KENT PUBLIC HEALTH OBSERVATORY

Analysis of the 2015 Stoptober Smokefree Initiative in Kent

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1. Executive Summary

1.1 Key Findings

1.1.1 Stoptober Uptake & Reach

- There is generally higher uptake from greater numbers of registrations, pack requests, texts and app requests within wards with highest levels of need in terms of the numbers of smokers.
    - There are, however, exceptions and the wards within the highest quintile of smoking prevalence but with the lowest quintile for reach have been identified.
- There is no evidence to suggest any differences in ward-level reach by the ward-level deprivation, age or ethnicity profile. However, only very limited analysis has been possible in the absence of a person-level dataset.
- Across the Kent districts, higher levels of reach for registrations, pack requests and app requests were evident for Dartford, Shepway, Swale and Tonbridge & Malling, and lower levels for Sevenoaks. The level of reach for text requests was similar across the Kent districts.

1.1.2 Stop Smoking Services

- Analysis of NHS Stop Smoking Service data explored whether there was a Stoptober effect for both access to services and securing good outcomes. This compared October with other months for before and after Stoptober introduction; 2010/11 and 2011/12 in comparison to 2013/14 and 2014/15.
- There is some evidence that suggests the Stoptober campaign has promoted greater access to services in Kent during October than the rest of the year.
- There is also evidence that the service is able to deliver similar outcomes in October, despite an uplift in service use; this has been confirmed within multivariate analysis.

1.2 Call to Action

Ward-level analysis has highlighted a number of wards with high (modelled) smoking prevalence but low levels of reach from Stoptober registrations, pack requests, texts and app sign up by the smoking population. This may provide further direction on targeting campaigns.

2. Introduction & Objectives

Introduced in 2012, Stoptober is a national marketing campaign, to motivate and support people to stop smoking, launching in early September for recruitment and starting on the 1st October for 28 days.

- Those who register can access a range of free support, including; packs, texts and an app. As well as, use internet based support, including; a website and social media encouragement via Facebook and Twitter.
- They describe a push and pull marketing strategy that aims to motivate quit attempts and provide support for those attempting to quit.[1]
- It is also grounded within the theory that if a person can stop smoking for 28 days, they would be more likely to stop smoking for good.[1]

Analysis of uptake of the 2015 Stoptober Smokefree initiative in Kent is required to inform inequalities research and planned targeted preventive action through the procurement of social marketing inputs.

In particular the analysis seeks to explore:

- How uptake (registrations, total pack requests, total SMS requests and total app requests) and reach of the smoking population varies across Kent, with a particular focus on the most deprived decile
- How reach in Kent compares with peer authorities

The report also seeks to explore the extent to which the Stoptober initiative impacts on usage of NHS Stop Smoking Services in Kent, both in terms of access to services and outcomes.

[1] Public Health England (2016) Stoptober https://campaignresources.phe.gov.uk/resources/campaigns

2.1 What does the evidence say?

An evaluation of Stoptober, found that more people attempted to quit in October during 2012 compared to the years 2007-2011 [OR 1.79 (95% CI: 1.20, 2.68)].[2] Furthermore, Stoptober has been related to an increase in quits within the month of October in comparison to other months of the year [OR 1.50(95% CI: 1.05, 2.15)] .[2]

Mass media campaigns have been found to be effective to reduce smoking in adults.[3, 4] A key advantage being the ability to reach large numbers of people, promoting awareness and participation. This has been supported by research suggesting that smoking cessation spreads through social networks.[5]

Electronic aids have been found to increase the likelihood of smoking cessation [OR 1.32 (95% CI: 1.21, 1.45)] [6] Further, mobile phone based interventions were effective for helping with longer term smoking cessation at six months [RR 1.72 (95% CI: 1.47, 1.99)]. [7] But, further research is needed on the effectiveness of the different types of electronic interventions,[6] as well as, determine whether internet interventions can help people to stop smoking. [8]

Little is known about the effect of mass media campaigns for smoking cessation on inequalities[3] and it appears that there are no consistent patterns by age, gender, ethnicity or education.[4]

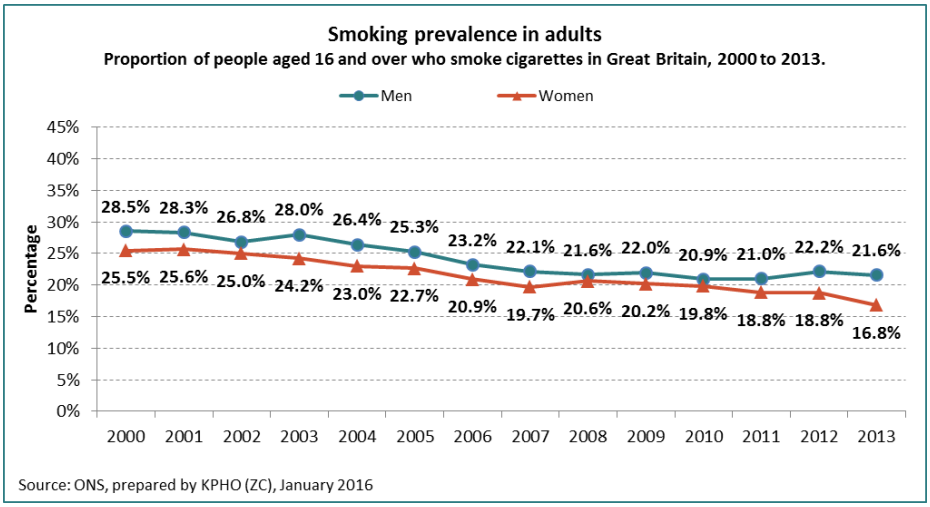
[2] Brown, J., et al (2013) How effective and cost-effective was the national mass media smoking cessation campaign 'Stoptober'? Drug and Alcohol Dependence, 135; 52-58.
[3] Jepson, R., et al (2007) A review of the effectiveness of mass media interventions which both encourage quit attempts and reinforce current and recent attempts to quit smoking. NICE Public Health Guidance.
[4] Bala, M.M., et al (2013) Mass media interventions for smoking cessation in adults. Cochrane Database of Systematic Reviews 2013, Issue 6. Art. No.: CD004704.
[5] Christakis, N.A., et al (2008) The collective dynamics of smoking in a large social network. The New England Journal of Medicine, 358; 2249-58
[6] Chen, Y.F., et al. (2012) Effectiveness and cost effectiveness of computer and other electronic aids for smoking cessation: a systematic review and network meta-analysis. Health Technology Assessment 2012; 16(38).
[7] Whittaker, R., et al (2012) Mobile phone-based interventions for smoking cessation. Cochrane Database of Systematic Reviews 2012, Issue 11. Art. No.: CD006611.
[8] Civljak, M., et al (2013) Internet-based interventions for smoking cessation. Cochrane Database of Systematic Reviews 2013, Issue 7. Art. No.: CD007078.

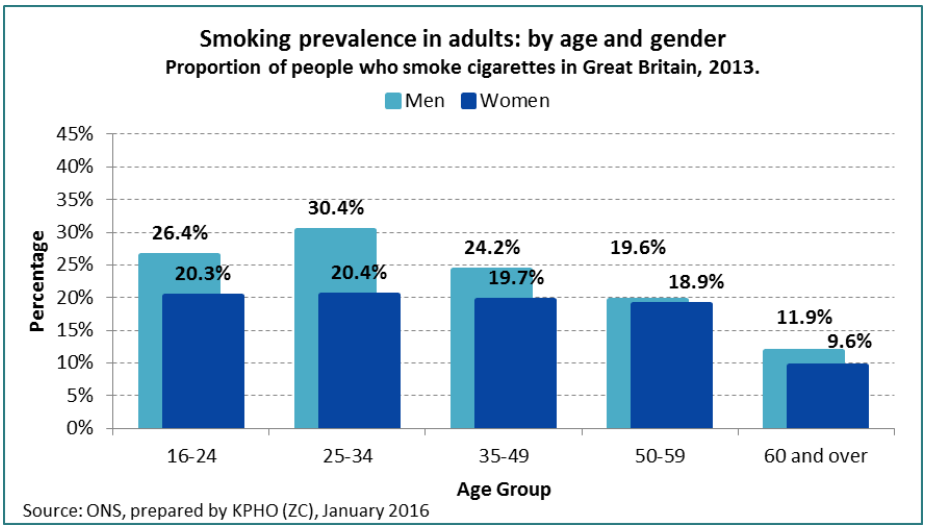
3. Public Health Need

3.1 National Prevalence

The Office for National Statistics, Opinions & Lifestyle Survey[9] reports the proportion of persons who smoke cigarettes nationally.

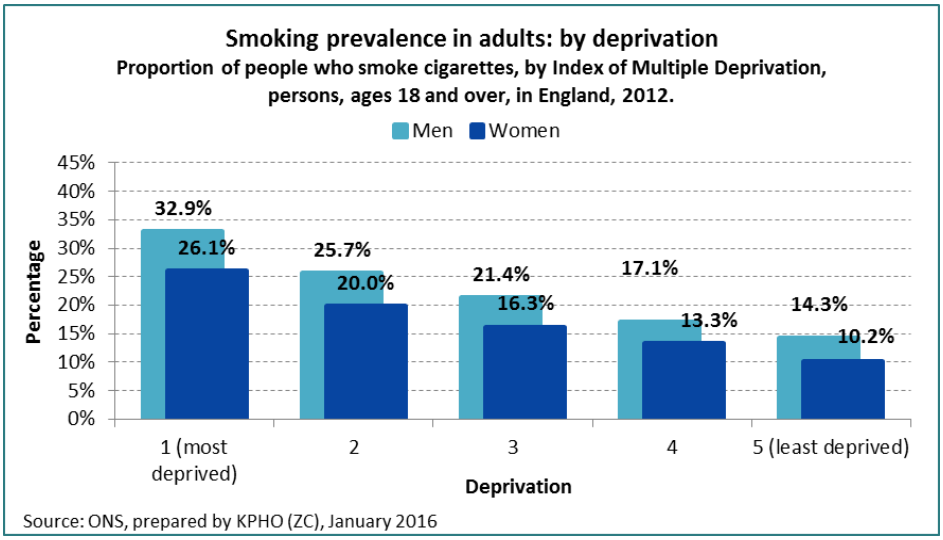
- There is a decreasing trend between 2000 and 2013: the prevalence has decreased from 28.5% to 21.6% in men and 25.5% to 16.8% in women.
- In men, the 25 to 34 years age group had the highest prevalence, with prevalence rates then decreasing with age. However, in women, prevalence rates are similar (at around 20%) up to the age of 60, after which they drop to around 10%.





