From: Graham Gibbens, Cabinet Member for Adult Social Care and Public Health

Andrew Scott-Clark, Director of Public Health

To: Health Reform and Public Health Cabinet Committee

15 January 2019

Subject: **Smoking Needs Assessment: Key Findings**

Classification: Unrestricted

Previous Pathway: This is the first committee to consider this report

Future Pathway: None

Electoral Division: All

Summary:
The tobacco landscape is changing. A decline in the rates of referral to traditional smoking cessation services has been seen alongside a dramatic increase in the use of e-cigarettes at the local and national level. A previous cabinet paper presented on 22 November 2018 set out a proposal for a new 'smoking plus' model of cessation for Kent in order to achieve a target prevalence of 12% by 2022. Alongside this, it estimated the need to accomplish 45,000 fewer smokers to achieve these targets.

The recent smoking needs assessment offers an update on these projections and builds on the evidence for a new model of care. It suggests that to achieve 2022 targets we need to accomplish 58,495 fewer smokers, an average of 11,699 per year. Achieving the 2022 targets would have a significant positive impact on health outcomes for the Kent population including a reduction in lung cancer, Chronic Obstructive Pulmonary Disease (COPD), coronary heart disease, acute myocardial infarction and stroke. Based on 'Number Needed to Treat' (NNT) analysis, smoking cessation is one of the most cost-effective interventions for health. Smoking cessation also confers financial benefit at the level of the individual and can reduce financial strain, lifting households out of poverty.

If we are to achieve 2022 targets, the smoking plus model offers the best chance of success. To maximise the impact of our services we must build on smokefree initiatives, exploring new and innovative schemes such as smokefree homes to create an environment that encourages and supports successful quits.

Recommendation: The Health Reform and Public Health Cabinet Committee is asked to:

COMMENT on and **ENDORSE** the overall approach in order to improve health and reduce health inequalities; and
SUPPORT the enhanced Smoking Plus model and the revised Kent ambition of 58,500 fewer smokers by 2022 in order to achieve our prevalence target of 12%.

1. Background

1.1 Despite declines in smoking prevalence both locally and nationally over the last decade, smoking continues to be a significant driver of health inequalities and remains the single biggest cause of cancer in the UK and globally[1].

1.2 Although we have seen a decline in smoking over the last 5 years, smoking prevalence is currently estimated at 16.3% of the Kent population (a total of 197,000 smokers). This figure hides significant variation within Kent. Those in routine and manual occupations are nearly 3.5 times more like to smoke than their counterparts in other occupations, and prevalence in districts such as Thanet are significantly higher at 23.7% compared with the England benchmark of 10.2%.[2]

1.3 Smoking in pregnancy remains a concern for Kent, with an estimated 13.8% of women smoking at time of delivery (significantly higher than the England estimate of 10.8%). Measuring Smoking at the Time of Delivery (SATOD) is not without its challenges but, as outlined in the November cabinet paper titled 'Smoking in Pregnancy'[3], we believe recent increases in figures may be due to improved reporting measures. Improved data collection methods will enable us to better understand the scale of the problem.

1.4 As outlined in a previous cabinet paper[4], the government has set out ambitious targets with the long-term aim of achieving a 'smokefree generation'. These targets 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 gap in smoking between those in routine and manual occupations and the general population.

1.5 The same cabinet paper gave approximations of the number of quits we need to achieve in order to achieve the 12% prevalence target by 2022, proposing a new model of care for Kent known as 'smoking plus'[5]. The recent smoking needs assessment offers an update on these estimations and builds the case for recommissioning smoking cessation services from both a financial and health perspective.

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[1] 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.

