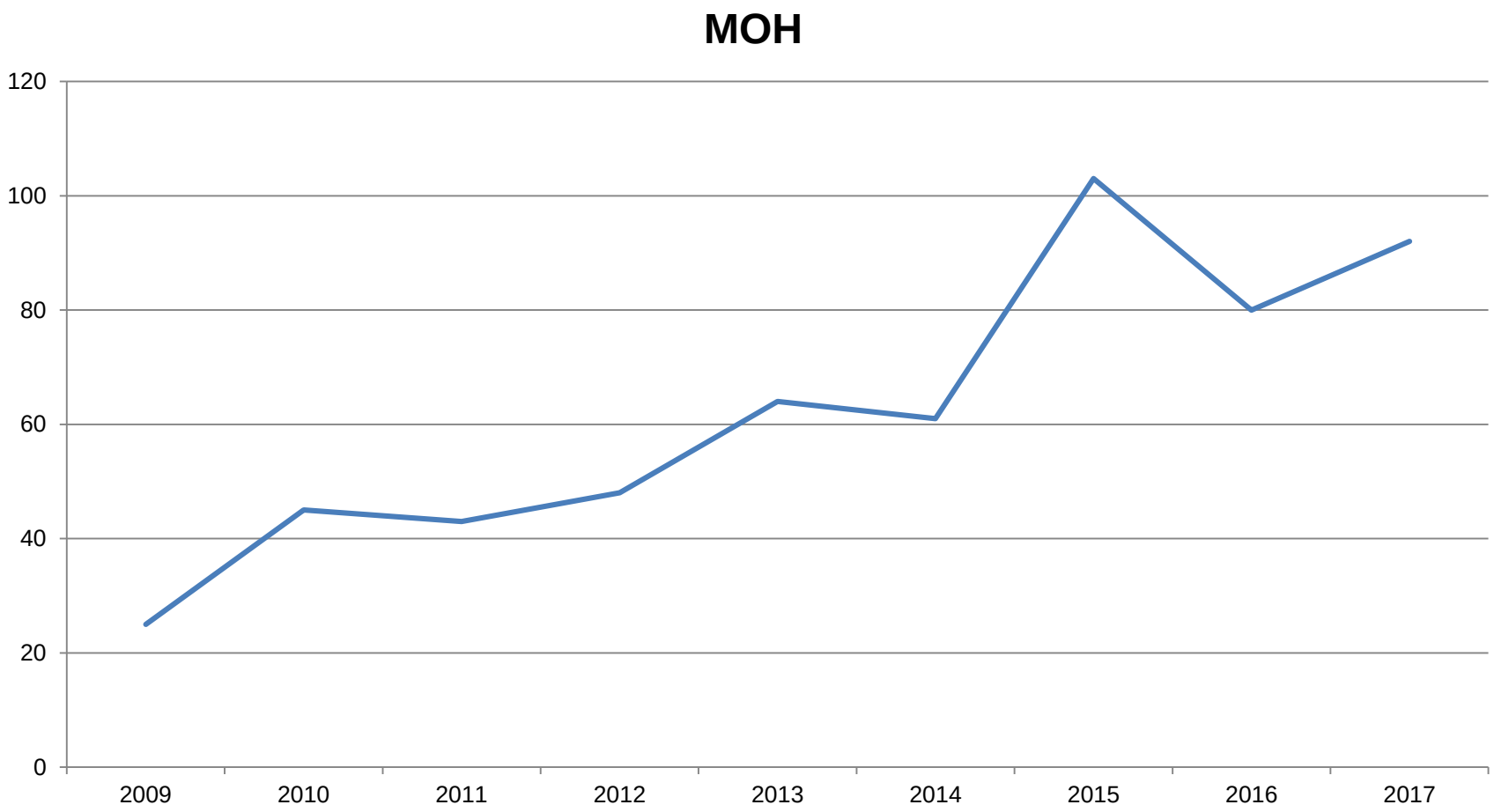
Major Obstetric Haemorrhage

Regional Transfusion Meeting
Jill Ablett, RBH Obstetrician
20/6/18

Major Obstetric haemorrhage at RBH 2009 - 2017



Population trends

- Increasing age of maternity patients
- Increased comorbidities and chronic disease
- Obesity