[9] 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.[10]
- Furthermore, smoking prevalence is higher amongst the unemployed, those in routine and manual occupations and those with lower education qualifications.



- 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.[11]

[10] 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

[11] 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

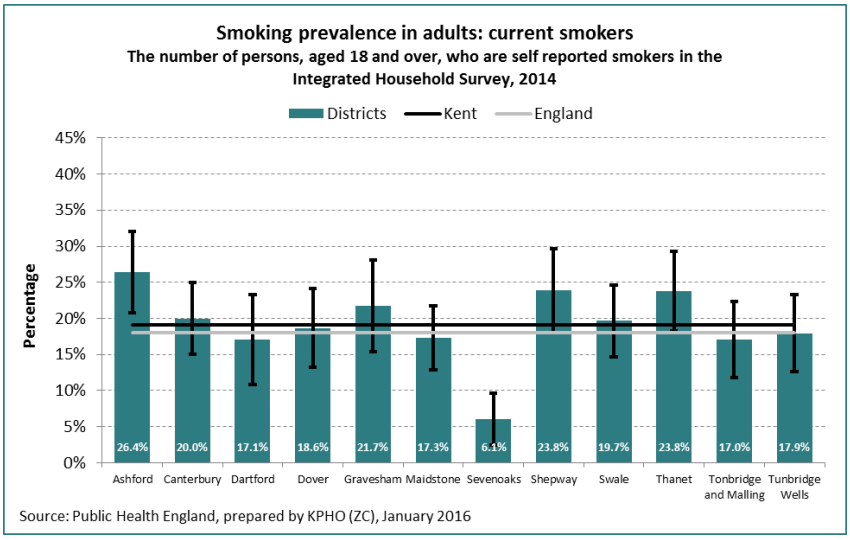
3.2 Local Prevalence

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[12] 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.

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

3.2.2 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.

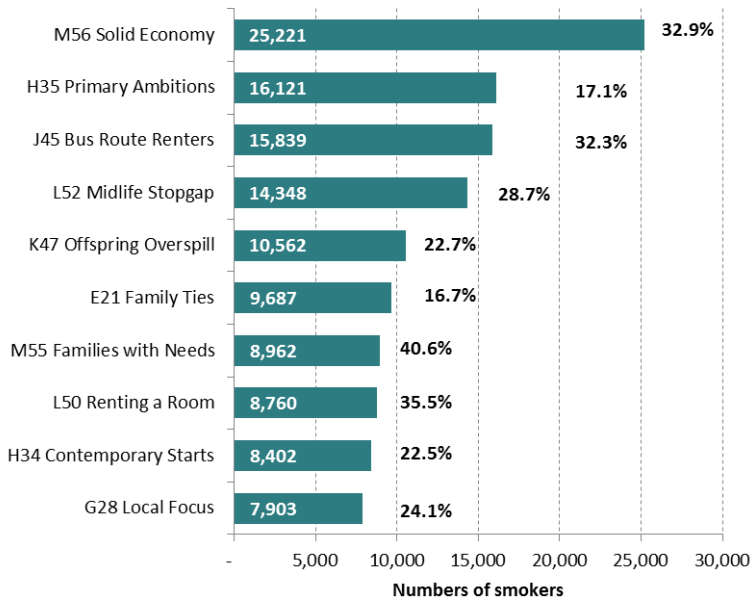
Table 1: Mosaic types with highest smoking prevalence, 2014

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

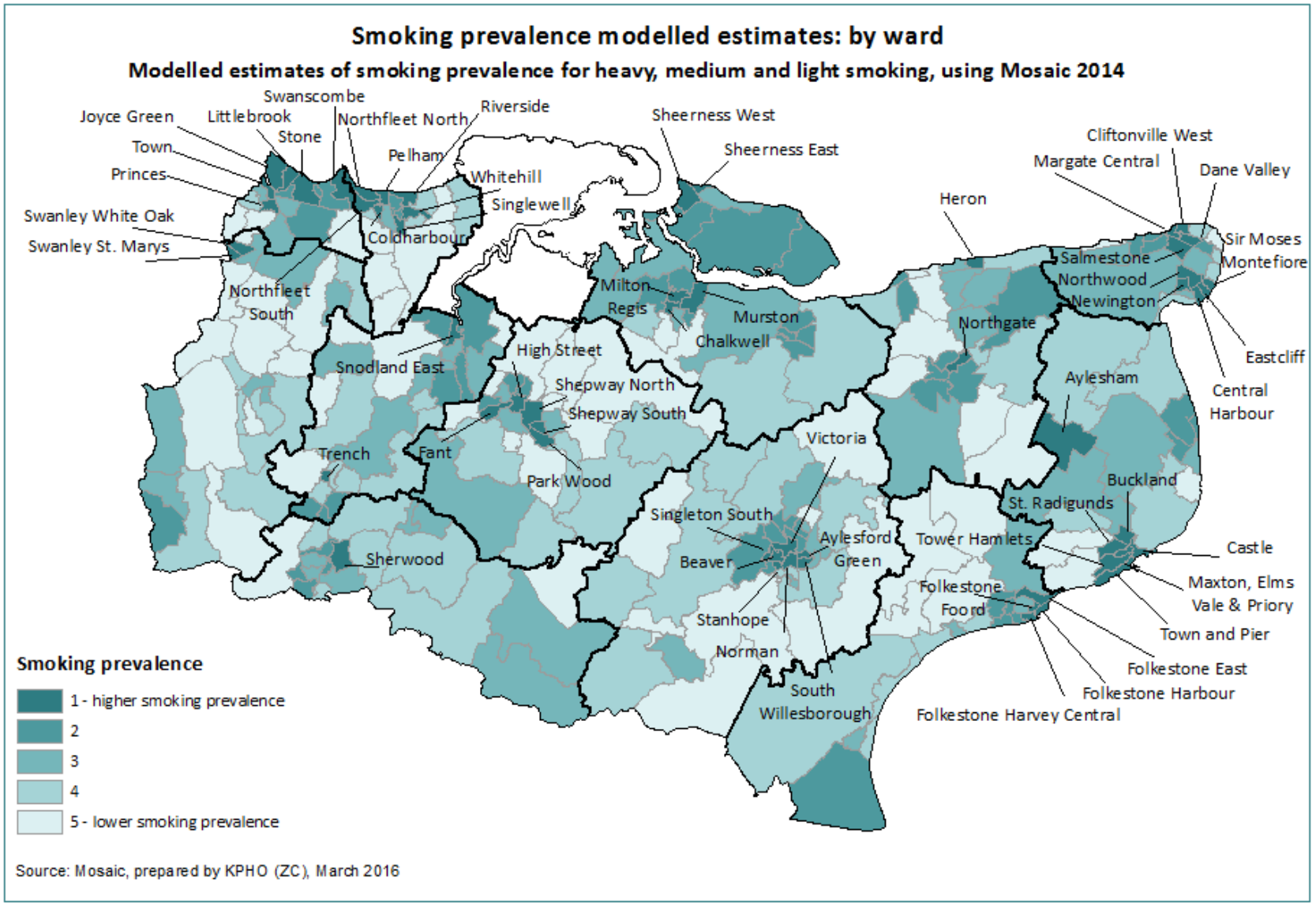
The Mosaic types with the highest smoking prevalence do not necessarily contribute the greatest numbers of smokers in Kent. The Mosaic types contributing the largest numbers of smokers have been presented within the chart below. The map below outlines their ward location.

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


Smoking prevalence modelled estimates: by ward
Modelled estimates of smoking prevalence for heavy, medium and light smoking, using Mosaic 2014
Swanscombe
Joyce Green
Littlebrook
Northfleet North
Riverside
Stone
Town
Pelham
Sheerness West
Sheerness East
Princes
Whitehill
Singlewell
Cliftonville West
Margate Central
Dane Valley
Heron
Swanley White Oak
Swanley St. Marys
Coldharbour
Sir Moses Montefiore
Salmestone
Northwood
Newington
Milton Regis
Murston
Chalkwell
Northfleet South
Northgate
Eastcliff
High Street
Snodland East
Aylesham
Shepway North
Shepway South
Central Harbour
Victoria
Trench
Fant
Park Wood
Buckland
St. Radigunds
Singleton South
Aylesford Green
Tower Hamlets
Castle
Sherwood
Beaver
Folkestone Foord
Maxton, Elms Vale & Priory
Stanhope
Town and Pier
Norman
Folkestone East
South Willesborough
Folkestone Harbour
Folkestone Harvey Central
Smoking prevalence
1 - higher smoking prevalence
2
3
4
5 - lower smoking prevalence
Source: Mosaic, prepared by KPHO (ZC), March 2016

4. Stoptober

Summary

In 2015, there were 6,006 registrations to Stoptober across Kent. There were also large numbers of pack requests (5,130) and app requests (4,420), but comparatively lower numbers requesting text alerts (1,397).

There is generally higher reach from greater numbers of registrations, pack requests, texts and app requests within wards with highest levels of need in terms of smoking prevalence. There are, however, exceptions and the Wards within the highest quintiles of smoking prevalence but with the lowest quintiles for reach have been identified.

