Challenging the role of routine pre-operative group and screen before transurethral resection of the prostate gland

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### Introduction

**Background**
- Transurethral resection of the prostate gland (TURP) is a common, elective surgical procedure.
- Around 500 TURP procedures are performed annually in this Trust alone.
- Obtaining a group and screen (G&S) is currently a routine element of pre-operative assessment.
- Each G&S has an estimated cost of £23.93 within the Trust.

**Project aims**
1. Identify the incidence of blood transfusion following TURP.
2. Assess the cost effectiveness of routine G&S in this group.

### Method

- Retrospective electronic case note review.
- 200 patients who underwent TURP in this period.
- Cross referenced with transfusion database.
- Variables measured included:
  - Patient age
  - Number of G&S samples obtained
  - Pre-operative haemoglobin (Hb)
  - Post-operative Hb
  - Episodes of blood transfusion.

### Results

**Patient demographics**
- Average age was 71.5.
- Mean pre-operative Hb 139 g/l.
- Post-operative Hb was measured in 53% of patients. In these cases average drop in Hb was 8 g/l.

**Group and screen performed**
- 64% of patients had at least two G&S samples taken pre-operatively.
- The average cost was £36.40 per patient.
- Total of 304 G&S performed in this cohort.

**Post-operative transfusion**
- Only 2 patients (1%) required a blood transfusion post-operatively.
- In both cases this was due to significant haematuria, without haemodynamic compromise.
- In both situations, there would have been enough time to arrange de novo sample collection to allow the transfusion of group-specific blood.

### Key points

**What is the incidence of transfusion following TURP?**
In this study, incidence of blood transfusion was 1%.

**What is the potential cost saving to the Trust?**
The cessation of routine G&S pre-TURP would have an annual cost saving to this Trust of around £18,200 (calculated by average cost per patient in this study multiplied by number of TURP annually performed).

**What are the safety implications for patients?**
The low incidence (1%) of peri-op transfusion in TURP, and non-emergency settings where transfusion was required, suggests patients would be unlikely to come to harm with this approach.

### Conclusion

This study supports stopping routine pre-operative group and screen testing for patients scheduled for transurethral resection of the prostate.

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