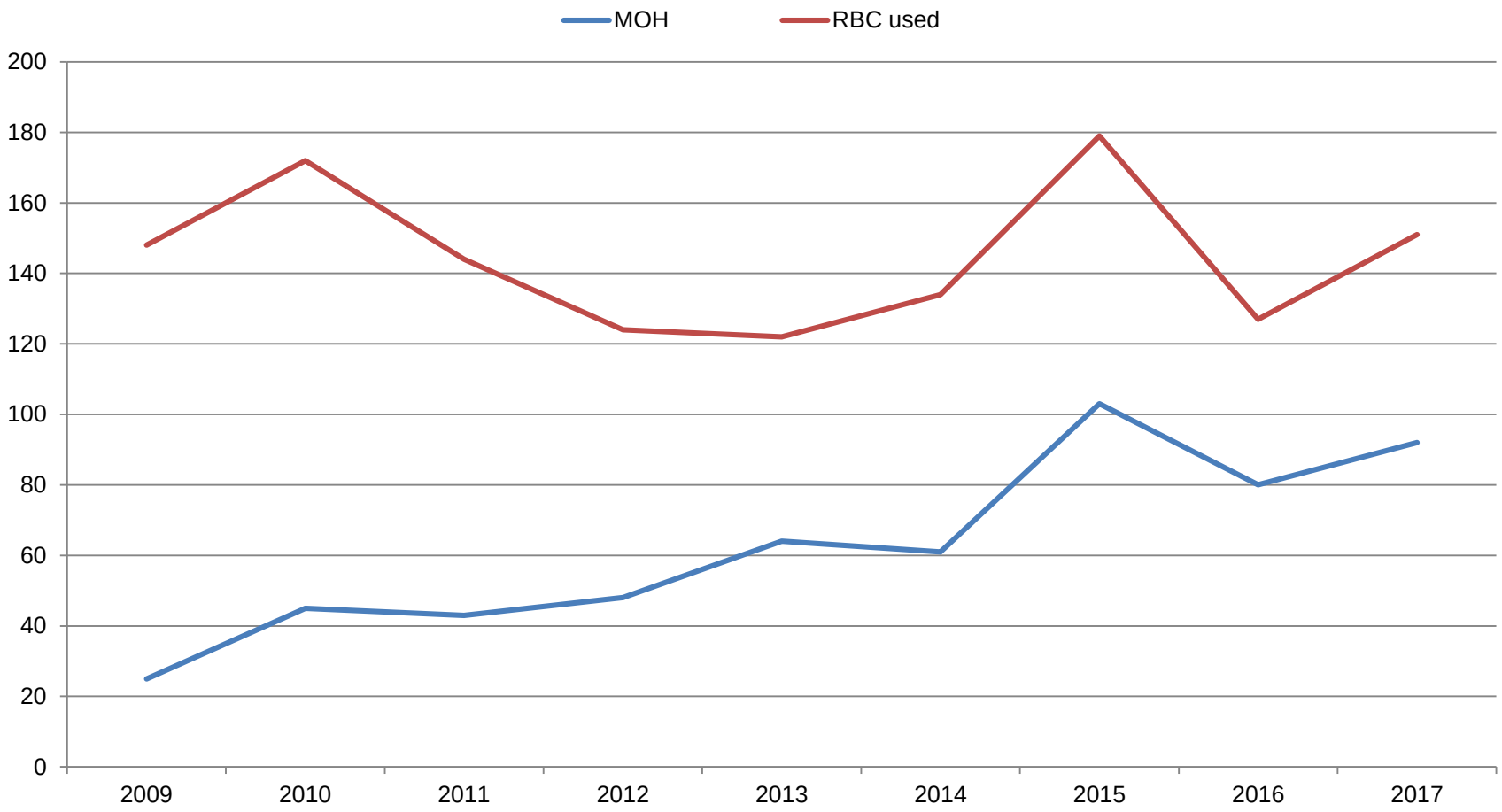
Common Risk Factors for PPH

- Age
- Prolonged labour
- Infection
- Large baby
- Fibroids
- Management of third stage of labour
  - Risk assessment
  - Choice of uterotonic agent
  - Physiological 3rd stage

