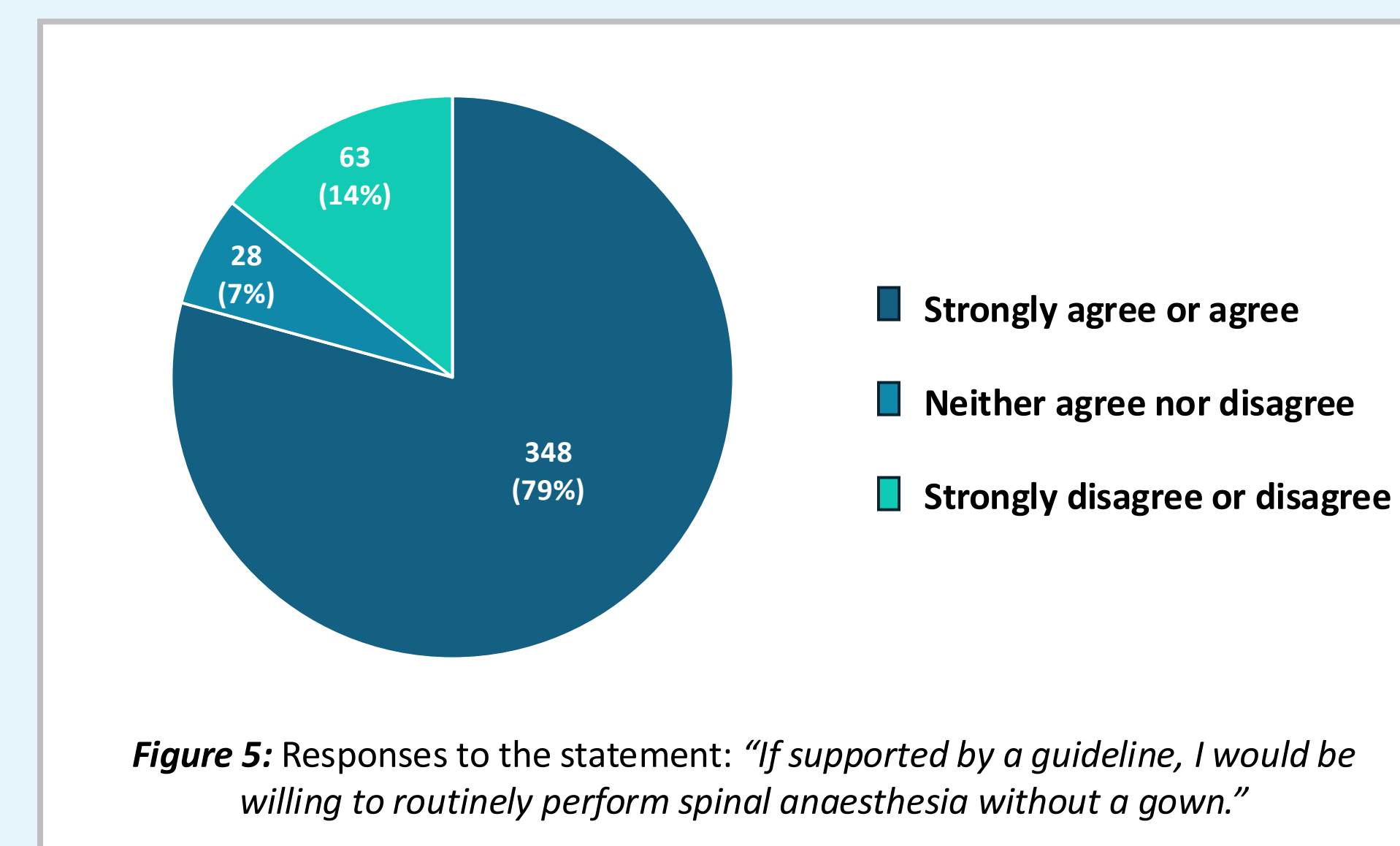
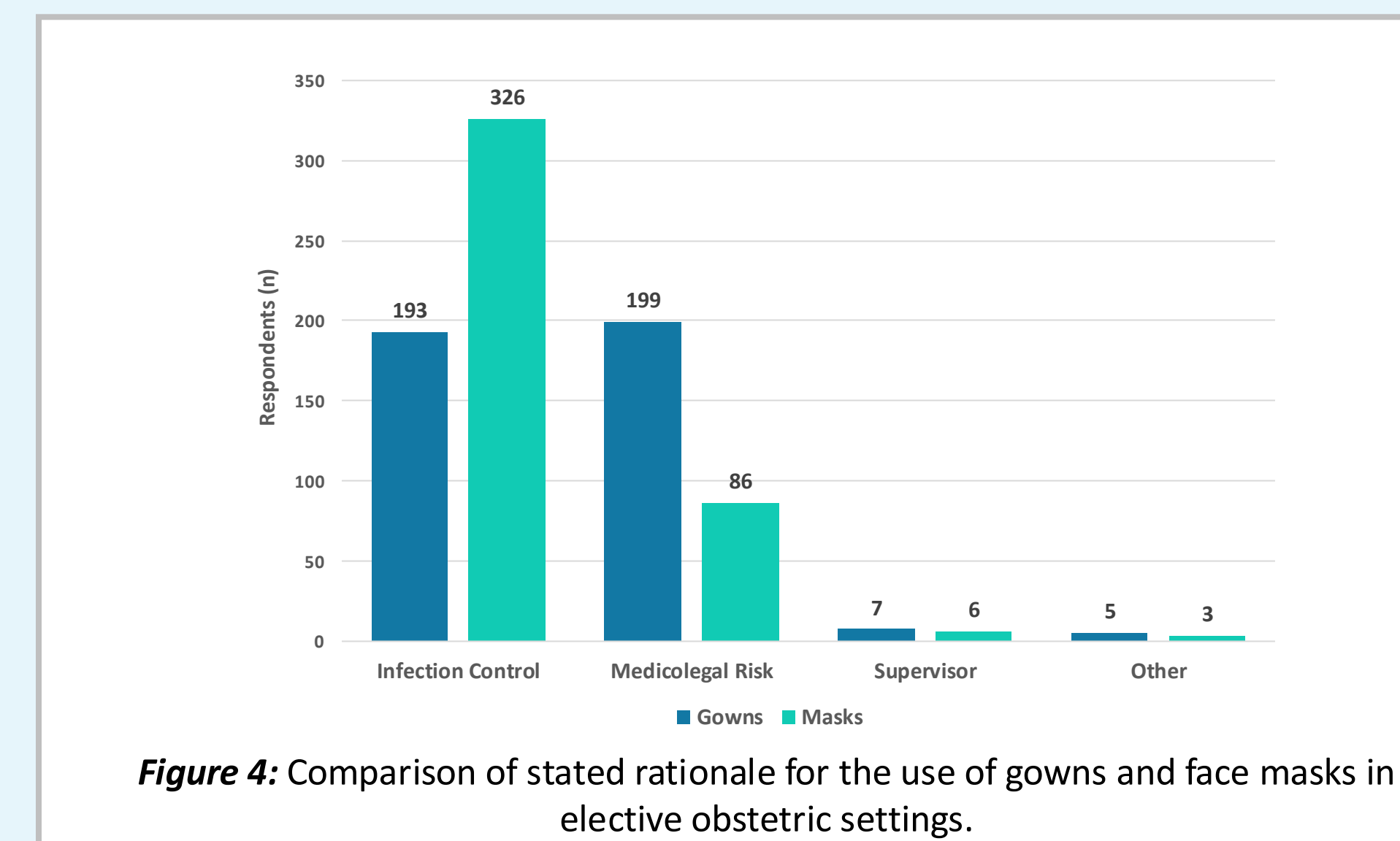
