APPENDIX 1

Medway Maternal Smoking Strategy

2018 - 2022

‘’smoking is the single largest preventable cause of fetal and infant morbidity in the UK’’

‘’smoking in pregnancy affects the health of mother and baby so the focus should not just be on the baby’’

‘’smoking cessation is an effective intervention which has immediate and long term health benefits for pregnant women and families’’.

‘’exposure to second-hand smoke is a serious health threat to infants’

Content

Foreword

Stopping smoking during pregnancy is the single most important change a woman can make to ensure her pregnancy avoids unnecessary complications, and to improve the probability of her baby being born full term and healthy.

Conversely, smoking during pregnancy causes up to 2,200 premature births, 5,000 miscarriages and 300 perinatal deaths every year in the UK. It can cause stillbirths, sudden infant deaths and adversely impacts a baby's development in the womb[1]. Maternal smoking increases the likelihood of developing placenta praevia, deep vein thrombosis and other conditions that require complex interventions on the maternity care pathway.

Babies born to women who smoke are more likely to be born underweight and are at greater risk of other adverse health outcomes[2]. These risks include respiratory problems, attention and hyperactivity difficulties, ear, nose and throat disorders, obesity, and diabetes[3].

Children exposed to second-hand smoke are at increased risk of preventable childhood diseases such as ear and respiratory infections, asthma and wheezing[4]. These conditions cause distress to the child and his or her family, and are associated with an increase in attendance at hospital emergency departments.

Although great strides have been made in reducing smoking prevalence in the general adult population, smoking during pregnancy remains stubbornly high in some parts of the country. Medway is one of 26 CCG areas in the country where NHS England has highlighted the need for urgent action during 2017/18 to reduce SATOD rates.

Given that hospitals are health promoting environments, they should not be a place for a behaviour that leads to the illness and death of so many. It is commendable that in response to national policy drivers, Medway Foundation Trust has been an early adopter of the initiative to make hospital sites smoke free. It is therefore even more compelling that those who work in this environment should seek to promote the health and wellbeing of service users at every opportunity.

Pregnancy is a powerful motivator for change. It is a time when women and their partners, often for the first time, make positive lifestyle changes to provide optimal conditions to ensure the health and wellbeing of their unborn baby. We also know that when women make these changes, they significantly influence the lifestyle choices of their children and wider family. Pregnancy therefore presents a golden opportunity to positively impact the health and wellbeing of individuals, families and communities.

The health of children is influenced by what happens throughout pregnancy and it is vitally important that efforts to ensure that mother and child are safe and healthy start well before birth. As smoking is the most modifiable risk factor that contributes to adverse outcomes in pregnancy, it is imperative that leadership is provided at a strategic level to facilitate the implementation of a collaborative and cohesive approach to reducing smoking in pregnancy. By achieving this, we will ensure that all babies born at Medway NHS Foundation Trust are given the best possible start in life.

Signed…….. <Senior representative, Medway Council>

Signed…….. <Senior representative, Medway CCG>

Signed…….. <Senior representative, MFT>

Key partners/organisations

- Children's Centres
- Community pharmacies
- General Practice teams
- Health Visitors (Kent Community Health NHS Foundation Trust, Swale residents)
- Health Visitors (Medway Community Healthcare, Medway residents)
- Maternity Services, Medway Foundation Trust (including community midwives)
- Medway Clinical Commissioning Group
- Public Health, Kent County Council
- Public Health, Medway Council
- Swale Clinical Commissioning Group

Abbreviations used in this document

CDOP	Child Death Overview Panel
CO	Carbon Monoxide
KSSS	Kent Stop Smoking Service
MAU	Maternity Assessment Unit
MFT	Medway NHS Foundation Trust (Medway Maritime Hospital)
MSSS	Medway Stop Smoking Service
NCSCT	National Centre for Smoking Cessation Training
NHSE	NHS England
NICE	National Institute for Health and Care Excellence
SATOB	Smoking at time of booking (first antenatal booking appointment)
SATOD	Smoking at time of delivery

Introduction

Smoking is the leading cause of preventable illness and premature death in England and is the single biggest cause of health inequalities between the richest and poorest in our communities[5]. This inequality is driven by the fact that the highest rates of smoking are found amongst those who are most disadvantaged[6].

Whilst smoking is the primary cause of preventable morbidity and premature mortality, it is also the most modifiable risk factor in terms of improving health and wellbeing outcomes.

The national priorities for reducing the harm caused by tobacco are encapsulated with the 'Tobacco Control Plan' which sets out ambitious targets to reduce smoking prevalence[7]. These priorities are underpinned by six internationally recognised strands of action as enshrined in the World Health Organisation's 'Framework Convention on Tobacco Control'[8]

I. Stopping the promotion of tobacco
II. Making tobacco less affordable
III. Effective regulation of tobacco products
IV. Helping tobacco users to quit
V. Reducing exposure to second hand tobacco
VI. Effective communications for tobacco control

Application of these principles has resulted in significant progress in reducing smoking prevalence in the UK. However, despite this success, we continue to see higher smoking prevalence in specific population groups. This includes people employed in routine and manual occupations, those with mental health conditions, and people living in areas of deprivation[5]. These differences result in a disproportionate and unfair impact on some of the most vulnerable in our society, including unborn babies, infants and children.

Evidence suggests that babies born to mothers who smoke are more likely to have worse health outcomes during the course of their lives[1]. Consequently, these babies are being disadvantaged before they are even born and the resulting disparity in outcomes can have far reaching repercussions for them in later life. It is therefore entirely appropriate that we continue to deliver targeted stop smoking support in order to eliminate the gap that exists in terms of health inequalities.

