KENT PUBLIC HEALTH OBSERVATORY

Tobacco Dependence Needs Assessment

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Produced by

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Background and Introduction

- Despite a steady decline in Kent smoking prevalence over the past decade, smoking remains the single most modifiable risk factor for cancer and the leading cause of preventable illness and premature death.
- In Kent alone, there were an estimated 7,381 deaths attributable to smoking in the period of 2014-16 and an estimated 12,444 smoking attributable hospital admissions in 2016/17.
- In addition, tobacco is a significant driver of health inequalities. Smoking accounts for approximately half of the difference in life expectancy seen between the richest and poorest groups in society. Lower socioeconomic groups are typically more dependent, smoke more each day and find it harder to successfully quit.
- Smoking in pregnancy further entrenches inequalities, with greater likelihood of complications in pregnancy and children of smokers exposed to greater levels of harmful secondhand smoke.
- Beyond health, tobacco also results in significant costs to both society and the individual. In the South East alone, this cost has been estimated at £2.04 billion. Illicit tobacco and organised crime further compound these issues.
- The government has set out a long-term ambition to create a 'smoke-free generation' and has outlined several key targets for 2022. These include a reduction in overall smoking prevalence in adults to 12% or less, a reduction in smoking in pregnancy rates to 6% or less and reducing the inequality gap in smoking prevalence.
- Achievement of these targets would have a significant positive impact on health outcomes for the Kent population, including a reduction in lung cancer, COPD, coronary heart disease, acute myocardial infarction events and stroke.
- The smoking landscape has changed. A decline in the rates of referral to traditional stop smoking services has occurred alongside a concurrent increase in the use of e-cigarettes. There is a need to review current smoking cessation provision to ensure it is offering the best chance of quit success for smokers and is setting Kent on a trajectory towards attainment of the 2022 targets.

Epidemiology

- There are inherent challenges in measuring smoking prevalence due to a reliance on self-reported smoking status and the fact that the Kent population is constantly in flux. Triangulation of the different measures available can produce a 'range of precision' and enable more effective monitoring of trends over time.
- Despite an estimated reduction in smoking prevalence of 4.4% in Kent over the past five years, 16.3% of Kent residents continue to smoke and the gap in smoking behaviour between the richest and poorest appears to be widening. Those in routine and manual occupations are nearly 3.5 times more likely to smoke than their counterparts in other occupations, and smoking prevalence in this group now stands at 32.4% (the highest in the South East).

- Significant variation in prevalence also exists between districts, with estimated prevalence in Thanet (23.7%) significantly greater than national estimated prevalence of 14.9%.
- Smoking in pregnancy remains a priority with an estimated 14.4% of women smoking at time of delivery. It is believed attainment of smoking status in pregnancy has improved in the last few years due to the work of smoking in pregnancy midwives and CO monitoring at booking. However, concerns remain and there is a need to ensure a single effective measurement is in place for Kent.
- Current smoking prevalence projections suggest Kent is on course to achieve the overall target of 12% by 2022. These projections equate to a prevalence reduction of 0.89% per year and an estimated total of 58,500 additional quits by 2022 in Kent (average of 11,700 per year).
- That said, if Kent is to achieve the target of reducing health inequalities, rates of decline will need to be accelerated in certain districts (particularly Ashford, Dover, Gravesham, Maidstone, Swale and Thanet) and among certain groups in Kent. Given this, and the decline seen in smokers accessing cessation support, there is a need to consider innovative solutions to ensure achievement of the 2022 goals.
- Current SATOD (smoking at time of delivery) trends suggest a need to accelerate quits among smoking pregnant women to achieve 6% prevalence by 2022. Projections estimate reductions of 2.1% will need to be achieved each year.
- There are currently an estimated 2,372 women smoking in pregnancy in Kent; this will need to be reduced to 971 by 2022 to achieve the 6% target. Per year, this translates to an average target reduction of 350 women.

Smoking Cessation Services

- Despite significant declines in smoking prevalence over the last decade, smoking rates remain too high and there is a need to look for new, flexible and innovative models of support to maximise Kent's chances of achieving the ambitious 2022 targets.
- Smoking cessation remains highly cost effective. With a 'number needed to treat' (NNT) value of 20 to prevent a premature death, it compares extremely favourably with other routine medical interventions.
- Traditional smoking cessation services continue to offer the best chance of successful quits and Kent services perform well. However, the numbers accessing these services have continued to decline. An estimated two-thirds of smokers report a desire to quit, yet just over 3% of the Kent smoking population currently access existing cessation services. There is a need to broaden support services to appeal to a wider audience.
- Research has shown GPs have a particularly important role to play in encouraging and supporting quit attempts. Smokers are more likely to visit their GP than non-smokers, and data shows quit attempts are more likely if advice or support on smoking cessation is offered by a GP.
- Guidance also emphasises the need for patient choice. Allowing a smoker to choose the quit method they prefer, provided it is not a pharmacotherapy that is unsuitable for them, is likely to increase chances of success.
- Given this, Smoking+, an evidence-based Stop Smoking model developed by UCL Professor Robert West, appears to offer the best chance of success.

- This model combines traditional smoking cessation services (tier 1) alongside GP brief advice and prescribing of NRT/varenicline (tier 2). Tier 3 would offer comprehensive online support and information. To achieve the desired population outcome, this model will require consistent intervention delivered at scale.
- Plans are currently underway for a smoking+ pilot in Ashford. This offers an opportunity for testing and costing the model locally before wider roll out. To maximise impact, wider implementation will require close collaboration between the Local Authority, the STP, CCGs and GP Practices across Kent.
- As with all interventions, there is a need to be mindful of widening existing health inequalities. Universal action is appropriate but should be delivered with a scale and intensity that is proportionate to level of need. Interventions will need to target the most vulnerable groups.
- Smoking+ would not replace specialist services that target pregnant women. Kent must continue to offer specialist smoking in pregnancy services and commit to expanding the home visit adviser service which has already led to significant increased quits among pregnant women in targeted areas.
- In addition, smoking initiation in young people must be considered. Evidence suggests reducing smoking prevalence among parents should help, but peer led school-based interventions such as ASSIST demonstrate cost effectiveness and should also be considered.
- This action should not be taken in isolation. All interventions need to take place in a context of broader environmental shifts that encourage and support quit attempts. Smokefree settings will be an important part of these efforts, alongside broader tobacco control efforts. Kent should build on existing work towards smokefree health settings, prisons and school gates. Housing teams at district level should be supported to implement smokefree housing interventions with a focus on vulnerable groups.
- A renewed focus on opportunistic intervention by a broad range of professionals in line with MECC (Making Every Contact count) principles will also be necessary. Beyond GPs and other healthcare workers, key groups such as such as the fire service, social care workers, debt advice workers, and housing professionals should be able to deliver basic messages and signpost to support.

1 Background

1.1 The tobacco landscape is changing. While traditional smoking cessation services continue to offer smokers the best chance of quitting, there has been a decline in the rates of referral to these services both locally and nationally[1]. Alongside this shift, there has been a dramatic rise in the use of e-cigarettes. Just under 2.5 million people use an E-cigarette in England, 1.8 million of whom have either quit smoking or are using vaping to quit. An additional three quarters of a million have quit both vaping and smoking[2].

1.2 Despite declines in smoking prevalence over the past decade, smoking is a huge driver of health inequalities and remains the single biggest cause of cancer in the UK and globally[3]. Complacency is not an option.

1.3 This needs assessment provides an overview of the local situation and the current evidence base for smoking cessation. Based on these, this report proposes a new model of care for Kent to maximise chances of achieving an adult smoking prevalence of 12% by 2022.

2 Introduction

2.1 Tobacco remains the deadliest commercially available product in England,[4] leading to the premature death of approximately 50% of its users[5].

2.2 Tobacco control has seen much success in the past decade, with prevalence across all target groups continuing to drop during the period covered by the last tobacco control action plan 2011-15[6]. Kent is no exception, with an estimated prevalence reduction of 4.4% in the past five years [7].

2.3 However, despite this progress, smoking remains the leading cause of preventable illness and premature death[8] and is responsible for over 200 deaths per day across England[9].

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[1] Towards a Smokefree Generation: A Tobacco Control Plan for England. July 2017 https://www.gov.uk/government/publications/towards-a-smoke-free-generation-tobacco-control-plan-for-england

[2] PHE Health matters report 2018. Stopping smoking: What works?

3 Brown, K. et al., 2018: The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015. British Journal of Cancer.

https://www.nature.com/articles/s41416-018-0029-6 ?_ga=2.103337600.1681808247.1542626640-231728466.1538648419

[4] Towards a Smokefree Generation: A Tobacco Control Plan for England. July 2017. As above.

[5] ASH- Facts at a glance, accessed Oct 2018. file:///C:/Users/MulreC01/Downloads/Facts-at-a-Glance-12-Sept-2018-FINAL%20(1).pdf _

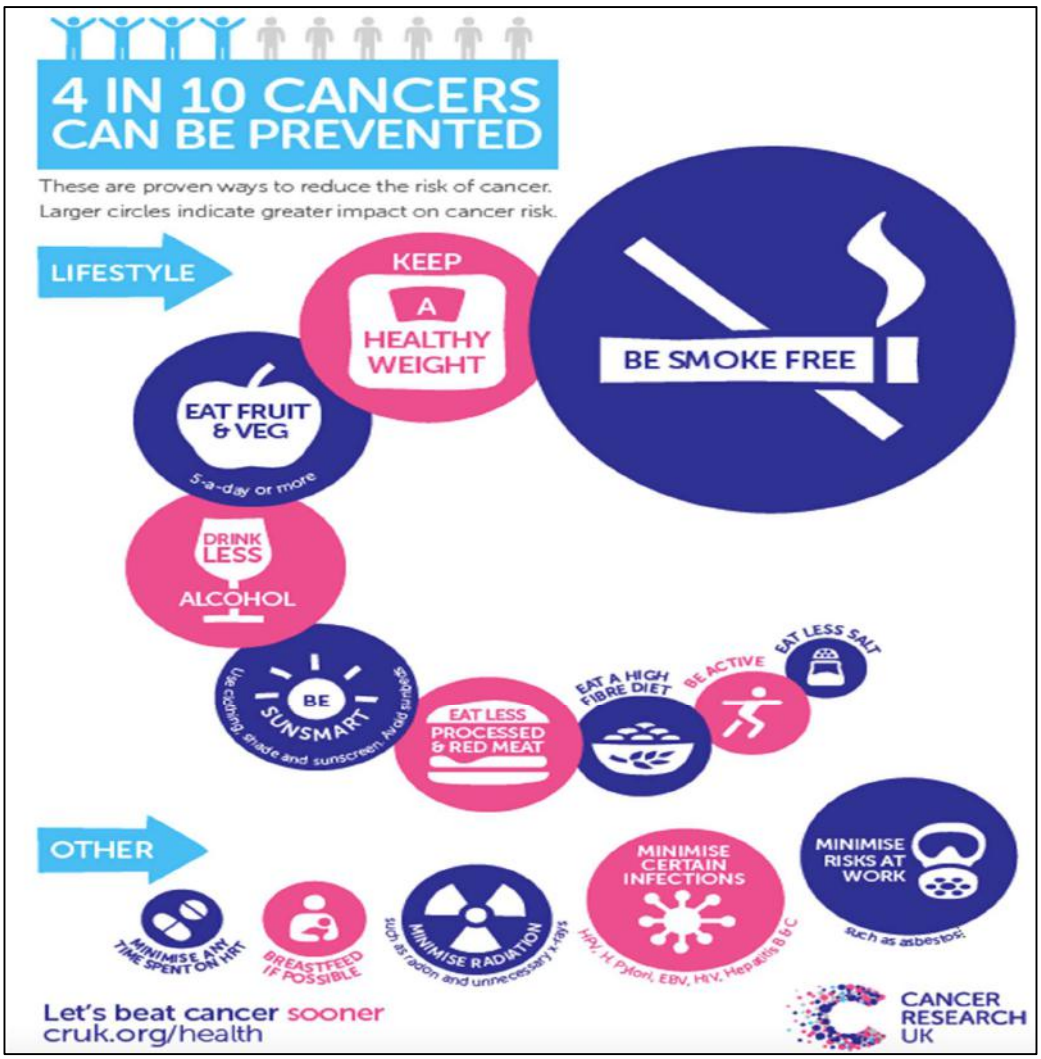
[6] Towards a Smokefree Generation: A Tobacco Control Plan for England. July 2017

[7] Fingertips: Local Tobacco Control Profile for Kent (Annual Population Survey estimates). Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control

[8] Fingertips, as above

[9] Statistics on Smoking, England- 2017. Accessed October 2018 http://webarchive.nationalarchives.gov.uk/20180328135544/http://digital.nhs.uk/catalogue/PUB24228

2.4 Smoking is the single most modifiable risk factor for cancer. Responsible for 72% of lung cancer cases[10], it is also associated with cancers in other organs including lip, mouth, throat, bladder, kidney, stomach, liver and cervix, alongside other diseases such as chronic obstructive pulmonary disease (COPD) and heart disease[11],(see appendix 1 for full list of smoking attributable conditions).



Cancer prevention and cancer risk factors

2.5 In Kent alone, there were an estimated 7,381 deaths attributable to smoking in the period of 2014-16 and an estimated 12,444 smoking attributable hospital admissions in 2016/17[12].

2.6 In addition to the overall burden to population health, smoking is a huge driver of health inequalities within populations. Smoking-related death rates are two to three

[10] ASH- Facts at a glance, as above
[11] PHE Fingertips. Local Tobacco Control Profile for Kent. https://fingertips.phe.org.uk/profile/tobacco-control
[12] PHE Fingertips. Local Tobacco Control Profile for Kent. https://fingertips.phe.org.uk/profile/tobacco-control

times greater in low-income groups than in wealthier social groups[13]. In fact, it has been estimated that smoking accounts for approximately half of the difference in life expectancy between the richest and poorest groups in society[14]. In addition to premature mortality, healthy life expectancy is also greatly reduced for smokers. Chronic illnesses associated with smoking such as COPD (chronic obstructive pulmonary disease) can be debilitating, making it difficult to engage in day to day tasks or contribute to the economy[15].

2.7 Smoking rates remain high for those who already suffer from poorer health and other disadvantages[16]. Data suggests more economically-deprived groups may be more dependent, smoke more each day and find it harder to successfully quit[17]. A smoking equity audit in Kent (2016) found that, although more likely to access smoking cessation services, less affluent groups have less chance of success following setting of a quit date[18]. Similar trends are seen across the UK, with 69% of smokers from managerial and professional groups successfully quitting, compared with 51% of smokers in routine and manual occupations[19].

2.8 The economic costs of smoking also hit poorer households harder. The average smoker spends over £2,000 on cigarettes every year[20]. There are 1.4m households with a smoker in England that fall below the poverty line. A third of these would be lifted out of poverty if the smoker in these households were to quit[21].

2.9 Even more stark than the differences seen between the richest and poorest is the burden placed on adults suffering from mental ill health. In England, 40.5% of adults with a serious mental illness smoke and people with a mental health condition die on average 10 to 20 years earlier than the general population.[22] The tobacco control plan for England sets out an ambition that all mental health inpatient services sites be smokefree by 2018. Although some have expressed concern that quitting can be detrimental for mental health, research suggests the reverse is true. Studies have found quitting to be associated with reduced levels of depression, anxiety and stress in addition to improved positive mood[23]. Research has also found no effect or, in some

[13] Fair Society, Healthy Lives: The Marmot Report. Feb 2010. http://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-the-marmot-review/fair-society-healthy-lives-full-report-pdf.pdf

[14] Fair Society, Healthy Lives. As above

[15] Towards a Smokefree Generation: A Tobacco Control Plan for England.

[16] Towards a Smokefree Generation: A Tobacco Control Plan for England.

[17] Office for National Statistics. Adult Smoking Habits in Great Britain, 2016 https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandlifeexpectancies/bulletins/adultsmokinghabitsingreatbritain/2016

[18] KPHO publication: NHS Stop Smoking Services May 2016.

[19] Office for National Statistics. Adult smoking habits in the UK: 2016. s.l. : Office for National Statistics, 2017.

[20] ASH Ready Reckoner http://ash.lelan.co.uk/

[21] Smoking in the Home: New solutions for a Smokefree Generation. Nov 2018 http://ash.org.uk/wp-content/uploads/2018/11/FINAL-2018-Smokefree-Housing-report-web.pdf

[22] Towards a Smokefree Generation: A Tobacco Control Plan for England.

[23] Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P. Change in mental health after smoking cessation: systematic review and meta-analysis. BMJ. 2014;348:g1151. Published 2014 Feb 13. doi:10.1136/bmj.g1151

cases, a reduction in levels of aggression, following a smoking ban in mental health settings[24].

Smoking and Inequalities

In Kent, life expectancy at birth (males) is estimated at...

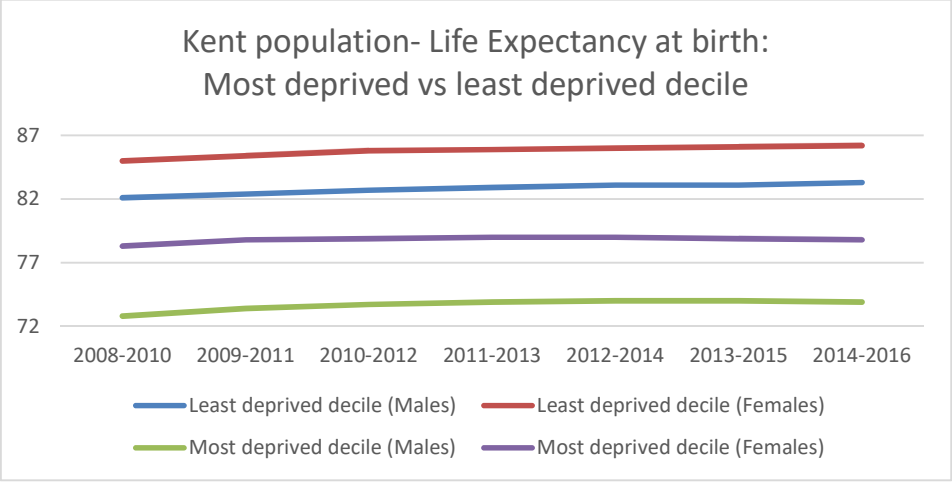
73.9 years for the most deprived decile

and 83.3 years for the least deprived.

40.5% of adults with a serious mental illness smoke, *compared with 14.9% in the general population*

A difference of almost 10 years. *Smoking has been estimated to account for approximately half the difference in life expectancy between the richest and poorest groups in society.*

People with a mental health condition die on average 10 to 20 years earlier *than the general population.*



**Source: PHE Fingertips*

While life expectancy has increased for all groups over the last decade, the inequalities between the least deprived and most deprived deciles remain.

[24] Campion, J., Checinski, K., Nurse, J., & McNeill, A. (2008). Smoking by people with mental illness and benefits of smoke-free mental health services. Advances in Psychiatric Treatment, 14(3), 217-228. doi:10.1192/apt.bp.108.005710

Smoking in Pregnancy

2.10 In addition to the risks outlined above, smoking in pregnancy carries more immediate and significant risks to both mother and baby. Smoking in pregnancy is associated with a wide range of problems, including complications during labour, increased risk of stillbirth, miscarriage, premature birth, low birth weight and sudden unexpected death in infancy[25]. In fact, smoking has been cited as the biggest single modifiable risk factor for poor birth outcomes[26]. Smoking during pregnancy has been estimated to increase the risk of infant mortality by 40%[27]. In Kent between 2014-16, there were an estimated 233 stillbirths and 125 neo-natal mortalities attributable to smoking[28].

2.11 Smoking in pregnancy further perpetuates the health inequalities seen in the general population. Smoking among disadvantaged groups and mothers under 20 is considerably higher than their affluent and older counterparts[29]; prevalence among women in routine and manual occupations is five times higher than women in managerial and professional occupations. In addition, children who grow up with a parent that smokes are more likely to be exposed to secondhand smoke[30] and more likely to become addicted themselves, further perpetuating the cycle of inequality.[31].

Smokeless tobacco: A Brief Overview

Smoking is not the only way of ingesting tobacco. Smokeless tobacco products can be placed in the mouth or nose and not burned. Smokeless tobacco is associated with a range of adverse health outcomes including cardiovascular disease, oropharyngeal cancers and periodontal disease[1]. That said, although it is not a safe alternative to smoking, it does not present a comparable health risk to the Kent population. Aside from carrying fewer risks than smoking cigarettes, the use of smokeless tobacco in England is largely confined to individuals of South Asian origin[1] who make up less than 3.5% of the Kent population[1]. Significant gaps remain in our understanding of smokeless tobacco use and the evidence around cessation, but NICE guidelines currently recommend those using smokeless tobacco should be supported to quit through traditional smoking cessation services where possible and appropriate[1]. Given the relatively low health burden placed

[25] NICE Guidelines: Smoking: stopping in pregnancy and after childbirth. https://www.nice.org.uk/guidance/ph26/resources/smoking-stopping-in-pregnancy-and-after-childbirth-pdf-1996240366789

[26] National Maternity Review. Better Births: Improving outcomes of maternity services in England. A five year forward view for maternity care, 2014: https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf

[27] National Maternity Review, as above.

[28] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control

[29] Towards a Smokefree Generation: A Tobacco Control Plan for England.

[30] Smoking in the Home: New solutions for a Smokefree Generation. Nov 2018 http://ash.org.uk/wp-content/uploads/2018/11/FINAL-2018-Smokefree-Housing-report-web.pdf

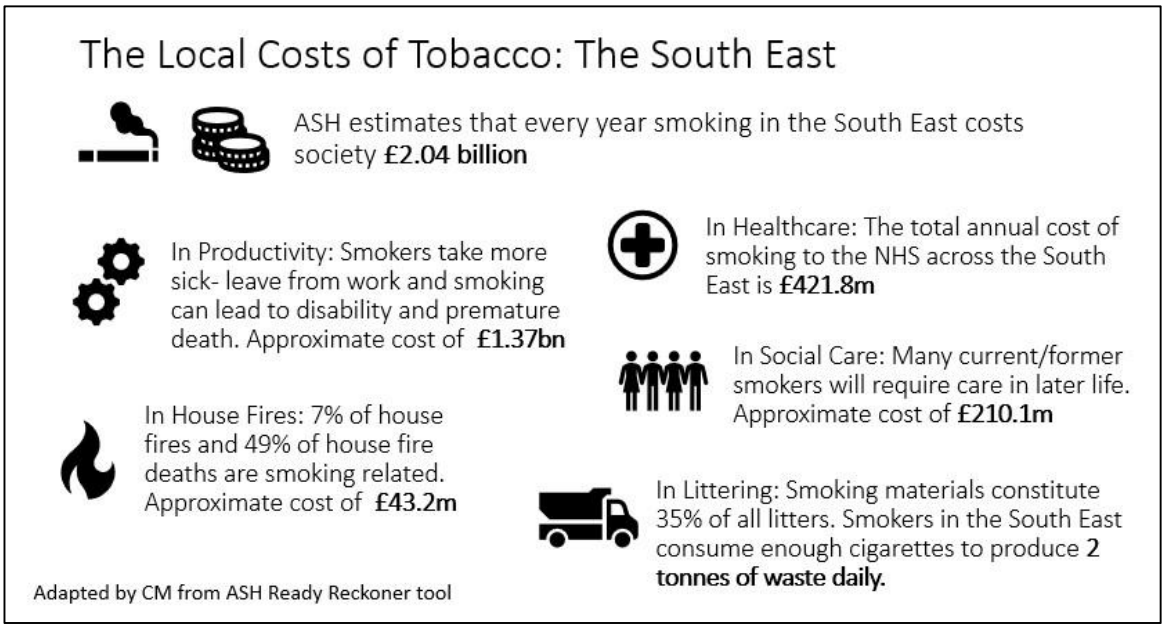
[31] Smoking in the Home, as above.

Wider costs to society

2.12 In addition to the costs of smoking to the individual, tobacco also results in significant costs to society. In the South East region alone, smoking is estimated to cost £2.04 billion to society each year[32]. In Kent, it has been estimated at £346.5m each year[33]. This cost is accrued across a range of social domains, including healthcare, social care and productivity.

2.13 In addition to these wider costs, there are also costs associated with illicit tobacco and organised crime[34]. Findings from a South East Illicit Tobacco study[35] suggest that 11% of Kent smokers buy illicit tobacco (compared with 14% average across the South East). Although the government has committed to continuation of high duty rates for tobacco products to make tobacco less affordable, illicit tobacco threatens to undermine measures to keep prices high as a disincentive for smoking[36]. This seems to be reflected in the findings of the South East Illicit Tobacco study. In Kent, 87.2% of illicit tobacco buyers surveyed answered 'agree strongly' to the statement 'It makes it possible for me to smoke when I couldn't afford it otherwise', compared with 52.9% of illicit tobacco buyers across the South East region. Likewise, 66.9% stated they 'slightly' or 'strongly' agreed with the statement 'Illicit tobacco has made it harder for me to quit smoking' compared with 29.9% across the South East region. Although relatively small numbers, these findings suggest the smoking behaviour of the Kent population may be more sensitive to price. It is essential that the Public Health team and Trading Standards continue to work together to reduce the availability of illicit tobacco to avoid an undermining of tobacco control efforts.

[32] ASH- Ready Reckoner tool: http://ash.lelan.co.uk/
[33] ASH Ready Reckoner, as above
[34] Towards a Smokefree Generation: A Tobacco Control Plan for England.
[35] South East Illicit Tobacco study for PHE. Spring 2018
[36] Towards a Smokefree Generation: A Tobacco Control Plan for England.



Smokefree Legislation

2.14 Smoking prevalence, as with all health behaviours, is shaped by our environment, and the importance of smokefree legislation cannot be underestimated. In addition to shifting social norms, smokefree legislation can also reduce exposure to the dangers of secondhand smoke[37]. While secondhand smoke has been shown to increase the risk of respiratory and cardiac ill health in adults, children are particularly vulnerable because of their developing lungs. Exposure to secondhand smoke in children increases susceptibility to pneumonia, bronchitis, worsening of asthma, middle ear disease, bacterial meningitis and sudden infant death syndrome. In pregnant women it increases the risk of miscarriage and stillbirth[38].

2.15 Since July 2007, additional legislation has built on the smoking ban and includes standardised packaging and a ban on both proxy purchasing and smoking in cars with children[39]. No further legislation is planned according to the most recent tobacco control programme for England, although plans are outlined for a smokefree NHS, with hospitals across England supported to create working environments which encourages smokers to quit[40]. In addition, there are plans to implement smokefree policy in prisons. With an estimated 80% of the prison population smoking[41], harm from secondhand smoke in prisons is a significant public health issue. At a more local

[37] Smoking in the Home: New solutions for a Smokefree Generation. Nov 2018 http://ash.org.uk/wp-content/uploads/2018/11/FINAL-2018-Smokefree-Housing-report-web.pdf
[38] Smoking in the Home: New solutions for a Smokefree Generation. As above
[39] Towards a Smokefree Generation: A Tobacco Control Plan for England.
[40] Towards a Smokefree Generation, as above
[41] Towards a Smokefree Generation ,as above

level, plans to create smokefree school gates are outlined in the Kent and Medway Sustainability and Transformation Partnership (STP) Prevention Action Plan. In addition, district councils have delivered initiatives around smokefree parks alongside initiatives offering recall of fines for cigarette littering if the offenders access specialist cessation services.

The Salford Experience: Joint e-cigarette pilot- Housing associations and stop smoking services

In early 2018 the Greater Manchester Health and Social Care funded a 3-month e-cigarette pilot in Greater Manchester. Delivered by the stop smoking service in partnership with local housing associations, tenants were given e-cigarette vouchers by community teams. These vouchers could be exchanged in pharmacies or at the local stop smoking service.

Demand to participate was high, with over 1,000 smokers receiving a voucher. Some said they had not previously considered quitting, and many said they would not have done so if the e-cigarettes had not been free.

Participants were CO verified at their first appointment and given a free e-cigarette plus 2 weeks' worth of e-liquid in exchange for their voucher. Participants were given further e-liquid as an incentive to return for further check ups.

The final quit rate was 63% among those who also engaged with quit support. 69% of participants were from the most deprived quintile, compared to 57% prior to the pilot. The NHS services participating in the pilot saw 4 times as many people and 5 times as many successful quits from

2.16 Smokefree homes also offer potential solutions and a pilot delivered in Salford, outlined above, has shown promising results. Although KCC does not hold housing responsibilities, there is a need to work proactively and pragmatically with the housing function at district level to support a smokefree housing vision. Basic interventions might include supporting landlords to develop a policy managing smoke drifting from a neighbour's property or communal space into a tenant's home and capturing the smoking status of tenants and signposting to support. Smokefree home initiatives have the potential to tackle entrenched inequalities if targeted at more vulnerable groups (for example, those living in social housing), encouraging residents to quit, reducing secondhand smoke exposure plus offering additional benefits such as a reduction in the risk of fire[42].

[42] Smoking in the Home: New solutions for a Smokefree Generation. As above

Government Targets: 2022 and Beyond

2.17 The government has set out a long-term ambition to create a 'smokefree generation', defined as achieving a smoking prevalence of 5% or below[43]. To achieve this, they have set a number of key targets for the end of 2022:

- **Reduce smoking prevalence amongst adults in England from 15.5% to 12% or less.**
- **Reduce the prevalence of smoking in pregnancy from 10.7% to 6% or less.**
- **Reduce the inequality gap in smoking prevalence between those in routine and manual occupations and the general population.**
- **Reduce the prevalence of 15 year olds who regularly smoke from 8% to 3% or less.**

2.18 Given current smoking prevalence and trends in Kent these targets are highly ambitious. This report aims to set out where Kent currently is, where it is heading, and what is needed to achieve these 2022 ambitions.

2.19 Achieving these targets would have a huge impact on the health of the Kent population. Using the JSNA population cohort model [44] it is possible to estimate what achievement of the 12% prevalence target would mean for Kent health outcomes by 2032, specifically:

- 620 fewer cases of lung cancer
- 832 fewer cases of COPD (chronic obstructive pulmonary disease)
- 480 fewer cases of coronary heart disease, and
- 461 fewer cases of stroke

2.20 Achievement of these targets should also translate to improved health outcomes for Kent in the shorter term. Studies have consistently shown the introduction of smokefree legislation in public and work settings is associated with a significant reduction in acute myocardial infarction events in a timeframe of months not years. In a systematic review conducted by Lin et al., they estimate that a 1% decrease in smoking prevalence leads to an estimated reduction of 2.8% in acute myocardial infarction rates[45].

2.21 The tobacco landscape is changing – a national decline in the use of traditional stop smoking services has occurred in conjunction with dramatic rises in the use of e-

[43] Towards a Smokefree Generation: A Tobacco Control Plan for England.
[44] JSNA Population Cohort Model for Kent. Accessed October 2018 https://www.thewholesystem.co.uk/systems-thinking-modelling/hosted-online-models/kent-cc-cohort-test/
[45] Lin H, Wang H, Wu W, Lang L, Wang Q, Tian L. The effects of smoke-free legislation on acute myocardial infarction: a systematic review and meta-analysis. BMC Public Health. 2013;13:529. doi: 10.1186/1471-2458-13-529.

cigarettes[46]. Just under 2.5 million people use an e-cigarette in England, 1.8 million of whom have either quit smoking or are using vaping as a means to quit[47]. An additional three quarters of a million have quit both vaping and smoking[48]. A Public Health England evidence review found that e-cigarettes, while not completely risk-free, were at least 95% less harmful than cigarettes[49] (for a breakdown of chemicals in a cigarette vs vaping, see appendix 2). However, common misconceptions around e-cigarettes persist, with many over-estimating the associated risks. A survey conducted by ASH in 2017 found that only 13% of respondents recognise that e-cigarettes are a lot less harmful than smoking, with 26% thinking they are more or equally harmful[50].

