KENT PUBLIC HEALTH OBSERVATORY

Mind The Gap: Health Inequalities Action Plan for Kent

Analytical Report

June 2016

Produced by

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Many thanks for Professor Chris Bentley for his advice and guidance

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1. Executive summary

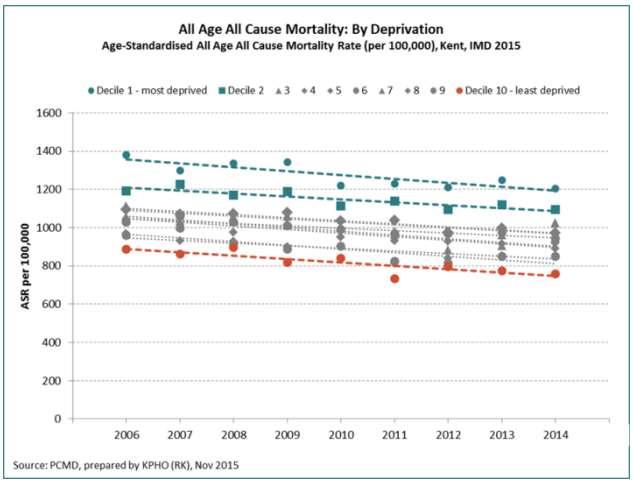
1.1 Introduction

This analysis was conducted to help inform the 2015 Public Health Annual Report and the forthcoming Mind the Gap: Health Inequalities Action Plan for Kent 2016. The analysis seeks to provide greater understanding of the true nature of the health inequalities in Kent.

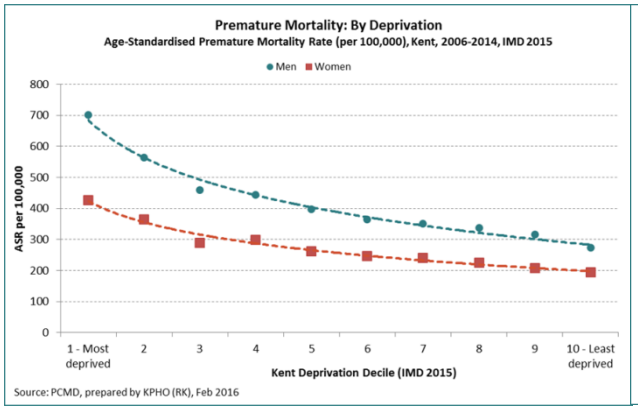
1.2 Key findings

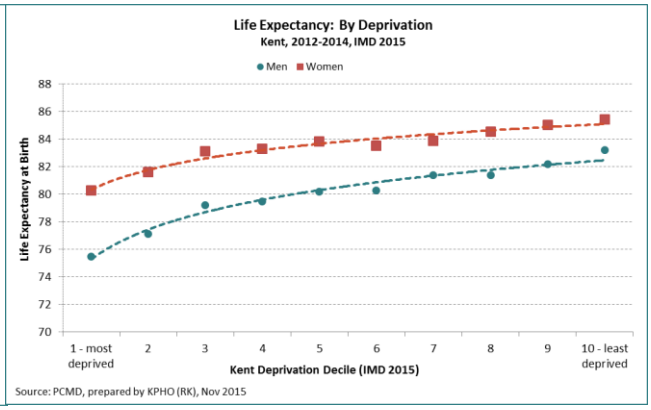
1.2.1 Inequalities in health outcomes

Whilst mortality rates in Kent have been falling over the last decade, the 'gap' in mortality rates between the most deprived and least deprived persists. This gap is particularly large for the most deprived deciles.



The most deprived populations have disproportionately worse premature mortality rates and life expectancy. This is demonstrated by the non-linear nature of the relationship between these high level health outcomes and deprivation.





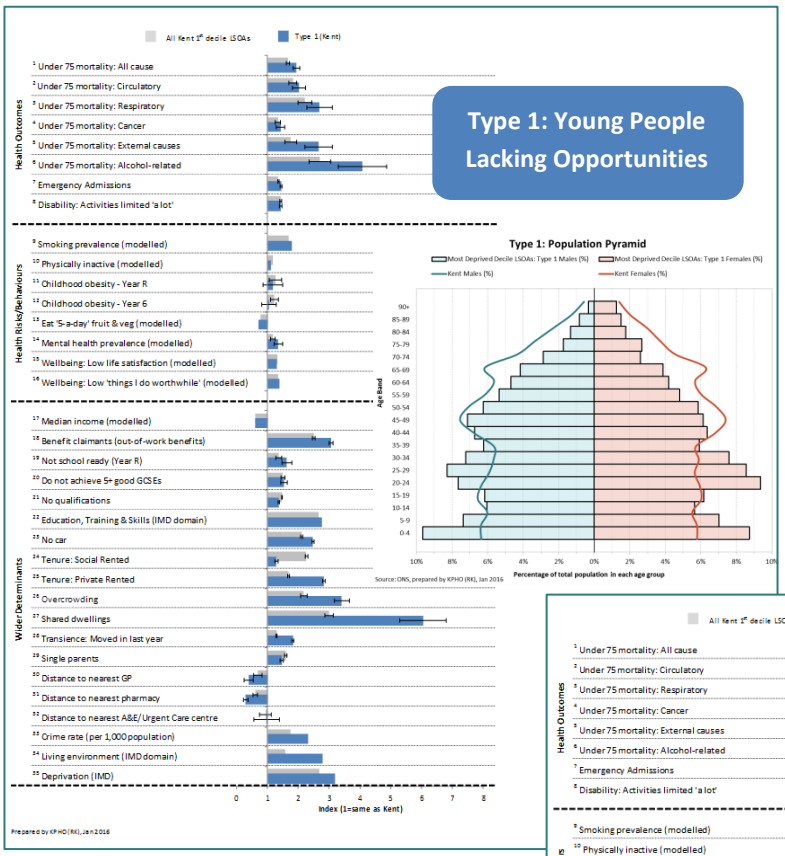
There are also inequalities in the causes of premature mortality. In the more deprived deciles, an increased proportion of the deaths are caused by cardiovascular, respiratory and GI disease.

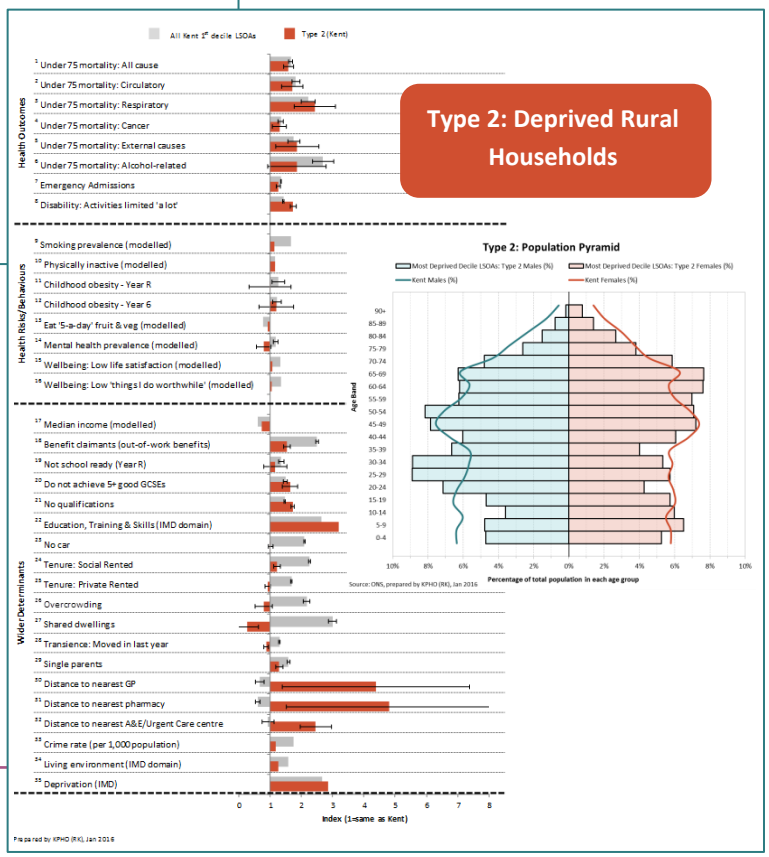
1.2.2 Inequalities in the wider determinants of health

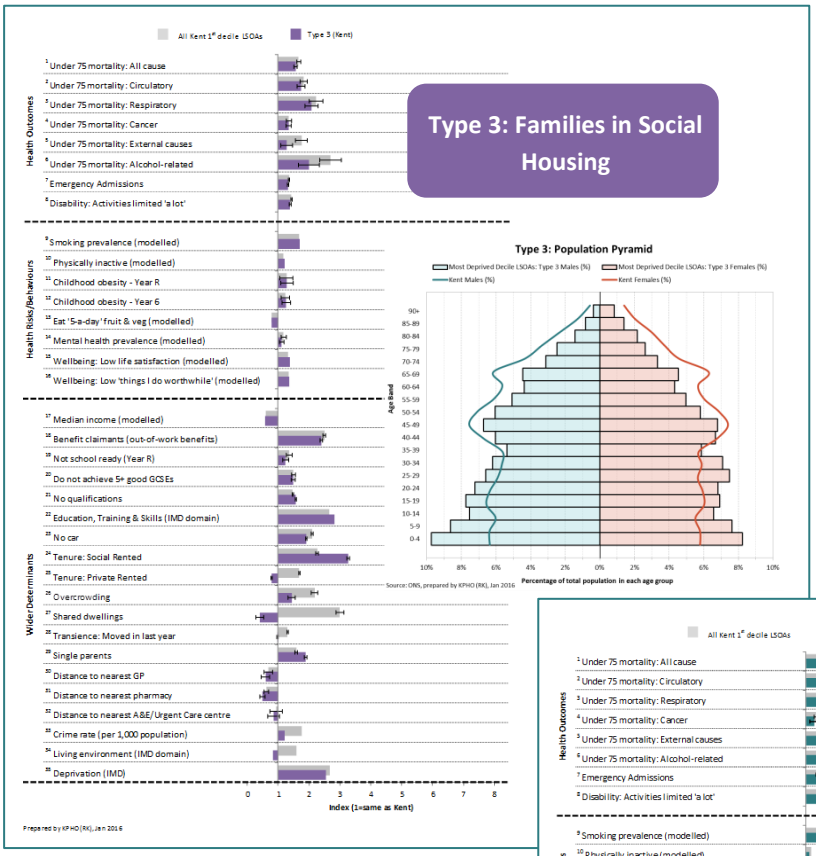
Steep inequality gradients are also evident across a large number of health and social indicators in Kent. On many measures the most deprived deciles fare disproportionately worse than their more affluent counterparts (i.e. there is a non-linear relationship with deprivation). For example, alcohol-related premature mortality is six times higher in the most deprived decile than the most affluent decile.

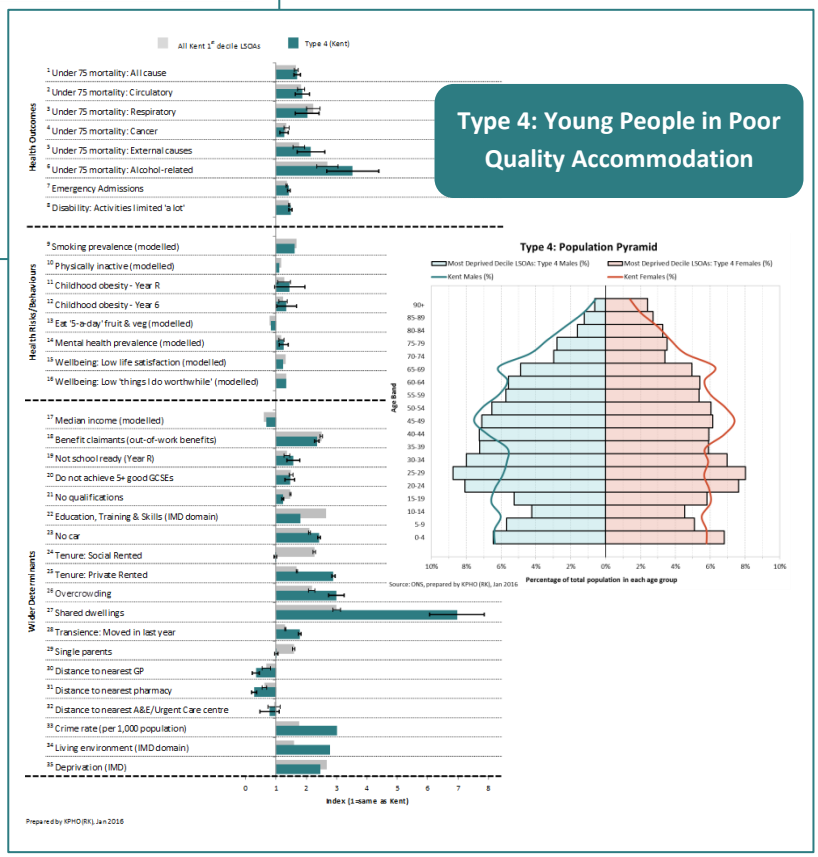
1.2.3 Types of deprivation

The LSOAs identified as falling into the most deprived decile in Kent have been subdivided using multivariate segmentation techniques. This segmentation sought to divide the most deprived LSOAs into 'types', so that within a 'type' areas are similar and between 'types' they differ. The analysis produced four distinct types.









1.3 Call to action

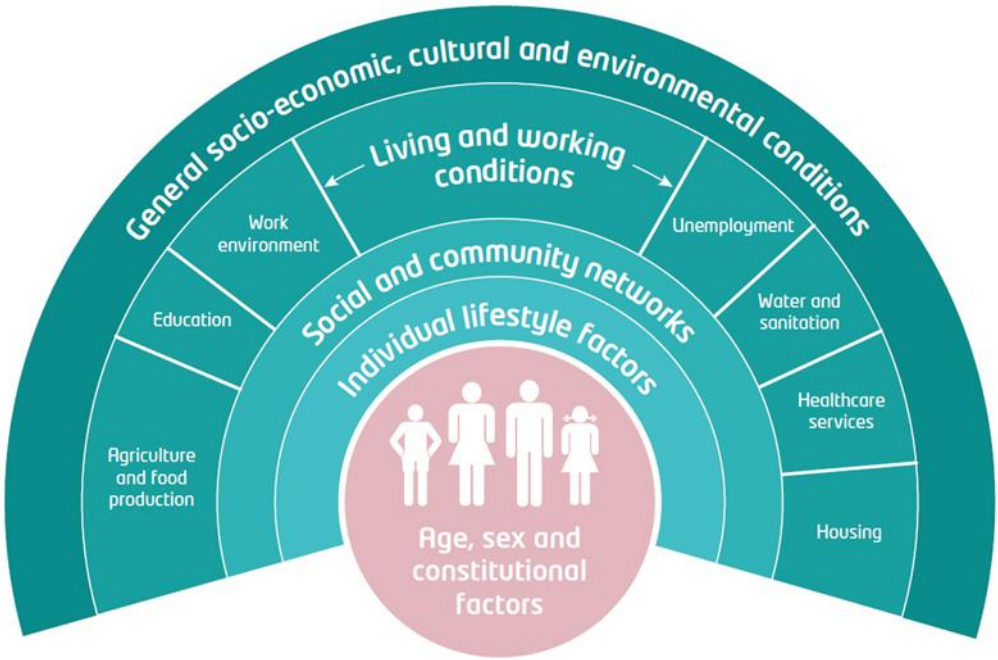
The forthcoming Mind the Gap: Health Inequalities Action Plan for Kent 2016 will include recommendations for action on health inequalities.

2. Introduction & objectives

Health inequalities are the differences in health outcomes within and between communities. We measure health inequalities overall through health statistics such as life expectancy or all-age, all-cause mortality rates or more specifically for specific disease mortality rates such as cancers, cardiovascular or respiratory disease rates.

It is now widely recognised that our health as individuals is shaped by the conditions in which we are born, grow, live, work and age[1].