There is no evidence to suggest any differences in Ward-level reach by the Ward-level deprivation, age or ethnicity profile.

Across the Kent districts, higher levels of reach for registrations, pack requests and app requests were evident for Dartford, Shepway, Swale and Tonbridge & Malling, and lower levels for Sevenoaks. The level of reach for text requests was similar across the Kent districts.

National comparisons suggest that Stoptober reach is lower than the peer authority median for four Kent Districts; namely Ashford, Gravesham, Tunbridge Wells and Sevenoaks.

Overall, there were 6,006 registrations, 5,130 pack requests, 1,397 text requests and 4,420 app requests across Kent.

Table 2: Stoptober Activity Data

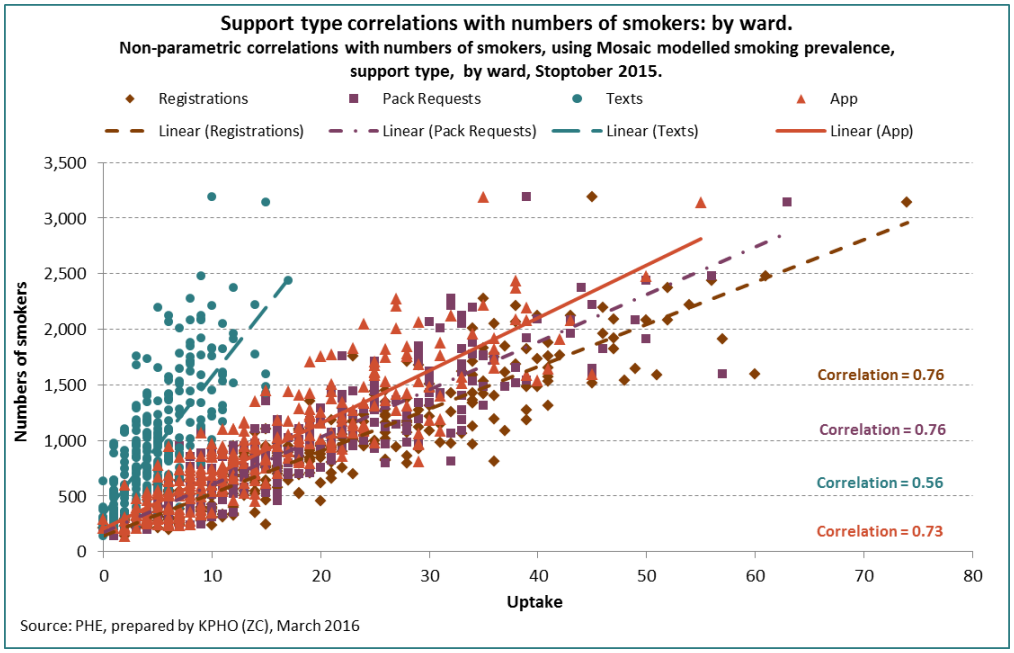
	Registrations	Pack requests	Text	App
Ashford	467	399	123	335
Canterbury	555	463	122	406
Dartford	432	382	95	324
Dover	502	428	116	369
Gravesham	398	341	87	299
Maidstone	635	539	157	460
Sevenoaks	340	283	91	237
Shepway	498	426	102	380
Swale	627	543	145	461
Thanet	647	564	141	486
Tonbridge and Malling	515	448	115	391
Tunbridge Wells	390	314	103	272
Kent	**6,006**	**5,130**	**1,397**	**4,420**

4.1 Uptake by Ward

Ward level sign up to Stoptober to access packs, emails, texts and the app has been analysed in the context of the numbers of smokers.[13]

Non-parametric correlation was explored, as data was not normally distributed and a meaningful measure for the strength of association was needed.[14]

As expected, there is a strong relationship between uptake and smoking prevalence for all support types (registrations, pack requests, texts and the app). This suggests that there is generally higher reach from greater numbers of registrations, pack requests, texts and app sign up within wards with highest levels of need in terms of smoking prevalence.



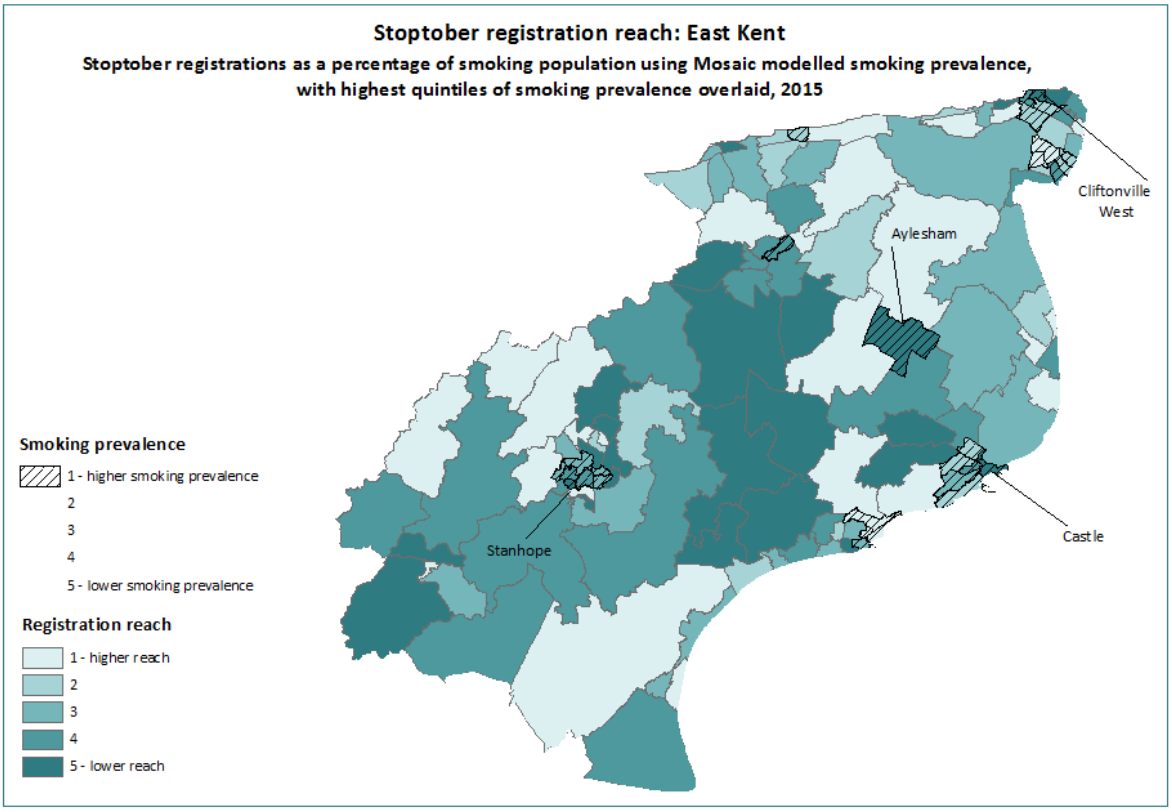
[13] Using the synthetic estimates of ward-level smoking prevalence described in Section 3.2.2
[14] Kendall's Tau was used for non-parametric correlations

4.1 Reach by Ward

Whilst there is generally alignment between reach and need, there are some individual wards with high levels of need but relatively low Stoptober reach.

Ward level reach has been analysed in the context of Stoptober uptake as a percentage of the smoking population. Wards within the top quintiles of smoking prevalence but with the bottom quintile with lowest reach for Stoptober have been identified.

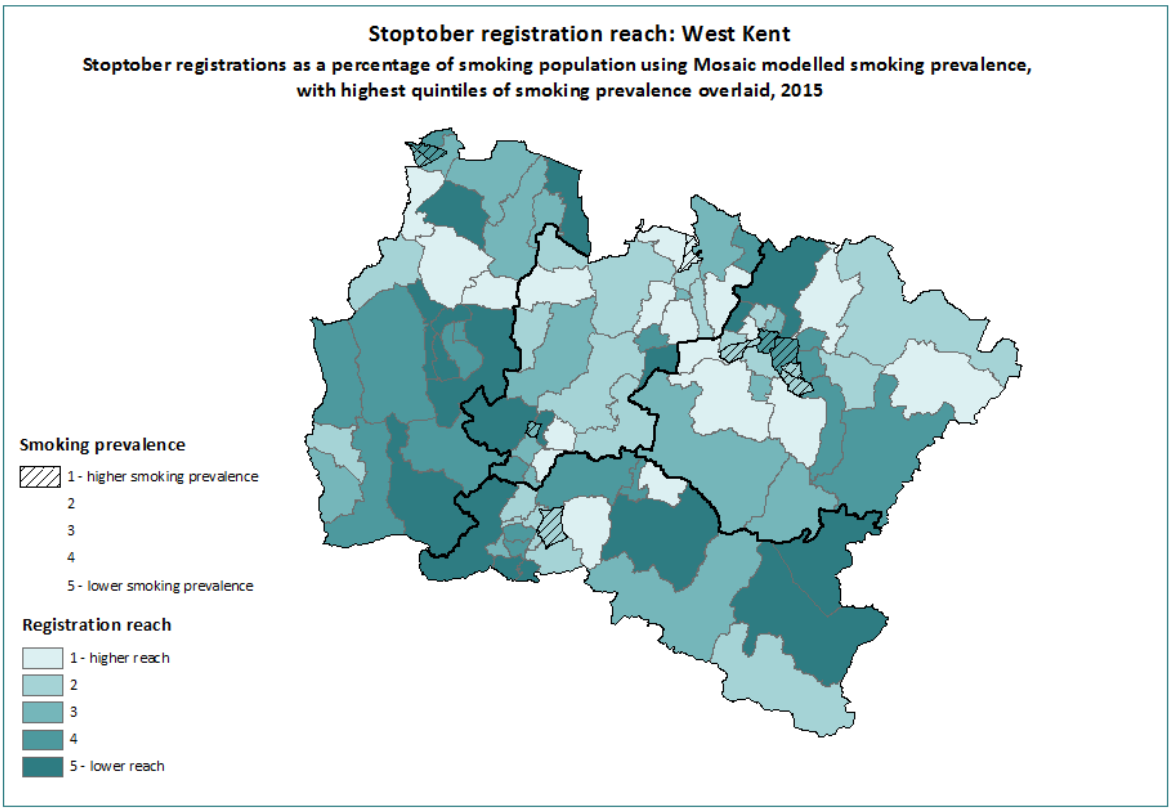
The map below shows the findings for East Kent.