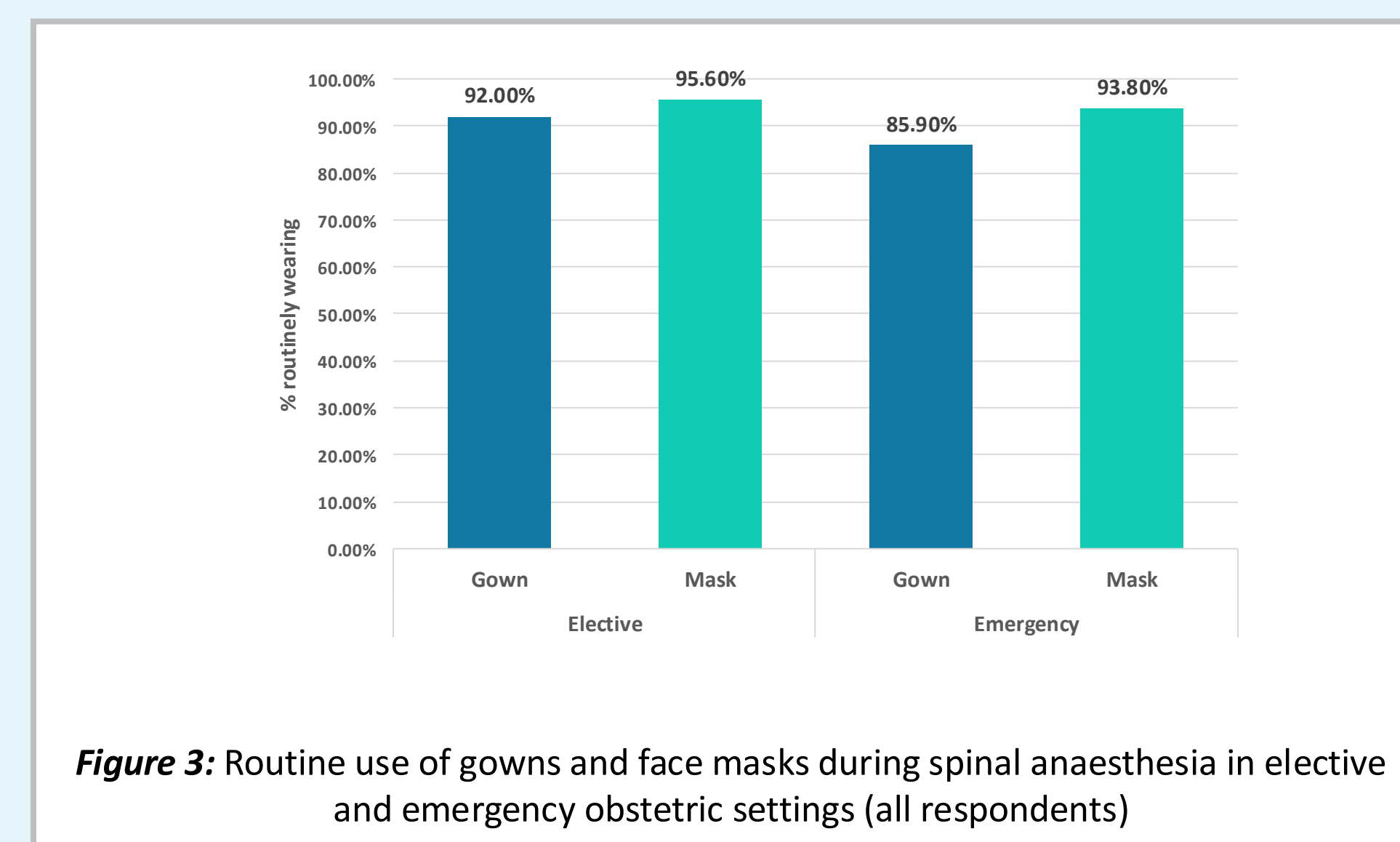