Table 1: Lifetime outcomes that are influenced by tobacco use

Life Stage	Potential Outcome
Antenatal	➢ More complications in pregnancy and at birth. ➢ Increased likelihood of miscarriage and stillbirth.
Postnatal	➢ Increased risk of preterm birth irrespective of the number of cigarettes smoked. ➢ Approximately 250-350g lower birth weight[1]. ➢ Have a smaller head and chest circumference and birth length[1]. ➢ Increased risk of Sudden Infant Death Syndrome. ➢ Increased likelihood of caesarean birth for women smoking five or more cigarettes a day.
Childhood	➢ Increased likelihood of illness. ➢ More likely to miss school due to ill health. ➢ Increased likelihood of lower educational attainment.
Adolescence	➢ Increased likelihood of adopting risk taking behaviours and of becoming a smoker[7]. ➢ Reduced employment choices due to lower educational attainment.
Early adulthood	➢ More likely to smoke during pregnancy. ➢ Increased likelihood of living in a lower income household[6]. More prone for Cardiovascular diseases
Later adulthood	➢ More likely to need health and social care services early. ➢ Compared to non-smokers, smokers have 2 – 4 times increased risk of heart disease and stroke[9]. ➢ In the UK, about 87% of lung cancer cases in men and 84% of cases in women, are attributable to tobacco[10].

The total annual cost to the NHS of smoking during pregnancy is estimated to range between £8.1m and £64m for treating smoking related conditions for mothers, and between £12m and £23.5m for treating infants (aged 0–12 months)[11]. Investing in efforts to reduce smoking in pregnancy can deliver both long and short term tangible benefits to disadvantaged communities, the NHS and local authority budgets.

The previous national Tobacco Control Plan 2011-2015 set an ambition to reduce maternal smoking prevalence to 11% by 2015[12]. Although this was achieved on average across the country, the prevalence of smoking during pregnancy still remains a challenge for us in Medway.

The new Tobacco Control Plan 2017-2022 defines an ambition to achieve a '*tobacco free generation*' by 2022[7]. To realise this vision, we must harness our efforts to ensure babies and children are not exposed to tobacco use. The Tobacco Control Plan seeks to further reduce maternal smoking in England to 6% or less by 2022[7]. The objectives defined in this local strategy describe the key actions required to enable Medway to achieve this ambition whilst at the same time, eliminating the regional variation in maternal smoking rates.

Achieving this outcome in Medway requires a cohesive and coordinated approach involving a wide range of partner organisations. Successful outcomes can only be delivered if all partners contribute and commit to the development and implementation of this strategy and resulting action plan.

Anecdotal reports tell us that women know smoking is harmful to them and their baby. However, what women say they are not aware of is how that harm is caused and how smoking is implicated in adverse pregnancy outcomes. By affording all pregnant women an opportunity to discuss this element of their care with a stop smoking specialist, we are helping them to make an informed choice about their health and wellbeing and that of their unborn baby.

Medway Stop Smoking Service (MSSS) has developed a range of targeted interventions to support pregnant women and their wider family members to quit smoking. These range from specialist 1-1 support where tailored messages are delivered to women who continue to smoke as they approach the second trimester of their pregnancy, to home visit support that makes it easier for families who may have other caring responsibilities, to benefit from the offer of support. As well as helping pregnant women to stop smoking, MSSS proactively offers support to partners and family members who share a home with the pregnant woman. This approach helps to minimise fetal exposure to second-hand tobacco smoke. The service also offers support to women whose pregnancies are deemed to be 'high risk'.

MSSS works with a wide range of professionals who are involved in the maternity care pathway and these professionals are trained and encouraged to provide brief intervention/advice to smokers, and to follow this up by signposting woman for quit support.

Aim

Our aim is to reduce SATOD prevalence in Medway to 6% or less by March 2022. We will do this by achieving a year on year reduction that will result in incremental improvements to our SATOD rate from our current prevalence of 18.6% in Q4 2016/17[8] to 6% by Q4 2021/22.

The national SATOD rate in England in Q4 2016/17 has been reported as 10.8% in Q4 2016/17. The objectives outlined in this strategy will ensure that Medway eliminates the gap between local and national prevalence and supports the Department of Health's vision to achieve 'a Smokefree Generation' as defined in the 'Tobacco control plan for England[7].

By achieving this, we will be ensuring that more babies born in Medway are able to benefit from the best possible start in life.

Key Objectives

The Maternity Transformation Plan is an initiative within NHSE's Five Year Forward View[13] and sets out a clear vision for improving maternity service in England. To support the implementation of changes required to realise this vision, Medway will enhance the provision of maternity care and reduce stillbirths and neonatal deaths. This will be achieved by consistently optimising opportunities to promote and sustain smokefree pregnancies. The following actions will contribute to this:

1. Secure leadership support at a senior management level within MFT to realise the aim defined in this strategy.

2. Update provider strategic and operational policies to ensure service delivery conforms to latest guidance and reflects best practice. Update Commissioner/provider contracts and service specifications to align with this.

3. Implement process driven efficiencies including the delivery of care and the recording, using and reporting of data.

4. Provide pregnant women and their partners/family with access to high quality stop smoking support as close to home as possible.

5. All staff involved in the maternity care pathway to attend regular smoking cessation training to ensure they enhance and maintain the skills and knowledge required to reduce SATOD rates for women giving birth at MFT.

Current Position

Medway Maritime Hospital serves the population of both Medway and Swale and is responsible for providing maternity services to women who are resident in both localities. Therefore, enhancing the maternity care pathway will have a positive impact on SATOD rates for both Medway and Swale. A summary of maternity data for 2016/17 is provided in the table below.

