Population Health Needs, Inequalities and Commissioning Opportunities in West Kent CCG

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Executive Summary

Principles

The responsibilities of Kent & Medway Clinical Commissioning Groups (CCGs) are to improve their population's health and reduce inequalities, by commissioning services that build on the recommendations of the Kent Joint Strategic Needs Assessment (JSNA). More importantly, Kent and Medway Health and Social Care commissioner and provider organisations have come together to develop a Sustainability and Transformation plan (STP) to improve the quality of care and improve access for all residents to health and social care alongside increasing demand for wider public services within the expected financial constraints over the next five years.

This placed based needs assessment aims to inform commissioning in West Kent CCG and the local STP planning process, reflecting priorities in terms of local needs and inequalities to maximise health gain across the population. It provides an outline of the current status of West Kent population and health and care services as well as analytical outputs of a population modelling tool to guide future research, planning and commissioning focussing on variation and health inequalities at general practice level. Names of GP practices have been anonymised. If the reader wishes, more information can be accessed on request from the Kent Public Health Observatory. Alongside this is a production excel based tool describing health inequality for each individual practice and West Kent version of the JSNA population cohort model for scenario planning (https://www.thewholesystem.co.uk/systems-thinking-modelling/hosted-online-models/kent-cc-cohort-test/, last accessed 3/12/2018))

Modelling Population health using systems dynamics

 A key addition in this needs assessment is the introduction of a place-based population cohort model for West Kent CCG. This is based on the Kent Health & Wellbeing Board's ambition to transform the JSNA into more forward planning dynamic tool that can directly support commissioning. Kent County Council commissioned Whole Systems Partnerships to explore the potential contribution that a modelling approach can make to understanding future population health needs. The project demonstrates that such an approach has the potential to complement the tools already used for the JSNA, and considerably improve stakeholder engagement and strategic decision making in the Sustainability and Transformation Partnerships.

System dynamics (SD) modelling and linked population data provided by the Kent Integrated Data set (KID) enables to simulate the impact of exposures or interventions on population health and services in Kent and Medway. Use of SD models provides a prospective analysis using aggregated person level data and thus can serve as a system planning tool for commissioners.

Included in this report are outputs from a calibration of this modelling tool to the West Kent CCG registered population. It summarises an approach to understanding local adult health

and care needs in terms of 'population cohorts. The model will be subject to further improvements and inclusion of additional programme areas and simulation scenarios over time. Suggested scenarios for further modelling are listed at the end of the recommendation sections.

Current context

West Kent CCG is comprised of 59 practices (60 practices at the time of much of this data analysis) responsible for a registered practice population of 491.000[1]. West Kent is the largest of the seven Kent CCGs with 31% of the total Kent registered practice population. Most patients registered with West Kent practices live within the district authorities of Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells, except for Swanley (in Sevenoaks District) who are predominately registered with practices in the Dartford, Gravesham and Swanley CCG. Practices within West Kent CCG also serve residents of two wards within the district authority of Ashford.

The registered population of the CCG differs from the average population for Kent and Medway in that it has proportionately fewer young people (particularly 20-29-year olds) and slightly higher proportion of 35 to 54-year olds.

Between 2016 and 2036 the number of people aged 65+ in Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells is expected to increase by 54%[2]. Over the same period, the number of people aged 85+ is expected to increase by 128% (i.e. more than double).

Life expectancy from birth in West Kent CCG is 81.4 years for males and 84.3 for females, higher than the Kent averages of 79.9 and 83.4 years. There is however significant variation between wards across the CCG.

The fertility rate in West Kent is similar to the Kent average, however, they are around 30% higher in the most deprived areas of West Kent than the least deprived areas[3]. There is considerable variation between electoral wards. Fertility rates are significantly higher than the West Kent average in South, Shepway South, Broadwater, Sevenoaks Northern, Snodland West and Medway. This may indicate the possibility of an increased demand for child health and maternity services in these areas.

In 2011, just 4.9% of the population of the four districts in West Kent were of black and ethnic minority origin, lower than the Kent average of 6.3% and the England average of 14.6%. The proportion of the population of the four West Kent districts that are of black and minority ethnic origin decreases with increasing age. Whilst (in 2011) 7.5% of 0-15's were BME, this decreased to 5.0% of those of working age, and 1.3% of those aged 65+.

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[1] Source: PCIS, December 2017
[2] Based on the September 2017 KCC housing-led forecasts
[3] based on Kent IMD 2015 quintiles.

Whilst the overall population of the CCG is relatively affluent there are pockets of deprivation throughout West Kent, mainly within urban centres. The east of the CCG is relatively more deprived than the West. Three wards in Maidstone are highlighted as being in the most deprived quintile in Kent: High Street, Park Wood and Shepway South.

Recommendations for commissioning

There is now overwhelming evidence that people with long term conditions place disproportionate pressure on current health and social care services. Multimorbid individuals (with 2 or more long-term conditions, 18% of the West Kent population) account for 52% of GP appointments; 46% of A&E attendances; 56% of emergency hospital admissions; 54% of outpatient appointments; and 72% of social care costs[4]. Evidence suggests that prevalence of multimorbidity increases substantially with age. There is also evidence to suggest that there is early onset of multimorbidity in the most deprived areas compared with the most affluent.

Considering the projected population growth, it is essential that Commissioners prevent ill health through primary prevention as well as commission services for secondary and tertiary prevention.

We have come together with NHS organisations as Sustainability and Transformation Partnerships (STP) to develop a place-based plan for the future of health and care services. The scope includes improving quality and developing new models of care; improving health and wellbeing; and improving efficiency of services. Key priorities needed for Kent and Medway to meet these challenges have been identified as: Prevention, local care, hospital care and mental health.

As the emphasis in service transformation lies on prevention in primary care, this needs assessment is focussed on providing information on variation of needs and inequalities on a GP practice level.

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[4] Source: Kent Integrated Dataset (KID), 2016/17

Acknowledgements

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1   Introduction

The NHS Act 2012 mandates the Kent Health Wellbeing Boards to produce a Joint Strategic Needs Assessment that will provide the evidence base for commissioning for health, wellbeing and social care and become more integral to the business planning processes in the Kent County Council and in partner organisations, particularly General Practitioners.

The Clinical Commissioning Groups (CCGs) have the responsibility to a deliver sustainable health care system which is focused on health outcomes and reduces health inequalities. In the face of a challenging financial environment the CCG needs to provide equitable services and drive up quality whilst reducing costs.

The STP prevention workstream aims to embed prevention as the first step in all patient health and social care pathways. It endeavours to make prevention the responsibility of all health and social care services, employers and the public to allow delivery of prevention interventions at scale and realisation of improved population health outcomes.

This needs assessment provides local information and projections developed from population cohort modelling for West Kent CCG and STP workstreams to assist them in making their commissioning decisions. Recommendations made include questions for further modelling activities.

1.1   Sustainability and Transformation Partnerships- Prevention plans and activities

1.1.1   Background

Over 500,000 people across Kent and Medway live with long-term health conditions, many with multiple long-term health conditions, dementia or mental ill health. A large proportion of these conditions are preventable.

The STP presents an exciting opportunity to change the way we deliver prevention to our population and Kent and Medway public health colleagues have been collaborating on many of the STP workstreams, the STP prevention workstream which aims to embed prevention as the first step in all patient health and social care pathways.

There are health inequalities across Kent & Medway; in Thanet, one of the most deprived areas of the county, a woman living in the best ward for life expectancy can expect to live almost 22 years longer than a woman in the worst. The main causes of early death are often preventable. Within West Kent there is also variation between wards. For example, Shepway South and Burham, Eccles & Wouldham have significantly lower life expectancy at birth than the West Kent average for both males and females.

1.1.1.1   Kent and Medway STP

The Kent and Medway Sustainability and Transformation Plan (STP) sets out how NHS and Local Authority partners think services need to change over the next five years to achieve

the right care for the people of Kent and Medway for decades to come. It will help us deliver the NHS Five Year Forward View, which sets out the national vision for health and social care services.

The core group involved in the Kent and Medway STP include all the organisations that commission (plan and pay for) NHS services in Kent and Medway; all the major organisations that provide NHS care in Kent and Medway including hospitals, mental health trusts, community providers and an ambulance trust; Kent County Council and Medway Council which plan and pay for social care and public health and Health Education Kent, Surrey and Sussex

Voluntary and charitable organisations will also play a significant part in helping to deliver the STP.

The STP is a work in progress. It describes what we think needs to be done differently to bring about better health and wellbeing, better standards of care, and better use of staff and funds. We will only be able to decide on and implement any changes following a period of engagement and consultation with local communities in Kent and Medway.

We need to make changes because our current health and social care system wasn't set up to meet the needs of today's population. Many more people are living longer, often with multiple long-term conditions, and they want and need a different kind of care.

 To help people make the most of their lives, we want to:

- prevent ill health

- intervene earlier when people are unwell

- have excellent care wherever it is delivered.

This will also enable us to make better use of staff and funds to secure the long-term future of health and care services.

1.1.1.2 Benefits of the STP

Kent and Medway residents will benefit from

- Joined-up services to treat and care for people at home and support to leave hospital.

- Health and social care coming together to work as a single team and able to access necessary records

- Improved use of technology, including online booking of appointments, virtual consultations and new apps to monitor your health

- Timely appointments with appropriate professionals

- Holistic care, for both physical and mental health

- Regular monitoring of complex health conditions, including multimorbidity

- More support – including support from the voluntary and charity sector and social prescribing

- Better access to health improvement advice and services to help you manage your own health and prevent disease

- High quality care – in hospital when it is needed and support out of hospital when you don't.

1.1.2 Future Activity

The workstream is currently developing several strands of work. A Prevention Action Plan is being developed for Kent and Medway STP. This will cover all of Kent and Medway, but work is ongoing to localise the plans to West Kent. This action plan will include full details of the four main areas of prevention for the STP, will detail the timing of the initiatives, data to be collected and performance indicators. It will also outline future considerations for the local populations such as the links between housing and public health and how the workstream can collaborate with other teams in the local health and care economy.

An action plan is being developed for an initiative on workforce development for partners to enable wider dissemination of public health philosophies and concepts and empower partners to deliver health promotion messages in many areas of health, care and wider public services e.g. fire service. This is being taken forward with monies from Local Workforce Action Board and there have been discussions with West Kent partners around the most appropriate delivery of these initiatives.

The STP prevention workstream has already developed links with many partners and other workstreams and there is representation at the workstream meetings e.g. from communications and finance workstreams. In addition, links have been made to other parts of the health and social care system such as the Local Maternity Service and Cancer Network. There are plans for 'deep dive' meetings to explore areas of health and care such as improved prevention in maternity service and cancer prevention.

The work of the STP continues at pace and the Prevention Workstream is developing to ensure that the work of the public health teams and partners is keeping pace with developments in Vanguards and the development of the accountable care system.

1.1.3   Risks

The funding required for the prevention of lifestyle-related harm is substantial and it is not possible to fund this from the public health budgets of local authorities without detriment to the prescribed legal functions of local authority public health.

An additional risk is a lack of buy-in from clinicians in primary and secondary care. It is essential that clinicians accept their responsibility for secondary and tertiary prevention[5]

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[5] Secondary prevention is the prevention of illness in those known to be susceptible e.g. screening to identify people at higher risk of cancer and interventions to then prevent the development of cancer

Tertiary prevention refers to interventions aimed at minimising the impact of disability or further deterioration in people with existing health condition or complex care and support needs,

1.2 Methodology

Information has been assimilated from various information sources currently available on the Kent Public Health Observatory (KPHO) website, the Kent County Council website, from NHS Digital (including Hospital Episode Statistics (HES)), Public Health England (PHE) and the Office for National Statistics (ONS), and supplemented by additional analysis of data conducted by KPHO, including analysis using the Kent Integrated Dataset (KID) as well as outputs from the population cohort modelling tool.

The analysis focuses on West Kent CCG, comparing West Kent with the rest of Kent and exploring variation by ward/GP practice, as well as commenting on trends over time and inequality gaps.

1.2.1 Quintiles

Where analysis is provided by deprivation quintiles, the quintiles shown are the population weighted Kent quintiles, with the first quintile being the most deprived and the fifth being the least deprived.

1.2.2 Included practices

Analysis of practice populations by GP practice is based on the 59 practices open at December 2017. Analysis of recorded disease prevalence (QOF) and hospital admissions is based on the 60 practices included within the 2016/17 QOF returns (i.e. they include St James Medical Centre (G82075), which merged with the Grosvenor Medical Centre (G82041) in August 2017). Where practices have closed/merged no adjustments have been made to historical data by GP practice, i.e. data is presented as originally published and based on the patients registered at the practice at that point in time. Analysis using data from the KID is based on the 56 practices flowing data at the time of the analysis.

1.2.3 Multimorbidity

Analysis of multimorbidity has been conducted using data from the Kent Integrated Dataset (KID). The KID is a whole population, person level, pseudonymised dataset that currently collects information from almost all NHS providers across Kent and Medway.

Analysis drawing on the Kent Integrated Dataset is based on c1.5million patients (about 93% of the Kent population) from 165 medical practices in Kent (and 56 practices in West Kent), who live in a Kent Lower Super Output Area (LSOA). Extracts of data from the KID were taken in May 2018. In this analysis patients were considered morbid if they had one, or multimorbid if they had two or more of the following 19 long term conditions: Atrial fibrillation (AF), coronary Heart disease (CHD), hypertension, heart failure (HF), peripheral artery disease (PAD), stroke, diabetes, asthma, chronic obstructive pulmonary disease (COPD), dementia, mental health (MH), cancer, chronic kidney disease (CKD), epilepsy, learning difficulties (LD), osteoporosis, rheumatoid arthritis (RA), obesity or depression.

2 Population demographics

2.1 Population size and age structure

West Kent CCG is the largest of the Kent CCGs and occupies the South West segment of Kent. The registered CCG population is 491,000, 31% of the total Kent registered practice population[6]. The CCG has 59 practices and covers the resident population from the local districts of Maidstone, Tonbridge & Malling, Tunbridge Wells, majority of Sevenoaks (except Swanley ward which is covered by the Dartford Gravesham and Swanley CCG)

The age profile of the population is broadly similar to that of Kent. West Kent has a slightly larger proportion of 35-54-year olds and smaller population of young people (particularly 20-29-year olds).

