ELECTIVIST – A Novel Tool to Book Elective Caesarean Sections

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Agenda
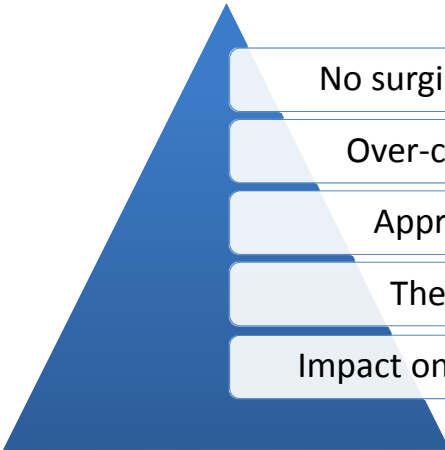
- Background

- Design

- Implementation

- Outcomes

- Learning and Reflections

Slide 1

ELCS at Buckinghamshire NHS Trust

After 1300h, one theatre available for emergencies ← **EMCS** **ELCS** → ELCS list 0800h to 1300h on Monday to Thursday and alternate Fridays

2 x Maternity operating theatres
Separate theatre teams for ELCS and Emergency cases

Slide 2

ELCS at Buckinghamshire NHS Trust

| 3 slots per ELCS list | Booking in antenatal clinic | Master Excel spreadsheet | Risk factors | Unselected case mix |
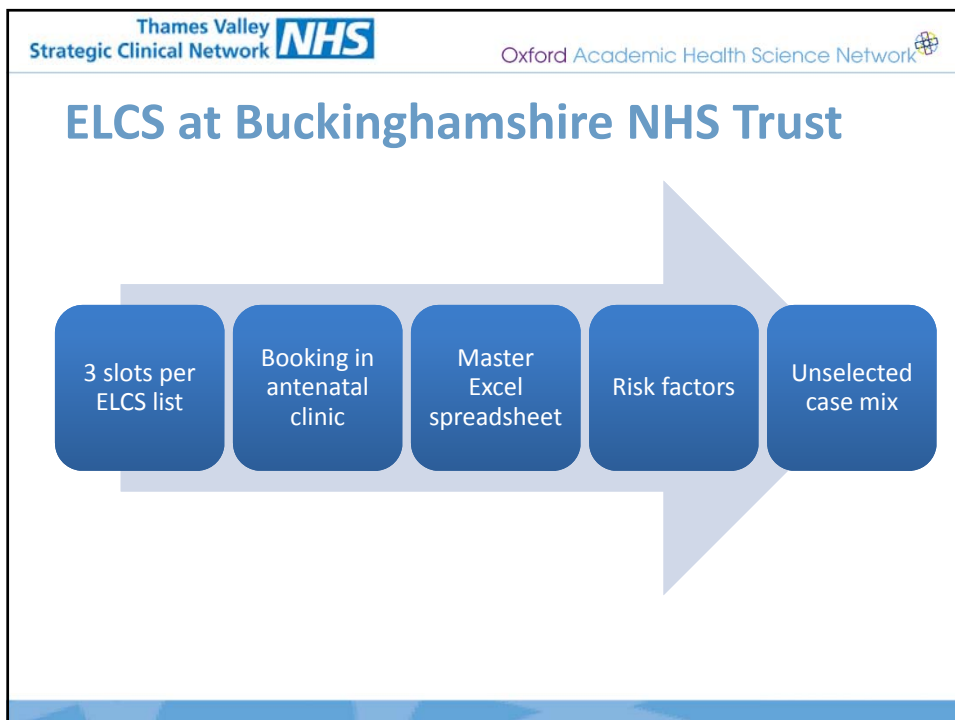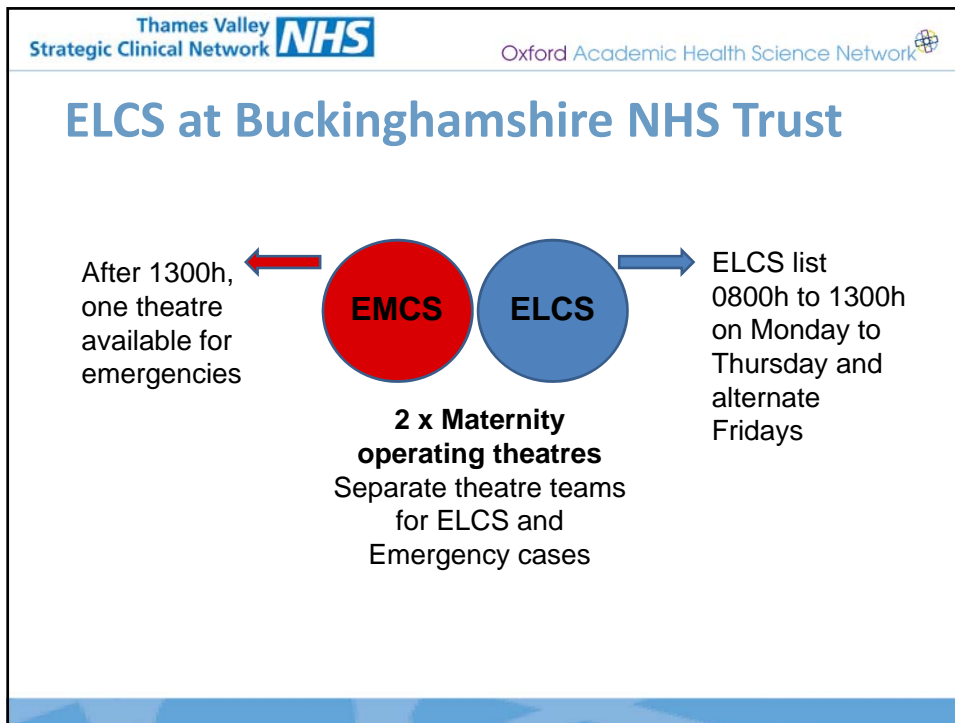
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Issues with ELCS Process

