

# Saving Babies Lives Care Bundle and the clinical importance of reducing smoking in pregnancy

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# Why Smoking is a key issue for Maternity



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	Maternal Smoking	Secondhand smoke exposure
<b>Low Birth Weight</b>	Average 250g lighter	Average 30-40g lighter
<b>Stillbirth</b>	Double the likelihood	Increased risk
<b>Miscarriage</b>	24-32% more likely	Possible risk
<b>Preterm birth</b>	27% more likely	Increased risk
<b>Heart defects</b>	50% more likely	Increased risk
<b>Sudden infant death</b>	3 times more likely	45% more likely

**Source:** Action on Smoking and Health. Smoking in pregnancy challenge group. Review of the Challenge 2018. July 2018

# Saving Babies Lives Care Bundle v2 – Element 1



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This element is strongly evidence based and provides a practical approach to reducing smoking in pregnancy by following NICE guidance

## **Interventions:**

- CO Testing should be offered to all pregnant women at the antenatal booking appointment, with the outcome recorded
- Additional CO testing should be offered to pregnant women as appropriate throughout pregnancy with the outcome recorded
- CO testing should be offered to all pregnant women at the 36 week antenatal appointment, with the outcome recorded
- Referral for those with elevated levels (4ppm or above) for support from a trained stop smoking specialist, based on an opt out system. Referral pathway must include feedback and follow up processes
- All relevant maternity staff should receive training on the use of the CO monitor and VBA so they are able to have a meaningful conversation with women about smoking

## **Continuous Learning:**

- Maternity care providers must examine their outcomes in relation to the interventions and trends and themes within their own incidents where smoking was a contributory factor
- Individual trusts examine outcomes in relation to similar trusts to understand variation and inform improvements

# Saving Babies Lives Care Bundle (SBLCB) v2

## Element 1



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### **Continuous Learning:**

Maternity providers are encouraged to focus improvement in the following areas:

- Effective identification of women who smoke during their pregnancies
- Increase the provision of effective training of staff in relation to smoking during pregnancy
- Working with local partners to develop effective pathways of care for referral for specialist stop smoking service

### **Process Indicators:**

- Recording of CO reading for each pregnant women on Maternity Information System and inclusion of these data in the providers MSDS submission to NHS Digital
- % of women where CO measurement at booking is recorded
- % of women where CO measurement at 36 weeks is recorded

### **Outcome Indicators:**

- % of women with a CO measurement > 4ppm at booking
- % of women with a CO measurement > 4ppm at 36 weeks
- % of women who have a CO level > 4ppm at booking and < 4ppm at the 36 week appointment

**SBLCB Survey updated in line with SBLCB v2 first submission today 4<sup>th</sup> November.**

# Updated SBLCBv2 Survey



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## Reducing Stillbirths Care Bundle Elements

**Element 1: Reducing smoking in pregnancy by carrying out a Carbon Monoxide (CO) test at booking to identify smokers (or those exposed to tobacco smoke) and referring to stop smoking service/specialist as appropriate**

**1a. Are you meeting all requirements of Element 1 of the care bundle?**

*If "yes", the questions below will be automatically populated on dropdown selection. If "no", please complete all questions below.*

Click to Select

**1b. Are you carrying out any improvement activity designed to reduce smoking in pregnancy?**

*If "yes", please go to question 1c, If "no", please go to question 1f.*

Click to Select

**1c. Does your standard operating procedure (e.g. guidelines) include the following:**

i. CO monitoring at booking and additional CO testing throughout pregnancy including the 36 week antenatal appointment, with the outcome recorded?

Click to Select

ii. Referring expectant mothers, with elevated CO levels (4ppm or above), to a trained stop smoking specialist, based on an opt out system with a pathway that includes feedback and follow up processes?

Click to Select

**1d. Do the improvement activities include training all maternity staff on the use of the CO monitor and having a brief and meaningful conversation with women about smoking?**

Click to Select

**1e. Have all recorded outcomes of CO testing in pregnancy relating to element 1 activities been recorded on your MIS enabling their submission in MSDS v2.0 monthly submissions?**

Click to Select

**1f. If you answered "no" to question 1b, are you planning on introducing this type of intervention / improvement activity?**

Click to Select

**Please use the free text box below to detail any barriers your maternity service is experiencing in implementing element 1 of SBLCBv2 or submitting the required data to MSDSv2; and to provide details of any learning developed as a result of the implementation.**