Risk Factors for PPH

Risk factors	Odds Ratio for PPH	95% CI
Retained placenta	7.8	3.8-16.2
Prolonged 3rd stage	7.6	4.2-13.5
Pre-eclampsia	5.0	3.0-8.5
Multiple pregnancy	4.7	2.4-9.1
Episiotomy	4.7	2.6-8.4
Previous PPH	3.6	1.2-10.2
Failure to progress 2nd stage	3.4	2.4-4.7
Placenta accreta	3.3	1.7-8.4
General anaesthesia	2.9	1.9-4.5
Fetal macrosomia	2.4	1.9-2.9
Perineal laceration	2.4	2.0-2.8

Units of blood used 2009-2017



MOH at RBH

- Rates increasing but rates of transfusion stable
- Better at accurately measuring loss
- Better at managing haemorrhage
- Previous MOH call at 2500 ml
- Now 2000 ml automatic call or earlier if loss ongoing – team includes: Consultants in Anaesthesia, Obstetrics, blood bank
- NMPA data collection 1500ml (above national average)

OBSTETRIC MASSIVE HAEMORRHAGE PROTOCOL
OPERATING THEATRE ACTION CARD (EMA-091)

Clinical evidence of uncontrolled bleeding > 2000ml, or Shocked Patient

Activate Major Obstetric Haemorrhage (MOH) Protocol

MANAGE UTERINE TONE

IF NOT ALREADY GIVEN

Carbetocin	100mcg iv (given routinely for LSCS but safe and effective after vaginal deliveries) **OR**
Oxytocin	5 units IV (max twice) or 30 units in 500ml saline infusion at 100 ml/hr *(not if Carbetocin already given)*
Ergometrine	500mcg IM
Carboprost (Haemabate)	250mcg IM/IU (max 8 times, 15 mins apart)
Misoprostol	1000mcg PR / IU

MANAGE SURGICAL BLEEDING

EUA

Perineal Repair

Manual Removal of Placenta (MROP)

Rusch Balloon

B-Lynch Suture

Uterine artery embolisation

Hysterectomy

MANAGE COAGULOPATHY

Blood Components
As per MOH Protocol

Tranexamic Acid
1g IV over 10 mins

Once bleeding controlled, aim for:

Hb > 80

Platelets > 50

Fibrinogen > 200

ALSO REMEMBER:

Biochemistry:

Calcium > 1
(10% Calcium Chloride 10ml IV over 10 mins)

Glucose < 10
Potassium < 5
(Glucose / Insulin Sliding Scale will do both)

Adjuncts:

Cellsaver
(need second ODP)

Active Warming
(Fluid Warmer and Bair Hugger)