Table 2: Annual reported maternity data for Medway & Swale CCGs for the period 2016/17 (Source: NHS Digital – Accessed 25.07.2017)[14]

Locality	Number of births	Number SATOD	Average Annual Smoking Prevalence %
Medway	3,739	638	17.1
Swale	1,365	301	22.1
Total	5,104	939	18.4

Data for the same period as recorded on MFTs maternity care IT system, EuroKing, states that 643 women (Medway residents), were recorded as smoking at the time of their first antenatal booking appointment (SATOB). As the difference between the recorded SATOB and reported SATOD numbers is marginal, the following factors should be considered:

i) Recording and reporting anomalies may exist as women progress through the maternity care pathway.

ii) Women may have stopped smoking following support received in the first and second trimester of the pregnancy, but may have relapsed by the time they give birth.

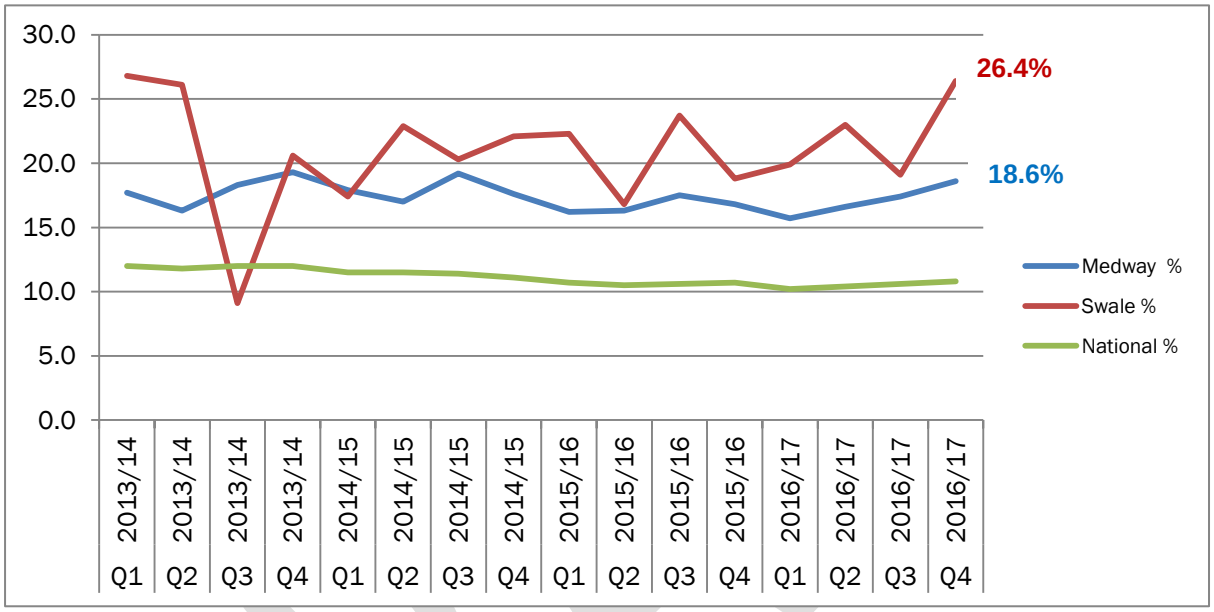
iii) Women have successfully quit smoking during pregnancy and have sustained their quit status. However, the CO reading reported at the time of delivery is the one captured and recorded at the first antenatal booking appointment. This scenario suggests that an historic CO reading is inaccurately being reported. To address this, and in recognition of the fact that it may be difficult to carry out a CO test at the time of birth, it has been agreed that CO testing should be routinely carried out for all women at the 36 week antenatal appointment at MFT. The outcome of this 36 week CO reading acts as a proxy for SATOD . This approach has been recommended by the 'Smoking in Pregnancy Challenge Group[15].

Whilst *Table 2* represents annualised data, a review of quarterly statistics shows that Medway reported a SATOD prevalence ranging from 15.7% in Q1 2016/17 to 18.6%

in Q4[16]. The table below shows a deteriorating trajectory for SATOD rates in Medway during 2016/17.

Quarterly data reported for Swale SATOD rates shows considerable variation, suggesting that that a consistent approach to the provision of care and recording and reporting of data could deliver improvements.

Table 3: Quarterly smoking status for Medway & Swale CCGs Q1 2013/14 – Q4 2016/17 (Source: NHS Digita)l[14]

