KENT PUBLIC HEALTH OBSERVATORY

NHS Stop Smoking Services

May 2016

Produced by

Colin Thompson: Public Health Consultant (Colin.Thompson@Kent.gov.uk)
Rachel Kennard: Senior Intelligence Analyst (Rachel.Kennard@kent.gov.uk)
Zara Cuccu: Public Health Analyst (Zara.Cuccu@Kent.gov.uk)
Correspondence to: Zara Cuccu

Version: 1.3
Last Updated: 8th June 2016

Contents

1. Executive Summary

1.1 Public Health Need

- The prevalence of smoking is decreasing, but smoking prevalence remains higher for men and is particularly high within the 25-34 age group.
- There is a clear relationship between smoking prevalence and affluence.
    - People living in the most deprived areas are more likely to smoke than those living in the least deprived areas.
    - Smoking prevalence is higher for those in routine and manual, as opposed to managerial and professional occupations.
- Shepway, Thanet and Ashford are identified as having high public health need from high smoking prevalence.

1.2 Access to Services

- Overall, there were 7,756 quit dates set through Kent Community Health, NHS Stop Smoking Services, in 2014/15. The numbers reported here do differ to the 8,267 reported within the HSCIC published report. This is because our analysis was based on registration date and relates to Kent residents only and does not include Medway residents.
- Over 90% of these quit dates were set within one to one support intervention types. In Kent, NHS Stop Smoking Services were mainly delivered in general practice, pharmacy and community settings.
    - There is evidence to suggest greater use of pharmacy setting in Kent than is the case nationally.
- Inequities are highlighted in access to services in relation to need. In particular, higher smoking prevalence but lower rates of quit dates set are evident for;
    - Younger people (aged 16-24).
    - Men.

1.3 Securing Good Outcomes

- Overall, local data suggests that 55% of service users reported quitting smoking. However, 46% of service users were validated as successful quits. This is well above the England average of 35%.
- Age was the best predictor of validated quitting. For all age categories, the next best predictor was economic activity. This was followed by Kent region, the final predictor.
    - Only 25% of those aged under 25 who set a quit date were validated as a quit. This fell further to 22% amongst those who were not economically active.
    - Quit rates rose to 43% for those aged 25 to 49. However, quit rates were again lower amongst those who were not economically active (at 38%).
    - Quit rates were highest amongst those aged 50 and over, with 53% quitting. Again, this varied by economic activity, with quit rates falling to 44% amongst those in this age group who were not economically active.
- Open groups (which account for around 5% of interventions) had the highest level of validated quits. Validated quit rates were similar across the other main intervention types (one to one support; drop in clinics and closed groups). There is insufficient evidence to infer any differences in quit rates between the intervention settings, due to wide confidence intervals.

1.4 Call to Action

The younger age groups are not making contact with services and when they do, they have less success. This is particularly the case for the economically inactive.

Less affluent smokers were more likely to set quit dates; however, were less likely to be successful in quitting smoking. Therefore, this suggests that the appropriate groups are making contact with services. However, services need to consider the reasons why these groups are less likely to achieve success and attempt to address this within the service offer.

There is a very small variation between routine and manual workers with managerial and professional groups successfully quitting (2%), and the general consideration that more affluent people have more resources and support mechanisms to help them change behaviours. This could suggest that the small variation is an indicator that the services do support those with complex and more hectic lives.

Identification of Mosaic types with high levels of smoking prevalence but low levels of access to services and/or poor quit rates provide further direction on targeting services.

Ward-level analysis has highlighted a number of wards with high (modelled) smoking prevalence but low levels of access to the Stop Smoking Service. In some cases, proximity to services may warrant further investigation.

2. Introduction & Objectives

The NHS Stop Smoking Service provides support to help people stop smoking. The service includes one to one counselling, group sessions, drop in clinics and telephone support. The service takes place in a range of settings including; general practice, pharmacy and community or hospital settings. Persons can contact the service directly or be referred by a general practitioner or healthcare professional.

The National Institute for Health and Care Excellence[1] set out key priorities, including;

- Aim to treat at least 5% of the estimated local smoking population.
- Ensure services target ethnic minority and socio-economically disadvantaged population groups.
- Aim for at least 35% of validated quits from those who start treatment.

The purpose of this report is to explore the performance and equity of stop smoking services within Kent. This report includes information for Kent residents seen by NHS Stop Smoking Services, Kent Community Health, within 2014/15. This report includes information on the numbers setting quit dates, self-reported quits and carbon monoxide validated quits. In depth analyses have been conducted of demographic variables, socio-economic position and area deprivation.

The Health & Social Care Information Centre have produced a report to summarise national findings:

Statistics on NHS Stop Smoking Services in England – April 2014 to March 2015

[1]NICE (2008) Stop smoking services. Guidance PH10 https://www.nice.org.uk/guidance/ph10

3. Public Health Need

Summary

We know that nationally the prevalence of smoking is decreasing, but smoking prevalence remains higher for men than women. In men, the 25 to 34 years age group had the highest prevalence, with prevalence rates then decreasing with age. However, in women, prevalence rates are similar (at around 20%) up to the age of 60, after which they drop to around 10%.

There is a clear gradient in the relationship between smoking prevalence and deprivation. People living in the most deprived areas are more likely to smoke than those living in the least deprived areas. Furthermore, there is a socio-economic gradient with smoking prevalence being higher for those in routine and manual, as opposed to, managerial and professional occupations.

There are limitations within our understanding of smoking prevalence by ethnicity. However, the national findings suggest that smoking may be highest amongst Bangladeshi and Irish men.

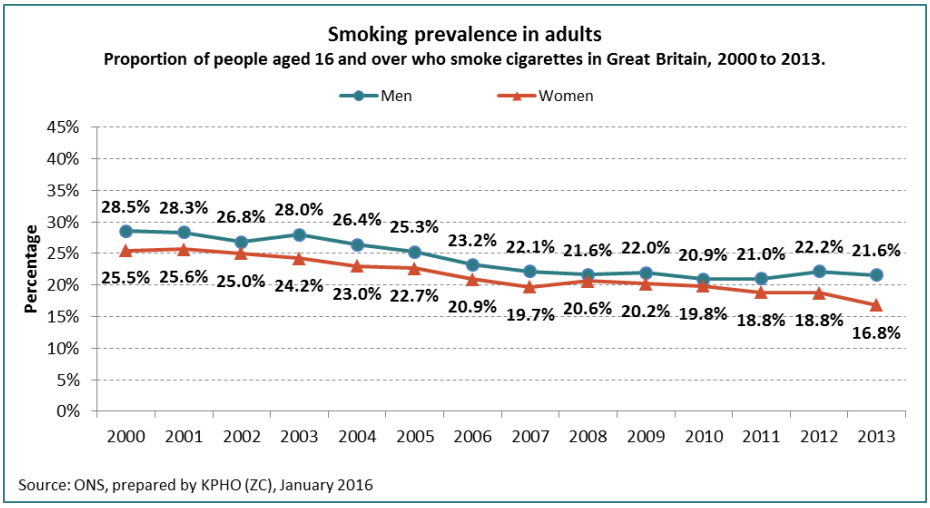
There are a number of sources of smoking prevalence data at a district level. Within this report we have focused on the Local Tobacco Control Profiles and the Quality & Outcomes Framework. There was some agreement between the estimates, with Sevenoaks particularly highlighted as having low smoking prevalence, and Shepway and Thanet consistently identified as having higher prevalence levels.

The Mosaic types identified as having particularly high smoking prevalence are consistent with the above findings, in that types with younger age profiles and covering more deprived socio-economic circumstances are the ones highlighted.

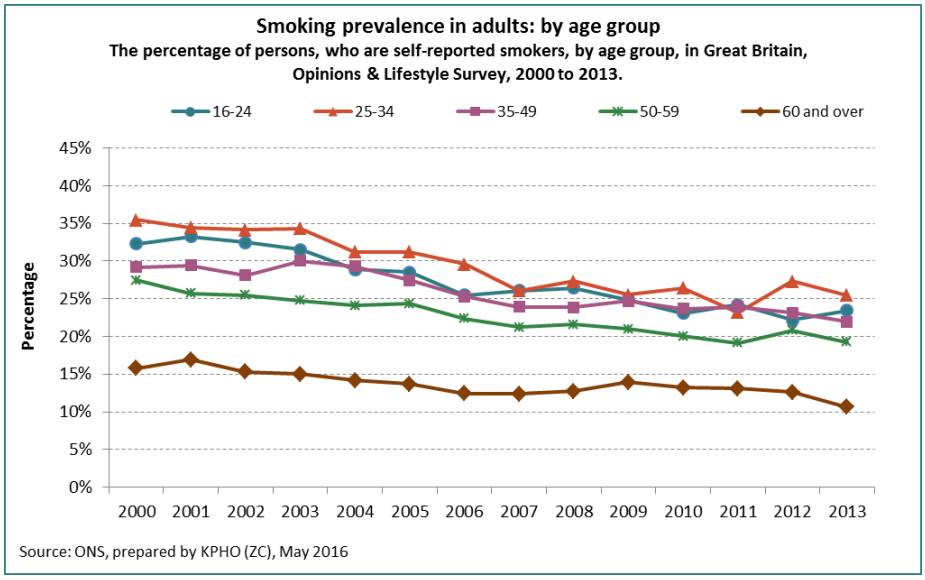
3.1 National Prevalence

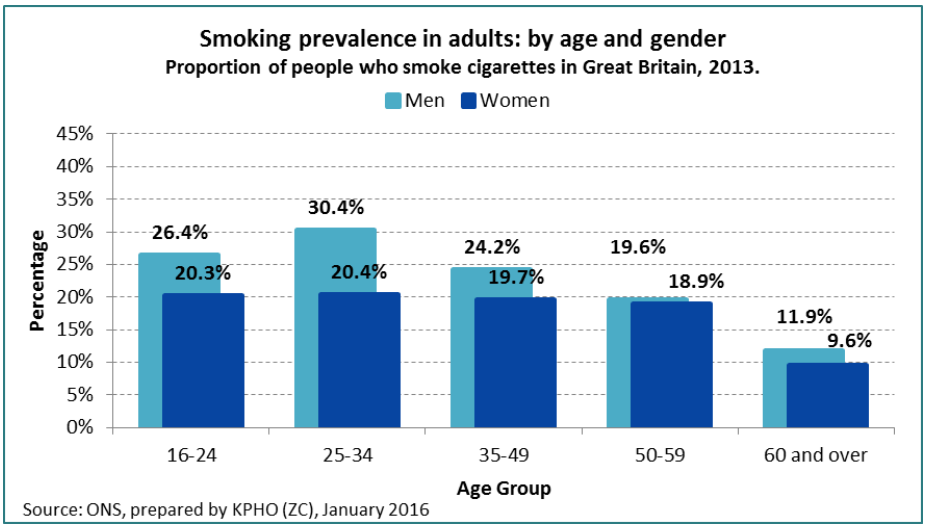
The Office for National Statistics, Opinions & Lifestyle Survey[2] reports the proportion of persons who smoke cigarettes nationally.