2.22 In recognition of the reduced harm posed by e-cigarettes, and in line with PHE guidance, the Kent and Medway sustainability and transformation partnership (STP) has drafted a position statement on electronic cigarettes (see appendix 3). This statement supports the use of e-cigarettes as a quit aid. It emphasises the need for smoking cessation services to offer 'e-cigarette friendly' services to those who choose to use them in preference to prescribed support to address tobacco addiction.

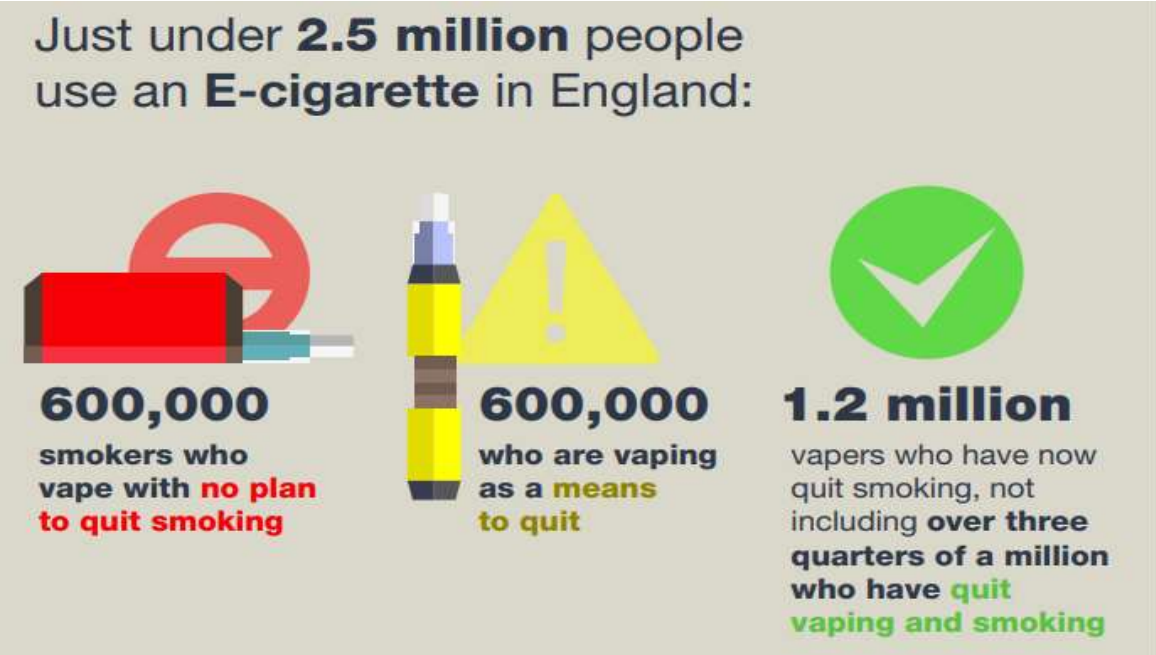
[46] NHS Digitial: Statistics on NHS Stop Smoking Services in England - April 2017 to March 2018 https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-nhs-stop-smoking-services-in-england/april-2017-to-march-2018

[47] PHE Health matters report 2018. Stopping smoking: What works?

[48] PHE Health matters report 2018, as above

[49] PHE Evidence review of e-cigarettes and heated tobacco products 2018: executive summary. Accessed October 2018 https://www.gov.uk/government/publications/e-cigarettes-and-heated-tobacco-products-evidence-review/evidence-review-of-e-cigarettes-and-heated-tobacco-products-2018-executive-summary

[50] ASH September 2018 briefing: Use of e-cigarettes (vapourisers) among adults in Great Britain: file:///C:/Users/MulreC01/Downloads/ASH-Adult-e-cig-factsheet-2018-1.pdf



**Infographic from the Health matters report*[51]

2.23 Surveys have consistently shown the majority of smokers want to quit[52]. Traditional smoking cessation services continue to offer the best chance of success[53] and so must be available to those willing to engage. However, there is a need to look at new and innovative ways to support those not accessing traditional treatment services. There is a need to review current smoking cessation provision to ensure it is offering the best chance of quit success for smokers and is setting Kent on a trajectory towards attainment of the 2022 targets.

[51] Health Matters: Smoking and quitting in England. As above
[52] ASH fact sheet: Stopping Smoking, June 2013: http://thevalemedicalcentre.co.uk/resources/content/Documents%20&%20Files/Leaflets/ASH_116%20-%20Stopping%20smoking.pdf
[53] Health Matters: Smoking and quitting in England: https://www.gov.uk/government/publications/health-matters-smoking-and-quitting-in-england/smoking-and-quitting-in-england

Summary – Part 1

- Despite a steady decline in Kent smoking prevalence over the past decade, smoking remains the single most modifiable risk factor for cancer and the leading cause of preventable illness and premature death.
- In Kent alone, there were an estimated 7,381 deaths attributable to smoking in the period of 2014-16 and an estimated 12,444 smoking attributable hospital admissions in 2016/17.
- In addition, tobacco is a significant driver of health inequalities. Smoking accounts for approximately half of the difference in life expectancy seen between the richest and poorest groups in society. Lower socioeconomic groups are typically more dependent, smoke more each day and find it harder to successfully quit.
- Smoking in pregnancy further entrenches inequalities, with greater likelihood of complications in pregnancy and children of smokers exposed to greater levels of harmful secondhand smoke.
- Beyond health, tobacco also results in significant costs to both society and the individual. In the South East alone, this cost has been estimated at £2.04 billion. Illicit tobacco and organised crime further compound these issues.
- The government has set out a long-term ambition to create a 'smoke-free generation' and has outlined several key targets for 2022. These include a reduction in overall smoking prevalence in adults to 12% or less, a reduction in smoking in pregnancy rates to 6% or less and reducing the inequality gap in smoking prevalence.
- Achievement of these targets would have a significant positive impact on health outcomes for the Kent population, including a reduction in lung cancer, COPD, coronary heart disease, acute myocardial infarction events and stroke.
- The smoking landscape has changed. A decline in the rates of referral to traditional stop smoking services has occurred alongside a concurrent increase in the use of e-cigarettes. There is a need to review current smoking cessation provision to ensure it is offering the best chance of quit success for smokers and is setting Kent on a trajectory towards attainment of the 2022 targets.

3 Epidemiology

3.1 Public Health England data estimates the current smoking prevalence in Kent at 16.3% of the population based on the Annual Population Survey (APS), compared with the England average of 14.9%. This translates to just over 197,000 smokers in Kent[54].

3.2 Estimating smoking prevalence in a population is not without its challenges and a level of imprecision is inevitable largely because:

3.2.1 Estimates are dependent on self-reported smoking status (vulnerable to misreporting), and

3.2.2 The denominator is constantly changing as the Kent population is in flux, with movement in and out of the county.

3.3 That said, there are several measures available (outlined below) and triangulation of these should give a 'range of precision'. The most recent data suggests Kent smoking prevalence is likely to fall between 14.4% and 18.2%.

Measuring Smoking Prevalence: An Overview[55]

Smoking prevalence can be a challenge to estimate. There are three main sources used to estimate prevalence at district level: the Quality Outcomes Framework (QOF), the Annual Population Survey (APS), and the General Practice Patient Survey (GPPS).

All use a slightly different approach, and so produce different estimates. It should be noted that all three are likely to under-estimate, as they rely on self-reporting whereby someone must identify as a 'current smoker'. Significant variation exists between these estimates for Kent at both district and county level, as is the case for England as a whole.

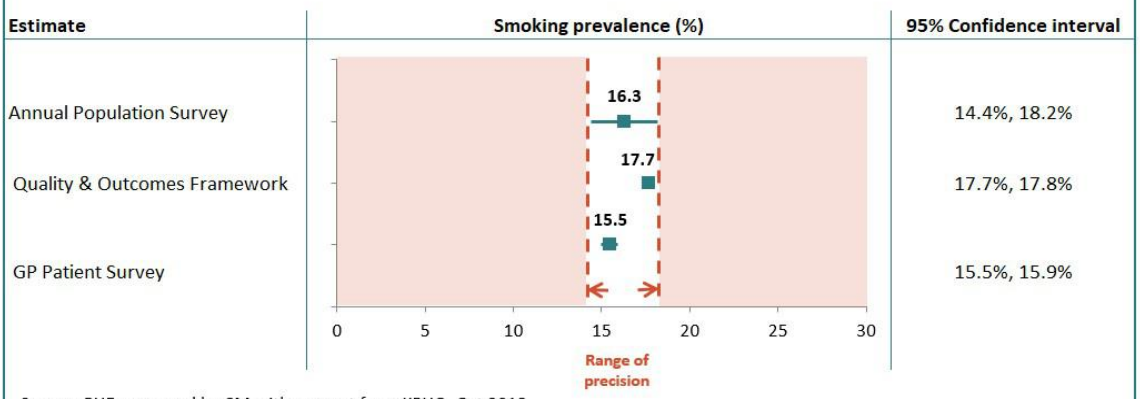
Measure	***Summary***	***Positives***	***Drawbacks***
Annual Population Survey (APS)	*Formerly the Integrated Household survey. Annual survey of population aged 18 and over. Rate based on self-reporting as a 'current cigarette smoker'.*	*Uses random sampling method and weighting in attempt to get representative sample. Used by PHE as key comparator measure.*	*Limited sample size at district level means large confidence intervals. Weighting is done at South East level so not always appropriate for Kent population.*

[54] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control

[55] Adapted from KPHO document 'Comparing sources of local smoking prevalence estimates' May 2016 *file://invicta.cantium.net/kccroot/users/shq/shq6/MulreC01/Desktop/Smoking%20Needs%20Assessment/SmokingPrevalenceComparison%20KPHO.pdf*

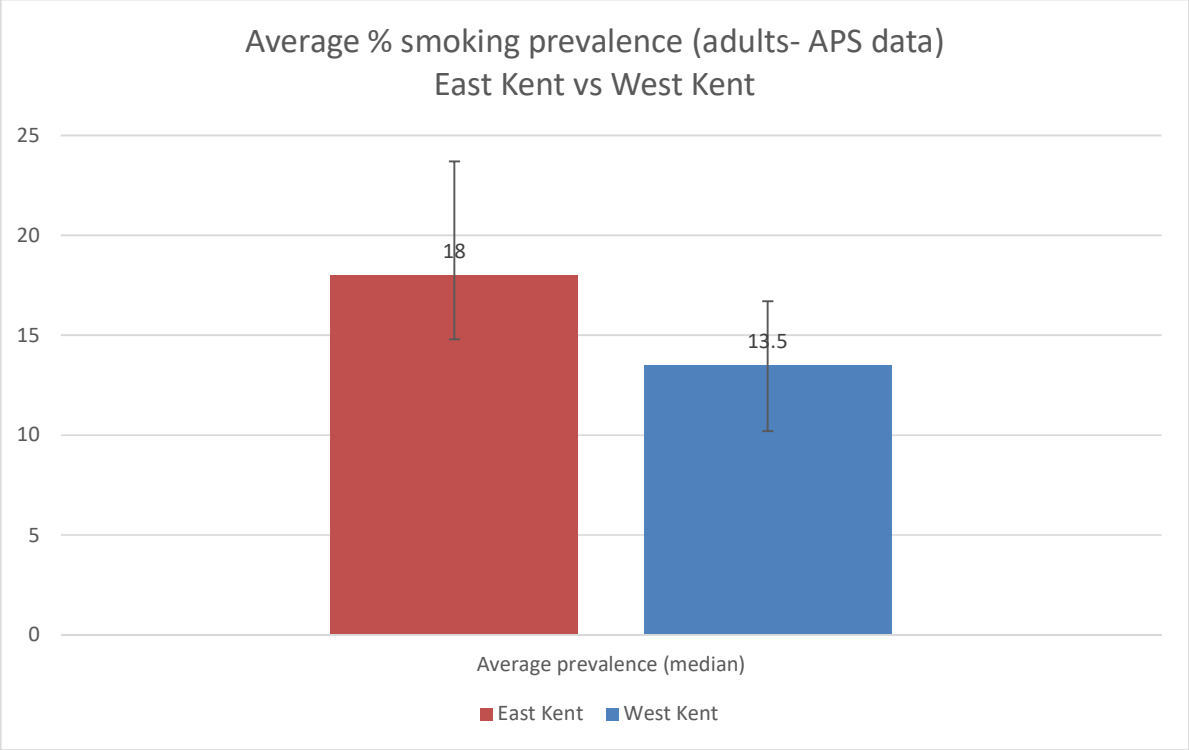
Quality & Outcomes Framework (QOF)	*Uses complete patient register of all included practices where smoking status has been recorded on GP patient record in last 25 months (aged 15+).*	*Greater proportion of the population than survey-based estimates.*	*Excludes those unregistered, or who have not visited GP in last 24 months. May be desirability bias (patients not wishing to tell GP they smoke).*
GP Patient Survey (GPPS)	*Survey of adults (18 and over) registered with a GP who describe themselves as 'occasional' or 'regular' smokers.*	*Uses random sampling method and weighting in attempt to get representative sample.*	*Excludes those unregistered with a GP.*

Comparison of smoking prevalence estimates: Kent, 2016/17



Source: PHE, prepared by CM with support from KPHO, Oct 2018

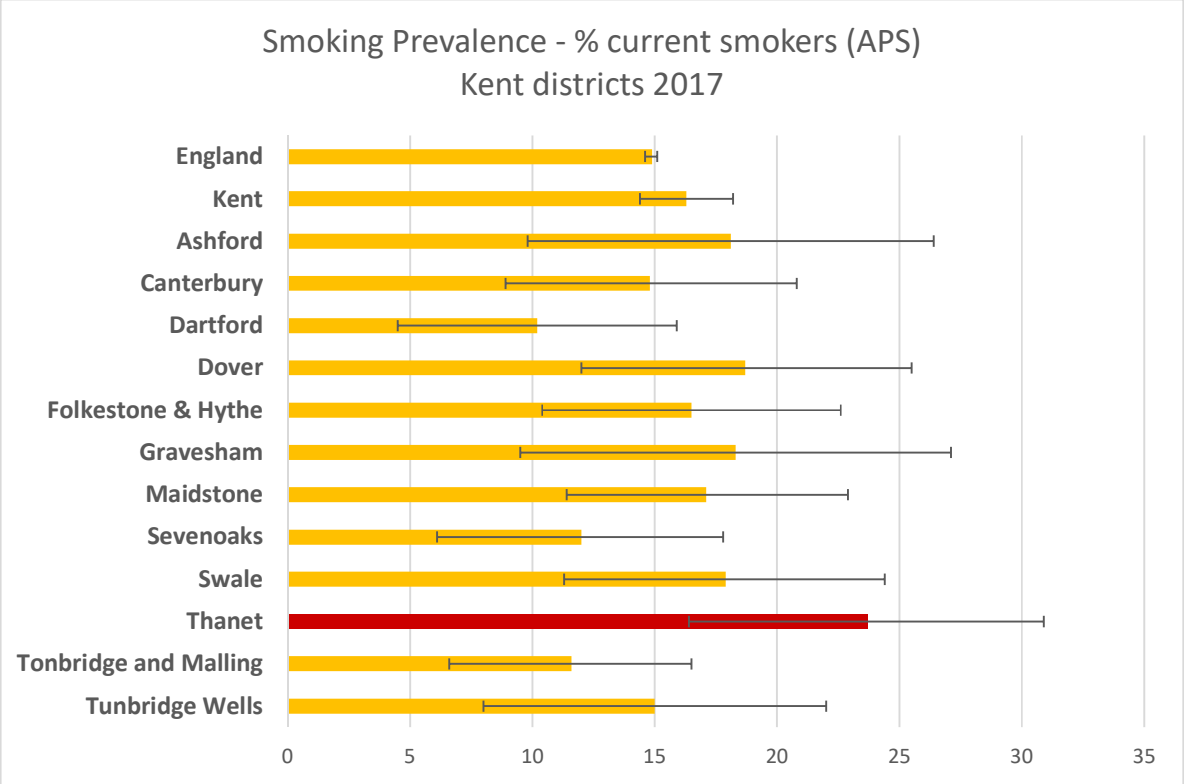
3.4 Although overall prevalence can be useful, it is important to consider variation within the county. Combining district level data suggests estimated prevalence is higher in East Kent at 18% compared with 13.5% in West Kent (although wide confidence intervals mean it is not possible to be sure this is a true difference).



**Graph above uses binomial proportion confidence intervals*

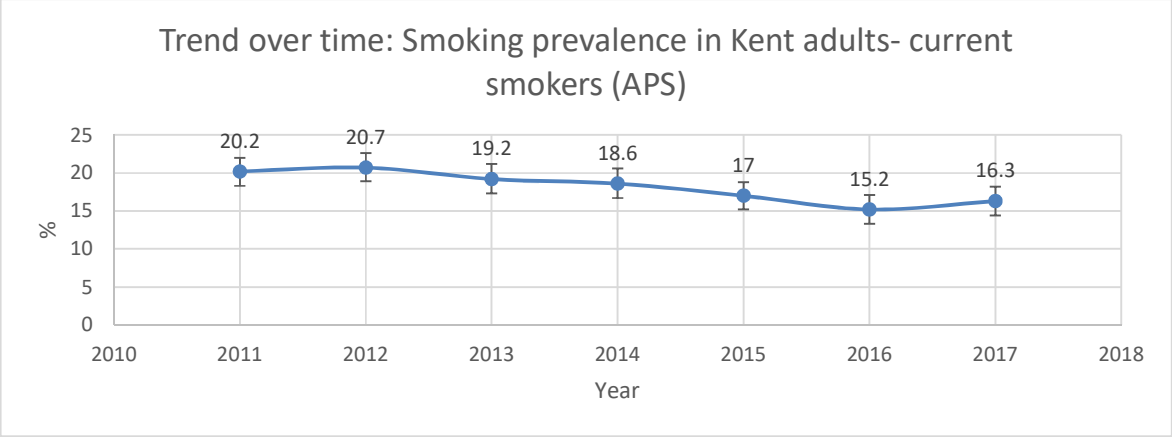
3.5 Variation also exists between districts. However, wide confidence intervals mean only limited conclusions can be drawn on whether a true difference exists between districts. The smoking prevalence estimate in Thanet of 23.7% (16.4-30.9%) is significantly higher than the England benchmark of 14.9% and the Dartford estimate of 10.2% (4.5-15.9%)[56].

[56] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control



Significantly worse compared with England benchmark

3.6 In line with national trends, smoking prevalence in Kent has steadily declined over the last seven years from 20.2% in 2011 to 16.3% in 2017[57]. This is a trend observed across all districts, although small sample sizes can mean slight variation year on year.



**Prior to 2016 estimates were taken from the Integrated Household Survey (IHS)*

[57] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control

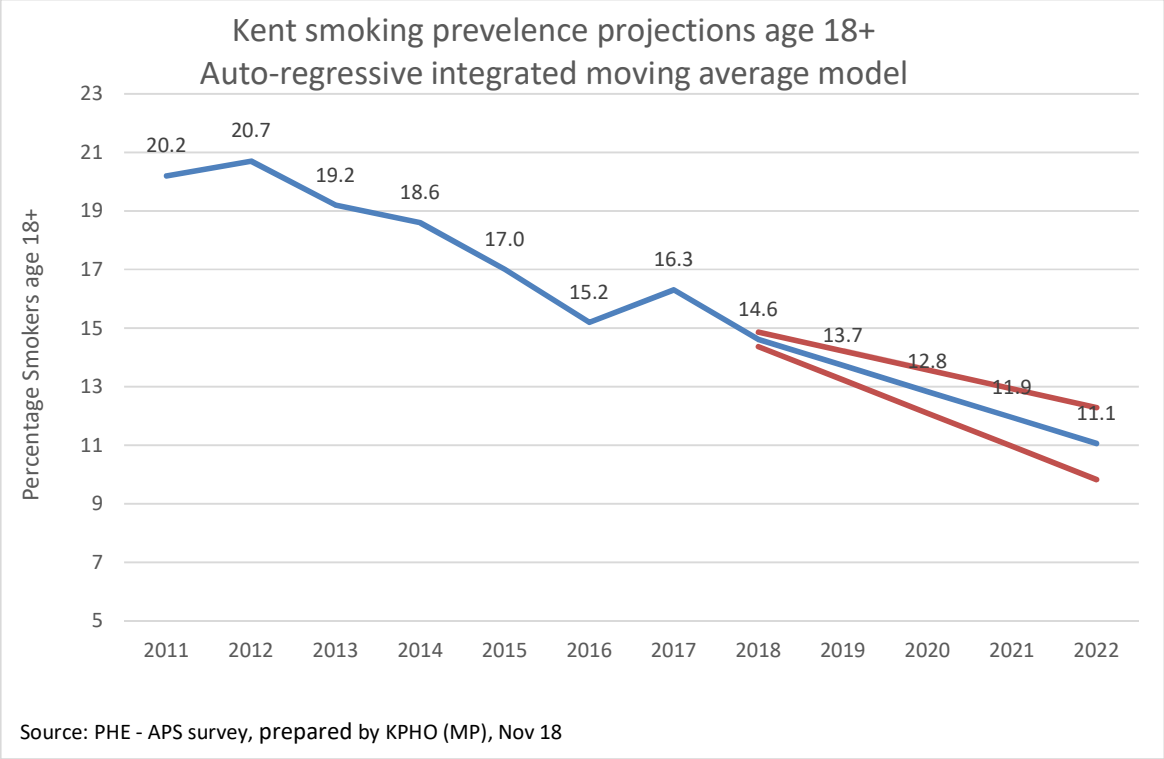
3.7 It is worth noting that the lower confidence interval (CI) in 2012 does not cross the upper CI for 2016 and 2017, so it is possible to say with relative confidence there has been a decrease in smoking prevalence in Kent since 2012. However, the imprecision of the measurement means that the year on year variation may not be a true difference. For example, although it appears smoking prevalence jumped up from 2016 to 2017, overlapping confidence intervals mean this 'jump' may be a symptom of measurement imprecision rather than a true increase.

Projected Future Trends: Towards the 2022 targets- General population

3.8 Using ONS population data[58] it is possible to project the number of quits needed to achieve over the next 4-5 years to ensure Kent is on target to reach the 2022 goals. Projections suggest that if the current rate of quits is maintained, Kent should achieve a smoking prevalence of 11.1% by 2022 (95% confidence interval 9.8-12.3%). This translates to a prevalence reduction of 0.89% per year (regression analysis based on 2011 to 2017 performance) and a total of 58,495 additional quits by 2022 in Kent (95% CI 50,934- 66,057). Per year, this equates to an average of 11,699 quits* (95% CI 10,186- 13,211). (For full breakdown of figures and calculations, see appendix 4).

**Note: In this instance, 'quits' encompasses not just the number of smokers quitting, but also: 1. A reduction in smoking initiation rates, and 2. The death of current smokers. For simplicity this paper focuses on 'quits' in this model as the most significant factor driving prevalence reductions, but it should be noted that some of the reduction should also be driven by these two additional factors.*

[58] ONS population projections. Accessed Dec 2018: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandz1



Source: PHE - APS survey, prepared by KPHO (MP), Nov 18

*Note - the ARIMA model determined 15.5% to be an appropriate start point for projected reductions. -0.89% was deducted from this for 2018.

Confidence intervals (data for 2018 onwards based on modelling predictions)

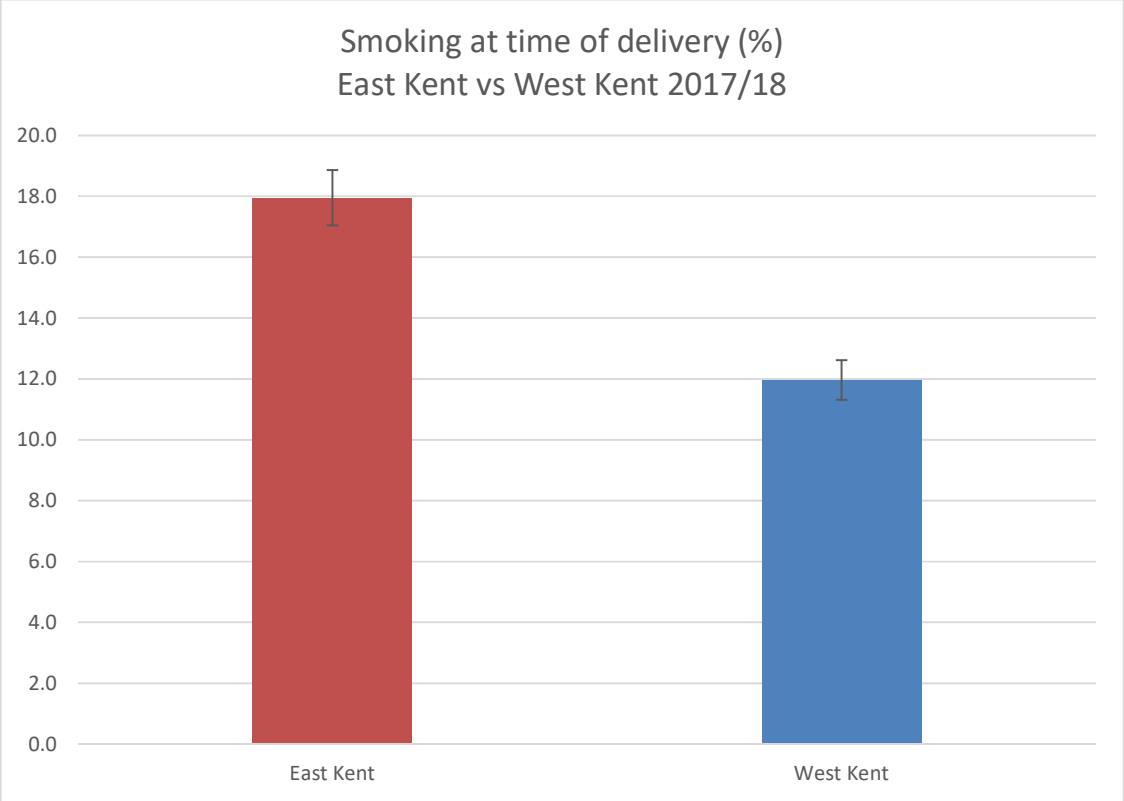
3.9 Although these projections suggest targets should be achieved if Kent continues with its current rate of quits, the reduction in smokers accessing traditional smoking services means there is a need to look for new and innovative approaches to ensure these trends continue. It should also be noted that, given the variation in smoking prevalence across the county, if Kent is to achieve a reduction in inequalities there will need to be a greater magnitude of quits in certain districts. Appendix 4 gives a breakdown at district level and demonstrates this. For example, in Thanet, an annual 0.89% reduction would mean a prevalence of 18.4% by the financial year 2022/23, over 6% above the target. 'Business as usual' is therefore insufficient if Kent is to achieve an overall prevalence of 12% and reduce the inequalities seen across the county.

Smoking in Pregnancy

3.10 Smoking in pregnancy is estimated through SATOD rates (Smoking at time of delivery). According to 2016/17 data, 14.4% of women in Kent were smoking at time

of delivery, significantly worse than the England average of 10.7%. (confidence interval 13.3- 14.3%) and over double the 2022 target of 6%[59].

3.11 Combining CCG level data suggests SATOD rates are significantly higher in East Kent (17.9%) in comparison to West Kent (11.9%).



*Note: 'East Kent' calculated as combined data from Ashford, Canterbury and Coastal, South Kent Coast and Thanet CCGs. 'West Kent' defined as Swale, West Kent and Dartford, Gravesham and Swanley CCGs.

[59] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control

SATOD: A note on accuracy

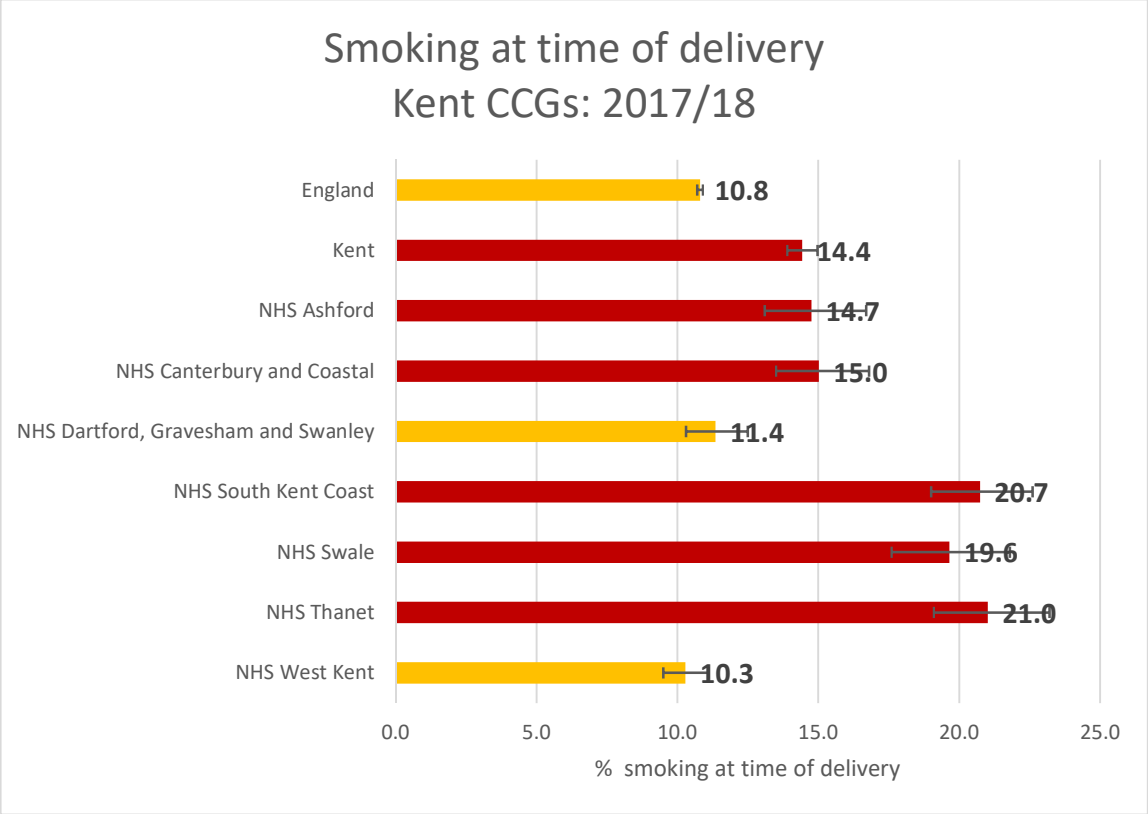
Although currently the most accurate measure available, there are ongoing issues with the SATOD measurement as an indicator of smoking in pregnancy that should be highlighted. Officially it is defined as 'the number of mothers known to be smokers at the time of delivery as a percentage of all maternities'. However, guideline definitions are loose, meaning there can be variations in the way it is measured between acute trusts, and measurements are based on observation hence susceptible to measurement bias. Although improved implementation of CO monitoring at time of booking (as per NICE guidance[60]) has been achieved through the 'BabyClear' programme, question marks remain over how accurate measurements are at time of delivery (i.e. SATOD). It is believed attainment of smoking status in Kent has improved in the last few years due to the work of the smoking in pregnancy midwives. That said, there is still a need to ensure a single effective measurement is in place for Kent[61].