This analysis highlights the following wards as having high smoking prevalence but low levels of reach;

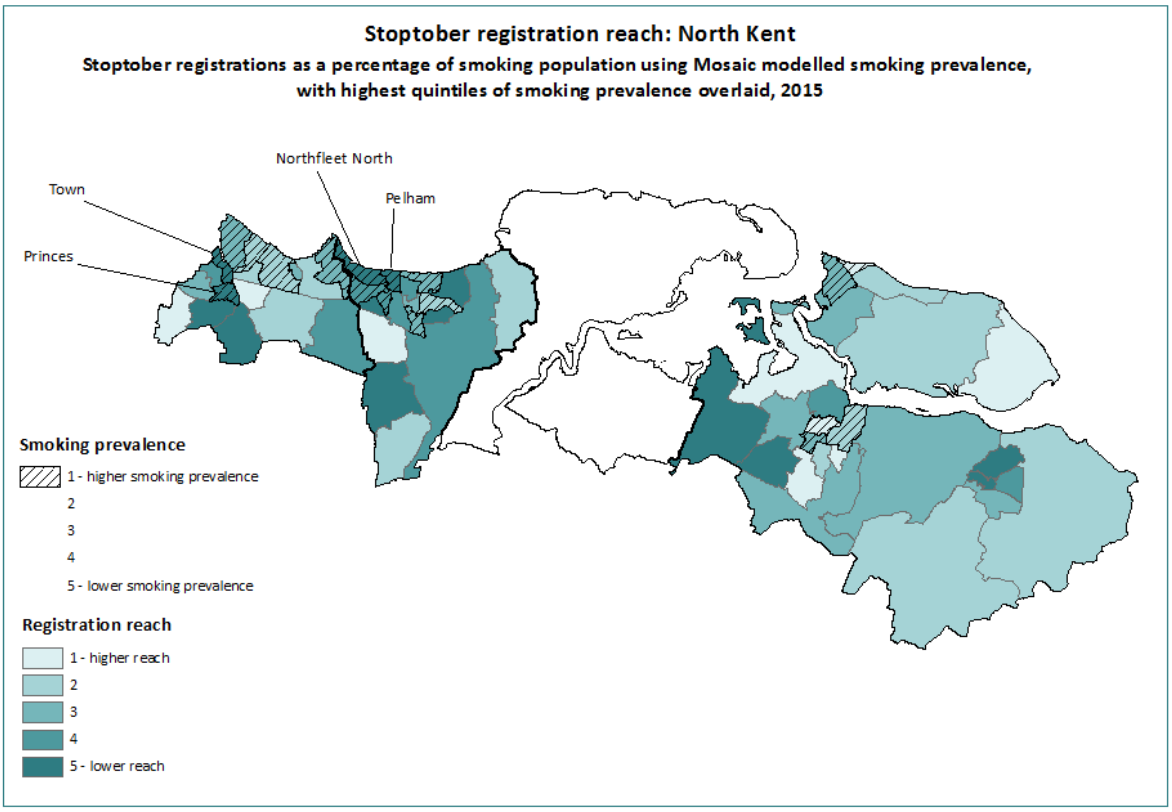
- Within Ashford; Stanhope.
- Within Dover; Aylesham and Castle.
- Within Thanet; Cliftonville West.

The map below shows the findings for West Kent.



This analysis does not highlight any wards within West Kent as having high smoking prevalence but lower levels of Stoptober reach.

The map below shows the findings for North Kent.



This analysis highlights the following wards as having high smoking prevalence but lower levels of Stoptober reach;

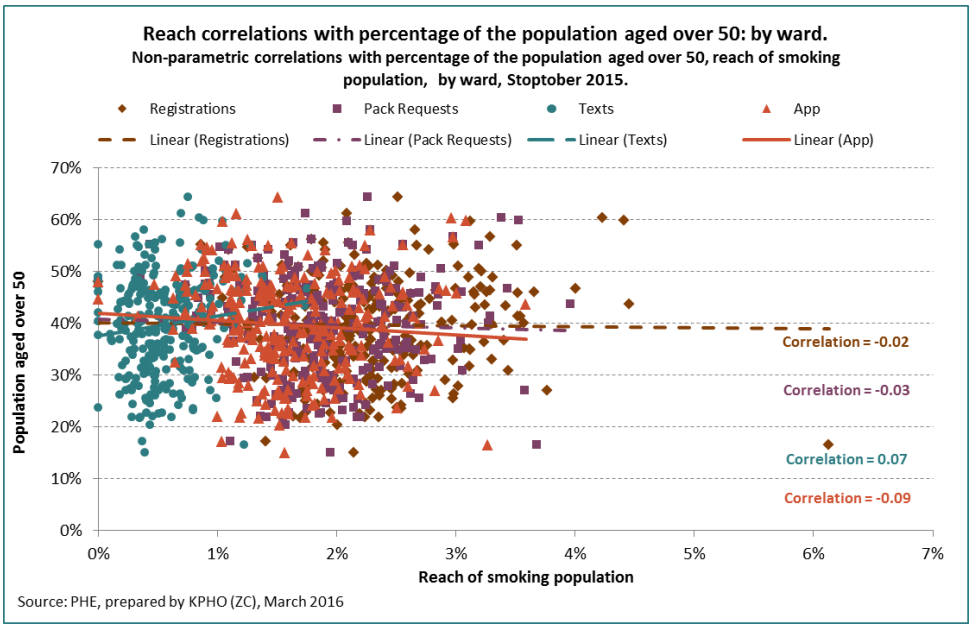
- Within Dartford; Princes and Town.
- Within Gravesend; Northfleet North and Pelham.

4.2 Reach by Age

Whilst the dataset does not allow direct analysis of Stoptober registrations, pack requests, app requests and text alerts by age, it is possible to explore whether there are any differences in reach by ward-level age profiles. If any differences are evident this may imply differences in reach by age.

Non parametric correlations were used to explore the distribution of ward Stoptober reach (i.e. Stoptober uptake as a percentage of the smoking population) for all the support types (registrations, pack requests, texts and app) by age profile, as measured by the proportion of the population aged over 50.

- No relationship was found between Stoptober reach for all the support types.

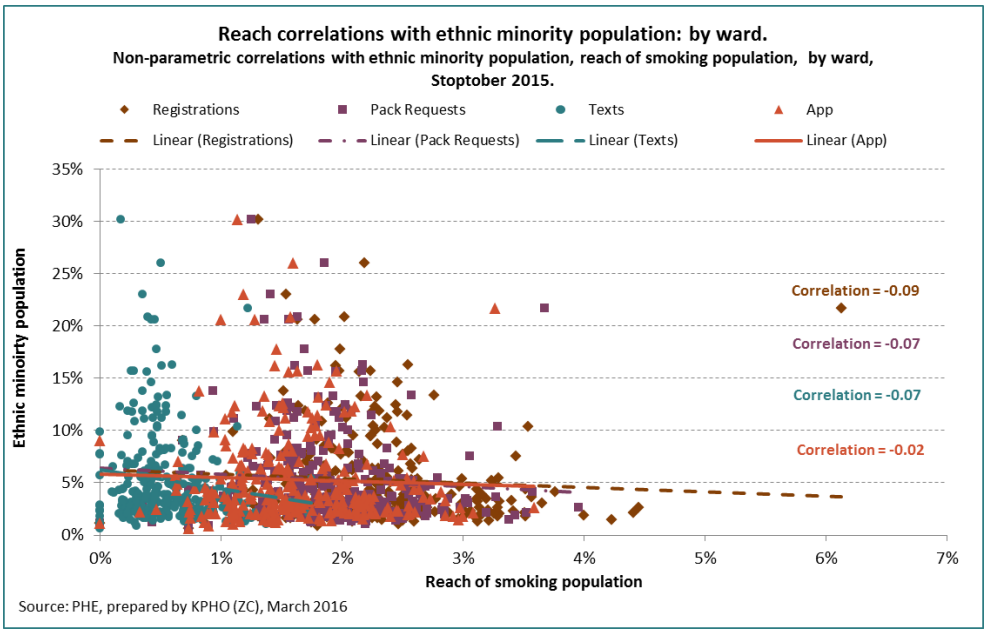


4.3 Reach by Ethnic Minority

Whilst the dataset does not allow direct analysis of Stoptober registrations, pack requests, app requests and text alerts by ethnicity, it is possible to explore whether there are any differences in reach by ward-level ethnicity profiles. If any differences are evident this may imply differences in reach by ethnicity.

Non parametric correlations were used to explore the distribution of ward Stoptober reach for all the support types (registrations, pack requests, texts and app) by ethnicity, as measured by the proportion of the population from an ethnic minority.[15]

- No relationship was found between Stoptober reach and the proportion of the population from an ethnic minority for all the support types.