- There is a decreasing trend between 2000 and 2013: the prevalence has decreased from 28.5% to 21.6% in men and 25.5% to 16.8% in women.
- In men, the 25 to 34 years age group had the highest prevalence, with prevalence rates then decreasing with age. However, in women, prevalence rates are similar (at around 20%) up to the age of 60, after which they drop to around 10%.
- All of the age groups show decreasing trends between 2000 and 2013
- The rate of decrease in smoking prevalence was lowest amongst those aged 60 or over



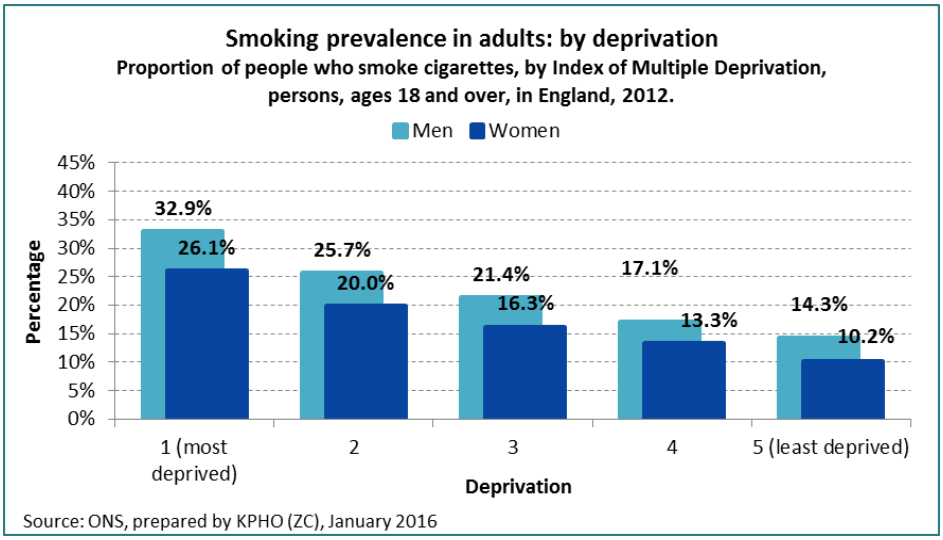
[2] Office for National Statistics (2014) Opinions and Lifestyle Survey, Adult Smoking Habits in Great Britain, 2013 Release. http://www.ons.gov.uk/ons/rel/ghs/opinions-and-lifestyle-survey/adult-smoking-habits-in-great-britain--2013/stb-opn-smoking-2013.html#tab-Why-do-these-results-matter-





- Smoking prevalence is greater within those living in the most deprived areas.[3]
- Furthermore, smoking prevalence is higher amongst the unemployed, those in routine and manual occupations and those with lower education qualifications.

[3] Office for National Statistics (2014) Do smoking rates vary between more and less advantaged areas? http://www.ons.gov.uk/ons/rel/disability-and-health-measurement/do-smoking-rates-vary-between-more-and-less-advantaged-areas-/2012/sty-smoking-rates.html



- Estimates of smoking prevalence by ethnicity are often subject to uncertainty due to small sample sizes. The latest reliable findings on smoking and ethnicity suggest that self-reported smoking is highest amongst Bangladeshi and Irish men, but within the general population rather than ethnic minority women.[4]

[4] Health Survey for England (2004) The health of ethnic minority groups. http://www.hscic.gov.uk/catalogue/PUB01209/heal-surv-hea-eth-min-hea-tab-eng-2004-rep.pdf

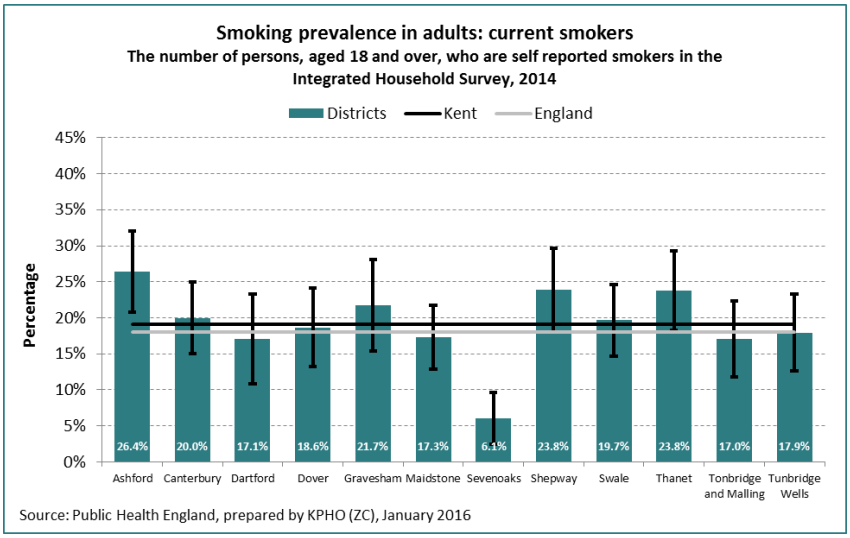
3.2 Local Prevalence

Local data for smoking prevalence has been provided alongside data for Kent and England comparisons.

3.2.1 Local Tobacco Control Profiles

Public Health England, as part of the Local Tobacco Control Profiles[5] publish an indicator for self-reported smoking in those aged 18 and over, which is derived from the Integrated Household Survey.

- In Kent, 19.1% of those aged 18 and over reported smoking cigarettes. This in comparison to 18.0% in England.
- In comparison to Kent and England;
    - Smoking prevalence was higher in Ashford, Shepway and Thanet.
    - Smoking prevalence was lower in Sevenoaks.



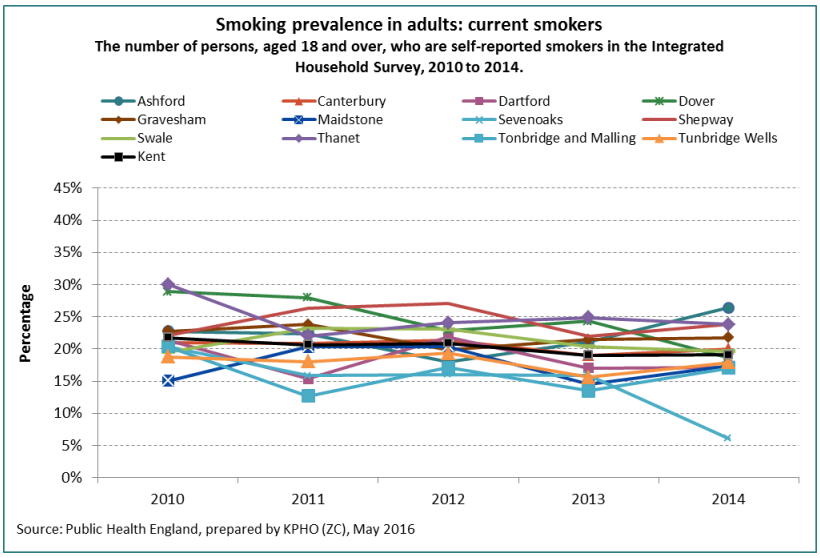
The Integrated Household Survey estimates are based on samples of the population, using self-reported smoking status. We know that the estimates are weighted for non-response and survey design, including a household weight inequality dimension. However, the estimates may be influenced by bias from self-report and may also reflect differences in local population age structure.

[5] Public Health England (2015) Local Tobacco Control Profiles. http://www.tobaccoprofiles.info/profile/tobacco-control

3.2.2 Trend Analysis of District Smoking Prevalence

Kent shows a decreasing trend in smoking prevalence between 2010 and 2014. This is similar to England.

- For the majority of the Kent districts there was no clear evidence of an increasing or decreasing trend, the rates of change were not significantly different to Kent or England.

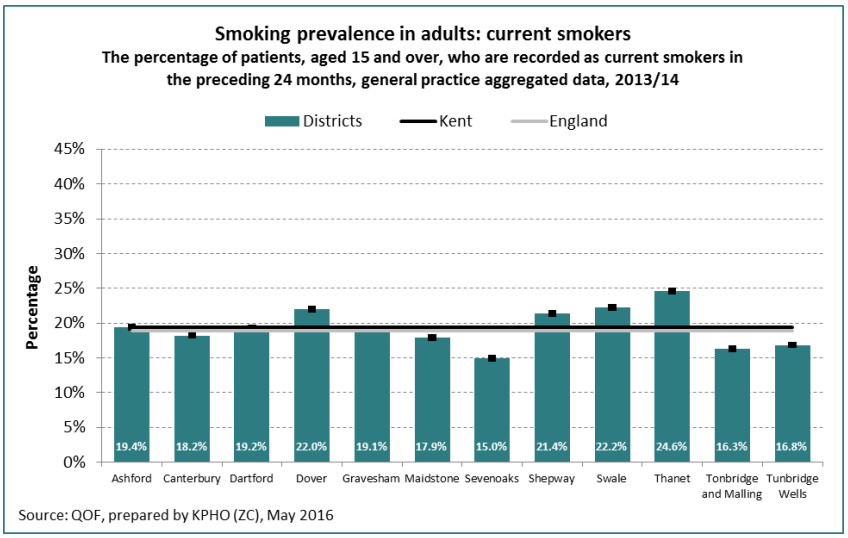


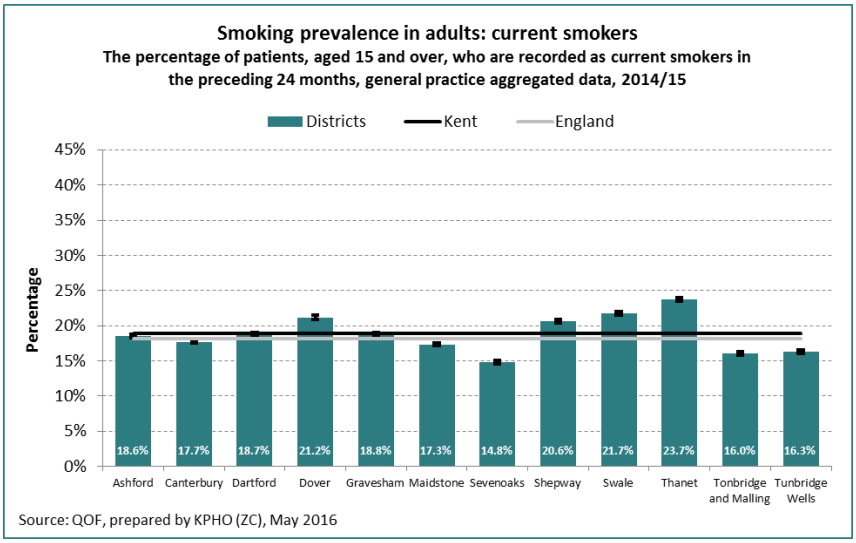
3.2.3 Quality & Outcomes Framework

The Quality & Outcomes Framework includes an indicator for smoking status by general practice; data was aggregated using patient distribution by geography.