- No surgical risk assessment
- Over-complex ELCS lists
- Appropriate staffing
- Theatre Over-Run
- Impact on Emergency Theatre

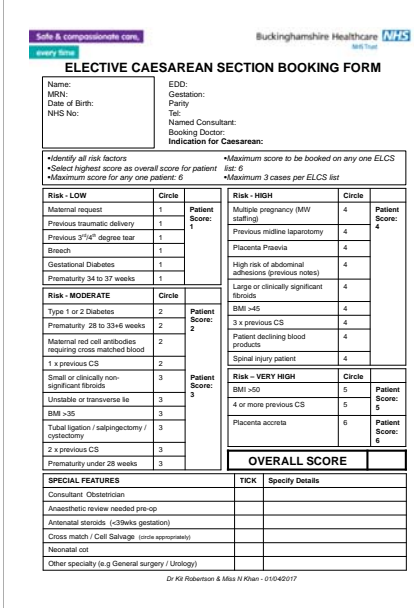**Thames Valley Strategic Clinical Network** NHS   Oxford Academic Health Science Network

ELCS Booking Form

- Risk assessment by clinician at booking
- Identification of all risk factors
- Highest risk score allocated as overall score to each case (1 to 6)
- Max total score on any one ELCS list: 6
- Max 3 cases per list

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ELECTIVE CAESAREAN SECTION BOOKING FORM

Name: EDD:
MRN: Gestation:
Date of Birth: Parity
NHS No: Tel:
                               Named Consultant:
                               Booking Doctor:
                               Indication for Caesarean:

- Identify all risk factors
- Select highest score as overall score for patient
- Maximum score for any one patient: 6

- Maximum score to be booked on any one ELCS list: 6
- Maximum 3 cases per ELCS list

Risk - LOW	Circle		Risk - HIGH	Circle	
Maternal request	1	**Patient Score: 1**	Multiple pregnancy (MW staffing)	4	**Patient Score: 4**
Previous traumatic delivery	1		Previous midline laparotomy	4	
Previous 3rd/4th degree tear	1		Placenta Praevia	4	
Breech	1		High risk of abdominal adhesions (previous notes)	4	
Gestational Diabetes	1		Large or clinically significant fibroids	4	
Prematurity 34 to 37 weeks	1				
Risk - MODERATE	**Circle**		BMI >45	4	
Type 1 or 2 Diabetes	2	**Patient Score: 2**	3 x previous CS	4	
Prematurity 28 to 33+6 weeks	2		Patient declining blood products	4	
Maternal red cell antibodies requiring cross matched blood	2		Spinal injury patient	4	
1 x previous CS	2		**Risk – VERY HIGH**	**Circle**	
Small or clinically non-significant fibroids	3	**Patient Score: 3**	BMI >50	5	**Patient Score: 5**
Unstable or transverse lie	3		4 or more previous CS	5	
BMI >35	3		Placenta accreta	6	**Patient Score: 6**
Tubal ligation / salpingectomy / cystectomy	3				
2 x previous CS	3				
Prematurity under 28 weeks	3		**OVERALL SCORE**		