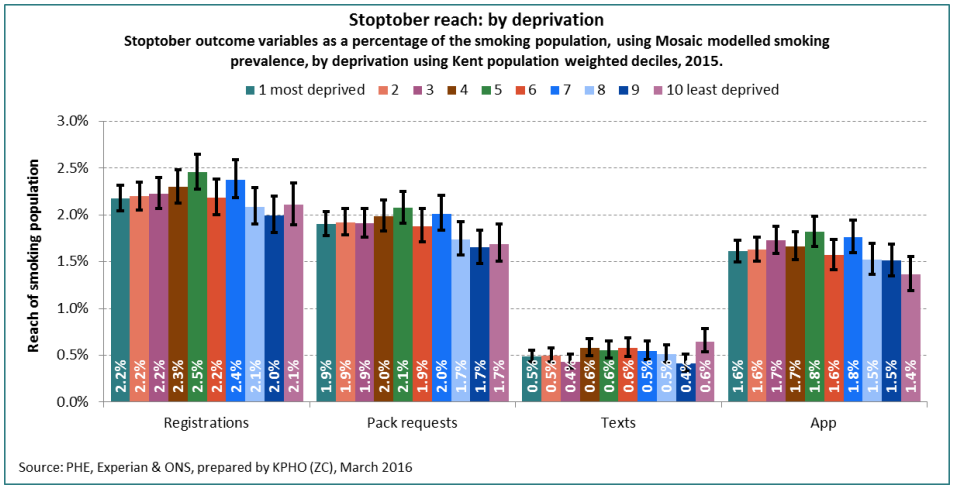
[15] This includes; Mixed/ Multiple, Asian/ Asian British, as well as, Black/ African/ Caribbean/ Black British ethnic groups.

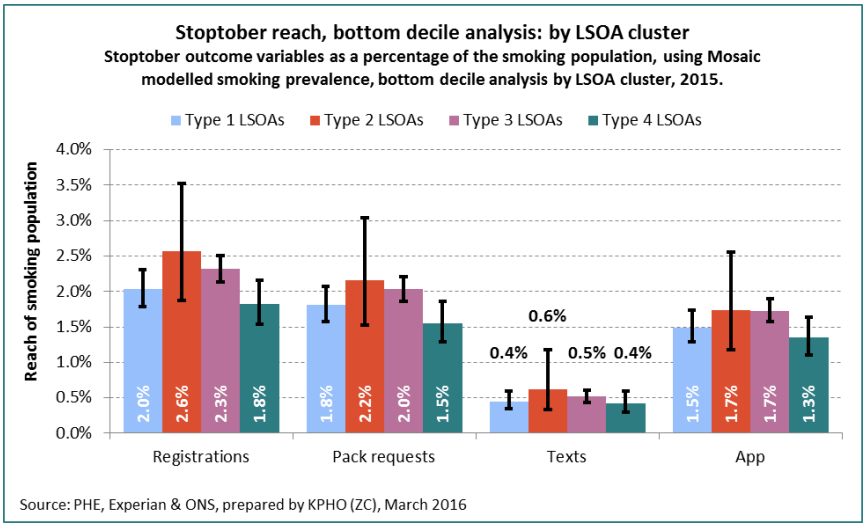
4.4 Reach by Deprivation

Analysis explored Stoptober reach by deprivation using Kent population weighted deciles, as well as, the bottom decile by lower super output area (LSOA) cluster. The '*Mind the Gap 2016*' report[16] grouped Kent's most deprived LSOAs into four deprivation types;

- Type 1 LSOAs – young people lacking opportunities
- Type 2 LSOAs – deprived rural households
- Type 3 LSOAs – families in social housing
- Type 4 LSOAs – young people in poor quality accommodation

Stoptober reach for all the support types (registrations, pack requests, texts and app) did not differ across the Index of Multiple Deprivation deciles or within the bottom decile by LSOA cluster.



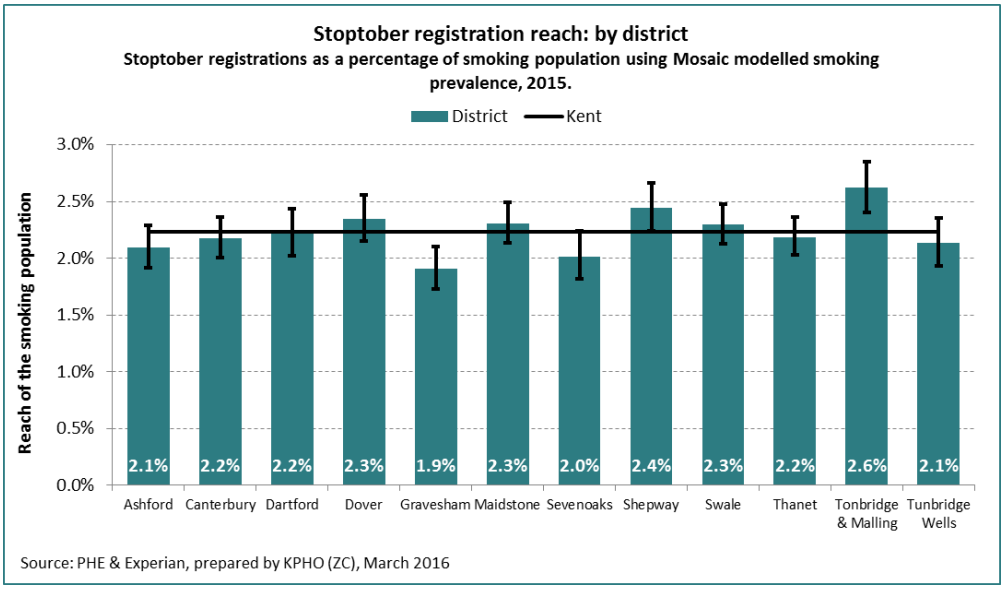


[16] Jayatunga W., et al. (2016) Mind the gap 2016: health inequalities strategy for Kent.

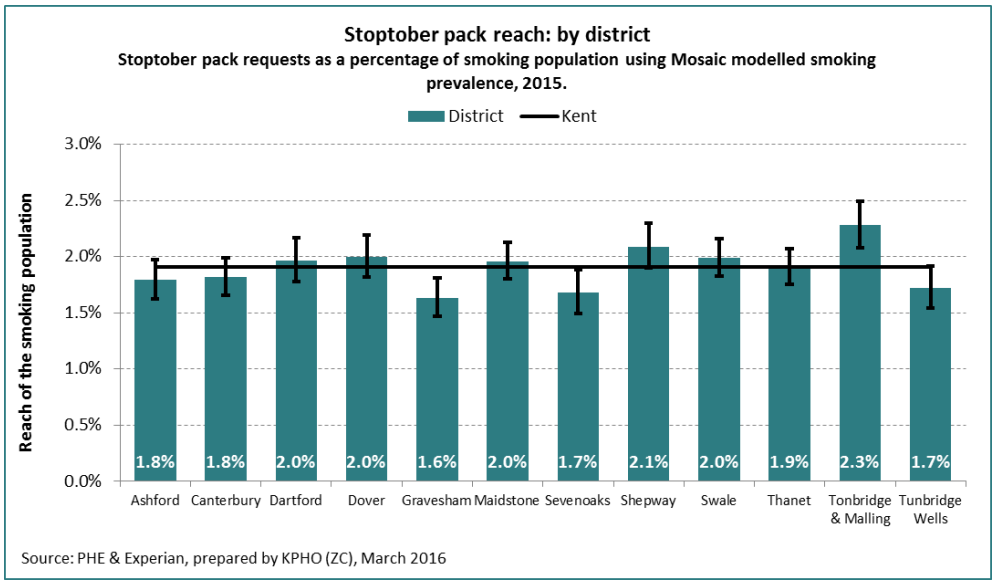
4.5 Reach by District

District level sign up to Stoptober to access packs, emails, texts and the app have also been analysed in relation to the smoking population to explore Stoptober reach.

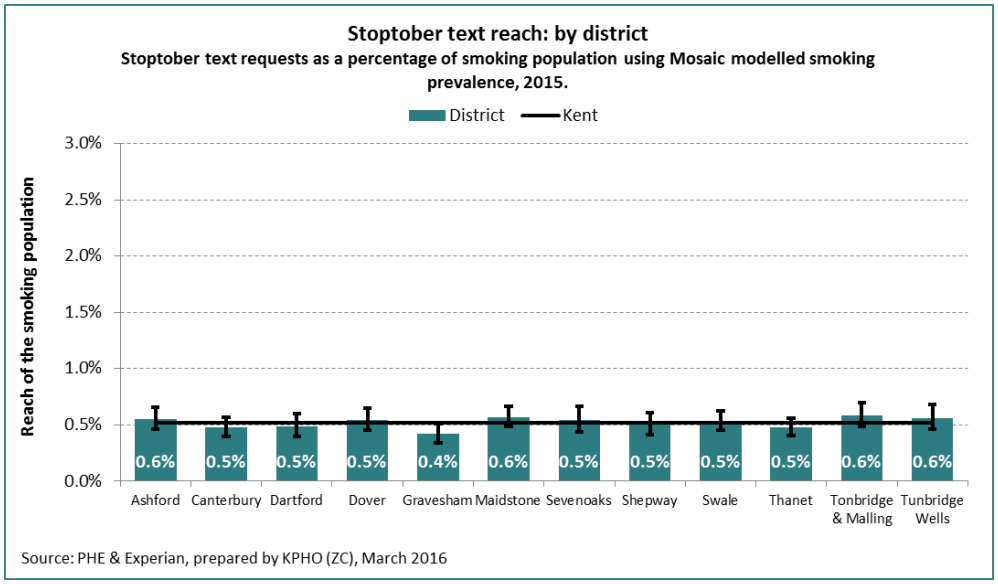
Overall, we can estimate that 2.2% of the Kent smoking population registered for Stoptober, 2015. This varied across the Kent districts, from 1.9% of the smoking population in Gravesham and 2.0% in Sevenoaks, to 2.5% in Shepway and 2.6% in Tonbridge & Malling.