# Development of the East Midlands Smokefree Pregnancy Network

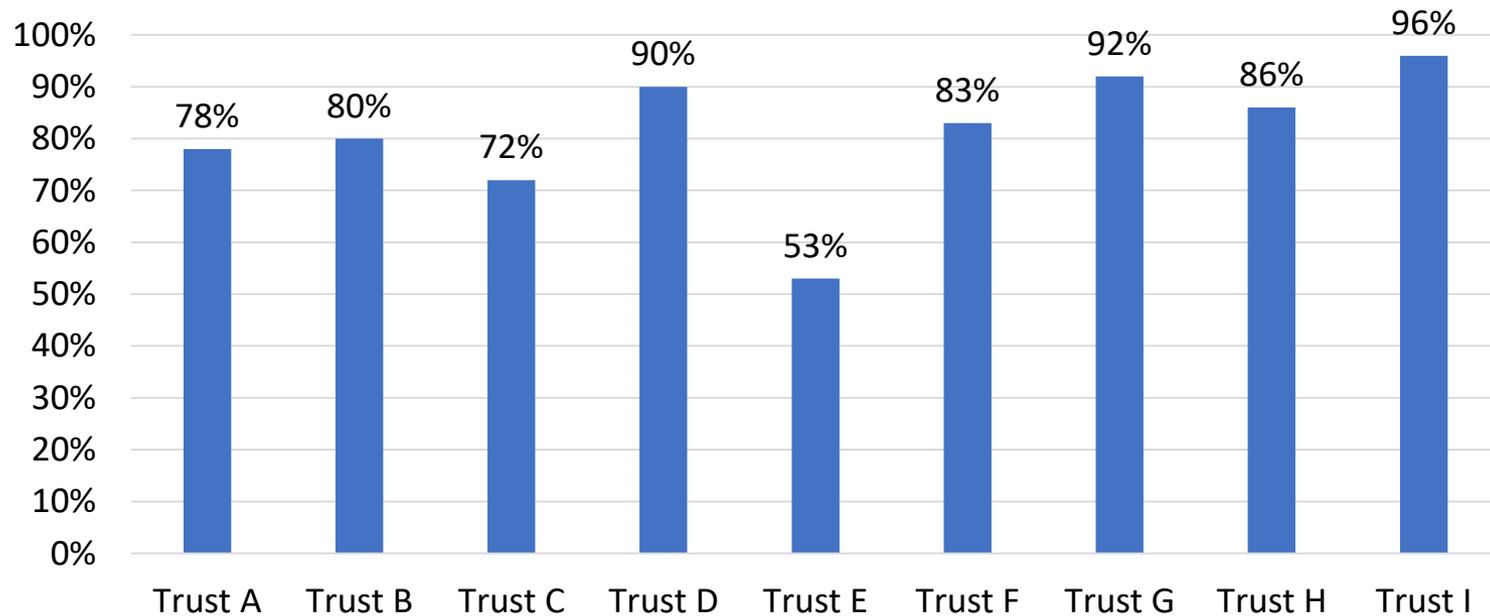


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East Midlands baseline audit  
Notes from October 2018-reported March 2019  
CO testing for all Pregnant Women at Antenatal Booking

Reducing smoking in pregnancy by carrying out Carbon Monoxide (CO) test at antenatal booking appointment to identify smokers (or those exposed to tobacco smoke) and referring to stop smoking service/specialist as appropriate