3.12 At CCG level, five out of seven Kent CCGs have SATOD rates that are significantly worse than England. Unsurprisingly most of these fall within the East Kent region. In fact, at the national level only seven CCGs across England recorded SATOD rates of greater than 20%. Two of these CCGs are in Kent: South Kent Coast (20.7%) and Thanet (21%)[62].

[60] NICE Guideline: Smoking: Stopping in Pregnancy and after Childbirth. https://www.nice.org.uk/guidance/ph26/resources/smoking-stopping-in-pregnancy-and-after-childbirth-pdf-1996240366789

[61] Towards a Smokefree Generation: A Tobacco Control Plan for England.

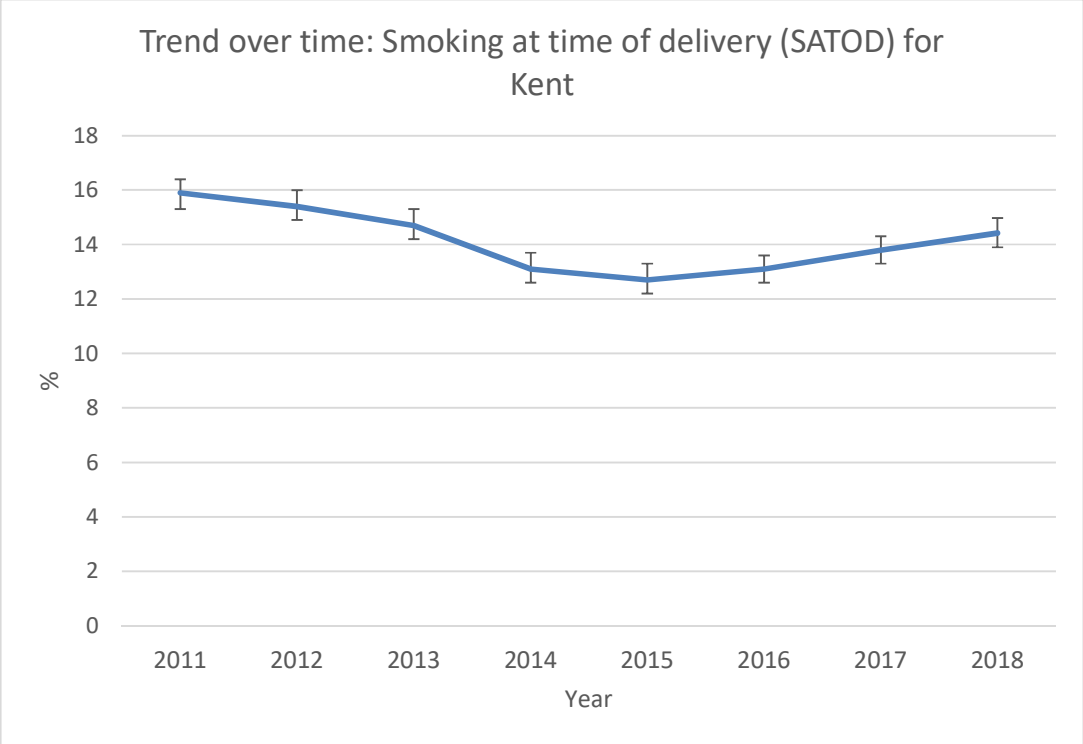
[62] NHS Digital: Statistics on Women's Smoking Status at Time of Delivery April 2017- March 2018 https://files.digital.nhs.uk/D2/C2C76A/stat-wome-smok-time-deli-eng-q4-17-18-rep.pdf



Significantly worse compared with England benchmark

3.13 In line with national trends (and trends seen in the general population of Kent), smoking at time of delivery has declined in Kent over the past seven years, from an estimated 15.9% in 2011 to an estimated 14.4% in 2017/18. However, since 2014/15 SATOD rates seem to be rising again. That said, it is believed that some of this increasing trend can be attributed to work implemented by the smoking in pregnancy midwives to improve recording of smoking status. It seems likely that rates before 2014/15 were under-representative of the true picture[63]. Regardless it is clear that smoking in pregnancy remains a significant public health concern for the Kent population.

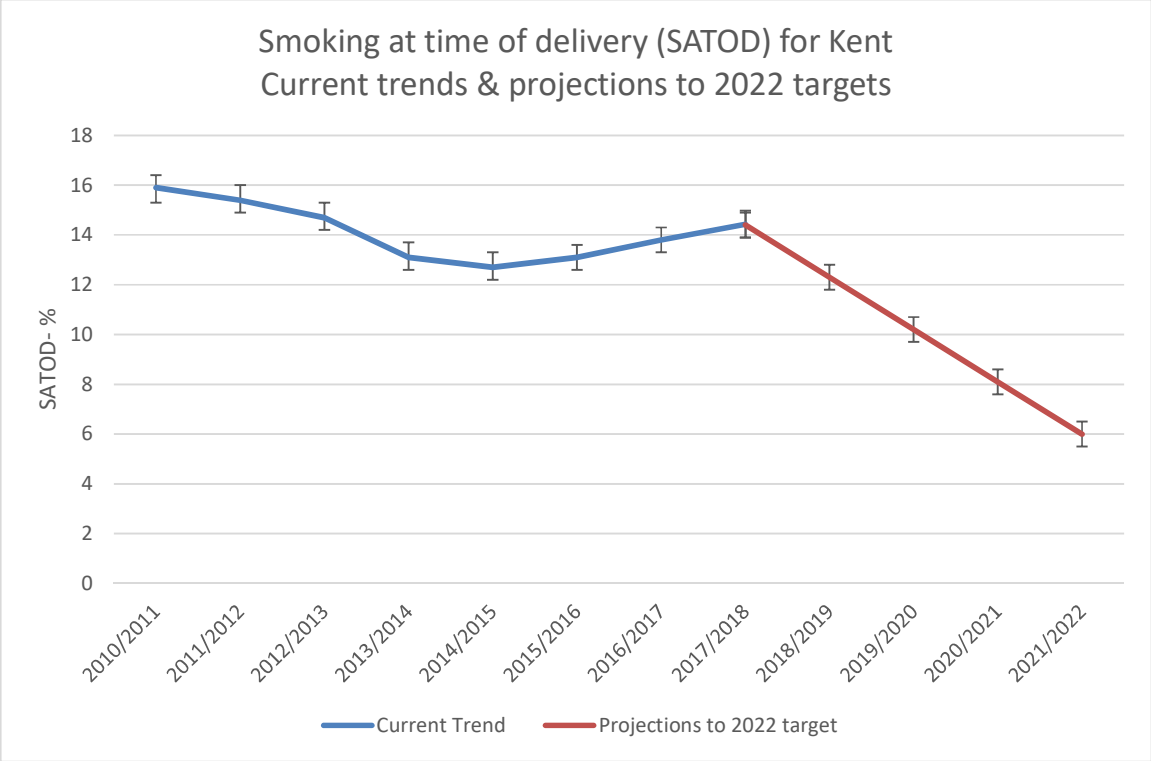
[63] Health Reform and Public Health Committee paper – Smoking in Pregnancy. 22nd November 2018



Projected Future Trends: Towards the 2022 targets- Smoking in pregnancy

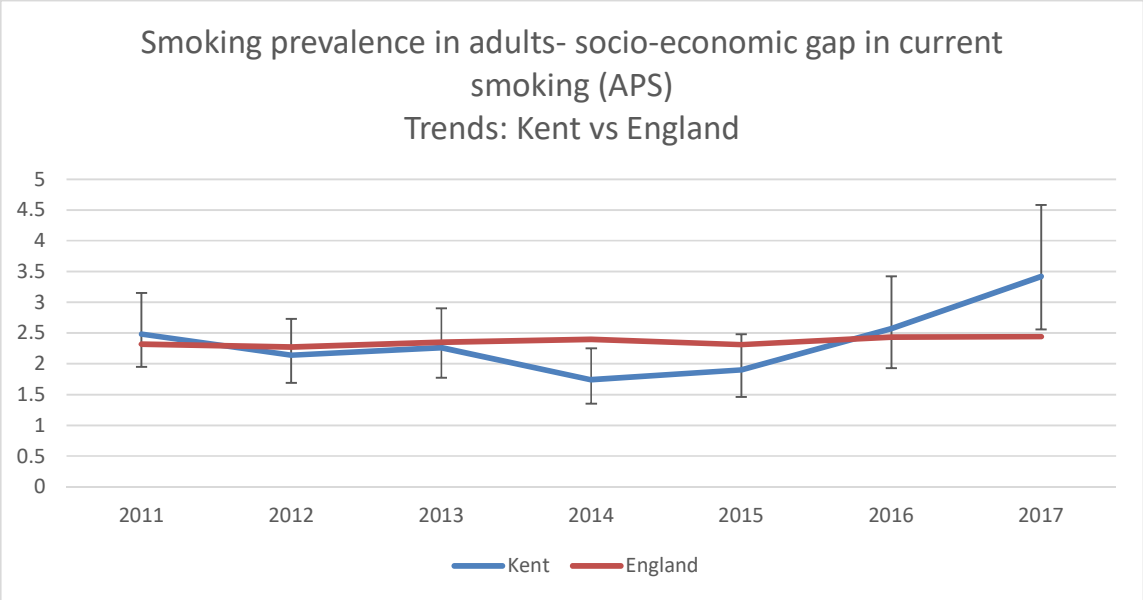
3.14 Using ONS birth predictions[64] it is possible to project the number of quits among pregnant required to achieve over the next 4-5 years to ensure Kent is on target to reach the 2022 goals. Projections suggest that in order to achieve a prevalence rate of 6% or lower, Kent will need a reduction of 2.1% each year. As seen in the graph below, this will require a significant acceleration of current quit trends. Estimates suggest there are currently 2,372 women smoking in pregnancy in Kent and this figure will need to be reduced to 971 (95% CI 890-1,068) by 2022 to achieve a 6% target. Per year, this translates to an average target reduction of 350 women. (For full breakdown of figures and calculations, see appendix 5).

[64] ONS- Population projections incorporating births, deaths and migration for regions and local authorities, May 2018: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/componentsofchangebirthsdeathsandmigrationforregionsandlocalauthoritiesinenglandtable5



Smoking and inequalities: The socio-economic gap

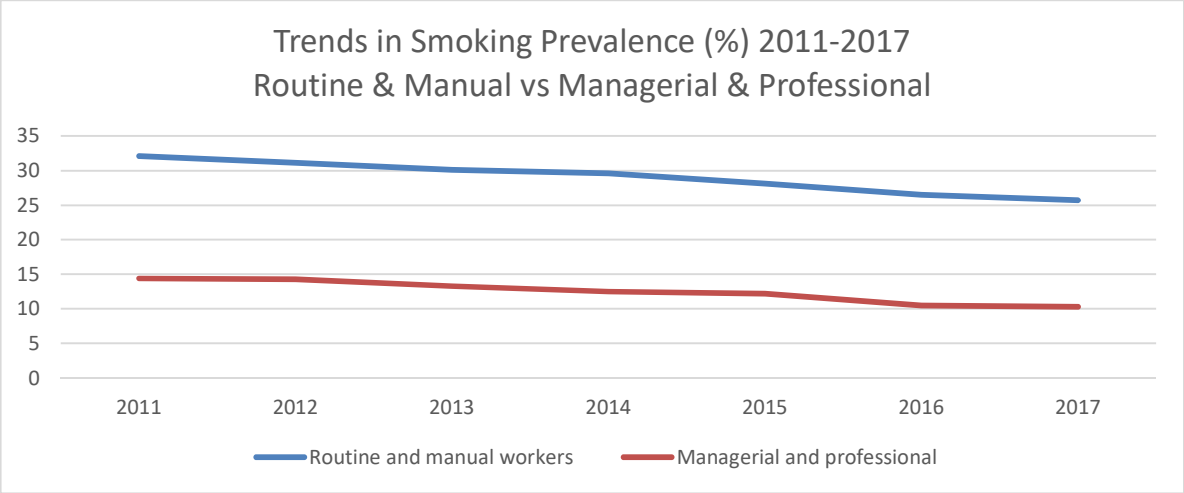
3.15 Although a reduction in prevalence is important, it is also necessary to be mindful of the widening gap between the richest and poorest in Kent. While adult smoking prevalence in Kent has declined in line with national trends, the socio-economic gap in smoking rates seems to be widening.



**Data from PHE fingertips*[65]

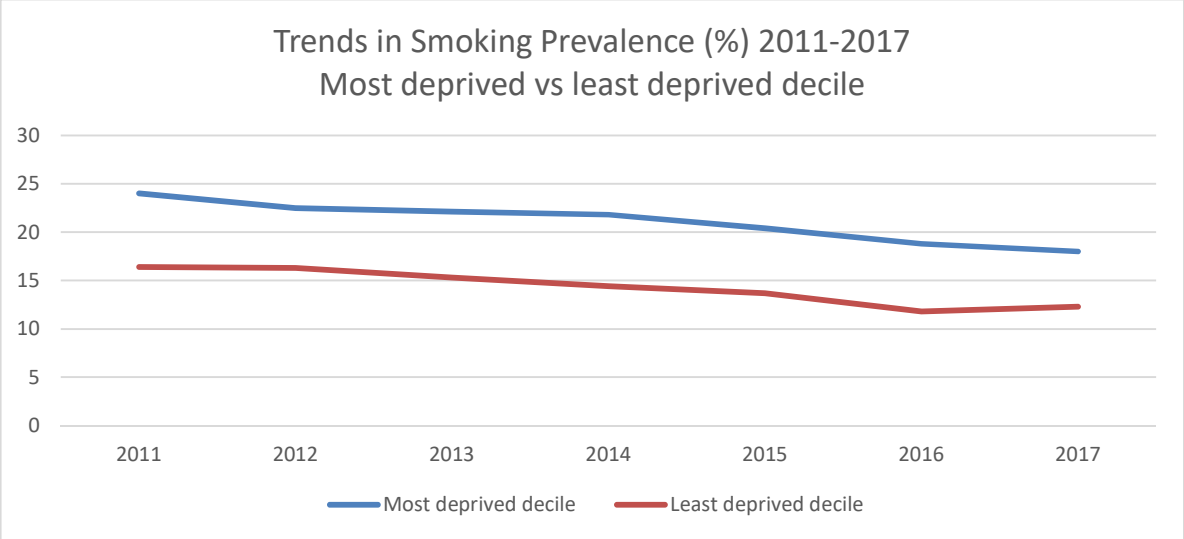
3.16 Most recent Kent estimates suggest that individuals working in routine and manual occupations are nearly 3.5 times more likely to smoke than their counterparts in other occupations[66]. Smoking prevalence among routine and manual groups now stands at 32.4%, the highest in the South East. This gap of magnitude 3.5 is wider than the England average of 2.44 and significantly worse than many of Kent's CIPFA colleagues.

3.17 However, a look at quit rates more closely (graphs below) highlights this widening gap is not due to greater initiation of smoking among lower socio-economic groups. Rates among lower socio-economic groups are also falling, but the rate of this decline has been insufficient to reduce the relative difference seen between groups.



*Adapted from PHE Fingertips[67]

[65] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control
[66] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018 https://fingertips.phe.org.uk/profile/tobacco-control
[67] As above



*Adapted from PHE Fingertips[68]

3.18 Continuing to reduce the overall prevalence of smoking in Kent is important but it is also necessary to be mindful of increasing inequalities. Local and national equity audits highlight that successful quit rates are greater among higher socio-economic groups; more affluent individuals are more likely to successfully quit. If Kent is to achieve the 2022 target of reducing the inequality gap in smoking prevalence, it will be necessary to find ways to accelerate quits among the most deprived populations, particularly groups such as routine and manual workers.

[68] PHE fingertips profile: https://fingertips.phe.org.uk/profile/tobacco-control/data#page/7/gid/1938132885/pat/6/par/E12000008/ati/102/are/E10000016

Summary – Part 2

- There are inherent challenges in measuring smoking prevalence due to a reliance on self-reported smoking status and the fact that the Kent population is constantly in flux. Triangulation of the different measures available can produce a 'range of precision' and enable more effective monitoring of trends over time.
- Despite an estimated reduction in smoking prevalence of 4.4% in Kent over the past five years, 16.3% of Kent residents continue to smoke and the gap in smoking behaviour between the richest and poorest appears to be widening. Those in routine and manual occupations are nearly 3.5 times more likely to smoke than their counterparts in other occupations, and smoking prevalence in this group now stands at 32.4% (the highest in the South East).
- Significant variation in prevalence also exists between districts, with estimated prevalence in Thanet (23.7%) significantly greater than national estimated prevalence of 14.9%.
- Smoking in pregnancy remains a priority with an estimated 14.4% of women smoking at time of delivery. It is believed attainment of smoking status in pregnancy has improved in the last few years due to the work of smoking in pregnancy midwives and CO monitoring at booking. However, concerns remain and there is a need to ensure a single effective measurement is in place for Kent.
- Current smoking prevalence projections suggest Kent is on course to achieve the overall target of 12% by 2022. These projections equate to a prevalence reduction of 0.89% per year and an estimated total of 58,500 additional quits by 2022 in Kent (average of 11,700 per year).
- That said, if Kent is to achieve the target of reducing health inequalities, rates of decline will need to be accelerated in certain districts (particularly Ashford, Dover, Gravesham, Maidstone, Swale and Thanet) and among certain groups in Kent. Given this, and the decline seen in smokers accessing cessation support, there is a need to consider innovative solutions to ensure achievement of the 2022 goals.
- Current SATOD (smoking at time of delivery) trends suggest a need to accelerate quits among smoking pregnant women to achieve 6% prevalence by 2022. Projections estimate reductions of 2.1% will need to be achieved each year.

- There are currently an estimated 2,372 women smoking in pregnancy in Kent; this will need to be reduced to 971 by 2022 to achieve the 6% target. Per year, this translates to an average target reduction of 350 women.

4 Smoking Cessation Services

4.1 Despite significant declines in smoking prevalence over the last decade, smoking rates remain too high and there is a need to look for new, flexible and innovative models of support to maximise the chances of achieving the ambitious 2022 targets for Kent.

4.2 With an NNT value as low as 20 (see summary below), smoking cessation compares extremely favourably with other routine medical interventions and is highly cost-effective. Traditional smoking cessation services continue to offer the best chance of successfully quitting[69]. NICE guidelines[70] outline pharmacotherapy plus behavioural support, or a combination of short-acting and long-acting NRT, as the gold standard for smoking cessation and most likely to lead to a successful quit. Smokers accessing traditional services are offered this and are up to four times more likely to quit compared with those who quit without help or with over the counter nicotine replacement therapy (NRT) products[71].

The case for investment in smoking cessation: NNT

When compared with broader prevention interventions, smoking cessation remains highly cost effective. One method of demonstrating this is through the 'number needed to treat' indicator, or NNT. NNT can be defined as 'the number of patients you need to treat to prevent one additional bad outcome'[1] (for example death or stroke). In the case of tobacco dependence, this term typically refers to either NNT for successful smoking cessation or NNT to prevent one premature death.

For pharmacological therapies, it has been estimated that one person will successfully quit (achieve 6 month absence) for every 6-23 people treated[1] [1]. This NNT to achieve a long-term quit can be as low as 10 when medication is given in combination with behavioural support[1]. Given that approximately 50% of all long-term smokers will die of a smoking-related illness, the NNT to prevent one premature death can therefore be translated as 20 for pharmacological support combined with behavioural therapy. As summarised in the table below, this figure is low in comparison to NNT figures for other primary care prevention interventions such as the use of statins (NNT 107), antihypertensive treatment (700) or cervical screening (1140).

In summary, smoking cessation compares extremely favourably with other routine medical interventions and is highly cost-effective. It is the single most effective thing a clinician can do to improve health outcomes for patients that smoke[1].

[1] Towards a Smokefree Generation: A Tobacco Control Plan for England.

[70] NICE guidelines NG92: Stop Smoking Interventions and Services. March 2018
https://www.nice.org.uk/guidance/ng92

[71] NCSCT report, Robert West: Stop smoking services: increased chances of quitting. 2012
http://www.ncsct.co.uk/usr/pub/Briefing%208.pdf

Table: Comparison of number needed to treat (NNT) to prevent one premature death. Adapted from Van Schayck et al., 2017[72]

Intervention	Outcome	NNT
Behavioural support plus - NRT - Bupropion (zyban) - Varenicline (champix)	Long term quitter/ premature death	23/46 18/36 10/20
Statins as primary prevention	Prevention of one death over 5 years	107
Antihypertensive treatment for mild hypertension	Prevent one stroke/ MI death over 1 year	700
Cervical screening	Prevent one death over 10 years	1140

Note: Smoking cessation medication is normally used for 3-6 months, while statins or antihypertensive medication may be used across a patient's lifetime.

4.3 Smoking cessation services in Kent continue to perform well, with patient satisfaction high and 51% of those setting quit dates successfully quitting[73], slightly higher than the national rate of 49%[74]. Average cost per quitter is estimated at approximately £500[75], in line with national cost estimates[76].

Kent Stop Smoking Services- Patient Experience

99.6% *of the patients who attended the service would recommend the service to friends or family.*

94.8% *of the patients accessing the services were satisfied with the service.*

96.1% *felt they had been given the right information*

[72] Van Schayck OCP, Williams S, Barchilon V, et al. Treating tobacco dependence: guidance for primary care on life-saving interventions. Position statement of the IPCRG. *NPJ Prim Care Respir Med*. 2017;27(1):38. Published 2017 Jun 9. doi:10.1038/s41533-017-0039-5

[73] Health Reform and Public Health Cabinet Committee reports- Friday 28th Sept 2018

[74] NHS Digital: Statistics on NHS Stop Smoking Services in England April 2017 to September 2017. https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-nhs-stop-smoking-services-in-england/statistics-on-nhs-stop-smoking-services-in-england-april-2017-to-september-2017

[75] NHS Digital data, August 2018

[76] Fingertips: Local Tobacco Control Profile for Kent. Accessed October 2018

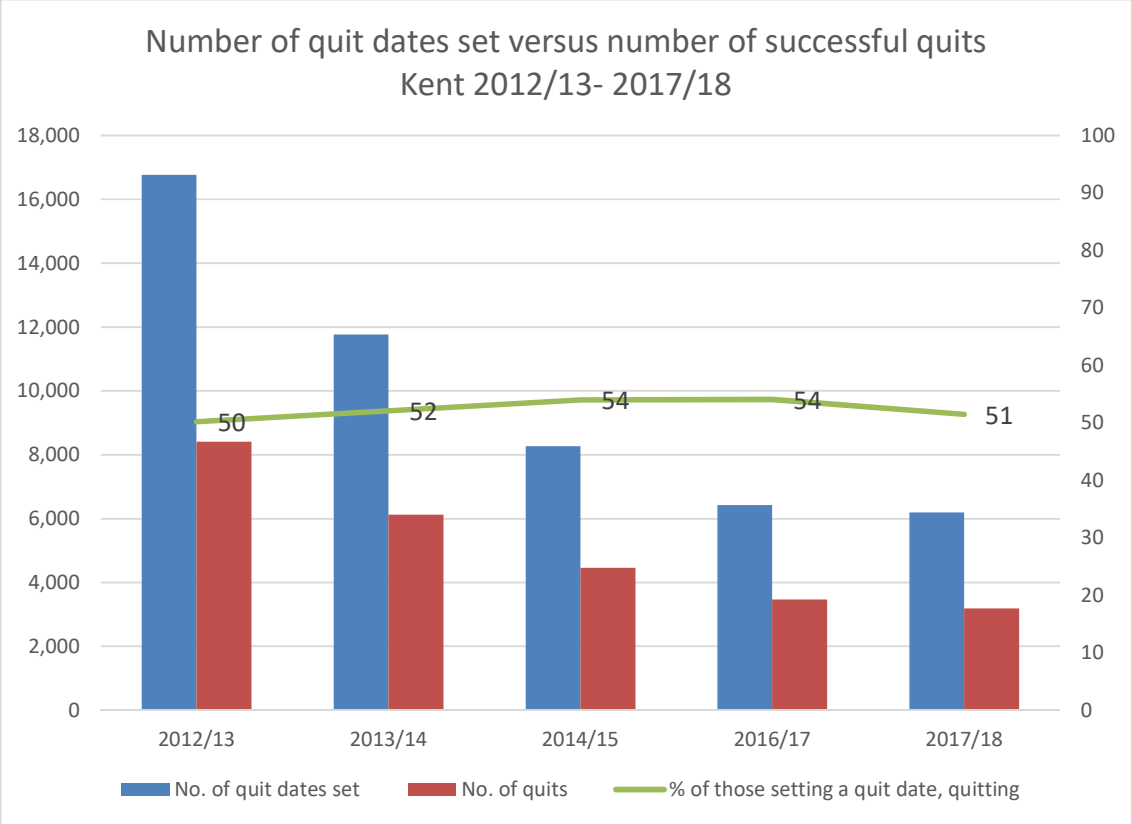
4.4 Not only do these services perform well but they also do well in terms of equity, with less affluent groups more likely to access them. In line with NICE recommendations, it is important traditional smoking cessation services are maintained for those that wish to access them[77].

4.5 However, it is important to recognise that the landscape is changing. Despite excellent quit rates, the numbers of individuals accessing local stop smoking services has steadily declined both within Kent and across England since 2012/13. From 2012/13 to 2017/18 Kent has seen a 63% reduction in the numbers of individuals setting a quit date through the stop smoking services. In 2017/18 a total of 6,198 smokers set a quit date with the support of the stop smoking services. This equates to just over 3% of the Kent smoking population. If Kent is to achieve 2022 targets these numbers alone are not sufficient.

Smoking cessation: What is known?

4.6 Approximately two-thirds of smokers report a desire to quit[78], yet just over 3% of the Kent smoking population currently access existing cessation services. There is a need to think more broadly. In line with a 'making every contact count' (MECC) approach, NICE guidance emphasises the need for opportunistic intervention, using every chance to ask if people smoke, and offering sensitive advice on how to quit[79]. Smoking cessation should not be the sole responsibility of traditional stop smoking services, but something that all frontline staff in healthcare and beyond are expected to take responsibility for. According to NICE, 'asking about smoking status, giving advice and referring to local stop smoking support should be part of routine care'[80].

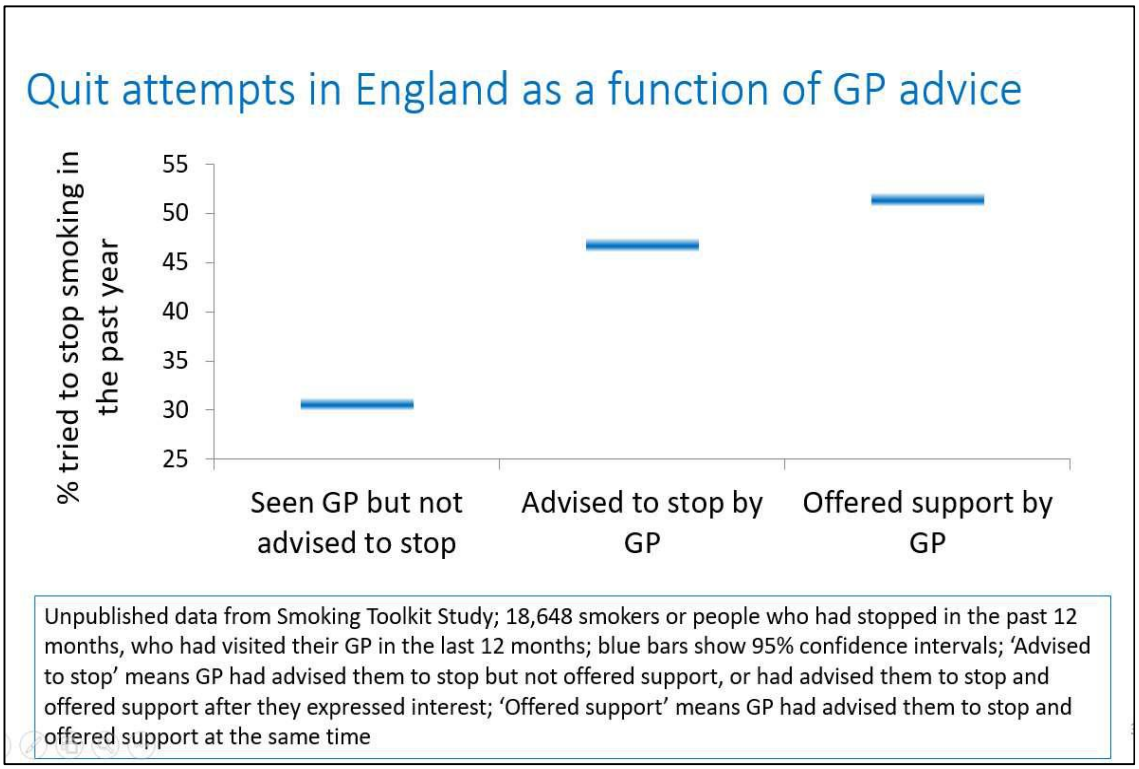
[77] NICE guidelines NG92: Stop Smoking Interventions and Services. March 2018 https://www.nice.org.uk/guidance/ng92
[78] Towards a Smokefree Generation: A Tobacco Control Plan for England.
[79] NICE guidelines NG92: Stop Smoking Interventions and Services. March 2018 https://www.nice.org.uk/guidance/ng92
[80] NICE guidelines- as above.



** Number of quits includes both self report and CO verified*

4.7 Research has shown GPs have a particularly important role to play in encouraging and supporting quit attempts. It is known that on average smokers see their GP 35% more than non-smokers. Promoting smoking cessation is the single most effective thing a clinician can do to improve health outcomes for patients that smoke[81]. Unpublished data from the Smoking Toolkit Study found that smokers advised to stop smoking by their GP were far likelier to make a quit attempt. When GP support was offered on top of this advice, the likelihood of a quit attempt was greater still, as outlined in the graph below.

[81] Towards a Smokefree Generation: A Tobacco Control Plan for England.



**Taken from Robert West slides*

4.8 NICE guidance also states that patient choice is important. Allowing a smoker to choose the quit method they prefer, provided it is not a pharmacotherapy that is unsuitable for them, is likely to increase chances of success[82]. Given this, the Smoking+ model for Kent, outlined below, offers the best chance of success in achieving the 2022 targets.