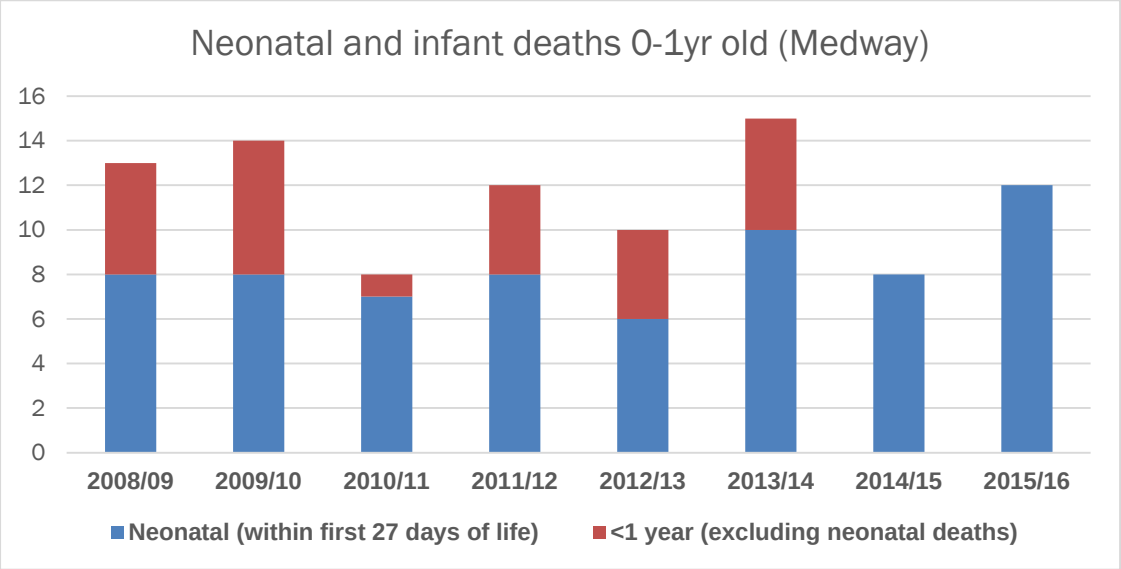


Smoking and Neonatal and Infant Deaths

Smoking is the leading cause of preventable mortality. In England, more than 200 people die every day from smoking related illnesses. In 2013, 79,700 (around 17%) of all deaths among people aged 35 years and over were attributable to smoking. On average, cigarette smokers die 10 years younger than non-smokers, and as a result, smoking is a leading cause of the difference in life expectancy between the richest and poorest in society[17].

Smoking is also strongly correlated to neonatal and infant deaths. Cumulative data presented in Medway Safeguarding Children Board's 'Child Death Overview Panel' (CDOP) report for 2015/16 shows that for the period 2008/09 – 2015/16 the majority of child deaths in Medway occured in the first year of life, most notably within the first four weeks. Whilst this is in line with the national picture, it should be noted that the major factor contributing to these deaths is prematurity. Multiple risk factors are implicated in premature birth such as teenage pregnancy, smoking, obesity, poverty and access to antenatal care. These factors are often interlinked. However risks such as smoking and obesity are identified as modifiable in child deaths.

Table 4: Age of children where a child death review has been completed (Source: Medway CDOP report 2015/16)



The majority of the deaths (43.8%), reviewed during 2008/2009 - 2015/16 were caused by a perinatal/neonatal event. In 80% of the perinatal/neonatal event cases reviewed in 2015/16, prematurity or preterm labour was cited as either the sole cause or one of the causes of death. The second most common cause was chromosomal, genetic and congenital anomalies (18.3% of cases).

Smoking is repeatedly identified as a common modifiable risk factor in incidences of neonatal and infant mortality. This highlights the importance of ensuring all professionals who provide maternity care regularly attend training on smoking in pregnancy and integrate brief intervention and/or CO monitoring as a routine element of antenatal and post natal care.

Barriers to quitting

Despite the implementation of a range of smoke free legislative measures together with NICE guidance PH26[18], a perception exists that maternal smoking is less harmful when compared to other risk taking behaviours such as alcohol or substance misuse.

NICE guidance PH26 comprises the following eight key recommendations:

1) Midwives to identify pregnant women who smoke and refer them to the Stop Smoking Service.
2) Others in the public, community and voluntary sectors to identify pregnant women who smoke and refer them to the Stop Smoking Service. This

includes obstetricians and sonographers and other members of the maternity team (apart from midwives).

3) Stop Smoking Service to contact pregnant women referred to the service in a timely manner and ensure the most appropriate support option is offered.
4) Stop Smoking Service to provide initial and ongoing behavioural support to aid a successful quit attempt.
5) Stop Smoking Service to discuss and provide advice on the use of NRT and other pharmacological support.
6) Stop Smoking Service to meet the needs of disadvantaged pregnant women who smoke such as those with complex conditions, and women who require the services of an interpreter.
7) Stop Smoking service to provide information and quit support to partners of pregnant women and others in the household who smoke.
8) Stop Smoking service to provide training to enable others to deliver stop smoking interventions.

During pregnancy, women often rely on support from family members or peers. If a strong culture of smoking is already embedded within these groups, it can be difficult to break free of the habit. Young women may feel they are immune to the risks or are simply not aware of them, particularly if their mothers and grandmothers have smoked in pregnancy with no “apparent” adverse outcomes. They themselves may have smoked in previous pregnancies and have given birth to seemingly healthy babies. Partners who smoke can also play a significant role in jeopardizing a client’s quit attempt.

There are many myths associated with maternal smoking. These include the following mistaken beliefs:

i) A small baby leads to an easier labour and delivery.

ii) The placenta acts as a filter and prevents harmful toxins from reaching the baby.

iii) The stress from quitting is likely to be more harmful than continuing to smoke.

iv) Using nicotine replacement therapies will be harmful to the baby.

v) Smoking is a lifestyle choice rather than an addiction/dependency.

Healthcare professionals are often reluctant to raise the issue of maternal smoking for fear of compromising the relationship with the patient, or opening up a dialogue they feel may be too time consuming. They may also feel they have insufficient knowledge and/or skills to confidently respond to objections and signpost a pregnant smoker to the stop smoking service.

In Medway, smoking cessation continues to feature on MFTs mandatory training programme for Midwives. The training focuses on addressing some of the barriers encountered, and as a result, midwives are able to use this knowledge to proactively discuss smoking status and refer women to the specialist stop smoking midwife.