CO reading for pregnant woman

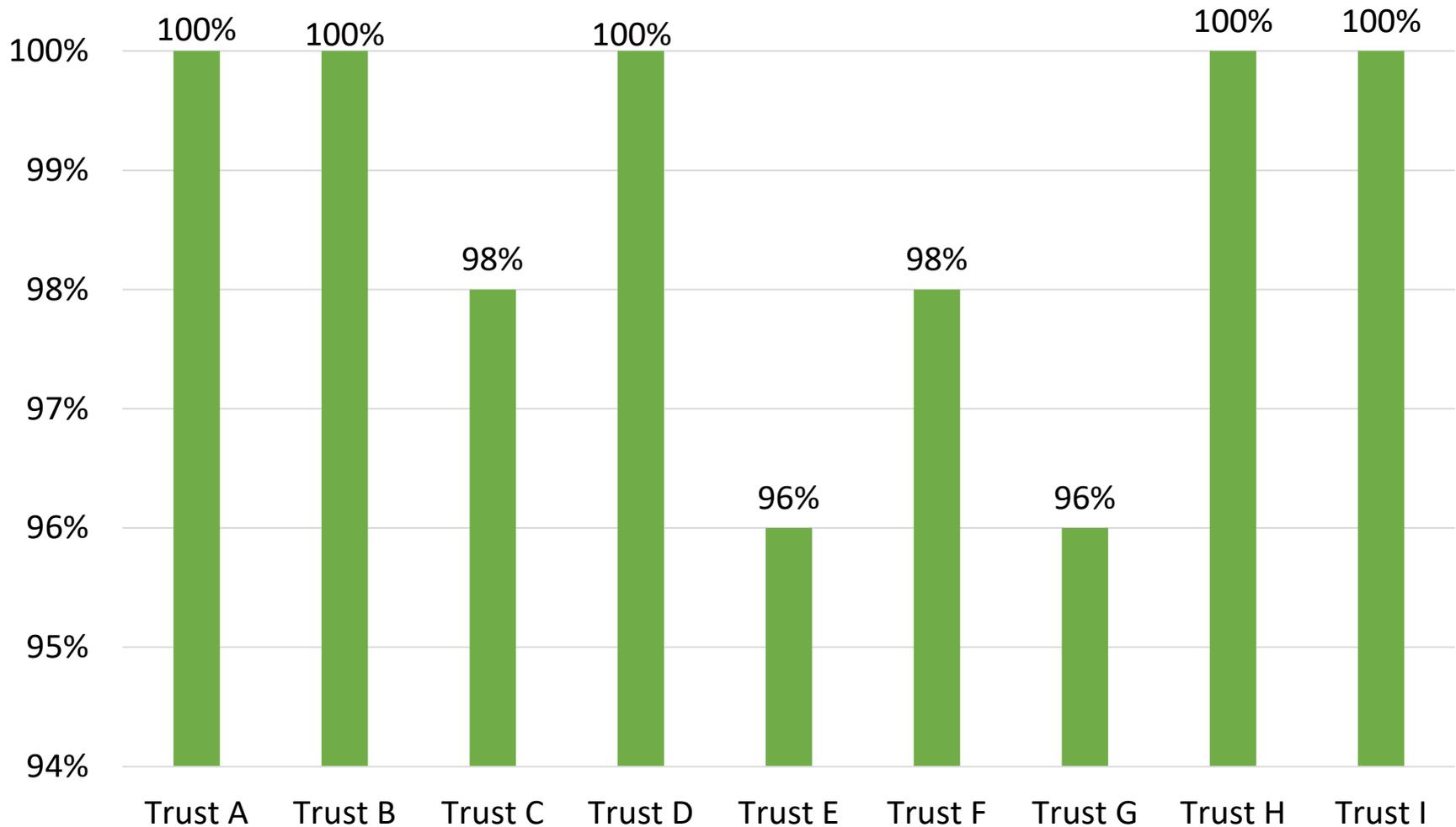


# East Midlands baseline October 2018 Smoking Status at Booking



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Recording of smoking status of each pregnant woman



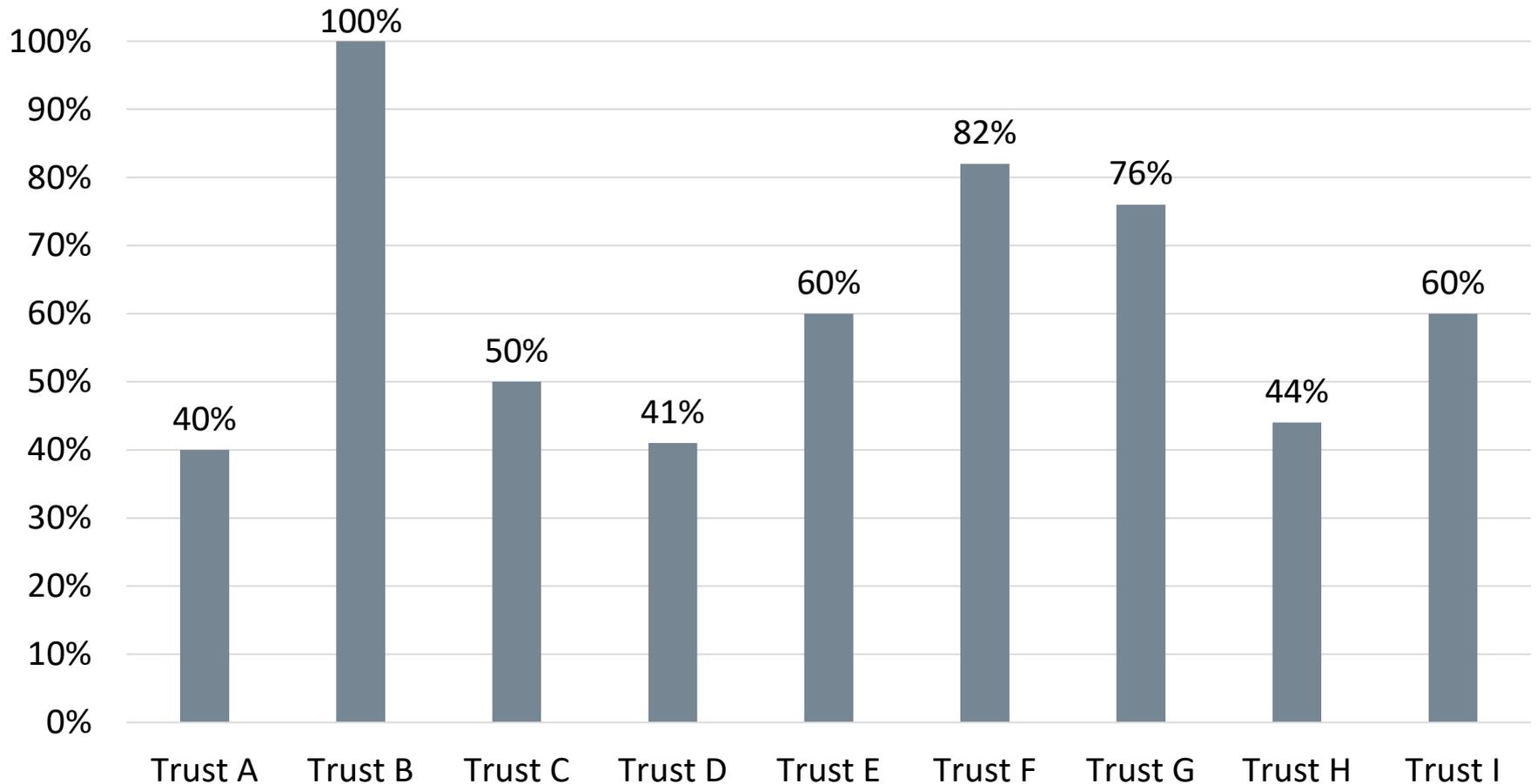
# East Midlands baseline audit October 2018