Thus policy makers for health have to consider the wider set of economic, political, and social forces and systems which influence our daily lives. These wider determinants of health drive the health inequalities which exist in society; that is, the unfair and avoidable differences in health status between individuals depending on their life circumstances.



Dahlgren and Whitehead's Social Model of Health (1991)

Whilst Kent as a whole scores above the England average on a range of health indicators, this hides the great diversity and disparities which exist within, and between, Kent's communities.

[1] UCL Institute of Health Equity. Fair Society, Healthy Lives: The Marmot Review - Strategic Review of Health Inequalities in England post-2010. 2010.

In 2012 the 'Mind the Gap' action plan was formulated by Kent County Council to reduce the gap in health status between the least deprived and most deprived communities in Kent[2]. The 2015 Public Health Annual Report[3] is dedicated to health inequalities and reinforces the need to remain focussed on reducing the 'gap' in health outcomes across the county.

As part of the work surrounding the production of the 2015 Public Health Annual Report, the Kent Public Health Observatory (KPHO) were asked to provide intelligence and analytic support to bring greater understanding of the true nature of the health inequalities we see in Kent. This work has also been used to inform the forthcoming Mind The Gap: Health Inequalities Action Plan for Kent 2016[4].

The specific objectives of our analysis were as follows:

- To explore trends in inequalities in health outcomes in Kent
- To explore inequalities in both health outcomes and the wider determinants of health
- To provide further understanding of the most deprived areas in Kent, using segmentation techniques to help describe our most deprived areas.

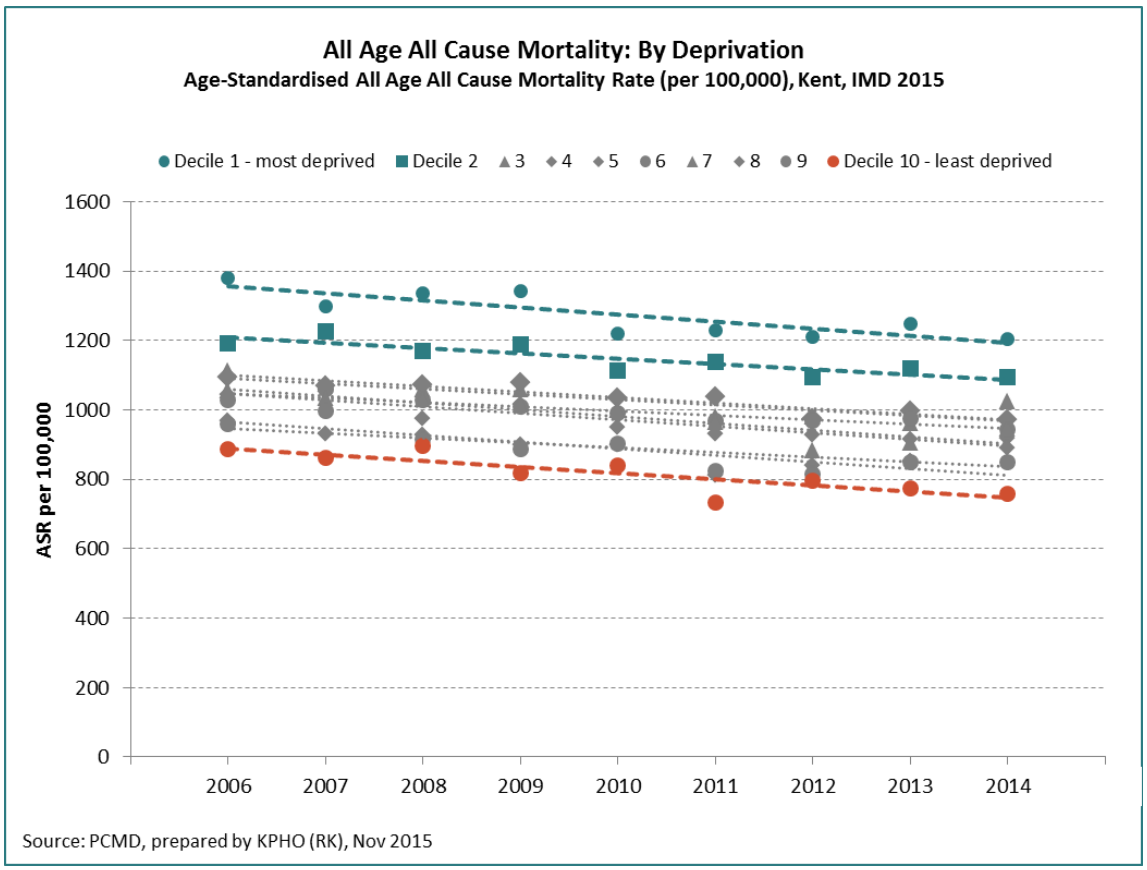
This analytical report describes the analysis we conducted and details the key findings. It should be read in conjunction with the 2015 Public Health Annual Report and the Mind The Gap: Health Inequalities Action Plan for Kent 2016 which it informs.

[2] Kent County Council. Mind The Gap: Kent's Health Inequalities Action Plan 2012/15. 2012:1-62
[3] Kent County Council. Kent Annual Public Health Report 2015: Health Inequalities (http://www.kpho.org.uk/__data/assets/pdf_file/0005/57407/Final-Public-Health-Annual-Report-2015.pdf).
[4] Kent County Council. Mind The Gap: Health Inequalities Action Plan for Kent 2016. Due for publication following County Council on 15th September 2016.

3. Inequalities in mortality & life expectancy

3.1 Trends in health inequalities

The chart below shows how the differences in all age, all cause mortality rates in Kent by deprivation decile have changed over time[5].



This analysis demonstrates that, whilst mortality rates in Kent have been falling over the last decade, the 'gap' in mortality rates between the most deprived and least deprived persists. The gap is particularly large for the most deprived deciles. This demonstrates how improving the health of an entire population does not necessarily address the health inequalities that exist between different parts of society. This persistent gap in health outcomes is not a phenomenon that is unique to Kent; the ONS recently reported that there has been a persistent fixed gap in the life expectancy across England as a whole[6]. This is consistent with the latest findings from the Global Burden of Disease Study[7]: that there are marked health

[5] In this analysis deprivation is measured via the Indices of Multiple Deprivation (IMD 2015) at LSOA-level, with the 902 LSOAs in Kent divided into population weighted deciles based on the overall IMD scores.

[6] Office for National Statistics. Statistical Bulletin Health Expectancies at birth by Middle Layer Super Output Areas , England , Inequality in Health and Life Expectancies within Upper Tier Local Authorities : 2009 to 2013. 2015:1-22.

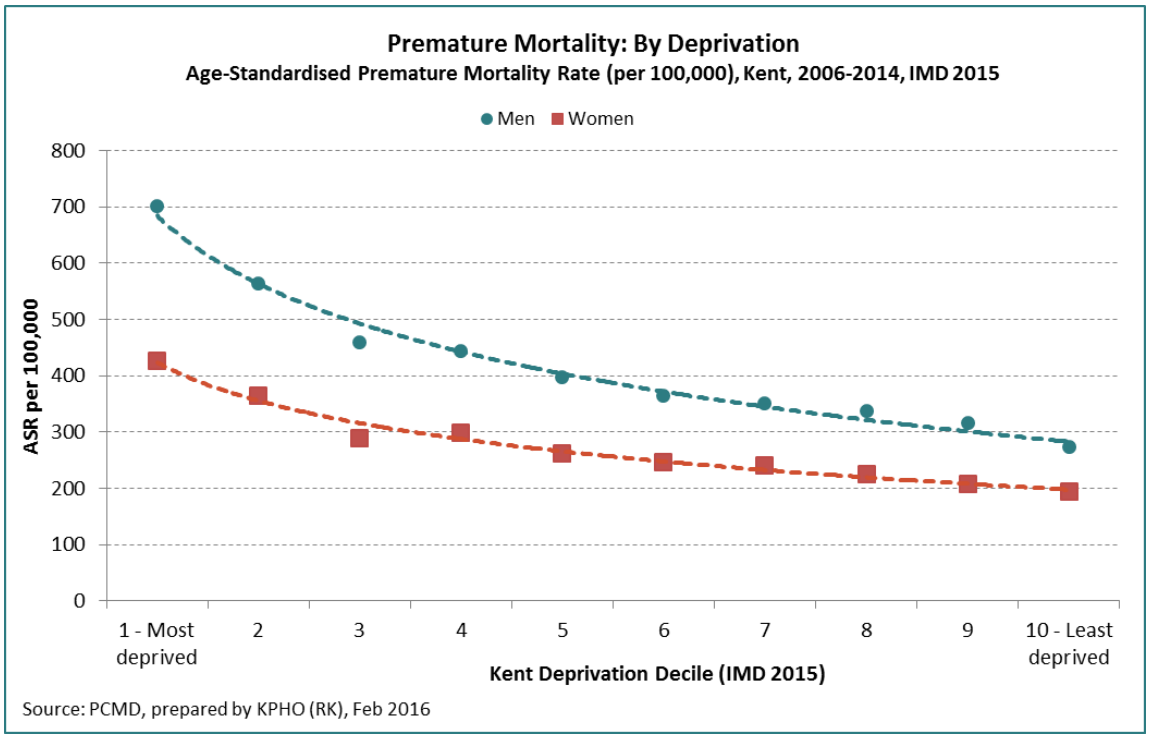
[7] Newton JN, Briggs ADM, Murray CJL, et al. Changes in health in England, with analysis by English regions and areas of deprivation , 1990 – 2013 : a systematic analysis for the Global Burden of Disease Study 2013. Lancet.

inequalities between the most and least deprived in England despite increases in overall life expectancy.

3.2 Inequality slopes

Health inequalities lead to inequalities in life expectancy. The analysis below looks both at life expectancy and premature mortality (deaths occurring under the age of 75 years) as it is these early deaths which lead to shorter life expectancy.

3.2.1 Premature mortality



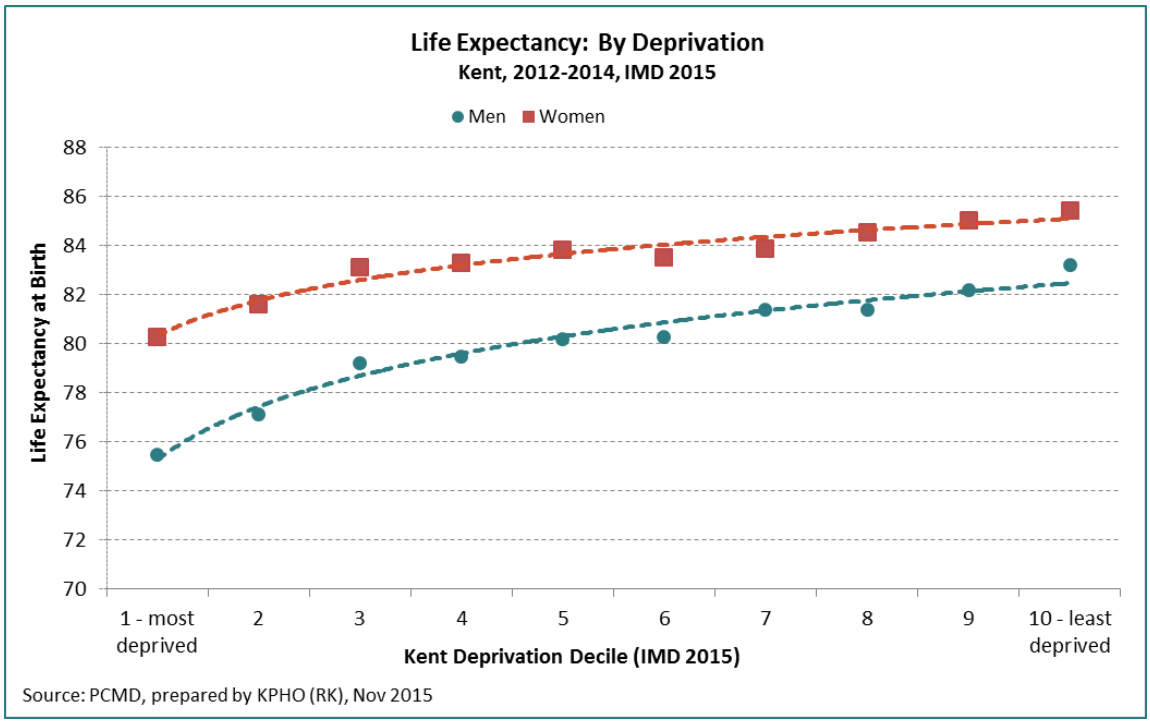
It is notable that the most deprived populations have disproportionately worse premature mortality, demonstrated by the non-linear curves of best-fit[8]. The most deprived decile in both men and women fare particularly poorly. In fact, in the most deprived decile, the premature mortality rate is more than double the rate in the most affluent decile.

In this analysis logarithmic trend lines have been used. It is clear from visual inspection alone that the relationship between deprivation and premature mortality is non-linear. In particular, the deviations from a linear trend line are clearly systematic in nature for the most deprived deciles. In the case of premature mortality the logarithmic trend lines for men and women have R^2 values of 99% and 98% respectively (compared with 86% and 87% for a linear trend line).

[8] Based on logarithmic trend lines.

3.2.2 Life expectancy

The chart below shows a similar analysis for life expectancy at birth.

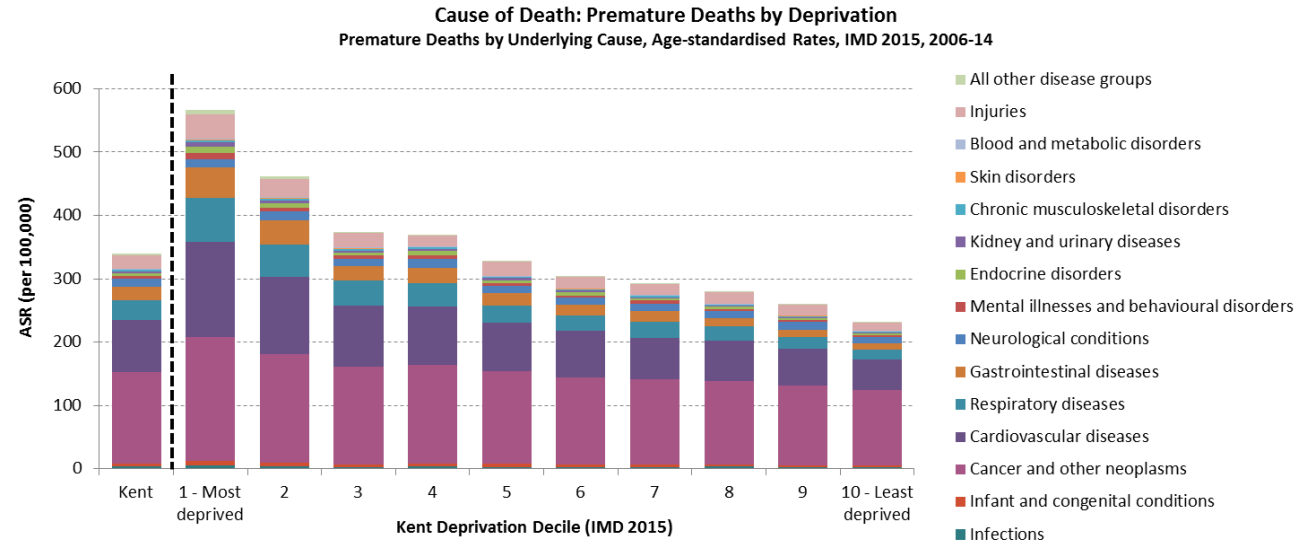


Again, the most deprived populations have disproportionately worse life expectancy, demonstrated by non-linear curves of best-fit. The most deprived decile in both men and women fare particularly poorly.

As with premature mortality, it is clear from visual inspection alone that the relationship between deprivation and life expectancy is non-linear. In particular, the deviations from a linear trend line are clearly systematic in nature for the most deprived deciles. In the case of premature mortality the logarithmic trend lines for men and women have R^2 values of 95% and 97% respectively (compared with 87% and 92% for a linear trend line).