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

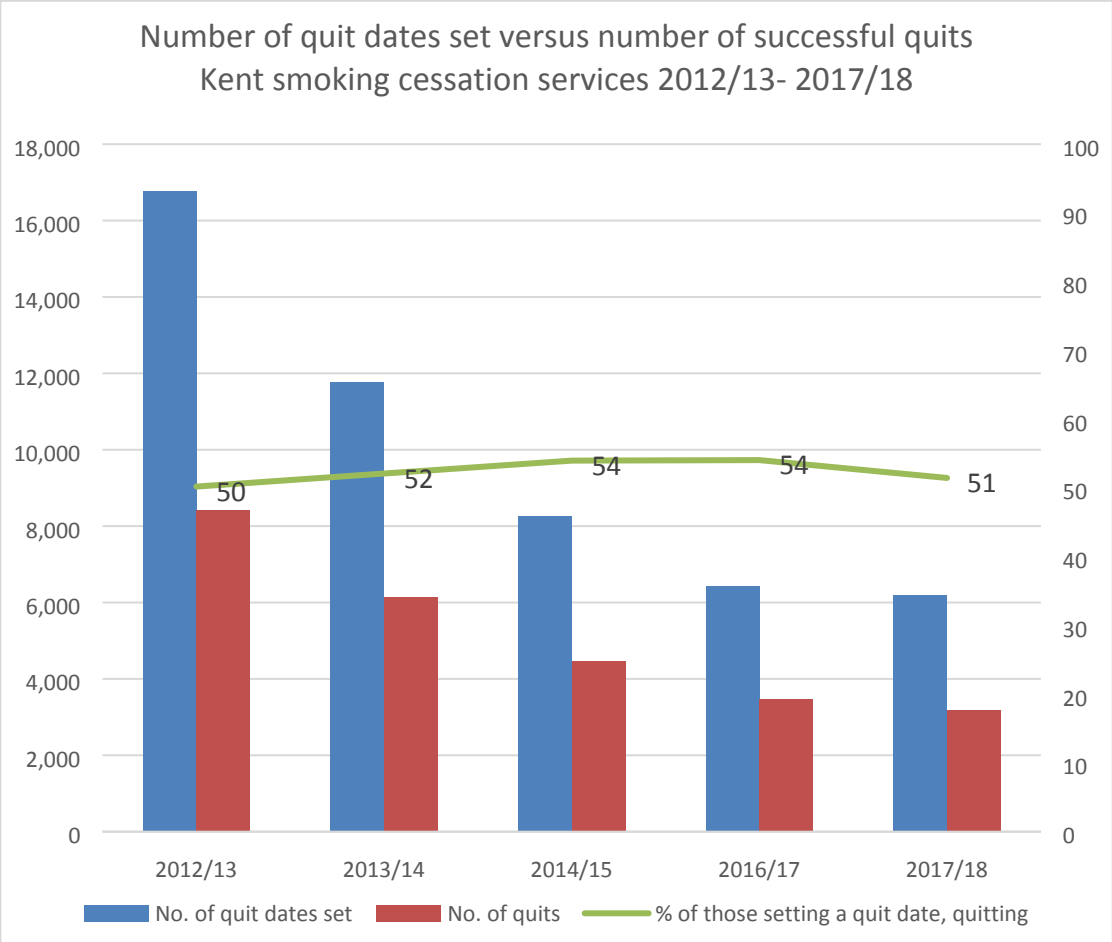
[3] Smoking in Pregnancy – Cabinet paper (A. Scott-Clark, D. Smith) 22 Nov 2018

[4] Stop Smoking Services – Cabinet paper (A. Scott-Clark, D. Smith) 22 Nov 2018

[5] Stop Smoking Services – Cabinet paper (A. Scott-Clark, D. Smith) 22 Nov 2018

2.0. Introduction

2.1 The tobacco landscape is changing. A decline in the rates of referral to traditional smoking cessation services has been seen alongside a dramatic increase in the use of e-cigarettes at the local and national level. While traditional stop smoking services continue to offer the best chances of successful quits, the number accessing these services has dropped to just over 3% of our current smoking population[6].



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

2.2 The case for commissioning a new model of care for smoking cessation in Kent continues to build. The recent smoking needs assessment concludes that smoking plus, a new evidence-based model developed by Professor Robert West of University Collect, London (UCL), offers the best chance of achieving the 2022 targets set out in the tobacco control plan for England.

2.3 This needs assessment also builds on the projected prevalence forecasts given in the November cabinet meeting and offers an updated target for number of quits needed to achieve our 2022 goals. It outlines a business case for investing in the smoking plus model from both a health and financial perspective. It also highlights the need for change to happen in a context of broader environmental shifts that encourage and support quit attempts.