## CO reading identifies exposure to smoke or high reading, referral to stop smoking services on an opt out basis or any other action



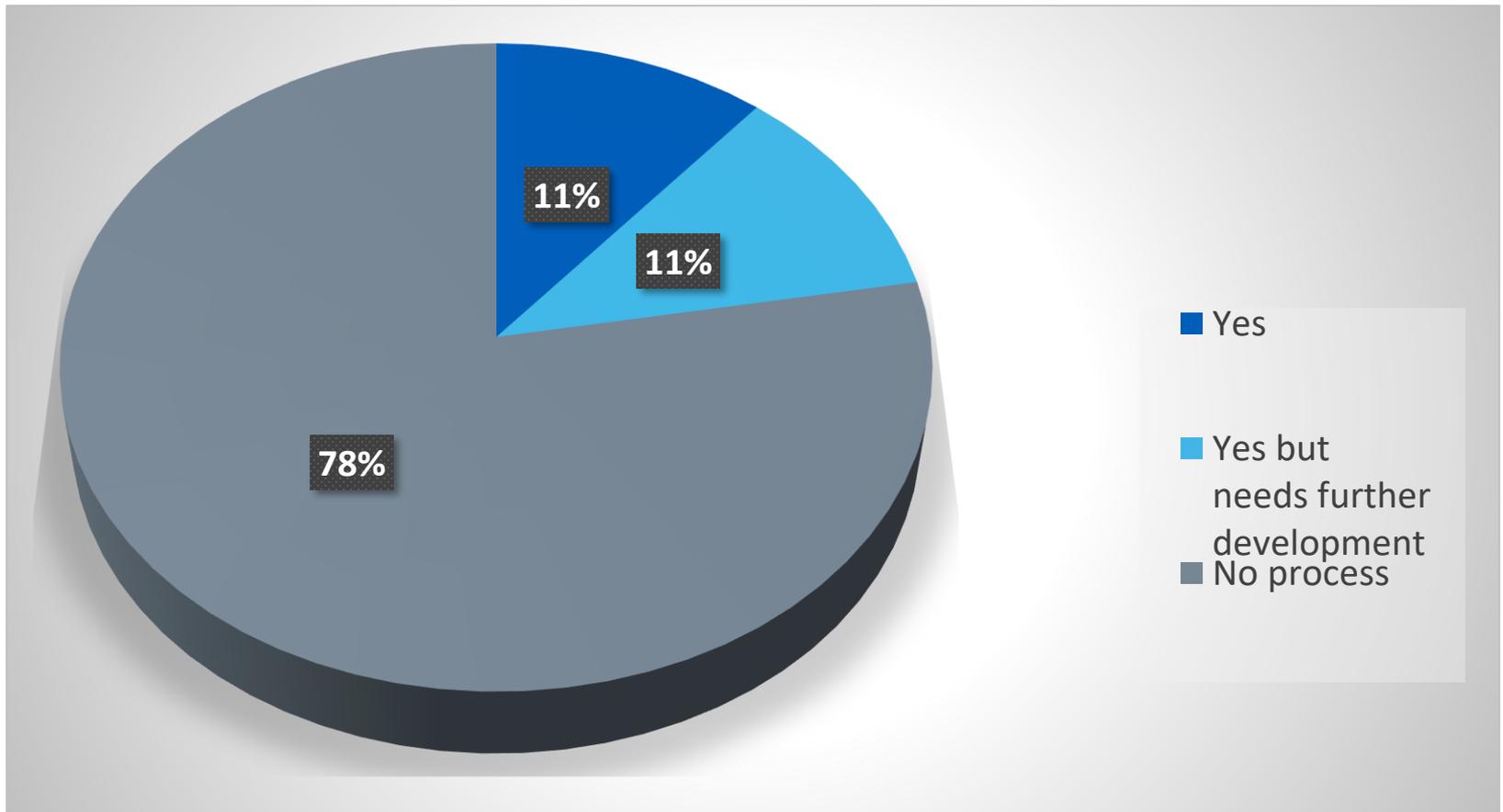
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Number of referrals completed or other actions for opt out