3.3 Causes of death

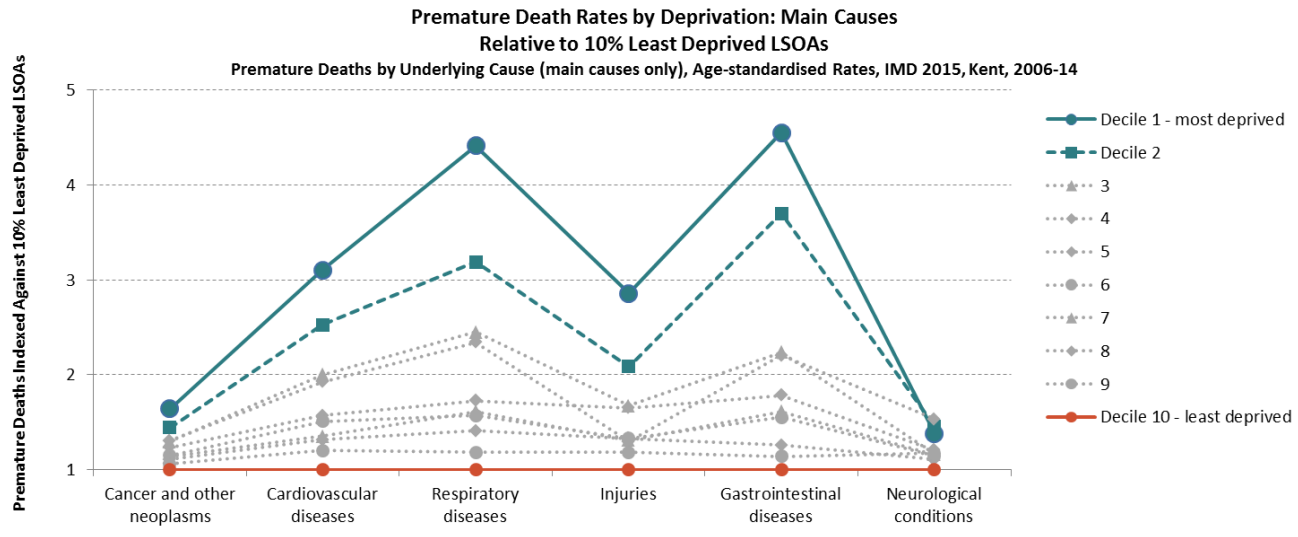
The chart below provides further analysis of premature deaths by deprivation in the context of cause of death.



Source: PCMD, prepared by KPHO (RK), April 2016

This analysis not only demonstrates the higher rate of premature deaths in the most deprived deciles but also differences in the causes of premature mortality.

Cancer is the largest cause of premature mortality overall. But in the more deprived deciles, an increasing proportion of the deaths are caused by cardiovascular, respiratory and GI disease. This is demonstrated more clearly in the chart below, which indexes cause-specific premature mortality rates against the least deprived decile.



Source: PCMD, prepared by KPHO (RK), May 2016

This analysis very clearly demonstrates the inequalities in the causes of premature mortality. In particular, it highlights striking differences in cardiovascular disease, respiratory disease, GI disease and external injuries. This is an important finding, since these inequalities are amenable to being reduced through earlier detection and preventative measures, such as lifestyle modification and management of long term health risks.

4. Inequalities in the wider determinants of health

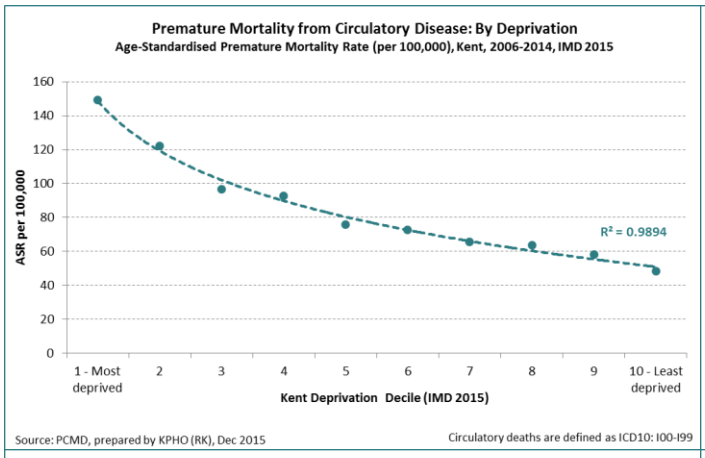
Given the inequalities in mortality rates and life expectancy, we would expect to see inequalities evident in the wider determinants of health. In this section we explore the relationship between deprivation and a range of measures of health outcomes, health risks and behaviours and the wider determinants of health. This analysis is again based on LSOA-level deprivation, with LSOAs grouped into deciles, and so requires LSOA-level data for each of the wider determinants. Analysis has been conducted for known social determinants of health, for which data exists or can be modelled at LSOA level[9].

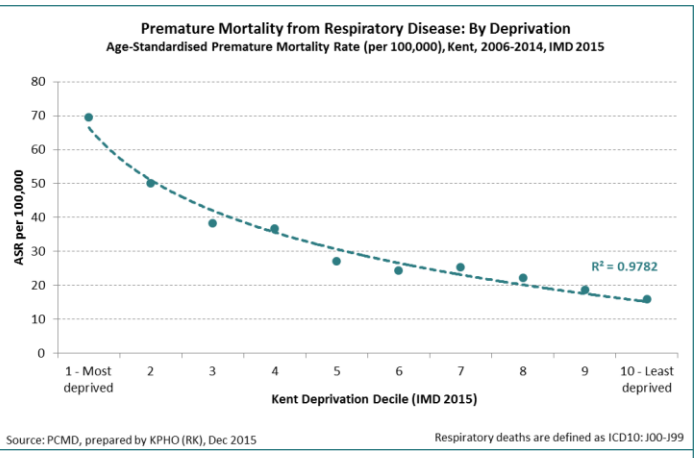
The charts overleaf show inequality slopes for a range of health outcome measures, measures of health risks and behaviours, and wider determinants of health.

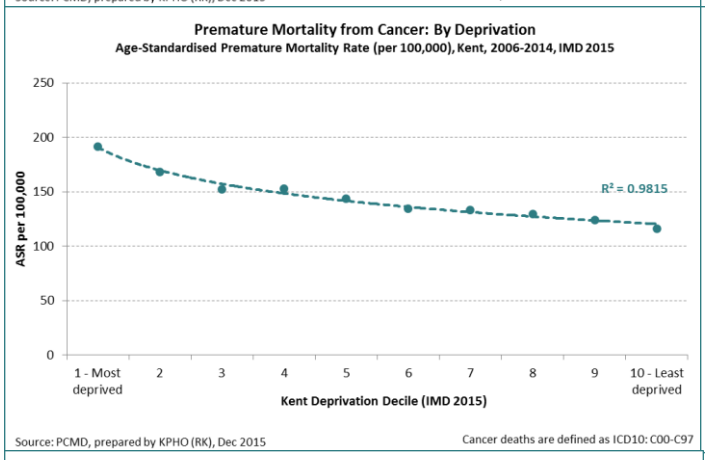
It is striking how steep inequality gradients are evident across a large number of health and social indicators in Kent. For example, in the most deprived decile, 66% of children do not achieve 5 good GCSEs, compared to 23% in the most affluent decile. Taking all the charts together, it is clear to see how poor social conditions and unhealthy behaviours reinforce one another and accumulate in individuals throughout their lives. Where the relationship is linear, those in the most deprived deciles fare worse than those in the least deprived deciles, to a degree that is proportionate to the slope of inequality. On many measures the gradient is not linear but rather curves sharply for the most deprived deciles. In these instances the most deprived deciles fare disproportionately worse than their more affluent counterparts. For example, alcohol-related premature mortality is six times higher in the most deprived decile than the most affluent decile.

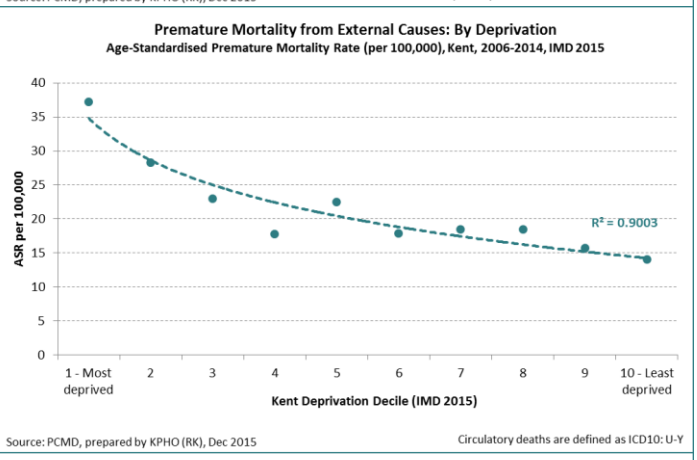
[9] Appendix A provides details of the data sources and modelling approaches.

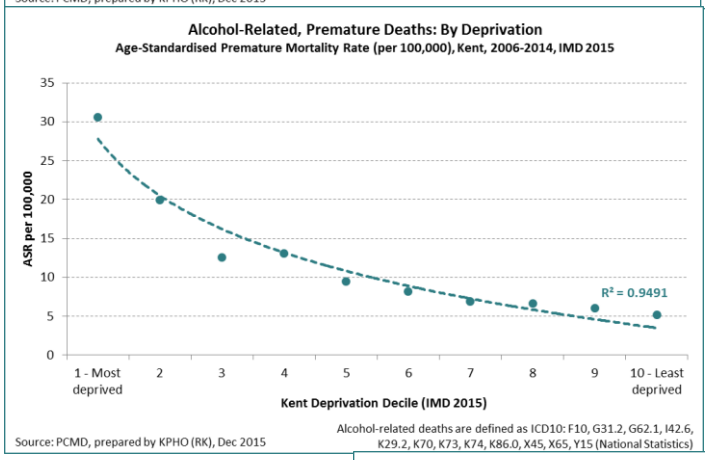
4.1 Inequality slopes: Health outcomes

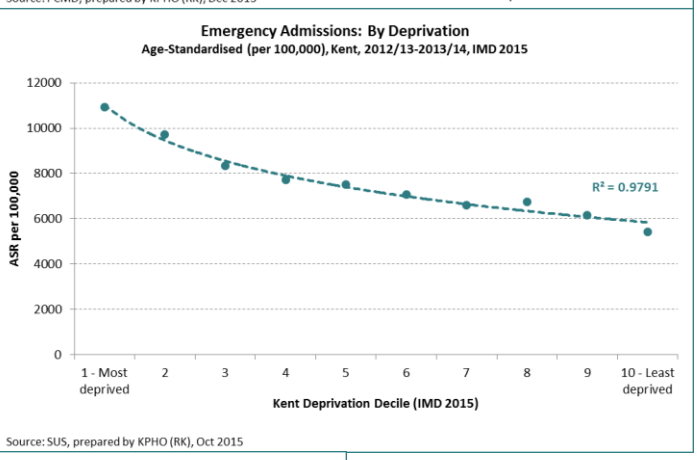


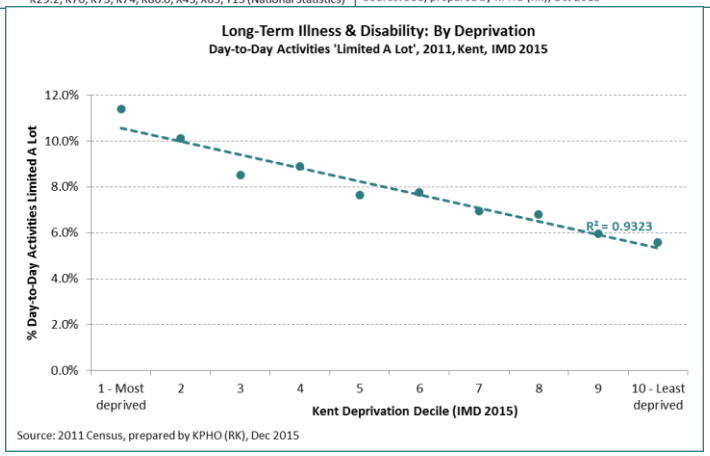




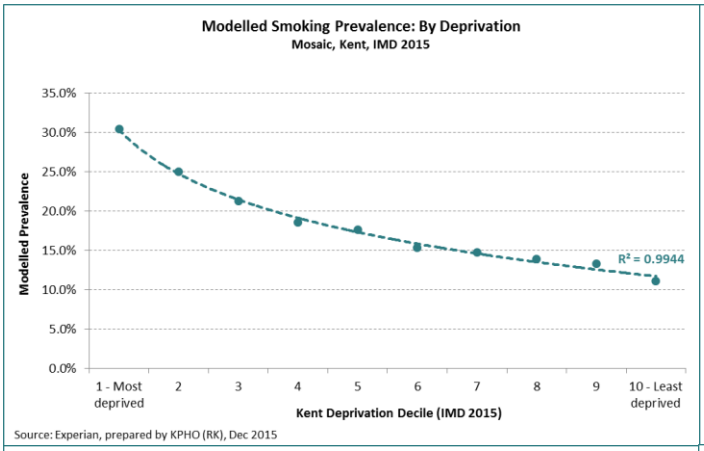




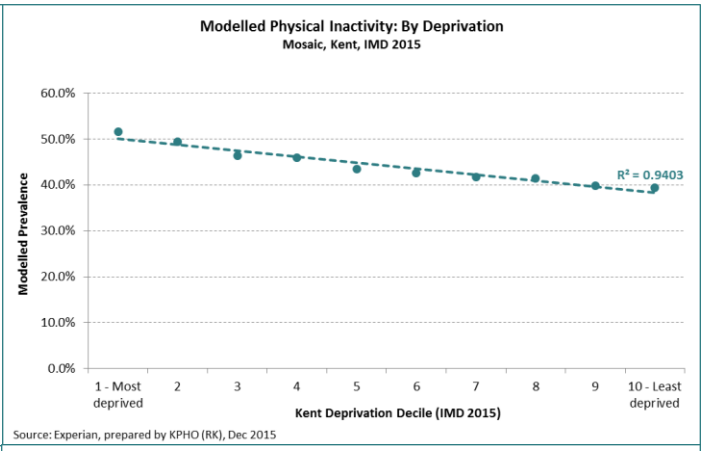




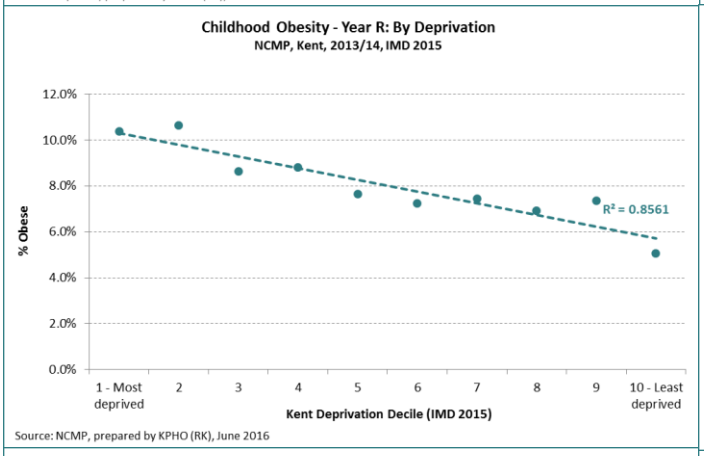
4.2 Inequality slopes: Health risks & behaviours



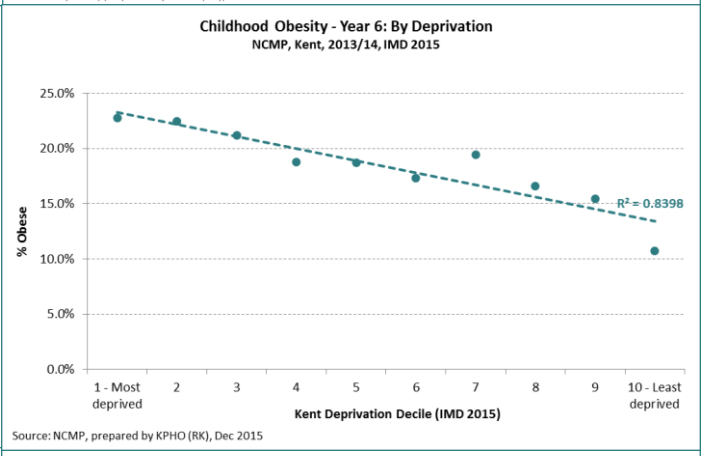
Source: Experian, prepared by KPHO (RK), Dec 2015