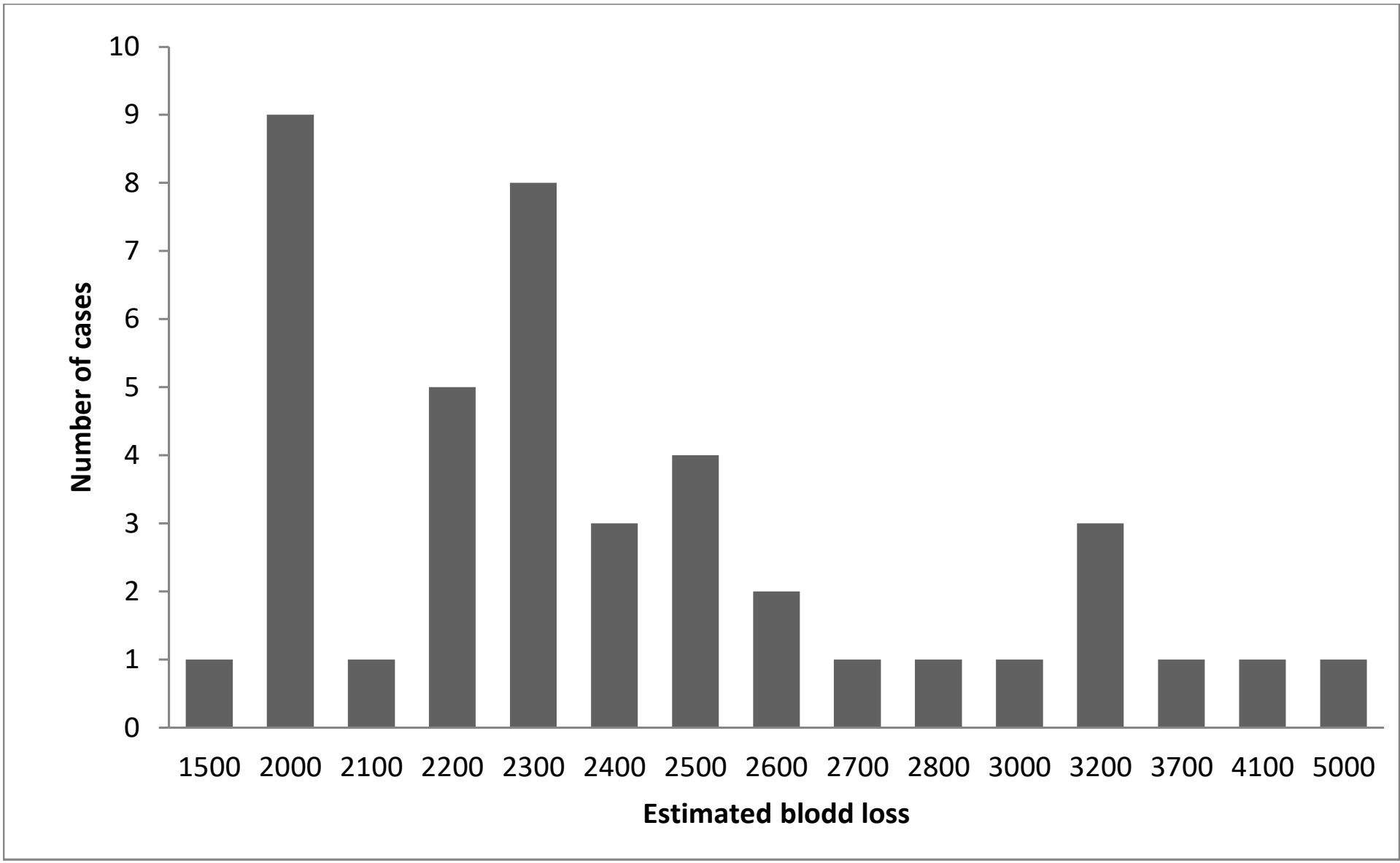
'MOH bloods':

FBC
Clotting + Fibrinogen (Send early)

Crossmatch
(purple, blue and pink bottles)
Consider U+E and calcium (yellow bottle)

P Bose, T Hawkins. L Williams (May 2018)