# East Midlands baseline audit October 2018

## Referral pathways explicitly includes feedback and follow up processes and explicit approach to ensure pathway is being followed



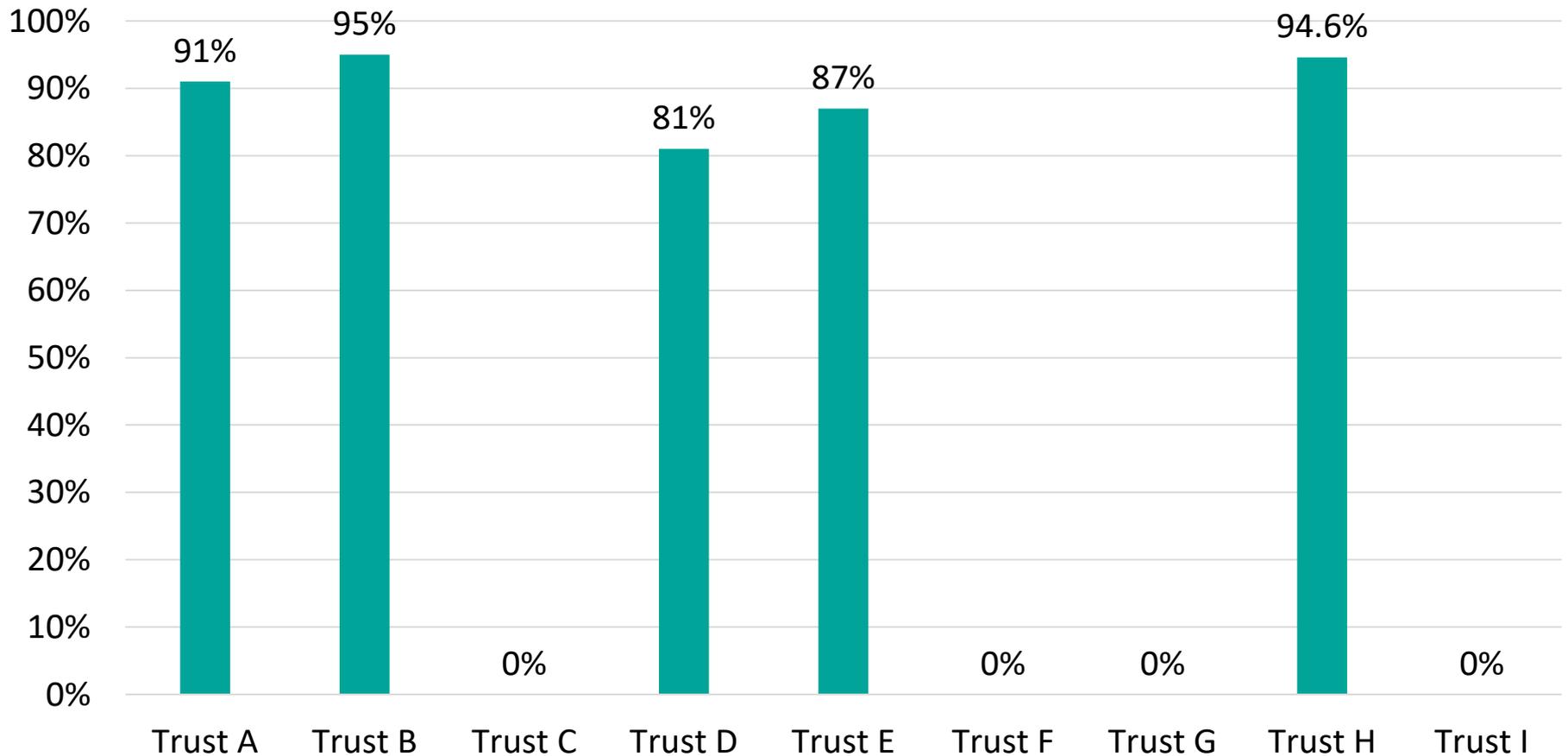
# East Midlands baseline audit October 2018

