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Reducing smoking in pregnancy: learning from the babyClear approach

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Smoking in pregnancy

Maternal smoking is major
cause of avoidable mortality
and morbidity

Adverse outcomes include low
birthweight and stillbirth





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Smoking in pregnancy

- Interventions to stop smoking in pregnancy are effective and cost-effective
- NICE recommends routine CO screening and referral for quit support

NICE National Institute for
Health and Care Excellence

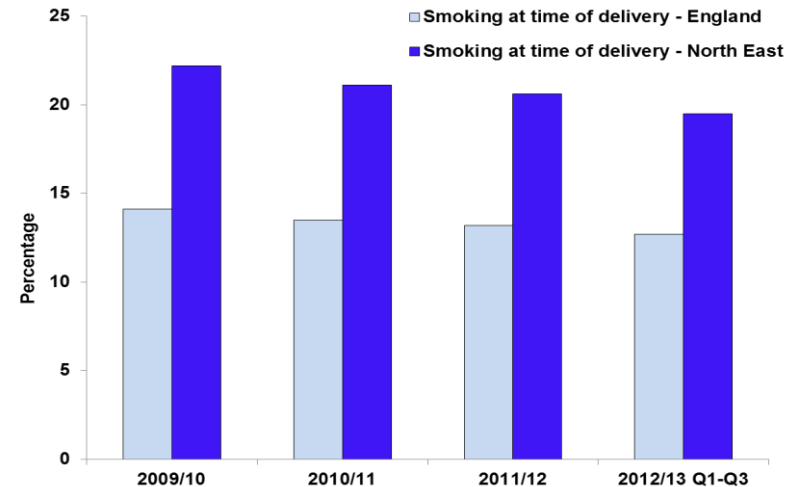
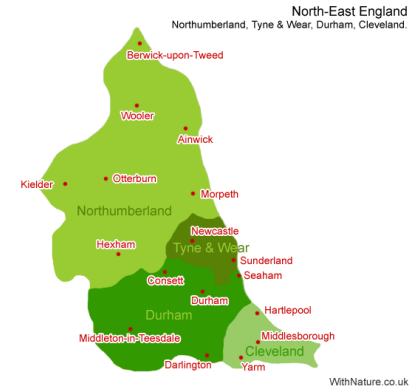


Smoking: stopping in pregnancy and after
childbirth

Public health guideline
Published: 23 June 2010
[nice.org.uk/guidance/ph26](https://www.nice.org.uk/guidance/ph26)

Understanding the issue

- North East population of 2.1 million, 12 Local Authorities, 8 acute Trusts
- NE an outlier at 22% smoking at delivery in 2010 (6,500 smokers)
- NICE guidance publication acted as a catalyst for regional discussions with strategic partners
- Newcastle University conducted insight work with 589 midwives on the barriers they face in discussing smoking during pregnancy



Taking a regional approach

- Midwives were concerned about how to approach women about smoking, and many Trusts lacked resources/monitors
- The babyClear approach was commissioned by Fresh, the regional tobacco control office, across the region
- Initial regional funding for training and materials, then localities to sustain



The babyClear approach



Aimed to embed NICE guidance:

- Training for midwives in a systematic approach to identify smokers by routine, universal CO reading at first booking appointment
- Standardised opt-out referral pathways to stop smoking support
- Skills training for stop smoking staff
- Branded resources to support all of the above





Evaluation questions

Did it work?

- Impact on monthly referrals to smoking cessation services and on quit rates
- Effect of quitting on birthweight

What worked well, and why?