Figure 1 West Kent population demographics compared to Kent population

Registered population in West Kent CCG compared to Kent

Source: PCIS (Dec-17), prepared by KPHO (RK), May 2018
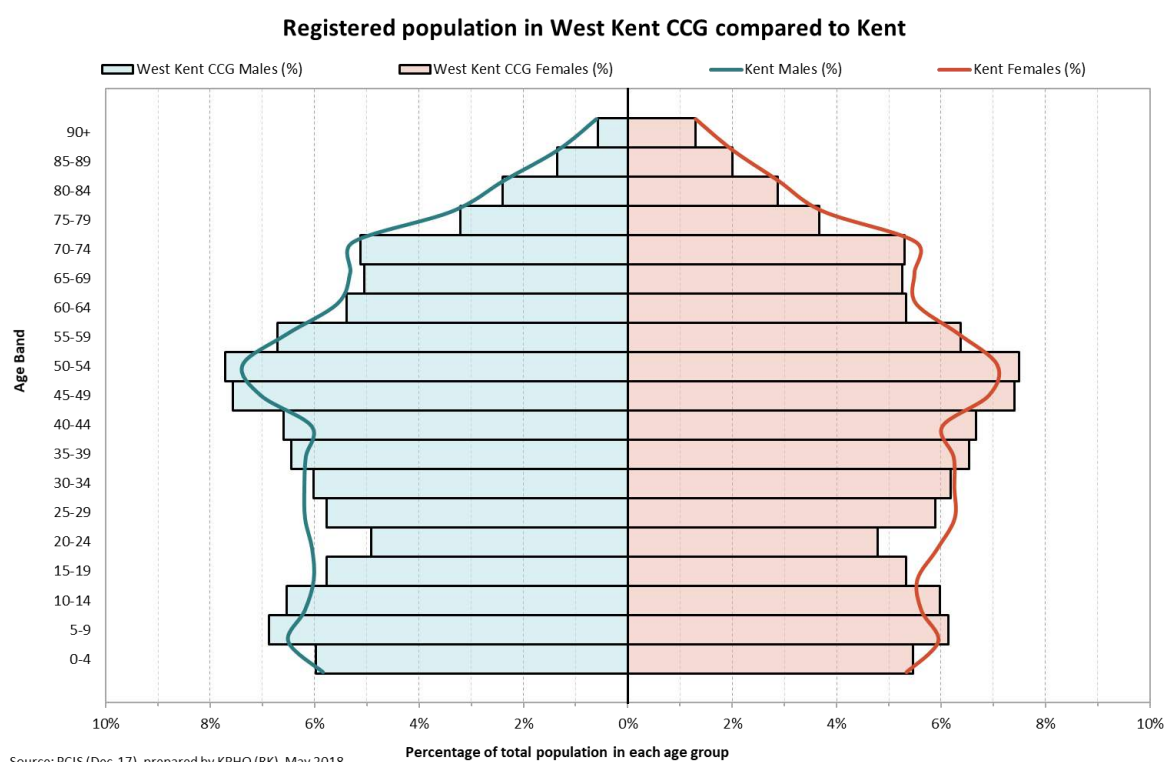
As with the Kent population, there are slightly more females (50.9%) than males (49.1%).

In West Kent, 19.1% of the total population is aged 65 or older, and this proportion is increasing. Five years ago (December 2012) this proportion was 18.2%, and just 16.1% in 2007.

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[6] Source: PCIS, December 2017

Figure 2 Population aged 65+ registered at a GP practice: trend 2007-2017

Proportion of practice population aged 65+: trend
Registered population, Dec 2007 to Dec 2017
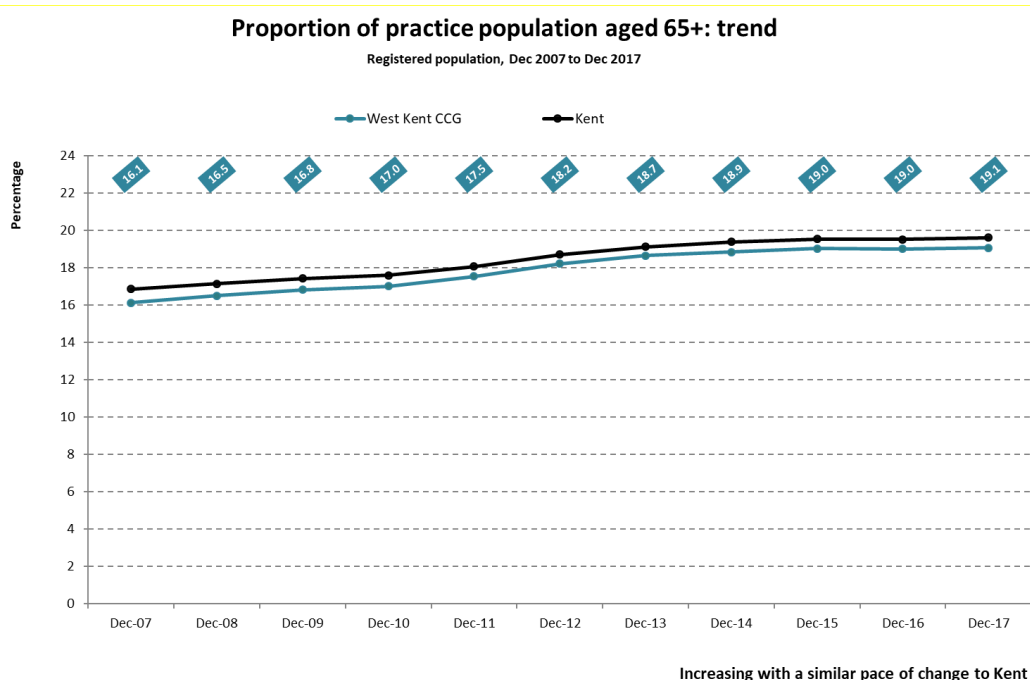
Source: PCIS, prepared by KPHO (RK), May-18

Across the CCG, 26 practices have a significantly higher proportion of their registered population aged 65 and over than the CCG average. The practice with the greatest proportion has 32.9% of registered patients who are aged 65 and over.

Figure 3 Registered population aged 65+ - by GP practice

Proportion of practice population aged 65+: by GP practice
Registered population, December 2017
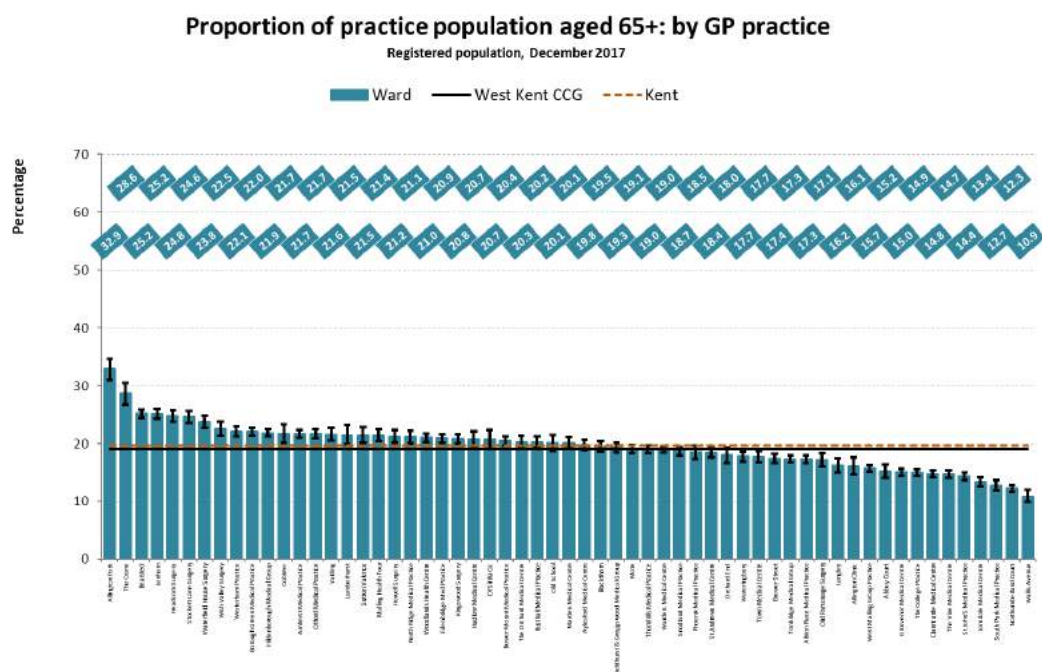
Source: PCIS, prepared by KPHO (RK), May-18

Across West Kent, 5.7% of the registered population are 0-4-year olds and 12 practices have significantly higher rates than the CCG rate. At the practice with the highest proportion 10.4% of the registered population are 0-4-year olds.

Figure 4 Registered population aged 0-4 - by GP practice

Proportion of practice population aged 0-4: by GP practice
Registered population, December 2017
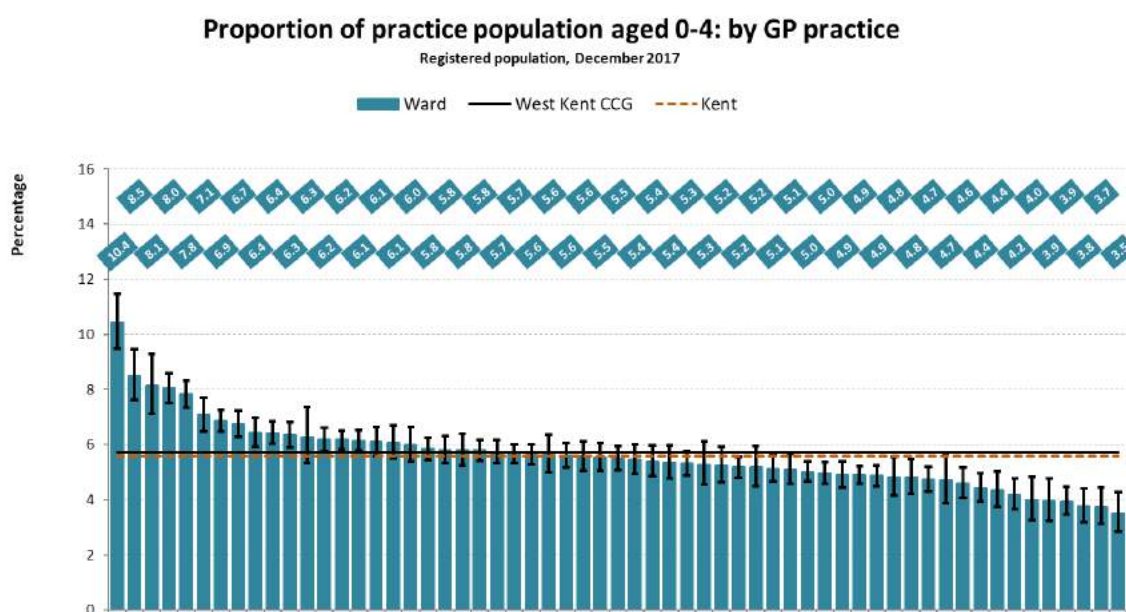
2.2 Expected population growth

Over the next twenty years the overall population of the four local authorities is expected to increase. There are two sets of population projections available at district-level; the ONS projections (which take into account births, deaths and migration) and KCC's own housing-led forecasts (which also take into account local housing plans). Generally, the KCC housing-led forecasts suggest a higher level of population grown (22% for Kent as a whole between 2016 and 2036, compared with 18% using the ONS projections).

Using resident populations for the districts of Maidstone, Sevenoaks, Tonbridge and Malling and Tonbridge Wells, the following changes are predicted:

- The under five population will increase more slowly than the population as a whole, with an increase of 7% based on the ONS projections and 12% based on the KCC housing-led forecasts over 20 years.

- The population aged 0-19 is predicted to increase by 13% based on the ONS projections and 16% based on the KCC housing-led forecasts across that period.

- The population of 65+ is predicted to increase much more significantly: by 52% based on the ONS projections and 54% based on the KCC housing-led forecasts.

- This population increase is even greater in the 85+ group, with both the ONS projections and KCC housing-led forecasts suggesting a c.130% increase (i.e. that the size of the 85+ population will more than double over a 20-year period).