## All midwives must be trained in providing brief advice to pregnant smokers and knowledgeable of local referral pathways



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Relevant staff will have attended training



# East Midlands Smokefree Pregnancy Network



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East Midlands Smokefree Pregnancy Network developed in May 2019 which consists of Smokefree Champions from individual trusts, Stop smoking services, Public Health local authority, Public Health England and 0-19 Public Health Services.

The network provides opportunities for shared learning around Smoking in Pregnancy, oversight of implementing the Smokefree Pregnancy Care Pathway document, driving quality improvement through standardisation and evidence-based clinical practice. Supporting trusts to work towards achievement of Element 1 of the Saving Babies Lives Care Bundle (SBLCB) version 2.

East Midlands Smokefree Pregnancy Pathway document aligns to SBLCB v2 and has been developed with Smokefree Champion Leads across the region. This includes:

- Antenatal Pathway – All women CO reading at booking & 36 weeks with outcome recorded. CO reading at every appointment for smokers or reading over 4ppm
- Opt out referral to Stop Smoking Services – once referral is received women will be contacted by SSS within 24 -48hrs to discuss support options
- E Cigarettes – clear guidance that they are significantly less harmful to health than tobacco
- NRT replacement for inpatient care, 36 weeks Pre Birth assessment, NRT assessment on ward for emergency admissions and clear NRT Pathway on admission
- Postnatal Care – all women have CO reading at first postnatal visit
- Monitoring & Evaluation
- Continuous Learning – next steps training package to be developed