Identifying smoking status

Carbon monoxide (CO) testing is a marker for smoking in pregnancy and the resulting test score, together with the approximate number of cigarettes smoked per day is routinely recorded on the patient's antenatal notes. Midwives employed by MFT are encouraged to follow NICE Guidance PH26[18] and carry out CO testing for all pregnant women at their first antenatal booking consultation. This is accompanied by an ***'opt out'*** approach to referrals to the stop smoking service.

Local Smoking Prevalence

Adult smoking prevalence in England continues to decline and is currently 15.5%. Whilst prevalence in Medway has also declined, at 19% the percentage of adults who smoke in Medway continues to exceed the national average[16]. A review of ward level data shows there are specific parts of Medway where higher levels of smoking exist. This is often accompanied by other socio-economic factors that contribute to poorer health and wellbeing outcomes.

Table 4: Estimated ward level smoking prevalence – Medway. (Source: ASH Ready Reckoner)[20]

Ward	Estimated Smoking prevalence	Estimated Smoking Population
Gillingham North	24.9%	3,241
Chatham Central	24.7%	2,915
Luton & Wayfield	24.4%	2,649
Gillingham South	24.2%	2,948
Strood South	23.9%	2,769
Princes Park	23.3%	1,753
Rochester East	23.3%	1,859
River	23.1%	1,717
Twydall	23.1%	2,511

Access to ward level maternal smoking data from MFT will enable the stop smoking service to identify any correlations. This will enhance the ability to make intelligence

led decisions to support the development of targeted approaches to reducing maternal smoking by working with partners across the health and social care arena.

The national Maternity Transformation Plan[13] highlights the need to identify local drivers for change. The sharing of data and information and the ability to use this at a local level to benchmark and drive service improvement is specified as a key system enabler.

A wealth of data exists at MFT, including statistical information on the number of women smoking and the association between smoking and low birth weight, intra uterine deaths, stillbirths, and admissions to the Special Care Baby Unit. The ability to use this data to inform service planning would provide for a more efficient and robust approach to service provision.

Training

There is evidence that training of healthcare professions in smoking cessation increases the likelihood of them addressing smoking[22]. A recent review has also found that there is an increase in smoking related interventions following provision of training, and a corresponding decline in smoking prevalence[23].

One of the obstacles that exists with respect to training is the ability of midwife teams to release staff to attend courses. This is primarily due to workload demands.

In 2016, The National Centre for Smoking Cessation and Training (NCSCT) launched an online training module, 'Very Brief Advice on Smoking for Pregnant Women'[24]. This is also available through the online training hub of the Royal College of Midwives.

Whilst online training serves a purpose, it is unable to identify and respond to specific practical skills and situational demands that require focussed support at a local level.

MSSS provides a range of specialist training packages that are regularly updated with the latest research and developments in the field of smoking cessation. Details of these packages can be found in Appendix D.

Healthcare Professionals & the Maternity Care Pathway

A range of professionals deliver care to pregnant women as they progress through the maternity care pathway.

NICE guidance[15] recommends that all professionals who provide maternity care, have a responsibility to ask about smoking. This recognises that due to the inherent nature of dependence and behaviour change, success or engagement may not occur at first contact and multiple quit attempts to give support may be necessary.

Professionals involved in the maternity care pathway range from administrative staff to midwives and consultants. Specialist clinical roles exist on the care pathway to ensure complex interventions are delivered sensitively and with the appropriate level of expertise. Details of the pathway and specialist roles can be found in Appendix C.

Maternal Smoking Strategy Group

The strategy group was set up in December 2016, following the 'Saving Babies' Lives'[15] seminar. Saving Babies' Lives comprises a range of elements that make up a care bundle designed to reduce stillbirths. One of these elements is the need to reduce smoking in pregnancy. A summary of the key elements of care can be found in Appendix E.

The maternal smoking strategy group met on a quarterly basis with the aim to secure leadership support and elicit system wide participation to drive forward the changes needed to reduce SATOD rates in Medway. The group developed this strategy, which outlined Medway's ambition to reduce smoking during pregnancy and provides headline outputs of how this will be achieved. The strategy group developed an action plan, which provides a more detailed breakdown of how this ambition will be achieved.

An action plan working group has since been established comprising providers and commissioners who meet on a regular basis to ensure progress continues. The action plan is kept up to date and new opportunities are discussed and progressed. The group provides feedback on progress and challenges to the Medway Health and Wellbeing Board and the Kent and Medway Local Maternity System.

Conclusion

A great deal of work has already taken place both at MFT and MSSS to reduce maternal smoking prevalence and this is evident in the high number of referrals from healthcare professionals who provide services at both the acute trust and in a community setting.

However, as the maternal smoking prevalence in Medway continues to be higher than the national average, focused effort is required to address gaps that exist within the maternity care pathway.

Data reported by MSSS shows that where women have an opportunity to discuss their smoking habit with a specialist stop smoking adviser, 46% of these women go on to have a successful quit outcome. These women can often have multiple factors affecting their lives including:

- Low income

- Poor housing
- Unemployment
- Little support from their partner and/or family
- Conflicting messages/advice from family/friends on the subject of smoking
- Other caring responsibilities

However, despite all these factors, these women can and do go on to stop smoking and by doing so, provide their new baby with a much better start to life. Stopping smoking has far reaching benefits, beyond that immediately evident in terms of health. Women and their partners who are able to stop smoking will increase their household incomes. This means that these families can potentially be lifted out of poverty when a successful quit attempt is undertaken[23].

Whilst not all pregnant smokers will have a successful stop smoking treatment outcome, in order to 'Make Every Contact Count', we must ensure that all stages of the maternity care pathway incorporate efficient and effective processes to afford all pregnant smokers the opportunity to find out more about the impact of smoking on their baby and the range of support options that can make quitting more manageable.