Separate analysis for each of the districts is available in the KPHO Health & Social Care Maps 'starting well' and 'ageing well' chapters

Figure 5 Population projections - Ages 0-4

Children aged 0-4 years: population projections
Office for National Statistics 2014-based projections, KCC housing-led forecast (September 2017)

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells KCC housing-led projection
■ Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection
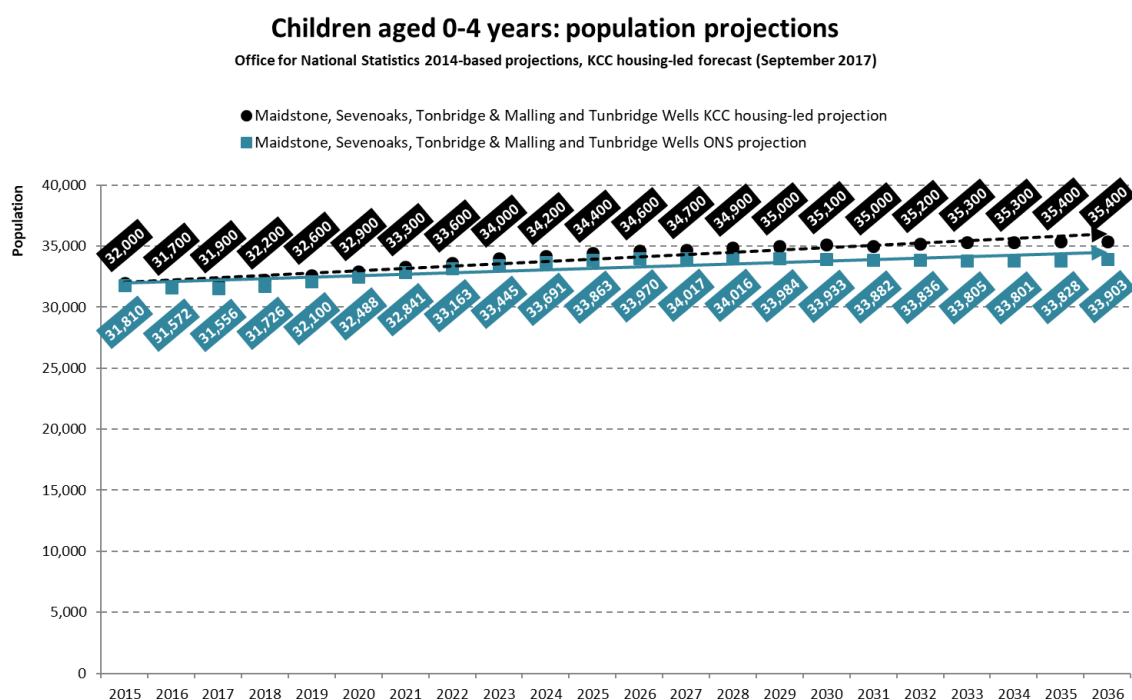
Source: ONS, KCC, prepared by KPHO (RK), May-18

Figure 6 Population projections - Ages 0-19

Children & young people aged 0-19 years: population projections
Office for National Statistics 2014-based projections, KCC housing-led forecast (September 2017)

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells KCC housing-led projection
■ Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection
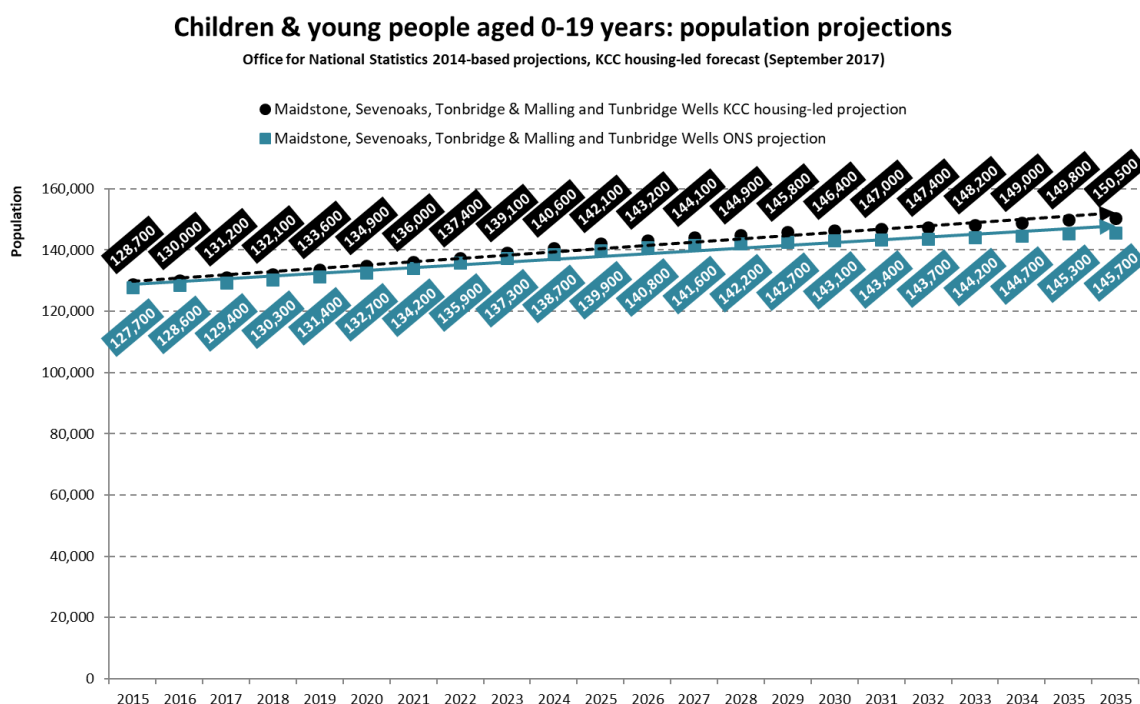
Source: ONS, KCC, prepared by KPHO (RK), May-18

Figure 7 Population projections - Ages 65+

Persons aged 65 years and over: population projections

Office for National Statistics 2014-based projections, KCC housing-led forecast (September 2017)

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells KCC housing-led projection
■ Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection
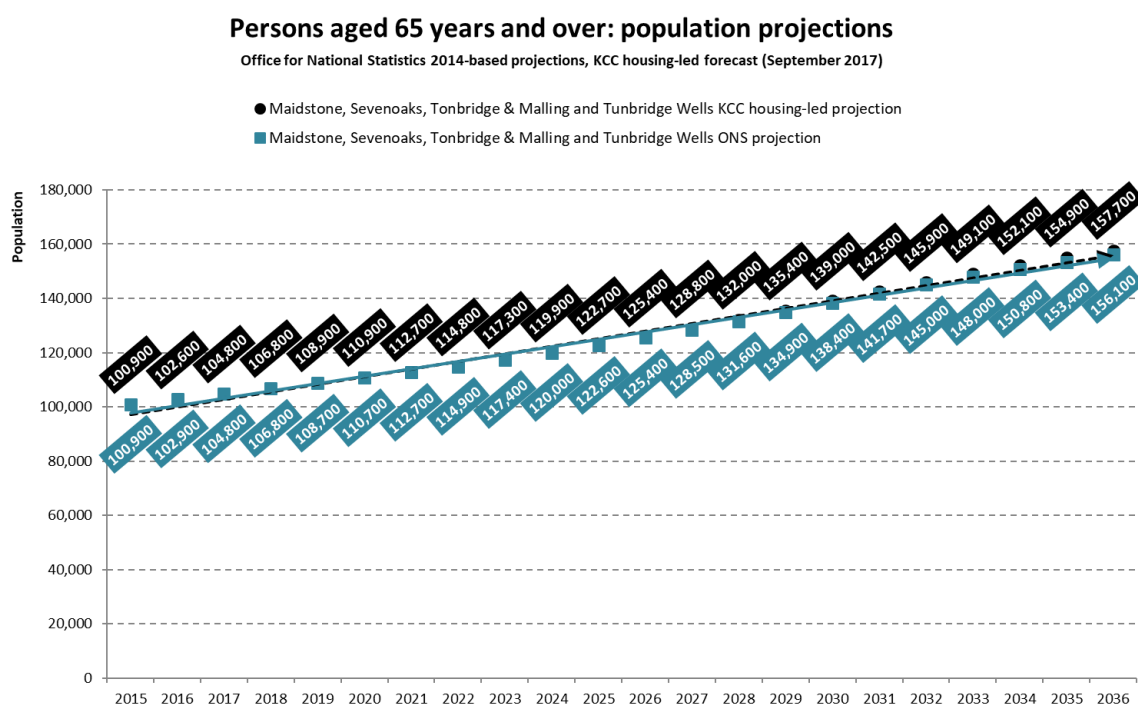
Source: ONS, KCC, prepared by KPHO (RK), May-18

Figure 8 Population projections - Ages 85+

Persons aged 85 years and over: population projections

Office for National Statistics 2014-based projections, KCC housing-led forecast (September 2017)

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells KCC housing-led projection
■ Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection
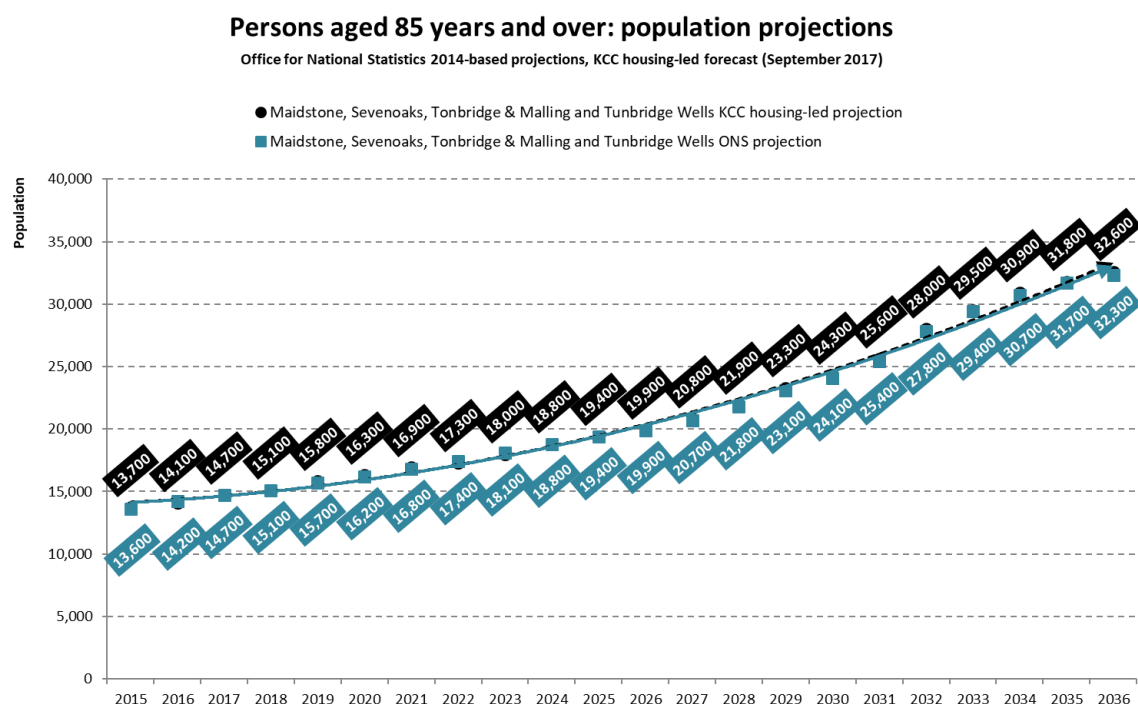
Source: ONS, KCC, prepared by KPHO (RK), May-18

2.3 Ethnicity

In 2011, just 4.9% of the population of the four districts were of black and ethnic minority origin, lower than the Kent average of 6.3% and the England average of 14.6%. The proportion of the population of the four West Kent districts that are of black and minority ethnic origin decreases with increasing age. Whilst 7.5% of 0-15's are BME, this decreases to 5.0% of those of working age, and 1.3% of those aged 65+.

Figure 9 Ethnicity by age group, 2011

Figure: Ethnicity: by age group — Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells, 2011. Legend: White, BME. All ages: White 95%, BME 5%. 0-15: White 92%, BME 8%. 16-64: White 95%, BME 5%. 65+: White 99%, BME 1%. Source: 2011 Census, prepared by KPHO (RK), May 2018
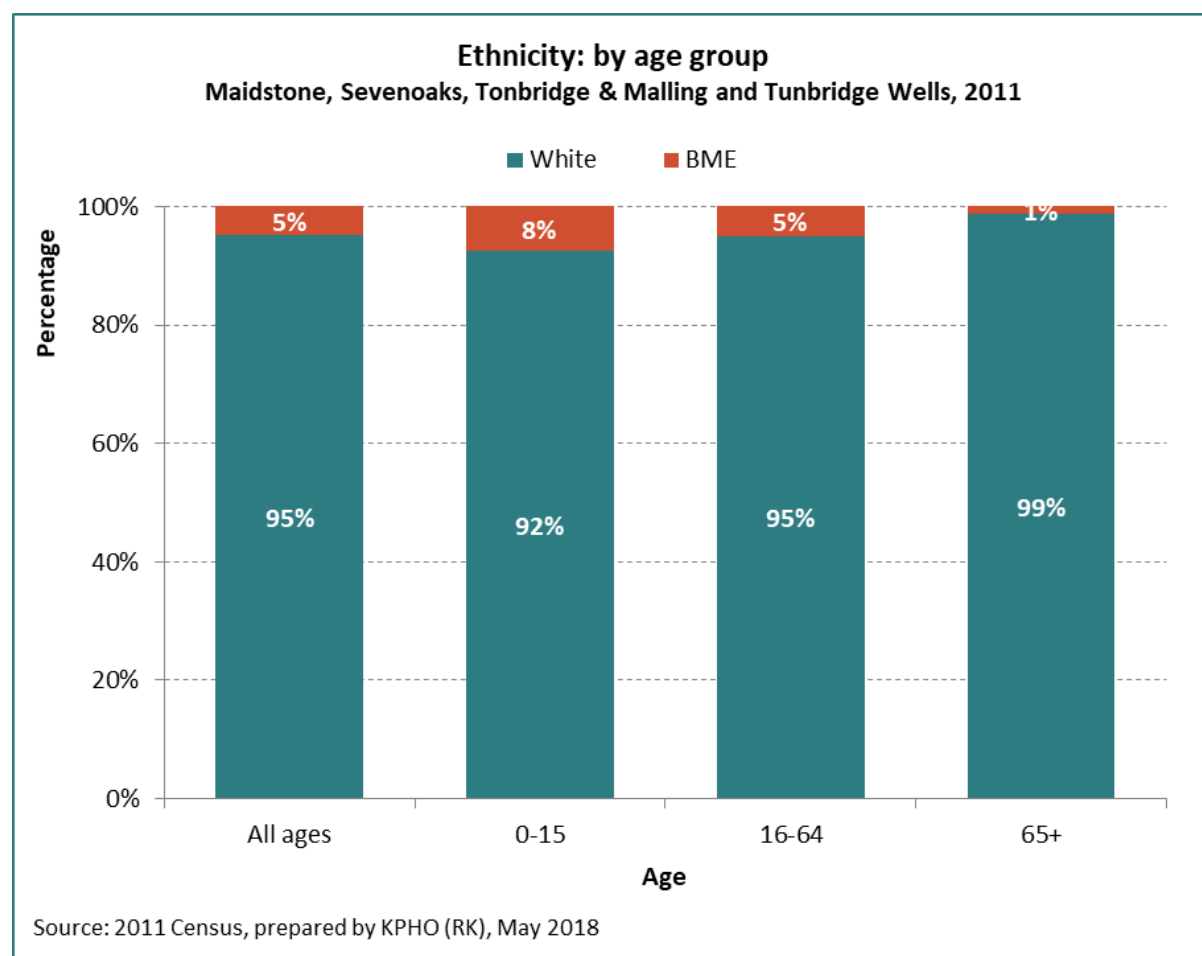
Table 1 2011 census data for Maidstone, Sevenoaks, T&M and Tunbridge Wells combined

