

A new boss for SBOS?; clinical empowerment and the surgical blood ordering schedule

Rebecca Elder, FY2, University
Hospital South Manchester

Introduction

- ★ MSBOS

- ★ Usually, Blood Bank and Hospital Transfusion Teams devise clinical guideline and advise clinicians on suggested practice

★ The audit...

★ Is our pre-operative blood ordering practice for elective general surgery appropriate?

- ★ 1) Clarification if MSBOS guidelines are being applied in current practice
- ★ 2) Determine if current guidelines are appropriate

★ UHSM SBOS

Appropriate for
patients with
normal Hb

General and Specialist surgery	
Abdomino Perineal Resection	4
Anterior Resection	2
Apronectomy	G&S
Cardio-oesophagectomy	4
Cholecystectomy	G&S
Closure of stoma	G&S
Colectomy, Colostomy	2
Delorme's procedure	G&S
Formation of ileal pouch	2
Gastrectomy	2
Gastrostomy, Ileostomy	G&S
Gastroplasty	2
Hartmann's procedure/reversal	2
Hemicolectomy	G&S
Hiatus hernia	G&S
General and Specialist surgery (cont'd)	
Incisional hernia repair	G&S
Laparotomy	2
Liver biopsy	G&S
Rectum pouch resection	2
Sigmoid colectomy	G&S
Splenectomy	2
Thyroidectomy	G&S

★ Method

- ★ Retrospective audit of all patients undergoing specific elective GI surgical procedures from March 2011 – March 2012 at UHSM

★ Elective GI Surgeries included

- ★ Incisional hernia repair
- ★ Hemicolectomy
- ★ Anterior resection
- ★ Cholecystectomy
- ★ Excision of sigmoid colon
- ★ Colectomy
- ★ APR