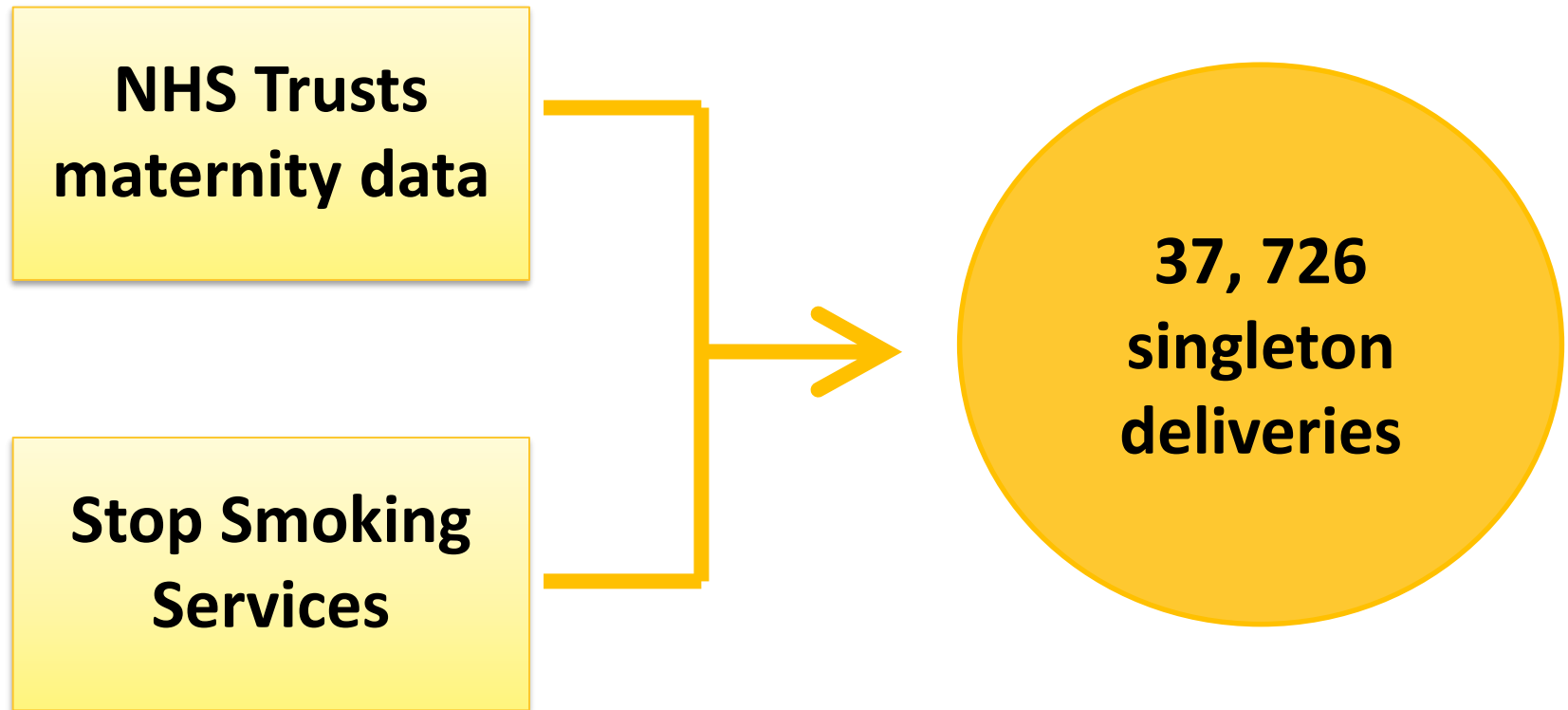
- Qualitative process evaluation assessing:
 - Individual behaviour change
 - System change



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Data sources





Referrals before and after implementation

- Referral rates increased progressively in the first three months after the intervention was introduced
- Rates were 2.5 times higher in for month four vs baseline
- Months with additional training were associated with increased referrals