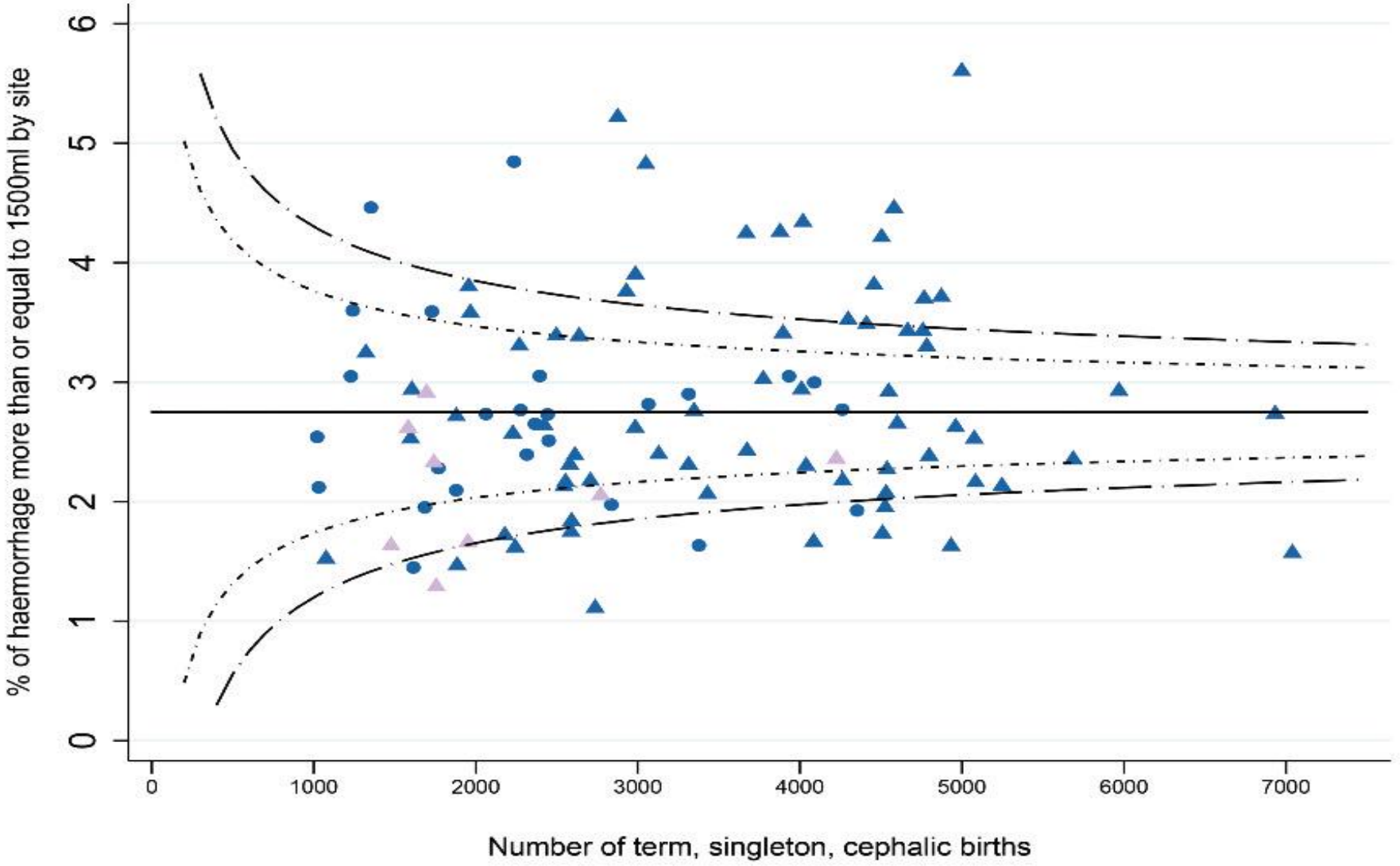
Number of cases of MOH and total blood loss