SPECIAL FEATURES	TICK	Specify Details
Consultant Obstetrician		
Anaesthetic review needed pre-op		
Antenatal steroids (<39wks gestation)		
Cross match / Cell Salvage (circle appropriately)		
Neonatal cot		
Other specialty (e.g General surgery / Urology)		

Dr Kit Robertson & Miss N Khan - 01/04/2017

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Risk Assessment

Risk - LOW	Circle	
Maternal request	1	**Patient Score: 1**
Previous traumatic delivery	1	
Previous 3rd/4th degree tear	1	
Breech	1	
Gestational Diabetes	1	
Prematurity 34 to 37 weeks	1	

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Risk Assessment

Risk - MODERATE	Circle		Risk - MODERATE	Circle	
Type 1 or 2 Diabetes	2	**Patient Score: 2**	Small or clinically non-significant fibroids	3	**Patient Score: 3**
Prematurity 28 to 33+6 weeks	2		Unstable or transverse lie	3	
Maternal red cell antibodies requiring cross matched blood	2		BMI >35	3	
			Tubal ligation / salpingectomy / cystectomy	3	
1 x previous CS	2		2 x previous CS	3	
			Prematurity under 28 weeks	3	

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Risk Assessment

Risk - HIGH	Circle	
Multiple pregnancy (MW staffing)	4	**Patient Score: 4**
Previous midline laparotomy	4	
Placenta Praevia	4	
High risk of abdominal adhesions	4	
Large or clinically significant fibroids	4	
BMI >45	4	
3 x previous CS	4	
Patient declining blood products	4	
Spinal injury patient	4	

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Risk Assessment

Risk – VERY HIGH	Circle	
BMI >50	5	**Patient Score: 5**
4 or more previous CS	5	
Placenta accreta	6	**Patient Score: 6**