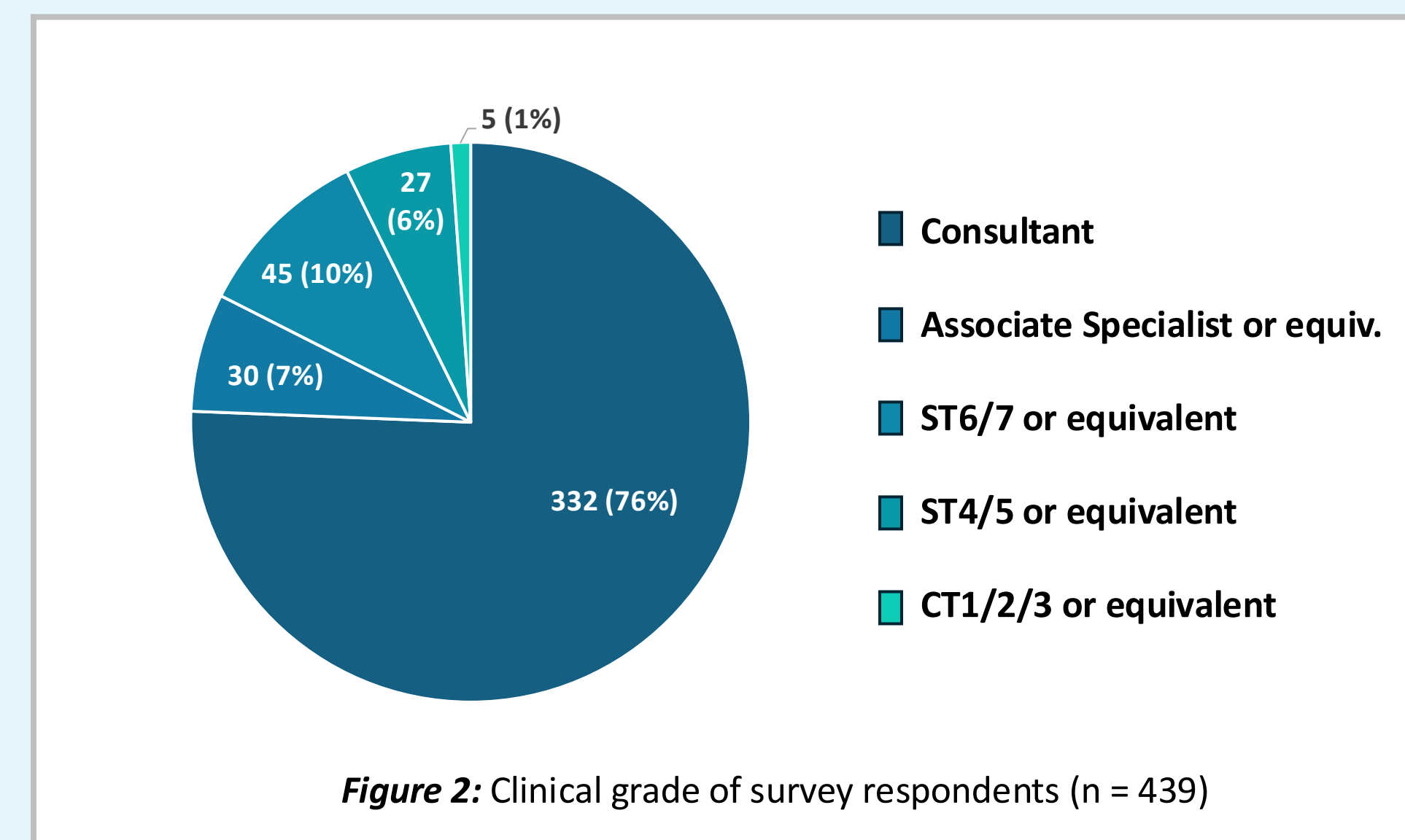
Data was analysed using Microsoft Excel.