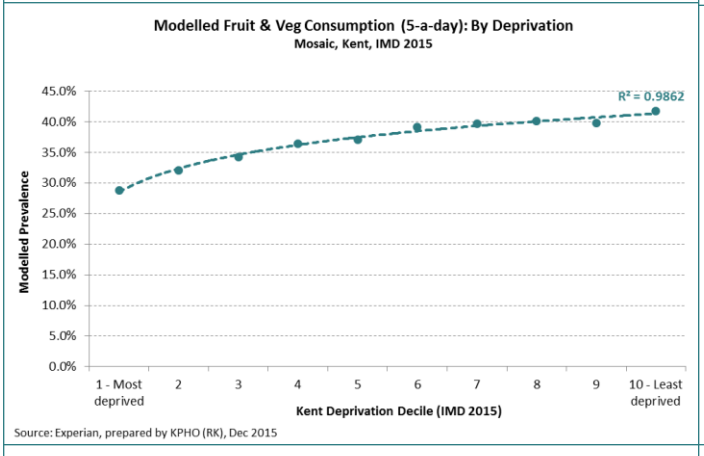
Source: Experian, prepared by KPHO (RK), Dec 2015



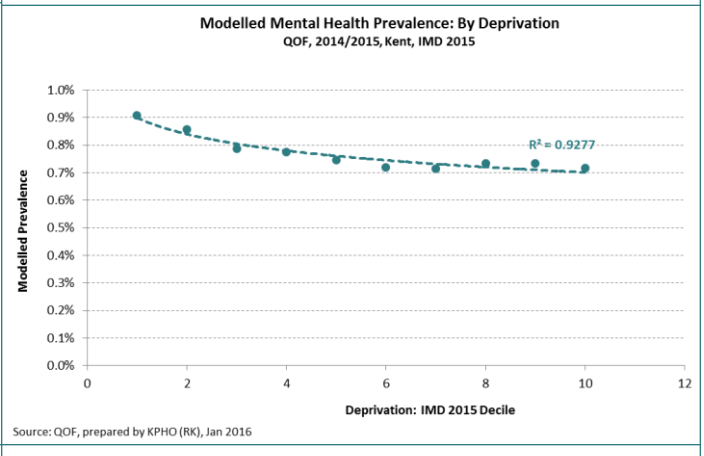
Source: NCMP, prepared by KPHO (RK), June 2016



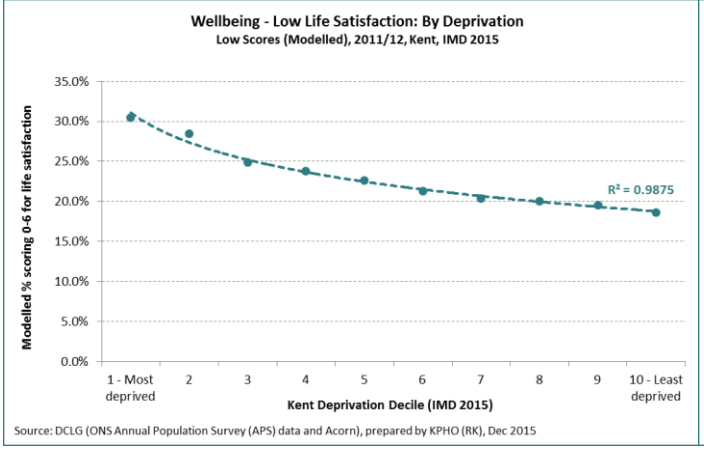
Source: NCMP, prepared by KPHO (RK), Dec 2015



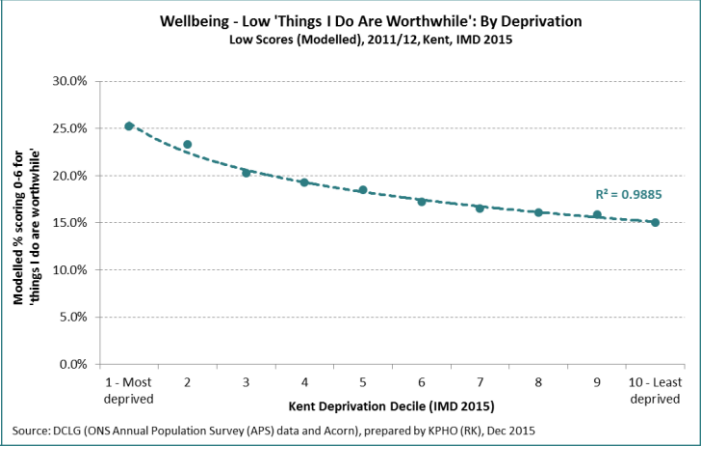
Source: Experian, prepared by KPHO (RK), Dec 2015



Source: QOF, prepared by KPHO (RK), Jan 2016

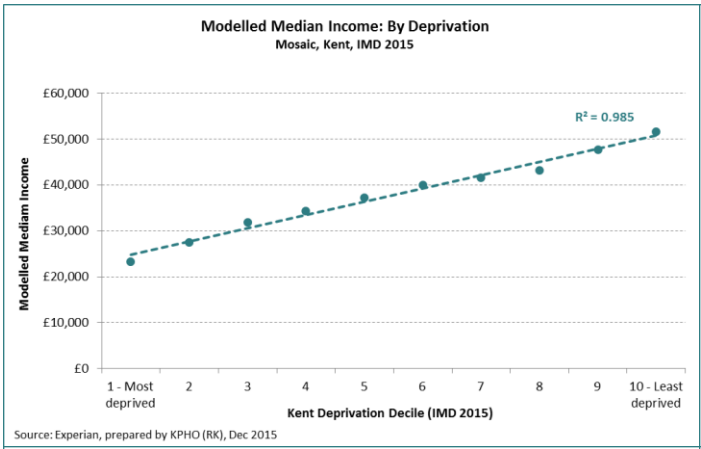


Source: DCLG (ONS Annual Population Survey (APS) data and Acorn), prepared by KPHO (RK), Dec 2015

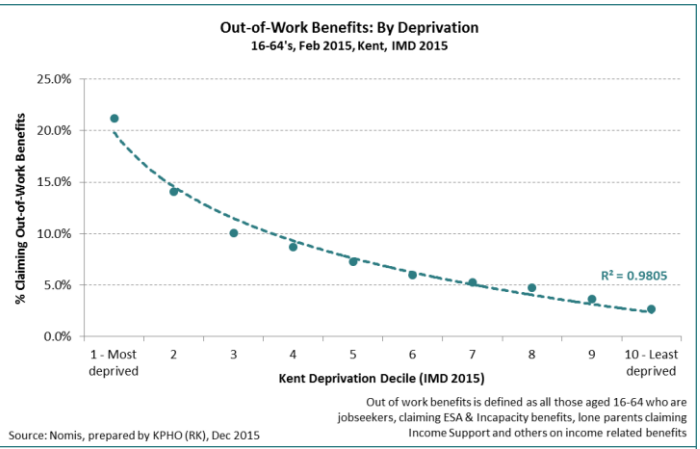


Source: DCLG (ONS Annual Population Survey (APS) data and Acorn), prepared by KPHO (RK), Dec 2015

4.3 Inequality slopes: Wider determinants of health

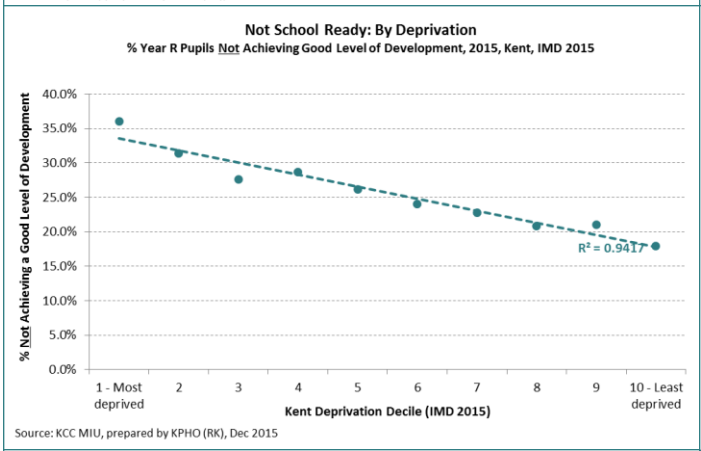


Source: Experian, prepared by KPHO (RK), Dec 2015

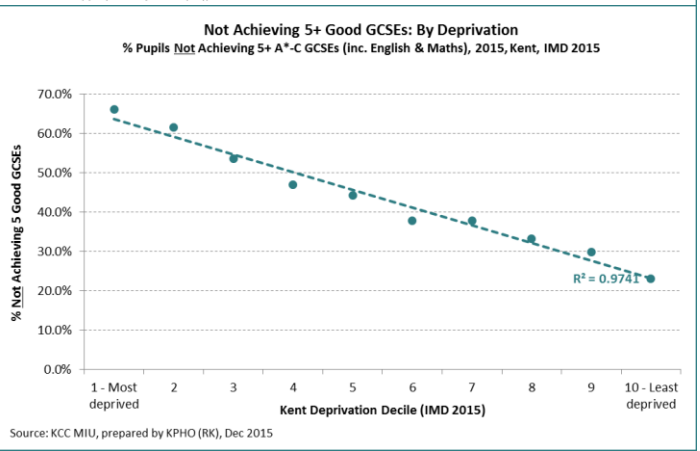


Out of work benefits is defined as all those aged 16-64 who are jobseekers, claiming ESA & Incapacity benefits, lone parents claiming Income Support and others on income related benefits

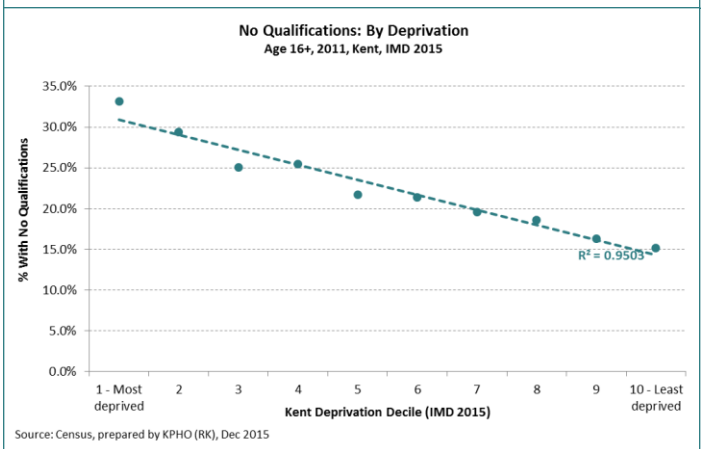
Source: Nomis, prepared by KPHO (RK), Dec 2015



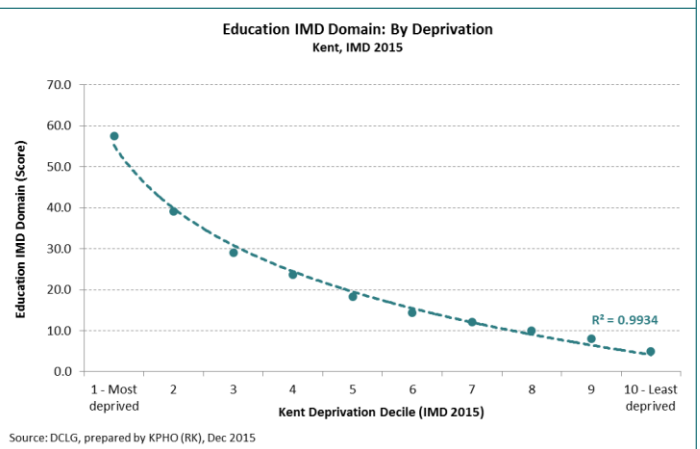
Source: KCC MIU, prepared by KPHO (RK), Dec 2015



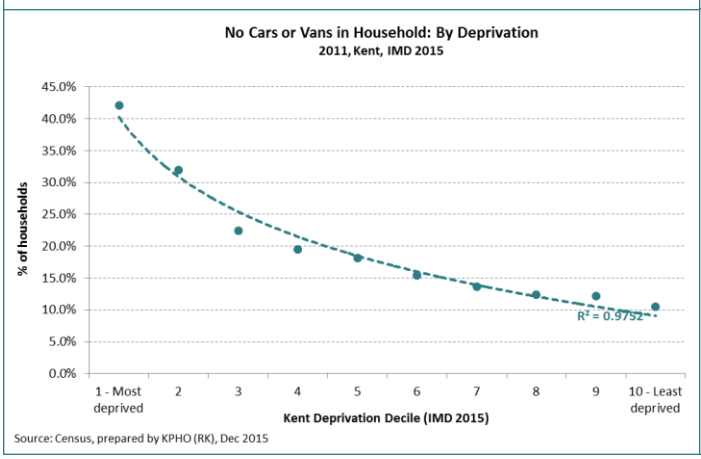
Source: KCC MIU, prepared by KPHO (RK), Dec 2015



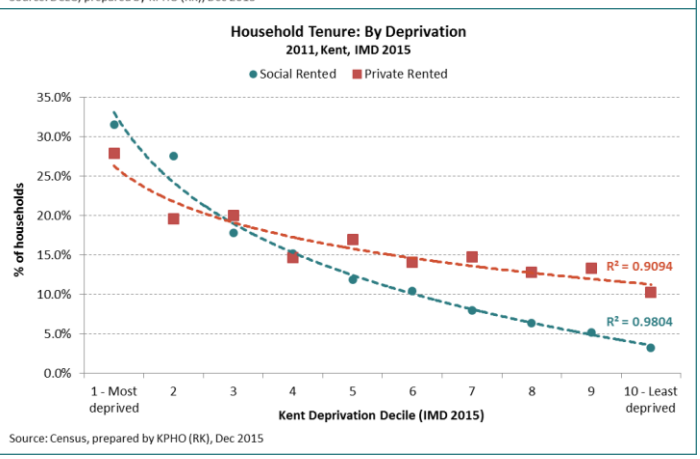
Source: Census, prepared by KPHO (RK), Dec 2015



Source: DCLG, prepared by KPHO (RK), Dec 2015

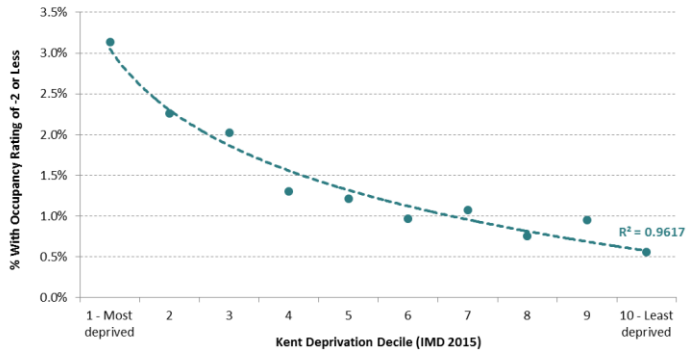


Source: Census, prepared by KPHO (RK), Dec 2015



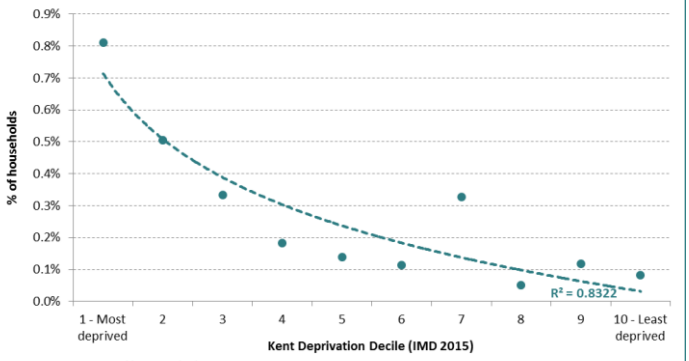
Source: Census, prepared by KPHO (RK), Dec 2015