- The indicator represents those aged 15 and over who were recorded as current smokers in the previous 24 months.
- In 2013/14 within Kent, there were 237,615 current smokers recorded (19.4%) in comparison to 19.2% in England. Recorded smoking prevalence was higher than the Kent and England averages in Dover, Shepway, Swale and Thanet. Recorded smoking prevalence was lower in Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells.

- In 2014/15 within Kent, there were 243,714 current smokers recorded (18.8%) in comparison to 18.6% in England. Recorded smoking prevalence was higher than the Kent and England averages in Dover, Shepway, Swale and Thanet. Recorded smoking prevalence was lower in Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells.
- It should be borne in mind that this may reflect the bias prior to 2014/15 in recording of smoking prevalence on the QOF to patients with various health conditions.





There was some agreement between the Quality & Outcomes Framework and the Local Tobacco Control Profiles for the districts with low prevalence; with Sevenoaks particularly highlighted via both sources. There is also agreement that smoking prevalence is relatively high in Shepway and Thanet.

3.2.4 Mosaic Segmentation

The Mosaic geo-demographic segmentation tool includes indicators for heavy, medium and light smoking prevalence. The Mosaic types with the highest smoking prevalence (calculated by aggregating heavy, medium and light smokers) have been included within Table 1; these appear to be influenced by area deprivation or socio-economic deprivation, with limited or routine and manual employment, and younger age groups.

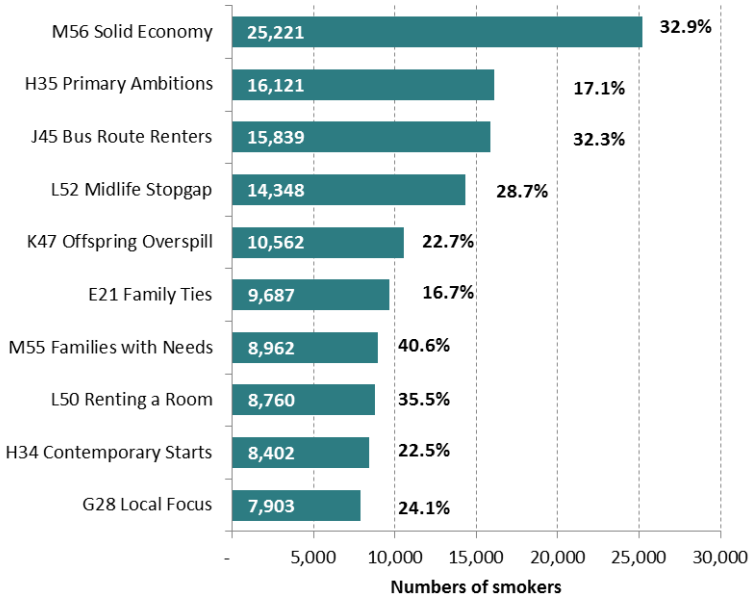
Table 1: Mosaic types with highest smoking prevalence, 2014.

Mosaic Type	Description	Smoking Prevalence	Estimated Smokers in Kent
L49 Disconnected Youth	Ages 25 and under, mostly living alone, limited employment options, rely on mobiles.	45.1%	5,764
O63 Streetwise Singles	Ages 26-30, singles and sharers, low cost social flats, urban and fringe locations, routine occupations.	44.0%	6,113
O64 High Rise Residents	Ages 31-35, singles and sharers, high rise social flats, urban locations.	41.6%	897
M55 Families with Needs	Ages 26-30, cohabiting couples and singles with kids, living in areas with high deprivation.	40.6%	8,962
L51 Make Do and Move On	Ages 26-30, singles and cohabitees without children, interim homes in low cost properties.	37.2%	1,867

The Mosaic types with the highest smoking prevalence do not necessarily contribute the greatest numbers of smokers in Kent. The Mosaic types contributing the largest numbers of smokers have been presented within the chart below.

Mosaic types with highest smoking numbers in Kent

Mosaic types with highest smoking numbers, presented with smoking prevalence, Kent, 2014.



Source: Experian, prepared by KPHO (ZC), January 2016

4. Stop Smoking Service

An extract of the Kent Community Health, NHS Stop Smoking Services dataset was analysed. This covered all episodes for Kent residents with a registration date between 1st April 2014 and 31st March 2015. The analysis forms two distinct parts; contact with services and securing good outcomes.

Please note that the numbers reported here do differ from the HSCIC published report. This is because our analysis was based on registration date and not quit date. Also, our analysis relates to Kent residents only and does not include Medway residents.

4.1 Contact with Services

Summary

In 2014/15, there were 7,756 quit dates set by Kent residents through NHS Stop Smoking Services, Kent Community Health. Over 90% of these quit dates set were within one to one support intervention types. In Kent, NHS Stop Smoking Services were mainly delivered in general practice, pharmacy and community settings. There is evidence to suggest greater use of pharmacy setting in Kent than is the case nationally.

Table 2, summarises the demographic and socio-economic groups with the highest and lowest levels of access to NHS Stop Smoking Services in Kent, as determined by the proportion of smokers accessing the services.

Table 2: Groups with highest and lowest proportions of smokers setting quit dates.

	Highest	Lowest
Gender	Women	Men
Age	Ages 60 and over	Ages 16-24
Deprivation	Most deprived	Least deprived

Inequities are highlighted in access to services in relation to need. In particular, higher smoking prevalence but lower rates of quit dates set are evident for:

- Younger people (aged 16-24)
- Men

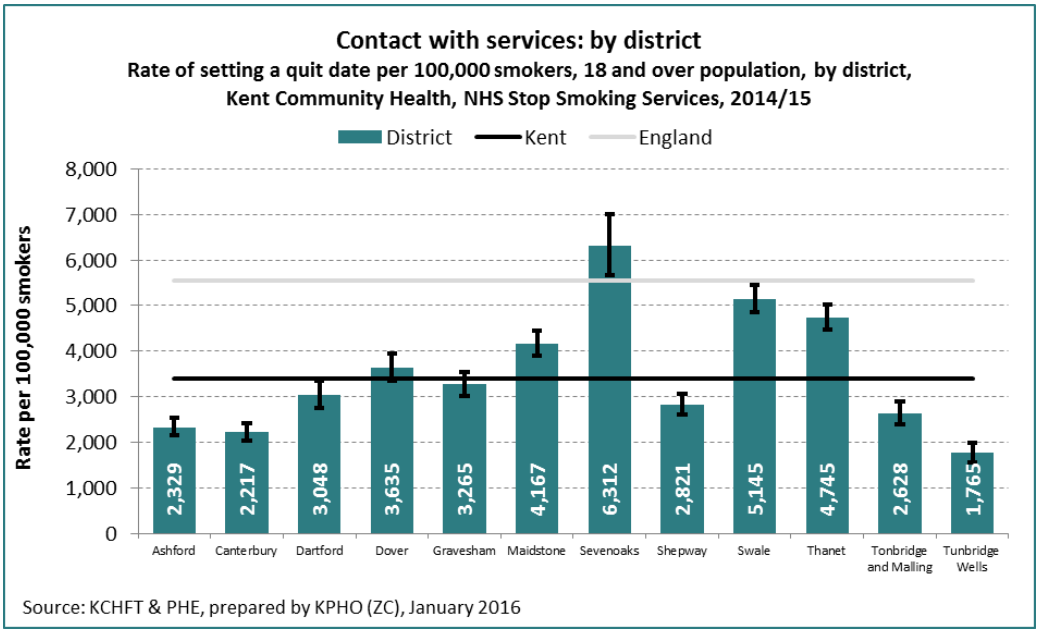
District analysis has identified that rates of setting a quit date, in comparison to the smoking population, were **higher** within Maidstone, Sevenoaks, Swale and Thanet, however, **lower** within Ashford, Canterbury, Shepway, Tonbridge & Malling and Tunbridge Wells. Some ward analysis has been used to highlight the wards with the highest levels of modelled smoking prevalence and lower numbers of quit dates set.

4.1.1 Contact with Services: By Geography

4.1.1.1 District

Quit dates set have been analysed as a rate per 100,000 smoking population, aged 18 and over. The numbers of smokers within districts have been derived using smoking prevalence from the Local Tobacco Control Profiles applied to mid-year population estimates in 2014.

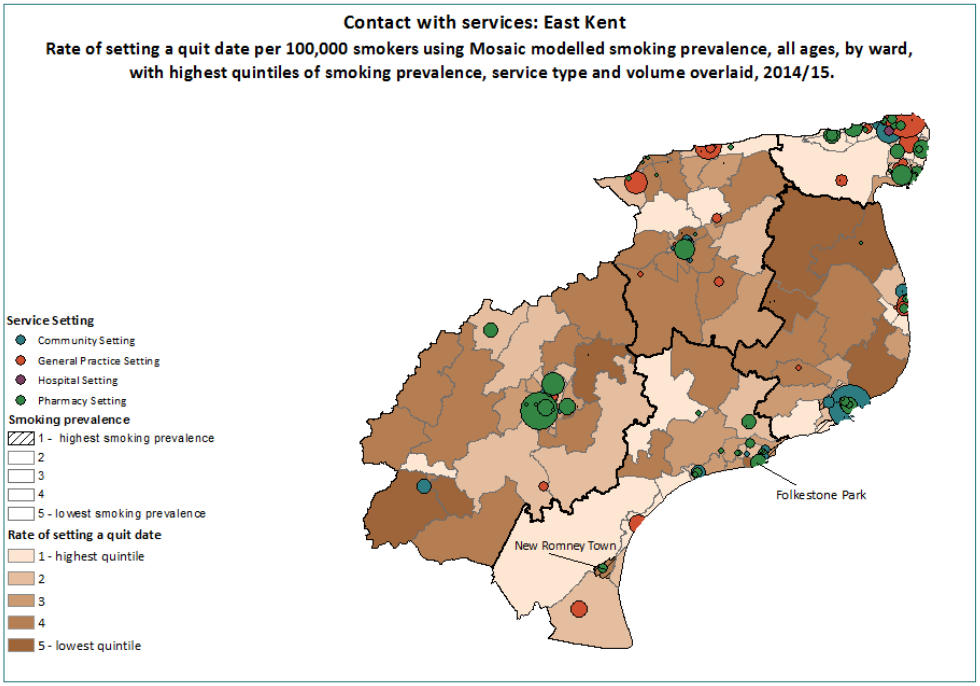
- In comparison with England, Kent has significantly lower rates of setting a quit date
- However, there is significant variation within Kent;
    - Maidstone, Sevenoaks, Swale and Thanet showed higher rates of setting a quit date.
    - Ashford, Canterbury, Shepway, Tonbridge & Malling and Tunbridge Wells showed lower rates of setting a quit date.