★ Oesophagectomy

★ Gastrectomy

★ Hiatus hernia

★ Excision stomach lesion

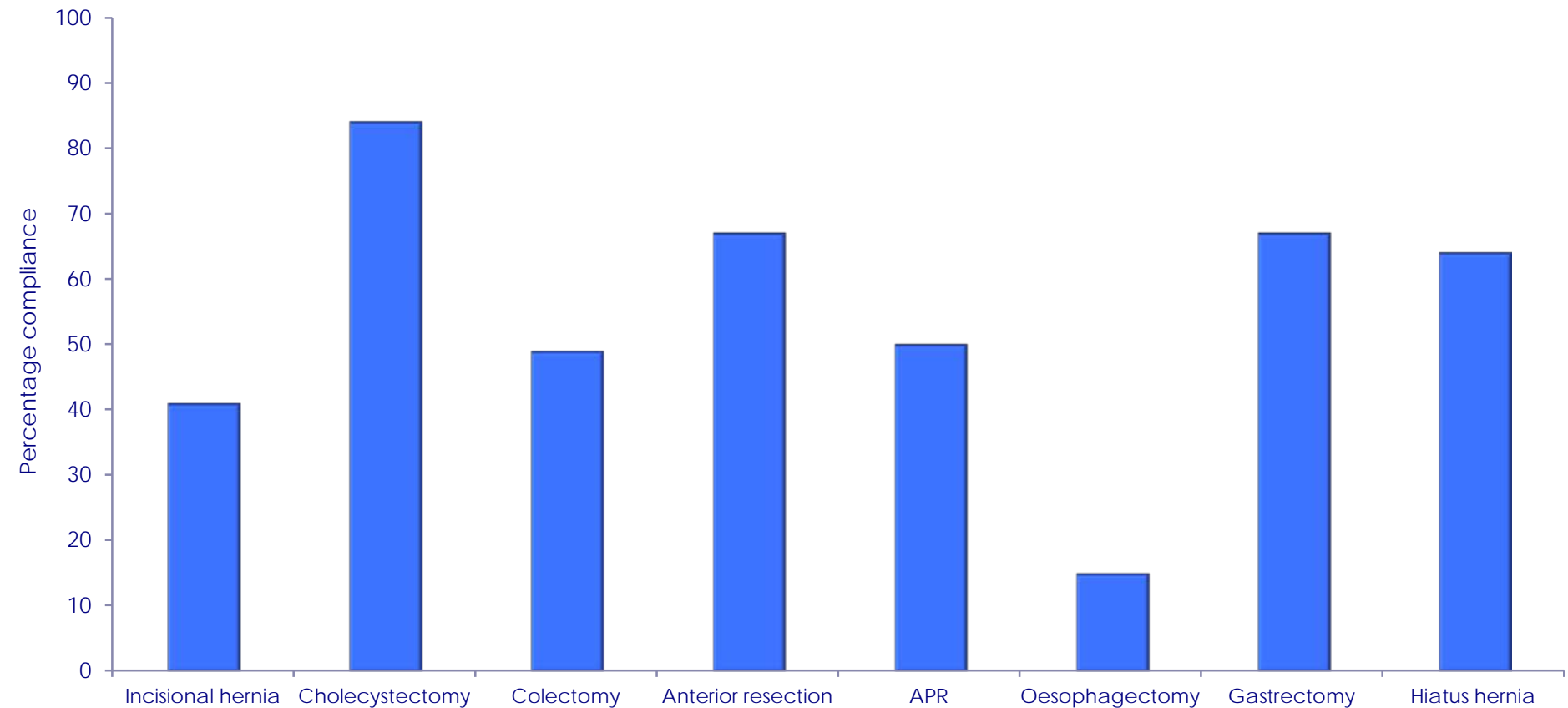
Total = 453

Excluded: emergency surgeries

Aim 1: Clarification if guidelines are being applied in current practice

- ★ Only 67% of requests were compliant with current guidelines
- ★ Primarily FY1 role to check appropriate G&S/cross match is in place prior to theatre
- ★ Foundation doctor awareness:
 - ★ 3/29 doctors aware of guidelines(all FY2s)

% compliance with MSBOS guidelines



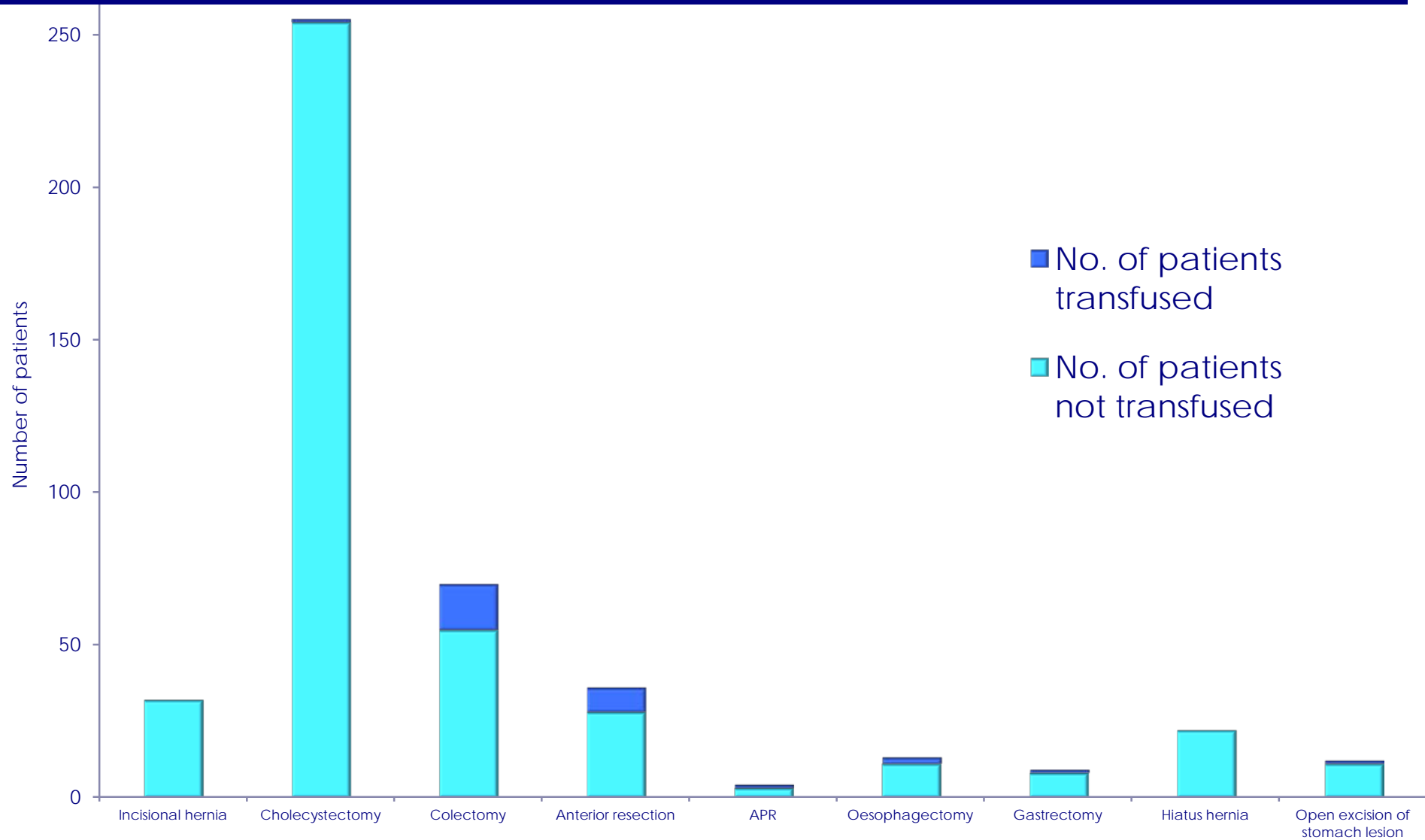
Aim 2: Determine if current guidelines are appropriate

- ★ Overall:

- ★ 253 units cross matched to 94 patients
- ★ 61 units transfused to 29 patients
- ★ Overall C:T ratio = 4:1

- ★ Only 24% of cross matched blood was used

Number of patients transfused/not transfused



★ CT ratios

Ideally, C:T ratio should be 1:1

Surgery	C:T
Incisional hernia	0:0
Cholecystectomy	1.5:1
Colectomy	3.9:1
Anterior resection	5.8:1
APR	2.5:1
Oesophagectomy	5.6:1
Gastrectomy	6:1
Hiatus Hernia	2:0
Excision of stomach lesion	2.1:1

★ Transfusion data

- ★ 23 of the 29 patients (79%) transfused were anaemic
- ★ 13 of the 29 patients (45%) transfused were severely anaemic, with Hb <100 g/l
- ★ C:T ratios improved in anaemic patients
- ★ 25 of the 94 patients (27%) cross matched and issued red cells had Hb \geq 140g/l

★ What is the cost of an unused unit of blood?