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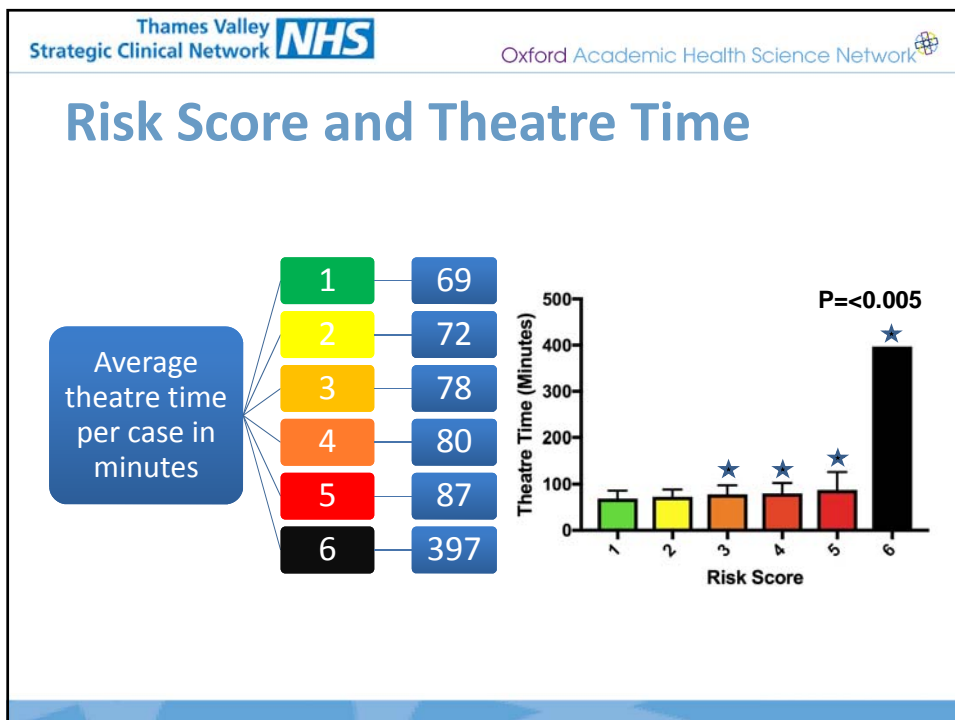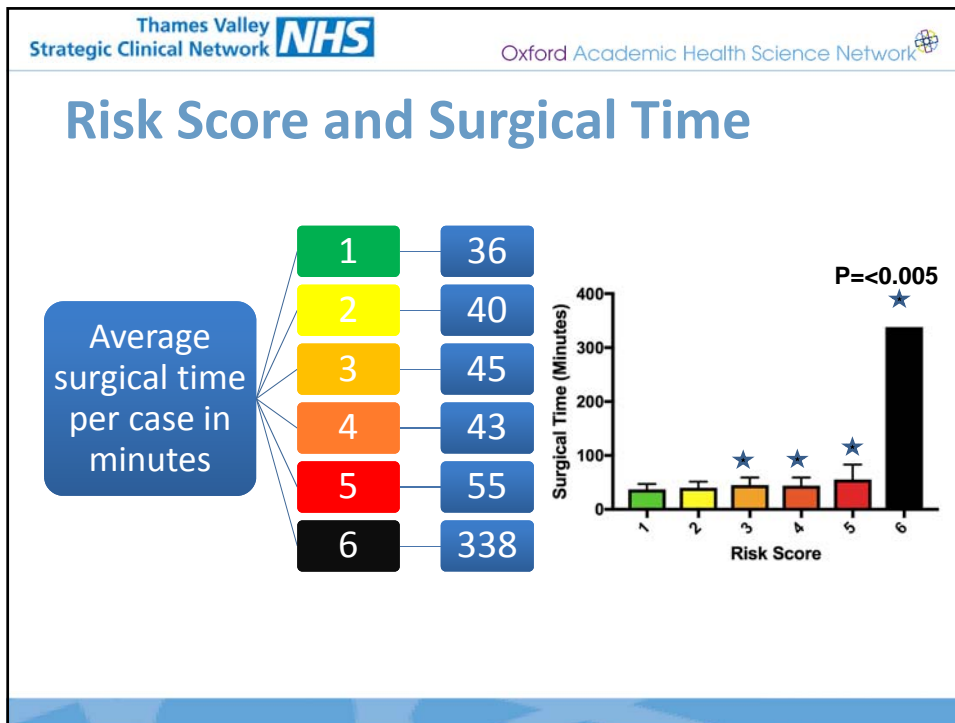
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Validation of Risk Score

- Retrospective analysis of all ELCS performed in 2016

- Data collected from existing booking details on ELCS booking Excel spreadsheet

- Patient risk scores calculated using new booking form

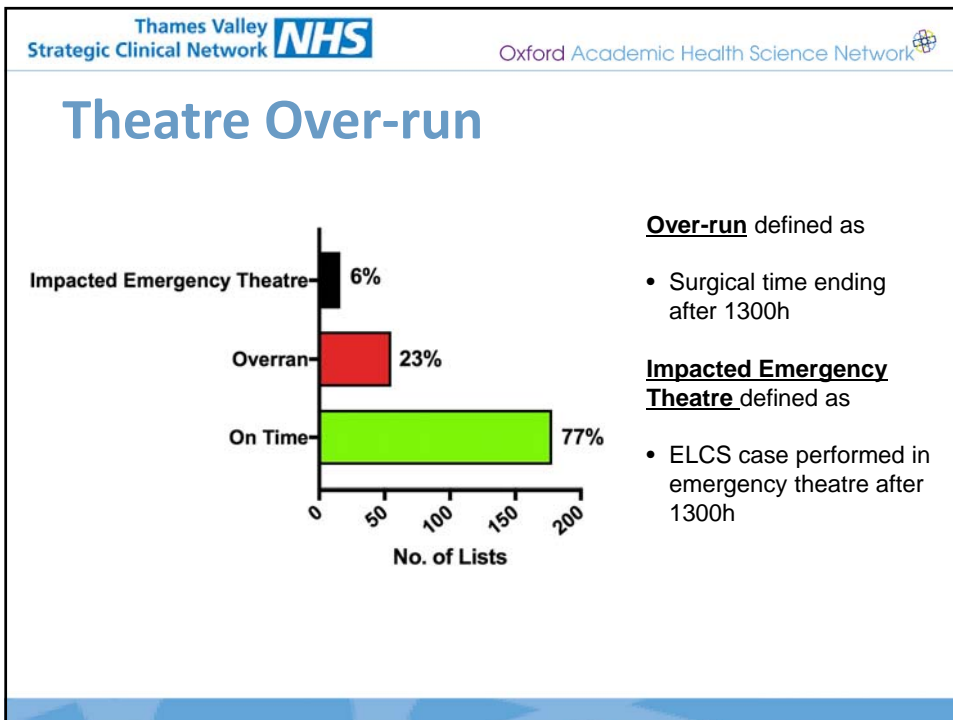- Surgical and theatre time data collected from Bluespier theatre records