4.1.1.2 Ward

Quit dates set have been analysed as an estimated rate per 100,000 smoking population, all ages, at ward-level. Synthetic estimates of the number of smokers within each ward have been created using Mosaic data. The NHS Stop Smoking Service locations, by type and volume have been overlaid. Wards within the highest quintiles of smoking prevalence but with the lowest quintiles for quit dates set have been labelled.

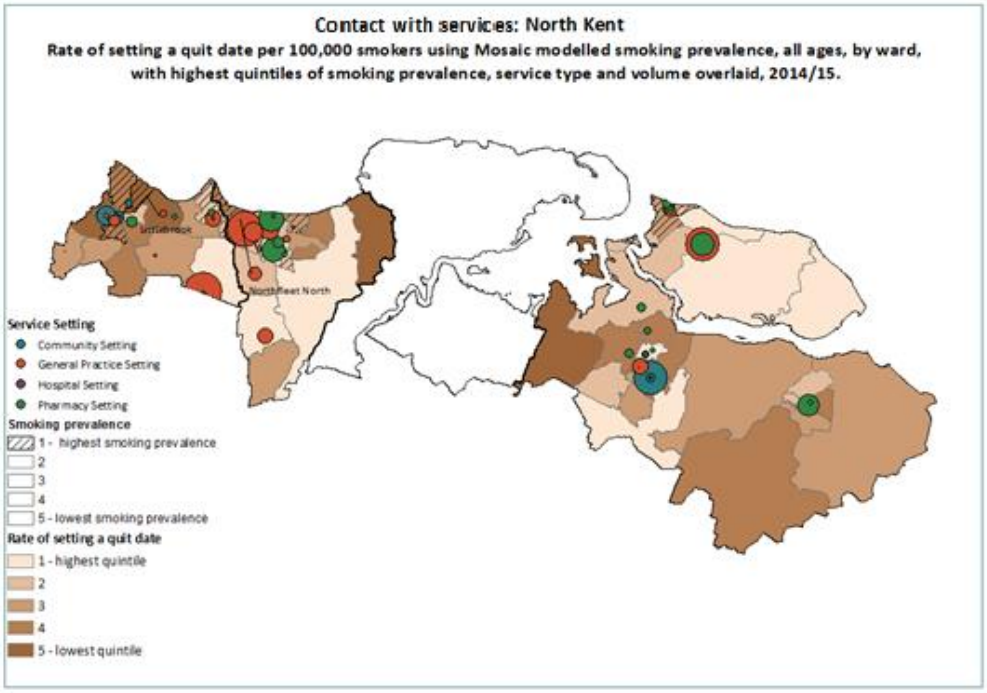
The map below shows the findings for East Kent.



This analysis highlights the following wards as having high smoking prevalence but low levels of contact with the Stop Smoking Service;

- Within Shepway; Folkestone Park and New Romney Town.

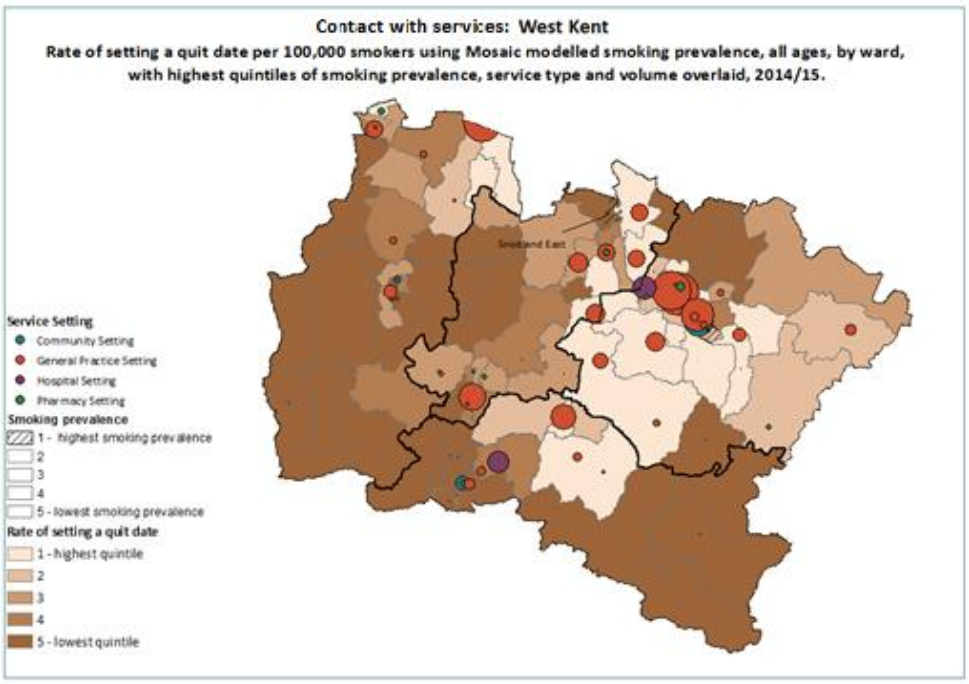
The map below shows the findings for North Kent.



This analysis highlights the following wards as having high smoking prevalence but low levels of contact with the Stop Smoking Service;

- Within Dartford; Littlebrook
- Within Gravesham; Northfleet North.

The map below shows the findings for West Kent.



This analysis highlights the following wards as having high smoking prevalence but low levels of contact with the Stop Smoking Service;

- Within Maidstone: Snodland East.

Interestingly, Snodland East does not appear to have any community, GP or pharmacy Stop Smoking Services located close by (although there are services delivered through the Children's Centre).

4.1.2 Contact with Services: By Subgroup

The absolute numbers of quit dates set in Kent have been analysed by each demographic, socio-economic and deprivation variable, and compared with national data[6].

- The highest proportions of quit dates set were within the 45 to 49 age group. The lowest proportion of quit dates set were within the under 18 age group. This was similar to national findings.
- More women than men set quit dates; this was similar to national findings.

Table 3: Numbers setting quit dates by gender and age band.

	Kent		National	
	n	**%**	***n***	**%**
Age				
Under 18	110	1.4%	9,506	2.1%
18-34	2,074	26.7%	132,464	29.4%
35-44	1,652	21.3%	97,279	21.6%
45-59	2,324	30.0%	130,441	28.9%
60 and over	1,596	20.6%	80,891	18.0%
Gender				
Female	3,998	51.5%	234,640	52.1%
Male	3,758	48.5%	215,941	47.9%
Total	**7,756**		**450,582**	

Source: KCHFT & HSCIC

[6] Health & Social Care Information Centre (2015) Statistics on NHS Stop Smoking Services in England – April 2014 to March 2015. http://www.hscic.gov.uk/catalogue/PUB18002

- The White ethnic group had the highest proportions of quit dates set; this was similar to national findings.
- Less than 2% of the sample did not have an ethnic group stated; this suggests good data quality for this indicator.

Table 4: Numbers setting quit dates by ethnic group.

	Kent		National	
	n	**%**	***n***	**%**
Ethnic group				
White	7339	94.6%	386,300	85.7%
Mixed	104	1.3%	7,924	1.8%
Asian	91	1.2%	19,742	4.4%
Black	81	1.0%	10,515	2.3%
Other	41	0.5%	7,328	1.6%
Not stated	100	1.3%	18,773	4.2%
Total	**7,756**		**450,582**	

Source: KCHFT & HSCIC

- There were higher proportions of quit dates set within; routine & manual, retired and managerial & professional groups. This was similar to national findings, but nationally there were greater proportions of quit dates set by those who had never worked or were unemployed for over 1 year.
- More than 5% of the sample did not have socio-economic classification coded; this suggests moderate data quality for this indicator.

Table 5: Numbers setting quit dates by socio-economic classification.

	Kent		National	
	n	**%**	***n***	**%**
Socio-economic				
Managerial and professional occupations	1,071	13.8%	49,928	11.1%
Intermediate occupations	445	5.7%	34,633	7.7%
Routine and manual occupations	1,976	25.5%	109,467	24.3%
Full time students	222	2.9%	16,755	3.7%
Home carers (unpaid)	489	6.3%	22,558	5.0%
Never worked /unemployed over 1 year	820	10.6%	64,749	14.4%
Prisoners	444	5.7%	11,731	2.6%
Retired	1,202	15.5%	54,366	12.1%
Sick/disabled and unable to return to work	572	7.4%	33,487	7.4%
Unable to code	515	6.6%	52,908	11.7%
Total	**7,756**		**450,582**	

Source: KCHFT & HSCIC

- A higher proportion of quit dates were set by those within the most deprived Kent quintile. The national NHS Stop Smoking Services statistics do not currently allow analysis by area deprivation. However, there is some evidence to suggest that more people from deprived areas initially access smoking cessation services.[7]

Table 6: Numbers setting quit dates by Index of Multiple Deprivation.

	Kent	
	n	**%**
Index of Multiple Deprivation		
1 – most deprived	2,632	33.9%
2	1,572	20.3%
3	1,403	18.1%
4	1,173	15.1%
5 – least deprived	976	12.6%
Total	**7,756**	

Source: KCHFT

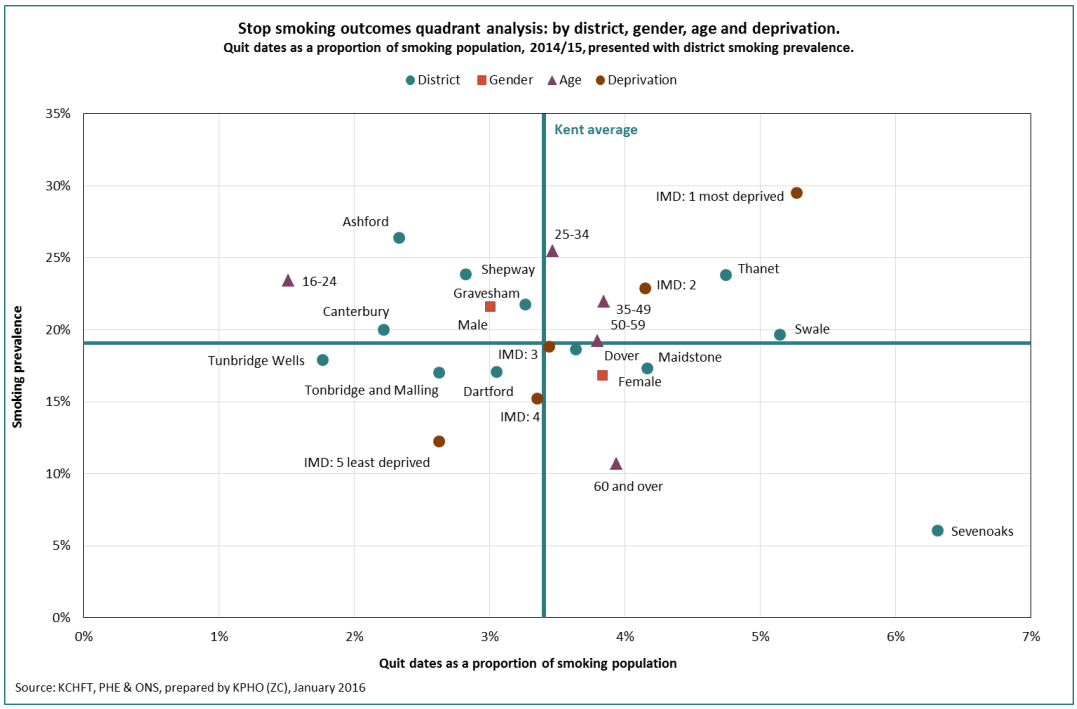
[7] Lowey et al (2003) Smoking cessation services are reducing inequalities. Journal of Epidemiology & Community Health, 57, 579-580 http://jech.bmj.com/content/57/8/579.full

The numbers of quit dates set in Kent have also been analysed by demographic and deprivation variables in the context of the size of the smoking population for each individual subgroup.