	All ages		0-15		16-64		65+	
	Number	%	Number	%	Number	%	Number	%
All people	**505,890**	*100.0%*	**100,629**	*100.0%*	**317,578**	*100.0%*	**87,683**	*100.0%*
White	**481,136**	*95.1%*	**93,038**	*92.5%*	**301,541**	*95.0%*	**86,557**	*98.7%*
BME	**24,754**	*4.9%*	**7,591**	*7.5%*	**16,037**	*5.0%*	**1,126**	*1.3%*
White: British	457,550	*90.4%*	89,208	*88.7%*	284,008	*89.4%*	84,334	*96.2%*
White: Irish	3,545	*0.7%*	251	*0.2%*	2,399	*0.8%*	895	*1.0%*
White: Gypsy or Irish Traveller	1,901	*0.4%*	697	*0.7%*	1,093	*0.3%*	111	*0.1%*
Other White	18,140	*3.6%*	2,882	*2.9%*	14,041	*4.4%*	1,217	*1.4%*
White and Black Caribbean	1,937	*0.4%*	911	*0.9%*	936	*0.3%*	90	*0.1%*
White and Black African	916	*0.2%*	501	*0.5%*	400	*0.1%*	15	*0.0%*
White and Asian	2,977	*0.6%*	1,543	*1.5%*	1,335	*0.4%*	99	*0.1%*
Other Mixed	1,760	*0.3%*	766	*0.8%*	923	*0.3%*	71	*0.1%*
Indian	3,429	*0.7%*	697	*0.7%*	2,466	*0.8%*	266	*0.3%*
Pakistani	786	*0.2%*	222	*0.2%*	528	*0.2%*	36	*0.0%*
Bangladeshi	1,276	*0.3%*	383	*0.4%*	862	*0.3%*	31	*0.0%*
Chinese	2,009	*0.4%*	350	*0.3%*	1,534	*0.5%*	125	*0.1%*
Other Asian	4,862	*1.0%*	1,025	*1.0%*	3,652	*1.1%*	185	*0.2%*
African	2,077	*0.4%*	686	*0.7%*	1,357	*0.4%*	34	*0.0%*
Caribbean	845	*0.2%*	96	*0.1%*	684	*0.2%*	65	*0.1%*
Other Black	370	*0.1%*	105	*0.1%*	259	*0.1%*	6	*0.0%*
Arab	476	*0.1%*	128	*0.1%*	317	*0.1%*	31	*0.0%*
Any other ethnic group	1,034	*0.2%*	178	*0.2%*	784	*0.2%*	72	*0.1%*

2.4 Migration

ONS provide migration projections[7], which are used as one of the components of change within their subnational population projections. These projections suggest net migration (made up of international, internal and cross-border migration) of around 3,300 per year across Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells.

Figure 10 Net migration projections

Net migration: projections

Office for National Statistics 2014-based projections, components of change

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection

Source: ONS, prepared by KPHO (RK), May-18

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[7] https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigranglandtable5
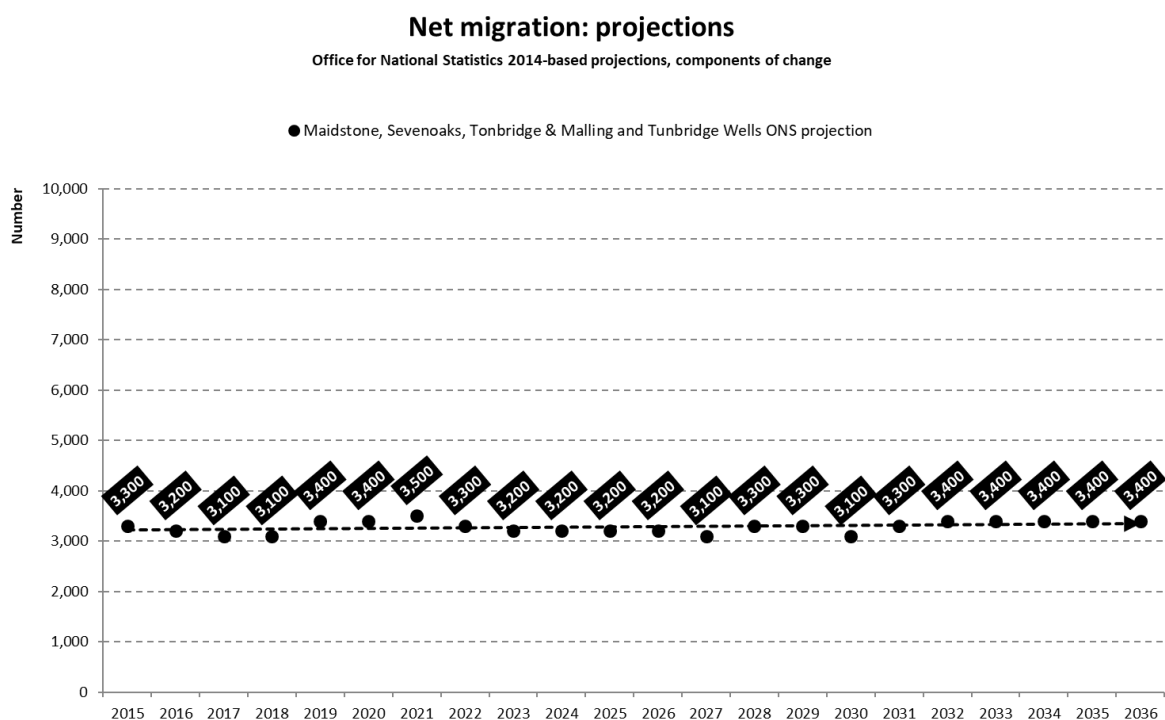
2.5   Fertility

The General Fertility Rate, (numbers of live births per 1,000 females aged 15-44 years) trends show variations in fertility over time. A decrease in the general fertility rate was seen between 1998 and 2002. Fertility rates then rose but have since stabilised. The fertility rate in West Kent is similar to the Kent average, however, there is considerable variation between electoral wards.

Fertility rates are significantly higher than the West Kent average in Park Wood, South, Shepway South, Broadwater, Sevenoaks Northern, Snodland West and Medway. This is likely to increase the possibility of an increased demand for child health and maternity services. Fertility rates are significantly lower than the West Kent average in Frittenden & Sissinghurst, Cage Green, Speldhurst & Bidborough. Seal & Weald, Benenden & Cranbrook, Blue Bell Hill & Walderslade, Hadlow, Mereworth & West Peckham, Pembury, Southborough North, Allington, Downs, Goudhurst & Lamberhurst and Culverden.

Fertility rates are around 30% higher in the most deprived areas of West Kent than the least deprived areas[8].

Figure 11 General Fertility Rate – trend

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

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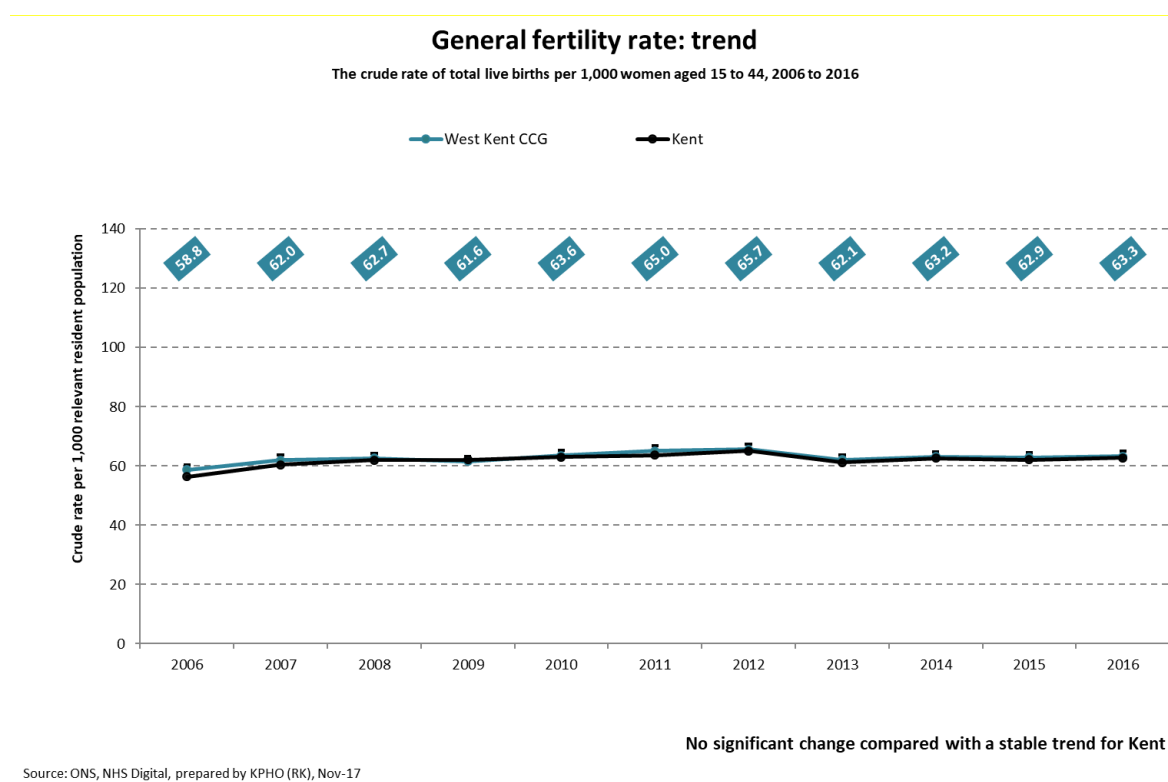
[8] based on Kent IMD 2015 quintiles.

Figure 12 General Fertility Rate – by CCG

General fertility rate: by CCG

The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016
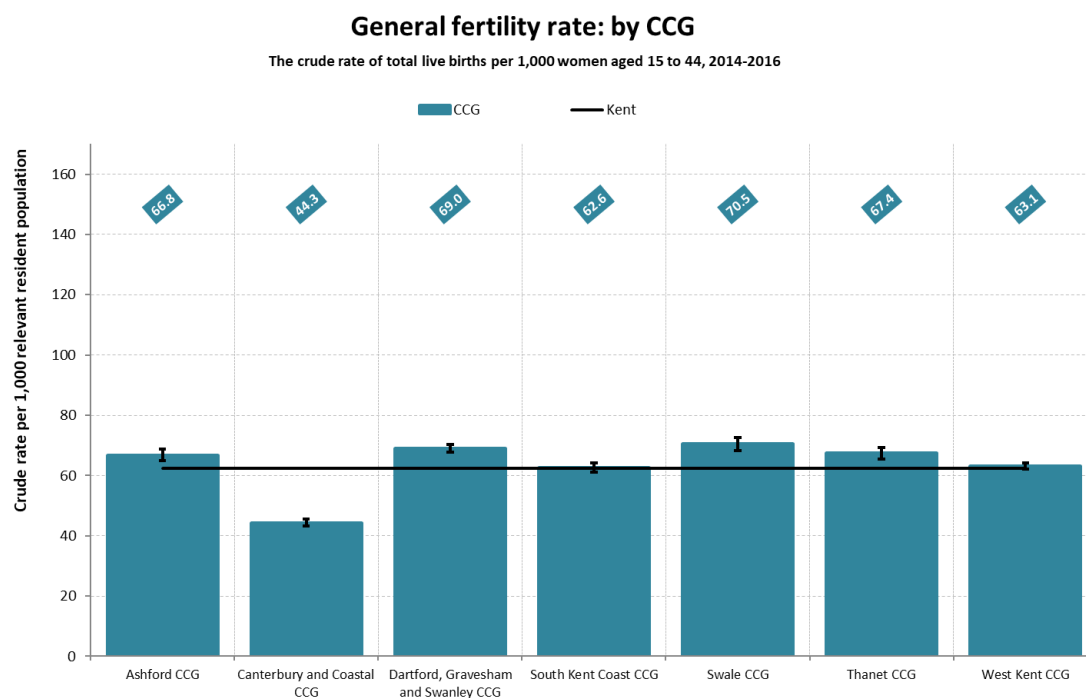
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 13 General Fertility Rate – by deprivation

General fertility rate: by deprivation

The crude rate of total live births per 1,000 women aged 15 to 44, 2006 - 2008 to 2014 - 2016

Least deprived trend - no significant change compared with a decreasing trend for Kent
Most deprived trend - no significant change compared with a stable trend for Kent
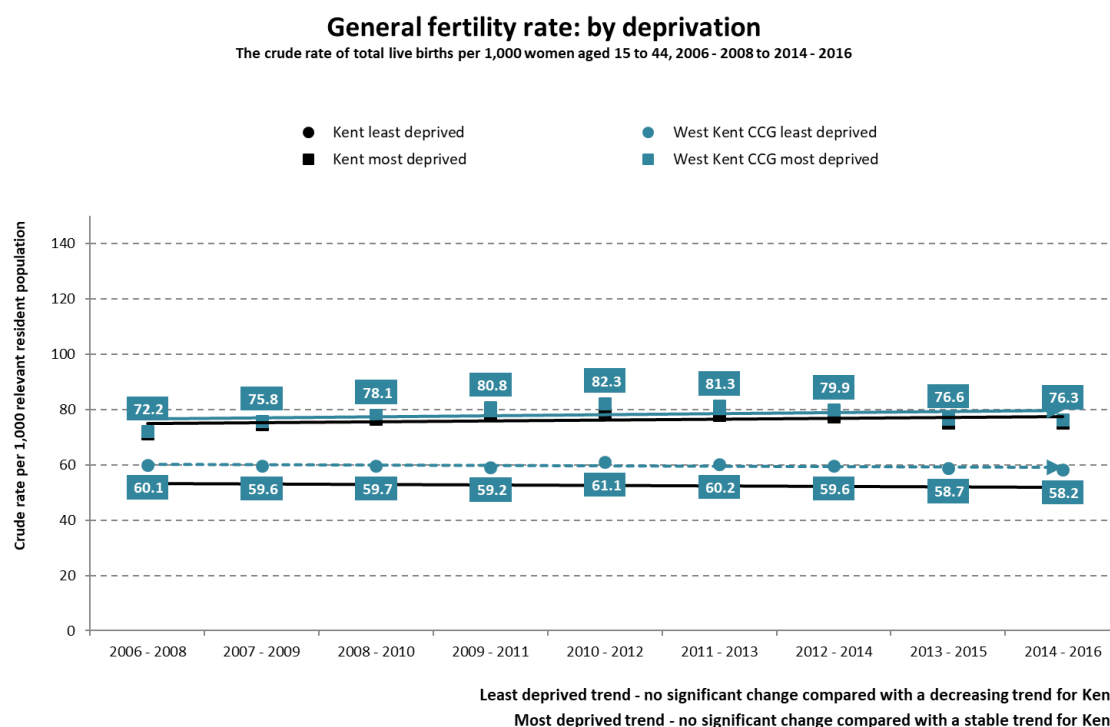
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 14 General Fertility Rate – by ward