Overcrowding: By Deprivation
Occupancy Rating (Rooms) of -2 or Less, 2011, Kent, IMD 2015



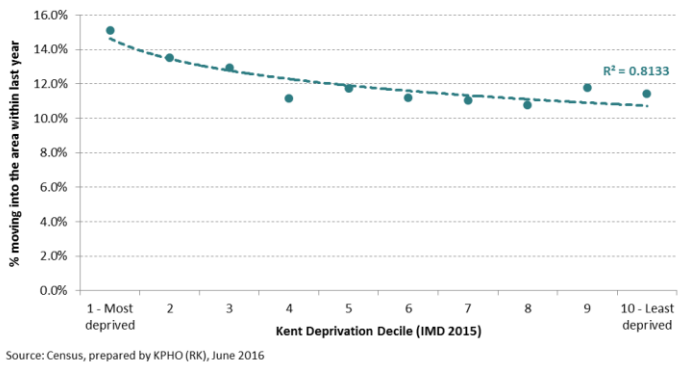
Source: Census, prepared by KPHO (RK), Dec 2015

Shared Dwellings: By Deprivation
2011, Kent, IMD 2015



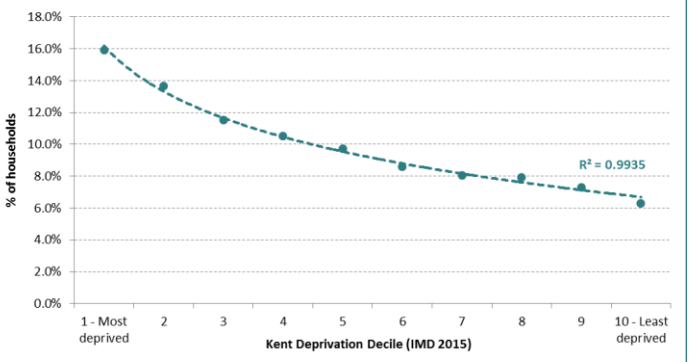
Source: Census, prepared by KPHO (RK), Dec 2015

Transience: By Deprivation
% Moving Within The Last Year, 2011, Kent, IMD 2015



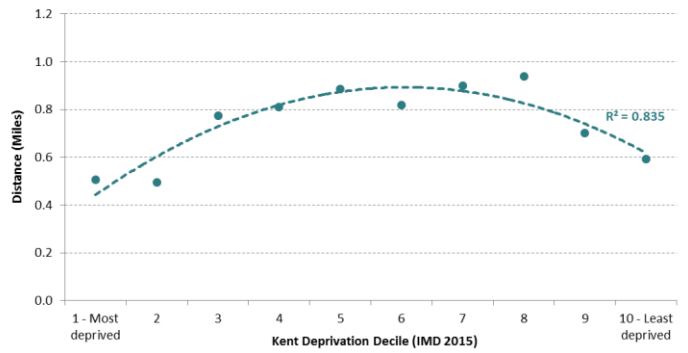
Source: Census, prepared by KPHO (RK), June 2016

Single Parents: By Deprivation
2011, Kent, IMD 2015



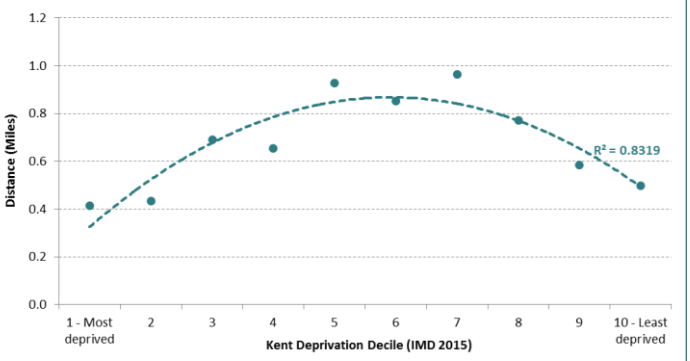
Source: Census, prepared by KPHO (RK), Dec 2015

Distance to Nearest GP: By Deprivation
Kent, IMD 2015



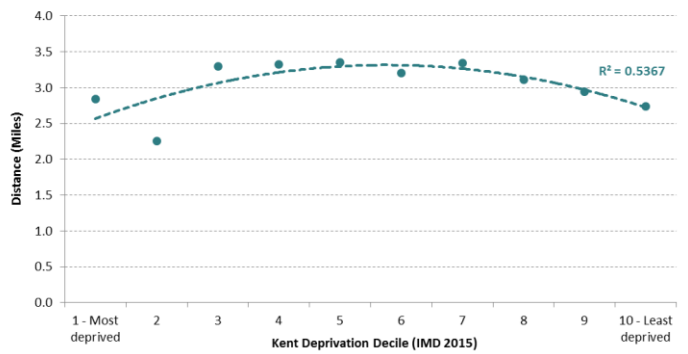
Source: KCC Business Intelligence, prepared by KPHO (RK), Dec 2015

Distance to Nearest Pharmacy: By Deprivation
Kent, IMD 2015



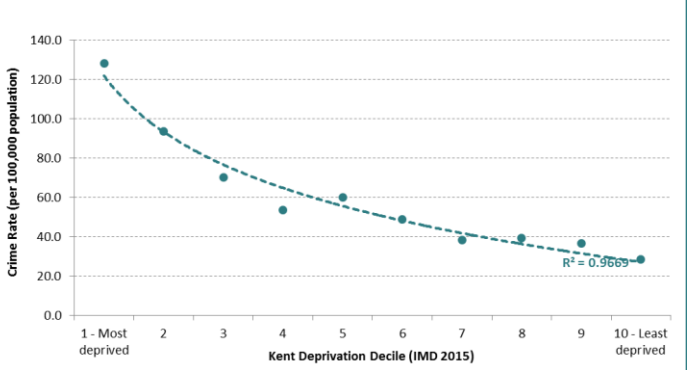
Source: KCC Business Intelligence, prepared by KPHO (RK), Dec 2015

Distance to Nearest A&E/Urgent Care Centre: By Deprivation
Kent, IMD 2015

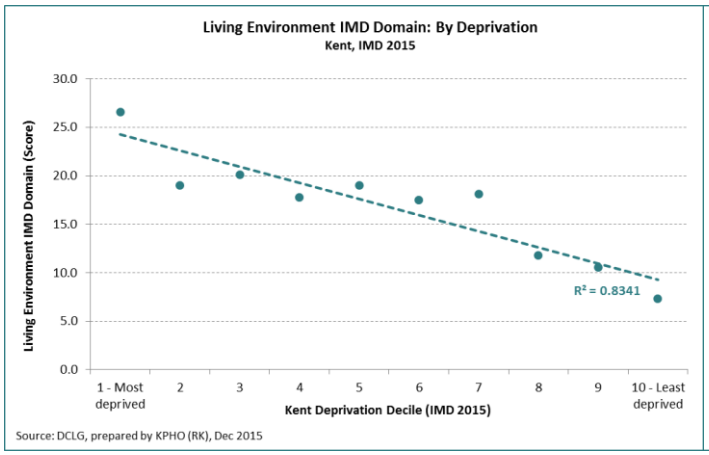


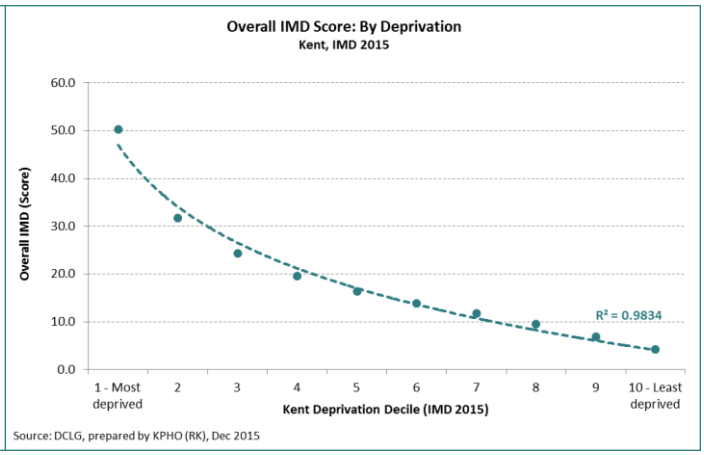
Source: KCC Business Intelligence, prepared by KPHO (RK), Dec 2015

Crime Rate: By Deprivation
Rate per 100,000 population, Kent, Oct 2013 - Sept 2015, IMD 2015



Source: Data.police.uk, prepared by KPHO (RK), Dec 2015





5. Types of deprivation

The above analysis clearly identifies the populations of the areas falling into the most deprived decile in Kent as suffering from disproportionately poor health outcomes and being disproportionately likely to display a number of characteristics associated with poor health outcomes. Before we can improve health outcomes in the most deprived areas, we need to gain deeper insights into the characteristics of the populations and the challenges they face.

The analysis in this section attempts to address concerns relating to treating the most deprived decile as a single homogenous group. Within this decile different local areas will face different challenges and so potentially require different interventions and approaches. However, it was our hypothesis that there exists some degree of commonality between certain groups of LSOAs falling into the most deprived decile.

5.1 Segmentation

The 88 LSOAs identified as falling into the most deprived decile have been subdivided using multivariate segmentation techniques. This segmentation seeks to divide the most deprived LSOAs into 'types', so that within a 'type' areas are similar and between 'types' they differ. Mosaic[10] has been used as the basis for the segmentation.

SPSS was used to run a k-means cluster analysis, which has identified relatively homogeneous groups of LSOAs based on their Mosaic profiles. The method allowed iterative identification of cluster centres. The 4-cluster solution was selected as the most

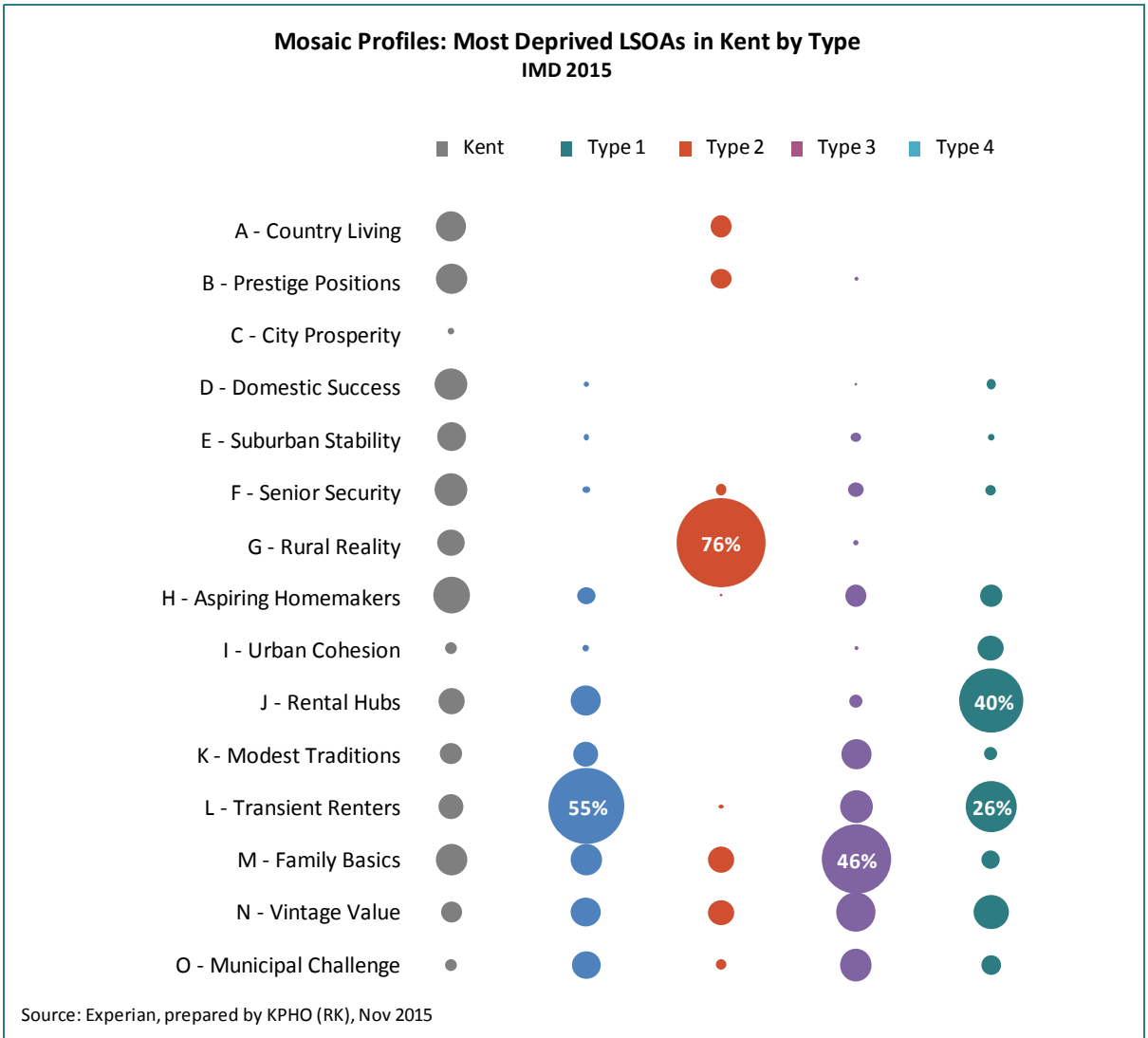
[10] MOSAIC is a population segmentation tool produced by Experian, which is increasingly being used in the public sector to better understand local populations. The classification system draws upon 450 different sources of data relating to socio-demographics, lifestyle, culture and behaviour, and then categorises households based on this.

appropriate, with the clusters labelled 'Type 1', 'Type 2', 'Type 3' and 'Type 4'. Appendix C gives a full listing of the type allocated to each of the 88 LSOAs falling within Kent's most deprived decile.

Based on the detailed analysis contained later within this section, the clusters were given names as follows:

- Type 1: Young people lacking opportunities
- Type 2: Deprived rural households
- Type 3: Families in social housing
- Type 4: Young people in poor quality accommodation.