The Smoking+ Model

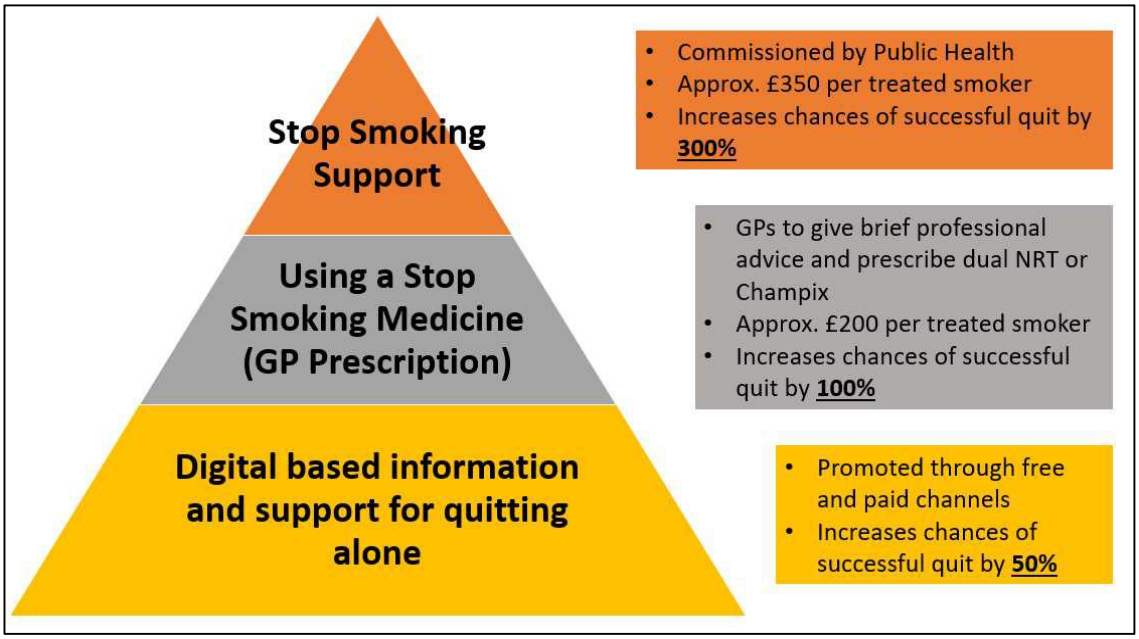
4.9 Smoking+ is an evidence-based Stop Smoking model developed by UCL Professor Robert West. Designed to future proof quit support services in line with current predicted trends, it is currently being implemented in London boroughs and offers greater flexibility than the current Kent model. This is the model of care recommended for commissioning in Kent.

4.10 This model recognises that the best chances of a successful quit are through specialist stop smoking services, but that the numbers going through these services are no longer sufficient to achieve reduction targets. It is widely accepted that quit attempts are triggered by informed choices and most smokers look to other types of support to help them quit; notably going to their GP or attempting to quit alone. It is known that GP advice and support increases likelihood of a quit attempt. In line with

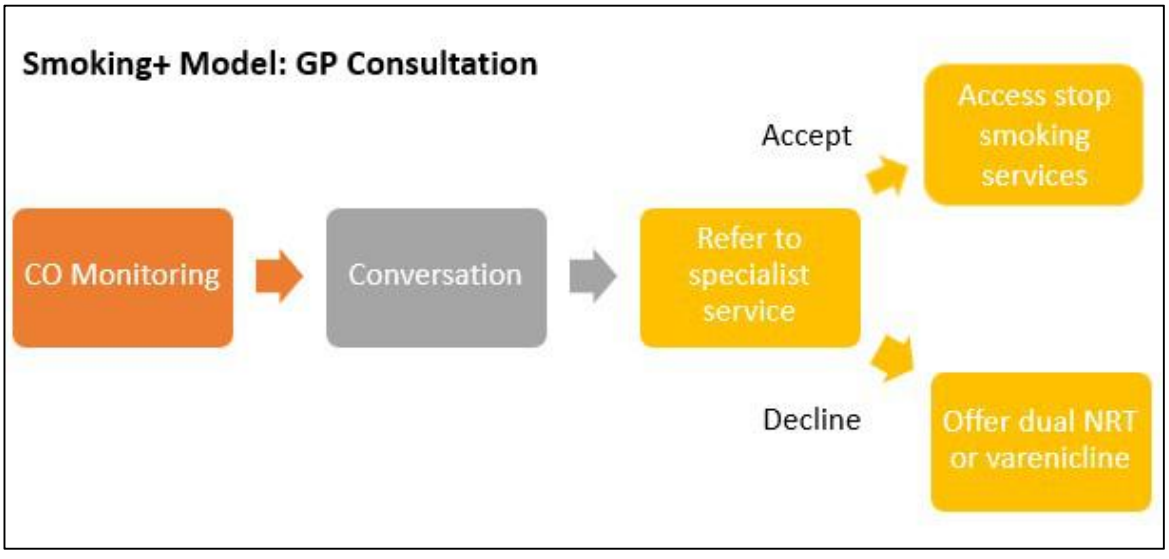
[82] NICE guidelines NG92: Stop Smoking Interventions and Services. March 2018
https://www.nice.org.uk/guidance/ng92

the MECC framework, this model would see GPs offering brief advice and prescribed nicotine replacement therapy (NRT) and/or varenicline (Champix) to identified smokers as appropriate.

The Smoking+ is based on three tiers of support:

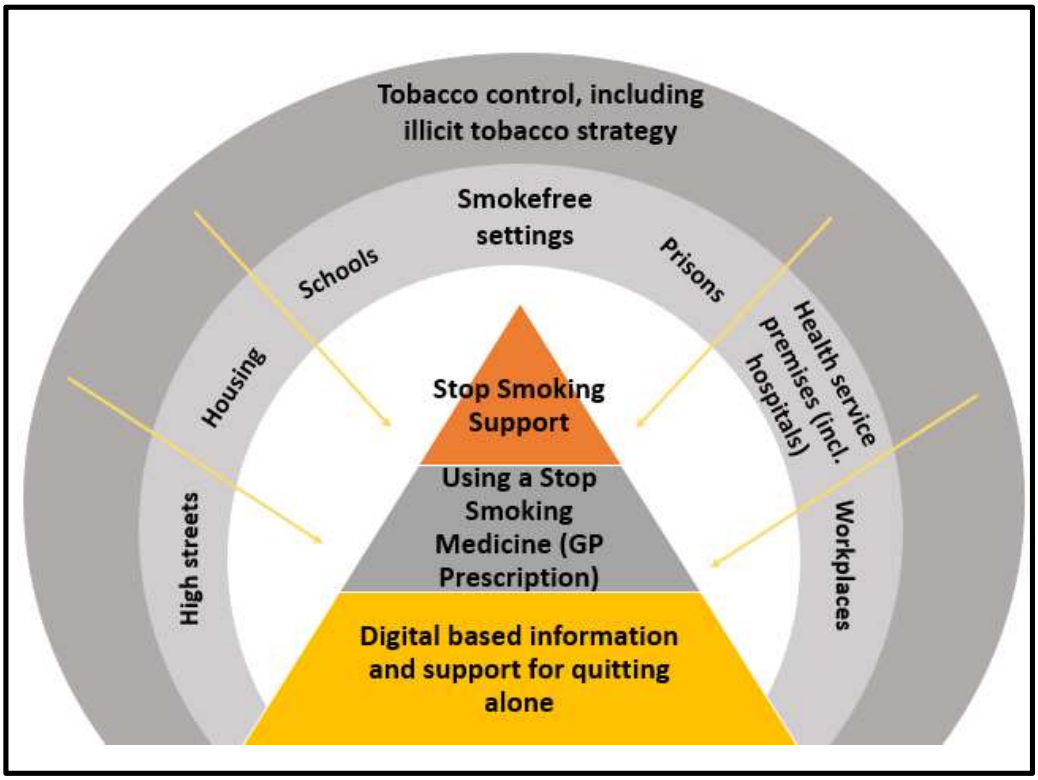


**Based on Professor Robert West's smoking plus model and national estimates. Note- stop smoking support in Kent is currently estimated at £250 per treated smoker so overall costs may be lower in Kent. GP costs include NRT and GP time; a more accurate Kent estimate will be available following delivery of the Ashford pilot (see appendix).*



4.11 This model recognises the importance of patient choice. For those unwilling to go through formal support channels (tiers 1 and 2), referral to website support would be appropriate. There is some evidence that interactive websites can be effective, although results can be variable and there is a need for more research[83][84]. The 'Kent smokefree' website is currently being revamped to include motivational facts alongside up to date information. This website will signpost to services and will offer support to Kent residents unwilling or unable to access formal support channels.

4.12 It should be emphasised that this model needs to be wrapped within smokefree settings initiatives and wider tobacco control strategy, as outlined in the diagram below. It is the wider environment that will promote the idea that it is a good idea to quit, offering external motivation and driving individuals to seek help and attempt cessation. The smoking plus model should sit at the centre of a wider systems approach to tobacco control.



4.13 Although evidence exists to support the implementation of this model, piloting in one or two CCGs initially would be recommended. This would enable testing of the model in a Kent context and achieve more accurate cost estimates per tier at the local level. Plans are currently underway for a pilot in Ashford (see appendix 6) so

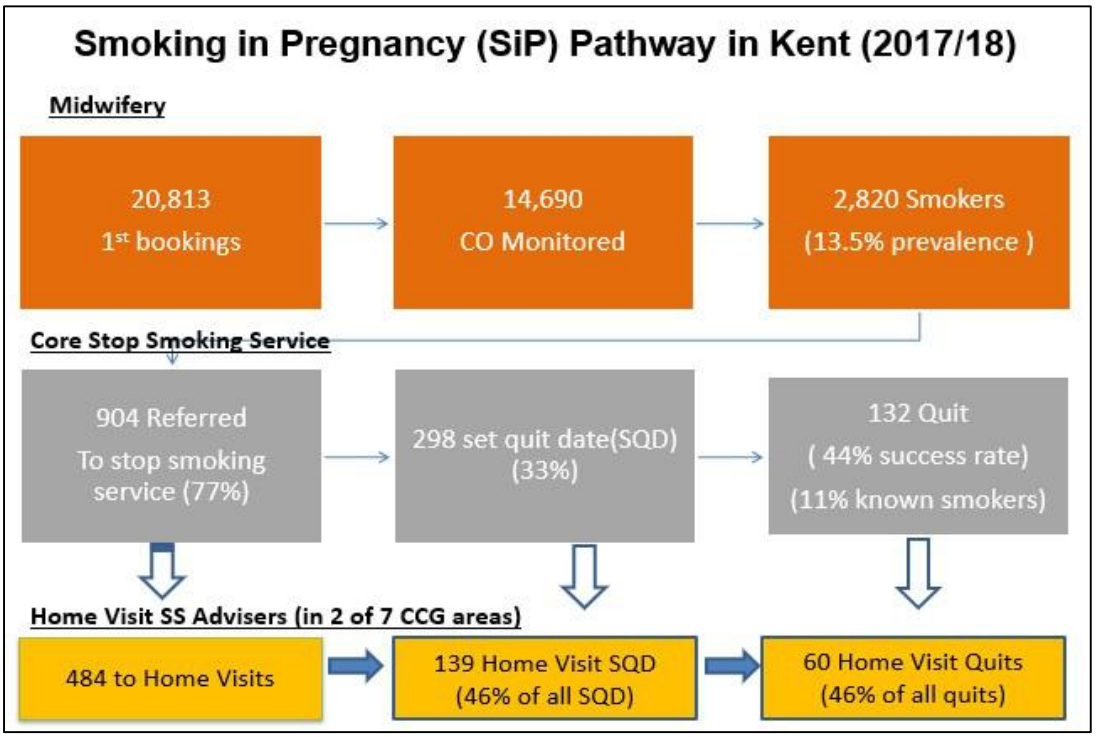
[83] Robert West- unpublished slides
[84] NICE guidelines NG92: Stop Smoking Interventions and Services. March 2018 https://www.nice.org.uk/guidance/ng92

this offers an opportunity for testing before wider roll out of the model. Roll out across Kent will require close collaboration between the Local Authority, the STP, CCGs and GP Practices to maximise the chances of success. As with all interventions, it will be necessary to be mindful of widening existing health inequalities. Universal action is appropriate but should be delivered with a scale and intensity that is proportionate to level of need. Targeting of the most vulnerable groups in Kent will be necessary, and this this will involve greater delivery intensity in more deprived districts.

4.14 This service should not replace specialist services targeting women in pregnancy. This group are particularly vulnerable to the effects of smoking and have an immediate and urgent need for smoking cessation support. Specialist smoking in pregnancy services must continue and the home visit adviser service, which has already led to significant increased quits among pregnant women in targeted areas, should be expanded (See SiP pathway outlined below).

4.15 Ultimately, if Kent is to achieve its first smokefree generation, it is not sufficient to focus on cessation alone. Smoking initiation must also be considered. Research demonstrates that most smokers become addicted in their teenage years[85] and so prevention needs to target young people. Evidence around prevention work in schools is mixed, and there are challenges in demonstrating long term impact. However, peer led interventions such as the ASSIST (A Stop Smoking in School Trial) programme appear to be a cost-effective intervention (mean cost per student=£32) and may be more effective among girls of lower socioeconomic status[86]. Other, more broad, interventions targeting multiple-risk behaviours have also shown to be effective in preventing engagement in tobacco use[87] (for full literature search on smoking prevention programmes for young people, see appendix 7). Within Kent there is no consistent approach to prevention within schools. Some include smoking modules within their PSHE curriculum but there is no mandatory requirement to do so, and other topics often take priority. Although stop smoking services are available for young people, very few access them. Just 37 under 18s set a quit date in Kent in 2017/18, and less than 20% of these were successful[88]. As part of the STP there are plans to develop 'quit coaches' where young people will mentor their peers, a scheme to be piloted in Ashford next year.

[85] Towards a Smokefree Generation: A Tobacco Control Plan for England.
[86] School-based interventions to prevent the uptake of smoking among children and young people. NICE Evidence Update April 2013
87 MacArthur G, Caldwell DM, Redmore J, Watkins SH, Kipping R, White J, Chittleborough C, Langford R, Er V, Lingam R, Pasch K, Gunnell D, Hickman M, Campbell R. Individual-, family-, and school-level interventions targeting multiple risk behaviours in young people. Cochrane Database of Systematic Reviews 2018, Issue 10. Art. No.: CD009927. DOI: 10.1002/14651858.CD009927.pub2.
[88] NHS Digital data 2017/18: https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-nhs-stop-smoking-services-in-england/april-2017-to-march-2018



**Adapted from Deborah Smith slide*

4.16 One of the most effective ways to prevent smoking initiation in young people is to reduce adult smoking prevalence in the population. Research has shown that children with a parent who smokes are between 2 and 3 times more likely to be smokers themselves[89]. While work targeting young people is important, effective smoking cessation support for adults should also have a positive impact on smoking initiation rates in younger age groups.

4.17 In summary, this needs assessment proposes a smoking+ model of cessation for Kent, bolstered by additional targeted work for pregnant women and young people. This action should not be taken in isolation. Interventions need to happen in a context of broader environmental shifts that encourage and support quit attempts. Continued and renewed support for smokefree settings will form part of this. Work should go beyond smokefree hospitals and prisons, and support districts with innovative smokefree home initiatives. Ultimately smoking cessation efforts should engage a broad range of organisations, involving professionals who are well placed to deliver messages about smoking. Key groups such as the fire service, social care workers, debt advice workers, healthcare professionals and housing professionals should be able to deliver basic messages and signpost to support in line with MECC principles. Flexible, appropriate and appealing services are key, but these must happen in an environment where individuals are encouraged, supported and empowered to quit.

[89] Towards a Smokefree Generation: A Tobacco Control Plan for England.

Summary and Recommendations – Part 3

- Despite significant declines in smoking prevalence over the last decade, smoking rates remain too high and there is a need to look for new, flexible and innovative models of support to maximise Kent's chances of achieving the ambitious 2022 targets.
- Smoking cessation remains highly cost effective. With a 'number needed to treat' (NNT) value of 20 to prevent a premature death, it compares extremely favourably with other routine medical interventions.
- Traditional smoking cessation services continue to offer the best chance of successful quits and Kent services perform well. However, the numbers accessing these services have continued to decline. An estimated two-thirds of smokers report a desire to quit, yet just over 3% of the Kent smoking population currently access existing cessation services. There is a need to broaden support services to appeal to a wider audience.
- Research has shown GPs have a particularly important role to play in encouraging and supporting quit attempts. Smokers are more likely to visit their GP than non-smokers, and data shows quit attempts are more likely if advice or support on smoking cessation is offered by a GP.
- Guidance also emphasises the need for patient choice. Allowing a smoker to choose the quit method they prefer, provided it is not a pharmacotherapy that is unsuitable for them, is likely to increase chances of success.
- Given this, Smoking+, an evidence-based Stop Smoking model developed by UCL Professor Robert West, appears to offer the best chance of success.
- This model combines traditional smoking cessation services (tier 1) alongside GP brief advice and prescribing of NRT/varenicline (tier 2). Tier 3 would offer comprehensive online support and information. To achieve the desired population outcome, this model will require consistent intervention delivered at scale.
- Plans are currently underway for a smoking+ pilot in Ashford. This offers an opportunity for testing and costing the model locally before wider roll out. To maximise impact, wider implementation will require close collaboration between the Local Authority, the STP, CCGs and GP Practices across Kent.

- As with all interventions, there is a need to be mindful of widening existing health inequalities. Universal action is appropriate but should be delivered with a scale and intensity that is proportionate to level of need. Interventions will need to target the most vulnerable groups.
- Smoking+ would not replace specialist services that target pregnant women. Kent must continue to offer specialist smoking in pregnancy services and commit to expanding the home visit adviser service which has already led to significant increased quits among pregnant women in targeted areas.
- In addition, smoking initiation in young people must be considered. Evidence suggests reducing smoking prevalence among parents should help, but peer led school-based interventions such as ASSIST demonstrate cost effectiveness and should also be considered.
- This action should not be taken in isolation. All interventions need to take place in a context of broader environmental shifts that encourage and support quit attempts. Smokefree settings will be an important part of these efforts, alongside broader tobacco control efforts. Kent should build on existing work towards smokefree health settings, prisons and school gates. Housing teams at district level should be supported to implement smokefree housing interventions with a focus on vulnerable groups.
- A renewed focus on opportunistic intervention by a broad range of professionals in line with MECC (Making Every Contact count) principles will also be necessary. Beyond GPs and other healthcare workers, key groups such as such as the fire service, social care workers, debt advice workers, and housing professionals should be able to deliver basic messages and signpost to support.

Appendix 1 – Global Burden of disease

According to a systemic analysis for the Global Burden of Disease Study[90], smoking is associated with an elevated risk of the following conditions:

Aortic aneurysm

Asthma

Atrial fibrillation and flutter

Bladder cancer

Cataract

Cervical cancer

Chronic obstructive pulmonary disease

Colon and rectum cancer

Diabetes mellitus

Hemorrhagic stroke

Hip Fracture

Hypertensive heart disease

Interstitial lung disease and pulmonary sarcoidosis

Ischaemic heart disease

Ischaemic stroke

Kidney cancer

Larynx cancer

Leukaemia

Lip and oral cavity cancer

Macular degeneration

Nasopharynx cancer

Non-Hip Fracture

Oesophageal cancer

Other cardiovascular and circulatory diseases

[90] Forouzanfar MH, Afshin A, Alexander LT, et al. Global, regional,and national comparative risk assessment of 79 behavioural, environmental and occupational, and metabolic risks or clusters of

risks, 1990–2015: a systematic analysis for the Global Burden of Disease Study 2015. Lancet 2016; 388: 1659–724.

Other chronic respiratory diseases

Pancreatic cancer

Peptic ulcer disease

Peripheral vascular disease

Rheumatoid arthritis

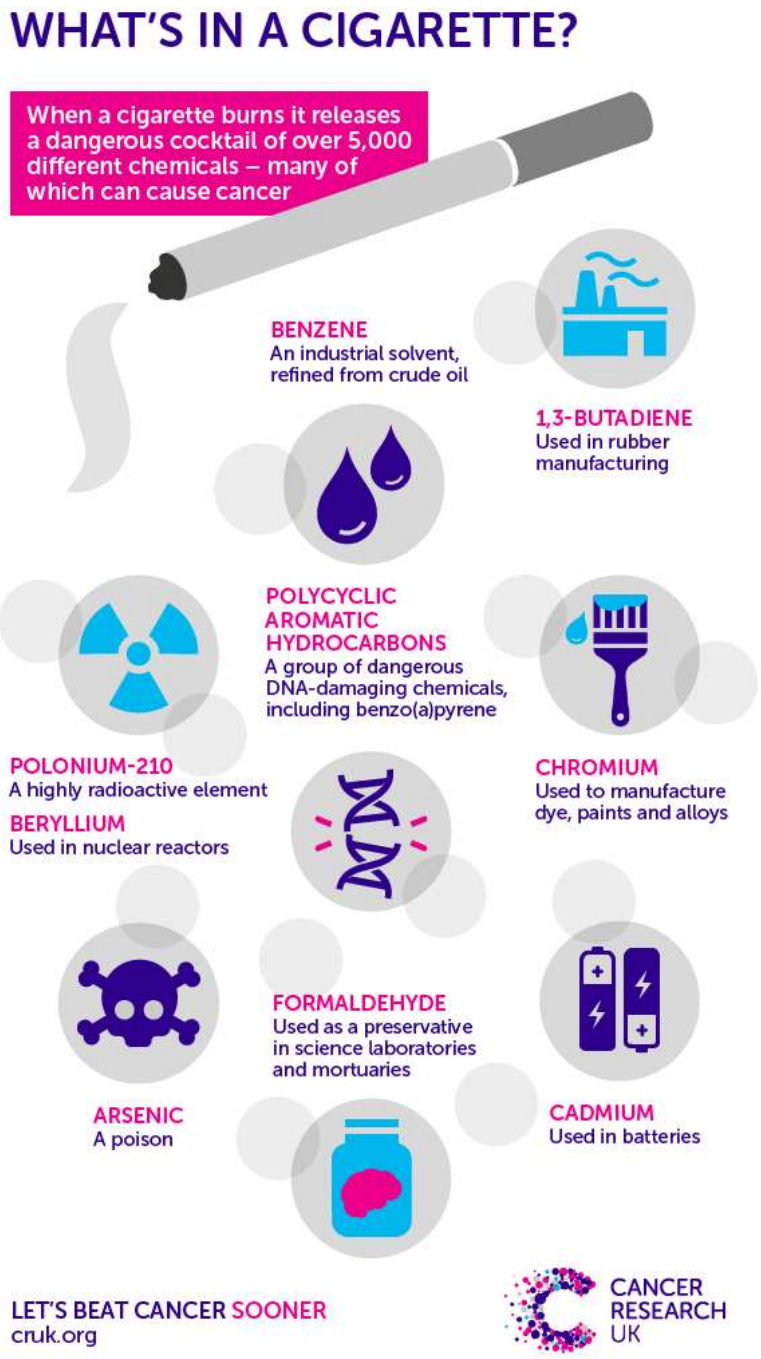
Stomach cancer

Tracheal, bronchus, and lung cancer

Tuberculosis

Appendix 2- Cigarettes vs e-cigarettes

There is widespread misunderstanding about the lethal components of a cigarette. While nicotine is the addictive part of a cigarette, it is the thousands of other chemicals released when the tobacco is burnt that are lethal.



Most of the carcinogenic chemicals in tobacco have other uses too. Examples include:

Benzene- an industrial solvent, refined from crude oil

Arsenic- a poison used in wood preservatives

Cadmium and lead- used in batteries

Formaldehyde- used to preserve dead bodies

Polonium-210 – a highly radioactive element

1.3- Butadiene- used in rubber manufacturing

Nickel- used to protect metals from corrosion

Beryllium – used in nuclear reactors

Ethylene oxide- a disinfectant used to sterilise hospital equipment

Polycyclic aromatic hydrocarbons- a group of dangerous chemicals that damage DNA

Ortho-Toluidine- used in weedkiller production

Source: https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/smoking-and-cancer/whats-in-a-cigarette

E-cigarettes

E-cigarettes consist of a battery-powered heating element designed to vaporise a solution made of propylene glycol and/or glycerine, water and frequently flavouring and nicotine.

Source: Smoking in the Home: New solutions for a Smokefree Generation. Nov 2018 http://ash.org.u

Appendix 3 – Kent and Medway STP Position statement on e-cigarettes

Kent and Medway Sustainability and Transformation Partnership

Position Statement on electronic-cigarettes in supporting the treatment of Tobacco Addiction

This policy statement is informed by the best current evidence from Public Health England (PHE), Action on Smoking and Health, National Centre Smoking Cessation Training (NCSCT) and NICE guidance on Smoking Harm Reduction.

The aim of this policy statement is to provide an agreed consensus for the Kent and Medway health and care system on the support for the use of e-cigarettes where smokers make the choice to use them to address their tobacco addiction in preference to prescribed support.

It is imperative that the public receive clear, evidenced based consistent advice on the use of e-cigarettes as currently perception of the dangers of e-cigarettes is at odds with current published evidence.

Statements:

1. Smoking remains the leading cause of illness and early death in Kent and Medway and is a significant contributory factor in the difference in health outcomes observed across different local populations.

2. Smoking prevalence in Kent and Medway adult population is as follows:
   Kent (PHE Health profile 2017) 15.2%
   Medway (PHE Health profile 2017) 19.0%

3. Electronic-cigarettes (e-cigarettes) have already contributed to a reduction in smoking prevalence and harm reduction from tobacco addiction. Public Health England reports that use has plateaued to just under 3 million people[91] in the UK and are responsible for driving the increase in Quit Smoking attempts and reduction in smoking prevalence. PHE estimate there are 20,000 new quitters each year.

4. Kent and Medway Public Health, in line with Public Health England advice, recommend that all smokers should stop completely. Smokers are four times more likely to be successful in quitting if they access a combination of behavioural support and stop smoking medication such as Nicotine

[91] https://www.gov.uk/government/news/phe-publishes-independent-expert-e-cigarettes-evidence-review

Replacement Therapy (NRT) or appropriate licensed other drugs provided free of charge for Kent and Medway residents (subject to prescription charges).

Kent Residents One You Kent service [Kent]
Phone: 0300 123 1220, text 'quit' to 87023

Medway Residents: A Better Medway Service [Medway]
Phone: 0800 234 6805 / 01634 334800

5. Smokers who want to use and pay for e-cigarettes should be encouraged to engage with the appropriate Specialist Stop Smoking service who will also support users of e-cigarettes to quit.

6. The latest evidence published by Public Health England (2018)[91] and the Royal College of Physicians (2016)[92] **estimate that using e-cigarettes (vaping) is around 95% safer for users than smoking** and **that there is no evidence of harm to bystanders from exposure to e-cigarette vapour and the risks to their health are likely to be extremely low**. Some harm from long-term e-cigarette use cannot be dismissed due to inhalation of the ingredients other than nicotine, **but is likely to be very small, and substantially smaller than that arising from tobacco smoking.**

7. Our position is not to promote nor support the long-term conversion from smoking to e-cigarettes but to support successful quit attempts by which ever choice smokers make. However, we need to recognise that some people will take much longer than others to quit and NICE does support longer term use where the use is preventing relapse to smoking cigarettes.

8. Most people continue to smoke due to their addiction to nicotine contained in tobacco; it is not a lifestyle choice. Most smokers start in their childhood, and like all addictions, the degree varies between individuals with deeper addiction more likely in vulnerable people and communities. We are therefore emphasising the language of tobacco or nicotine addiction. Nicotine is the addictive substance in tobacco, but it is the other 3000 odd chemicals that cause the adverse effects on health.

9. Public perceptions of harm from e-cigarettes remain inaccurate with only 13% in 2017 understanding that e-cigarettes are less harmful than smoking. Clinician support in changing this misconception is vital. NCSCT provide a free online short training programme on e-cigarettes for health professionals. [http://elearning.ncsct.co.uk/e_cigarettes-launch]

10. Pregnant women who find it difficult to stop smoking are recommended to use

[92] https://www.rcplondon.ac.uk/projects/outputs/nicotine-without-smoke-tobacco-harm-reduction-0

licensed nicotine replacement therapy (NRT) products. However, if a pregnant woman makes an informed choice to use an e-cigarette and if that helps them to stay smoke free, they should not be discouraged from doing so. This advice is supported by the Royal College of Midwives, Royal College of Nursing and Royal College of Physicians [http://smokefreeaction.org.uk/wp-content/uploads/2017/06/eCigSIP.pdf]

11. A systematic review of current surveys shows that 0.3% or less young people are reported to use e-cigarettes who have not previously smoked[93]. The code of practice of reputable e-cigarette retailers is not to give nicotine containing liquid to people who have never smoked previously

12. The stop smoking services in Kent and Medway are **"e-cigarette friendly"** and will provide behavioural support for those who want to stop smoking and use e-cigarettes as a quit aid. Smokers should be signposted to local services. [Kent] [Medway]

13. Public Health are supporting Trading Standards to ensure that e-cigarette quality and regulatory standards are maintained. E-cigarette users should be advised to purchase e-cigarettes from legitimate Vape shops which are regulated and offer tailored advice on use.

This policy comprises part of the broader Kent and Medway Tobacco Control Strategy to reduce tobacco use in Kent and Medway and aim towards a Smoke Free Generation. E-cigarettes can have a role in reducing illicit tobacco sales and can support the Kent and Medway economy to reduce overall smoking prevalence and meet the Department of Health targets of 12% smoking prevalence by 2022.

k/wp-content/uploads/2018/11/FINAL-2018-Smokefree-Housing-report-web.pdf

93 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684963/Evidence_review_of_e-cigarettes_and_heated_tobacco_products_2018.pdf

Appendix 4: Achieving the 2022 targets- Smoking prevalence projections

KENT PUBLIC HEALTH OBSERVATORY

Kent Smoking Projections to 2024

ONS populations projections - age 18+

District	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	97,997	99,026	100,150	101,187	102,195	103,210	104,164	105,132
Canterbury	134,711	136,110	137,239	138,167	139,018	139,933	141,104	142,444
Dartford	81,456	82,411	83,362	84,270	85,212	86,166	87,148	88,138
Dover	92,479	92,994	93,488	94,022	94,564	95,116	95,696	96,355
Folkestone & Hythe	90,168	90,816	91,373	91,961	92,543	93,188	93,828	94,577
Gravesham	81,866	82,367	82,879	83,410	83,913	84,441	85,033	85,696
Maidstone	130,892	132,199	133,485	134,607	135,818	137,050	138,186	139,421
Sevenoaks	92,784	93,144	93,598	94,013	94,452	94,962	95,522	96,034
Swale	113,669	114,908	116,087	117,222	118,313	119,493	120,625	121,890
Thanet	112,102	113,210	114,206	115,220	116,256	117,372	118,478	119,676
Tonbridge and Malling	98,765	99,538	100,291	101,098	101,855	102,634	103,385	104,208
Tunbridge Wells	90,819	91,039	91,351	91,650	92,045	92,506	92,888	93,345
Kent	**1,217,709**	**1,227,762**	**1,237,510**	**1,246,828**	**1,256,185**	**1,266,070**	**1,276,060**	**1,286,915**

Source - https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandz1

Number of smokers based on 2017 prevelence

District	2017 Smoking Prevelence	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	18.1%	17,737	17,924	18,127	18,315	18,497	18,681	18,854	19,029
Canterbury	14.8%	19,937	20,144	20,311	20,449	20,575	20,710	20,883	21,082
Dartford	10.2%	8,309	8,406	8,503	8,595	8,692	8,789	8,889	8,990
Dover	18.7%	17,293	17,390	17,482	17,582	17,684	17,787	17,895	18,018
Folkestone & Hythe	16.5%	14,878	14,985	15,077	15,174	15,270	15,376	15,482	15,605
Gravesham	18.3%	14,981	15,073	15,167	15,264	15,356	15,453	15,561	15,682
Maidstone	17.1%	22,382	22,606	22,826	23,018	23,225	23,435	23,630	23,841
Sevenoaks	12.0%	11,134	11,177	11,232	11,282	11,334	11,395	11,463	11,524
Swale	17.9%	20,347	20,568	20,780	20,983	21,178	21,389	21,592	21,818
Thanet	23.7%	26,568	26,831	27,067	27,307	27,553	27,817	28,079	28,363
Tonbridge and Malling	11.6%	11,457	11,546	11,634	11,727	11,815	11,906	11,993	12,088
Tunbridge Wells	15.0%	13,623	13,656	13,703	13,747	13,807	13,876	13,933	14,002
Kent	**16.3%**	**198,487**	**200,125**	**201,714**	**203,233**	**204,758**	**206,369**	**207,998**	**209,767**
Kent Lower CI	**14.4%**	**175,350**	**176,798**	**178,201**	**179,543**	**180,891**	**182,314**	**183,753**	**185,316**
Kent Upper CI	**18.2%**	**221,623**	**223,453**	**225,227**	**226,923**	**228,626**	**230,425**	**232,243**	**234,218**

Source - https://fingertips.phe.org.uk/profile/tobacco-control/data#page/4/gid/1938132885/pat/6/par/E12000008/ati/102/are/E10000016

Prevelence reduction rates at - 0.89% per year, derived from ARIMA analaysis based on 2011 to 2017 performance for Kent

District	2017 Smoking Prevelence	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	18.1%	18.1%	17.2%	16.3%	15.4%	14.5%	13.7%	12.8%	11.9%
Canterbury	14.8%	14.8%	13.9%	13.0%	12.1%	11.2%	10.4%	9.5%	8.6%
Dartford	10.2%	10.2%	9.3%	8.4%	7.5%	6.6%	5.8%	4.9%	4.0%
Dover	18.7%	18.7%	17.8%	16.9%	16.0%	15.1%	14.3%	13.4%	12.5%
Folkestone & Hythe	16.5%	16.5%	15.6%	14.7%	13.8%	12.9%	12.1%	11.2%	10.3%
Gravesham	18.3%	18.3%	17.4%	16.5%	15.6%	14.7%	13.9%	13.0%	12.1%
Maidstone	17.1%	17.1%	16.2%	15.3%	14.4%	13.5%	12.7%	11.8%	10.9%
Sevenoaks	12.0%	12.0%	11.1%	10.2%	9.3%	8.4%	7.6%	6.7%	5.8%
Swale	17.9%	17.9%	17.0%	16.1%	15.2%	14.3%	13.5%	12.6%	11.7%
Thanet	23.7%	23.7%	22.8%	21.9%	21.0%	20.1%	19.3%	18.4%	17.5%
Tonbridge and Malling	11.6%	11.6%	10.7%	9.8%	8.9%	8.0%	7.2%	6.3%	5.4%
Tunbridge Wells	15.0%	15.0%	14.1%	13.2%	12.3%	11.4%	10.6%	9.7%	8.8%
Kent	**16.3%**	**16.3%**	**14.6%**	**13.7%**	**12.8%**	**11.9%**	**11.1%**	**10.2%**	**9.3%**
Kent Lower CI	**14.4%**	**14.4%**	**14.4%**	**13.2%**	**12.1%**	**11.0%**	**9.8%**	**8.7%**	**7.6%**
Kent Upper CI	**18.2%**	**18.2%**	**14.9%**	**14.2%**	**13.6%**	**12.9%**	**12.3%**	**11.6%**	**11.0%**

*Note - the ARIMA model determined 15.5% to be an appropriate start point for projected reductions. -0.89% was deducted from this for 2018.