Quadrant analysis has then been used to explore the relationship between level of need and access to services. Need has been represented by smoking prevalence[8] and access to service by quit dates as a proportion of the smoking population.[9]

This has been produced by age, gender and area deprivation to identify groups with higher smoking prevalence, but lower proportions of quit dates set. The Kent average of district smoking prevalence and a 5% cut off for access to services by the smoking population has been used.

- The analysis highlights males, those aged between 16 and 24 years, as well as, those within Ashford, Canterbury, Gravesham & Shepway districts to have higher smoking prevalence, but lower access to services within the smoking population.



[8] Smoking prevalence by age, gender and deprivation uses Integrated Household Survey, Office for National Statistics, 2012.

[9] The proportion of quit dates by deprivation have been derived using national Index of Multiple Deprivation quintiles to mirror the smoking prevalence indicator.

Further analysis in the context of smoking prevalence has been conducted by Mosaic type. The presentation of this analysis has been restricted to the 22 Mosaic types with the highest levels of smoking prevalence and expected to contribute more than 1,000 smokers within Kent.

Quit dates set have been analysed as a percentage of the all age smoking population, as estimated by Experian for each individual Mosaic type. From this, the three Mosaic types with the highest and lowest levels of service access (and high smoking prevalence) have been highlighted.

Table 7: Mosaic types with quit dates set, as a proportion of smoking population.

Mosaic Type	Description	Quit Dates Set	Smoking Prevalence	Estimated Smokers in Kent
G28 Local Focus	Rural families, ages 41 to 45 in affordable village homes, reliant on the local economy for jobs.	5.3%	24.1%	7,903
N61 Estate Veterans	Longstanding elderly renters, ages 76 to 80, social homes, neighbours a mix of owners and renters.	3.8%	23.5%	5,022
N60 Dependent Greys	Ageing social renters, ages 66 to 70, with high levels of need in centrally located developments of small units.	3.8%	26.6%	2,659
-	-	-	-	-
H32 Flying Solo	Young singles, ages 18 to 25, on starter salaries choosing to rent homes in family suburbs.	1.7%	32.3%	3,315
J43 Student Scene	Students, ages 18 to 25, living in high density accommodation close to universities.	1.5%	23.6%	1,136
J41 Central Pulse	Younger, 26-30, renting city centre flats in vibrant locations.	1.3%	29.2%	2,062

Source: KCHFT & Experian

4.1.3 Contact with Services: By Intervention Types and Settings

Each smoking cessation record includes intervention type details, definitions include:

- One to one support; structured multi-session support.
- Open groups; fluctuating and ongoing membership.
- Drop-in clinic; structured multi-session support.
- Closed group; structured multi-session support, defined start and finish dates, pre-booked client group.
- Other (telephone and couple /family group); multi-session support type.

The table below shows numbers of smokers setting quit dates by intervention type and setting.

- The vast majority of users of Kent NHS Stop Smoking Services receive the one to one support type. This finding was similar to national findings. Drop-in clinics appear to be used less in Kent than is the case nationally.
- The most popular setting in Kent is general practice, accounting for approaching two-fifths of interventions. This finding was similar to national findings. Pharmacies appear to be used more in Kent than is the case nationally.

Table 8: Numbers setting quit dates by intervention type and setting.

	Kent		National	
	n	**%**	***n***	**%**
Intervention Type				
One to one support	7,103	91.6%	366,005	81.2%
Open group	354	4.6%	9,814	2.2%
Drop-in clinic	153	2.0%	45,537	10.1%
Closed group	106	1.4%	5,698	1.3%
Other	40	0.5%	23,528	5.2%
Intervention Setting				
General practice	2,949	38.0%	173,153	38.4%
Pharmacy	2,432	31.4%	84,961	18.9%
Community	1,647	21.2%	129,534	28.7%
Prison	444	5.7%	11,301	2.5%
Hospital	162	2.1%	13,469	3.0%
Workplace	65	0.8%	3,188	0.7%
Children & School	36	0.5%	3,213	0.7%
Other	21	0.3%	27,160	6.0%
Total	**7,756**		**450,582**	

Source: KCHFT & HSCIC

4.2 Securing Good Outcomes – Successful Quits

Summary

Overall, local data suggest that 55% of service users reported quitting smoking. However, 46% of service users were validated as successful quits. This is well above the England average of 35%.

Age was the best predictor of validated quitting. For all age categories, the next best predictor was economic activity. This was followed by Kent region, the final predictor.

- Only 25% of those aged under 25 who set a quit date were validated as a quit. This fell further to 22% amongst those who were not economically active.
- Quit rates rose to 43% for those aged 25 to 49. However, quit rates were again lower amongst those who were not economically active (at 38%).
- Quit rates were highest amongst those aged 50 and over, with 53% quitting. Again, this varied by economic activity; with quit rates falling to 44% amongst those in this age group who were not economically active.

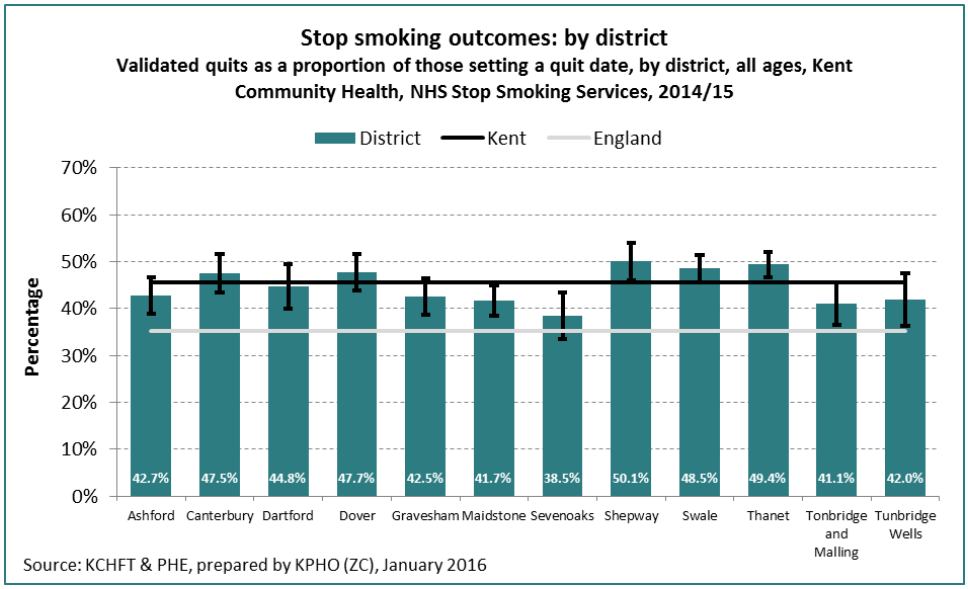
Open groups (which account for around 5% of interventions) had the highest level of validated quits. Validated quit rates were similar across the other main intervention types (one to one support; drop in clinics and closed groups). There is insufficient evidence to infer any differences in quit rates between the intervention settings, due to wide confidence intervals.

4.2.1 Successful Quits: By Geography

Validated quits have been analysed as a proportion of those setting quit dates. In this respect, Kent outperforms the England average validated quit rate.

Success rates vary by District, from 50.1% in Shepway down to 38.5% in Sevenoaks. In comparison to Kent:

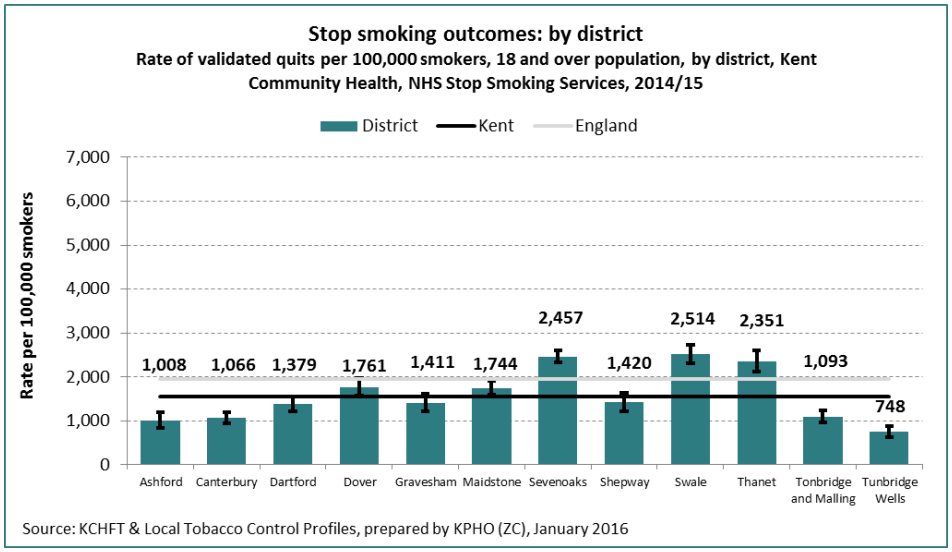
- Shepway and Thanet showed significantly higher validated quits in comparison with Kent.
- Maidstone and Sevenoaks showed lower validated quits in comparison with Kent.



Validated quits have also been analysed as a rate per 100,000 smoking population, aged 18 and over, derived using smoking prevalence applied to mid-year population estimates.[10] Reflecting the lower levels of access to services by smokers in Kent in comparison with England, the validated quit rate in terms of the rate per 100,000 smokers is lower in Kent than for England as a whole.