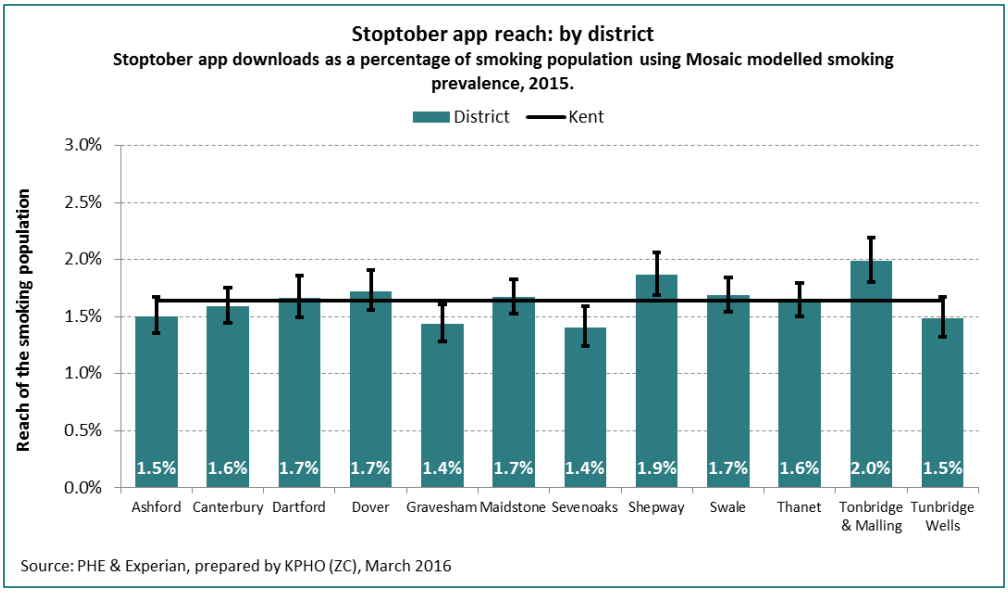
Overall, we can estimate that 1.9% of the Kent smoking population requested packs for Stoptober, 2015. This varied across the Kent districts, from 1.6% of the smoking population in Gravesham, 1.7% in Sevenoaks and 1.7% in Tunbridge Wells, to 2.1% in Shepway and 2.3% in Tonbridge & Malling.



Overall, we can estimate that 0.5% of the Kent smoking population requested texts during Stoptober, 2015. The level of reach was similar across the Kent districts.



Overall, we can estimate that 1.6% of the Kent smoking population downloaded the app for Stoptober, 2015. This varied across the Kent districts, from 1.4% of the smoking population in both Gravesham and Sevenoaks, to 1.9% in Shepway and 2.0% in Tonbridge & Malling.



4.6 Peer Authority Comparisons

The Office for National Statistics group local authorities into 29 clusters based on demographic and socio-economic variables[17]. The subgroup clusters for each of the local authorities within Kent were identified.

For this comparator analysis, Stoptober uptake has been analysed as a percentage of the smoking population[18] to explore reach for the Stoptober campaign in Kent in comparison with peer authorities.

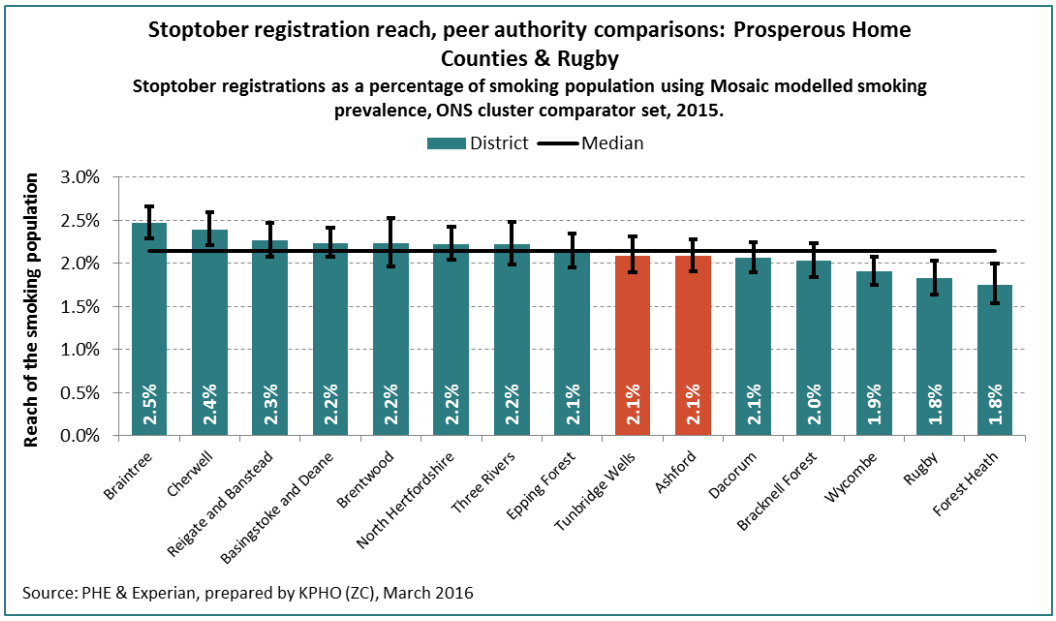
Table 3: Office for National Statistics, subgroup clusters

Local Authority	Subgroup Cluster
Ashford	Prosperous Home Counties and Rugby
Canterbury	Heritage Centres
Dartford	Expanding Areas and Established Cities
Dover	Resorts and Ports
Gravesham	Expanding Areas and Established Cities
Maidstone	Prosperous Country
Sevenoaks	Prosperous Country
Shepway	Resorts and Ports
Swale	Mining Heritage and Semi-Rural
Thanet	Resorts and Ports
Tonbridge and Malling	Prosperous Country
Tunbridge Wells	Prosperous Home Counties and Rugby

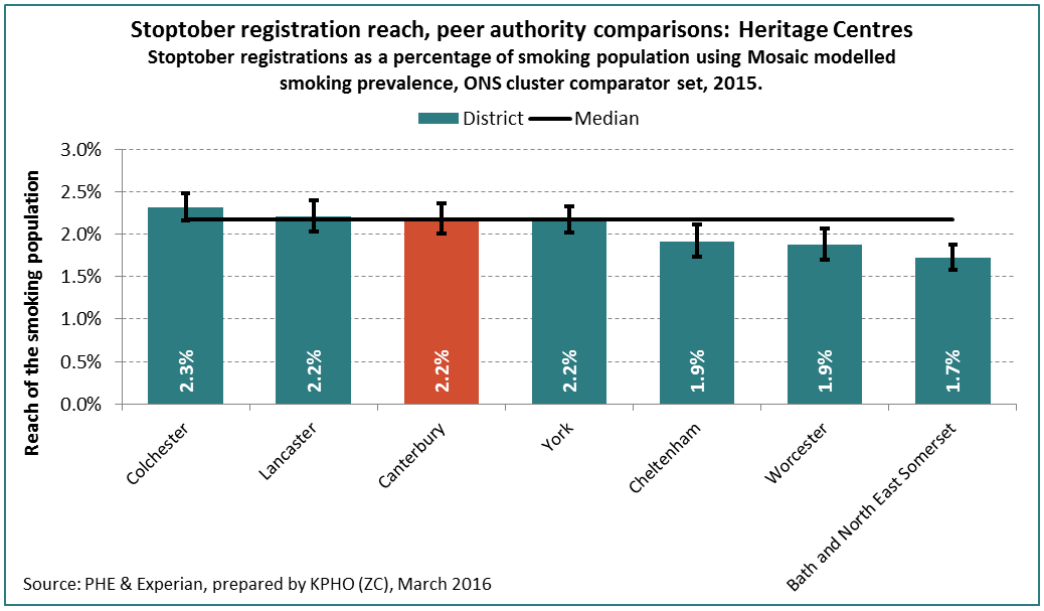
[17] Office for National Statistics (2011) About the area classifications. http://webarchive.nationalarchives.gov.uk/20160105160709/http://www.ons.gov.uk/ons/guide-method/geography/products/area-classifications/ns-area-classifications/ns-2011-area-classifications/about-the-area-classifications/index.html

[18] Using the synthetic estimates of ward-level smoking prevalence described in Section 3.2.2

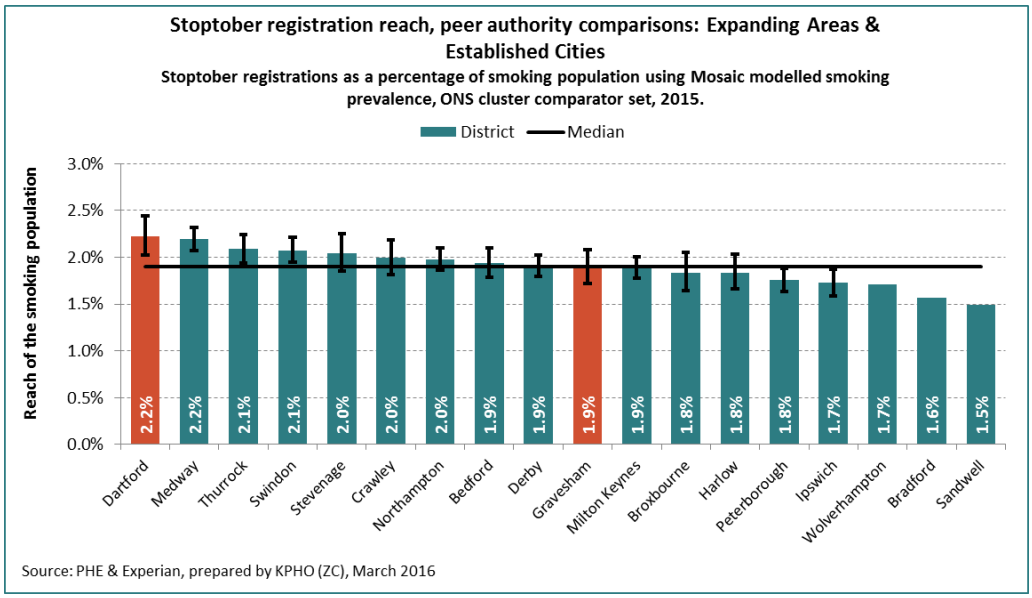
Both Ashford and Tunbridge Wells fall into the 'Prosperous Home Counties and Rugby' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is similar to the median value for both Ashford and Tunbridge Wells.