Smokers at 0.89% reduction per year applied to relevent year's projected population

District	2017 Smoking Prevelence	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	18.1%	17,737	17,042	16,345	15,613	14,859	14,088	13,291	12,479
Canterbury	14.8%	19,937	18,933	17,869	16,760	15,626	14,483	13,348	12,207
Dartford	10.2%	8,309	7,672	7,019	6,345	5,658	4,955	4,235	3,499
Dover	18.7%	17,293	16,562	15,818	15,072	14,317	13,554	12,785	12,015
Folkestone & Hythe	16.5%	14,878	14,176	13,450	12,718	11,975	11,229	10,471	9,713
Gravesham	18.3%	14,981	14,340	13,692	13,037	12,369	11,695	11,020	10,343
Maidstone	17.1%	22,382	21,429	20,450	19,424	18,390	17,337	16,251	15,155
Sevenoaks	12.0%	11,134	10,348	9,566	8,771	7,972	7,170	6,362	5,541
Swale	17.9%	20,347	19,546	18,713	17,853	16,966	16,072	15,150	14,225
Thanet	23.7%	26,568	25,823	25,034	24,231	23,414	22,594	21,753	20,907
Tonbridge and Malling	11.6%	11,457	10,661	9,849	9,028	8,189	7,338	6,472	5,596
Tunbridge Wells	15.0%	13,623	12,846	12,077	11,300	10,530	9,759	8,973	8,186
Kent	**16.3%**	**198,487**	**179,429**	**169,848**	**160,039**	**150,069**	**139,991**	**129,748**	**119,407**
Kent Lower CI	**14.4%**	**175,350**	**176,408**	**163,759**	**150,836**	**137,707**	**124,416**	**110,911**	**97,244**
Kent Upper CI	**18.2%**	**221,623**	**182,449**	**175,938**	**169,242**	**162,432**	**155,566**	**148,585**	**141,571**

Target quitters - cumulative total from 2017

District	2017 Smoking Prevelence	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	18.1%	0	-695	-1,393	-2,124	-2,878	-3,649	-4,446	-5,258
Canterbury	14.8%	0	-1,004	-2,069	-3,178	-4,312	-5,454	-6,589	-7,730
Dartford	10.2%	0	-636	-1,289	-1,963	-2,650	-3,354	-4,073	-4,809
Dover	18.7%	0	-731	-1,475	-2,222	-2,976	-3,739	-4,508	-5,278
Folkestone & Hythe	16.5%	0	-701	-1,428	-2,160	-2,903	-3,649	-4,407	-5,165
Gravesham	18.3%	0	-641	-1,290	-1,944	-2,613	-3,286	-3,961	-4,638
Maidstone	17.1%	0	-953	-1,933	-2,959	-3,993	-5,046	-6,132	-7,227
Sevenoaks	12.0%	0	-786	-1,568	-2,363	-3,162	-3,964	-4,772	-5,593
Swale	17.9%	0	-801	-1,634	-2,494	-3,381	-4,275	-5,196	-6,122
Thanet	23.7%	0	-745	-1,534	-2,337	-3,154	-3,974	-4,816	-5,661
Tonbridge and Malling	11.6%	0	-796	-1,608	-2,429	-3,268	-4,118	-4,985	-5,861
Tunbridge Wells	15.0%	0	-777	-1,546	-2,323	-3,093	-3,864	-4,650	-5,437
Kent	**16.3%**	**0**	**-19,058**	**-28,638**	**-38,447**	**-48,417**	**-58,495**	**-68,739**	**-79,079**
Kent Lower CI	**14.4%**	**0**	**1,058**	**-11,591**	**-24,514**	**-37,643**	**-50,934**	**-64,439**	**-78,107**
Kent Upper CI	**18.2%**	**0**	**-39,174**	**-45,685**	**-52,381**	**-59,191**	**-66,057**	**-73,038**	**-80,052**

Target quitters - year on year based on 2017 prevelence estimates									
District	2017 Smoking Prevelence	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	18.1%	0	-695	-698	-731	-754	-771	-797	-812
Canterbury	14.8%	0	-1,004	-1,064	-1,109	-1,134	-1,143	-1,135	-1,141
Dartford	10.2%	0	-636	-653	-674	-687	-704	-719	-736
Dover	18.7%	0	-731	-744	-746	-755	-763	-769	-770
Folkestone & Hythe	16.5%	0	-701	-726	-732	-743	-746	-758	-758
Gravesham	18.3%	0	-641	-649	-655	-668	-674	-675	-677
Maidstone	17.1%	0	-953	-980	-1,026	-1,034	-1,053	-1,086	-1,096
Sevenoaks	12.0%	0	-786	-783	-794	-800	-802	-808	-821
Swale	17.9%	0	-801	-833	-860	-887	-894	-921	-926
Thanet	23.7%	0	-745	-789	-803	-817	-820	-841	-845
Tonbridge and Malling	11.6%	0	-796	-812	-821	-839	-851	-866	-876
Tunbridge Wells	15.0%	0	-777	-769	-776	-770	-771	-786	-787
Kent	**16.3%**	**0**	**-19,058**	**-9,580**	**-9,809**	**-9,970**	**-10,078**	**-10,243**	**-10,341**
Kent Lower CI	**14.4%**	**0**	**1,058**	**-12,649**	**-12,922**	**-13,130**	**-13,290**	**-13,506**	**-13,667**
Kent Upper CI	**18.2%**	**0**	**-39,174**	**-6,512**	**-6,696**	**-6,810**	**-6,866**	**-6,981**	**-7,014**

Prepared by KPHO (MP) Dec-18

Appendix 5: Achieving the 2022 targets- SATOD projections

KENT PUBLIC HEALTH OBSERVATORY

Kent SATOD Projections to 2024

ONS 2017 births and predicted births to 2024

District	2017	2018	2019	2020	2021	2022	2023	2024
Ashford	1,571	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Canterbury	1,347	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Dartford	1,615	1,500	1,500	1,500	1,500	1,600	1,600	1,600
Dover	1,128	1,100	1,100	1,100	1,100	1,100	1,100	1,100
Folkestone & Hythe	1,061	1,100	1,100	1,000	1,000	1,000	1,000	1,000
Gravesham	1,375	1,400	1,400	1,400	1,400	1,400	1,400	1,400
Maidstone	2,010	2,000	2,000	2,000	2,000	2,000	2,000	2,000
Sevenoaks	1,228	1,300	1,300	1,300	1,300	1,300	1,300	1,300
Swale	1,814	1,700	1,700	1,700	1,700	1,700	1,700	1,700
Thanet	1,606	1,600	1,600	1,600	1,600	1,500	1,500	1,500
Tonbridge and Malling	1,495	1,400	1,400	1,400	1,400	1,500	1,500	1,500
Tunbridge Wells	1,217	1,200	1,200	1,200	1,200	1,200	1,200	1,200
Kent	**17,467**	**17,300**	**17,300**	**17,200**	**17,200**	**17,300**	**17,300**	**17,300**

Source - https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/componentsofchangebirthsdeathsandmigrationforregionsandlocalauthoritiesinenglandtable5

Maternities

District	2017/18 SATOD Prevelence	Maternities 2017/18	Smoking mothers 2017/18	Ratio of 2017 Births to 17/18 Maternities
Ashford	14.8%	1,516	224	96.5%
Canterbury	15.0%	1,351	203	100.0%
Dartford	11.4%	1,393	158	86.2%
Dover	20.0%	1,074	215	95.2%
Folkestone & Hythe	20.7%	1,002	208	94.4%
Gravesham	11.4%	1,185	134	86.2%
Maidstone	10.3%	1,939	199	96.4%
Sevenoaks	10.7%	1,132	121	92.1%
Swale	18.8%	1,692	318	93.3%
Thanet	21.0%	1,535	323	95.6%
Tonbridge and Malling	10.3%	1,441	148	96.4%
Tunbridge Wells	10.3%	1,172	121	96.3%
Kent	**14.4%**	**16,431**	**2,372**	**94.1%**
Kent Lower CI	**13.9%**			**2,405**
Kent Upper CI	**15.0%**			**2,595**

Source- https://fingertips.phe.org.uk/search/smoking#page/3/gid/1/pat/102/par/E10000016/ati/101/are/E07000105/iid/93085/age/1/sex/2

Predicted Maternities to 2024 - based on ratio of births to maternities								
District	Maternities 2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Ashford	1,516	1,447	1,447	1,447	1,447	1,447	1,447	1,447
Canterbury	1,351	1,500	1,500	1,500	1,500	1,500	1,500	1,500
Dartford	1,393	1,293	1,293	1,293	1,293	1,380	1,380	1,380
Dover	1,074	1,048	1,048	1,048	1,048	1,048	1,048	1,048
Folkestone & Hythe	1,002	1,039	1,039	944	944	944	944	944
Gravesham	1,185	1,206	1,206	1,206	1,206	1,206	1,206	1,206
Maidstone	1,939	1,929	1,929	1,929	1,929	1,929	1,929	1,929
Sevenoaks	1,132	1,198	1,198	1,198	1,198	1,198	1,198	1,198
Swale	1,692	1,586	1,586	1,586	1,586	1,586	1,586	1,586
Thanet	1,535	1,529	1,529	1,529	1,529	1,434	1,434	1,434
Tonbridge and Malling	1,441	1,350	1,350	1,350	1,350	1,446	1,446	1,446
Tunbridge Wells	1,172	1,156	1,156	1,156	1,156	1,156	1,156	1,156
Kent	**16,431**	**16,274**	**16,274**	**16,180**	**16,180**	**16,274**	**16,274**	**16,274**

Note Calendar year maternities predicted to fall into earlier part of finaincial year period, i.e. 2018 into 2018/19

SATOD performance at calculated 2.1% prevalence reduction per year to hit 6% by 2021/22								
District	2017/18 SATOD Prevelence	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Ashford	14.8%	12.7%	10.6%	8.5%	6.4%	4.3%	2.2%	0.1%
Canterbury	15.0%	12.9%	10.8%	8.7%	6.6%	4.5%	2.4%	0.3%
Dartford	11.4%	9.3%	7.2%	5.1%	3.0%	0.9%	-1.2%	-3.3%
Dover	20.0%	17.9%	15.8%	13.7%	11.6%	9.5%	7.4%	5.3%
Folkestone & Hythe	20.7%	18.6%	16.5%	14.4%	12.3%	10.2%	8.1%	6.0%
Gravesham	11.4%	9.3%	7.2%	5.1%	3.0%	0.9%	-1.2%	-3.3%
Maidstone	10.3%	8.2%	6.1%	4.0%	1.9%	-0.2%	-2.3%	-4.4%
Sevenoaks	10.7%	8.6%	6.5%	4.4%	2.3%	0.2%	-1.9%	-4.0%
Swale	18.8%	16.7%	14.6%	12.5%	10.4%	8.3%	6.2%	4.1%
Thanet	21.0%	18.9%	16.8%	14.7%	12.6%	10.5%	8.4%	6.3%
Tonbridge and Malling	10.3%	8.2%	6.1%	4.0%	1.9%	-0.2%	-2.3%	-4.4%
Tunbridge Wells	10.3%	8.2%	6.1%	4.0%	1.9%	-0.2%	-2.3%	-4.4%
Kent	**14.4%**	**12.3%**	**10.2%**	**8.1%**	**6.0%**	**3.9%**	**1.8%**	**-0.3%**
Kent Lower CI	**13.9%**	**11.8%**	**9.7%**	**7.6%**	**5.5%**	**3.4%**	**1.3%**	**-0.8%**
Kent Upper CI	**15.0%**	**13.8%**	**10.8%**	**9.6%**	**6.6%**	**5.4%**	**2.4%**	**1.2%**

*Note - 2.1% reduction per year was calculated in order to meet 6% Kent target for 2012/22, reducing from 14.4% to 6% over 4 years

SATOD numerator, calculated predicted maternities x target prevelence for year								
District	Smoking mothers 2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Ashford	224	184	153	123	93	62	32	1
Canterbury	203	194	162	131	99	68	36	4
Dartford	158	120	93	66	39	12	-17	-46
Dover	215	188	166	144	122	100	78	56
Folkestone & Hythe	208	193	171	136	116	96	76	57
Gravesham	134	112	87	62	36	11	-14	-40
Maidstone	199	158	118	77	37	-4	-44	-85
Sevenoaks	121	103	78	53	28	2	-23	-48
Swale	318	265	232	198	165	132	98	65
Thanet	323	289	257	225	193	151	120	90
Tonbridge and Malling	148	111	82	54	26	-3	-33	-64
Tunbridge Wells	121	95	71	46	22	-2	-27	-51
Kent	**2,372**	**2,002**	**1,660**	**1,311**	**971**	**635**	**293**	**-49**
Kent Lower CI		**1,920**	**1,579**	**1,230**	**890**	**553**	**212**	**-130**
Kent Upper CI		**2,246**	**1,758**	**1,553**	**1,068**	**879**	**391**	**195**

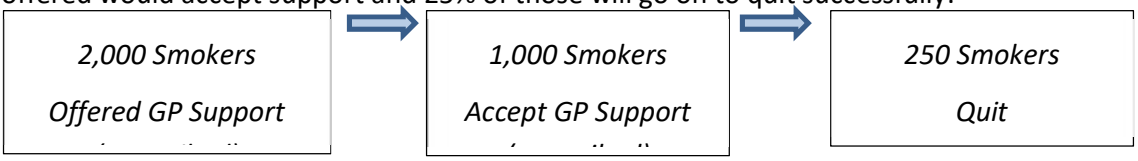
Target reduction - year on year								
District	Smoking mothers 2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
Ashford	224	40	30	30	30	30	30	30
Canterbury	203	10	32	32	32	32	32	32
Dartford	158	38	27	27	27	26	29	29
Dover	215	27	22	22	22	22	22	22
Folkestone & Hythe	208	15	22	35	20	20	20	20
Gravesham	134	22	25	25	25	25	25	25
Maidstone	199	41	41	41	41	41	41	41
Sevenoaks	121	18	25	25	25	25	25	25
Swale	318	53	33	33	33	33	33	33
Thanet	323	34	32	32	32	42	30	30
Tonbridge and Malling	148	38	28	28	28	29	30	30
Tunbridge Wells	121	26	24	24	24	24	24	24
Kent	**2,372**	**370**	**342**	**349**	**340**	**336**	**342**	**342**

Prepared by KPHO (MP) Dec-18

Appendix 6: The Ashford smoking plus pilot

Smoking+ pilot: Ashford

This model is soon to be piloted by Ashford CCG as part of the STP prevention stream. Using data from the UCL Smoking toolkit study, modelling suggests they will need to reach 2,000 smokers to achieve a target of 225 quitters in Ashford. It is projected that 50% of those offered would accept support and 25% of those will go on to quit successfully:



It has been estimated that achieving 250 quitters in one year could save Ashford NHS:

*Taken from Kent Smoking+ pilot proposal

This pilot will be invaluable in testing the model in a Kent context, and updating cost estimates per tier at the local level.

KENT PUBLIC HEALTH OBSERVATORY

Evaluations of smoking prevention programmes for adolescents

Literature search for Claire Mulrenan

November 2018

Produced by

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Kent County Council kent.gov.uk

Contents

1. Search request

An overview of the evidence around programmes that prevent young people/adolescents taking up/initiating smoking. Are there any programmes targeted at young people that stop initiation of smoking behaviours and how successful are they?

This search will form part of the smoking needs assessment. We are outlining the current smoking landscape, and also proposing a new model of care. As part of this, we want to outline what works for preventing initiation of smoking in young people with a focus on school-based interventions.

2005 onwards

2. Guidelines and policy

1. School-based interventions to prevent the uptake of smoking among children and young people : Evidence Update April 2013, NICE

A search was conducted for new evidence from 1 November 2008 to 31 October 2012. A total of 7493 pieces of evidence were initially identified. Following removal of duplicates and a series of automated and manual sifts, 19 items were selected for the Evidence Update (see Appendix A for details of the evidence search and selection process). This Evidence Update was developed in parallel with the guidance review process for NICE public health guidance 23.

See page 7 onwards for commentary on the 19 pieces of evidence used, including

Adams et al. (2009)
Lovato et al. (2010a)
Lipperman-Kreda et al. (2009)
Lovato et al. (2010b)
Sabiston et al. (2009)
US Department of Health and Human Services (2012)
Crone et al. (2011)
Conner and Higgins (2010)
Faggiano et al. (2010)
Gabrhelik et al. (2012a)
Gabrhelik et al. (2012b)
Sussman et al. (2012)
Isensee et al. (2012)
Mercken et al. (2012)
Norman et al. (2008)
Hollingworth et al. (2012)
Spoth et al. (2011)
Carson et al. (2011)
Jackson et al. (2011)

Summary

Organisation-wide or 'whole-school' approaches

• Effective school tobacco policies appear to be those that: are enforced; are strongly prohibitive (including prohibiting smoking at all times in all areas); and have explicit purpose and goals.

Adult-led interventions

• A lesson-based smoking prevention programme prior to secondary school may have long-term preventive effects on smoking that continue into secondary school. Π • Forming repeated 'implementation intentions' (a type of planned behaviour) about how to refuse cigarettes may reduce smoking in the long term. Π • 'Unplugged' (a general substance abuse prevention programme) may help to reduce smoking in the long term. Further research is needed to adapt and pilot this intervention in a UK setting. Π • 'Project Toward No Drug Abuse' (a general substance abuse prevention programme) may prevent smoking among older teenagers from schools with a high drug-use risk. Further research is needed to adapt and pilot this intervention in a UK setting. Π • Evidence suggests that the 'Smokefree Class Competition' (an incentive-driven smoking prevention intervention) may not prevent smoking initiation among non-smoking children and adolescents in the long term, and similar schemes could also possibly widen health inequalities in the short term.

Π* • Limited evidence suggests that a web-assisted smoking prevention programme may help to prevent smoking among some groups of students.

Peer-led interventions • The ASSIST (A Stop Smoking in School Trial) programme appears to be a cost-effective intervention (mean cost per student=£32), and may be more effective among girls of lower socioeconomic status.

Coordinated approach

• Implementing school-based sessions on resisting substance use as part of a wider community and university partnership appears to reduce smoking in the longer term. Π • There is some evidence of the effectiveness of community interventions featuring a school component in reducing smoking, but it is not strong and contains methodological flaws. Π • There is some, albeit limited, evidence of the effectiveness of smoking prevention as part of wider targeting of other risk behaviours. Π • Socioeconomic status did not appear to have any consistent effect on outcomes with the European Smoking Prevention Framework Approach (a coordinated smoking prevention programme).

2. Smoking prevention in schools : guidance (PH23)

Smoking prevention in schools. Public health guideline [PH23] Published date: February 2010. Changes after publication: February 2012: minor maintenance; January 2013: minor maintenance. Recommendation 3 is on Peer Support.

National Institute for Health and Care Excellence - NICE source - 24 February 2010

Appendix C: The evidence

- Evidence statements
- Cost-effectiveness evidence
- Fieldwork findings

Gaps in evidence

https://www.nice.org.uk/guidance/ph23/chapter/Appendix-D-Gaps-in-the-evidence

Search criteria

https://www.nice.org.uk/guidance/ph23/chapter/Appendix-B-Summary-of-the-methods-used-to-develop-this-guidance

3. Smoking: preventing uptake in children and young people

Public health guideline [PH14] Published date: July 2008 Last updated: November 2014

This guideline covers anti-smoking mass-media campaigns, for example, on TV, in newspapers and online. It also covers measures to prevent tobacco being sold to children and young people. The aim is to help prevent children and young people from taking up smoking.

Recommendations

This guideline makes recommendations on:

- mass-media campaigns, including how to develop them and the type of messages to put across
- illegal sales and how to prevent them

Appendix C: The evidence

- Evidence statements
- Cost-effectiveness evidence
- Fieldwork findings

Gaps in evidence
https://www.nice.org.uk/guidance/ph14/chapter/Appendix-D-Gaps-in-the-evidence

Search criteria https://www.nice.org.uk/guidance/ph14/chapter/Appendix-B-Summary-of-the-methods-used-to-develop-this-guidance

4. Smokeless tobacco: South Asian communities
Public health guideline [PH39] Published date: September 2012

Emphasis seems to be on cessation not prevention except for one 1995 study.
Evidence statement 17 Local community-based initiatives to raise awareness: initiation rates of tobacco use
There is mixed evidence from one (+) Indian RCT1 that showed tobacco education interventions which raise awareness about the harmful effects of tobacco can have a positive effect on decreasing initiation rates of tobacco use among South Asians. Baseline initiation rates of tobacco use from the ATCEP showed that male rates were comparable between the experimental and control areas. However, the rate among females was different. Initiation rates of tobacco use in the experimental area showed a statistically significant decline in males ($p < 0.01$) and females ($p = 0.005$) between the baseline and the first follow-up surveys at 2 years. At the final 3-year assessment, males in the first control area did not show a statistically significant decline in the initiation rate ($p = 0.16$). At the final 3-year assessment, the initiation rate of chewing among males was 0.2% and that of smoking 0.1% in the experimental area. In control area one, the initiation rate of chewing was 0.1% compared with 0.3% for smoking. In control area two, the initiation rates were 0.4% and 0.9% for chewing and smoking respectively. This evidence is partially applicable to people of South Asian ancestry living in the UK who may have maintained cultural and social practices related to smokeless tobacco use.
1 Anantha et al. 1995

5. National Center for Chronic Disease Prevention and Health Promotion (U.S.) Office on Smoking and Health. Preventing tobacco use among youth and young adults: A report of the Surgeon General. Atlanta, GA: CDC, 2012.
Preventing Tobacco Use Among Youth and Young Adults Fact Sheet

6. Tobacco Control Strategy - Creating a Tobacco-free Generation The Scottish Government, March 2013 HTML
Creating a Tobacco-Free Generation A Tobacco Control Strategy for Scotland [PDF, 264.4 kb: 27 Mar 2013]
See sections:
4. Prevention – creating an environment where young people do not want to smoke 10
5. Protection – protecting people from second-hand smoke 22
See also Young Scots Youth Commission Report in Section 4 below

7. Tobacco Free Ireland - Department of Health https://health.gov.ie/wp-content/uploads/2014/03/TobaccoFreeIreland.pdf
Report of the Tobacco Policy Review Group
Department of Health October 2013
See sections:
6. Tackling the Problem 36

8. House of Commons Library

Tobacco control policy overview

Published Wednesday, November 8, 2017

A number of other Commons Library briefing papers provide more information on specific policies and issues:

- Regulation of e-cigarettes
- Advertising of e-cigarette products
- Prohibition of tobacco display in shops
- Prohibition of tobacco vending machines.
- Smoking in public places

Download the full report

Tobacco control policy overview (PDF, 309.37 KB)

9. Towards a Smokefree Generation A Tobacco Control Plan for England, Department of Health, 2017

See also:

- Health matters: smoking and quitting in England - GOV.UK
  https://www.gov.uk › Health matters: smoking and quitting in England
  15 Sep 2015
- The NICE tobacco return on investment (RoI) tool includes 28 local tobacco control interventions.
- NICE and PHE provide resources and user support to help implement the NICE RoI tool at local level (by local authority or Clinical Commissioning Group).
- NICE Tobacco ROI Tool User Guide (Microsoft Word) *2.7 Mb*
- NICE Tobacco ROI Tool Technical Report (Microsoft Word) *500 Kb 2014*

The Health Matters summary reports: at a national level the government will: • Provide access to training for all health professionals on smoking cessation, particularly those working with mental health patients. • Review the type and level of sanctions for tobacco retailers who repeatedly break laws designed to protect young people.

• DH will monitor the impact of regulation and policy on e-cigarettes and novel tobacco products in England, including evidence on safety, uptake, health impact and effectiveness of these products as smoking cessation aids to inform our actions on regulating their use.

10. Recommendations on behavioural interventions for the prevention and treatment of cigarette smoking among school-aged children and youth [PDF]

27 February 2017 - Publisher: Canadian Medical Association
CMAJ 2017 February 27;189:E310-6. doi: 10.1503/cmaj.161242
KEY POINTS • Tobacco smoking by children and youth is a potentially reversible driver of disease in adulthood, but there is a lack of high-quality randomized controlled trials that have examined the benefits of prevention and treatment in primary health care settings. • Available evidence suggests that providing brief information and advice may help to prevent and treat smoking among children and youth aged 5 to 18 years. • No studies assessed the long-term effects (i.e., in adulthood) of preventing or treating tobacco smoking among children and youth. • There is substantial variability in the characteristics of the prevention and treatment interventions identified in the literature search.

11. E-cigarettes: Are we renormalizing public smoking? Reversing five decades of tobacco control and revitalizing nicotine dependency in children and youth in Canada

Canadian Paediatric Society2015 Position Statement
See the recommendations section.

12. Preventing smoking in children and adolescents: Recommendations for practice and policy
Source: Canadian Paediatric Society - 10 May 2016 - Publisher: Canadian Paediatric Society
Principal author(s)
Johanne Harvey, Nicholas Chadi; Canadian Paediatric Society, Adolescent Health Committee
Paediatr Child Health 2016;21(4):209-14
See onwards from **Interventions that work, Smoking prevention in the primary care setting** half way through document.

13. Clinical Practice Policy to Protect Children From Tobacco, Nicotine, and Tobacco Smoke.
Farber HJ, Walley SC, Groner JA, Nelson KE, Section on Tobacco Control
Pediatrics. 2015;136(5):1008.

Tobacco dependence starts in childhood. Tobacco exposure of children is common and causes illness and premature death in children and adults, with adverse effects starting in the womb. There is no safe level of tobacco smoke exposure. Pediatricians should screen for use of tobacco and other nicotine delivery devices and provide anticipatory guidance to prevent smoking initiation and reduce tobacco smoke exposure. Pediatricians need to be aware of the different nicotine delivery systems marketed and available.Parents and caregivers are important sources of children's tobacco smoke exposure. Because tobacco dependence is a severe addiction, to protect children's health, caregiver tobacco dependence treatment should be offered or referral for treatment should be provided (such as referral to the national smoker's quitline at 1-800-QUIT-NOW). If the source of tobacco exposure cannot be eliminated, counseling about reducing exposure to children should be provided.Health

care delivery systems should facilitate the effective prevention, identification, and treatment of tobacco dependence in children and adolescents, their parents, and other caregivers. Health care facilities should protect children from tobacco smoke exposure and tobacco promotion. Tobacco dependence prevention and treatment should be part of medical education, with knowledge assessed as part of board certification examinations.

14. Primary care interventions to prevent tobacco use in children and adolescents: U.S. Preventive Services Task Force recommendation statement.
Moyer VA, U.S. Preventive Services Task Force
Ann Intern Med. 2013;159(8):552.
Description:
Update of the 2003 U.S. Preventive Services Task Force (USPSTF) recommendation on primary care interventions to prevent tobacco use in children and adolescents.
Methods:
The USPSTF reviewed the evidence on the effectiveness of primary care interventions on the rates of initiation or cessation of tobacco use in children and adolescents and on health outcomes, such as respiratory health, dental and oral health, and adult smoking. The USPSTF also reviewed the evidence on the potential harms of these interventions.
Population:
This recommendation applies to school-aged children and adolescents. The USPSTF has issued a separate recommendation statement on tobacco use counseling in adults and pregnant women.
Recommendation:
The USPSTF recommends that primary care clinicians provide interventions, including education or brief counseling, to prevent initiation of tobacco use in school-aged children and adolescents.

15. Roadmap of actions to strengthen implementation of the WHO Framework Convention on Tobacco Control in the WHO European Region 2015–2025: making tobacco a thing of the past.
Copenhagen: WHO Regional Office for Europe; 2015

16. Promoting a tobacco-free society
A summary paper from the BMA board of science – June 2015
Covers all users and includes old data but extensive references.