★ 192 units of blood held out of circulation

★ Increased age of blood units – more likely to expire?

★ Cost?

★ Summary

- ★ Non compliance with current Trust MSBOS guidelines
- ★ Lack of awareness about guidelines amongst junior doctors
- ★ Excessive cross matching of blood
- ★ Hb is a good indicator of transfusion requirement

★ Limitations

- ★ Small sample size
- ★ Did not account for individual patient factors

★ Proposed new guidelines

- ★ Devised with consensus input from Consultant surgeons and Consultant Anaesthetists
- ★ Consideration of when to deviate from guidelines:
 - ★ if anaemic HB<100g/l – cross match 2 units
 - ★ if patient has a coagulation disorder/antibodies present on G&S – cross match 2 units

Impact of new BCSH guidelines – 2 samples ??

Elective general surgery	G&S/cross match
Abdomino-perineal resection	G&S
Anterior resection	G&S
Antireflux fundoplication	G&S
Cardio-oesophagectomy	G&S
Cholecystectomy	G&S
Closure of stoma	none
Colectomy/colostomy	G&S
Delorme's procedure	none
Epigastric hernia repair	none
Excision of stomach lesion	G&S
Formation of ileal pouch	G&S
Gastrectomy	G&S
Gastrostomy/ileostomy	G&S
Hartmann's procedure/reversal	G&S
Hemicolectomy	G&S
Hiatus hernia repair	G&S
Incisional hernia repair	none
Inguinal hernia repair (TEP (totally extraperitoneal repair)/TAPP (trans-abdominal pre-peritoneal repair)	none
Laparoscopic gastro-jejunostomy	G&S
Laparotomy	G&S
Liver biopsy	G&S
Rectum pouch resection	G&S
Sigmoid colectomy	G&S
Splenectomy	G&S
Staging laparoscopy	none
Umbilical hernia repair	none

★ Recommendations

- ★ Introduce new guidelines
- ★ Expand audit to all elective surgical departments:
 - ★ blood budget may be devolved to individual specialties in our Trust
 - ★ significant financial implications alongside improvement to clinical care
- ★ Increase junior doctor awareness:
 - ★ posters, teaching, iPhone app

Current guidelines

Elective general surgery	G&S/cross match
Abdomino-perineal resection	4
Anterior resection	2
Antireflux fundoplication	
Cardio-oesophagectomy	4
Cholecystectomy	G&S
Closure of stoma	G&S
Colectomy/colostomy	2
Delorme's procedure	G&S
Epigastric hernia repair	
Excision of stomach lesion	
Formation of ileal pouch	2
Gastrectomy	2
Gastrostomy/ileostomy	G&S
Hartmann's procedure/reversal	2
Hemicolectomy	G&S
Hiatus hernia repair	G&S
Incisional hernia repair	G&S
Inguinal hernia repair (TEP (totally extraperitoneal repair)/TAPP (trans-abdominal pre-peritoneal repair))	
Laparoscopic gastro-jejunostomy	
Laparotomy	2
Liver biopsy	G&S
Rectum pouch resection	2
Sigmoid colectomy	G&S
Splenectomy	2
Staging laparoscopy	
Umbilical hernia repair	

Proposed new guidelines

Elective general surgery	G&S/cross match
Abdomino-perineal resection	G&S
Anterior resection	G&S
Antireflux fundoplication	G&S
Cardio-oesophagectomy	G&S
Cholecystectomy	G&S
Closure of stoma	none
Colectomy/colostomy	G&S
Delorme's procedure	none
Epigastric hernia repair	none
Excision of stomach lesion	G&S
Formation of ileal pouch	G&S
Gastrectomy	G&S
Gastrostomy/ileostomy	G&S
Hartmann's procedure/reversal	G&S
Hemicolectomy	G&S
Hiatus hernia repair	G&S
Incisional hernia repair	none
Inguinal hernia repair (TEP (totally extraperitoneal repair)/TAPP (trans-abdominal pre-peritoneal repair))	none
Laparoscopic gastro-jejunostomy	G&S
Laparotomy	G&S
Liver biopsy	G&S
Rectum pouch resection	G&S
Sigmoid colectomy	G&S
Splenectomy	G&S
Staging laparoscopy	none
Umbilical hernia repair	none

Thank you for listening...

Any questions?

(be nice!)