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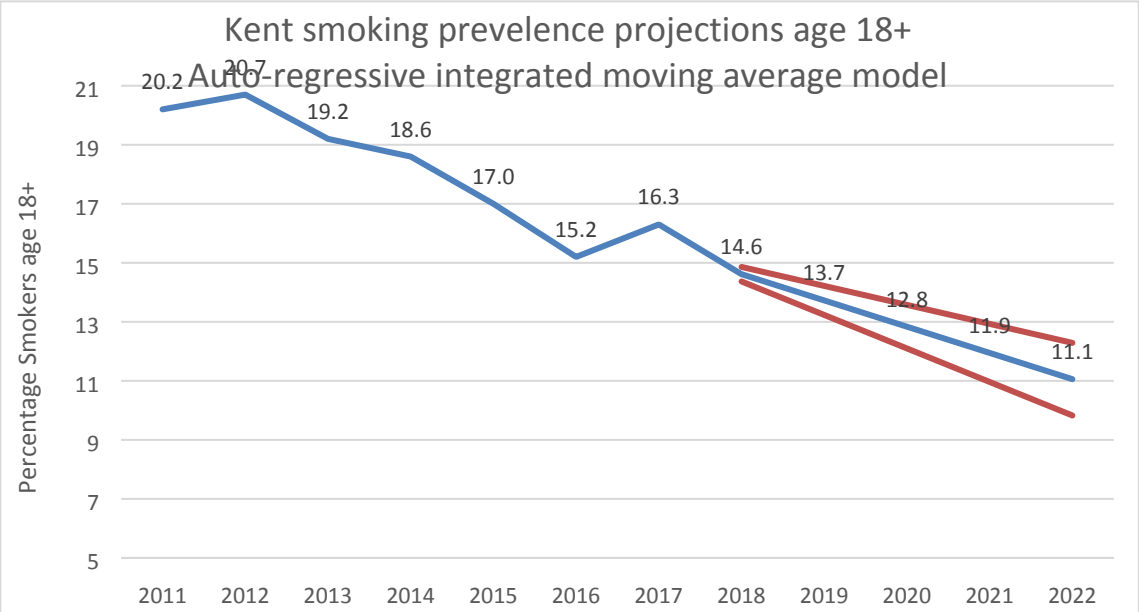
[6] NHS Digital, Statistics on NHS Stop Smoking Services in England - April 2017 to March 2018 August 2018

3.0 Modelling future prevalence: Updated projections to 2022

3.1 To maximise our chances of achieving 2022 targets, we must understand what these figures translate to in the context of the Kent population. Using Office of National Statistics (ONS) population data[7] it is possible to project the number of quits we need to achieve over the next 4-5 years to ensure we are on target to reach the 2022 goals. While the previous cabinet paper on stop smoking services[8] estimated that achievement of the 2022 targets would mean 45,074 fewer smokers in Kent, the recent smoking needs assessment has reviewed and updated these projections based on the best information we have.

3.2 Updated projections based on ARIMA modelling (autoregressive integrated moving average) outline projections to 11.1% (95% confidence interval 9.8-12.3%). These figures are based on us maintaining our current average rate of quits and allow us to capture uncertainty and maximise our chance of falling below the 12% marker. According to this model, to achieve 2022 targets we need to aim for a prevalence reduction of 0.89% per year 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 per year (95% CI 10,186- 13,211).



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)

3.3 Although these projections suggest we should achieve our targets if we continue with our current rate of quits in Kent, the reduction in smokers accessing traditional smoking services means we will 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 we are to achieve a reduction in inequalities we will need to achieve a greater magnitude of quits in certain districts, particularly Thanet.