17. Effectiveness of motivational interviewing to reduce head start children`s secondhand smoke exposure. a randomized clinical trial
EvidenceUpdates2014
Am J Respir Crit Care Med. 2014 Jun 15;189(12):1530-7. doi: 10.1164/rccm.201404-0618OC.
Effectiveness of motivational interviewing to reduce head start children's secondhand smoke exposure. a randomized clinical trial.
Eakin MN1, Rand CS, Borrelli B, Bilderback A, Hovell M, Riekert KA.
RATIONALE:
Secondhand smoke exposure (SHSe) is a significant modifiable risk for respiratory health in children. Although SHSe is declining overall, it has increased for low-income and minority populations. Implementation of effective SHSe interventions within community organizations has the potential for significant public health impact.
OBJECTIVES:

To evaluate the effectiveness of motivational interviewing (MI) delivered in the context of a SHS education reduction initiative within Head Start to reduce preschool children's SHSe.
METHODS:
A total of 350 children enrolled in Baltimore City Head Start whose caregivers reported a smoker living in the home were recruited. Caregivers were randomized to MI + education or education alone. Assessments were conducted at baseline, 3, 6, and 12 months.
MEASUREMENTS AND MAIN RESULTS:
The primary outcome measure was household air nicotine levels measured by passive dosimeters. Secondary outcomes included child salivary cotinine, self-report of home smoking ban (HSB), and smoking status. Participants in the MI + education group had significantly lower air nicotine levels (0.29 vs. 0.40 mg), 17% increase in prevalence of caregiver-reported HSBs, and a 13% decrease in caregiver smokers compared with education-alone group (all P values < 0.05). Although group differences in salivary cotinine were not significant, among all families who reported having an HSB, salivary cotinine and air nicotine levels declined in both groups (P < 0.05).
CONCLUSIONS:
MI may be effective in community settings to reduce child SHSe. More research is needed to identify ways to tailor interventions to directly impact child SHSe and to engage more families to make behavioral change. Clinical trial registered with www.clinicaltrials.gov (NCT 00927264).

1. Systematic reviews and evidence since 2013

3.1 Family, peer and behaviour change

18. Acad Pediatr. 2016 Jul;16(5):419-429. doi: 10.1016/j.acap.2015.12.006. Epub 2016 Feb 15.
Family-Based Interventions in Preventing Children and Adolescents from Using Tobacco: A Systematic Review and Meta-Analysis.
Thomas RE1, Baker PRA2, Thomas BC3.
See also
Family-based programmes for preventing smoking by children and adolescents
Roger E Thomas, Philip RA Baker, Bennett C Thomas, Diane L Lorenzetti
BACKGROUND:
Tobacco is the main preventable cause of death and disease worldwide. Adolescent smoking is increasing in many countries with poorer countries following the earlier experiences of affluent countries. Preventing adolescents from starting smoking is crucial to decreasing tobacco-related illness.
OBJECTIVE:
To assess effectiveness of family-based interventions alone and combined with school-based interventions to prevent children and adolescents from initiating tobacco use.
DATA SOURCES:
Fourteen bibliographic databases and the Internet, journals hand-searched, and experts consulted.
STUDY ELIGIBILITY CRITERIA, PARTICIPANTS, AND INTERVENTIONS:
Randomized controlled trials (RCTs) with children or adolescents and families, interventions to prevent starting tobacco use, and follow-up ≥6 months.
STUDY APPRAISAL/SYNTHESIS METHODS:
Abstracts/titles independently assessed and data independently entered by 2 authors. Risk of bias was assessed with the Cochrane Risk-of-Bias tool.
RESULTS:

Twenty-seven RCTs were included. Nine trials of never-smokers compared with a control provided data for meta-analysis. Family intervention trials had significantly fewer students who started smoking. Meta-analysis of 2 RCTs of combined family and school interventions compared with school only, showed additional significant benefit. The common feature of effective high-intensity interventions was encouraging authoritative parenting.
LIMITATIONS:
Only 14 RCTs provided data for meta-analysis (approximately a third of participants). Of the 13 RCTs that did not provide data for meta-analysis 8 compared a family intervention with no intervention and 1 reported significant effects, and 5 compared a family combined with school intervention with a school intervention only and none reported additional significant effects.
CONCLUSIONS AND IMPLICATIONS OF KEY FINDINGS:
There is moderate-quality evidence that family-based interventions prevent children and adolescents from starting to smoke.

19. Primary Care–Relevant Interventions for Tobacco Use Prevention and Cessation in Children and Adolescents: A Systematic Evidence Review for the U.S. Preventive Services Task Force
Carrie D. Patnode, PhD, MPH; Elizabeth O'Connor, PhD; Evelyn P. Whitlock, MD, MPH; Leslie A. Perdue, MPH; Clara Soh, MPA; Jack Hollis, PhD
Published: Ann Intern Med. 2013;158(4):253-260.
DOI: 10.7326/0003-4819-158-4-201302190-00580
http://annals.org/aim/fullarticle/1476724/primary-care-relevant-interventions-tobacco-use-prevention-cessation-children-adolescents

See also critical appraisal from which this abstract is taken
Centre for Reviews and Dissemination NIHR
Primary care-relevant interventions for tobacco use prevention and cessation in children and adolescents: a systematic evidence review for the US Preventive Services Task Force
Patnode CD, O'Connor E, Whitlock EP, Perdue LA, Soh C, Hollis J
Results of the review
Nineteen trials were included in the review, with 39,195 participants. Fifteen trials were rated as fair, and four trials were rated as good. Follow-up ranged from six months to 36 months.
Prevention and cessation: In six trials (8,749 participants), compared with control groups, the intervention did not reduce smoking prevalence in young people, at seven-to-12 months follow-up.
Prevention: In nine trials, (26,624 participants), there was significantly reduced smoking initiation in the intervention groups, compared with the control groups, at seven-to-36 months follow-up (RR 0.81, 95% CI 0.70 to 0.93; I^2= 37.8%). The pooled absolute risk difference was -0.02 (95% CI -0.03 to 0.00).
Cessation: In seven trials (2,328 participants) of behaviour-based cessation, there was no significant difference in cessation rates between the two groups, at six-to-12 months follow-up. In two trials (256 participants) of bupropion cessation, there was no statistically significant difference between the two groups at six months follow-up.
Harms: None of the behaviour-based intervention studies reported the harms of treatment. Mixed results were found on the harms with bupropion in three trials. No trials assessed health-related outcomes and none assessed subsequent adult rates of smoking.
The sensitivity analysis results were given in the main report (see Patnode, et al. 2012 in Other Publications of Related Interest). The authors did not assess publication bias, as there were less than 10 trials in all the analyses.
Authors' conclusions

Interventions in primary care might prevent smoking initiation, over 12 months, in children and adolescents.

20. Individual-, family-, and school-level interventions targeting multiple risk behaviours in young people

Georgina MacArthur, Deborah M Caldwell, James Redmore, Sarah H Watkins, Ruth Kipping, James White, Catherine Chittleborough, Rebecca Langford, Vanessa Er, Raghu Lingam, Keryn Pasch, David Gunnell, Matthew Hickman, Rona Campbell

5 October 2018

Background

Engagement in multiple risk behaviours can have adverse consequences for health during childhood, during adolescence, and later in life, yet little is known about the impact of different types of interventions that target multiple risk behaviours in children and young people, or the differential impact of universal versus targeted approaches. Findings from systematic reviews have been mixed, and effects of these interventions have not been quantitatively estimated.

Objectives

To examine the effects of interventions implemented up to 18 years of age for the primary or secondary prevention of multiple risk behaviours among young people.

Search methods

We searched 11 databases (Australian Education Index; British Education Index; Campbell Library; Cumulative Index to Nursing and Allied Health Literature (CINAHL); Cochrane Central Register of Controlled Trials (CENTRAL), in the Cochrane Library; Embase; Education Resource Information Center (ERIC); International Bibliography of the Social Sciences; MEDLINE; PsycINFO; and Sociological Abstracts) on three occasions (2012, 2015, and 14 November 2016)). We conducted handsearches of reference lists, contacted experts in the field, conducted citation searches, and searched websites of relevant organisations.

Selection criteria

We included randomised controlled trials (RCTs), including cluster RCTs, which aimed to address at least two risk behaviours. Participants were children and young people up to 18 years of age and/or parents, guardians, or carers, as long as the intervention aimed to address involvement in multiple risk behaviours among children and young people up to 18 years of age. However, studies could include outcome data on children > 18 years of age at the time of follow-up. Specifically,we included studies with outcomes collected from those eight to 25 years of age. Further, we included only studies with a combined intervention and follow-up period of six months or longer. We excluded interventions aimed at individuals with clinically diagnosed disorders along with clinical interventions. We categorised interventions according to whether they were conducted at the individual level; the family level; or the school level.

Data collection and analysis

We identified a total of 34,680 titles, screened 27,691 articles and assessed 424 full-text articles for eligibility. Two or more review authors independently assessed studies for inclusion in the review, extracted data, and assessed risk of bias.

We pooled data in meta-analyses using a random-effects (DerSimonian and Laird) model in RevMan 5.3. For each outcome, we included subgroups related to study type (individual, family, or school level, and universal or targeted approach) and examined effectiveness at up to 12 months' follow-up and over the longer term (> 12 months). We assessed the quality and certainty of evidence using the Grades of Recommendation, Assessment, Development and Evaluation (GRADE) approach.

Main results

We included in the review a total of 70 eligible studies, of which a substantial proportion were universal school-based studies (n = 28; 40%). Most studies were conducted in the USA (n = 55; 79%). On average, studies aimed to prevent four of the primary behaviours. Behaviours that were most

frequently addressed included alcohol use (n = 55), drug use (n = 53), and/or antisocial behaviour (n = 53), followed by tobacco use (n = 42). No studies aimed to prevent self-harm or gambling alongside other behaviours.
Evidence suggests that for multiple risk behaviours, universal school-based interventions were beneficial in relation to tobacco use (odds ratio (OR) 0.77, 95% confidence interval (CI) 0.60 to 0.97; n = 9 studies; 15,354 participants) and alcohol use (OR 0.72, 95% CI 0.56 to 0.92; n = 8 studies; 8751 participants; both moderate-quality evidence) compared to a comparator, and that such interventions may be effective in preventing illicit drug use (OR 0.74, 95% CI 0.55 to 1.00; n = 5 studies; 11,058 participants; low-quality evidence) and engagement in any antisocial behaviour (OR 0.81, 95% CI 0.66 to 0.98; n = 13 studies; 20,756 participants; very low-quality evidence) at up to 12 months' follow-up, although there was evidence of moderate to substantial heterogeneity (I^2 = 49% to 69%). Moderate-quality evidence also showed that multiple risk behaviour universal school-based interventions improved the odds of physical activity (OR 1.32, 95% CI 1.16 to 1.50; I^2 = 0%; n = 4 studies; 6441 participants). We considered observed effects to be of public health importance when applied at the population level. Evidence was less certain for the effects of such multiple risk behaviour interventions for cannabis use (OR 0.79, 95% CI 0.62 to 1.01; P = 0.06; n = 5 studies; 4140 participants; I^2 = 0%; moderate-quality evidence), sexual risk behaviours (OR 0.83, 95% CI 0.61 to 1.12; P = 0.22; n = 6 studies; 12,633 participants; I^2 = 77%; low-quality evidence), and unhealthy diet (OR 0.82, 95% CI 0.64 to 1.06; P = 0.13; n = 3 studies; 6441 participants; I^2 = 49%; moderate-quality evidence). It is important to note that some evidence supported the positive effects of universal school-level interventions on three or more risk behaviours.
For most outcomes of individual- and family-level targeted and universal interventions, moderate- or low-quality evidence suggests little or no effect, although caution is warranted in interpretation because few of these studies were available for comparison (n ≤ 4 studies for each outcome).

Seven studies reported adverse effects, which involved evidence suggestive of increased involvement in a risk behaviour among participants receiving the intervention compared to participants given control interventions.
We judged the quality of evidence to be moderate or low for most outcomes, primarily owing to concerns around selection, performance, and detection bias and heterogeneity between studies.
Authors' conclusions
Available evidence is strongest for universal school-based interventions that target multiple- risk behaviours, demonstrating that they may be effective in preventing engagement in tobacco use, alcohol use, illicit drug use, and antisocial behaviour, and in improving physical activity among young people, but not in preventing other risk behaviours. Results of this review do not provide strong evidence of benefit for family- or individual-level interventions across the risk behaviours studied. However, poor reporting and concerns around the quality of evidence highlight the need for high-quality multiple- risk behaviour intervention studies to further strengthen the evidence base in this field.

21. **Community interventions for preventing smoking in young people**
Kristin V Carson, Malcolm P Brinn, Nadina A Labiszewski, Adrian J Esterman, Anne B Chang, Brian J Smith
Background
Cigarette smoking is one of the leading causes of preventable death in the world. Decisions to smoke are often made within a broad social context and therefore community interventions using coordinated, multi-component programmes may be effective in influencing the smoking behaviour of young people.
Objectives
To determine the effectiveness of multi-component community based interventions in influencing smoking behaviour, which includes preventing the uptake of smoking in young people.

Search methods
The Tobacco Addiction group's specialised register, Medline and other health, psychology and public policy electronic databases were searched, the bibliographies of identified studies were checked and raw data was requested from study authors. Searches were updated in August 2010.
Selection criteria
Randomized and non randomized controlled trials that assessed the effectiveness of multi-component community interventions compared to no intervention or to single component or school-based programmes only. Reported outcomes had to include smoking behaviour in young people under the age of 25 years.
Data collection and analysis
Information relating to the characteristics and the content of community interventions, participants, outcomes and methods of the study was extracted by one reviewer and checked by a second. Studies were combined in a meta-analysis where possible and reported in narrative synthesis in text and table.
Main results
Twenty-five studies were included in the review and sixty-eight studies did not meet all of the inclusion criteria. All studies used a controlled trial design, with fifteen using random allocation of schools or communities. One study reported a reduction in short-term smoking prevalence (twelve months or less), while nine studies detected significant long-term effects. Two studies reported significantly lower smoking rates in the control population while the remaining thirteen studies showed no significant difference between groups. Improvements were seen in secondary outcomes for intentions to smoke in six out of eight studies, attitudes in five out of nine studies, perceptions in two out of six studies and knowledge in three out of six studies, while significant differences in favour of the control were seen in one of the nine studies assessing attitudes and one of six studies assessing perceptions.
Authors' conclusions
There is some evidence to support the effectiveness of community interventions in reducing the uptake of smoking in young people, but the evidence is not strong and contains a number of methodological flaws.

22. Incentives for preventing smoking in children and adolescents

Hefler M, Liberato SC, Thomas DP, Livingstone-Banks J. Cochrane Database of Systematic Reviews 2017, Issue 6. Art. No.: CD008645. DOI: 10.1002/14651858.CD008645.pub3.
Background
Adult smoking usually has its roots in adolescence. If individuals do not take up smoking during this period it is unlikely that they ever will. Further, once smoking becomes established, cessation is challenging; the probability of subsequently quitting is inversely proportional to the age of initiation. One novel approach to reducing the prevalence of youth smoking is the use of incentives.
Objectives
To assess the effect of incentives on preventing children and adolescents (aged 5 to 18 years) from starting to smoke. It was also our intention to assess, where possible, the dose-response of incentives, the costs of incentive programmes, whether incentives are more or less effective in combination with other interventions to prevent smoking initiation, and any unintended consequences arising from the use of incentives.
Search methods
For the original review (published 2012) we searched the Cochrane Tobacco Addiction Group Specialized Register, with additional searches of MEDLINE, Embase, CINAHL, CSA databases and PsycINFO for terms relating to incentives, in combination with terms for smoking and tobacco use, and children and adolescents. The most recent searches were of the Cochrane Tobacco Addiction Group Specialized Register, and were carried out in December 2016.

Selection criteria
We considered randomized controlled trials (RCTs) allocating children and adolescents (aged 5 to 18 years) as individuals, groups or communities to intervention or control conditions, where the intervention included an incentive aimed at preventing smoking uptake. We also considered controlled trials (CTs) with baseline measures and post-intervention outcomes.
Data collection and analysis
Two review authors extracted and independently assessed the data. The primary outcome was the smoking status of children or adolescents at follow-up who reported no smoking at baseline. We required a minimum follow-up of six months from baseline and assessed each included study for risks of bias. We used the most rigorous definition of abstinence in each trial; we did not require biochemical validation of self-reported tobacco use for study inclusion. Where possible we combined eligible studies to calculate pooled estimates at the longest follow-up, using the Mantel-Haenszel fixed-effect method, grouping studies by study design.
Main results
We identified three eligible RCTs and five CTs, including participants aged 11 to 14 years, who were non-smokers at baseline. Of the eight trials identified, six had analyzable data relevant for this review, which contributed to meta-analyses (7275 participants in total: 4003 intervention; 3272 control; 2484 participants after adjusting for clustering). All except one of the studies tested the 'Smokefree Class Competition' (SFC), which has been widely implemented throughout Europe. In this competition, classes with youth generally between the ages of 11 and 14 years commit to being smoke-free for a six-month period, and report their smoking status regularly. If 90% or more of the class are non-smokers at the end of the six months, the class goes into a competition to win prizes. The one study that was not a trial of the SFC was a controlled trial in which schools in two communities were assigned to the intervention, with schools in a third community acting as controls. Students in the intervention community with lower smoking rates at the end of the project (one school year) received rewards.
Most studies resulted in statistically non-significant results. Only one study of the SFC reported a significant effect of the competition on the prevention of smoking at the longest follow-up. However, this study was at risk of multiple biases, and when we calculated the adjusted risk ratio (RR) we no longer detected a statistically significant difference. The pooled RR for the more robust RCTs (3 studies, n = 3056 participants/1107 adjusted for clustering) suggests that there is no statistically significant effect of incentives, in the form of the SFC, to prevent smoking initiation among children and adolescents in the long term (RR 1.00, 95% confidence interval (CI) 0.84 to 1.19). Pooled results from the non-randomized trials also did not detect a significant effect of the SFC, and we were unable to extract data on our outcome of interest from the one trial that did not study the SFC. There is little robust evidence to suggest that unintended consequences (such as making false claims about their smoking status and bullying of smoking students) are consistently associated with such interventions, although this has not been the focus of much research. There was insufficient information to assess the dose-response relationship or to report costs of incentives for preventing smoking uptake.
We judged the included RCTs to be at unclear risk of bias, and the non-RCTs to be at high risk of bias. Using GRADE, we rated the overall quality of the evidence for our primary outcome as 'low' (for RCTs) and 'very low' (for non-RCTs), because of imprecision (all studies had wide confidence intervals), and for the risks of bias identified. We further downgraded the non-RCT evidence, due to issues with the non-RCT study design, likely to introduce further bias.
Authors' conclusions
The very limited evidence currently available suggests that incentive programmes do not prevent smoking initiation among youth. However, there are relatively few published studies and these are of variable quality. In addition, trials included in the meta-analyses were all studies of the SFC, which distributed small to moderately-sized prizes to whole classes, usually through a lottery system. It is

therefore possible that other incentive programmes could be more successful at preventing smoking uptake in young people.
Future studies might investigate the efficacy of a wider range of incentives, including those given to individual participants to prevent smoking uptake, whilst considering both the effect of incentives on smoking initiation and the progression to smoking. It would be useful if incentives were evaluated in varying populations from different socioeconomic and ethnic backgrounds, and if intervention components were described in detail.

23. Johnston V, Liberato S, Thomas D. Incentives for preventing smoking in children and adolescents. Cochrane Database Syst Rev 2012;10:CD008645,
Search methods
We searched the Cochrane Tobacco Addiction Group Specialized Register, with additional searches of MEDLINE, EMBASE, CINAHL, CSA databases and PsycINFO for terms relating to incentives, in combination with terms for smoking and tobacco use, and children and adolescents. The most recent searches were in May 2012.
Selection criteria
We considered randomized controlled trials allocating children and adolescents (aged 5 to 18 years) as individuals, groups or communities to intervention or control conditions, where the intervention included an incentive aimed at preventing smoking uptake. We also considered controlled trials with baseline measures and post-intervention outcomes.
Data collection and analysis
Data were extracted by two authors and assessed independently. The primary outcome was the smoking status of children or adolescents at follow-up who reported no smoking at baseline. We required a minimum follow-up of six months from baseline and assessed each included study for risk of bias. We used the most rigorous definition of abstinence in each trial; we did not require biochemical validation of self-reported tobacco use for study inclusion. Where possible we combined eligible studies to calculate pooled estimates at the longest follow-up using the Mantel-Haenszel fixed-effect method, grouping studies by study design.
Main results
We identified seven controlled studies that met our inclusion criteria, including participants with an age range of 11 to 14 years. Of the seven trials identified, only five had analysable data relevant for this review and contributed to the meta-analysis (6362 participants in total who were non-smokers at baseline; 3466 in intervention and 2896 in control). All bar one of the studies was a trial of the so-called Smokefree Class Competition (SFC), which has been widely implemented throughout Europe. In this competition, classes with youth generally between the ages of 11 to 14 years commit to being smoke free for a six month period. They report regularly on their smoking status; if 90% or more of the class is non-smoking at the end of the six months, the class goes into a competition to win prizes. The one study that was not a trial of the SFC was a controlled trial in which schools in two communities were assigned to the intervention, with schools in a third community acting as controls. Students in the intervention community with lower smoking rates at the end of the project (one school year) received rewards.
Only one study of the SFC competition, a non-randomized controlled trial, reported a significant effect of the competition on the prevention of smoking at the longest follow-up. However, this study had a risk of multiple biases, and when we calculated the adjusted RR we no longer detected a statistically significant difference. The pooled RR for the more robust RCTs (3 studies, n = 3056 participants) suggests that, from the available data, there is no statistically significant effect of incentives to prevent smoking initiation among children and adolescents in the long term (RR 1.00, 95% CI 0.84 to 1.19). Pooled results from non-randomized trials also did not detect a significant effect, and we were unable to extract data on our outcome of interest for the one trial that did not study the SFC. There is little robust evidence to suggest that unintended consequences (such as

youth making false claims about their smoking status and bullying of smoking students) are consistently associated with such interventions, although this has not been the focus of much research. There was insufficient information to assess the dose-response relationship or to report costs.
Authors' conclusions
To date, incentive programmes have not been shown to prevent smoking initiation among youth, although there are relatively few published studies and these are of variable quality. Trials included in this meta-analysis were all studies of the SFC competition, which distributed small to moderately sized prizes to whole classes, usually through a lottery system.

Future studies might investigate the efficacy of incentives given to individual participants to prevent smoking uptake. Future research should consider the efficacy of incentives on smoking initiation, as well as progression of smoking, evaluate these in varying populations from different socioeconomic and ethnic backgrounds, and describe the intervention components in detail.

24. Kew KM, Carr R, Crossingham I. Lay-led and peer support interventions for adolescents with asthma. Cochrane Database of Systematic Reviews 2017, Issue 4. Art. No.: CD012331. DOI: 10.1002/14651858.CD012331.pub2.
Adolescents with asthma are at high risk of poor adherence with treatment. This may be compounded by activities that worsen asthma, in particular smoking. Additional support above and beyond routine care has the potential to encourage good self-management. We wanted to find out whether sessions led by their peers or by lay leaders help to reduce these risks and improve asthma outcomes among adolescents.
Authors' conclusions
Although weak evidence suggests that lay-led and peer support interventions could lead to a small improvement in asthma-related quality of life for adolescents, benefits for asthma control, exacerbations and medication adherence remain unproven. Current evidence is insufficient to reveal whether routine use of lay-led or peer support programmes is beneficial for adolescents receiving asthma care.
Ongoing and future research may help to identify target populations for lay-led and peer support interventions, along with attributes that constitute a successful programme.

25. Peirson L, Ali MU, Kenny M, et al. Interventions for prevention and treatment of tobacco smoking in school-aged children and adolescents: a systematic review and meta-analysis. Prev Med 2016;85:20-31.
OBJECTIVES:
To determine the effectiveness of primary health care relevant interventions to prevent and treat tobacco smoking in school-aged children and adolescents.
METHODS:
This systematic review considered studies included in a prior review. We adapted and updated the search to April 2015. Titles, abstracts and full-text articles were reviewed in duplicate; data extraction and quality assessments were performed by one reviewer and verified by another. Meta-analyses and pre-specified sub-group analyses were performed when possible. PROSPERO #CRD42015019051.
RESULTS:
After screening 2118 records, we included nine randomized controlled trials. The mostly moderate quality evidence suggested targeted behavioral interventions can prevent smoking and assist with cessation. Meta-analysis showed intervention participants were 18% less likely to report having initiated smoking at the end of intervention relative to controls (Risk Ratio 0.82; 95% confidence

interval 0.72, 0.94); the absolute effect is 1.92% for smoking initiation, Number Needed to Treat is 52 (95% confidence interval 33, 161). For cessation, meta-analysis showed intervention participants were 34% more likely to report having quit smoking at the end of intervention relative to controls (Risk Ratio 1.34; 95% confidence interval 1.05, 1.69); the absolute effect is 7.98% for cessation, Number Needed to Treat is 13 (95% confidence interval 6, 77). Treatment harms were not mentioned in the literature and no data were available to assess long-term effectiveness.
CONCLUSION:
Primary care relevant behavioral interventions improve smoking outcomes for children and youth. The evidence on key components is limited by heterogeneity in methodology and intervention strategy. Future trials should target tailored prevention or treatment approaches, establish uniform definition and measurement of smoking, isolate optimal intervention components, and include long-term follow-up.

PMID:26743631
DOI:10.1016/j.ypmed.2015.12.004
[Indexed for MEDLINE]

26. Pbert L, Farber H, Horn K, et al. State-of-the-art office-based interventions to eliminate youth tobacco use: The past decade. Pediatrics 2015;135(4):734-47.
Tobacco use and tobacco smoke exposure are among the most important preventable causes of premature disease, disability, and death and therefore constitute a major pediatric health concern. The pediatric primary care setting offers excellent opportunities to prevent tobacco use in youth and to deliver cessation-related treatment to youth and parents who use tobacco. This report updates a “state-of-the-art” article published a decade ago on office-based interventions to address these issues. Since then there has been marked progress in understanding the nature, onset, and trajectories of tobacco use and nicotine addiction in youth with implications for clinical practice. In addition, clinicians need to remain abreast of emerging nicotine delivery systems, such as electronic cigarettes, that may influence uptake or continuation of smoking. Although evidence-based practice guidelines for treating nicotine addiction in youth are not yet available, research continues to build the evidence base toward that goal. In the interim, practical guidelines are available to assist clinicians in addressing nicotine addiction in the pediatric clinical setting. This article reports current practices in addressing tobacco in pediatric primary care settings. It reviews our increasing understanding of youth nicotine addiction, summarizes research efforts on intervention in the past decade and additional research needed going forward, and provides practical guidelines for pediatric health care providers to integrate tobacco use prevention and treatment into their clinical practice. Pediatric providers can and should play an important role in addressing tobacco use and dependence, both in the youth they care for and in parents who use tobacco.

27. Tobacco cessation interventions for young people
Thomas R Fanshawe, William Halliwell, Nicola Lindson, Paul Aveyard, Jonathan Livingstone-Banks,
Background
Most tobacco control programmes for adolescents are based around prevention of uptake, but teenage smoking is still common. It is unclear if interventions that are effective for adults can also help adolescents to quit. This is the update of a Cochrane Review first published in 2006.
Objectives
To evaluate the effectiveness of strategies that help young people to stop smoking tobacco.
Search methods
We searched the Cochrane Tobacco Addiction Group's Specialized Register in June 2017. This includes reports for trials identified in CENTRAL, MEDLINE, Embase and PsyclNFO.

Selection criteria
We included individually and cluster-randomized controlled trials recruiting young people, aged under 20 years, who were regular tobacco smokers. We included any interventions for smoking cessation; these could include pharmacotherapy, psycho-social interventions and complex programmes targeting families, schools or communities. We excluded programmes primarily aimed at prevention of uptake. The primary outcome was smoking status after at least six months' follow-up among those who smoked at baseline.
Data collection and analysis
Two review authors independently assessed the eligibility of candidate trials and extracted data. We evaluated included studies for risk of bias using standard Cochrane methodology and grouped them by intervention type and by the theoretical basis of the intervention. Where meta-analysis was appropriate, we estimated pooled risk ratios using a Mantel-Haenszel fixed-effect method, based on the quit rates at six months' follow-up.
Main results
Forty-one trials involving more than 13,000 young people met our inclusion criteria (26 individually randomized controlled trials and 15 cluster-randomized trials). We judged the majority of studies to be at high or unclear risk of bias in at least one domain. Interventions were varied, with the majority adopting forms of individual or group counselling, with or without additional self-help materials to form complex interventions. Eight studies used primarily computer or messaging interventions, and four small studies used pharmacological interventions (nicotine patch or gum, or bupropion). There was evidence of an intervention effect for group counselling (9 studies, risk ratio (RR) 1.35, 95% confidence interval (CI) 1.03 to 1.77), but not for individual counselling (7 studies, RR 1.07, 95% CI 0.83 to 1.39), mixed delivery methods (8 studies, RR 1.26, 95% CI 0.95 to 1.66) or the computer or messaging interventions (pooled RRs between 0.79 and 1.18, 9 studies in total). There was no clear evidence for the effectiveness of pharmacological interventions, although confidence intervals were wide (nicotine replacement therapy 3 studies, RR 1.11, 95% CI 0.48 to 2.58; bupropion 1 study RR 1.49, 95% CI 0.55 to 4.02). No subgroup precluded the possibility of a clinically important effect. Studies of pharmacotherapies reported some adverse events considered related to study treatment, though most were mild, whereas no adverse events were reported in studies of behavioural interventions. Our certainty in the findings for all comparisons is low or very low, mainly because of the clinical heterogeneity of the interventions, imprecision in the effect size estimates, and issues with risk of bias.
Authors' conclusions
There is limited evidence that either behavioural support or smoking cessation medication increases the proportion of young people that stop smoking in the long-term. Findings are most promising for group-based behavioural interventions, but evidence remains limited for all intervention types. There continues to be a need for well-designed, adequately powered, randomized controlled trials of interventions for this population of smokers.

28. Lay-led and peer support interventions for adolescents with asthma
Kayleigh M Kew, Robin Carr, Iain Crossingham
19 April 2017
Main results
Five studies including a total of 1146 participants met the inclusion criteria for this review. As ever with systematic reviews of complex interventions, studies varied by design (cluster and individually randomised), duration (2.5 to 9 months), setting (school, day camp, primary care) and intervention content. Most risk of bias concerns were related to blinding and incomplete reporting, which limited the meta-analyses that could be performed. Studies generally controlled well for selection and attrition biases.

All participants were between 11 and 17 years of age. Asthma diagnosis and severity varied, as did smoking prevalence. Three studies used the Triple A programme; one of these studies tested the addition of a smoke-free pledge; another delivered peer support group sessions and mp3 messaging to encourage adherence; and the third compared a peer-led asthma day camp with an equivalent camp led by healthcare practitioners.
We had low confidence in all findings owing to risk of bias, inconsistency and imprecision. Results from an analysis of asthma-related quality of life based on the prespecified random-effects model were imprecise and showed no differences (MD 0.40, 95% confidence interval (CI) -0.02 to 0.81); a sensitivity analysis based on a fixed-effect model and a responder analysis suggested small benefit may be derived for this outcome. Most other results were summarised narratively and did not show an important benefit of the intervention; studies provided no analysable data on asthma exacerbations or unscheduled visits (data were skewed), and one study measuring adherence reported a drop in both groups. Effects on asthma control favoured the intervention but findings were not statistically significant. Results from two studies with high levels of baseline smoking showed some promise for self-efficacy to stop smoking, but overall nicotine dependence and smoking-related knowledge were not significantly better in the intervention group. Investigators did not report adverse events.
Authors' conclusions
Although weak evidence suggests that lay-led and peer support interventions could lead to a small improvement in asthma-related quality of life for adolescents, benefits for asthma control, exacerbations and medication adherence remain unproven. Current evidence is insufficient to reveal whether routine use of lay-led or peer support programmes is beneficial for adolescents receiving asthma care.
Ongoing and future research may help to identify target populations for lay-led and peer support interventions, along with attributes that constitute a successful programme.