In comparison to Kent:

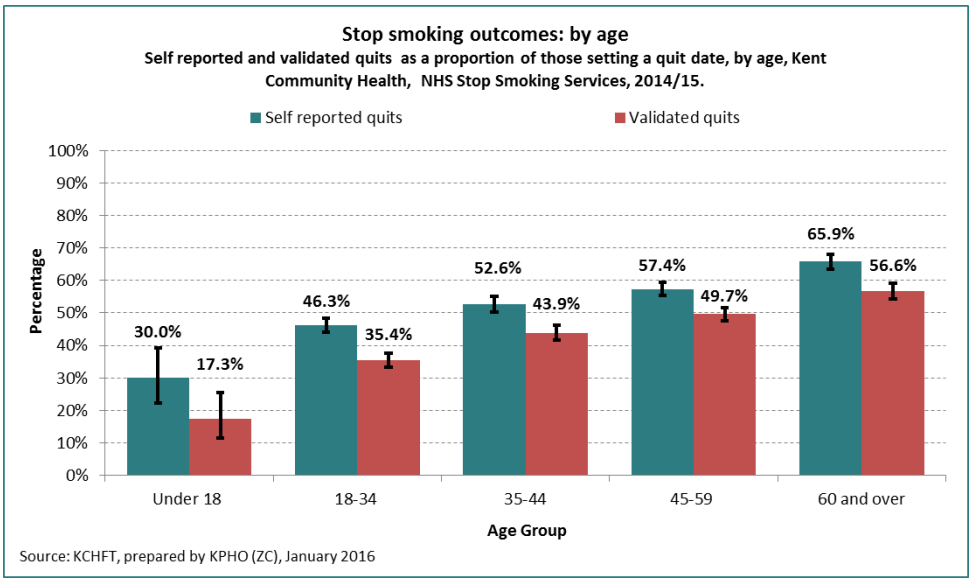
- Sevenoaks, Swale and Thanet showed higher validated quits per 100,000 smokers.
- Ashford, Canterbury, Tonbridge & Malling and Tunbridge Wells showed lower validated quits per 100,000 smokers.



[10] District smoking prevalence uses Local Tobacco Control Profiles, Public Health England, 2014.

4.2.2 Successful Quits: By Subgroup

Greater success with smoking cessation in terms of the proportion of those setting a quit date who do actually quit can be seen within those aged 45 years and over; this can be seen in comparison to those aged under 35 and is further highlighted by the under 18 population. This is similar to nationally reported results. [11]



[11] Health & Social Care Information Centre (2015) Statistics on NHS Stop Smoking Services in England – April 2014 to March 2015. http://www.hscic.gov.uk/catalogue/PUB18002

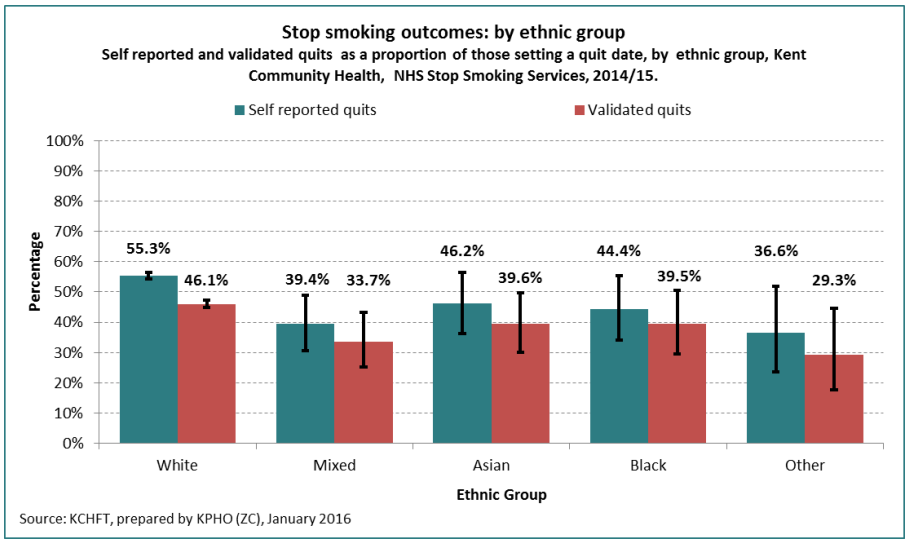
Similar proportions of men and women were validated as successfully quitting. National findings suggest that slightly more men than women were validated as successfully quitting.

Table 9: Stop smoking outcomes: by gender

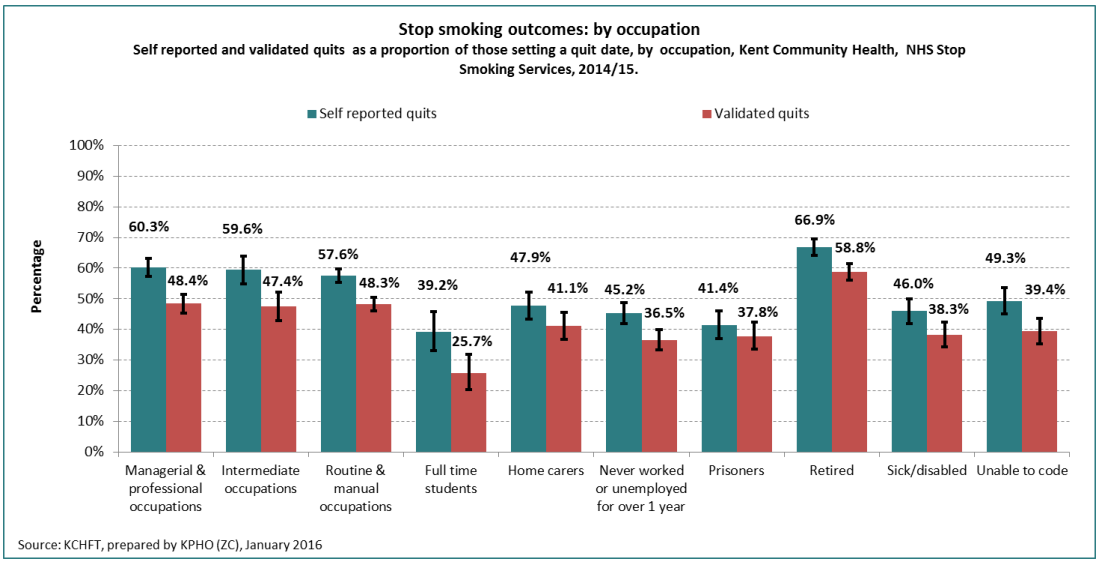
	Successful quits				
	Total	Males		Females	
	n	*n*	%	*n*	%
Self-reported quits	4,246	2,074	55.2%	2,172	54.3%
Validated quits	3,537	1,721	45.8%	1,816	45.4%

Source: KCHFT

The White ethnic group had higher validated quits. But there is insufficient evidence to infer any further differences in success with smoking cessation between the ethnic groups, due to wide confidence intervals. National reporting allows comparison of self-reported quits only, whereby, the percentages of self-reported quits by ethnic group were; 52% White, 45% Mixed, 53% Asian and 47% Black.

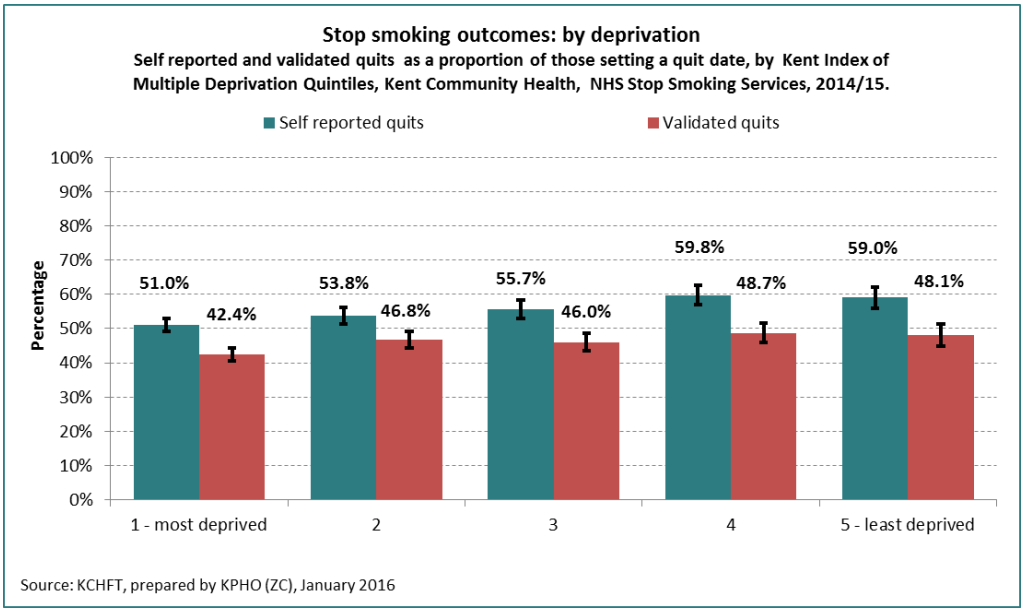


The retired group had the greatest success with smoking cessation, which is perhaps to be expected given the earlier findings related to age. This was followed by those in work (encompassing the managerial & professional, intermediate and routine & manual groups) who also had higher validated quits in comparison to other groups. National reporting allows comparison of self-reported quits only, whereby, self-reported success was highest amongst the retired and those in work[12].



[12] 60% within retired groups, 59% within managerial & professional, 57% within intermediate and 55% within routine & manual. Health & Social Care Information Centre (2015) Statistics on NHS Stop Smoking Services in England – April 2014 to March 2015. http://www.hscic.gov.uk/catalogue/PUB18002

The most deprived quintile had marginally lower success with smoking cessation, with 42% of those setting a quit date validated as quits. This compares with 46%-48% for less deprived groups. The published statistics on NHS Stop Smoking Services in England do not currently allow analysis by area deprivation. However, some evidence does suggest that within the most deprived groups, of those who originally accessed smoking cessation services, lower proportions end up successfully quitting.[13]

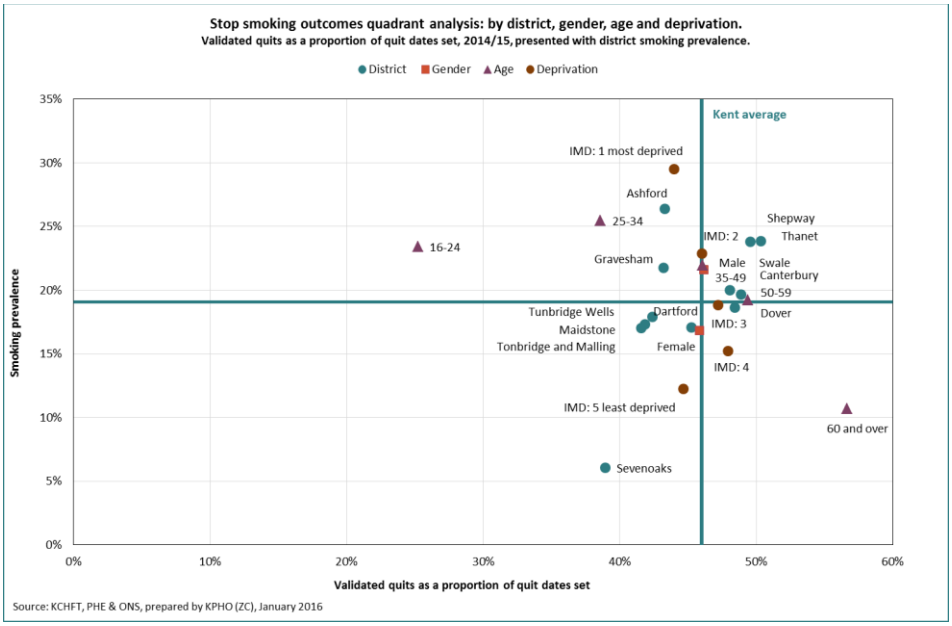


Validated quit rates in Kent (as a proportion of quit dates set) have also been analysed by demographic and deprivation variables in the context of the size of the smoking population for each individual subgroup.