Example question

- I routinely wear X because I consider it necessary for infection control
- I routinely wear X to avoid the medicolegal risk of not complying with local/national guidance
- I routinely wear X because my supervising colleague wears one or suggests I do
- I do NOT routinely wear X because I do not consider it necessary for infection control
- I do NOT routinely wear X because their environmental impact outweighs their potential benefits
- I do/do NOT wear X for another reason (please detail in free text section)

Figure 1: Example question from survey examining routine barrier precaution usage and underlying rationale. This was modified to assess either sterile gown or mask usage in elective and emergency scenarios.

3 Results



- **439 members completed the survey**, of whom **76% were consultants** [332/439] (*Figure 2*). This represents a response rate of 24% [439/1861 active OAA members]. 80% of respondents practiced in England [353/439]; no significant regional variation in practice was seen (data not shown).
- **92% [404/439] of respondents indicated that they routinely wear gowns for elective cases** and 96% [421/439] routinely wear face masks (*Figure 3*). In emergencies, usage decreases slightly; 86% [377/439] wear gowns and 94% [412/439] masks. When comparing consultants vs. non-consultants, consultants were slightly less likely to use gowns in both elective (90% vs 97%) and emergencies scenarios (84% vs 92%).
- **78% of respondents do not ask their assistants to wear any additional precautions** whilst they are preparing equipment and medication for spinal anaesthesia in theatre. 8% request that they wear a mask (data not shown).
- Whilst 77% [326/421] of respondents cited infection control as their rationale for wearing a face mask, the **rationale for gown usage was more mixed** (48% [193/404] cited infection control, 49% [199/404] avoidance of medicolegal risk) (*Figure 4*). Among those who do not use gowns, in elective scenarios 70% felt they were unnecessary, whilst in emergencies, 47% cited time savings as their rationale (data not show).
- **79% [348/439] of respondents indicated that they agreed [148] or strongly agreed [200]** with the statement "If supported by a guideline, I would be willing to routinely perform spinal anaesthesia without a gown?" whilst 14% [63/439] disagreed [48] or strongly disagreed [15] (*Figure 5*).

4 Discussion

Most OAA members still routinely wear gowns and face masks whilst carrying out spinal anaesthesia, reflecting current UK guidance. 77% of respondents cite infection control as their rationale for wearing a face mask likely due to the well-documented link between oropharyngeal bacteria and post-spinal infectious complications (2). The benefits of gowning are less certain (hence the international variability), and this is reflected by around half of respondents reporting compliance with guidance as their main motivation for gown usage. This aligns with the significant majority of respondents agreeing that they would perform spinal anaesthesia without a gown.

The rarity of post-spinal infectious complications effectively precludes the study of sterile gowns by randomised control trial. In the absence of direct evidence, professional consensus and pragmatic guideline development will be essential.

5 Conclusion

- Usage of both gowns and masks remains high in UK practice.
- There appear to be diverging perceptions of the importance of gowns and masks.
- Despite oropharyngeal flora being the most common source of post-spinal infections, few anaesthetists ask assistants to wear masks during preparation.
- A significant majority of OAA members are open to practicing without a sterile gown provided they are supported by an appropriate guideline.

6 References

1. Tuohey BH, Shelton CL, Dieleman S, McGain F. Time to re-evaluate the routine use of sterile gowns in neuraxial anaesthesia. *Anaesth Intensive Care*. 2024; 52: 197–9.
2. Reynolds F. Neurological Infections After Neuraxial Anesthesia. *Anesthesiol Clin*. 2008; 26: 23–52.

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