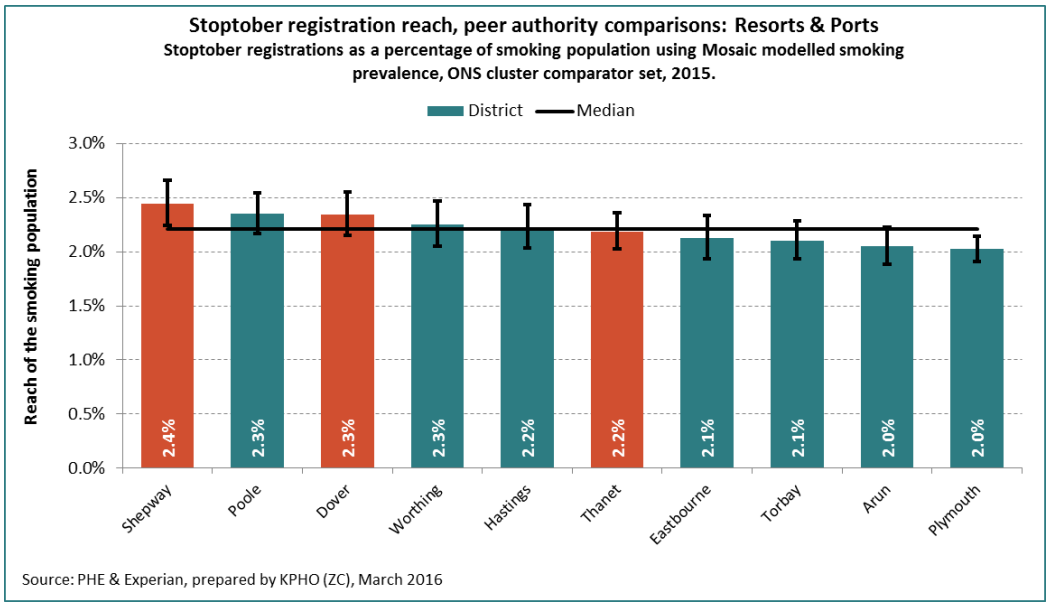
Canterbury falls into the 'Heritage Centres' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is similar to the median value.



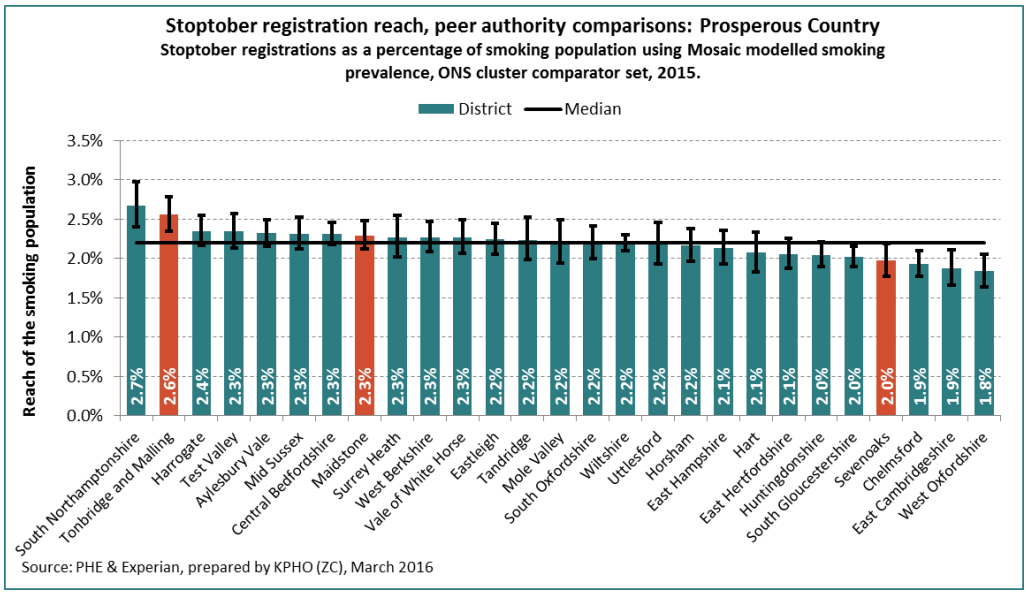
Both Dartford and Gravesham fall into the 'Expanding Areas & Established Cities' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is above the median value for Dartford, whereas, Gravesham is similar to the median value.



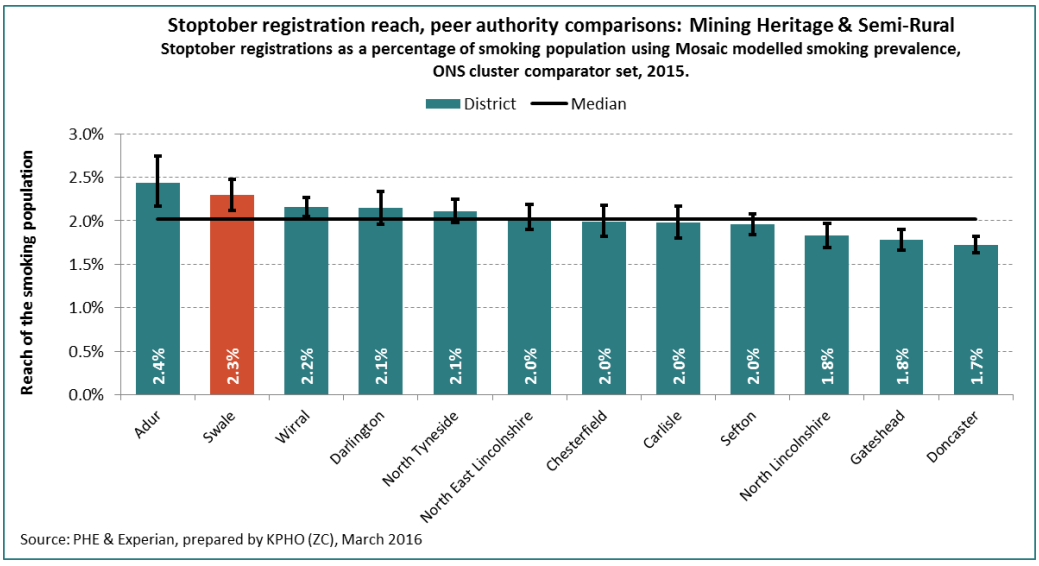
Thanet, Shepway and Dover fall into the 'Resorts & Ports' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is above the median value for Shepway, but similar to the median value for Dover and Thanet.



Maidstone, Tonbridge & Malling and Sevenoaks fall into the 'Prosperous Country' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is above the median value for Tonbridge and Malling, whereas, Sevenoaks is below the median value. Maidstone is similar to the median value.



Swale falls into the 'Mining Heritage & Semi Rural' subgroup cluster. In comparison with other authorities in this subgroup, Stoptober reach in terms of registrations per smoking population is above the median value for Swale.



5. Stoptober: Impact on NHS Stop Smoking Services

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 2010 and 31st March 2012, as well as, 1st April 2013 and 31st March 2015. These two periods represent both before and after Stoptober introduction in 2012.

The analysis forms two distinct parts; access to services and securing good outcomes.

Summary

Analysis of NHS Stop Smoking Service data explored whether there was a Stoptober effect for both access to services and securing good outcomes. This compared October with other months for before and after Stoptober introduction (2010/11-2011/12 versus 2013/14-2014/15).

- There is some evidence that suggests the Stoptober campaign has promoted greater access to services in Kent during October in comparison to the rest of the year.
- There is also evidence that the service is able to deliver similar outcomes in October, despite an uplift in service use; this has been confirmed within multivariate analysis.

5.1 Access to Services

Analysis of NHS Stop Smoking Service data explored whether there was a Stoptober effect for access to services. This compared October with other months both before and after Stoptober introduction; 2010/11 and 2011/12 in comparison to 2013/14 and 2014/15.

There is evidence that suggests the Stoptober campaign does indeed promote greater access to Stop Smoking Services in October in comparison with the rest of the year.

- Across the Kent districts, there is a clear increase in the proportion of quit dates that were set during October between the periods; from 8.6% of quit dates set in 2010/11-2011/12 to 10.2%% in 2013/14-2014/15.
    - To quantify this relationship, the odds ratio was 1.21 for quit dates set within 2013/14 and 2014/15.
    - This implies a corresponding increase in the proportion of smokers setting a quit date in October.
- This finding should be interpreted in the context of a significant decrease in the overall level of access to NHS Stop Smoking Services over recent years.
    - For the periods studied, access has decreased from 30,760 in 2010/11-2011/12 to 17,912 in 2013/14-2014/15.
- This reduction in access to services has outstripped reductions in smoking prevalence, meaning that those setting a quit date as a proportion of the smoking population has also decreased from 5.0% to 3.1% before and after Stoptober introduction.