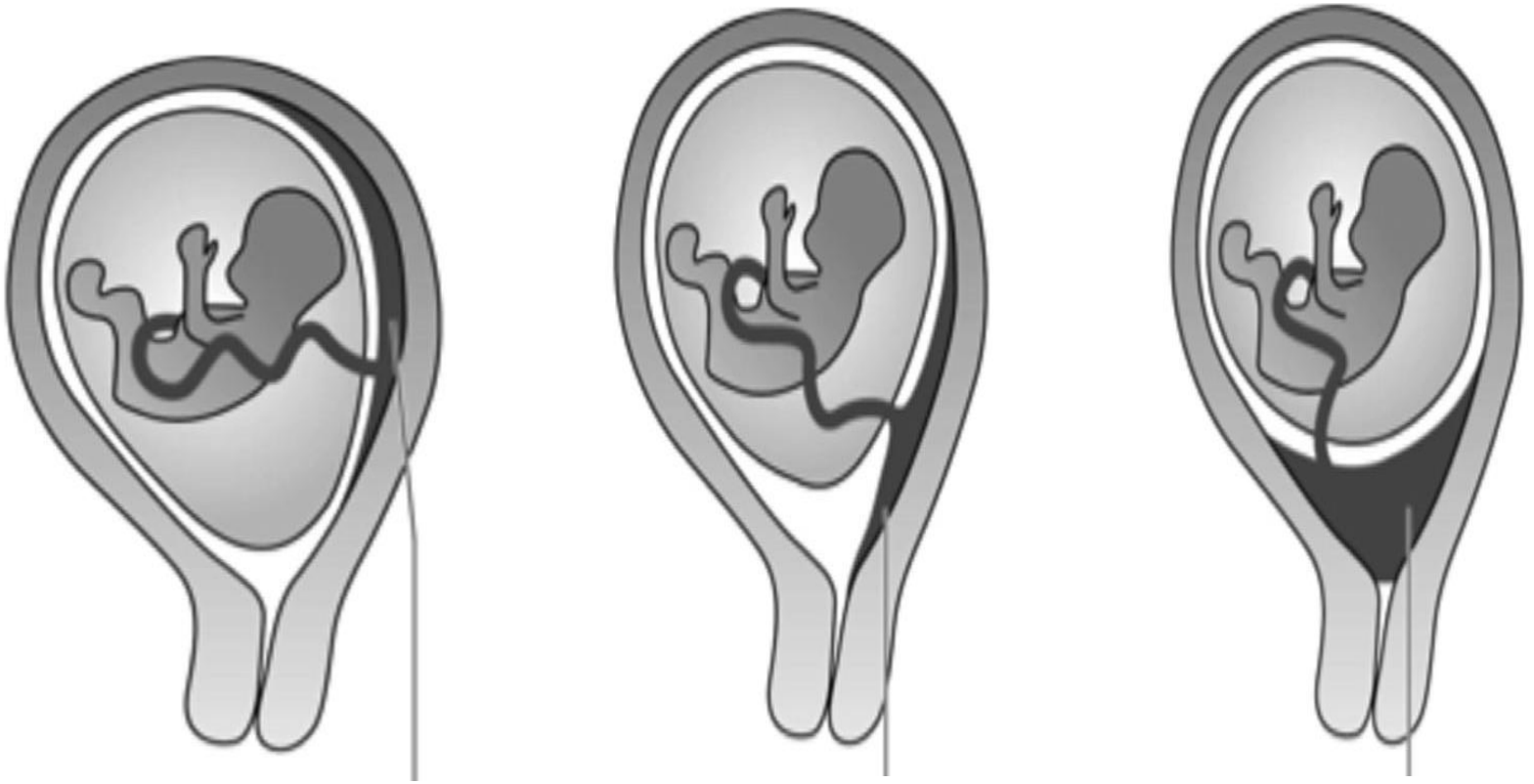
National Maternity and Perinatal Audit 2017

- National data collection for many issues including haemorrhage
- Term singleton cephalic deliveries only
- Losses above 1500ml
- 3.7% RBH
- National average 2.8%
- Range 1-6%
- From 2018 we will collect data on bleeds over 1500ml