A collaborative and cohesive approach to remedying the gaps that currently exist in the care pathway can yield better outcomes for families in Medway and for local health and social care services.

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Appendices

Appendix A – The Referral Pathway

1. • CO testing at booking (8-10 weeks) with opt- referral to MSSS
2. • **Community Midwife to offer smoking cessation support (8-10 weeks)**
3. • **Risk Perception- discuss associated risks of smoking during pregnancy using visual aids and Bedfont CO Monitor (11-13 weeks)**
4. • Offer follow-up appointment in the community or at home
5. • Initial Consultation- discussion surrounding: smoking habits, previous quit attempts, CO reading and NRT options
6. • **Quit date (The woman will need to remain smoke free for at least 25 days to be classified as a "non-smoker")**
7. • Follow-up appointments with a specialist pregnancy adviser for approximately 6 weeks for ongoing behavioural support and NRT.
8. • **25-42 days after the woman has set her quit date a treatment outcome will be recorded and added to PHAIR**
9. • **Women whose pregnancies are deemed to be high risk are contacted by the MSSS to offer Specialist smoking in pregnancy support (36 weeks)**

Appendix B - Maternity Care Pathway

Universal Clients : Without complications

High Risk Pregnancy: Previous obstetric complications, multiple pregnancy, IVF, PIH (Pregnancy Induced hypertension), Placenta praevia, congenital abnormalities, FGR (Fetal growth restriction), Obstetric choleostasis, Drug and Alcohol Use, Obesity, Diabetes.

	Pre-Post Birth	(5-8 weeks)	(8-10 weeks)	(12 week)	(16 weeks)	(20 weeks)	(22 weeks)	(36 weeks)	(40+ weeks)	(New Birth)	(6-8 week) post natal	(9-12 months)	(2-2.5 yrs)	(3-3.5 yrs)
Universal Clients	Type of Appointment	Early Bird Information Session	Booking Appointment & C.O. Testing	Scan		Scan	Scan & Midwife Appointment	Midwife Appointment & C.O. Testing	Midwife Appointment & Assessment for Induction	New Birth Visit	Screening - Breastfeeding, MMHealth check etc.	Universal visit, screens	Ages and Stages Questionnaire, development check	School readiness, development check
	Location of Appointment	Childrens Centres	Childrens Centres/HLC	MFT		MFT Fetal Medicines Unit	MFT	MFT	MFT	In the Home	In the Home	Childrens Centre/HLC	Childrens Centre/HLC	Childrens Centre/HLC
	Health care professional	Midwife	Midwife	Sonographer		Sonographer	Midwife	Sonogrpaher, Midwife, Health Visitor	Midwife	Health Visitor, GP, (midwife up to 28 days). Childrens Centre Staff	Health Visitor, Childrens Centre Staff			
High Risk	Type of Appointment	As above	As above	As above	Routine Checks, Blood, Urine etc	Scans, urine, bloods etc				GP - Post Natal check, Midwife -Post natal review, Health Visitor - new born check	Screening - Breastfeeding, MMHealth check etc.	Universal visit, screens	Ages and Stages Questionnaire, development check	School readiness, development check
	Location of Appointment					MFT Fetal Medicines Unit, Obstetric Specialist				In the Home	In the Home	Childrens Centre/HLC/In the home		
	Health care professional	Midwife	Midwife	Midwife	Midwife	Midwife, Obstetrician, Fetal Medicine Consultant, Diabetic Midwife, Mental Health Midwife, Sonographer, Social Worker				GP, Health Visitor, Midwife	Health Visitor, Childrens Centre Staff, LAC Teams, Social workers			

KEY:
MFT - Medway Foundation Trust
HLC - Healthy Living Centre
LAC - Looked after Children

Appendix C – Providers of Care (Maternity Care Pathway)

Community Midwives

The role of the midwife is very diverse and includes:

i) Carrying out clinical examinations
ii) Providing health and parent education
iii) Supporting the mother and her family throughout the childbearing process to help them adjust to their parental role.
iv) Working in partnership with other health and social care services to meet individual mothers' needs, i.e., teenage mothers, mothers who are socially excluded, disabled mothers and mothers from diverse ethnic backgrounds.

Midwives are responsible for their own individual practice and have a statutory responsibility to keep up to date with current knowledge.

Community Midwives are in an ideal position to raise the issue of smoking during the antenatal period and provide information on second-hand smoke. By using the 'Make Every Contact Count' (MECC) approach to improving health and reducing health inequalities, midwives can empower women to adopt healthier lifestyle choices and provide advice and support that leads to behaviour changes.

Obstetricians

The obstetrician specialises in monitoring and treating women during pregnancy and childbirth. They usually work with women who have complicated or high-risk pregnancies.

Obstetricians are surgeons and trained gynaecologists who undergo training in all aspects of childbearing and supervise the wellbeing of pregnant women. They work as part of a multi-disciplinary team comprising midwives, health visitors and breast-feeding consultants. They oversee maternity wards and antenatal and postnatal clinics. Some have specialist areas of interest/knowledge such as gestational diabetes and infertility.

Health Visitors

The Health Visiting Service consists of 5 key visits which all families can expect under the universal level of service:

i) Antenatal at 28 weeks gestation
ii) New baby

iii) 6 – 8 weeks
iv) 9 – 12 months
v) 2 – 2 ½ years
vi) 3 - 3.5 years

Health Visitors provide holistic support and are well positioned to raise the issue of smoking at the scheduled antenatal visit and make a referral to the stop smoking service for both the pregnant woman/new mother and/or significant others.