Quit rates before and after implementation

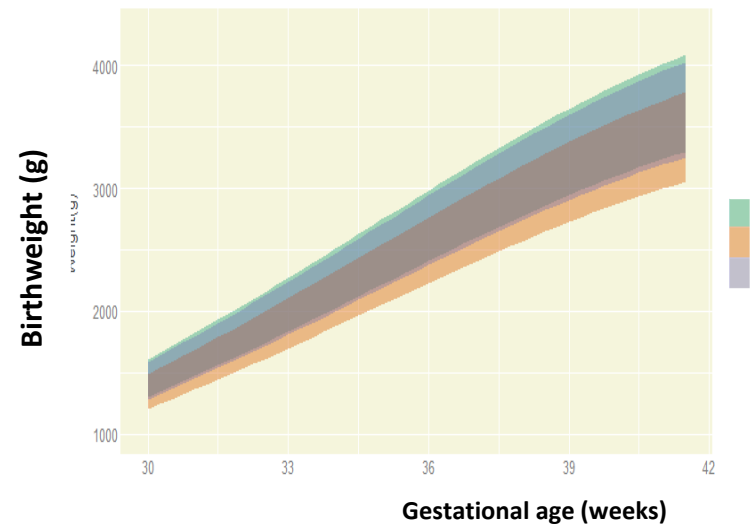
- Quit rates were nearly two fold higher after introduction (aOR 1.8; CI 1.6-2.2)
- Quit rates were higher in pregnancies with a recorded referral to smoking cessation services (aOR 3.2) or with a record of setting a quit date (aOR 4.8)
- Quit rates were higher in non-white women, older women and women living in less deprived areas

Reference: Bell et al, Tobacco Control 2017



Effect of quitting on birthweight

- Smokers' babies were significantly lighter than non-smokers' babies
- Quitting smoking increased birthweight, equivalent to 210g at term
- Quitters' babies had similar birthweight to non smokers



Qualitative evaluation: who we talked to

Pregnant smokers:

17 women attending after babyClear implementation

Health service and stop smoking service staff:

SSS staff (n=32)

Midwives (n=42)

Care assistants (n=13)

Senior trust maternity managers (n=8)

Pharmacy staff (n=3)

Trainers (n=3)

Fresh NE manager (n=1)





What helped women quit?

Routine CO screening

- Women overwhelmingly supported CO screening. Method of personal goal-setting. Individual scores remembered and gave them something to aim for
- Initial results “scary”. Women unprepared to be checked; however they soon came to expect this intervention at all visits



What helped women quit?

Opt out referrals

- “Opened door to stop smoking services”
- no evidence of damage to relationship with midwives
- Most women positive about setting up first appointments with SSS
- Many women felt need for extra contact between weekly appointments. Personal contact available in some areas and valued





What helped women quit?

- The detail about **how smoking affects body and baby** was what struck women most. Seen as new news, and really challenged them to change their behaviour
- Women **expected to be asked** about their smoking at each encounter



How did the system change?

Organisational culture - integral to success

- **Leaders**, including senior and middle managers, are motivational and enabling
- Pathway **championed on ground** by opinion-leader who is passionate about project and drives implementation forward
- Positive **attitude/readiness to embrace change within organisation**
- **Stable organisational structures**



How did the system change?



- **Training felt to be of a high standard** and available to all staff involved in the pathway
- **Consistent delivery of key messages** (i.e. universal routine CO screening, ‘concern at high CO levels’, from both stop smoking and maternity services)
- Importance of **available resources**

Summary of evaluation findings

- Implementation of a system wide intervention to identify and routinely refer pregnant smokers into SSS nearly **doubled probability of quitting by delivery**
- Quitters' babies were 210g heavier
- The intervention was acceptable to both pregnant women and staff
- North East smoking at delivery rates now falling faster than England



Challenges



- Reorganisation and reduction of stop smoking services - effective quit support is essential
- Branding of the 'initiative': pros and cons
- Sustaining the progress made: NHS pressures
- New NICE guidance and commissioning

Key messages

- Consistently identifying and referring pregnant smokers for help to quit is highly cost-effective in improving pregnancy outcomes
- The intervention aimed to embed best practice/NICE guidance
- High quality skills training, leadership and organisational support are key
- Not a once only initiative – needs continued priority and attention
- Simple, but not easy!



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