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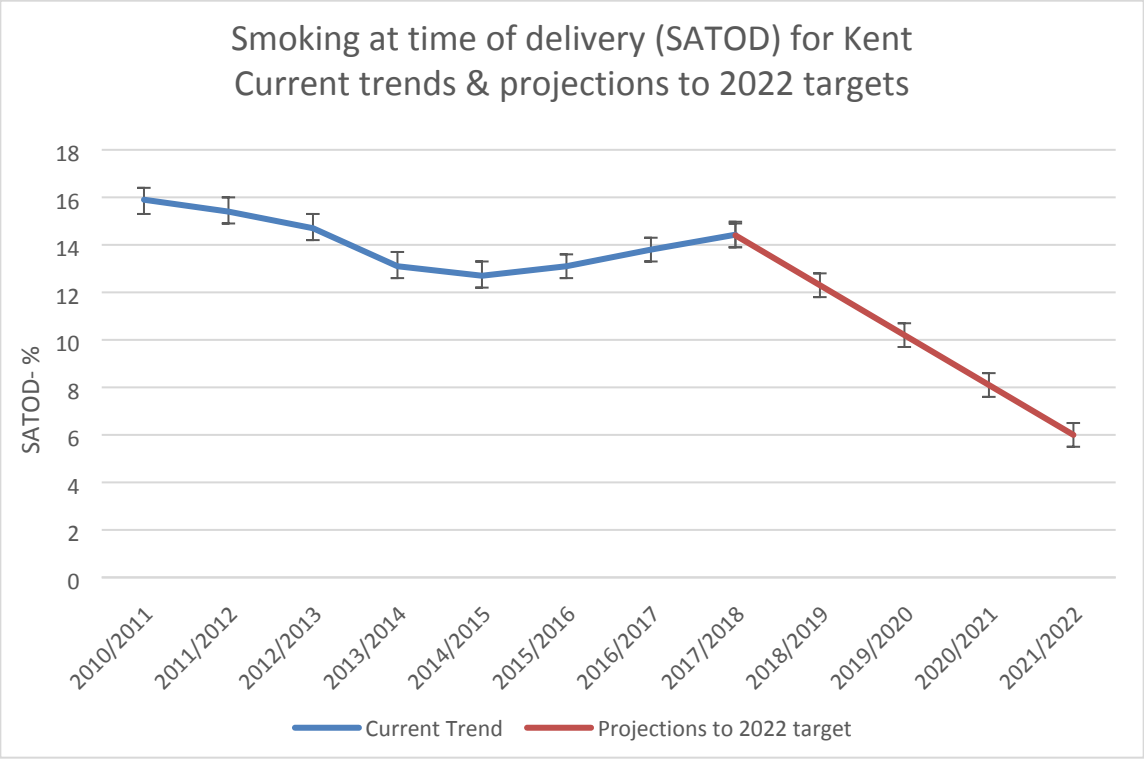
[7] ONS population projections. Accessed Dec 2018: https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationprojections/datasets/localauthoritiesinenglandz1

[8] Stop Smoking Services – Cabinet paper (A. Scott-Clarke, D. Smith) 22 Nov 2018

3.4 It should be highlighted that there are a myriad of factors beyond quit rates that influence smoking prevalence, including smoking initiation and population change (both migration and death can influence numerator and denominator). We would not expect smoking cessation services to deliver all the quits needed to achieve our target (we know that many individuals will attempt to quit alone, for example, a significant number with the use of e-cigarettes as a quit aid). However, we believe an innovative smoking cessation model, placed in the context of a wider tobacco control system, should be driving Kent quit behaviour and quit rates.

3.5 While we are broadly on course to deliver the 12% prevalence target for the general population, the same cannot be said for smoking in pregnancy. Projections based on ONS birth predictions[9] suggest that, in order to achieve a prevalence rate of 6% or lower, we will need a reduction of 2.1% each year. As you can see from the graph below, this will require a significant acceleration of current quit trends. Estimates suggest we currently have 2,372 women smoking in pregnancy in Kent and we will need to get this figure down to 971 (95% CI 890-1,068) by 2022 to achieve our 6% target. Per year, this translates to an average target reduction of 350 women.



3.6 Continuing to reduce the overall prevalence of smoking in Kent is important but we must also be mindful of increasing inequalities. We know from equity audits both locally and nationally that successful quit rates are greater among higher socio-economic groups; more affluent individuals are more likely to successfully quit. If we are to achieve the 2022 target of reducing the inequality gap in

[9] 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 prevalence, we will need to find ways to accelerate quits among our most deprived populations, particularly groups such as routine and manual workers.

4.0. Modelling health outcomes for Kent

4.1 Understanding how we achieve the targets is important, but we must also understand why. Achieving these targets would have a significant impact on the health outcomes of the Kent population.

4.2 Using the JSNA population cohort model[10] it is possible to predict the difference we would see in Kent by 2032, given as:

- 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.

4.3 We would also expect achievement of these targets to translate into 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[11].

4.4 We can apply these estimates to the Kent population. Data suggests there were 126.9 emergency hospital admissions for myocardial infarction per 100,000 registered population in 2015/16 across Kent[12] (so, in a population of just over 1.5 million, this translates to approximately 1,904 admissions). If we were to achieve a 4% decrease in smoking prevalence to reach 2022 targets, this would mean approximately 213 fewer hospital admissions for MI per year, and almost 3,000 less by 2022 (current estimate- future projection= 1,904- 1,691).

5.0 The economic case for investment: NNT

5.1 Smoking cessation is not only good for the health outcomes of the population. Research has demonstrated that it makes financial sense too. One method of demonstrating this is through the 'Number Needed to Treat' indicator, or NNT.