Some mothers will stop smoking for the duration of their pregnancy but relapse following the birth of their baby. This can have significant adverse health consequences for the infant. Postnatal health visitor appointments are a good time to discuss second and third-hand smoke and the importance of maintaining smokefree homes and cars.

Obstetric Sonographers/ Research Fellowes

The Fetal Medicine Foundation (FMF) awards several 2-year training fellowships in fetal medicine each year. Medway Maritime Hospital participates in this fellowship training programme.

During the period of training the doctors are closely supervised and will observe and actively assist in the management of a wide range of conditions. These will range from screening for fetal abnormalities to involvement in complex conditions that are diagnosed antenatally. The involvement of the doctors will vary depending on their level of experience, but the aim is that the trainees become competent in all aspects of patient care and counselling.

It is expected that by the end of the Training Fellowship the doctor will have obtained the FMF Certificates of competence in:

- Nuchal translucency scan
- Assessment of the nasal bone
- Assessment of ductus venous flow
- Assessment of tricuspid flow
- Preeclampsia screening
- The 20-22 weeks scan
- Fetal Doppler Ultrasound
- Cervical assessment
- Fetal echocardiography

The Fellowes/Sonographers have a captive audience and for some women their baby is now “real” as they are looking at the scan images for the first time. A brief dialogue to make the association between smoking and the risk of low birthweight

babies could possibly elicit a behaviour change at this emotive time. After the scan women are directed to see the Specialist midwife who discusses various aspects of maintaining a healthy pregnancy including smoking cessation.

Specialist Midwives

Medway provides Specialist Midwives for:

- Bereavement and pregnancy loss support
- Diabetes
- Infant feeding
- Mental Health
- Clinical governance and risk management
- Child Protection

Many of the midwives work closely with specialists in their field and provide a link between maternity services and other health and social care providers. These midwives have usually undertaken additional training in their field of work and are experienced staff members who can give extra information, advice and support to parents.

Specialist Midwives are well placed to signpost smokers as they are mainly dealing with women with “high risk” pregnancies. Diabetes for example is often complicated by smoking and poses additional risk to both mother and baby. Infant breastfeeding can also be negatively impacted in smokers.

Early Pregnancy Assessment

This clinic provides care and support for women who are between 6 and 12 weeks pregnant and who have symptoms such as:

- Pain or bleeding
- Previous ectopic pregnancy
- Previous molar pregnancy
- Recurrent miscarriages

An early pregnancy bleed can be a traumatic experience and as there is an increased risk of ectopic pregnancy and miscarriage in women who smoke, it is yet another opportunity to intervene. Timing is the critical factor in such cases, particularly where a pregnancy is no longer viable. There is already a referral pathway in place but we currently have very little uptake.

Aurelia Team

This team is based at MFT and provides pre-operative care for women who choose to have a surgical birth. This decision will have been made during pregnancy and

before the onset of labour and can also be referred to as 'elective surgery. Pre-operative care comprises the preparation and assessment, (physical and psychological), of a patient before surgery. Whilst physical preparation is routine, psychological care differs for each patient since every woman requires different levels of information and support.

Women booked for an elective Caesarean Section are at an increased risk of venous thromboembolism and post-operative complications if they continue to smoke and should ideally have an automatic referral to the SSS.

Maternity Care Unit (MCU) This is located in the Antenatal Clinic and is where women present when they have complications but do not need to be admitted immediately to hospital. Instead, these women are seen and assessed in the MCU. A common problem is reduced fetal movement which can be indicative of a reduced oxygen supply caused or exacerbated by maternal smoking. Pregnant women are required to come into hospital for monitoring. If, following auscultation (during which the fetal heart is monitored), it is found that no further intervention is required, it would be timely for the women to have a consultation with the specialist stop smoking midwife.

Neonatalogists

A neonatologist is responsible for the care of all newborn babies who need extra support shortly after birth. Babies require admission to the neonatal unit for a variety of reasons. Acute situations vary, from a baby born at full term with a complex cardiac abnormality to a baby born extremely prematurely at 24 weeks. A neonatologist is responsible for liaising with obstetricians, providing antenatal and bereavement counselling to families, caring for babies on the neonatal unit during their acute stay, and following up babies in clinic after they have been discharged from the neonatal unit. Neonatologists also carry out research and provide teaching. Simulation training is becoming an integral part of neonatal teaching programmes.

A neonatologist needs a holistic approach to caring for a baby to manage all elements of the baby's care. However, involvement of paediatricians from other specialties may be necessary if the baby's condition is complex. Babies are often admitted to the neonatal unit for several weeks, especially if they are extremely preterm. This enables neonatologists to build a rapport with the families of these babies and provide continuity of care.

The likelihood exists that maternal smoking may be a major contributory factor in a neonatal admission.

Children's Centres

These centres provide an informal environment where multi-disciplinary teams deliver a wide range of services. Collaborative working can increase opportunities to deliver consistent messages and appropriate support to pregnant smokers and their families. The 19 centers in Medway have recently been the subject of a restructuring programme. The process of reconfiguring Children Centres will be complete after the autumn of 2017. As Children's Centres are usually located in areas of high deprivation, they provide an ideal platform for imparting key messages to those who are likely to benefit most from health promotion interventions.

GPs and Practice Nurses

GP's have been encouraged to deliver consistent messages to pregnant smokers and new parents and to actively support a referral to the stop smoking service. They can also play a huge role in helping to dispel the plethora of myths surrounding maternal smoking.