General fertility rate: by electoral ward

The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016
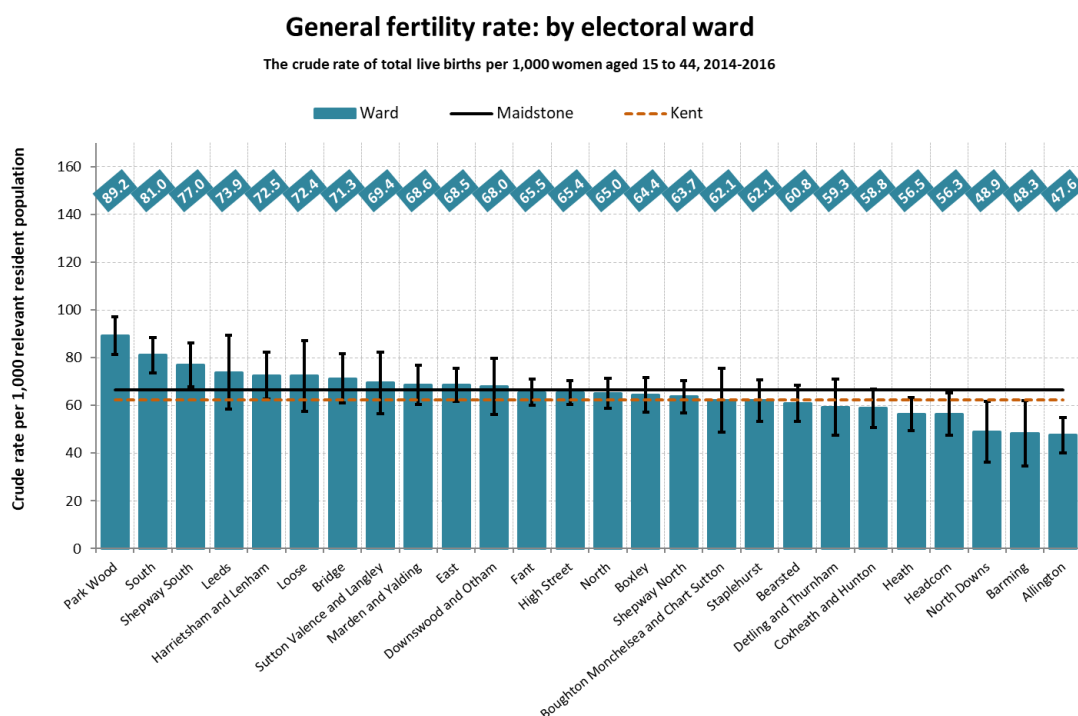
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 15 General Fertility Rate – by ward

General fertility rate: by electoral ward

The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016

**The crude rate of total live births
per 1,000 women aged 15 to 44**

- Greater than 72.0
- 64.6 to 72.0
- 58.8 to 64.6
- 51.5 to 58.8
- Less than 51.5
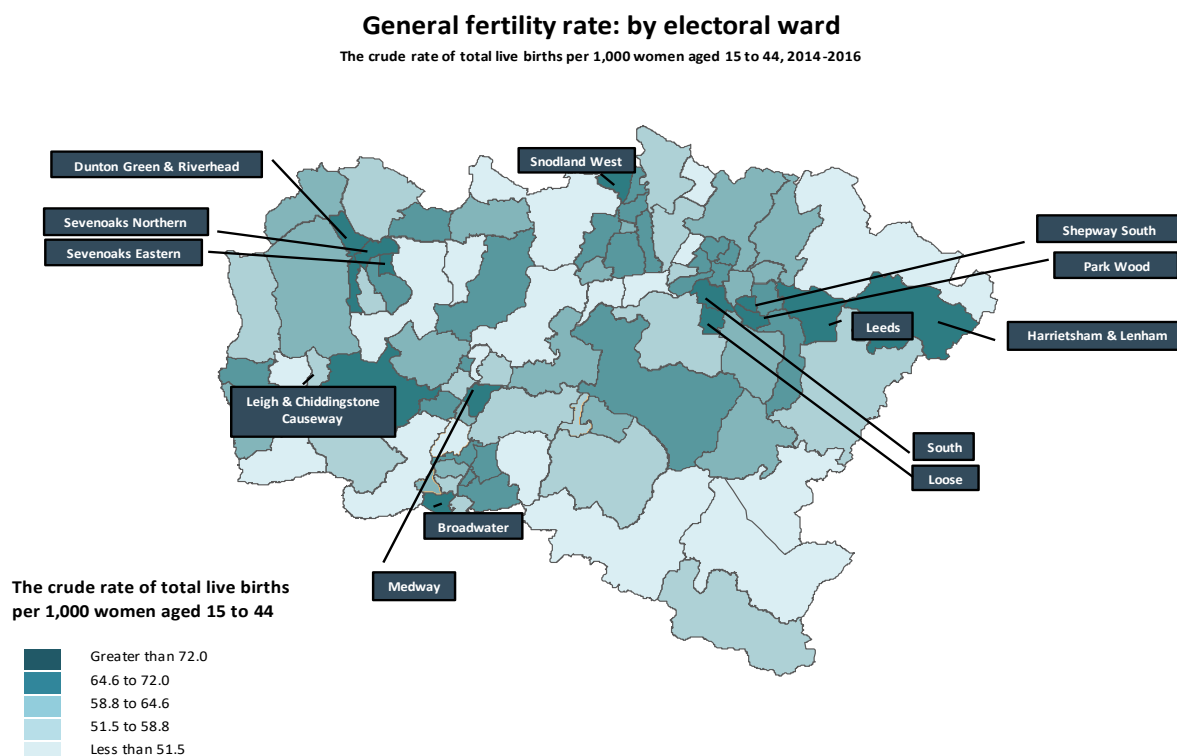
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 16 General Fertility Rate – by ward

General fertility rate: by electoral ward
The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016

Legend: Ward — Sevenoaks - - - Kent

Values: 75.5, 74.8, 74.2, 73.2, 73.0, 72.1, 70.4, 67.0, 66.8, 65.4, 64.4, 64.3, 64.1, 61.2, 60.6, 60.1, 59.2, 58.7, 58.2, 58.1, 56.0, 51.8, 51.2, 48.9, 48.8, 43.3

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17
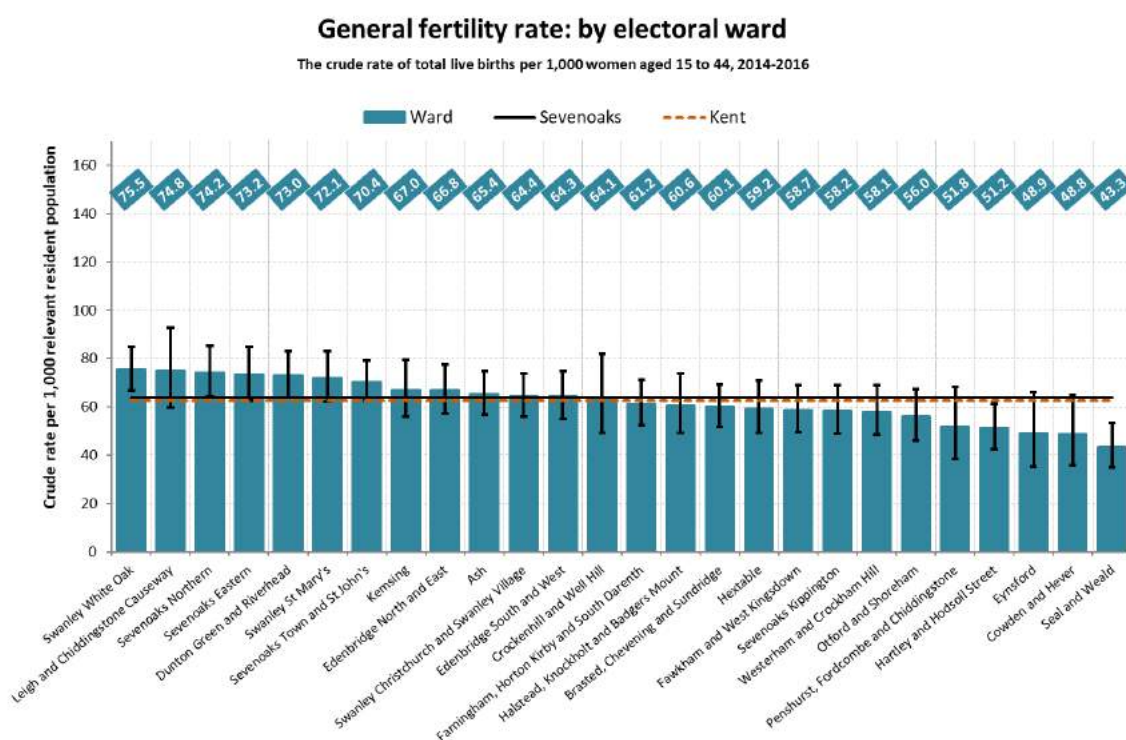
Figure 17 General Fertility Rate – by ward

General fertility rate: by electoral ward
The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016

Legend: Ward — Tonbridge & Malling - - - Kent

Values: 74.1, 74.1, 72.0, 69.1, 68.8, 68.3, 68.0, 66.6, 65.2, 64.9, 64.1, 62.1, 61.0, 60.5, 59.9, 59.4, 58.1, 57.0, 52.9, 52.8, 51.3, 48.3, 48.2, 44.6, 44.5, 42.2

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17
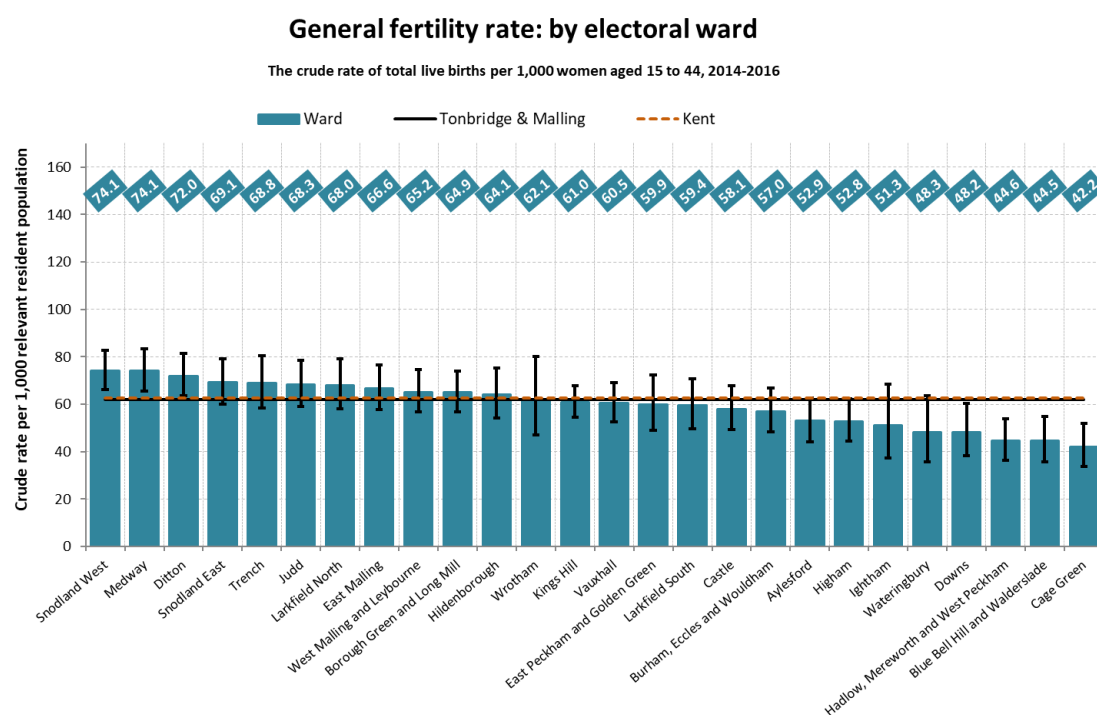
Figure 18 General Fertility Rate – by ward

General fertility rate: by electoral ward

The crude rate of total live births per 1,000 women aged 15 to 44, 2014-2016
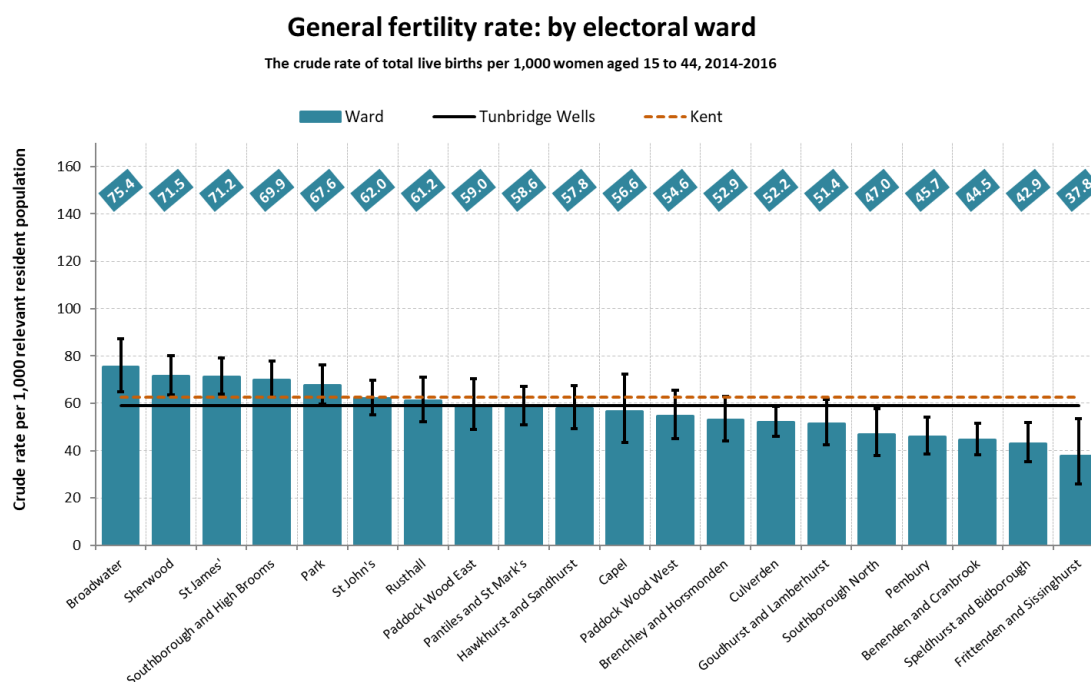
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Recommendations

Planning will be necessary for an increased capacity for older people's health services, particularly those aged 85 years and over. Older people have the greatest need of health services and it may be necessary to expand the capacity of certain health services such as general practitioners in areas where there will be the greatest population increases.