5.2 NNT can be defined as ''the number of patients you need to treat to prevent one additional poor outcome'[13] (for example death or stroke). In the context of smoking cessation, it is typically calculated as NNT to achieve a long-term quit or NNT to prevent one premature death.

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[10] JSNA Population Cohort Model for Kent. Accessed October 2018 https://www.thewholesystem.co.uk/systems-thinking-modelling/hosted-online-models/kent-cc-cohort-test/

[11] 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.

[12] Kent Public Health Observatory: Cardiovascular disease. June 2017: https://www.kpho.org.uk/__data/assets/pdf_file/0017/72602/Cardiovascular-Disease-2017.pdf

[13] Centre for Evidence Based Medicine (CEBM): Numbers Needed to Treat. Accessed 6th Dec 2018 https://www.cebm.net/2014/03/number-needed-to-treat-nnt/

5.3 NNT analysis shows that smoking cessation remains one of the most cost-effective interventions for health. With an NNT value as low as 20, as outlined in the table below, smoking cessation compares extremely favourably with other routine medical interventions. Given this, it has been cited as the single most effective thing a clinician can do to improve health outcomes for patients that smoke[14].

Table: Comparison of number needed to treat (NNT) to prevent one premature death. Adapted from Van Schayck et al., 2017[15]

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.

5.4 There are also economic benefits at the level of the individual and family. The average smoker spends over £2,000 on cigarettes every year[16]. 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[17]. With ongoing transition to universal credit currently underway, it is worth considering opportunistic interventions that offer support and signpost to smoking cessation services as a means of reducing financial strain on households.

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

[15] 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

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

[17] 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

6.0. The wider context: Smokefree initiatives

6.1 Any changes to smoking cessation support should happen in a context of broader environmental shifts that encourage and support quit attempts. Smoking prevalence, as with all health behaviours, is shaped by our environment, and the importance of smokefree legislation and initiatives cannot be underestimated. Smokefree initiatives have an important role to play in shifting social norms alongside reducing exposure to the dangers of second-hand smoke[18].

6.2 In addition to ongoing efforts to create smokefree healthcare settings, prisons and school gates, there are other initiatives that have significant potential to effect change. A recent e-cigarette pilot involving a partnership between housing associations and stop smoking services in Salford saw a dramatic increase in people accessing smoking cessation support, most markedly among the most deprived. Compared with figures from the same quarter in the previous year, participating NHS services saw 4 times as many people and 5 times as many successful quits from the most deprived quintile.

6.3 There is a need to work proactively and pragmatically with the housing function at district level in Kent to support a smokefree housing vision. A report released by ASH in November 2018 offers practical steps towards achieving this goal[19]. There are now ongoing discussions with the Kent housing group to confirm and clarify plans, of which one element will be related to smoking and tobacco control.

7.0 Conclusion and Next Steps

7.1 Given the decline in those accessing smoking cessation support we cannot take current rates of decline in prevalence for granted. If we are to achieve the 58,495 fewer smokers in order to achieve 12% population prevalence, alongside a concurrent reduction in inequalities, a 'business as usual' approach is not sufficient.

7.2 Smoking plus, a new evidence-based model of care developed by Professor Robert West of UCL, offers our best chance of success. Implementation across Kent will require close collaboration between the Local Authority, the Sustainability and Transformation Partnership (STP), CCGs and GP practices to maximise our chances of success. It will require consistent delivery at scale.

7.3 Alongside a revised model of smoking cessation we will need a broader partnership effort to continue and build on wider tobacco control. Initiatives should encompass a broad range of settings including the workplace, homes, schools, healthcare settings and high streets.

7.4 Smoking cessation continues to be one of the most cost effective interventions that can be delivered for health. Achievement of the 2022 targets would confer

[18] 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

[19] 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

significant health and financial benefits to the Kent system and population.

8.0. Recommendation

The Health Reform and Public Health Cabinet Committee is asked to:

COMMENT on and **ENDORSE** the overall approach in order to improve health and reduce health inequalities; and
SUPPORT the enhanced Smoking Plus model and the revised Kent ambition of 58,500 fewer smokers by 2022 in order to achieve our prevalence target of 12%.

9.0. Background Documents

Stop Smoking services - Health Reform and Public Health Cabinet Committee – 22 November 2018
https://democracy.kent.gov.uk/documents/s87730/Item%208%20-%20Stop%20Smoking%20Service.pdf

Kent Smoking Needs Assessment. C Mulrenan, Dec 2018 (Link to KPHO)

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