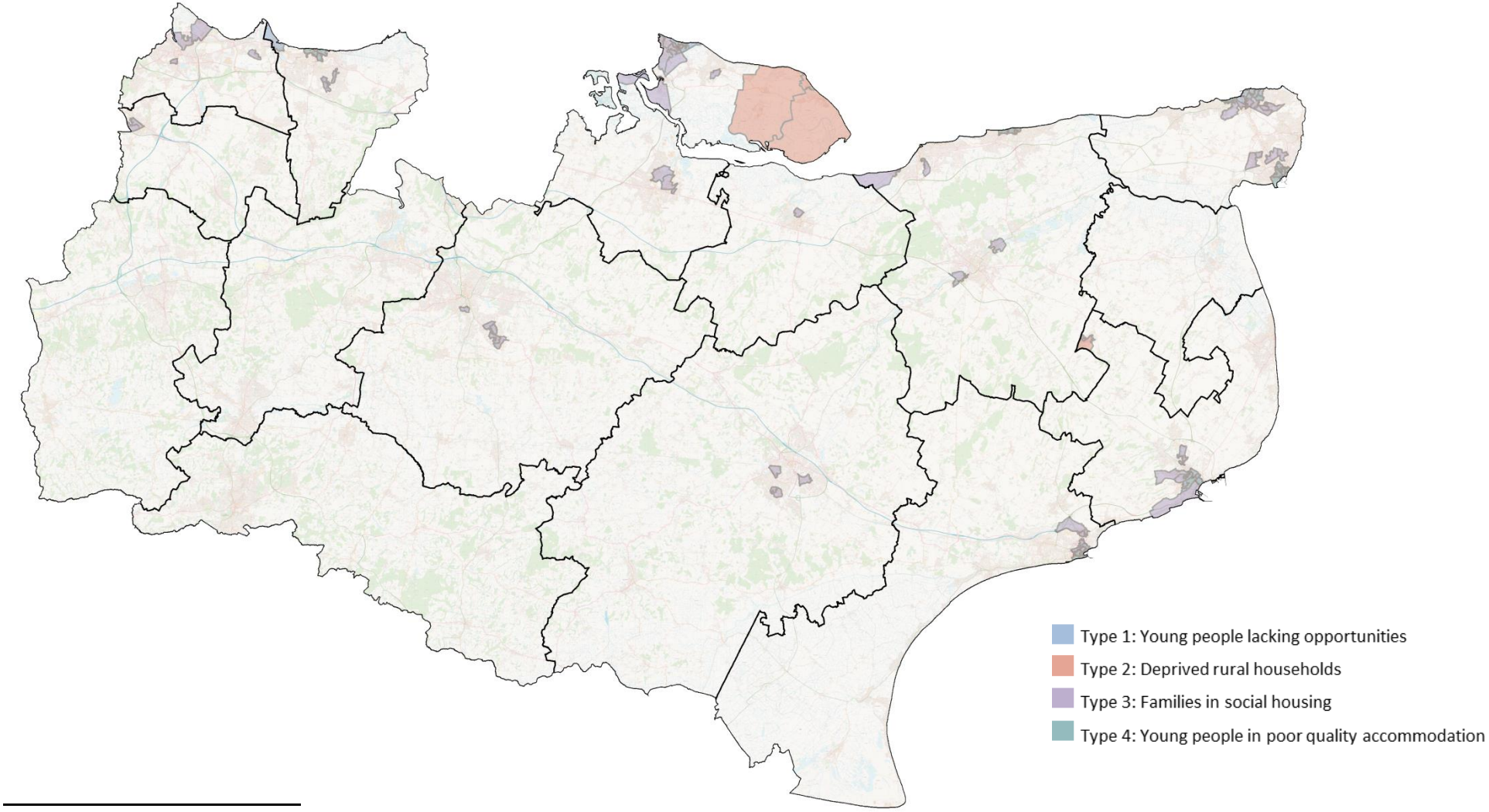
The chart below shows the Mosaic profiles of each of the four types.



There are clear differences between the four deprivation types in respect of their Mosaic profiles.

The map below shows Kent's most deprived decile LSOAs by type[11].

Most Deprived Decile LSOAs in Kent: By Deprivation Type

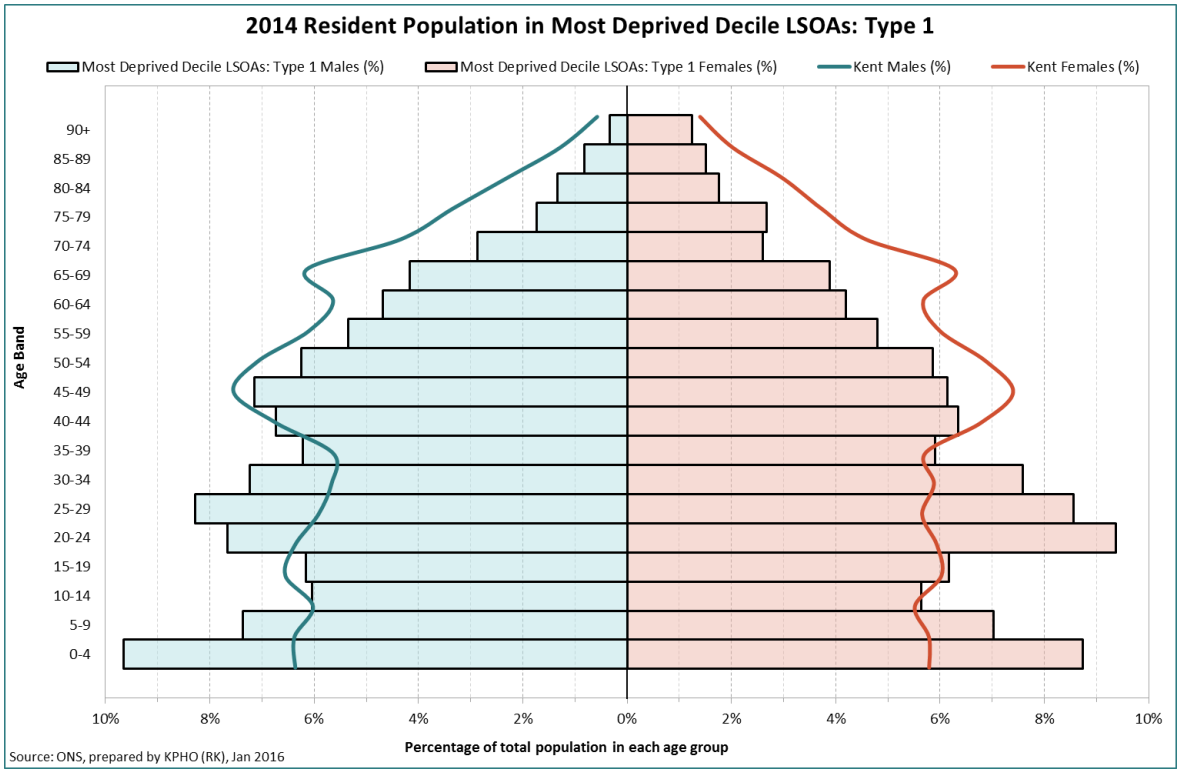


[11] More detailed local maps can be found in the CCG-level summaries contained within Appendix B.

5.2 Type 1: Young people lacking opportunities

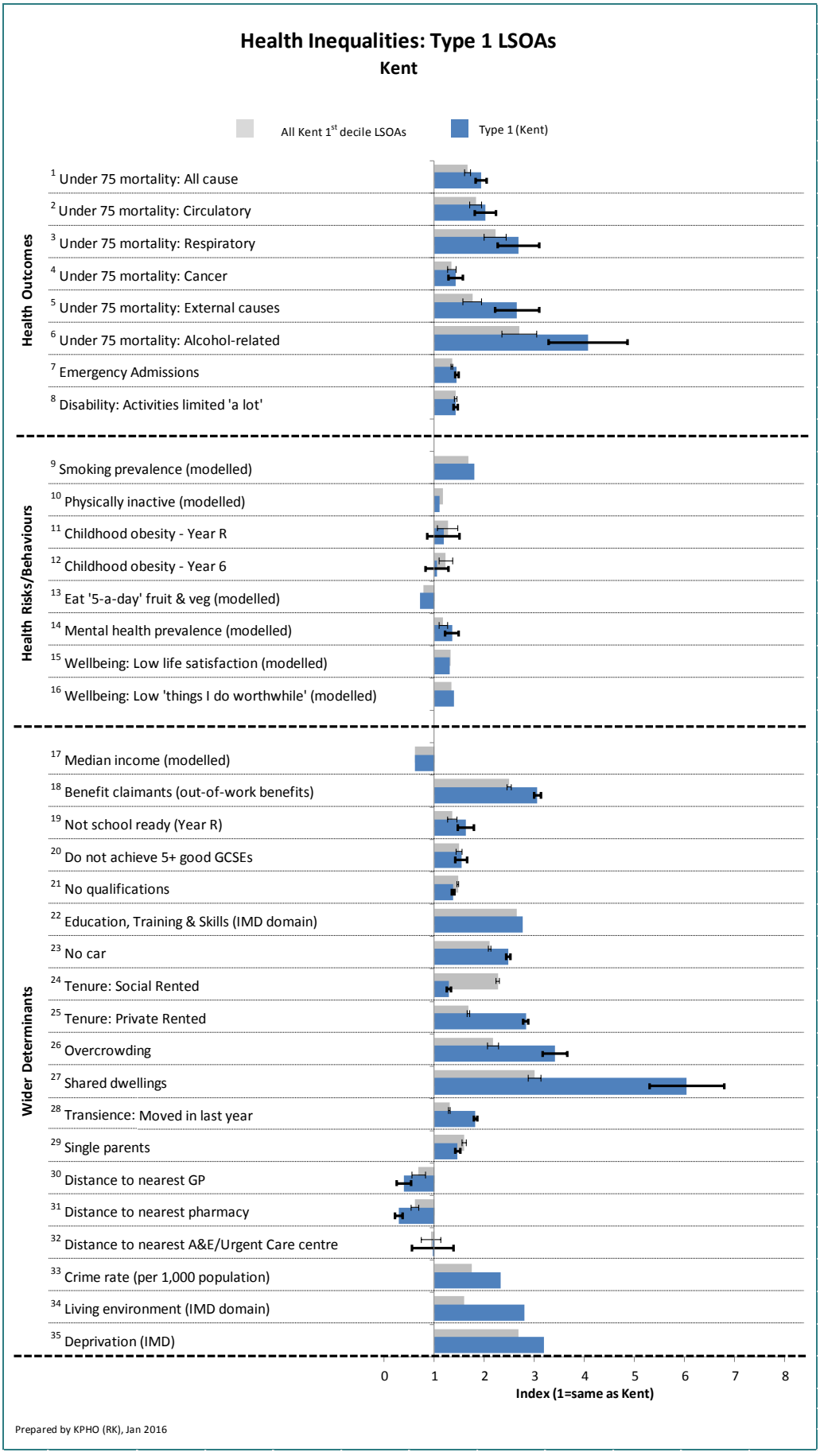
A total of 18 of the 88 most deprived decile LSOAs in Kent fall into type 1. These include LSOAs in Northfleet, Folkestone Harbour, Clarendon, Tower Hamlets, Sheerness East Margate Central, Cliftonville West and Eastcliff. For detailed local maps of the individual LSOAs falling into this cluster see the CCG-level summaries in Appendix B.

The chart below shows the age structure of the population of type 1 deprived areas in comparison with Kent as a whole.



This analysis shows that type 1 deprived areas have high numbers of young adults and of young children.

The chart overleaf provides a summary of the characteristics of type 1 deprived areas in terms of health outcomes, health risks and behaviours, and the wider determinants of health. In this analysis type 1 deprived areas have been indexed against the average for Kent for each individual characteristic. Also shown is data for the most deprived decile as a whole. For details of the data sources used for each characteristic see Appendix A.


Health Inequalities: Type 1 LSOAs
Kent
All Kent 1st decile LSOAs
Type 1 (Kent)
Health Outcomes
1 Under 75 mortality: All cause
2 Under 75 mortality: Circulatory
3 Under 75 mortality: Respiratory
4 Under 75 mortality: Cancer
5 Under 75 mortality: External causes
6 Under 75 mortality: Alcohol-related
7 Emergency Admissions
8 Disability: Activities limited 'a lot'
Health Risks/Behaviours
9 Smoking prevalence (modelled)
10 Physically inactive (modelled)
11 Childhood obesity - Year R
12 Childhood obesity - Year 6
13 Eat '5-a-day' fruit & veg (modelled)
14 Mental health prevalence (modelled)
15 Wellbeing: Low life satisfaction (modelled)
16 Wellbeing: Low 'things I do worthwhile' (modelled)
Wider Determinants
17 Median income (modelled)
18 Benefit claimants (out-of-work benefits)
19 Not school ready (Year R)
20 Do not achieve 5+ good GCSEs
21 No qualifications
22 Education, Training & Skills (IMD domain)
23 No car
24 Tenure: Social Rented
25 Tenure: Private Rented
26 Overcrowding
27 Shared dwellings
28 Transience: Moved in last year
29 Single parents
30 Distance to nearest GP
31 Distance to nearest pharmacy
32 Distance to nearest A&E/Urgent Care centre
33 Crime rate (per 1,000 population)
34 Living environment (IMD domain)
35 Deprivation (IMD)
0 1 2 3 4 5 6 7 8
Index (1=same as Kent)
Prepared by KPHO (RK), Jan 2016

Type 1 deprived areas are characterised by high numbers of young adults in private rented accommodation.

This analysis highlights the following key characteristics of type 1 deprived areas in respect of some of the wider determinants of health, and in comparison with Kent as a whole:

- Particularly high levels of shared dwellings and overcrowding
- Particularly poor living environment with particularly high crime rates
- Low incomes
- Particularly high levels of out-of-work benefit claimants
- Poor scores for education
- Particularly high levels of movement/transiency.

In terms of health risks and behaviours, type 1 deprived areas have:

- High smoking prevalence
- Low levels of wellbeing.

In terms of health outcomes, type 1 deprived areas have:

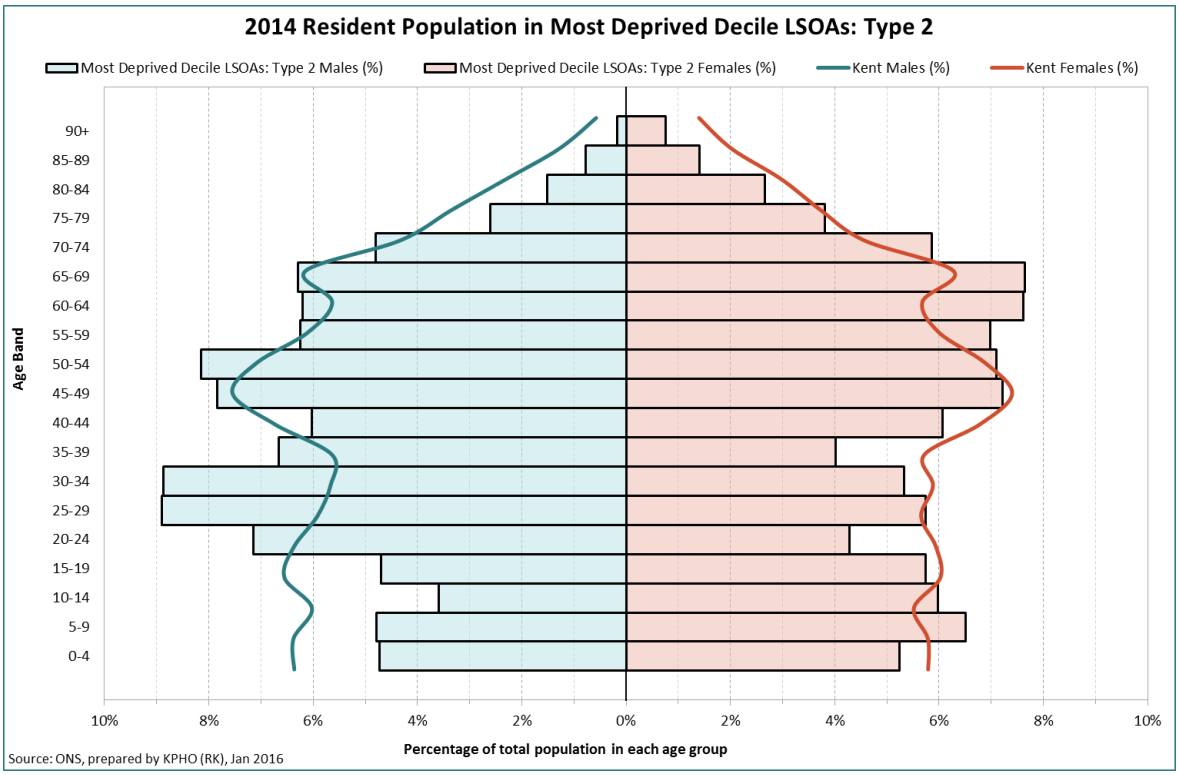
- Particularly high premature mortality rates, with alcohol-related premature mortality, premature mortality from 'external causes' particularly high
- High emergency hospital admission rates
- High rates of disability ('activities limited a lot').

Please see Appendix B for analysis of type 1 deprived areas at CCG-level, including detailed local maps for individual LSOAs falling into this cluster.