Equally, the increase in young families due to planned housing development projects will put pressure on health and social care, such as maternity and children's services. Health and Social care service planners and commissioners will need to ensure that the differences in the localities are considered when planning Maternity and Children's services.

---

3   Mortality

3.1   Life expectancy

Life expectancy at birth is 81.4 years for males and 84.3 years for females, higher than the Kent averages of 79.9 and 83.4 years.

Figure 19 Life expectancy at birth – by CCG
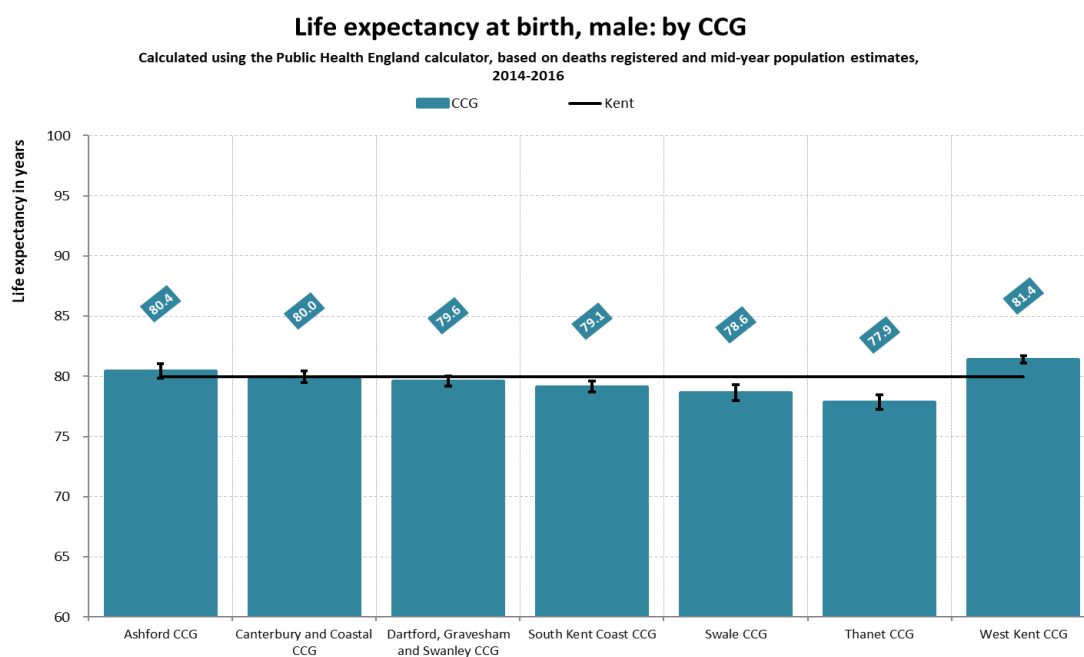
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

Figure 20 Female life expectancy at birth by CCG
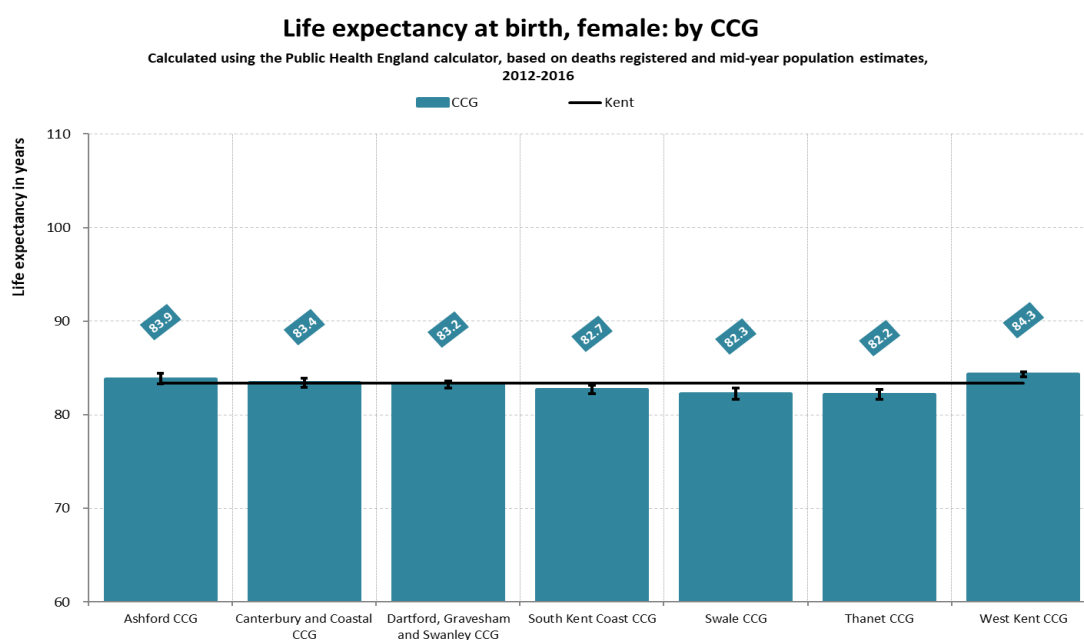
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

There is significant variation in ward-level life expectancy across the CCG. Seal & Weald has significantly higher life expectancy at birth than the West Kent average for both males and females.

The following wards have significantly lower life expectancy at birth than the West Kent average for both males and females:

- Bridge
- Burham, Eccles & Wouldham
- Shepway North
- Shepway South
- Snodland East
- Wrotham

Figure 21   Life expectancy at birth – by ward
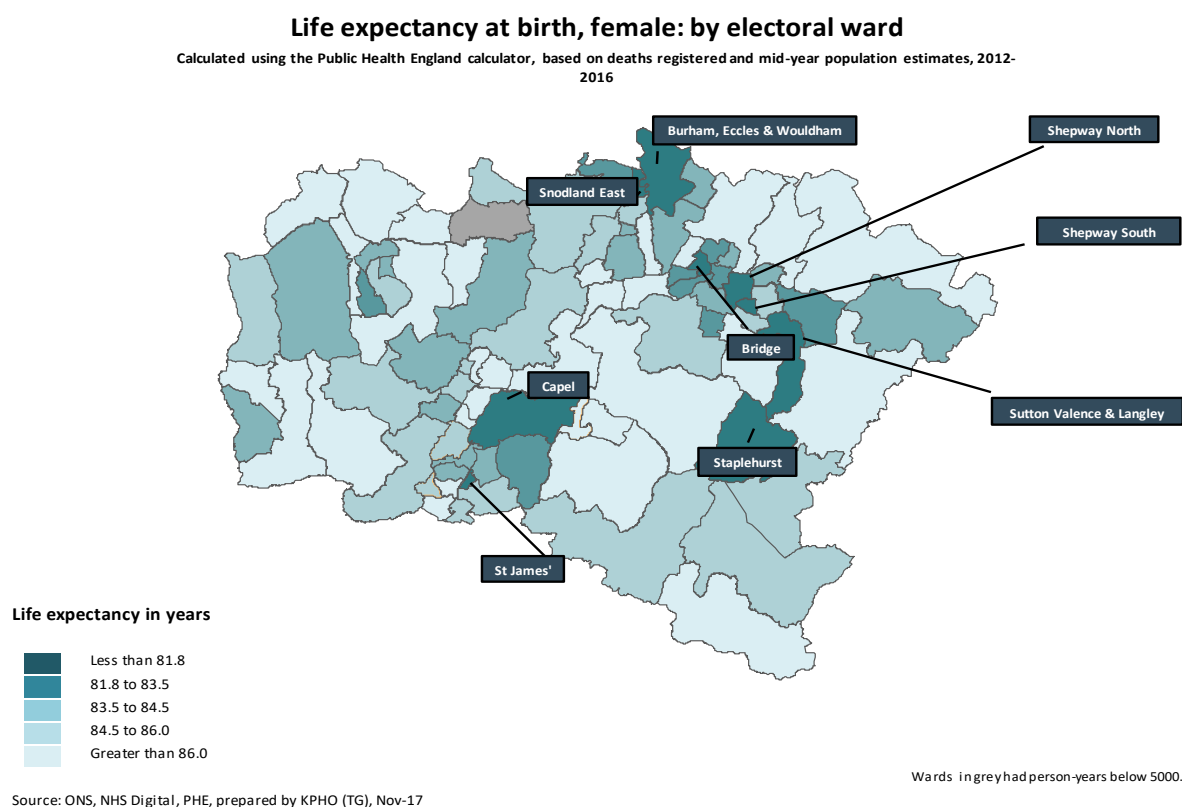
Life expectancy at birth, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Life expectancy in years

- Less than 81.8
- 81.8 to 83.5
- 83.5 to 84.5
- 84.5 to 86.0
- Greater than 86.0

Wards in grey had person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

Life expectancy at birth, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Life expectancy in years

	Less than 78.0
	78.0 to 79.7
	79.7 to 81.2
	81.2 to 82.5
	Greater than 82.5

Wards in grey had person-years below 5000.
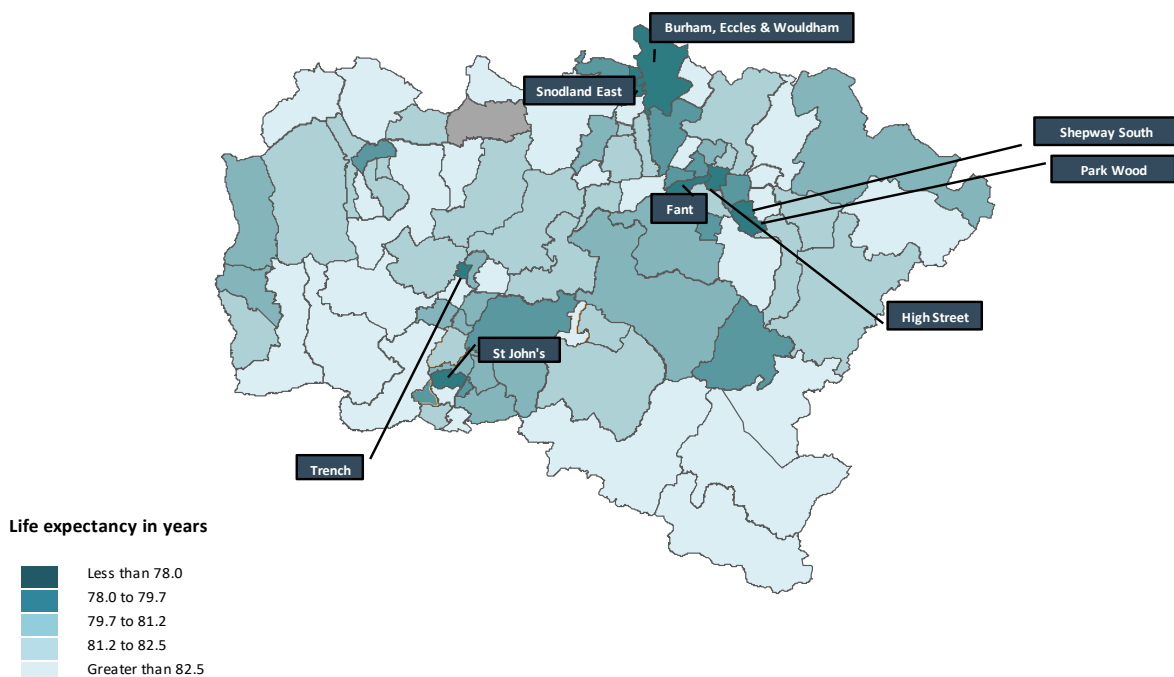
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

Figure 22 Male life expectancy at birth – by ward

Life expectancy at birth, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Figure 23 Female life expectancy at birth – by ward

Life expectancy at birth, female: by electoral ward
Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Figure 24 Male life expectancy at birth – by ward

Life expectancy at birth, male: by electoral ward
Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Figure 25 Female life expectancy at birth – by ward