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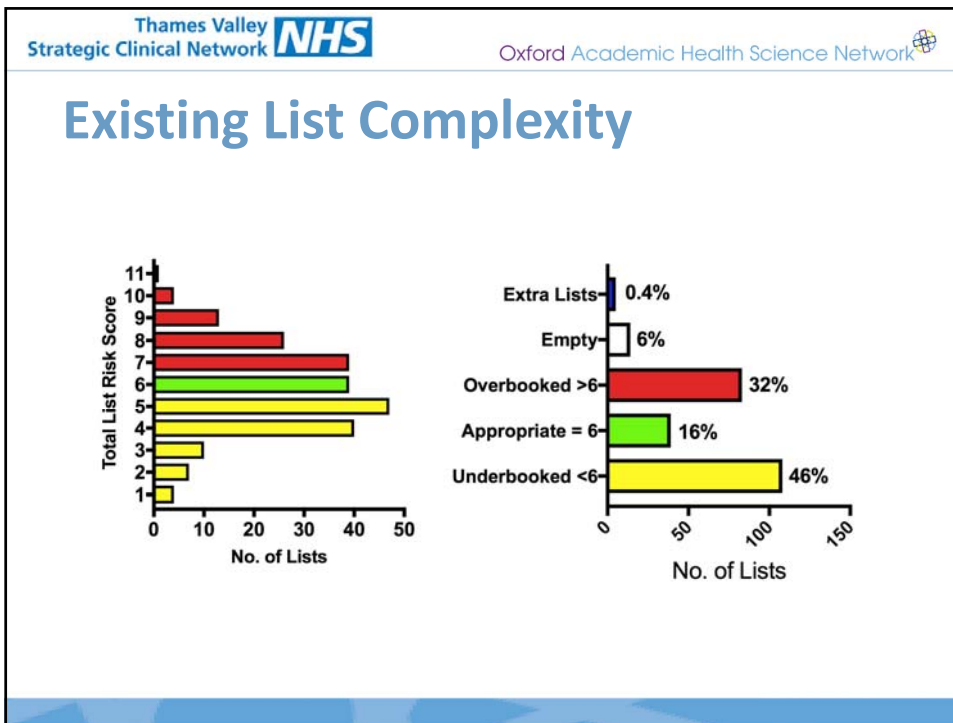
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Results

| 230 ELCS lists | — | 586 ELCS cases |

1	144 cases
2	248 cases
3	99 cases
4	87 cases
5	7 cases
6	1 case

Booking Process

	Parity	Gestation	Indication	Risk Factors	Score	Total List Score
MON	3	39.1	Other	Prev C/S X3	4	**8**
	1	39.1	Other	Breech	1	
	1	39.2	Other	transverse lie GDM metformin	3	
TUES	0	36.1	Twins	DCDA/IUGR X2	4	**9**
	1	39.2	Declined VBAC	prev C/S X 1 GDM Diet	2	
	2	39.0	Other	x2 prev c/s	3	
WED	1	39.2	Maternal request	Prev Shoulder dystocia,3rd degree tear, PPH	1	**3**
	0	39.1	Breech		1	
	1	38	Other	SGA, abnormal Doppler	1	
THURS	1	39.0	Declined VBAC	1 x prev cs hypothyroid	2	**4**
	1	39.2	Declined VBAC	prev c/s x 1	2	
FRI	2	39.0	Other	Prev C/S x 2, BMI 53.6 wt 164.4 kgs	5	**7**
	1	40.1	Declined VBAC	Prev C/S x1	2	
				Total Week Risk Score		**31**
				Total Week List Capacity		**30**