# Risk perception in maternity service smoking cessation strategy 2019

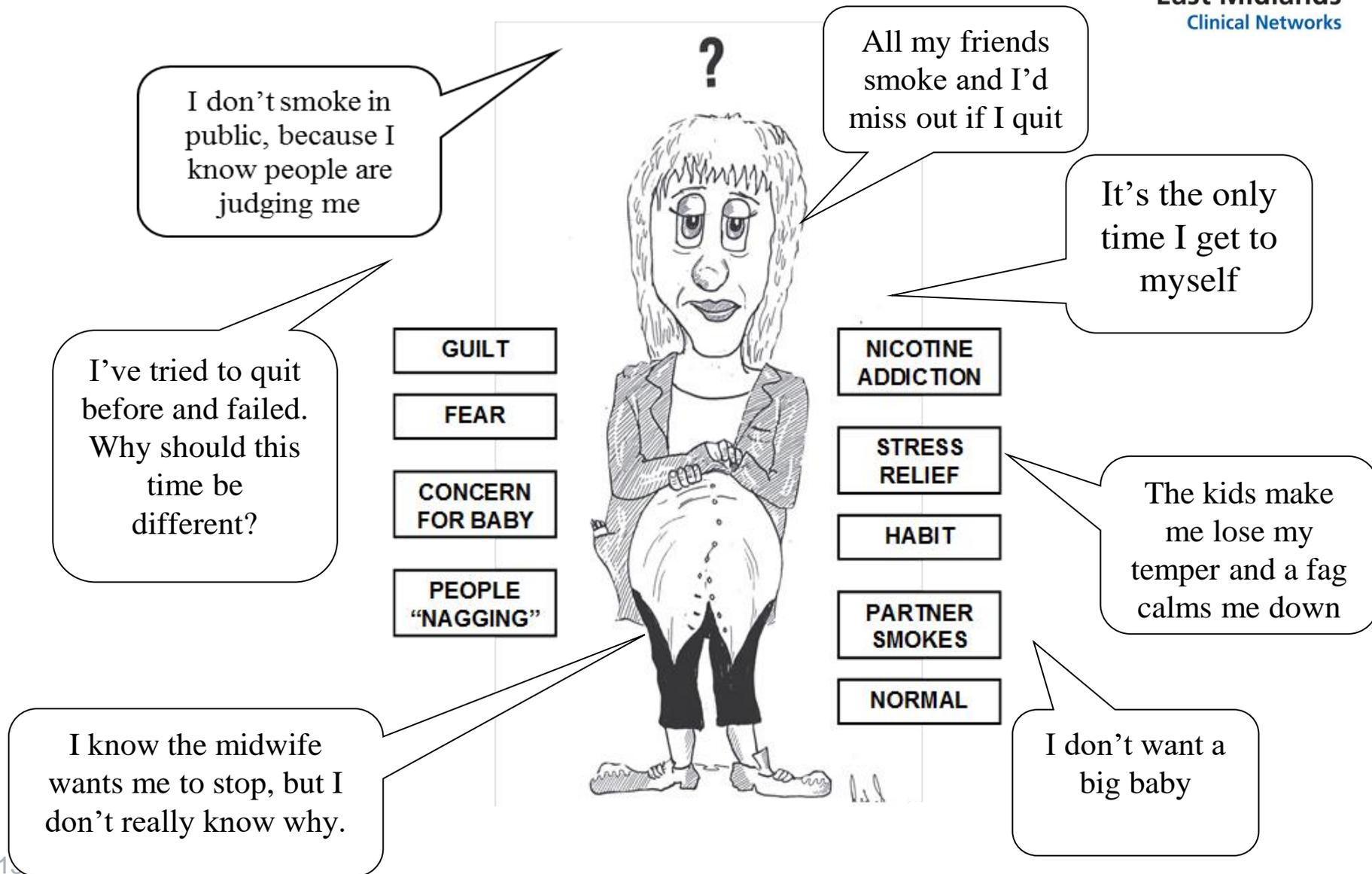
Claire Allison

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Sherwood Forest Hospitals NHS Foundation Trust



# Why and how do pregnant women feel when they smoke?



## Key milestones with SATOD DATA at SFHFT

- 2003 SATOD 32%
- 2009 SATOD 24.16% post SNAP Trial
- 2010 Brief Intervention training CMWs
- 2013-14 SATOD 27% data cleansed & commenced 'Opt out Trial', CO readings plus 24 and 36 week smoking enquiry
- 2014-15 SATOD 22.29%: Risk Perception commenced
- 2017-18 SATOD 20.0%

# Maternity Service pathway

## Every Contact Counts

### 8-12 weeks pregnancy: booking assessment with community midwife

- Record smoking status in antenatal hand held record and antenatal electronic maternity pathway (EMP)
- Provide verbal and written information on risks of smoking and benefits of quitting smoking using **brief intervention techniques**
- Record smoking status of household members.
- Discuss the effects of passive smoking
- Refer to local NHS smoking cessation services electronic referral letter on EMP ORION
- Routine CO testing performed for all pregnant women
- Give NHS Pregnancy Smoking Helpline number (Antenatal hand held records).

## 11- 14 week dating scan

- Scanning sessions for women who smoke have been identified to enable efficient delivery of **Risk Perception programme**
- At SFHFT CO monitoring has been part of routine AN care since early 2013 and is part of NICE guidance
- Women with a CO reading of 4 ppm or more will be referred to the PDC midwife for Risk Perception intervention
- **Self reported smokers** have a repeat CO reading and Risk Perception by a PDC midwife at KMH or SWC
- ‘Opt out’ electronic and/or phone referral is made to stop smoking services
- Post Risk Perception assessment within 2 days of referral by smoking cessation advisor and support provided to all household members if required

# 16 weeks of pregnancy

Community midwife assesses the woman's engagement with the Smokefree life advisor and establishes if her quit attempt has been successful. If the woman is still smoking and her CO at dating scan was  $\geq 4$  a referral for a consultant appt with serial growth scans is made. Links to GAP programme (Perinatal Institute).



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Appendix A

## Risk factor assessment for the identification of SGA infants.

**Booking assessment**  
Singleton pregnancy first trimester

**Increased risk factors**

**Maternal**

Maternal age >40yrs

Any smoker (To be referred once CO reading is confirmed and review at 16 weeks)

Drug misuse

**Maternal medical history**

Chronic hypertension

Renal impairment

Antiphospholipid syndrome

**Current pregnancy history**

PAPP-A  $\leq 0.4$  MoM

**Previous pregnancy history**

Previous SGA

Previous stillbirth

**Unsuitable for SFH measurements**

BMI >40

Large uterine fibroids

**Community midwife's responsibility**

**At 16 weeks**

**Review CO reading**

↓

**CO  $\geq 4$**  If the **only** risk factor is smoking please refer for maternity team care stating first appointment required for 28 weeks with growth scan.