29. What works to prevent adolescent smoking? A systematic review of the National Cancer Institute's Research-Tested Intervention Programmes

Authors:
SHERMAN Elyse J., PRIMACK Brain A.
Journal article citation:
Journal of School Health, 79(9), September 2009, pp.391-399.
Publisher:
John Wiley and Sons
This study explored characteristics of programmes deemed to be successful short-term Research-Tested Intervention Programs (RTIPs) by the National Cancer Institute (NCI) in the US. Two independently working researchers applied specified selection criteria to all programs in the NCI's RTIP database. Selected programs were abstracted using a structured form for general information, participants, interventions, outcomes, and quality. Extracted data were then assessed for common themes and contrasts in each category. As of June 2008, 18 studies met the NCI's standards for RTIPs preventing smoking among adolescents. After selection criteria were applied, only 5 programs remained. Each independently working researcher arrived at the same pool of programs. In chronological order according to date of publication of outcomes evaluation, the 5 programs ultimately included were Project Towards No Tobacco Use, Pathways to Health, Native FACETS, Kentucky Adolescent Tobacco Prevention Project, and Sembrando Salud. The majority of these programs were targeted toward a particular sociodemographic group (eg, American Indians, Hispanic migrant communities).

30. Group-based interventions may help teenagers stop smoking
NIHR Dissemination Centre 2018
NIHR Signal
doi: 10.3310/signal-000542
What did it find?

- There was evidence that interventions involving group counselling, some peer-led, were effective at stopping smoking after at least six months follow-up, pooled confidence interval [CI] 1.03 to 1.77), 1,910 participants in nine trials. About 19 in every 100 adolescents in the counselling group managed to stop compared to 14 in every 100 in the minimal control groups.
- Studies involving individual counselling as the intervention were not found to be effective, pooled RR 1.07 (95% CI 0.83 to 1.39).
- Studies involving computer-based interventions, interventions using text messaging or computer-based with face-to-face counselling interventions were not found to be effective for young people.
- The pooled outcomes of the drug-treatment interventions were also not found to be effective.

31. Behavioural incentive interventions for health behaviour change in young people (5-18years old): A systematic review and meta-analysis
Source: PubMed - 09 February 2018 - Publisher: Preventive Medicine
Abstract
Physical inactivity, an unhealthy diet, smoking, and alcohol consumption are key determinants of morbidity and mortality. These health behaviours often begin at a young age and track into adulthood, emphasising a need for interventions in children and young people. Previous research has demonstrated the potential effectiveness of behavioural incentive (BI) interventions in adults. However, little is known about their effectiveness in children and adolescents. Eight bibliographic databases were searched. Eligibility criteria included controlled trials using behavioural incentives (rewards provided contingent on successful performance of the target behaviour) as an intervention component for health behaviour change in children and adolescents. Intervention effects (standardised mean differences or odds ratios) were calculated and pooled by health behaviour, using a random effects model. Twenty-two studies were included (of n = 8392 identified), 19 of which were eligible for meta-analysis: physical activity (n = 8); healthier eating (n = 3); and smoking (n = 8). There was strong evidence that behavioural incentives may encourage healthier eating behaviours, some evidence that behavioural incentives were effective for encouraging physical activity behaviour, and limited evidence to support the use of behavioural incentives for smoking cessation and prevention in adolescents. Findings suggest that behavioural incentives may encourage uptake and initiation of healthy eating and physical activity in young people. However, this is a limited evidence base and a wide range of incentive designs have yet to be explored. Future research should further investigate the acceptability of these intervention approaches for young people.
PMID: 29432789 DOI: 10.1016/j.ypmed.2018.02.004

3.2 School based policies

32. Fletcher A, Willmott M, Langford R, White J, Poole R, Brown R, *et al.* Pilot trial and process evaluation of a multilevel smoking prevention intervention in further education settings. *Public Health Res* 2017;5(8)

Setting

Six UK FE institutions.

Participants

FE students aged 16–18 years.

Intervention

'The Filter FE' intervention. Staff working on Action on Smoking and Health Wales' 'The Filter' youth project applied existing staff training, social media and youth work resources in three intervention settings, compared with three control sites with usual practice. The intervention aimed to prevent smoking uptake by restricting the sale of tobacco to under-18s in local shops, implementing tobacco-free campus policies, training FE staff to deliver smoke-free messages, publicising The Filter youth project's online advice and support services, and providing educational youth work activities.

Main outcome measures

(1) The primary outcome assessed was the feasibility and acceptability of delivering and trialling the intervention. (2) Qualitative process data were analysed to explore student, staff and intervention team experiences of implementing and trialling the intervention. (3) Primary, secondary and intermediate (process) outcomes and economic evaluation methods were piloted.

Data sources

New students at participating FE settings were surveyed in September 2014 and followed up in September 2015. Qualitative process data were collected via interviews with FE college managers (n = 5) and the intervention team (n = 6); focus groups with students (n = 11) and staff (n = 5); and observations of intervention settings. Other data sources were semistructured observations of intervention delivery, intervention team records, 'mystery shopper' audits of local shops and college policy documents.

Results

The intervention was not delivered as planned at any of the three intervention settings, with no implementation of some community- and college-level components, and low fidelity of the social media component across sites. Staff training reached 28 staff and youth work activities were attended by 190 students across the three sites (< 10% of all eligible staff and students), with low levels of acceptability reported. Implementation was limited by various factors, such as uncertainty about the value of smoking prevention activities in FE colleges, intervention management weaknesses and high turnover of intervention staff. It was feasible to recruit, randomise and retain FE settings. Prevalence of weekly smoking at baseline was 20.6% and was 17.2% at follow-up, with low levels of missing data for all pilot outcomes.

Limitations

Only 17% of eligible students participated in baseline and follow-up surveys; the representativeness of student and staff focus groups is uncertain.

Conclusions

In this study, FE settings were not a supportive environment for smoking prevention activities because of their non-interventionist institutional cultures promoting personal responsibility. Weaknesses in intervention management and staff turnover also limited implementation. Managers accept randomisation but methodological work is required to improve student recruitment and retention rates if trials are to be conducted in FE settings.

33. School-based programmes for preventing smoking

Roger E Thomas, Julie McLellan, Rafael Perera

30 April 2013

Background

Helping young people to avoid starting smoking is a widely endorsed public health goal, and schools provide a route to communicate with nearly all young people. School-based interventions have been delivered for close to 40 years.

Objectives

The primary aim of this review was to determine whether school smoking interventions prevent youth from starting smoking. Our secondary objective was to determine which interventions were most effective. This included evaluating the effects of theoretical approaches; additional booster sessions; programme deliverers; gender effects; and multifocal interventions versus those focused solely on smoking.

Search methods

We searched the Cochrane Central Register of Controlled Trials (CENTRAL), the Cochrane Tobacco Addiction Group's Specialised Register, MEDLINE, EMBASE, PsyclNFO, ERIC, CINAHL, Health Star, and Dissertation Abstracts for terms relating to school-based smoking cessation programmes. In addition, we screened the bibliographies of articles and ran individual MEDLINE searches for 133 authors who had undertaken randomised controlled trials in this area. The most recent searches were conducted in October 2012.

Selection criteria

We selected randomised controlled trials (RCTs) where students, classes, schools, or school districts were randomised to intervention arm(s) versus a control group, and followed for at least six months. Participants had to be youth (aged 5 to 18). Interventions could be any curricula used in a school setting to deter tobacco use, and outcome measures could be never smoking, frequency of smoking, number of cigarettes smoked, or smoking indices.

Data collection and analysis

Two reviewers independently assessed studies for inclusion, extracted data and assessed risk of bias. Based on the type of outcome, we placed studies into three groups for analysis: Pure Prevention cohorts (Group 1), Change in Smoking Behaviour over time (Group 2) and Point Prevalence of Smoking (Group 3).

Main results

One hundred and thirty-four studies involving 428,293 participants met the inclusion criteria. Some studies provided data for more than one group.

Pure Prevention cohorts (Group 1) included 49 studies (N = 142,447). Pooled results at follow-up at one year or less found no overall effect of intervention curricula versus control (odds ratio (OR) 0.94, 95% confidence interval (CI) 0.85 to 1.05). In a subgroup analysis, the combined social competence and social influences curricula (six RCTs) showed a statistically significant effect in preventing the onset of smoking (OR 0.49, 95% CI 0.28 to 0.87; seven arms); whereas significant effects were not detected in programmes involving information only (OR 0.12, 95% CI 0.00 to 14.87; one study), social influences only (OR 1.00, 95% CI 0.88 to 1.13; 25 studies), or multimodal interventions (OR 0.89, 95% CI 0.73 to 1.08; five studies). In contrast, pooled results at longest follow-up showed an overall significant effect favouring the intervention (OR 0.88, 95% CI 0.82 to 0.96). Subgroup analyses detected significant effects in programmes with social competence curricula (OR 0.52, 95% CI 0.30 to 0.88), and the combined social competence and social influences curricula (OR 0.50, 95% CI 0.28 to 0.87), but not in those programmes with information only, social influence only, and multimodal programmes.

Change in Smoking Behaviour over time (Group 2) included 15 studies (N = 45,555). At one year or less there was a small but statistically significant effect favouring controls (standardised mean difference (SMD) 0.04, 95% CI 0.02 to 0.06). For follow-up longer than one year there was a statistically nonsignificant effect (SMD 0.02, 95% CI -0.00 to 0.02).

Twenty-five studies reported data on the Point Prevalence of Smoking (Group 3), though heterogeneity in this group was too high for data to be pooled.
We were unable to analyse data for 49 studies (N = 152,544).
Subgroup analyses (Pure Prevention cohorts only) demonstrated that at longest follow-up for all curricula combined, there was a significant effect favouring adult presenters (OR 0.88, 95% CI 0.81 to 0.96). There were no differences between tobacco-only and multifocal interventions. For curricula with booster sessions there was a significant effect only for combined social competence and social influences interventions with follow-up of one year or less (OR 0.50, 95% CI 0.26 to 0.96) and at longest follow-up (OR 0.51, 95% CI 0.27 to 0.96). Limited data on gender differences suggested no overall effect, although one study found an effect of multimodal intervention at one year for male students. Sensitivity analyses for Pure Prevention cohorts and Change in Smoking Behaviour over time outcomes suggested that neither selection nor attrition bias affected the results.
Authors' conclusions
Pure Prevention cohorts showed a significant effect at longest follow-up, with an average 12% reduction in starting smoking compared to the control groups. However, no overall effect was detected at one year or less. The combined social competence and social influences interventions showed a significant effect at one year and at longest follow-up. Studies that deployed a social influences programme showed no overall effect at any time point; multimodal interventions and those with an information-only approach were similarly ineffective.
Studies reporting Change in Smoking Behaviour over time did not show an overall effect, but at an intervention level there were positive findings for social competence and combined social competence and social influences interventions.

34. School policies for preventing smoking among young people

Coppo A, Galanti MR, Giordano L, Buscemi D, Bremberg S, Faggiano F. School policies for preventing smoking among young people. Cochrane Database of Systematic Reviews 2014, Issue 10. Art. No.: CD009990. DOI: 10.1002/14651858.CD009990.pub2
Background
School tobacco policies (STPs) might prove to be a promising strategy to prevent smoking initiation among adolescents, as there is evidence that the school environment can influence young people to smoke. STPs are cheap, relatively easy to implement and have a wide reach, but it is not clear whether this approach is effective in preventing smoking uptake.
Objectives
To assess the effectiveness of policies aiming to prevent smoking initiation among students by regulating smoking in schools.
Search methods
We searched seven electronic bibliographic databases, including the Cochrane Tobacco Addiction Group specialized register, MEDLINE, EMBASE, PsycINFO and ERIC. We also searched the grey literature and ongoing trials resources. The most recent search was performed in May 2014.
Selection criteria
We included cluster-randomised controlled trials (c-RCTs) in which primary and secondary schools were randomised to receive different levels of smoking policy or no intervention. Non-randomised controlled trials, interrupted time series and controlled before-after studies would also have been eligible. Cross-sectional studies were not formally included but we describe their findings and use them to generate hypotheses to inform future research.
Data collection and analysis
We independently assessed studies for inclusion in the review, and present a narrative synthesis, as the studies are too limited in quality to undertake a formal meta-analysis.
Main results

We found only one study which was eligible for inclusion in the review. It was judged to be at high risk of bias. The study compared two 'middle schools' from two different regions in China. The experimental conditions included the introduction of a tobacco policy, environmental changes, and communication activities, while the control condition was no intervention. After a year's follow-up the study found no differences in smoking prevalence between intervention and control schools. We also described 24 observational studies, the results of which we considered for hypothesis generation. In these, policy exposure was mainly described using face-to-face interviews with school staff members, and the outcome evaluation was performed using self-administered questionnaires. Most studies reported no differences in students' smoking prevalence between schools with formal STPs when compared with schools without policies. In the majority of studies in schools with highly enforced policies, smoking bans extended to outdoor spaces, involving teachers and including sanctions for transgressions, with assistance to quit for smokers plus support by prevention programmes, there was no significant difference in smoking prevalence when compared to schools adopting weaker or no policies.
Authors' conclusions
Despite a comprehensive literature search, and rigorous evaluation of studies, we found no evidence to support STPs. The absence of reliable evidence for the effectiveness of STPs is a concern in public health. We need well-designed randomised controlled trials or quasi-experimental studies to evaluate the effectiveness of school tobacco policies.

35. Asia Pac J Public Health. 2012 Sep;24(5):733-52. doi: 10.1177/1010539512445053. Epub 2012 May 16.
A systematic review of school-based interventions to prevent risk factors associated with noncommunicable diseases.
Saraf DS1, Nongkynrih B, Pandav CS, Gupta SK, Shah B, Kapoor SK, Krishnan A.
See also Dare record Centre for Reviews and Dissemination
A systematic review of school-based interventions to prevent risk factors associated with noncommunicable diseases
Saraf DS, Nongkynrih B, Pandav CS, Gupta SK, Shah B, Kapoor SK, Krishnan A
Study includes:
Tobacco prevention interventions (12 studies including 10 RCTs): Nine studies reported positive changes in smoking behaviour in favour of the intervention group.
Overall, the authors stated that studies that involved a family or community component showed significant changes in the intervention groups compared with control.
The authors also discussed the effects of specific intervention processes.
Authors' conclusions
School settings have the potential to play a pivotal role in promoting healthy lifestyles in the prevention and treatment of lifestyle-related chronic diseases. The ability of schools to deliver multi-faceted interventions that address the environment where children work and play is likely to be a key success factor.

3.3 packaging, advertising and sales

36. McNeill A, Gravely S, Hitchman SC, Bauld L, Hammond D, Hartmann-Boyce J. Tobacco packaging design for reducing tobacco use. Cochrane Database of Systematic Reviews 2017, Issue 4. Art. No.: CD011244. DOI: 10.1002/14651858.CD011244.pub2.

Abstract

BACKGROUND:

Tobacco use is the largest single preventable cause of death and disease worldwide. Standardised tobacco packaging is an intervention intended to reduce the promotional appeal of packs and can be defined as packaging with a uniform colour (and in some cases shape and size) with no logos or branding, apart from health warnings and other government-mandated information, and the brand name in a prescribed uniform font, colour and size. Australia was the first country to implement standardised tobacco packaging between October and December 2012, France implemented standardised tobacco packaging on 1 January 2017 and several other countries are implementing, or intending to implement, standardised tobacco packaging.

OBJECTIVES:

To assess the effect of standardised tobacco packaging on tobacco use uptake, cessation and reduction.

SEARCH METHODS:

We searched MEDLINE, Embase, PsycINFO and six other databases from 1980 to January 2016. We checked bibliographies and contacted study authors to identify additional peer-reviewed studies.

SELECTION CRITERIA:

Primary outcomes included changes in tobacco use prevalence incorporating tobacco use uptake, cessation, consumption and relapse prevention. Secondary outcomes covered intermediate outcomes that can be measured and are relevant to tobacco use uptake, cessation or reduction. We considered multiple study designs: randomised controlled trials, quasi-experimental and experimental studies, observational cross-sectional and cohort studies. The review focused on all populations and people of any age; to be included, studies had to be published in peer-reviewed journals. We examined studies that assessed the impact of changes in tobacco packaging such as colour, design, size and type of health warnings on the packs in relation to branded packaging. In experiments, the control condition was branded tobacco packaging but could include variations of standardised packaging.

DATA COLLECTION AND ANALYSIS:

Screening and data extraction followed standard Cochrane methods. We used different 'Risk of bias' domains for different study types. We have summarised findings narratively.

MAIN RESULTS:

Fifty-one studies met our inclusion criteria, involving approximately 800,000 participants. The studies included were diverse, including observational studies, between- and within-participant experimental studies, cohort and cross-sectional studies, and time-series analyses. Few studies assessed behavioural outcomes in youth and non-smokers. Five studies assessed the primary outcomes: one observational study assessed smoking prevalence among 700,000 participants until one year after standardised packaging in Australia; four studies assessed consumption in 9394 participants, including a series of Australian national cross-sectional surveys of 8811 current smokers, in addition to three smaller studies. No studies assessed uptake, cessation, or relapse prevention. Two studies assessed quit attempts. Twenty studies examined other behavioural outcomes and 45 studies examined non-behavioural outcomes (e.g. appeal, perceptions of harm). In line with the challenges inherent in evaluating standardised tobacco packaging, a number of methodological imitations were apparent in the included studies and overall we judged most studies to be at high or unclear risk of bias in at least one domain. The one included study assessing the impact of standardised tobacco packaging on smoking prevalence in Australia found a 3.7% reduction in odds when comparing before to after the packaging change, or a 0.5 percentage point

drop in smoking prevalence, when adjusting for confounders. Confidence in this finding is limited, due to the nature of the evidence available, and is therefore rated low by GRADE standards. Findings were mixed amongst the four studies assessing consumption, with some studies finding no difference and some studies finding evidence of a decrease; certainty in this outcome was rated very low by GRADE standards due to the limitations in study design. One national study of Australian adult smoker cohorts (5441 participants) found that quit attempts increased from 20.2% prior to the introduction of standardised packaging to 26.6% one year post-implementation. A second study of calls to quitlines provides indirect support for this finding, with a 78% increase observed in the number of calls after the implementation of standardised packaging. Here again, certainty is low. Studies of other behavioural outcomes found evidence of increased avoidance behaviours when using standardised packs, reduced demand for standardised packs and reduced craving. Evidence from studies measuring eye-tracking showed increased visual attention to health warnings on standardised compared to branded packs. Corroborative evidence for the latter finding came from studies assessing non-behavioural outcomes, which in general found greater warning salience when viewing standardised, than branded packs. There was mixed evidence for quitting cognitions, whereas findings with youth generally pointed towards standardised packs being less likely to motivate smoking initiation than branded packs. We found the most consistent evidence for appeal, with standardised packs rating lower than branded packs. Tobacco in standardised packs was also generally perceived as worse-tasting and lower quality than tobacco in branded packs. Standardised packaging also appeared to reduce misperceptions that some cigarettes are less harmful than others, but only when dark colours were used for the uniform colour of the pack.
AUTHORS' CONCLUSIONS:
The available evidence suggests that standardised packaging may reduce smoking prevalence. Only one country had implemented standardised packaging at the time of this review, so evidence comes from one large observational study that provides evidence for this effect. A reduction in smoking behaviour is supported by routinely collected data by the Australian government. Data on the effects of standardised packaging on non-behavioural outcomes (e.g. appeal) are clearer and provide plausible mechanisms of effect consistent with the observed decline in prevalence. As standardised packaging is implemented in different countries, research programmes should be initiated to capture long term effects on tobacco use prevalence, behaviour, and uptake. We did not find any evidence suggesting standardised packaging may increase tobacco use.

37. Interventions for preventing tobacco sales to minors

Lindsay F Stead, Tim Lancaster

Background
Laws restricting sales of tobacco products to minors exist in many countries, but young people may still purchase cigarettes easily.
Objectives
The review assesses the effects of interventions to reduce underage access to tobacco by deterring shopkeepers from making illegal sales.
Search methods
We searched the Cochrane Tobacco Addiction group trials register, MEDLINE and EMBASE. Date of the most recent searches: April 2008.
Selection criteria
We included controlled trials and uncontrolled studies with pre- and post-intervention assessment of interventions to change retailers' behaviour. The outcomes were changes in retailer compliance with legislation (assessed by test purchasing), and changes in young people's smoking behaviour and their perceived ease of access to tobacco products.
Data collection and analysis

Studies were prescreened for relevance by one person and assessed for inclusion by two people independently. Data from included studies were extracted by one person and checked by a second. Study designs and types of intervention were heterogeneous so results were synthesised narratively, with greater weight given to controlled studies.
Main results
We identified 35 studies of which 14 had data from a control group for at least one outcome. Giving retailers information was less effective in reducing illegal sales than active enforcement and/or multicomponent educational strategies. No strategy achieved complete, sustained compliance. In three controlled trials, there was little effect of intervention on youth perceptions of access to tobacco products or prevalence of youth smoking.
Authors' conclusions
Interventions with retailers can lead to large decreases in the number of outlets selling tobacco to youths. However, few of the communities studied in this review achieved sustained levels of high compliance. This may explain why there is limited evidence for an effect of intervention on youth perception of ease of access to tobacco, and on smoking behaviour.

38. Szatkowski L, Taylor J, Taylor A, Lewis S, Britton J, McNeill A, *et al.* Development and evaluation of an intervention providing insight into the tobacco industry to prevent smoking uptake: a mixed-methods study. *Public Health Res* 2016;4(9)
University of York Centre for Reviews and Dissemination
Development and evaluation of an intervention providing insight into the tobacco industry to prevent smoking uptake: a mixed-methods study
Health Technology Assessment (HTA) Database.2016
Szatkowski L, Taylor J, Taylor A, Lewis S, Britton J, McNeill A, Bauld L, Wu Q, Parrott S, Jones L, Bains M
Design: Mixed-methods, non-randomised controlled study. Component 1 was delivered to Year 7 students, and student focus groups and teacher interviews were conducted to refine the lessons and to develop components 2 and 3. The revised Year 7 lessons and accompanying family booklet were delivered to new Year 7 students 1 year later in one school only; Year 8 students in both schools received the booster session.
Setting and participants: Students in Years 7–8 (aged 11–13 years) in two UK schools.
Intervention: A three-component intervention comprising (1) three 50-minute classroom-based sessions in Year 7 in which students acted as secret agents to uncover industry practices through videos, quizzes, discussions and presentations; (2) an accompanying family booklet containing activities designed to stimulate discussions about smoking between parents and students; and (3) a 1-hour interactive classroom-based booster session for Year 8 students, in which students learnt about tobacco marketing strategies from the perspectives of an industry executive, a marketing company and a health campaigner.
Main outcome measures: Odds ratios to compare the self-reported prevalence of ever smoking and susceptibility to smoking in Year 8 students after the delivery of the booster session in study schools compared with students in local control schools. Qualitative data on acceptability of the intervention.
Results: The combined prevalence of ever smoking and susceptibility increased from 18.2% in Year 7 to 33.8% in Year 8. After adjusting for confounders there was no significant difference in the odds of a Year 8 student in an intervention school being an ever smoker or susceptible never smoker compared with controls [adjusted odds ratio (aOR) 1.28, 95% confidence interval (CI) 0.83 to 1.97; p = 0.263] and no significant difference in the odds of ever smoking (aOR 0.82, 95% CI 0.42 to 1.58; p = 0.549). Students
mostly enjoyed the intervention and acquired new knowledge that appeared to strengthen their aversion to smoking. Teachers liked the ‘off-the-shelf’ nature of the resource, although they

highlighted differences by academic ability in the extent to which students understood the messages being presented. Use of the family component was low but it was received positively by those parents who did engage with it.
Limitations: Logistical difficulties meant that students' responses in Year 7 and Year 8 could not be linked; however, baseline smoking behaviours differed little between intervention and control schools, and analyses were adjusted for confounders measured at follow-up.
Conclusions: Operation Smoke Storm is an acceptable resource for delivering smoking-prevention education but it does not appear to have reduced smoking and susceptibility.
Future work: The lack of a strong signal for potential effectiveness, considered alongside logistical difficulties in recruiting and working with schools, suggests that a fully powered cluster randomised trial of the intervention is not warranted.
Funding: The National Institute for Health Research (NIHR) Public Health Research programme

39. Richardson L, Hemsing N, Greaves L, et al. Preventing smoking in young people: a systematic review of the impact of access interventions. *Int J Environ Res Public Health*. 2009;6(4):1485-514.
Aims:
To examine existing evidence on the effectiveness of interventions that are designed to prevent the illegal sale of tobacco to young people. The review considers specific sub-questions related to the factors that might influence effectiveness, any differential effects for different sub-populations of youth, and barriers and facilitators to implementation.
Methods:
A review of studies on the impact of interventions on young people under the age of 18 was conducted. It included interventions that were designed to prevent the illegal sale of tobacco to children and young people. The review was conducted in July 2007, and included 20 papers on access restriction studies. The quality of the papers was assessed and the relevant data was extracted.
Results:
The evidence obtained from the review indicates that access restriction interventions may produce significant reductions in the rate of illegal tobacco sales to youth. However, lack of enforcement and the ability of youth to acquire cigarettes from social sources may undermine the effectiveness of these interventions.
Conclusions:
When access interventions are applied in a comprehensive manner, they can affect young people's access to tobacco. However, further research is required to examine the effects of access restriction interventions on young people's smoking behaviour.

40. Would vaccination against nicotine be a cost-effective way to prevent smoking uptake in adolescents?
NHS Economic Evaluation Database.2012
Centre for Reviews and Dissemination, York commentary
See also the original article:
Gartner CE, Barendregt JJ, Wallace A, Hall WD. Would vaccination against nicotine be a cost-effective way to prevent smoking uptake in adolescents? Addiction 2012; 107(4): 801-809
Authors' conclusions
The authors concluded that a nicotine vaccination programme to prevent smoking was unlikely to be cost-effective.
CRD commentary
Interventions:
The vaccination programme was described, and was appropriately compared with no vaccination.

Effectiveness/benefits:
No systematic search of the literature was reported, making it unclear if all the relevant clinical data were used. The authors did not describe the two phase two trials of nicotine vaccines that supplied the clinical estimates, but they referred to an online appendix, for more details. These trials reported the effectiveness and discontinuation rates with the vaccination programme, but the data were uncertain, so the authors varied these estimates. Other estimates of effectiveness were from Australian observational studies and reports.
Costs:
The perspective was not explicitly reported, making it impossible to determine if all the relevant costs were included. A very limited cost analysis was performed, including only the costs of the vaccination programme. The treatment of smoking related-disease was omitted, and this could have made vaccination more cost-effective. The currency and discount rate were reported, but the price year was not, which will hinder future reflation exercises. Further details of the costing methods were available in an appendix.
Analysis and results:
The details of the model were provided with a diagram. The authors did not report the costs and benefits separately, but presented the results of the incremental analysis, with the costs and benefits combined. Uncertainty in the model's results was exhaustively tested in one-way and probabilistic sensitivity analyses, as well as threshold analyses. As the main limitation to their study the authors reported that they did not consider the use of the vaccine for smoking cessation, which could improve its cost-effectiveness.
Concluding remarks:
Overall, the methods were adequate. The authors did not include the costs of the treatment of smoking-related disease, but their inclusion is unlikely to alter the conclusions, given the small impact of the vaccine on the smoking outcomes.

41. Leonardi-Bee J, Nderi M, Britton J. Smoking in movies and smoking initiation in adolescents: systematic review and meta-analysis.
Addiction. 2016 Oct;111(10):1750-63. doi: 10.1111/add.13418. Epub 2016 May 26.
BACKGROUND AND AIMS:
Preventing young people from initiating smoking is a vital public health objective. There is strong evidence that exposure to smoking imagery in movies is associated with an increased risk of smoking uptake. However, the estimate of the magnitude of effect is not clear, as previous reviews have synthesized estimates of cross-sectional and longitudinal associations. Therefore, we have performed a systematic review to quantify cross-sectional and longitudinal associations between exposure to smoking in movies and initiating smoking in adolescents.
METHODS:
Four electronic databases (MEDLINE, EMBASE, PsycINFO and International Bibliography of the Social Sciences, IBSS) and grey literature were searched from inception to May 2015 for comparative epidemiological studies (cross-sectional and cohort studies) that reported the relation between exposure to smoking in movies and smoking initiation in adolescence (10-19 years). Reference lists of studies and previous reviews were also screened. Two authors screened papers and extracted data independently.
RESULTS:
Seventeen studies met our inclusion criteria. Random-effects meta-analysis of nine cross-sectional studies demonstrated higher exposure (typically highest versus lowest quantile) to smoking in movies was associated significantly with a doubling in risk of ever trying smoking [relative risk (RR) = 1.93, 95% confidence interval (CI) = 1.66-2.25]. In eight longitudinal studies (all deemed high quality), higher exposure to smoking in movies was associated significantly with a 46% increased risk of initiating smoking (RR = 1.46; 95% CI = 1.23-1.73). These pooled estimates were significantly

different from each other (P = 0.02). Moderate levels of heterogeneity were seen in the meta-analyses.
CONCLUSIONS:
The cross-sectional association between young people reporting having seen smoking imagery in films and smoking status is greater than the prospective association. Both associations are substantial, but it is not clear whether or not they are causal.

42. Title: Perceptions of health risk and smoking decisions of young people.
Citation: Health Economics, July 2012, vol./is. 21/7(865-77), 1057-9230;1099-1050 (2012 Jul)
Author(s): Gerking S, Khaddaria R
Language: English
Abstract: Using the Annenberg Perception of Tobacco Risk Survey 2, this paper finds that perceived risk deters smoking among persons aged 14-22 years who think that it is relatively difficult to quit smoking and that onset of deleterious health effects occurs relatively quickly. Perceived health risk, however, does not affect the smoking status of young people who hold the opposite beliefs. These results are consistent with predictions of rational addiction models and suggest that young people, who view smoking as more addictive and health effects as more immediate, may have greater incentive to consider long-term health effects in their decision to smoke. Copyright 2011 John Wiley & Sons, Ltd.
Publication Type: Journal Article, Research Support, Non-U.S. Gov't
Source: MEDLINE

3.4 e-cigarettes and others

43. JAMA. 2015 Aug 18;314(7):700-7. doi: 10.1001/jama.2015.8950.
Association of Electronic Cigarette Use With Initiation of Combustible Tobacco Product Smoking in Early Adolescence.
Leventhal AM1, Strong DR2, Kirkpatrick MG3, Unger JB3, Sussman S4, Riggs NR5, Stone MD3, Khoddam R1, Samet JM3, Audrain-McGovern J6.
Author information
IMPORTANCE:
Exposure to nicotine in electronic cigarettes (e-cigarettes) is becoming increasingly common among adolescents who report never having smoked combustible tobacco.
OBJECTIVE:
To evaluate whether e-cigarette use among 14-year-old adolescents who have never tried combustible tobacco is associated with risk of initiating use of 3 combustible tobacco products (ie, cigarettes, cigars, and hookah).
DESIGN, SETTING, AND PARTICIPANTS:
Longitudinal repeated assessment of a school-based cohort at baseline (fall 2013, 9th grade, mean age = 14.1 years) and at a 6-month follow-up (spring 2014, 9th grade) and a 12-month follow-up (fall 2014, 10th grade). Ten public high schools in Los Angeles, California, were recruited through convenience sampling. Participants were students who reported never using combustible tobacco at baseline and completed follow-up assessments at 6 or 12 months (N = 2530). At each time point, students completed self-report surveys during in-classroom data collections.
EXPOSURE:
Student self-report of whether he or she ever used e-cigarettes (yes or no) at baseline.