5.3 Type 2: Deprived rural households

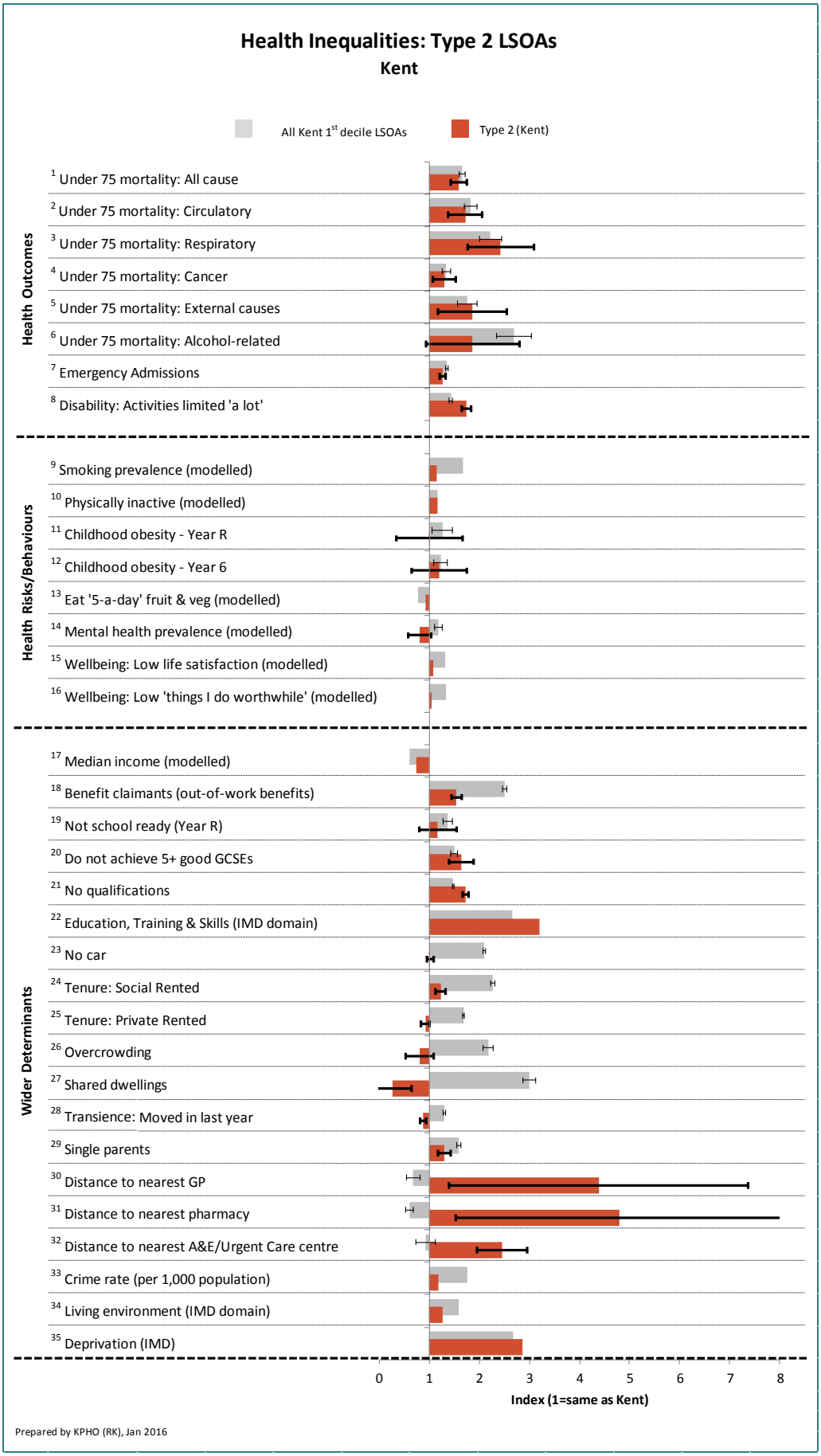
A total of 4 of the 88 most deprived decile LSOAs in Kent fall into type 2. These include LSOAs in Aylesham, Leysdown-On-Sea, Warden and Eastchurch. It must be borne in mind when interpreting the results for type 2 LSOAs that data is based on a relatively small population. For detailed local maps of the individual LSOAs falling into this cluster see the CCG-level summaries in Appendix B.

The chart below shows the age structure of the population of type 2 deprived areas in comparison with Kent as a whole.



This analysis shows that type 2 deprived areas have lower numbers of children than the Kent population as a whole (and other deprived area types).

The chart overleaf provides a summary of the characteristics of type 2 deprived areas in terms of health outcomes, health risks and behaviours, and the wider determinants of health. In this analysis type 2 deprived areas have been indexed against the average for Kent for each individual characteristic. Also shown is data for the most deprived decile as a whole.


Health Inequalities: Type 2 LSOAs
Kent
All Kent 1st decile LSOAs
Type 2 (Kent)
Health Outcomes
1 Under 75 mortality: All cause
2 Under 75 mortality: Circulatory
3 Under 75 mortality: Respiratory
4 Under 75 mortality: Cancer
5 Under 75 mortality: External causes
6 Under 75 mortality: Alcohol-related
7 Emergency Admissions
8 Disability: Activities limited 'a lot'
Health Risks/Behaviours
9 Smoking prevalence (modelled)
10 Physically inactive (modelled)
11 Childhood obesity - Year R
12 Childhood obesity - Year 6
13 Eat '5-a-day' fruit & veg (modelled)
14 Mental health prevalence (modelled)
15 Wellbeing: Low life satisfaction (modelled)
16 Wellbeing: Low 'things I do worthwhile' (modelled)
Wider Determinants
17 Median income (modelled)
18 Benefit claimants (out-of-work benefits)
19 Not school ready (Year R)
20 Do not achieve 5+ good GCSEs
21 No qualifications
22 Education, Training & Skills (IMD domain)
23 No car
24 Tenure: Social Rented
25 Tenure: Private Rented
26 Overcrowding
27 Shared dwellings
28 Transience: Moved in last year
29 Single parents
30 Distance to nearest GP
31 Distance to nearest pharmacy
32 Distance to nearest A&E/Urgent Care centre
33 Crime rate (per 1,000 population)
34 Living environment (IMD domain)
35 Deprivation (IMD)
0
1
2
3
4
5
6
7
8
Index (1=same as Kent)
Prepared by KPHO (RK), Jan 2016

This analysis highlights the following key characteristics of type 2 deprived areas in respect of some of the wider determinants of health, and in comparison with Kent as a whole:

- Low educational attainment and lack of qualifications
- Fewer out-of-work benefit claimants than other deprived groups
- Car ownership is high
- Lower crime rates than many other deprived areas
- Low levels of movement/transiency.

In terms of health risks and behaviours, type 2 deprived areas have:

- Lower smoking prevalence than other deprived area types
- Higher levels of wellbeing than other deprived area types.

In terms of health outcomes, type 2 deprived areas have:

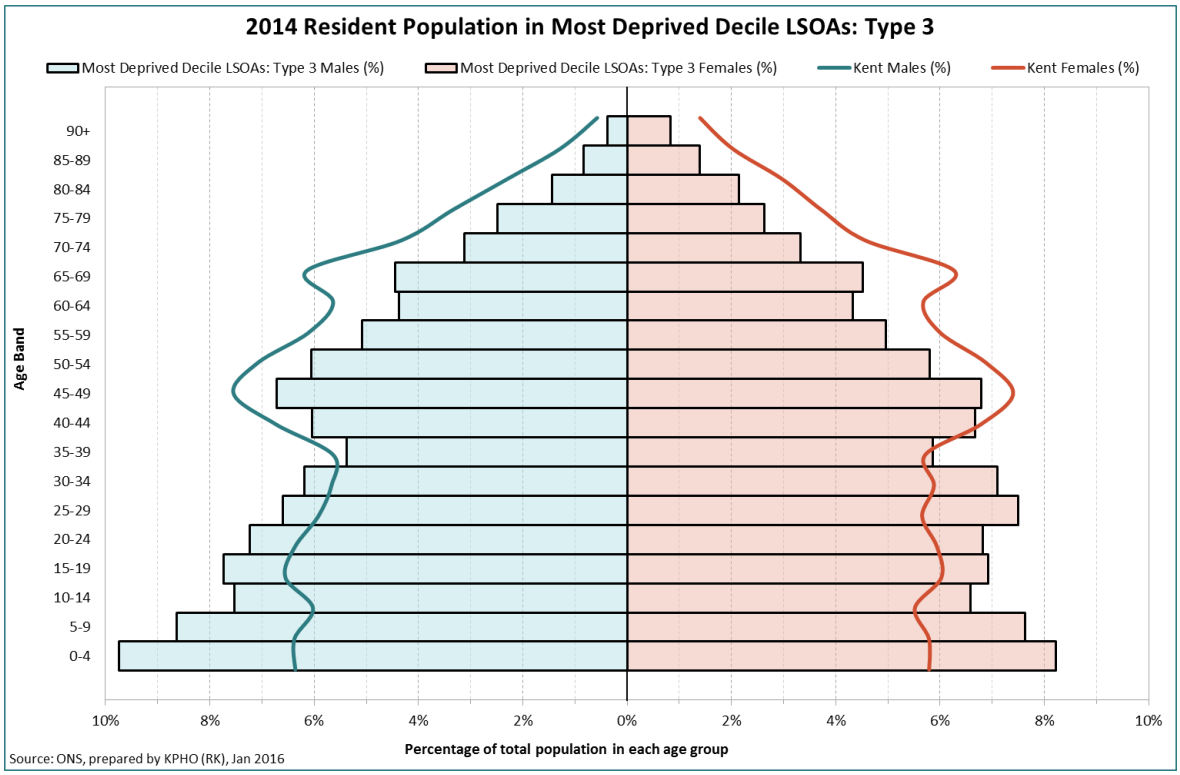
- Particularly high rates of disability ('activities limited a lot')
- High premature mortality.

Please see Appendix B for analysis of type 2 deprived areas at CCG-level, including detailed local maps for individual LSOAs falling into this cluster.

5.4 Type 3: Families in social housing

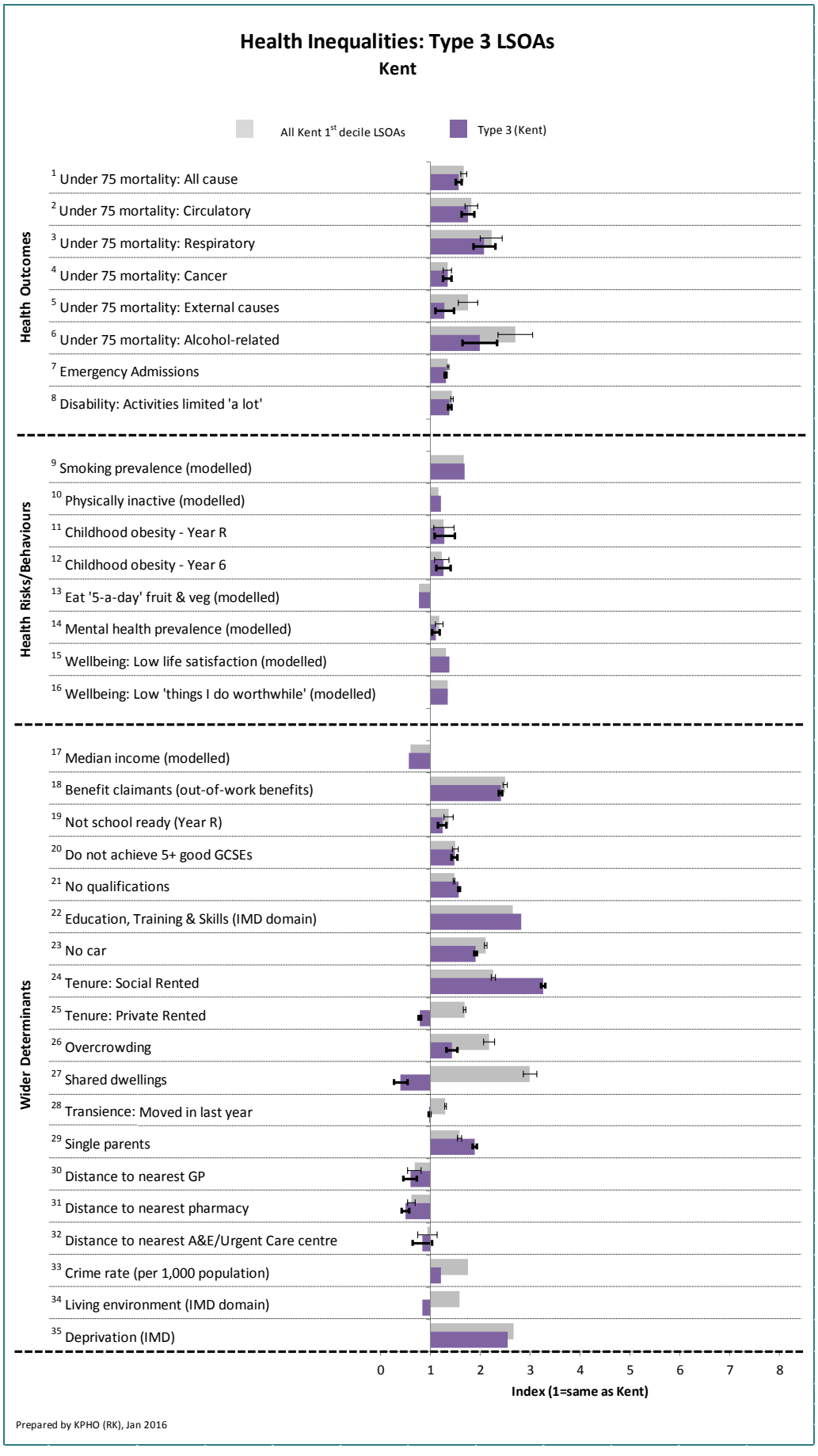
A total of 51 of the 88 most deprived decile LSOAs in Kent fall into type 3. This is the largest of the four deprivation types. These include LSOAs in Folkestone East, Aycliffe, Buckland Valley, St Radigans, Stanhope, Aylesford Green, Victoria, Davington Priory, Northgate, Gorrell, Seasalter, Wincheap, Swanley St Mary's, Dartford, Swanscombe, Kings Farm, Westcourt, Sheerness, Queenborough, Rushenden, Sittingbourne, Dane Valley, Garlinge, Newington, Parkwood, Shepway and Postley Road. For detailed local maps of the individual LSOAs falling into this cluster see the CCG-level summaries in Appendix B.

The chart below shows the age structure of the population of type 3 deprived areas in comparison with Kent as a whole.



This analysis shows that type 3 deprived areas have very high numbers children and lower numbers of over 50s in comparison with the Kent population as a whole.

The chart overleaf provides a summary of the characteristics of type 3 deprived areas in terms of health outcomes, health risks and behaviours, and the wider determinants of health. In this analysis type 3 deprived areas have been indexed against the average for Kent for each individual characteristic. Also shown is data for the most deprived decile as a whole.


Health Inequalities: Type 3 LSOAs
Kent
All Kent 1st decile LSOAs
Type 3 (Kent)
Health Outcomes
1 Under 75 mortality: All cause
2 Under 75 mortality: Circulatory
3 Under 75 mortality: Respiratory
4 Under 75 mortality: Cancer
5 Under 75 mortality: External causes
6 Under 75 mortality: Alcohol-related
7 Emergency Admissions
8 Disability: Activities limited 'a lot'
Health Risks/Behaviours
9 Smoking prevalence (modelled)
10 Physically inactive (modelled)
11 Childhood obesity - Year R
12 Childhood obesity - Year 6
13 Eat '5-a-day' fruit & veg (modelled)
14 Mental health prevalence (modelled)
15 Wellbeing: Low life satisfaction (modelled)
16 Wellbeing: Low 'things I do worthwhile' (modelled)
Wider Determinants
17 Median income (modelled)
18 Benefit claimants (out-of-work benefits)
19 Not school ready (Year R)
20 Do not achieve 5+ good GCSEs
21 No qualifications
22 Education, Training & Skills (IMD domain)
23 No car
24 Tenure: Social Rented
25 Tenure: Private Rented
26 Overcrowding
27 Shared dwellings
28 Transience: Moved in last year
29 Single parents
30 Distance to nearest GP
31 Distance to nearest pharmacy
32 Distance to nearest A&E/Urgent Care centre
33 Crime rate (per 1,000 population)
34 Living environment (IMD domain)
35 Deprivation (IMD)
0
1
2
3
4
5
6
7
8
Index (1=same as Kent)
Prepared by KPHO (RK), Jan 2016

Type 3 deprived areas are characterised by families with children in social housing.