Life expectancy at birth, female: by electoral ward
Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016
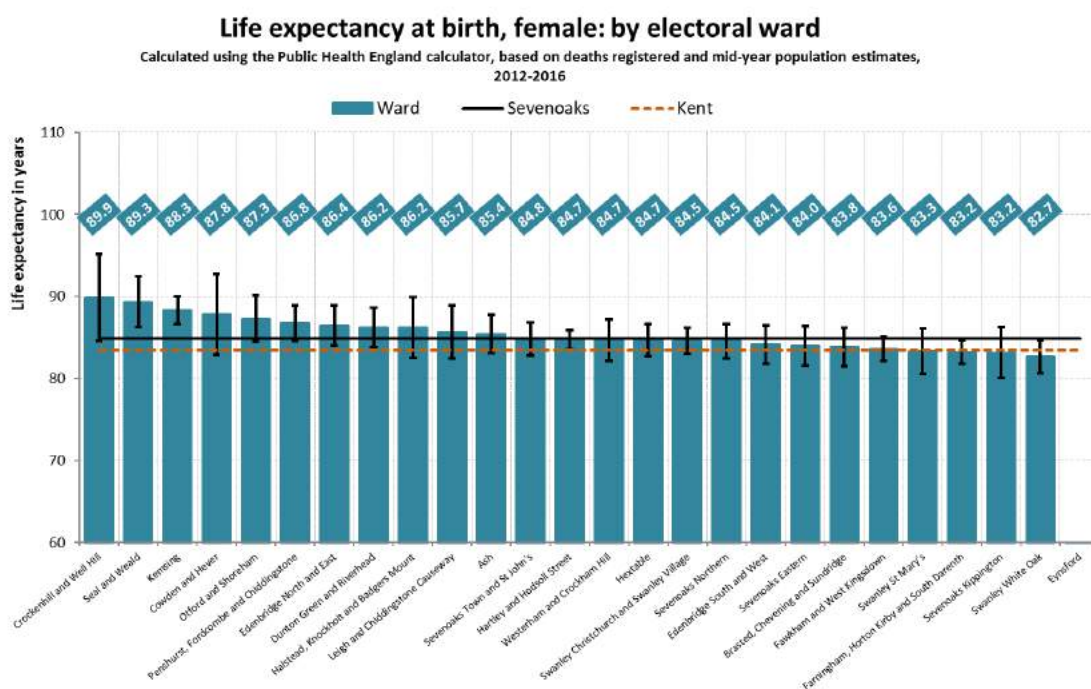
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Figure 26 Male life expectancy at birth – by ward
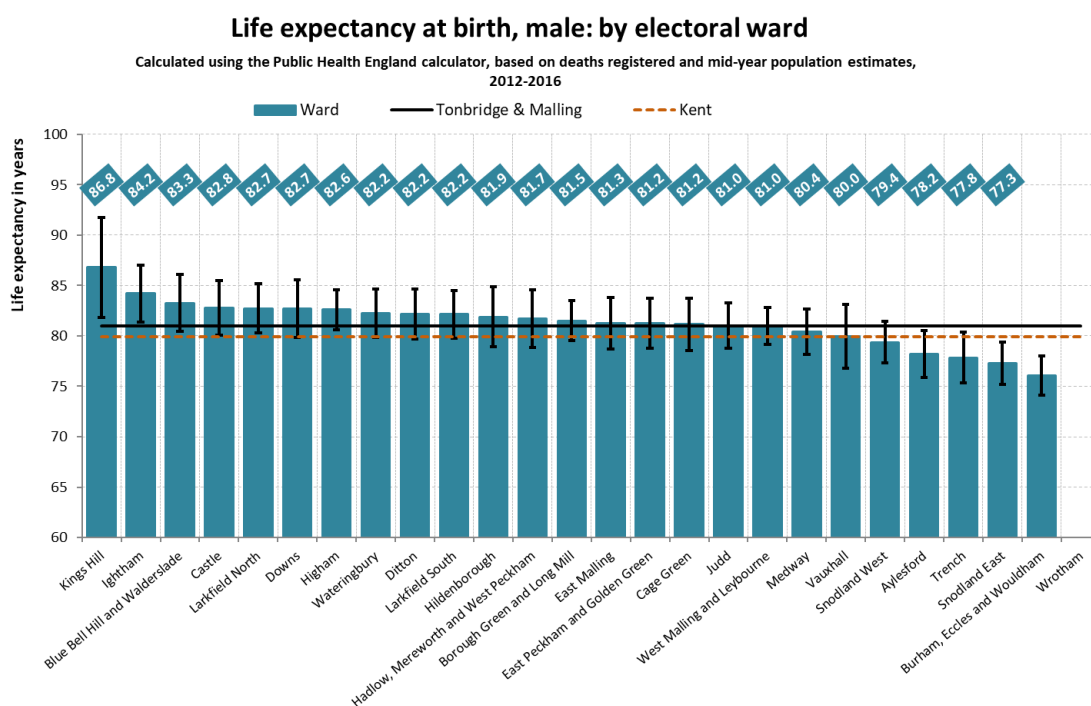
Life expectancy at birth, male: by electoral ward
Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

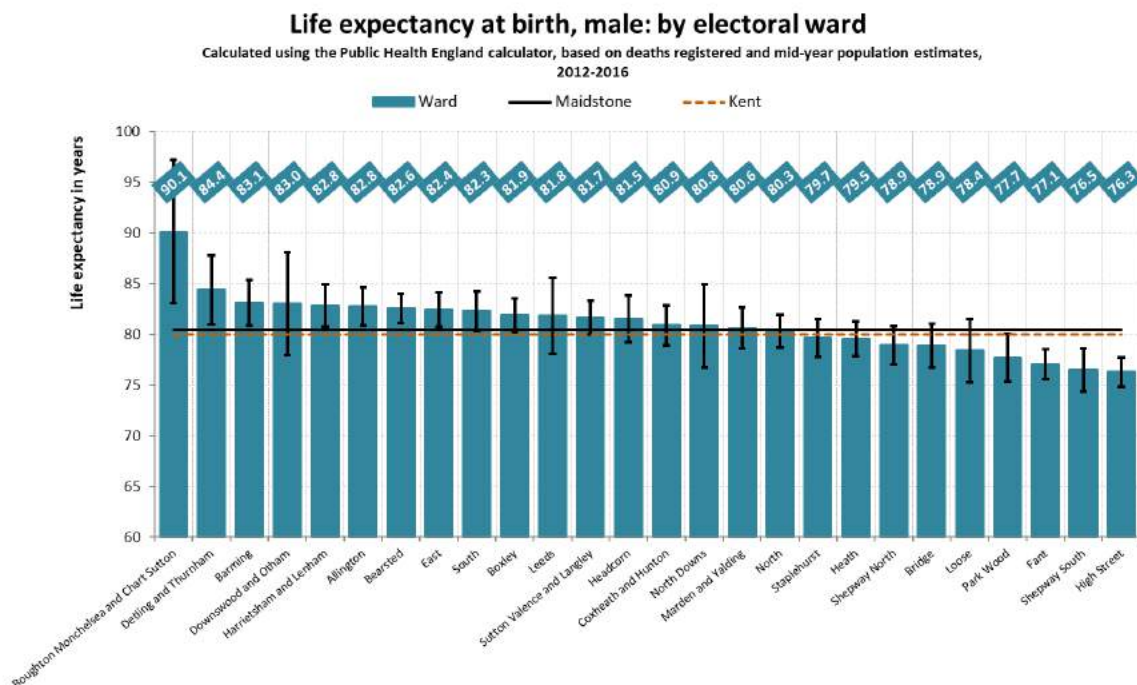## Figure 27 Female life expectancy at birth – by ward

Life expectancy at birth, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Wards with no data are due to person-years below 5000.

Figure 28 Female life expectancy at birth – by ward

Life expectancy at birth, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016
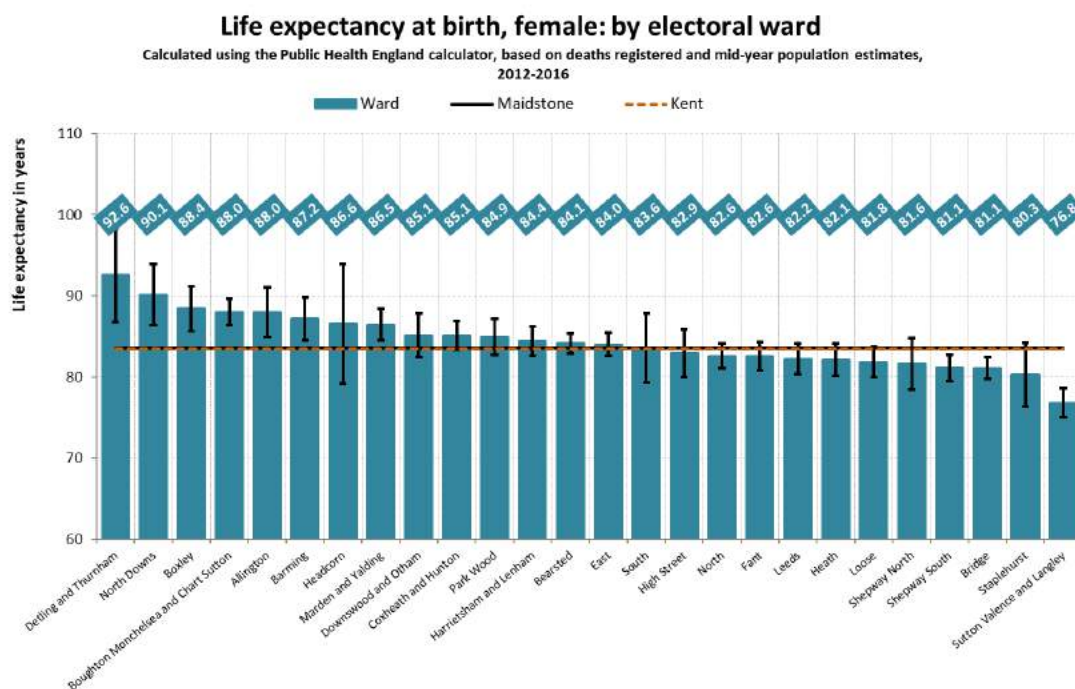
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Wards with no data are due to person-years below 5000.
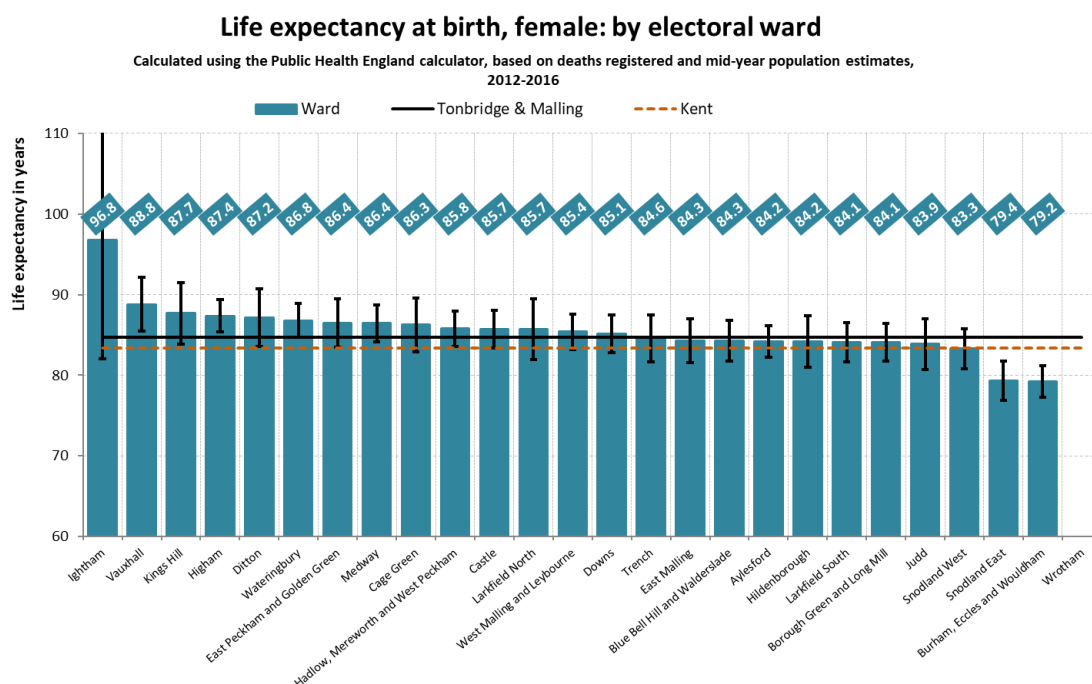
Figure 29 Male life expectancy at birth – by ward

Life expectancy at birth, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Ward — Tunbridge Wells ---- Kent

Values: 83.9, 83.7, 83.7, 83.2, 83.1, 82.9, 82.8, 82.6, 82.3, 82.2, 81.7, 81.3, 80.9, 80.8, 80.5, 80.2, 79.3, 79.2, 79.1, 77.8