Booking Process

	Parity	Gestation	Indication	Risk Factors	Score	Total List Score
MON	3	39.1	Other	Prev C/S X3	4	**6**
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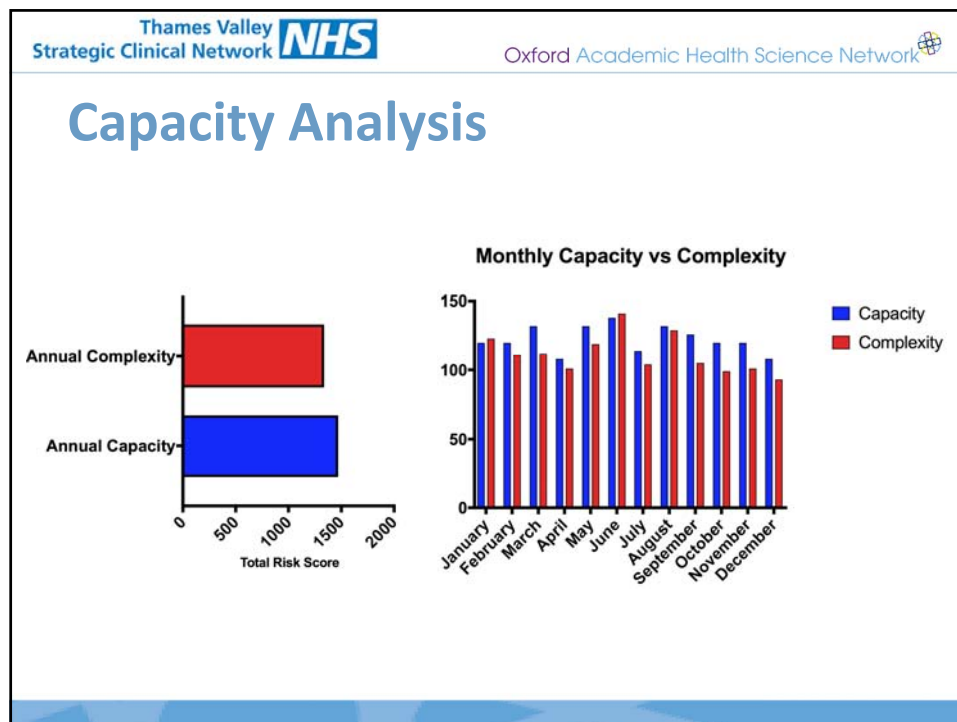
Capacity Analysis

Monthly Capacity vs Complexity

Capacity / Complexity

Implementation of ELECTIVIST

- Introduction of ELCS booking form (April 2017)
- Staff training
- Booking spreadsheet modified
- New risk score and total list score columns
- Colour coding to alert booking clinician if list overbooked
- Overbooking permitted if named senior clinician reviewed list complexity and agreed

ELECTIVIST Outcomes at 4 months

- Improved booking
- Reduction in extra lists required by 66%
- No empty lists in first four months

ELECTIVIST Outcomes at 4 months

- Reduction in over-run from 23% to 8%
- Reduction in over-run impacting emergency theatre from 6% to 1%
- All lists which overran were either overbooked or had an extra emergency case added on the day
- Positive feedback from ANC, obstetric, anaesthetic and theatre staff

Further improvements

- Improving staff training with risk scoring system
- ELCS booking form as part of induction process for new doctors
- Further modifications to booking spreadsheet to make data entry easier

Learnings and Reflections

- Excellent support from all stakeholders
- Overbooking continued initially due to capacity issues, now resolving
- Minimal disruption to service due to modification of existing system
- Early data suggests improved efficiency and reduction in clinical risk due to over-run

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Acknowledgements

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- A Mackillop, Buckinghamshire NHS Trust
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Thank you

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