Table 4: Absolute numbers and proportions of quit dates set within October versus other months, within Kent, analysed by each district for the periods 2010/11-2011/12 and 2013/14-2014/15

	2010/11-2011/12			2013/14-2014/15		
	October	Average of other months	Total	October	Average of other months	Total
Ashford	249 (9.7%)	210 (8.2%)	2,564	165 (12.5%)	105 (8.0%)	1,324
Canterbury	251 (9.2%)	226 (8.3%)	2,733	149 (10.2%)	120 (8.2%)	1,465
Dartford	150 (7.7%)	163 (8.4%)	1,941	94 (9.1%)	86 (8.3%)	1,035
Dover	227 (8.6%)	220 (8.3%)	2,646	161 (10.3%)	128 (8.2%)	1,565
Gravesham	181 (8.1%)	187 (8.4%)	2,233	132 (10.5%)	102 (8.1%)	1,256
Maidstone	271 (8.1%)	278 (8.4%)	3,333	151 (8.1%)	155 (8.4%)	1,855
Sevenoaks	132 (10.3%)	105 (8.2%)	1,282	79 (9.2%)	71 (8.3%)	862
Shepway	220 (8.7%)	209 (8.3%)	2,520	139 (9.3%)	123 (8.2%)	1,492
Swale	350 (8.5%)	341 (8.3%)	4,104	240 (8.9%)	222 (8.3%)	2,682
Thanet	346 (8.4%)	342 (8.3%)	4,106	339 (11.6%)	234 (8.0%)	2,916
Tonbridge and Malling	140 (7.0%)	168 (8.5%)	1,991	102 (12.4%)	65 (8.0%)	820
Tunbridge Wells	119 (9.1%)	108 (8.3%)	1,307	74 (11.6%)	51 (8.0%)	640
Kent	2,636 (8.6%)	2,557 (8.3%)	30,760	1,825 (10.2%)	1,462 (8.2%)	17,912

Table 5: Annual quit dates set as a proportion of the smoking population[19], within Kent, analysed by each district for the periods 2010/11-2011/12 and 2013/14-2014/15

	2010/11-2011/12		2013/14-2014/15	
	Quit dates set	Smokers	Quit dates set	Smokers
Ashford	2,564 (4.8%)	53,094	1,324 (2.3%)	58,276
Canterbury	2,733 (4.4%)	62,492	1,465 (2.4%)	61,038
Dartford	1,941 (5.5%)	35,499	1,035 (3.0%)	34,576
Dover	2,646 (4.2%)	63,397	1,565 (3.2%)	48,409
Gravesham	2,233 (4.7%)	47,212	1,256 (2.8%)	45,130
Maidstone	3,333 (6.1%)	54,753	1,855 (3.6%)	51,141
Sevenoaks	1,282 (3.1%)	41,611	862 (3.3%)	25,791
Shepway	2,520 (4.8%)	52,108	1,492 (3.0%)	50,029
Swale	4,104 (7.1%)	57,935	2,682 (4.8%)	56,041
Thanet	4,106 (5.9%)	69,587	2,916 (4.4%)	66,896
Tonbridge and Malling	1,991 (5.0%)	39,815	820 (2.2%)	37,795
Tunbridge Wells	1,307 (3.1%)	42,156	640 (1.6%)	38,815
Kent	30,760 (5.0%)	618,629	17,912 (3.1%)	572,161

[19] Using the Local Tobacco Control Profile, self-reported smoking prevalence described in Section 3.2.1 applied to all age population.

5.2 Securing Good Outcomes

Analysis of NHS Stop Smoking Service data explored whether there was a Stoptober effect for securing good outcomes, as measured via validated four week quits. This compared October with other months for before and after Stoptober introduction; 2010/11 and 2011/12 in comparison to 2013/14 and 2014/15.

- There is evidence to suggest that outcomes have improved across the period studied. Validated quits, as a proportion of quit dates set, within Kent, have increased from 39.6% in 2010/11-2011/12 to 45.5% in 2013/14-2014/15.
- Whilst there isn't any evidence of a Stoptober effect for securing good outcomes, as success rates are similar in October in comparison to the rest of the year, the findings do suggest that the service is able to deliver the similar outcomes in October, even with clear increases in demand.

Multivariate analysis has been used to explore success rates (measured by validated quits) in more detail, with the aim of providing further evidence for a Stoptober effect. Further details on the methodology have been included within Appendix A.

After adjusting for the groups that we know are more or less likely to quit smoking,[20] we have explored for effect between October versus other months of the year for 2010/11 and 2011/12 in comparison to 2013/14 and 2014/15.

- Relative to other months in the year, after adjustment, quit rates were lower in 2010/11 and 2011/12 compared with 2013/14 and 2014/15. Odds ratio for not quitting in 2010/11 and 2011/12 was 1.22 (95% CI 1.17, 1.27).
- However, this effect did not remain when exploring for modification of effects between October versus other months of the year for 2010/11 and 2011/12 compared with 2013/14 and 2014/15.
    - A related study, found more self-reported quits in October, 2012 in comparison to 2007-2011, odds ratio 1.50 (95% CI: 1.05, 2.15).[21] However, used self-reported rather than validated quits.

[20] Thompson C., et al. (2016) NHS Stop Smoking Services. Kent Public Health Observatory
[21] Brown, J et al. (2014) How effective and cost-effective was the national mass media smoking cessation campaign 'Stoptober'? Drug and Alcohol Dependence, 135; 52-58

Table 6: Absolute numbers of validated quits as a proportion of quit dates set, within October versus other months, within Kent, analysed by each district for the periods 2010/11-2011/12 and 2013/14-2014/15.

	2010/11-2011/12				2013/14-2014/15			
	October		Average of other months		October		Average of other months	
	Quits	Quit dates set	Quits	Quit dates set	Quits	Quit dates set	Quits	Quit dates set
Ashford	107 (43%)	249	92 (44%)	210	66 (40%)	165	49 (47%)	105
Canterbury	116 (46%)	251	95 (42%)	226	80 (54%)	149	54 (45%)	120
Dartford	47 (31%)	150	49 (30%)	163	46 (49%)	94	37 (43%)	86
Dover	105 (46%)	227	102 (46%)	220	78 (48%)	161	60 (47%)	128
Gravesham	58 (32%)	181	54 (29%)	187	47 (36%)	132	41 (40%)	102
Maidstone	96 (35%)	271	105 (38%)	278	63 (42%)	151	62 (40%)	155
Sevenoaks	35 (27%)	132	37 (36%)	105	33 (42%)	79	28 (39%)	71
Shepway	95 (43%)	220	92 (44%)	209	74 (53%)	139	65 (53%)	123
Swale	160 (46%)	350	142 (42%)	341	116 (48%)	240	105 (47%)	222
Thanet	122 (35%)	346	147 (43%)	342	175 (52%)	339	114 (49%)	234
Tonbridge and Malling	44 (31%)	140	56 (34%)	168	37 (36%)	102	28 (43%)	65
Tunbridge Wells	45 (38%)	119	40 (37%)	108	31 (42%)	74	21 (40%)	51
Kent	1,030 (39%)	2,636	1013 (40%)	2,557	846 (46%)	1,825	663 (45%)	1,462

6. Conclusions

Generally speaking, higher numbers of Stoptober registrations, pack, text and app requests can be seen within wards with higher smoking prevalence. However, there are some Wards identified with high smoking prevalence but relatively low levels of access to Stoptober. Identification of wards with the highest quintile of smoking prevalence but with the lowest quintile for reach may provide further direction on targeting for future campaigns.

Analysis has shown that the 2015 Stoptober campaign reached similar proportions of smokers regardless of deprivation levels, including smokers in LSOAs in the most deprived decile in Kent.

Multivariate analysis of NHS Stop Smoking Service validated quits suggests that there may be a small Stoptober effect in Kent in terms of an uplift in usage of Stop Smoking services and despite this the service is able to deliver similar outcomes in October.

Appendix A

Logistic regression was used to disentangle the relationships for securing good outcomes; by adjusting for the groups that we know are more or less likely to quit smoking and exploring whether there is a residual Stoptober effect.

From an equity audit of NHS Stop Smoking Services,[22] we know that age was the best predictor of validated quitting and that for all age categories; the next best predictor was economic activity. The findings for these groups include:

- The odds ratio for not quitting smoking within the under 25 category was 2.73, indicating lower success in this younger age group, after adjustment.
- The odds ratio for not quitting smoking within Males was 0.96, indicating a small higher success in this group, after adjustment.
- The odds ratio for not quitting smoking within the White ethnic category was 0.81, indicating greater success in this group, after adjustment.
- The odds ratio for not quitting smoking within the economically active category was 0.70, indicating greater success in this group, after adjustment.

The model adjusted for the above groups, as well as, for the lower success in 2010/11 and 2011/12 relative to 2013/14 and 2014/15.

- After adjustment, the odds ratio for not quitting smoking in October versus other months of the year between the periods was 1.08, indicating similar levels of success. This means that there isn't any evidence of a Stoptober effect for securing good outcomes, as success rates are similar in October in comparison to the rest of the year, but the findings do suggest that the service is able to deliver similar outcomes in October, even with clear increases in demand.

It should be noted that the dataset was restricted to quit dates set with complete coding for the variables analysed and may be subject to limitations from missing data.

[22] Thompson C., et al. (2016) NHS Stop Smoking Services. Kent Public Health Observatory

Table 7: The relationship between validated quits with demographic, socio-economic and Stoptober variables within 48,672 quit dates set

Predictor variable	Odds ratio for not quitting	95% CI	P value
Age band			<0.001
Under 25	2.73	2.54 to 2.93	
25 to 49	1.35	1.30 to 1.40	
Over 50	1.00		
Gender			<0.05
Male	0.96	0.93 to 1.00	
Female	1.00		
Ethnicity			<0.001
White	0.81	0.74 to 0.88	
Ethnic Minority	1.00		
Economic activity[23]			<0.001
Active	0.70	0.67 to 0.73	
Not active	1.00		
October effect			>0.05
October	0.95	0.86 to 1.01	
Other months	1.00		
Policy year			<0.001
2010/11-2011/12	1.22	1.17 to 1.27	
2013/14-2014/15	1.00		
Interaction			
October * 2010/11-2011/12	1.08	0.95 to 1.23	>0.05

[23] The economic activity variable: Active included; managerial & professional, intermediate, routine and retired groups. Not active included; student, carer, never worked & long term unemployed, prisoners and long-term sick groups.