**PAPP-A  $\leq 0.4$  MoM**

**Review PAPP-A MoM result**

Refer for maternity team care stating first appointment required for 28 weeks with growth scan.

Serial assessment of fetal size (EFW) and liquor volume at 28, 32, 36, 39 & 41 weeks.

Plus umbilical artery Doppler if indicated by growth crossing centiles or reduced AFI.

Please refer to the **relevant guideline** for growth assessment by ultrasound scan if the woman falls into the following categories:

- Diabetic
- Severe pregnancy induced hypertension
- Placenta praevia
- Antepartum haemorrhage
- Multiple pregnancy
- Substance misuse

## Risk Perception Intervention for pregnant women who smoke:

Risk perception is based on motivational interviewing techniques:

*Motivational interviewing is a directive, client centred counselling style for eliciting behaviour change by helping clients to explore and resolve ambivalence.*

The examination and resolution of ambivalence is its central purpose, and the counsellor is intentionally directive in pursuing this goal.

*Rollnick S., & Miller, W.R. (1995). What is motivational interviewing?  
Behavioural and Cognitive Psychotherapy, 23, 325-334*

Ambivalence is the state of having mixed feelings or contradictory ideas about something or someone.

# Risk Perception interview structure



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Discuss reasons for the interview. Ask if she knows why she is seeing you today?

Discuss scan and look at pictures “I’m going to talk to you about how your smoking is affecting your baby”

**Doll:** Basic anatomy of placenta, lungs/heart/development of baby  
Everything you eat/ drink passes to baby via cord, including carbon monoxide: Affects O<sub>2</sub> levels, ↑ heart rate

**DANGEROUS GAS, SQUEEZE ON CORD** “Did you know this before?” “How does that make you feel?”

Weak & poorly baby, not grow properly

**For baby:** Increases LSCS & NICU chance, premature birth

**Placenta:**

Want a healthy placenta. Placental abruption “What do you think will happen?”

Loss of blood and become anaemic

In hospital for longer

Possible death of baby “How does that make you feel?”

“Did you know this before?”

“You didn’t know those risks before, really important that you know the risks”

“I would hate you to walk out of here today not knowing the risks and thinking everything

was going to be fine”

## Perform CO reading

“I would like to test how much carbon monoxide you have in your body today, can I do that now?”

### PERFORM CO READING

Explain result

Red result: danger, ↑ heart rate,

Result may upset the mother:

“ You didn’t know this before today”

“ This information can enable you to make the choices that are right for you”

“I can make a phone call now so you can start treatment”

## Continued smoking enquiry and referral

Smoking enquiry questions are formally recorded at 25 weeks and 34 weeks

Electronic IG safe referrals are made from EMP at any point in her pregnancy

Referrals to Smokefreelife are monitored by the smoking cessation service.

Smokefreelife team are situated in the Maternity Unit foyer and will counsel women and their partners following the Risk Perception intervention.

## Responsibility of the multidisciplinary teams

1. HCSWs within the Antenatal Clinic have had Brief Intervention and carbon monoxide monitoring training. They provide the CO monitoring to all women attending ANC at 36 weeks of pregnancy at KMH and SWC.
2. Community midwives complete the smoking enquiries and 36 woman's CO reading in the community setting.
3. Receptionists in the Antenatal Suite provide the liaison between the ultrasound dept, the HCSWs and the PDC midwives to facilitate the Risk Perception programme.
4. Ultra sonographers and their reception team facilitate booking dating scan appts into the Risk Perception slots and providing on going scanning facilities for women who continue to smoke.
5. Obstetricians support the smoking cessation programme by ensuring smoking cessation is part of their AN care and referring if required.

# Challenges to the Implementation of the programme

- Multidisciplinary working with ultrasound scan, Public Health and smoking cessation service colleagues.
- Upgrade of electronic maternity pathway to ensure up to date information and the ability to audit service
- Education of staff: all grades to ensure smoking cessation support is everyone's business
- Maintenance of education with a changing workforce.
- Ensuring smoking cessation is valued in a time/ resource pressured service
- Feedback to staff
- Maintaining a long term view

## Next Steps: What more is needed to support women to have safer, smokefree pregnancies?

- Training for maternity staff to ensure they can have a meaningful robust conversation with women to understand the risks and training on the use of the CO monitor
- Up to date information for women to make informed decisions which includes e cigarettes
- Work with local partners to develop robust opt out pathways
- Robust data collection
- Health needs assessment of local population in your area to target resource in specific areas
- Review trends and themes regarding incidents where smoking in pregnancy is felt to have been a contributory factor share within Local Maternity Systems and wider