[13] Lowey et al (2003) Smoking cessation services are reducing inequalities. Journal of Epidemiology & Community Health, 57, 579-580 http://jech.bmj.com/content/57/8/579.full

Quadrant analysis has been used to explore the relationship between level of need and service outcome. Need has been represented by smoking prevalence[14] and service outcome by validated quits as a proportion of total quit dates set.[15] This has been analysed by age, gender and area deprivation to identify groups with higher need but lower success rates for those accessing services. Kent averages for district smoking prevalence and validated quits, as a proportion of quit dates set, were used.

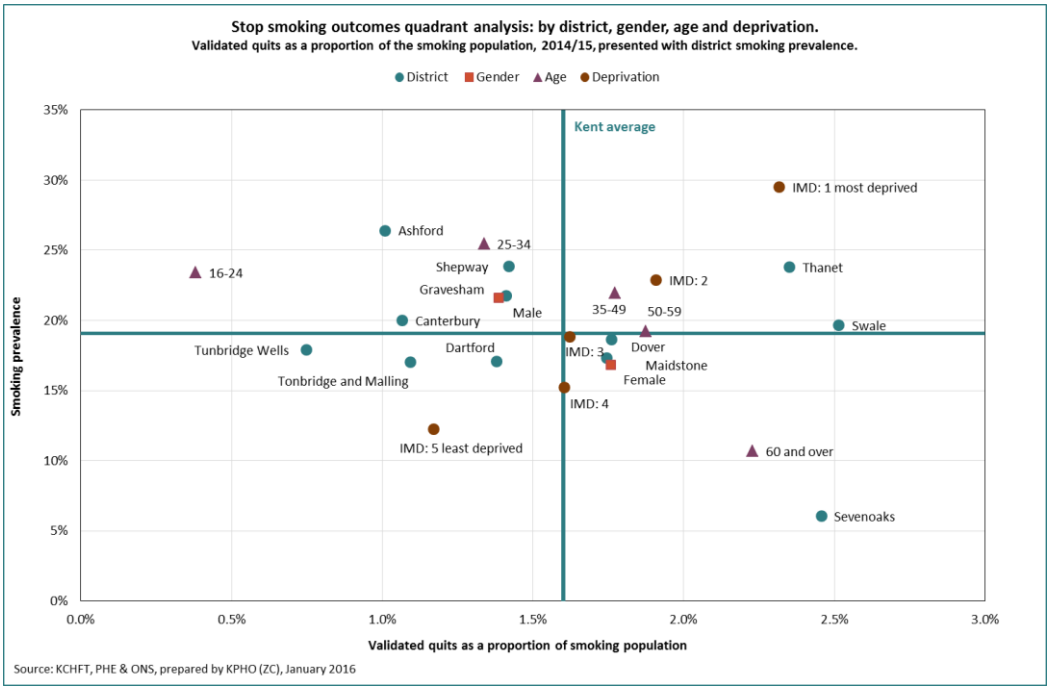
This highlights a combination of high smoking prevalence, but low success rates within the younger population (aged 16-34), as well as, within Ashford and Gravesham, and the most deprived quintile.



[14] Smoking prevalence by age, gender and deprivation uses Integrated Household Survey, Office for National Statistics, 2012.

[15] The proportion of validated quits by deprivation have been derived using national Index of Multiple Deprivation quintiles to mirror the smoking prevalence indicator.

If service outcome is considered in terms of the proportion of the smoking population successfully quitting (and not simply as a proportion of those accessing the Stop Smoking Service) quadrant analysis highlights high smoking prevalence coupled with low quit rates for males and the younger population (aged 16-34), as well as, those within Ashford, Canterbury, Gravesham & Shepway districts.



Further analysis of quit rates in the context of smoking prevalence has been conducted by Mosaic type. The presentation of this analysis has again been restricted to the 22 Mosaic types with the highest levels of smoking prevalence and expected to contribute more than 1,000 smokers within Kent.

Quit rates have been analysed as a percentage of the all age smoking population, as estimated by Experian for each individual Mosaic type. From this, the three Mosaic types with the highest and lowest levels of successful quits in the context of the smoking population (and high smoking prevalence) have been highlighted.

Table 10: Mosaic types with validated quits, as a proportion of smoking population.

Mosaic Type	Description	Validated Quits	Smoking Prevalence	Estimated Smokers in Kent
G28 Local Focus	Rural families, ages 41 to 45 in affordable village homes, reliant on the local economy for jobs.	2.2%	24.1%	7,903
N60 Dependent Greys	Ageing social renters, ages 66 to 70, with high levels of need in centrally located developments of small units.	1.8%	26.6%	2,659
M54 Childcare Squeeze	Younger families, ages 31 to 35, who own a budget home and strive to cover expenses.	1.7%	25.7%	4,118
-	-	-	-	-
H34 Contemporary Starts	Younger, 26-30, renting city centre flats in vibrant locations.	0.7%	22.5%	8,402
J41 Central Pulse	Younger, 26-30, renting city centre flats in vibrant locations.	0.4%	29.2%	2,062
J43 Student Scene	Students, ages 18 to 25, living in high density accommodation close to universities.	0.4%	23.6%	1,136

Source: KCHFT & Experian

The Mosaic types highlighted are very similar to those identified as having high and low levels of access to services as a proportion of the smoking population.

Multivariate decision tree analysis (CHAID) has been used to explore success rates (measured by validated quits as a % of those setting quit dates) in more detail, with the aim of identifying the combinations of characteristics with the highest and lowest success rates once individuals are engaged with the service. The model identifies groups that are most and least likely to quit smoking once engaged with the current NHS Stop Smoking Service in Kent. Further details on the methodology have been included within Appendix A.

Age was the best predictor of validated quitting. For all age categories, the next best predictor was economic activity. Region of Kent, the final predictor, was only included under a few nodes.

The findings from the final tree model, included;

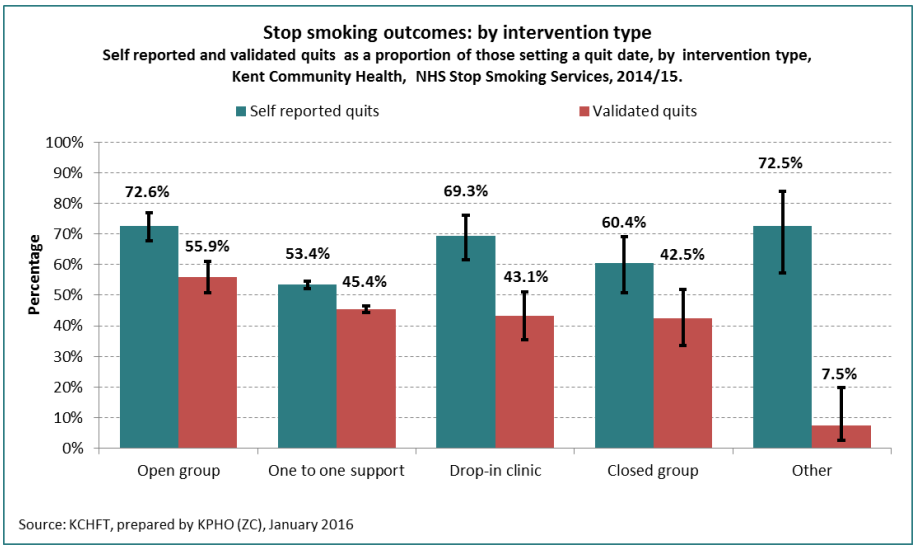
- Only 25% of those aged under 25 who set a quit date were validated as a quit. Well below the 35% threshold included within NICE Guidance PH10. This fell further to 22% amongst those who were not economically active.[16]
- Quit rates rose to 43% for those aged 25 to 49. However, quit rates were again lower amongst those who were not economically active (at 38%).
    - Kent region was a further significant predictor for the economically active in this age group, with those within the West less likely to quit in comparison to the East and North of Kent (42% vs 50%).
- Quit rates were highest amongst those aged 50 and over, with 53% quitting. Again, this varied by economic activity; with quit rates falling to 44% amongst those in this age group who were not economically active. Kent region was again only a significant predictor for the economically active, and again the West was identified as having a lower quit rate than the East and North of Kent (49% vs 60%).

[16] Covers the following categories: students, home carer, never worked and long term unemployed, prisoners and long-term sick.