MAIN OUTCOMES AND MEASURES:

Six- and 12-month follow-up reports on use of any of the following tobacco products within the prior 6 months: (1) any combustible tobacco product (yes or no); (2) combustible cigarettes (yes or no), (3) cigars (yes or no); (4) hookah (yes or no); and (5) number of combustible tobacco products (range: 0-3).

RESULTS:

Past 6-month use of any combustible tobacco product was more frequent in baseline e-cigarette ever users (n = 222) than never users (n = 2308) at the 6-month follow-up (30.7% vs 8.1%, respectively; difference between groups in prevalence rates, 22.7% [95% CI, 16.4%-28.9%]) and at the 12-month follow-up (25.2% vs 9.3%, respectively; difference between groups, 15.9% [95% CI, 10.0%-21.8%]). Baseline e-cigarette use was associated with greater likelihood of use of any combustible tobacco product averaged across the 2 follow-up periods in the unadjusted analyses (odds ratio [OR], 4.27 [95% CI, 3.19-5.71]) and in the analyses adjusted for sociodemographic, environmental, and intrapersonal risk factors for smoking (OR, 2.73 [95% CI, 2.00-3.73]). Product-specific analyses showed that baseline e-cigarette use was positively associated with combustible cigarette (OR, 2.65 [95% CI, 1.73-4.05]), cigar (OR, 4.85 [95% CI, 3.38-6.96]), and hookah (OR, 3.25 [95% CI, 2.29-4.62]) use and with the number of different combustible products used (OR, 4.26 [95% CI, 3.16-5.74]) averaged across the 2 follow-up periods.

CONCLUSIONS AND RELEVANCE:

Among high school students in Los Angeles, those who had ever used e-cigarettes at baseline compared with nonusers were more likely to report initiation of combustible tobacco use over the next year. Further research is needed to understand whether this association may be causal.

Comment in

- e-Cigarette Use and Subsequent Tobacco Use by Adolescents: New Evidence About a Potential Risk of e-Cigarettes. [JAMA. 2015]
- Teens who use e-cigarettes are more likely to take up smoking, US study finds. [BMJ. 2015]
- Do young e-cigarette users become smokers? [Arch Dis Child. 2015]
- Association of e-Cigarette Vaping and Progression to Heavier Patterns of Cigarette Smoking. [JAMA. 2016]
- E-cigarette use associated with tobacco smoking. [J Pediatr. 2016]

44. More than half of adolescent E-Cigarette users had never smoked a cigarette: findings from a study of school children in the UK

E. Fulton'Correspondence information about the author E. FultonEmail the author E. Fulton, K. Gokal, S. Griffiths, S. Wild

DOI: https://doi.org/10.1016/j.puhe.2018.04.014

Highlights

•More than half of adolescent electronic cigarette (EC) users had not used tobacco.
•Many young people were unaware that ECs contain nicotine and are, therefore, addictive.
•Further research is needed to establish whether EC users are at risk of smoking initiation.
•Education regarding the risks of experimentation may be warranted.

Abstract

Objectives

Electronic cigarettes (ECs) are known for their use as a smoking cessation aid; however, experimental use in adolescence is a growing international concern. The proportion of adolescent EC users who have never used tobacco is rising. EC use is associated with later tobacco initiation in

young people. Understanding adolescent beliefs about ECs is needed to inform public health campaigns and school education regarding the EC and the associated risks.
Study design
A cross-sectional questionnaire-based design was used.
Methods
As part of a larger study, questionnaires to assess beliefs about ECs and current use were distributed to 499 school pupils aged 11–16 years in a county in England, UK.
Results
More than half of EC users had never used tobacco (52.6%), a substantially greater proportion than previously reported in the literature. Adolescents were aware that ECs were less harmful than tobacco but many were unaware that they contain nicotine and the subsequent risk of addiction could lead to later tobacco use.
Conclusions
Given the possible association of EC use and later smoking initiation, education in schools may warrant greater emphasis on ECs, the role of nicotine and the risk of addiction associated with experimentation. Young people who deem ECs as a 'safe' option, and may otherwise have never experimented with tobacco, could be at risk of later tobacco use.

45. Soneji S, Barrington-Trimis JL, Wills TA, et al. Association Between Initial Use of e-Cigarettes and Subsequent Cigarette Smoking Among Adolescents and Young AdultsA Systematic Review and Meta-analysis. *JAMA Pediatr.* 2017;171(8):788–797. doi:10.1001/jamapediatrics.2017.1488

Key Points
Question Is there an association between e-cigarette use and cigarette smoking among adolescents and young adults?
Finding A systematic review and meta-analysis showed strong and consistent evidence of an association between initial e-cigarette use and subsequent cigarette smoking initiation, as well as between past 30-day e-cigarette use and subsequent past 30-day cigarette smoking.
Meaning To minimize the potential public health harm from e-cigarette use, the US Food and Drug Administration, as well as state and local agencies, will need to engage in effective regulatory actions to discourage youths' use of e-cigarettes and prevent the transition from e-cigarettes to other combustible tobacco products.
Abstract
Importance The public health implications of e-cigarettes depend, in part, on whether e-cigarette use affects the risk of cigarette smoking.
Objective To perform a systematic review and meta-analysis of longitudinal studies that assessed initial use of e-cigarettes and subsequent cigarette smoking.
Data Sources PubMed, EMBASE, Cochrane Library, Web of Science, the 2016 Society for Research on Nicotine and Tobacco 22nd Annual Meeting abstracts, the 2016 Society of Behavioral Medicine 37th Annual Meeting & Scientific Sessions abstracts, and the 2016 National Institutes of Health Tobacco Regulatory Science Program Conference were searched between February 7 and February 17, 2017. The search included indexed terms and text words to capture concepts associated with e-cigarettes and traditional cigarettes in articles published from database inception to the date of the search.
Study Selection Longitudinal studies reporting odds ratios for cigarette smoking initiation associated with ever use of e-cigarettes or past 30-day cigarette smoking associated with past 30-day e-cigarette use. Searches yielded 6959 unique studies, of which 9 met inclusion criteria (comprising 17 389 adolescents and young adults).

Data Extraction and Synthesis Study quality and risk of bias were assessed using the Newcastle-Ottawa Scale and the Risk of Bias in Non-randomized Studies of Interventions tool, respectively. Data and estimates were pooled using random-effects meta-analysis.
Main Outcomes and Measures Among baseline never cigarette smokers, cigarette smoking initiation between baseline and follow-up. Among baseline non–past 30-day cigarette smokers who were past 30-day e-cigarette users, past 30-day cigarette smoking at follow-up.
Results Among 17 389 adolescents and young adults, the ages ranged between 14 and 30 years at baseline, and 56.0% were female. The pooled probabilities of cigarette smoking initiation were 23.2% for baseline ever e-cigarette users and 7.2% for baseline never e-cigarette users. The pooled probabilities of past 30-day cigarette smoking at follow-up were 21.5% for baseline past 30-day e-cigarette users and 4.6% for baseline non–past 30-day e-cigarette users. Adjusting for known demographic, psychosocial, and behavioral risk factors for cigarette smoking, the pooled odds ratio for subsequent cigarette smoking initiation was 3.50 (95% CI, 2.38-5.16) for ever vs never e-cigarette users, and the pooled odds ratio for past 30-day cigarette smoking at follow-up was 4.28 (95% CI, 2.52-7.27) for past 30-day e-cigarette vs non–past 30-day e-cigarette users at baseline. A moderate level of heterogeneity was observed among studies (I2 = 56%).
Conclusions and Relevance e-Cigarette use was associated with greater risk for subsequent cigarette smoking initiation and past 30-day cigarette smoking. Strong e-cigarette regulation could potentially curb use among youth and possibly limit the future population-level burden of cigarette smoking.

46. Pediatr Clin North Am. 2015 Oct;62(5):1159-72. doi: 10.1016/j.pcl.2015.05.003. Epub 2015 Jul 7.Systematic Review to Inform Dual Tobacco Use Prevention. Evans WD1, Horn KA2, Gray T1.
With more tobacco products now available and heavily marketed, dual tobacco use is increasing among youth. We systematically reviewed literature on dual tobacco use interventions, with an emphasis on mass health communication strategies. The review identified 46 articles meeting initial criteria and ultimately included 8 articles. Included studies reported a mix of health communication and social marketing techniques. Although there is a body of research on dual tobacco use, there is limited literature describing interventions aimed at controlling it. Design and evaluation of such interventions showing reductions in dual use of cigarettes, smokeless, and alternative products would advance the field.
PMID: 26318945 DOI: 10.1016/j.pcl.2015.05.003

47. **Interventions for waterpipe smoking cessation**
Wasim Maziak, Mohammed Jawad, Sena Jawad, Kenneth D Ward, Thomas Eissenberg, Taghrid Asfar
31 July 2015
Abstract - Background
Waterpipe tobacco smoking is a traditional method of tobacco use, especially in the Eastern Mediterranean Region (EMR), but its use is now spreading worldwide. Recent epidemiological data, for example, show that waterpipe smoking has become the most prevalent tobacco use method among adolescents in.

2. Implementation studies

48. **Tobacco control delivery plan for Wales 2017 to 2020**
Policy and strategy
What we are doing to reduce the number of people smoking.
2017
Page 10-18

Action Area 2: Preventing the uptake of smoking
The best way of stopping smoking is to never start. It is important that young people are supported to choose not to smoke in order to protect their health, and increase the chances of future generations becoming smoke-free.
This section of the plan also focuses on nicotine addiction. We recognise the benefits of switching to other nicotine delivery products for those who are smoking tobacco but there is international consensus that we should be discouraging use of ecigarettes and other novel products, among the young. This is particularly the case in the current period of uncertainty while we seek to understand more about the complex inter-relationship between experimentation with a range of substances, including ecigarettes, and tobacco use.

49. Young scots support a Smoke-free generation by 2034
The youth commission on smoking prevention's Final report to the scottish government in 2014
FULL REPORT
The purpose of the Youth Commission on Smoking Prevention (YCSP) is to aid the Scottish Government
in the creation of a smoke free generation for Scotland by the year 2034 by reducing the number of smokers to less than 5% of the population. The year 2034 was chosen based on the fact that a child
born in 2013 will be 21 at this time and will be the next generation of Scotland's adults.

The YCSP is a group of 17 young people aged between 12 – 22 who come from various regions of Scotland and also have a combination of different backgrounds; allowing us to have a wide range of personal experiences to call upon. We first came together on 25 May 2013 and in a year we have shown our determination and passion to create
measurable change. We have achieved this through extensive research and attendance at conferences that have allowed us to create recommendations which we are eager to share with you in this report.

50. NHS Grampian
Smoking Prevention / Tobacco Control in Local Authority Educational Settings: Guidance for Grampian
Contents
Page

51. 'Smokefree Class Competition'

Network

Co-funded by the European Commission from 1997 to 2009, a network of partners from up to 22 European Countries engaged in implementing a school-based intervention to prevent smoking: the "Smokefree Class Competition" (SFC). The network was co-ordinated by the Institute for Therapy and Health Research (IFT-Nord), Germany.

Intervention

The idea of SFC was first established in Finland in 1989. SFC is especially conceptualized for schools and carried out as a competition for pupils aged 11 to 14 years. The concept and materials are attractive and can be easily integrated in many different subjects.

Evaluation

Several process and outcome evaluation studies have been carried out in the European participating countries demonstrating high acceptance and practicability of the program as well as giving hints for effects of participation in the competition in reducing smoking among adolescents. In addition, a cost-effectiveness study shows that SFC is a cost-effective school-based intervention.

52. Tobacco-free generations : protecting children from tobacco in the WHO European Region [PDF]
Source: WHO Regional Office for Europe - WHO Europe - 28 April 2017 - Publisher: WHO Regional Office for Europe (WHO Europe)

Case studies: paving the way to a tobacco-free generation 18

Tobacco denormalization in Ireland 19
Peer-based interventions in the United Kingdom 21
Addressing tobacco-related health inequities in
United Kingdom (Scotland) 21
Reducing families' exposure to second-hand smoke in
the home (REFRESH) project in United Kingdom (Scotland) 23
The tobacco-free generation proposal 23

53. Unplugged https://www.eudap.net/Home.aspx

54. Youth - ASSIST - Smokefreelife Nottinghamshire
https://www.smokefreelifenottinghamshire.co.uk/Youth-ASSIST.aspx
Nottinghamshire **County Council** ... Although many youths think about and attempt to quit tobacco, many are unaware of, or unable to access cessation services. Also, many ... innovative and highly effective smoking **prevention** programme which aims to reduce the potential of **adolescent smoking** prevalence within schools.

ASSIST (A Stop Smoking in Schools Trial): Randomised controlled trial of the effectiveness of a schools-based, peer-led, smoking intervention
http://decipher.uk.net/research-page/assist/
This page includes links to the journal write ups of all the ASSIST trials.
The work on this seems to date from 2012 backwards to assume it has been incorporated into NICE guidelines already.

Hollingworth W, Cohen D, Hawkins J, Hughes RA, Moore L, Holliday JC, Audrey S, Starkey F, Campbell R (2012). 'Reducing Smoking in Adolescents: Cost-Effectiveness Results From the Cluster Randomized ASSIST (A Stop Smoking In Schools Trial)'*Nicotine and Tobacco Research* 14 (2):161-168.

Hollingworth W, Cohen D, Hawkins J, Hughes RA, Moore L, Holliday JC, Audrey S, Starkey F, Campbell R (2012). 'Reducing Smoking in Adolescents: Cost-Effectiveness Results From the Cluster Randomized ASSIST (A Stop Smoking In Schools Trial)'*Nicotine and Tobacco Research* 14 (2):161-168.

The ASSIST programme aims to reduce smoking amongst young people aged 12-13 (Year 8) by training influential students to disseminate new norms of behaviour through their established social networks. It has been rigorously evaluated as A Stop Smoking in Schools Trial, funded by the Medical Research Council, which took place in 59 secondary schools in South Wales and the South-West of England.
For further information on the programme, please contact Sarah Marlow:
sarah.marlow@nottscc.gov.uk

55. http://www.freshne.com/#
FRESH north East
Fresh was the UK's first dedicated regional tobacco control programme, set up in the North East in 2005 to tackle the worst rates of smoking-related illness and death in the country. Since then the North East has seen the largest fall in smoking in England, a fall of 41% from 2005 to 2016 with around 218,000 fewer smokers. Currently 17.2% of North East adults are regular smokers.

We are delivering a programme of eight key strands of activity which are all designed to work together to motivate and support current smokers to stop, to reduce the numbers of young people taking up smoking and to provide protection to non-smokers from secondhand smoke harm.
Our Work »
Building infrastructure, skills and capacity
Reducing exposure to secondhand smoke
Helping smokers to quit
Media, communications and education
Reducing availability and supply
Reducing tobacco promotion
Tobacco regulation
Research, monitoring and evaluation

Our Campaigns »
Every Breath
Don't be the 1
Quit 16
Keep It Out
Stoptober

56. Int J Environ Res Public Health. 2016 Jun; 13(6): 593.
Published online 2016 Jun 15. doi: [10.3390/ijerph13060593]
PMCID: PMC4924050
PMID: 27314373
Smoking and Looked-After Children: A Mixed-Methods Study of Policy, Practice, and Perceptions Relating to Tobacco Use in Residential Units
Lisa Huddlestone,1,* Catherine Pritchard,1 and Elena Ratschen2
Despite the implementation of smoke-free policies by local authorities and a statutory requirement to promote the health and well-being of looked-after children and young people in England, rates of tobacco use by this population are substantially higher than in the general youth population. A mixed-methods study, comprising a survey of residential care officers in 15 local authority-operated residential units and semi-structured, face-to-face interviews with residential carers in three local authority-operated residential units, was conducted in the East Midlands. Survey data were descriptively analysed; and interview data were transcribed and analysed using thematic framework analysis. Forty-two care officers (18% response rate) completed the survey, and 14 participated in

the interviews. Despite reporting substantial awareness of smoke-free policies, a lack of adherence and enforcement became apparent, and levels of reported training in relation to smoking and smoking cessation were low (21%). Potential problems relating to wider tobacco-related harms, such as exploitative relationships; a reliance on tacit knowledge; and pessimistic attitudes towards LAC quitting smoking, were indicated. The findings highlight the need for the development of comprehensive strategies to promote adherence to and enforcement of local smoke-free policy within residential units for looked-after children and young people, and to ensure appropriate support pathways are in place for this population.

57. Teen smoking: 10 ways to keep teens smoke-free - Mayo Clinic
"Mayo Clinic is a non profit organization committed to clinical practice, education and research, providing expert, whole-person care to everyone who needs healing."
Teen smoking: 10 ways to keep teens smoke-free
Want to prevent teen smoking? Understand why teens smoke and how to talk to your teen about cigarettes.
By Mayo Clinic Staff

58. ASH Scotland Evidence for youth smoking prevention measures May 2011
References include evidence submissions and qualitative studies of effectiveness.
Key points:
• There is a range of published evidence which demonstrates that point of sale displays of tobacco are associated with youth smoking uptake and some evidence that displays elicit cravings and potentially relapse in ex-smokers
• There is encouraging preliminary evidence from countries that have longstanding display bans that they may contribute towards declining youth smoking prevalence
• Young people in Scotland self-report access to tobacco products through vending machines, and enforcement test purchase activity indicates underage sale is frequently possible; outright prohibition of tobacco vending machines is a more effective means of reducing access than locking restrictions
• A registration scheme and system of fixed penalty notices will facilitate more effective enforcement activity, and puts tobacco more in line with other age restricted products
• There is evidence that proxy purchase is used in Scotland by young people to circumvent age restrictions but no direct evidence on the effectiveness of criminalising the purchaser as a means to prevent this circumvention
• Making underage purchase illegal may be a deterrent to youth access, though the American studies that support this theory may not generalise to Scotland

59. ASH toolkit: The case for local action on tobacco
The Local Toolkit is a set of materials for local public health professionals involved in tobacco control. It was created by ASH, the Faculty of Public Health, the Local Government Association and FRESH North East. The materials are designed for use with Councillors and other stakeholders to help ensure that tackling tobacco use is high on the local public health agenda.
Together these resources will allow you to:
demonstrate the scale of the harm locally caused by tobacco use and the contribution this makes to health inequalities,
demonstrate the cost to local communities, local economies and service providers,
demonstrate the evidence of effectiveness of local action on tobacco and health, including tobacco control work and local stop smoking services.

The materials are designed for you easily to integrate local data from local tobacco control profiles and from the ASH Ready Reckoner, a tool for demonstrating the local economic impacts of smoking and tobacco use.
Making the case for strong local tobacco control
This document is designed to help you make the case for evidence based local tobacco control.

60. Doctors back cigarette ban to those born after 2000. London: British Medical Association; 2014 (https://www.bma.org.uk/news/2014/june/doctors-back-cigarette-ban-to-those-bornafter-2000).

61. Making a public health case for investing in prevention and early intervention initiatives to tackle substance misuse Smoking prevention among young people
"About Mentor
Mentor is the UK's leading charity dedicated to protecting young people from drug and alcohol harms. We review research from around the world, test promising approaches and work to translate best policy and practice into evidence based national and local services."
Second half contains recommendations and references, mainly from the Drug Education Forum

62. Science and Technology Committee Inquiry into the Impact of social media and screen-use on young people's health Written evidence from ASH and the UK Centre for Tobacco and Alcohol Studies
01 April 2018 -
. Publisher: Action on Smoking and Health (ASH)
Recommendations to central government and BBC

63. Smoking and Tobacco Use (CDC): Provides resources for individuals, children and adolescents, and researchers and scientists.

64. teen.smokefree.gov (NIH): Provides resources to help teens quit smoking.

3. Search strategy

www.evidence.nhs.uk
smoking prevention initiation adolescent young

https://www.cochranelibrary.com/search
'smoking prevention adolescent in Title Abstract Keyword

www.tripdatabase.com
smoking prevention intervention
TripPro
tobacco prevention initiation adolescen
(adolescen* smoking) (prevention or initiation) ("county council") from:2008
(adolescen* smoking) ("county council") from:2008

Google
adolescents taking up initiating smoking prevent programmes
(adolescent OR young people OR youth) AND (take up OR taking up OR initiat*) AND smoking
(adolescen* smoking) (prevention OR initiation) ("county council" OR "local authority")

Kent County Council
Equality Analysis/ Impact Assessment (EqIA)

Directorate/ Service: Strategic Commissioning/ Public Health

Name of decision, policy, procedure, project or service: Tobacco Dependency Needs Assessment

Responsible Owner/ Senior Officer: Andrew Scott-Clark

Version: January 10th V1 Claire Mulrenan
January 14th 2018 V2 Claire Mulrenan (edits from Andrew Scott-Clark)
January 15th 2018 V3 Claire Mulrenan (response to feedback-Akua Agyepong)
January 15th 2018 Final version by Claire Mulrenan

Author: Claire Mulrenan

Pathway of Equality Analysis:

- Undertaking of Health Needs Assessment October 2018- January 2019
- Presentation to Health Reform and Public Health Cabinet Committee 15th January 2019

Summary and recommendations of equality analysis/impact assessment.

- **Context**

A health needs assessment seeks to identify differences in the population's health needs, including protected characteristics.

Smoking is the leading cause of health inequalities and the leading risk factor for burden of disease in Kent and Medway. It has been identified as a priority in the Sustainability Transformation partnerships prevention plan.

The tobacco dependency needs assessment offers a review of the smoking status of the population of Kent. The report also looks at the performance of current smoking cessation services and outlines a proposal to ensure we achieve our target reductions in smoking prevalence by 2022.

Data available suggest there is variation in smoking prevalence by age, gender, disability, race/ethnicity and pregnancy. There is variation in service use by age, gender and pregnancy. For certain protected characteristics, trends are unknown.

- **Aims and Objectives**

The needs assessment presents an executive summary of the findings and emerging themes and will inform the commissioning of the smoking cessation services.

- **Summary of equality impact**

Adverse Equality Impact Rating Low

Attestation
I have read and paid due regard to the Equality Analysis/Impact Assessment concerning the tobacco dependency needs assessment in Kent. I agree with risk rating and the actions to mitigate any adverse impact(s) that has /have been identified.

Head of Service

Signed: 

Name: Andrew Scott-Clark

Job Title: Director of Public Health

Date: 15th January 2019

DMT Member

Signed:

Name:

Job Title:

Date:

Part 1 Screening

Could this policy, procedure, project or service, or any proposed changes to it, affect any Protected Group (listed below) less favourably (negatively) than others in Kent?

Could this policy, procedure, project or service promote equal opportunities for this group?

Protected Group	Please provide a brief commentary on your findings. Fuller analysis should be undertaken in Part 2.			
	High negative impact EqIA	**Medium negative impact** Screen	**Low negative impact** Evidence	**High/Medium/Low Positive Impact** Evidence
Age		25-29 year olds are the group most likely to smoke. Individuals aged 16-24 years are less likely to access smoking cessation services and set a quit date.		Proposed expansion of service to include GP and online support for those unwilling/unable to access traditional cessation services. Medium
Disability	Smoking among Kent adults with a serious mental illness is significantly higher than prevalence in the general Kent population (40.4% compared with 16.3%).		It is estimated that there are fewer adults with learning disabilities who smoke compared to the general population. However, smoking rates among younger people with milder learning disabilities are likely to be higher than their peers.	Proposals outlined in tobacco control plan for England set out ambition that all mental health inpatient services sites be smokefree, in line with other NHS premises. Medium Proposed expansion of service to include GP and online support for those unwilling/unable to access traditional cessation services. Low

Sex			Males are more likely to smoke in Kent (17.6% vs 15.2% among females) and less likely to set a quit date through cessation services. Smoking prevalence among routine and manual workers (most of whom are male) estimated at 32.4% in Kent.	Proposed expansion of service to include GP and online support for those unwilling/unable to access traditional cessation services. Medium
Gender identity/ Transgender	N/A			
Race			At the national level, 'mixed', 'white' and 'other' ethnic groups have higher smoking prevalence than the national average.	
Religion and Belief			Those responding 'none' or 'other' have higher rates of smoking than the national average.	

Sexual Orientation	N/A			
Pregnancy and Maternity	Pregnant women are less likely to successfully quit through traditional cessation services than the general population. Additional adverse outcomes for pregnant women that smoke include complications in pregnancy and during and after birth.			Proposal for expansion of Home Visit adviser service for pregnant women. High
Marriage and Civil Partnerships	N/A			
Carer's Responsibilities		There may be challenges for carers in attending traditional smoking cessation services.		Proposed expansion of service to include GP and online support for those unable to access traditional cessation services. Medium

Part 2

Equality Analysis /Impact Assessment

Protected groups

Sex, race, age, pregnant or disability.

Information and Data used to carry out your assessment

Data sets are referenced throughout the needs assessment but most relevant to this assessment are:

PHE fingertips (Local Tobacco Control Profiles):
https://fingertips.phe.org.uk/profile/tobacco-control/data#page/1/gid/1938132886/pat/6/par/E12000008/ati/102/are/E10000016/iid/93085/age/1/sex/2
NHS Digital: https://digital.nhs.uk/data-and-information/publications/statistical/statistics-on-nhs-stop-smoking-services-in-england/april-2018-to-june-2018
Kent Public Health Observatory Smoking Equity Audit:
https://www.kpho.org.uk/__data/assets/pdf_file/0005/58532/Smoking_Equity_Audit_update-JUNE.pdf

Who have you involved consulted and engaged?
Service providers
External insights work
User service feedback

Analysis

Age
National data suggest 25-29 year olds are more likely to smoke (Kent-level data not available). Those aged 16-24 years are less likely to access smoking cessation services and set a quit date; smokers aged 60 and over were most likely to set a quit date with the support of traditional services. Service providers believe that online cessation support may appeal more to younger groups.

It is known that children who grow up with a smoking parent are more likely to smoke themselves. A reduction in smoking prevalence in the general populations should therefore reduce smoking initiation rates in younger age groups.

Sex
Males are more likely to smoke in Kent (17.6% vs 15.2% among females) and less likely to set a quit date through cessation services.

Related to this is the inequality between routine and manual workers versus those in professional or managerial occupations. Individuals working in routine

and manual occupations (most of whom are men) are nearly 3.5 times more likely to smoke than their counterparts in other occupations.

Disability
Smoking among Kent adults with a serious mental illness is significantly higher than the prevalence in the general Kent population (40.4% compared with 16.3%). Despite initial concerns that implementation of smokefree mental health inpatient facilities may have a detrimental effect on patient mental health, research suggests it may be associated with reduced levels of depression, anxiety, stress and aggression.

Race/ ethnicity
At the national level, 'mixed', 'white' and 'other' ethnic groups have higher smoking prevalence than the national average at 20.5%, 16.5% and 15.4% respectively. There is no equivalent data available at the Kent level.

We know that certain districts have a high smoking prevalence, particularly Thanet (23.7%) which is significantly greater than the estimated national prevalence of 14.9%. In Thanet, over 95% of the population identified as 'white' in the 2011 census.

Pregnancy
Although estimated smoking rates among pregnant women are slightly lower than in the general Kent population (14.4% vs 16.3%), pregnant women are at risk of additional adverse outcomes from smoking. Traditional cessation services are less likely to deliver a successful quit for pregnant women than the general population,

The recent Home Visit Adviser pilot in Thanet and South Kent Coast CCGs has seen 450% more smoking in pregnancy quitters in these two areas alone than in the rest of Kent. A proposal to expand this service to the rest of Kent is outlined in the needs assessment.

Adverse Impact,
Identified adverse impacts are outlined above in part 1.

Positive Impact:
The needs assessment proposes an expansion of the current model of care. We believe this will improve cessation rates among those why do not traditionally access smoking cessation programmes.

In addition, outlined proposals to expand smokefree initiatives to include mental health inpatient services and the Home Visit Adviser service for pregnant women should reduce the inequalities we see among these protected groups.

JUDGEMENT

- **No major change** - no potential for discrimination and all opportunities to promote equality have been taken

Internal Action Required YES

There is potential for adverse impact on particular groups and proposals to reconfigure smoking cessation services alongside expansion of the Home Visit Adviser service and smokefree initiatives should work to mitigate risk. These initiatives are system-wide rather than the direct responsibility of KCC Public Health, who will play a facilitative role.

Equality Impact Analysis/Assessment Action Plan

Protected Characteristic	Issues identified	Action to be taken	Expected outcomes	Owner	Timescale	Cost implications
Age	25-29 year olds are the group most likely to smoke. Individuals aged 16-24 years are less likely to access smoking cessation services and set a quit date.	Proposed expansion of service to include GP and online support for those unwilling/unable to access traditional cessation services. Proposals to reduce smoking prevalence in general population to 12% (2022 target)	Improved access to cessation support for younger age groups (smoking plus model) Given children more likely to smoke if their parent does, should reduce smoking initiation in younger age groups.	Andrew Scott-Clark Debbie Smith	**By 2022**	**Cost neutral: Digital manager already employed at KCC to work with comms and PH team to review and update online information (digital review underway). Additional costs will fall to NHS. Note: Smoking reduction picked up in the NHS 10 year plan, and Public Health at KCC will continue to work with the NHS in order to deliver.**

Disability	Smoking among Kent adults with a serious mental illness is significantly higher than prevalence in the general Kent population (40.4% compared with 16.3%).	Mental health inpatient sites to go smokefree. GP and online cessation support available through new model of care	Should lead to reduction in smoking among those living with serious mental illness. Will bring mental health inpatient services in line with general NHS services.	Andrew Scott-Clark Debbie Smith	**Mental Health trusts should already be smokefree (target- 2018)**	**Cost neutral: MH trusts already smokefree, supported by KCC and KCHFT. Cost incurred by MH provider (delivery of preventing ill health CQUIN).**
Sex	Males are more likely to smoke in Kent (17.6% vs 15.2% among females) and less likely to set a quit date through cessation services.	Proposed expansion of service to include GP and online support for those unwilling/unable to access traditional cessation services. Focus on routine and manual workers as part of reducing health inequalities strategy outlined in tobacco control strategy for	Should lead to improved access to cessation support (and ultimately an increase in successful quits) among men. Focus on routine and manual workers, the majority of whom are male, should reduce male-female inequalities.	Andrew Scott-Clark Debbie Smith	**By 2022**	**Cost neutral: Working with KCHFT to review total service offer at the local level.**

		England.				
Pregnancy and Maternity	Pregnant women experience greater adverse outcomes due to smoking yet are less likely to successfully quit through traditional cessation services than the general population.	Proposal for expansion of Home Visit adviser service for pregnant women.	Improved access to cessation support (and ultimately an increase in successful quits) among pregnant women.	Andrew Scott-Clark Debbie Smith	**By 2022**	**Cost neutral: Public Health working with the NHS system to transfer funding from midwives to Home Visit advisers to enable universal service in Kent. No additional cost, just using the existing budget in a different way.**

Have the actions been included in your business/ service plan?
Yes- included in system wide STP plans.

Appendix

Please include relevant data sets

Please forward a final signed electronic copy and Word version to the Equality Team by emailing diversityinfo@kent.gov.uk

If the activity will be subject to a Cabinet decision, the EqIA must be submitted to committee services along with the relevant Cabinet report. Your EqIA should also be published .

The original signed hard copy and electronic copy should be kept with your team for audit purposes.