Paediatricians

Paediatricians are doctors who look at specific health issues, diseases and disorders related to stages of growth and development. This is an area of medicine where the doctors work closely with the patient and their family and are therefore in an ideal position to raise the issue of second hand smoke

Appendix D - Smoking in Pregnancy Training Packages

Mandatory training for midwives

A one hour training session delivered each month at MFT. The frequency of this training is designed to ensure that all midwives are able to attend this training at least once a year. The session includes:

- The effects of smoking in pregnancy
- Local and national statistics
- Information on e-cigarettes and conventional nicotine replacement treatments
- Brief Intervention - demonstration or practice session on how to have an effective conversation with a smoker
- Overcoming common objections
- Case studies – reflective learning

Undergraduate training

Smoking cessation in pregnancy is part of the Public Health module at Canterbury Christ Church University. This lecture/training is delivered at both the Medway and Canterbury campuses and includes all content covered in mandatory training plus a practical workshop on dealing with resistant smokers.

F1 and F2 Doctors

This provides a brief overview of the risks associated with maternal smoking and the referral pathway.

GP Training

Annual refresher training and updates are provided at the GP Protected Learning Time monthly meetings. This session is used to reinforce the principle of “every contact counts”, dispelling myths about smoking in pregnancy, and the importance of early referral for support for women requiring assisted reproductive technology.

Health Visitors

Health visitors receive an annual update on maternal smoking which includes information on second hand smoke and the support available to new parents.

Smoking In Pregnancy Training Modules – Including Additional Bespoke Training Modules

Module Name	Description/Content	'X' for more on this topic
History of smoking and smoking related disease	• How prevalence has changed what are the factors that have influenced this? • Social acceptance of smoking – historical perspective and current views. • How and why smoking related diseases occur. • Physiological changes caused by smoking. This includes impact on metabolism, circulatory system, respiratory system, central nervous system, placental function and fetal development. • Why smoking affects the rate at which a wound will heal and why this is particularly important for women undergoing a surgical birth. • Why the need to use Fragmin may be higher in women who smoke. • Smoking and diabetes – why this combination poses an increased risk to pregnant women.	
Tobacco control legislation	• The range of measures/laws that have been introduced over the past 20years. • The rationale for these laws. • What impact have these laws had? **(Interactive session)**	
Taxation	• Taxation of tobacco • The relationship between tobacco tax revenue and expenditure on provision of health and social care.	

Environmental impact of tobacco	• How tobacco production and discarded tobacco litter impacts our communities and wildlife. • Tobacco manufacturers and Corporate Social Responsibility.	
Secondhand Smoke	• Giving children the best start in life – how parental smoking impacts lifetime outcomes for children. • Impact of parental smoking on onset of respiratory disorders/exacerbations in infants and children.	
National and local maternity care outcome data	• National statistics for maternal smoking. Comparison with local data, including a trajectory of prevalence since 2012. • Review of local outcomes for smokers compared to non-smokers, including data for low birth weight, stillbirths, admission to SCBU. • Medway strategic drivers and objectives for reducing maternal smoking. • Referral process and pathways, including data on referral volumes via each pathway. • Current marking and promotional campaigns – what's happening locally to 'get the message' out to the pregnant women. **(Interactive session)**	
The psychology of addiction	• How the habitual/behavioural aspect of smoking is developed and embedded into a smoker's daily life. • The half life of nicotine and the factors that influence the way different people titrate nicotine • Tobacco product marketing sizes and how this supports addiction and usage patterns. • Identifying behavioural patterns so that a smoker can plan for change and be prepared to address obstacles and difficult times during the quit process. • Managing and alleviating urges to smoke. Demonstrating empathy and offering practical support and guidance.	

	• Smoking and mental heath – the association between smoking and mental health and how we can support these smokers to quit. **(interactive session, where venue permits)**	
Eliciting motivation & overcoming objections	• Identifying and acting on motivational triggers. • Eliciting motivation in population groups who have multiple/complex challenges in their lives. • How to respond to common objections raised by pregnant women, such as, 'I have cut down to 2 cigarettes'. **(interactive session)**	
Nicotine replacement treatment	• How these differ in the way they work, including speed of delivery and mode of action. • Why we might recommend one type of treatment over another. • Why we recommend a combination of treatment products for some women. • Treatments that can and can't be used by pregnant women. • The role of e-cigarettes (both nicotine and non-nicotine versions) **(Interactive session)**	
Case Studies	• Reflective learning using real patient scenarios/referrals received from Medway midwives **(interactive session)**	

Appendix E – Saving Babies' Lives Care Bundle (Summary)

Reducing smoking in pregnancy

All women should be offered a test at their antenatal booking appointment to establish the level of carbon monoxide they are exposed to as well as referral to support to stop smoking. This will ensure that smokers and those exposed to smoke are fully aware of the risks to their unborn baby and are supported to make an informed decision about quitting or staying away from smoke.

Enhancing detection of fetal growth restriction

Growth of babies should be monitored and recorded on growth charts and an algorithm should be used to indicate the level of monitoring required. Of the one in 200 babies that are stillborn, growth restricted babies are the single largest preventable group.

Improving awareness of the importance of fetal movement

Women and their partners should be better informed and more empowered to monitor their baby's movements by clear, consistent advice. An information and advice leaflet on reduced fetal movement will be provided to all pregnant women. Providers should also have protocols in place to manage care effectively for women who report reduced movement.

Improving fetal monitoring during labour

There should be annual training and assessment for staff on cardiotocograph (CTG) interpretation and use of auscultation (monitoring of the baby's heartbeat) during labour. A buddy system for CTG interpretation should also be implemented so that 'fresh eyes' can detect any potential problems during labou