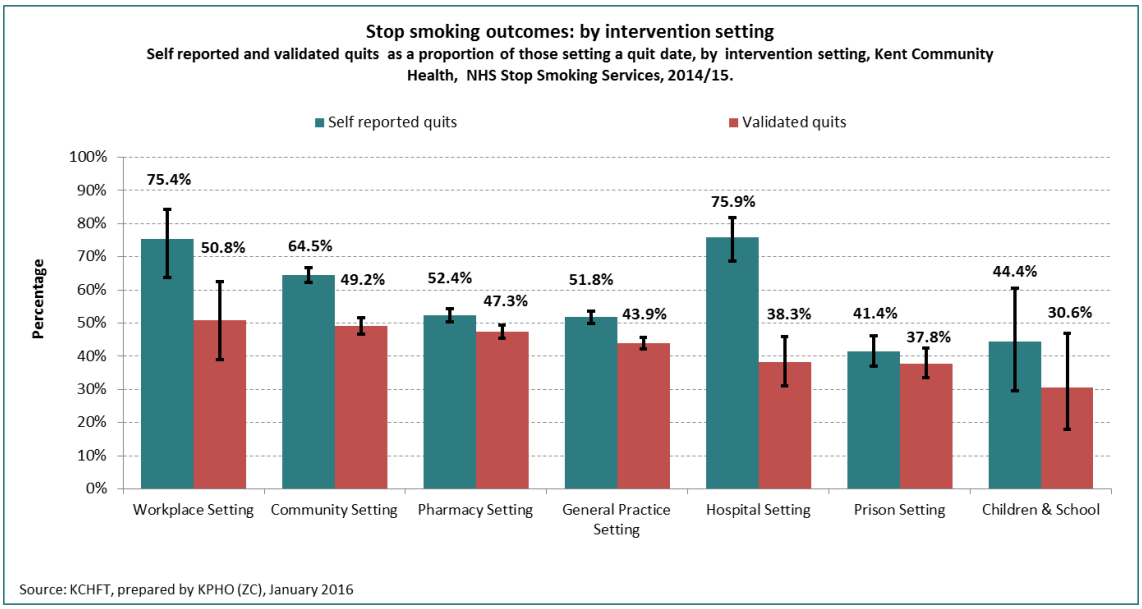
4.2.3 Successful Quits: By Intervention Type and Setting

Each smoking cessation record includes details of intervention type and setting.

Open groups (which accounted for around 5% of interventions in Kent in 2014/15) had the highest level of validated quits. Validated quit rates were similar across the other main intervention types (one to one support; drop in clinics and closed groups). National reporting allows comparison of self-reported quits only, and shows a similar pattern of results, with self-reported success slightly lower for one to one support in comparison with the other main intervention types.



There is insufficient evidence to infer any differences in quit rates between the intervention settings, due to wide confidence intervals. National reporting allows comparison of self-reported quits only, whereby, self-reported success was highest within workplace (61%) and hospital (59%) settings. Kent data suggests the same for self-reported quits, but not validated quits.



5. Conclusions

More quit dates were set and higher levels of validated quits can be seen within the older age groups, despite greater need from higher smoking prevalence within the younger age groups. Quadrant analysis specifically identified higher smoking prevalence coupled with lower quit dates set and validated quits within the younger age groups. This suggests that the younger age groups are not making contact with services and when they do, they are less likely to be successful. Multivariate analysis of success rates amongst those accessing services illustrates that, after age, the key predictor of poor success rates is economic inactivity.

Less affluent smokers were more likely to set quit dates; however, were less likely to be successful in quitting smoking. Therefore, this suggests that the appropriate groups are making contact with services. However, services need to consider the reasons why these groups are less likely to achieve success and attempt to address this within the service offer.

Identification of Mosaic types with high levels of smoking prevalence but low levels of contact with services and/or poor quit rates provide further direction on targeting services.

Ward-level analysis has highlighted a number of wards with high (modelled) smoking prevalence but low levels of access to the Stop Smoking Service. In some cases, proximity to services may warrant further investigation. .

Appendix A: Methodology

CHAID analysis (Chi Square Automatic Interaction Detection) was used to explore the relationship between validated carbon monoxide quitting or not quitting and several predictor variables. This method uses the chi-square test to determine each variables explanatory impact and produce a tree-based classification model.

The following predictor variables were explored; age, gender, ethnicity, occupation and district. Based on these predictor variables, a model was built to identify groups that were more and least likely to quit smoking.

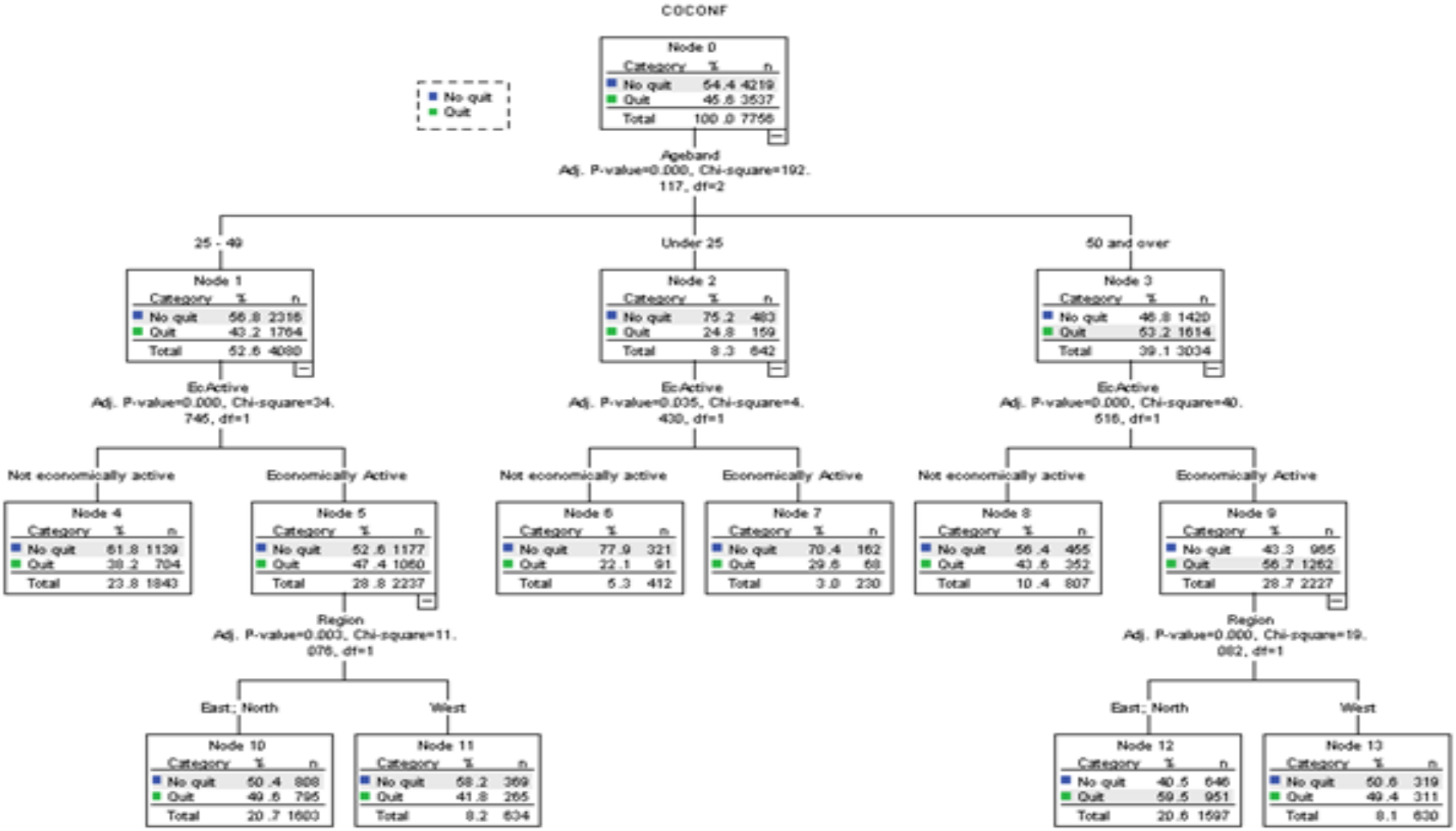
Gender, ethnic group and deprivation were specified but did not pull through into the final model. This is because these variables did not make a significant contribution and so were automatically dropped.

Variables were categorised due to their relationship with the outcome of interest.

- Age band was derived from the continuous variable for age at quit date, whereby age groups were automatically categorised due to similarity of outcomes.
- The categorical occupation variable was automatically grouped due to similarity of outcomes; this was renamed as economically active/ inactive. Those labelled economically active included; managerial & professional, intermediate, routine & manual and retired. Those labelled as economically inactive included; students, home carer, never worked and long term unemployed, prisoners and long-term sick.
- The categorical district variable was automatically grouped due to similarity of outcomes; this was renamed as North, East and West Kent regions.

The findings from the final tree model, included;

- Age band was the best predictor of validated carbon monoxide quitting.
    - Only 25% of those aged under 25 quit.
    - 43% of those aged 25 to 49 quit.
    - Only those aged 50 and over were found to be more likely to successful quit than not, with 53% quitting.
- For all age categories, the next best predictor was economic activity.
    - For those aged under 25, economic activity was considered the terminal node and no further predictor variables were included. Within this age category, 22% of those who were not economically active quit in comparison to 30% of the economically active.
    - For those aged between 25 and 49, 38% of those who were not economically active quit in comparison to 47% of the economically active.
    - For those aged 50 and over, 44% of those who were not economically active quit in comparison to 57% of the economically active.
- The next best predictor, region of Kent, was only included under the following nodes:
    - Those aged between 25 and 49, who were economically active
        - 42% of those within the West quit in comparison to 50% across the East and North of Kent.
    - For those aged 50 and over, who were economically active
        - 49% of those within the West quit in comparison to 60% across the East and North of Kent.


COCONF
No quit
Quit
Node 0
Category % n
No quit 54.4 4219
Quit 45.6 3537
Total 100.0 7756
Ageband
Adj. P-value=0.000, Chi-square=192.117, df=2
25 - 49
Under 25
50 and over
Node 1
Category % n
No quit 56.8 2316
Quit 43.2 1764
Total 52.6 4080
Node 2
Category % n
No quit 75.2 483
Quit 24.8 159
Total 8.3 642
Node 3
Category % n
No quit 46.8 1420
Quit 53.2 1614
Total 39.1 3034
EcActive
Adj. P-value=0.000, Chi-square=34.745, df=1
EcActive
Adj. P-value=0.035, Chi-square=4.430, df=1
EcActive
Adj. P-value=0.000, Chi-square=40.516, df=1
Not economically active
Economically Active
Not economically active
Economically Active
Not economically active
Economically Active
Node 4
Category % n
No quit 61.8 1139
Quit 38.2 704
Total 23.8 1843
Node 5
Category % n
No quit 52.6 1177
Quit 47.4 1060
Total 28.8 2237
Node 6
Category % n
No quit 77.9 321
Quit 22.1 91
Total 5.3 412
Node 7
Category % n
No quit 70.4 162
Quit 29.6 68
Total 3.0 230
Node 8
Category % n
No quit 56.4 455
Quit 43.6 352
Total 10.4 807
Node 9
Category % n
No quit 43.3 965
Quit 56.7 1262
Total 28.7 2227
Region
Adj. P-value=0.003, Chi-square=11.076, df=1
Region
Adj. P-value=0.000, Chi-square=19.092, df=1
East; North
West
East; North
West
Node 10
Category % n
No quit 50.4 808
Quit 49.6 795
Total 20.7 1603
Node 11
Category % n
No quit 58.2 369
Quit 41.8 265
Total 8.2 634
Node 12
Category % n
No quit 40.5 646
Quit 59.5 951
Total 20.6 1597
Node 13
Category % n
No quit 50.6 319
Quit 49.4 311
Total 8.1 630