NMPA data for haemorrhages over 1500ml



Placenta Praevia

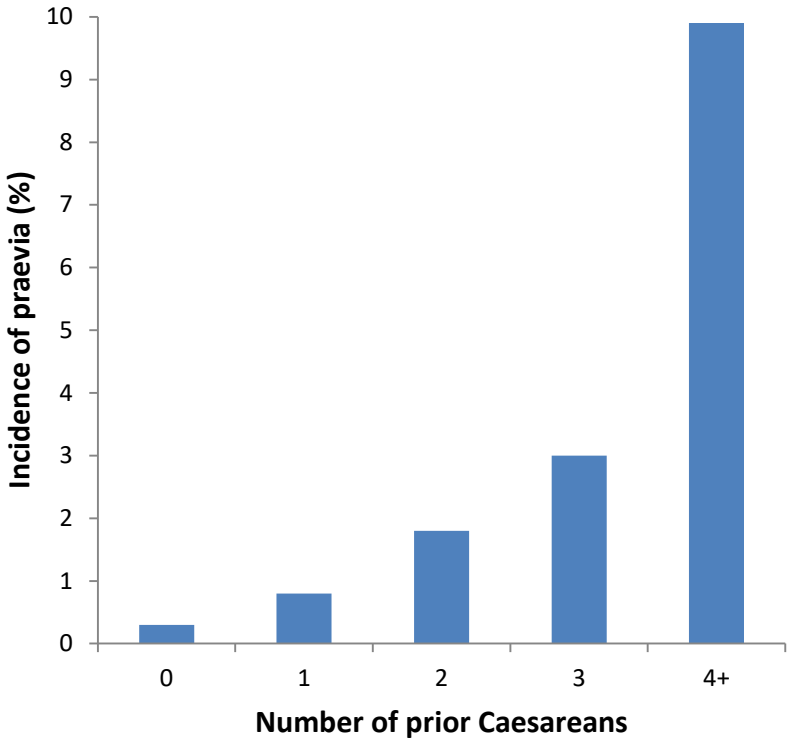


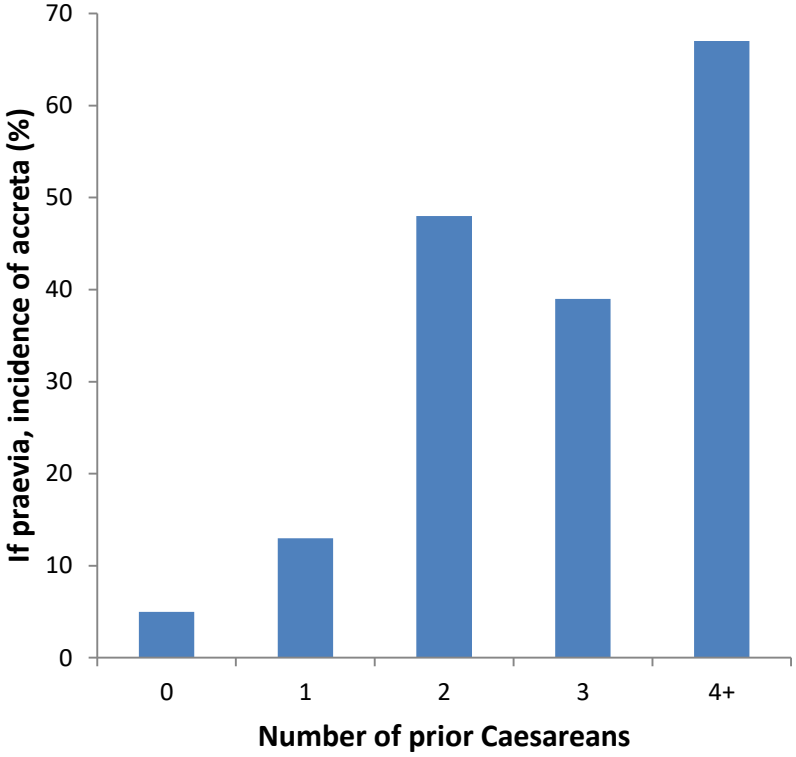
- Normal

Minor

Major

Postpartum Haemorrhage C/S and Placenta Praevia/Accreta





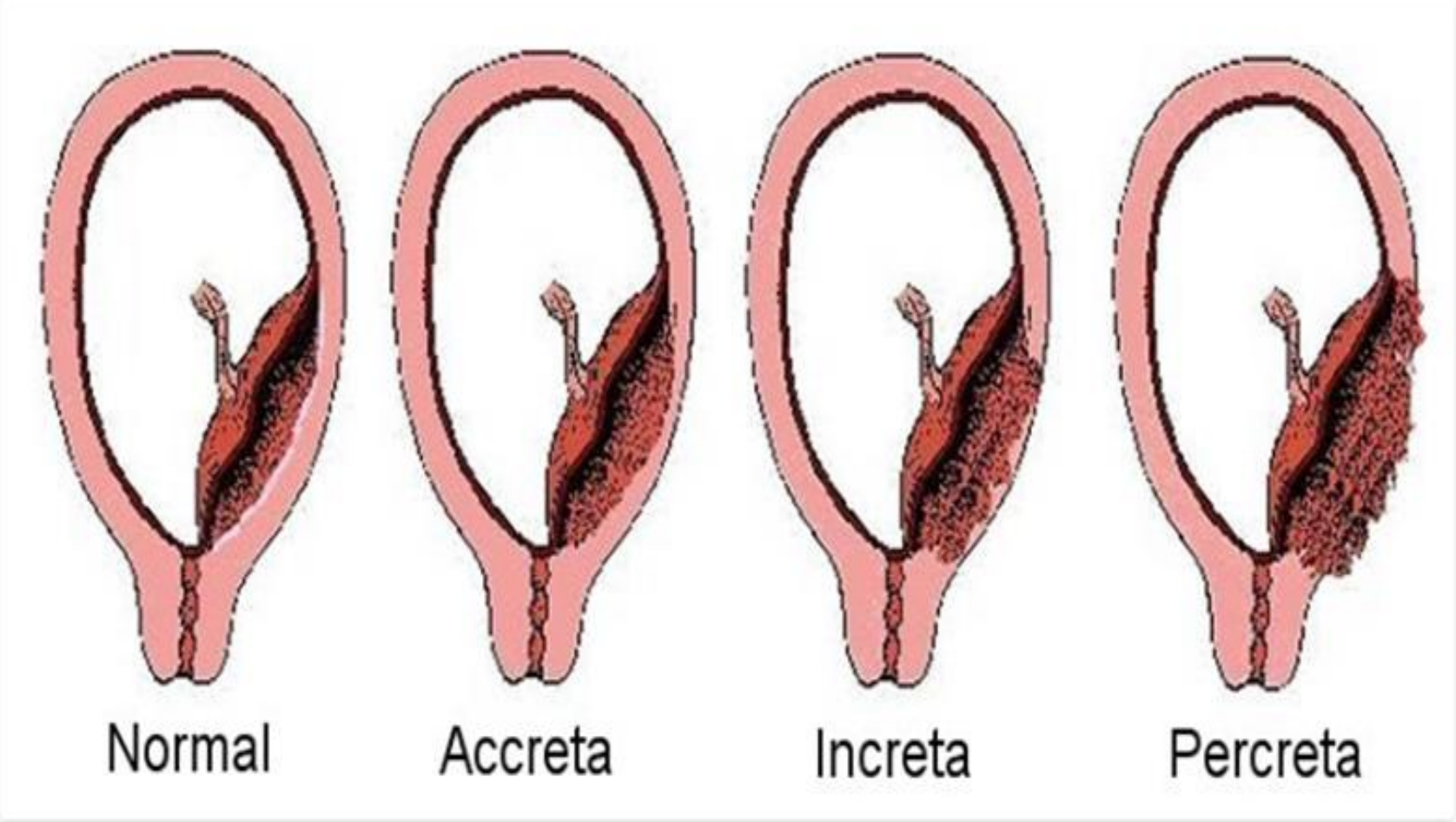
Placenta Accreta

- Associations/risk factors
  - Placenta praevia
  - Previous surgery (LSCS, ERPC, myomectomy, endometrial ablation)
  - IVF
  - Multiparity
  - Age
  - Uterine abnormalities

Placenta Accreta

- 1 in 22000 without placenta praevia
- 1980 - 1 in 2510
- 2015 - 1 in 731
- Increasing rates of LSCS and other risk factors
- 1 previous LSCS 3% risk accreta with placenta praevia
- 4 previous LSCS 67% risk accreta if placenta praevia

Placenta Accreta



Diagnosis

- Ultrasound with colour Doppler
- MRI
- Loss of hyperechoic zone between uterus and bladder
- Thin myometrium
- Abnormal vessels

Management

- Multidisciplinary team planning
  - Obstetricians
  - Gynaecologists
  - Anaesthetics/Theatre teams
  - Urologists/ Vascular surgeons
  - Haematology and Transfusion teams
  - Interventional radiology

Management

- Interventional radiology – balloons
- Urology – stents
- LSCS – avoid placenta
- Do not attempt to remove placenta
- Remove abnormal area
- hysterectomy

Haemorrhages - what have we learned most recently?

- Assess and reassess risk factors and which oxytocic drug to use
- Measure bleeding accurately
- Small women decompensate earlier (<55Kg)
- Tranexamic acid after 500ml loss
- Controlled/uncontrolled haemorrhage call

Thank you

Any questions?