This analysis highlights the following key characteristics of type 3 deprived areas in respect of some of the wider determinants of health, and in comparison with Kent as a whole:

- Low incomes
- Poor scores for education
- High numbers of out-of-work benefits claimants
- Particularly high number of single parents
- Better living environment and lower crime rates than other deprived areas.

In terms of health risks and behaviours, type 3 deprived areas have:

- High smoking prevalence
- Low levels of wellbeing.

In terms of health outcomes, type 3 deprived areas have:

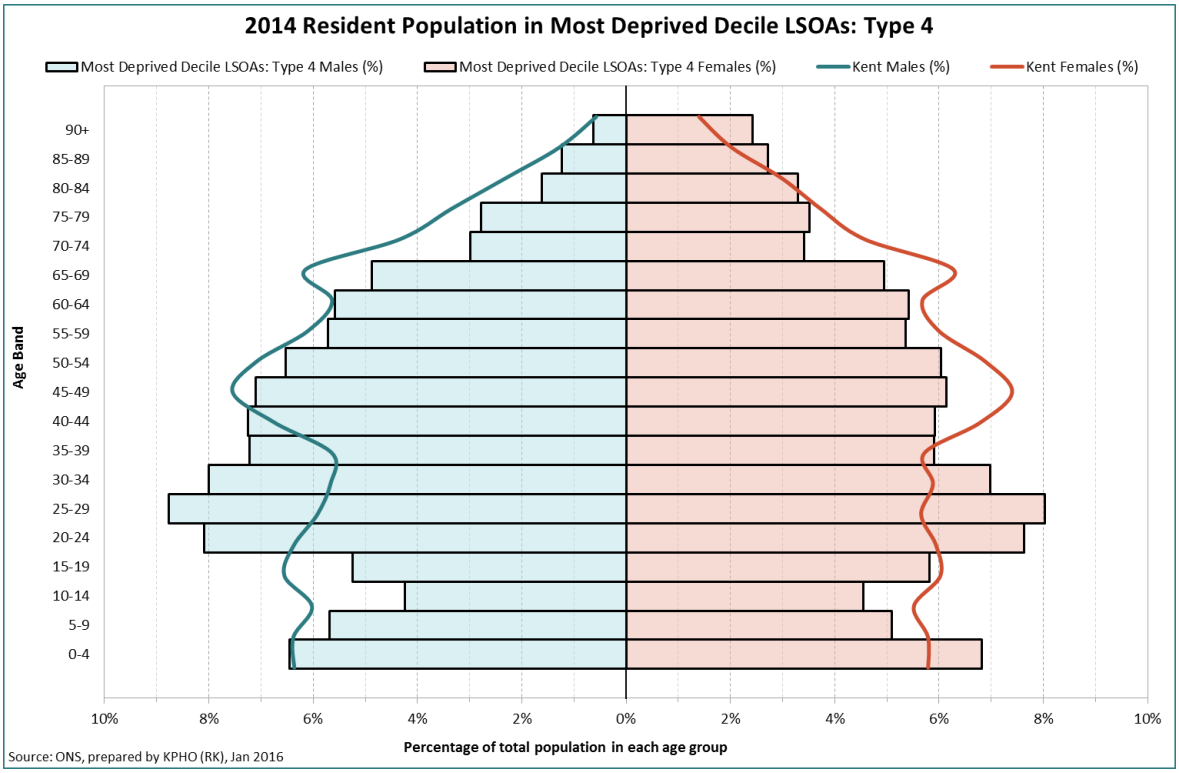
- High premature mortality rates
- High emergency hospital admission rates
- High rates of disability ('activities limited a lot').

Please see Appendix B for analysis of type 3 deprived areas at CCG-level, including detailed local maps for individual LSOAs falling into this cluster.

5.5 Type 4: Young people in poor quality accommodation

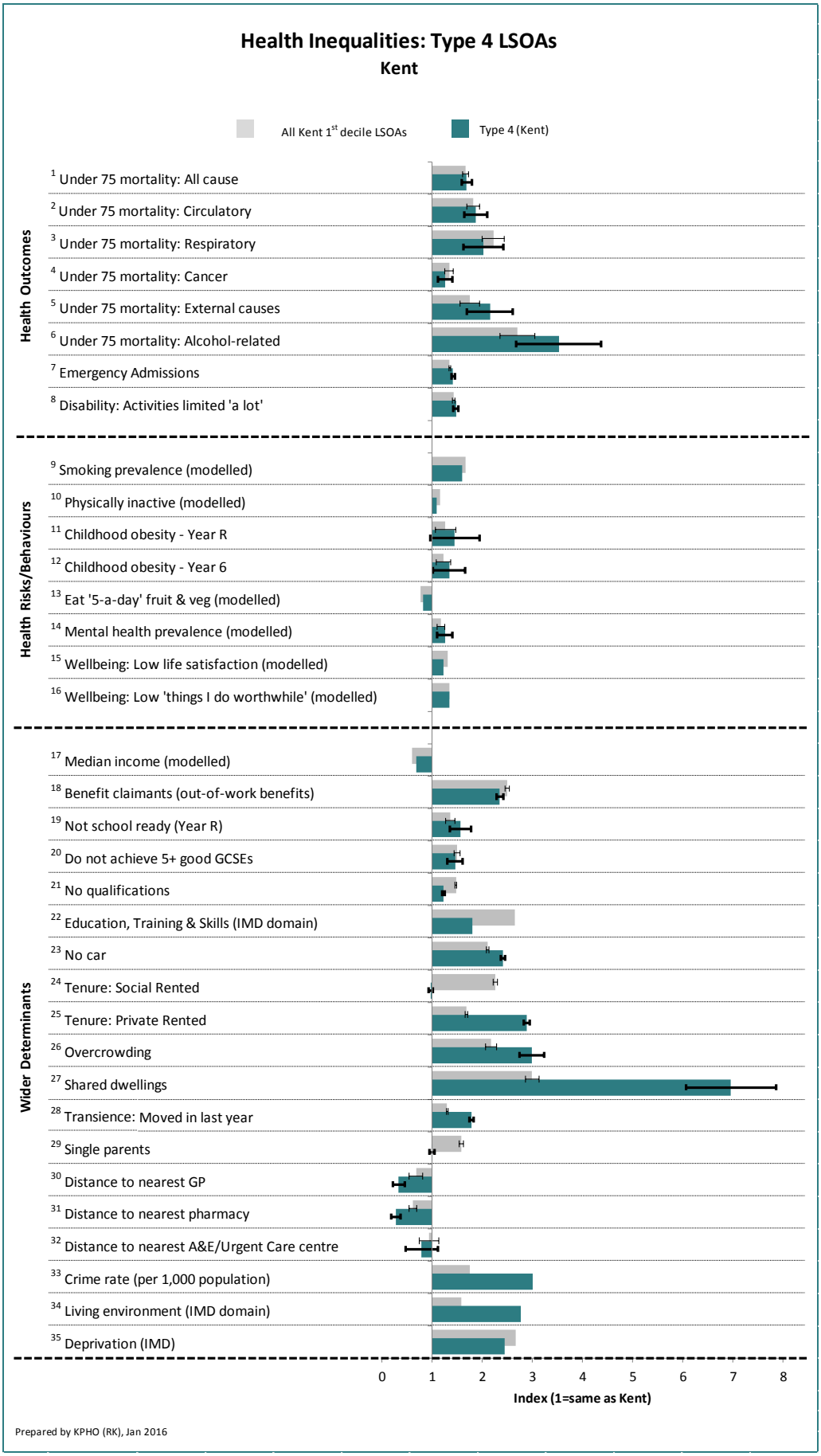
A total of 15 of the 88 most deprived decile LSOAs in Kent fall into type 4. These include LSOAs in Folkestone Harvey Central, Priory, Pencester, Heron, Herne Bay, Central Gravesend, Central Harbour (Ramsgate), Westbrook, Eastcliff and Cliftonville West. For detailed local maps of the individual LSOAs falling into this cluster see the CCG-level summaries in Appendix B.

The chart below shows the age structure of the population of type 4 deprived areas in comparison with Kent as a whole.



This analysis shows that type 4 deprived areas have high numbers of young adults and low numbers of school-age children and teenagers.

The chart overleaf provides a summary of the characteristics of type 4 deprived areas in terms of health outcomes, health risks and behaviours, and the wider determinants of health. In this analysis type 4 deprived areas have been indexed against the average for Kent for each individual characteristic. Also shown is data for the most deprived decile as a whole.


Health Inequalities: Type 4 LSOAs
Kent
All Kent 1st decile LSOAs
Type 4 (Kent)
Health Outcomes
1 Under 75 mortality: All cause
2 Under 75 mortality: Circulatory
3 Under 75 mortality: Respiratory
4 Under 75 mortality: Cancer
5 Under 75 mortality: External causes
6 Under 75 mortality: Alcohol-related
7 Emergency Admissions
8 Disability: Activities limited 'a lot'
Health Risks/Behaviours
9 Smoking prevalence (modelled)
10 Physically inactive (modelled)
11 Childhood obesity - Year R
12 Childhood obesity - Year 6
13 Eat '5-a-day' fruit & veg (modelled)
14 Mental health prevalence (modelled)
15 Wellbeing: Low life satisfaction (modelled)
16 Wellbeing: Low 'things I do worthwhile' (modelled)
Wider Determinants
17 Median income (modelled)
18 Benefit claimants (out-of-work benefits)
19 Not school ready (Year R)
20 Do not achieve 5+ good GCSEs
21 No qualifications
22 Education, Training & Skills (IMD domain)
23 No car
24 Tenure: Social Rented
25 Tenure: Private Rented
26 Overcrowding
27 Shared dwellings
28 Transience: Moved in last year
29 Single parents
30 Distance to nearest GP
31 Distance to nearest pharmacy
32 Distance to nearest A&E/Urgent Care centre
33 Crime rate (per 1,000 population)
34 Living environment (IMD domain)
35 Deprivation (IMD)
0
1
2
3
4
5
6
7
8
Index (1=same as Kent)
Prepared by KPHO (RK), Jan 2016

Type 4 deprived areas have a number of similar characteristics to type 1 deprived areas, including having high numbers of young adults in private rented accommodation.

This analysis highlights the following key characteristics of type 4 deprived areas in respect of some of the wider determinants of health, and in comparison with Kent as a whole:

- High levels of shared dwellings and overcrowding
- Better educated than the other deprivation types
- Particularly poor living environment with high crime rates
- Low incomes, but not as low as Type 1 areas
- High levels of out-of-work benefit claimants, but not as high has Type 1 areas
- Particularly high levels of movement/transiency.

In terms of health risks and behaviours, type 4 deprived areas have:

- High smoking prevalence.

In terms of health outcomes, type 4 deprived areas have:

- High premature mortality rates
- High emergency hospital admission rates
- High rates of disability ('activities limited a lot').

Please see Appendix B for analysis of type 4 deprived areas at CCG-level, including detailed local maps for individual LSOAs falling into this cluster.

Appendix A: Data sources

The charts in Section 5 summarising the characteristics of each deprivation type in terms of health outcomes, health risks and behaviours, and the wider determinants of health show data derived from the following sources:

1-6 Age-standardised mortality rates, 2006-2014. Source: PCMD. **2** ICD10: I00-I99. **3** ICD10: J00-J99. **4** ICD10: C00-C97. **5** ICD10: U00-Y99. **6** ICD10: F10, G31.2, G62.1, I42.6, K29.2, K70, K73, K74, K86.0, X45, X65, Y15.

7 Emergency admissions, 2012/13-2013/14. Source: SUS.

8 % self-reporting day-to-day activities 'limited a lot', 2011. Source: Census.

9 Modelled based on smoking prevalence data by Mosaic type. Source: Experian (TGI: 'Heavy', 'Medium' & 'Light' smokers combined).

10 Modelled based on % who do not exercise by Mosaic type. Source: Experian (TGI).

11-12 % children measured who were obese, 2013/14. Source: NCMP.

13 Modelled based on % who claim to eat '5-a-day' fruit and vegetables by Mosaic type. Source: Experian (TGI).

14 Modelled mental health prevalence based on GP practice-level data, 2014/15. Source: QOF.

15-16 Modelled wellbeing based on ONS Annual Population Survey (APS) data by Acorn type, 2011/12. Source: DCLG. **15** % scoring 0-6 for 'Overall, how satisfied are you with your life nowadays?' **16** % scoring 0-6 for 'Overall, to what extent do you feel the things you do in your life are worthwhile?'

17 Modelled based on median household income data by Mosaic type. Source: Experian (ConsumerView).

18 % claiming out of work benefits (defined as all those aged 16-64 who are jobseekers, claiming ESA & incapacity benefits, lone parents claiming Income Support and others on income related benefits), February 2015. Source: DWP (from Nomis).

19 % Year R pupils not achieving a good level of development, 2015. Source: KCC, MIU.

20 % pupils not achieving 5+ A*-C GCSEs (including English & Maths) at the end of Key Stage 4, 2015. Source: KCC, MIU.

21 % with no qualifications (based on persons aged 16+), 2011. Source: Census.

22 Education, Training & Skills IMD domain (average score), 2015. Source: DCLG.

23 % of households with no car or van, 2011. Source: Census.

24 % of households living in social rented accommodation, 2011. Source: Census.

25 % of households living in private rented accommodation, 2011. Source: Census.

26 % of households with an occupancy rating of -2 (i.e. with 2 too few rooms), 2011. Source: Census.

27 % of households with accommodation type 'shared dwellings', 2011. Source: Census.

28 % of households not living at the same address a year ago, 2011. Source: Census. Please note that OAs E00124937 & E00166800 have been removed from this analysis due to the undue influence of Eastchurch prison on levels of transience.

29 % of households with no adults or one adult and one or more children, 2011. Source: Census.

30-32 Distance to nearest GP/pharmacy/A&E or Urgent Care centre (in miles, as the crow flies from population weighted centroid of LSOA), 2015. Source: KCC Business Intelligence.

33 Crime rate (recorded crime per 1,000 population), Oct 2013 - Sept 2015. Source: data.police.uk.

34 Living Environment IMD domain (average score), 2015. Source: DCLG.

35 Index of Multiple Deprivation (IMD) (average score), 2015. Source: DCLG.

For some of the variables above, modelling techniques have been used to derive LSOA-level estimates for use in the analysis.

QOF Prevalence Modelling

Modelled estimates of recorded disease prevalence at LSOA-level have been produced using GP registration data extracted from HSCIC's maintained GP Payments system[12].

Disease prevalence estimates have been produced at LSOA-level by combining the numbers of people in each LSOA registered with each individual GP practice with that GP's disease prevalence rates (as recorded in the 2014/15 QOF). Thus, the model relies on the assumption that disease prevalence rates for the whole GP practice apply to the patients registered to that GP who live in the LSOA in question. This should be borne in mind when interpreting the results.

Mosaic Modelling

Experian's Mosaic classification system has been used to produce modelled estimates for smoking prevalence, physical inactivity, consumption of fruit and vegetables, and income.

Taking smoking as an example, prevalence estimates have been produced at LSOA-level by combining the Mosaic type-level population profile of each individual LSOA with smoking rates for each Mosaic type (as contained within the Mosaic Grand Index). Thus, the model relies on the assumption that smoking rates for a given Mosaic type, calculated by Experian at national level, apply to people of that Mosaic type within Kent.

[12] http://www.hscic.gov.uk/article/2021/Website-Search?productid=19077&q=Numbers+of+Patients+Registered+at+a+GP+Practice&sort=Relevance&size=10&page=1&area=both#top

Appendix B: CCG-level summaries

CCG-level summaries, including detailed local maps.

Ashford Profile.pdf
C&C Profile.pdf
DGS Profile.pdf
South Kent Coast Profile.pdf
Swale Profile.pdf
Thanet Profile.pdf
West Kent Profile.pdf

Appendix C: Deprivation types by LSOA

Data file detailing deprivation types by LSOA.

Appendix C.xlsx