Wards: Pantiles and St Mark's, Goudhurst and Lamberhurst, Culverden, Paddock Wood West, Speldhurst and Bidborough, Frittenden and Sissinghurst, Benenden and Cranbrook, Hawkhurst and Sandhurst, Brenchley and Horsmonden, Broadwater, Southborough North, Paddock Wood East, Sherwood, Pembury, Park, Southborough and High Brooms, Capel, Rusthall, St James', St John's
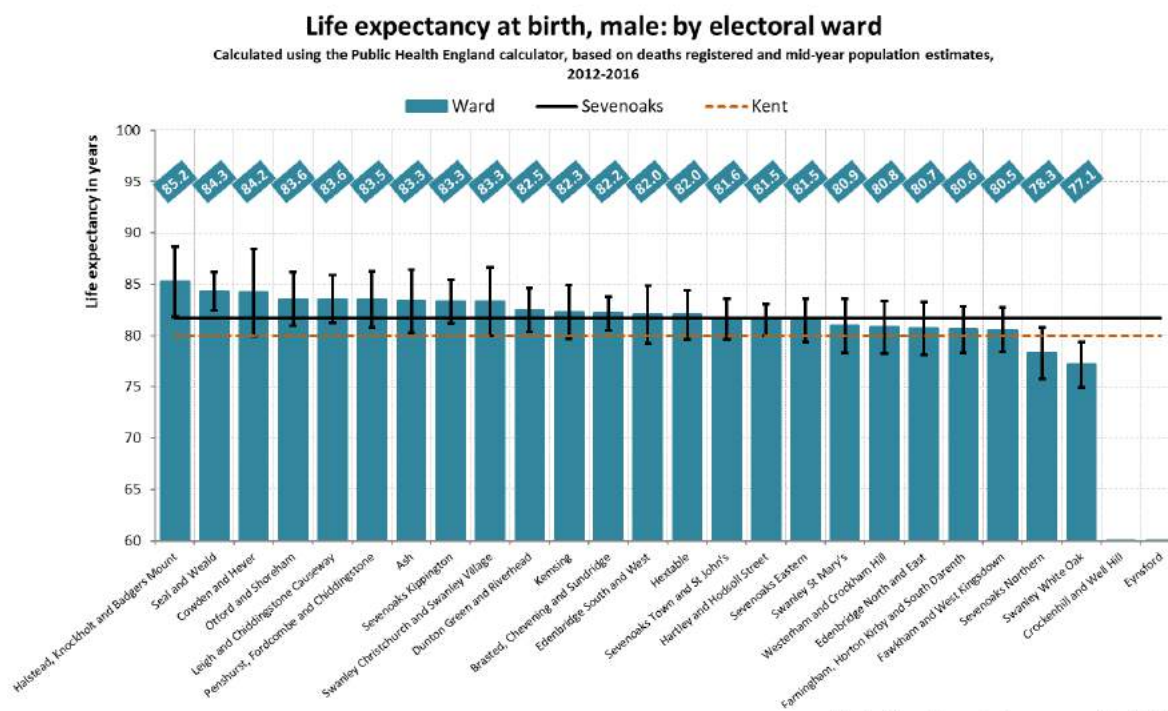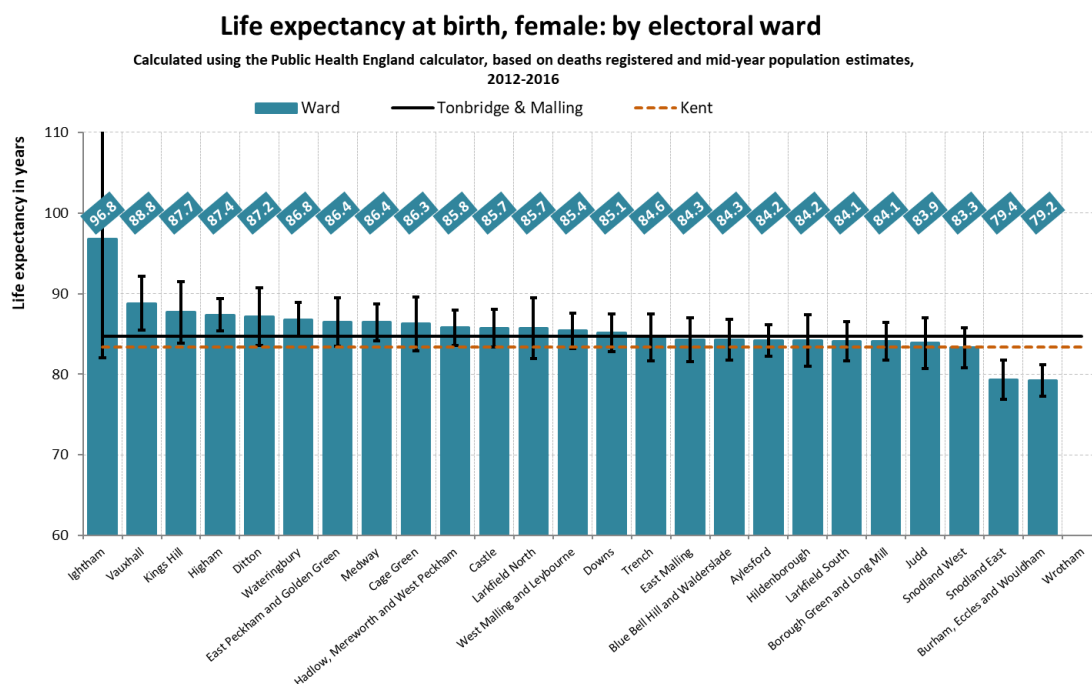
Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Figure 30 Female life expectancy at birth – by ward

Life expectancy at birth, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Ward — Tunbridge Wells ---- Kent

Values: 87.4, 87.1, 87.0, 87.0, 86.9, 86.2, 85.9, 85.7, 85.6, 85.5, 84.7, 84.6, 84.5, 84.5, 84.2, 84.0, 83.6, 82.6, 80.9, 79.4

Wards: Paddock Wood West, Broadwater, Hawkhurst and Sandhurst, Brenchley and Horsmonden, Culverden, Paddock Wood East, Pantiles and St Mark's, Rusthall, Park, Benenden and Cranbrook, Speldhurst and Bidborough, Goudhurst and Lamberhurst, Frittenden and Sissinghurst, Southborough North, St John's, Southborough and High Brooms, Sherwood, Pembury, Capel, St James'

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

3.2   Causes of premature mortality

Premature mortality rates are lower in West Kent than for Kent as a whole. In 2016, 44% of premature deaths (under the age of 75) were from cancer and 20% from circulatory disease.
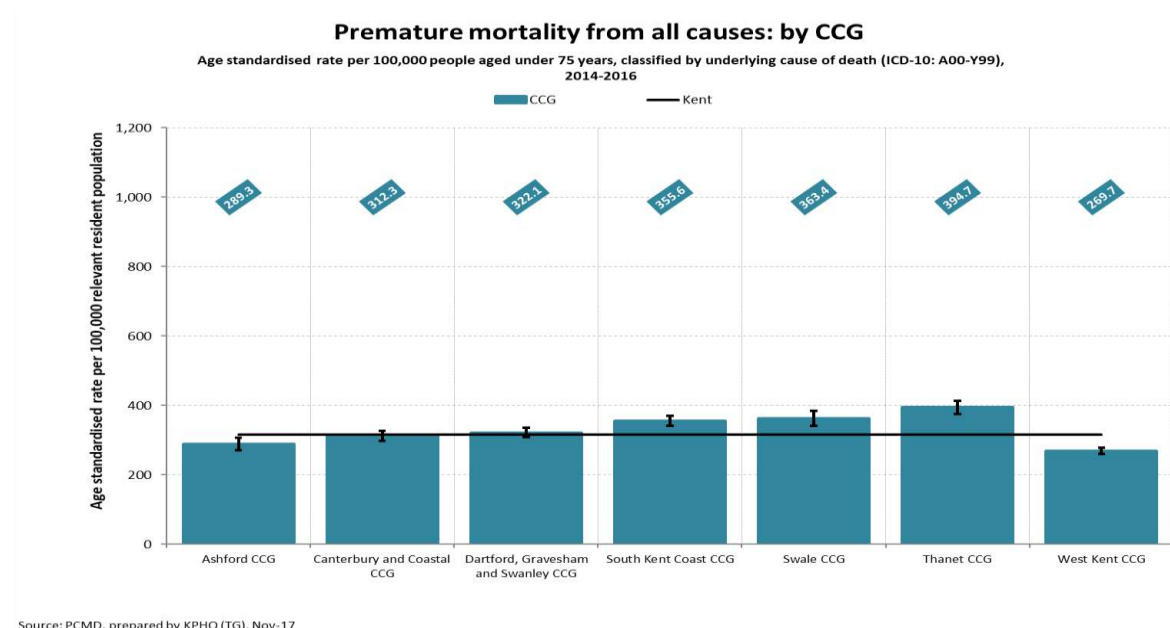
The premature mortality rate in the most deprived areas of West Kent is around double that of the least deprived areas[9].

Figure 31 Premature mortality – by CCG

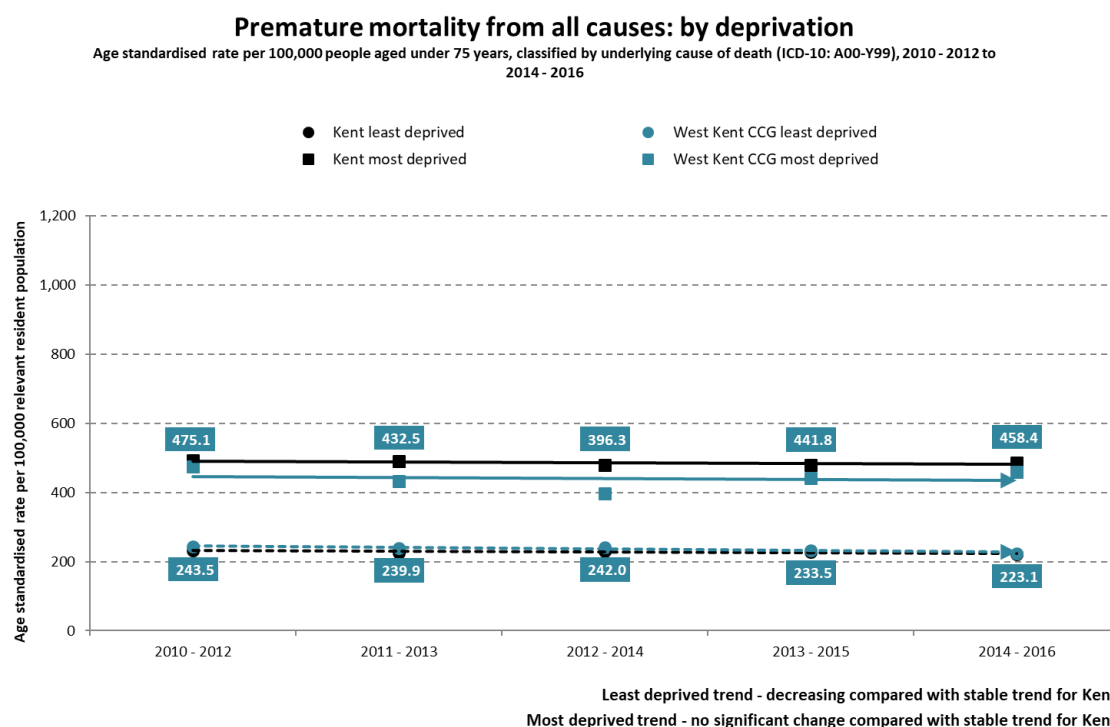Premature mortality from all causes: by CCG
Age standardised rate per 100,000 people aged under 75 years, classified by underlying cause of death (ICD-10: A00-Y99), 2014-2016

Source: PCMD, prepared by KPHO (TG), Nov-17

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[9] based on Kent IMD 2015 quintiles.

Figure 32 Causes of premature mortality

Causes of premature mortality

Underlying cause of death for persons aged under 75 years, 2016

Circulatory
- Ischaemic heart disease
- Heart disease (other)
- Cerebrovascular diseases
- Other

Other
- Injuries
- Gastrointestinal diseases
- Neurological conditions
- Infant & congenital conditions
- Other

Cancer
- Lung
- Colorectal
- Breast
- Prostate
- Other

Respiratory
- Pneumonia
- Bronchitis, emphysema & other COPD
- Other

Source: PCMD, prepared by KPHO (RK), Nov-17

Figure 33 Premature mortality – by deprivation

Premature mortality from all causes: by deprivation

Age standardised rate per 100,000 people aged under 75 years, classified by underlying cause of death (ICD-10: A00-Y99), 2010 - 2012 to 2014 - 2016

- ● Kent least deprived
- ■ Kent most deprived
- ● West Kent CCG least deprived
- ■ West Kent CCG most deprived

Least deprived trend - decreasing compared with stable trend for Kent

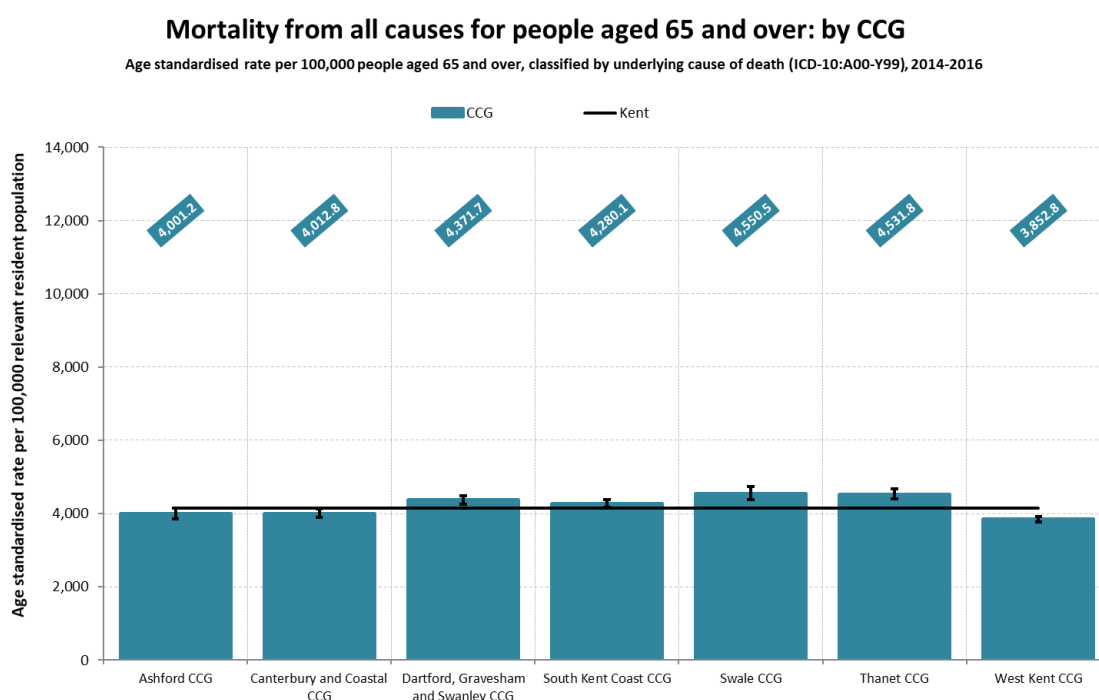Most deprived trend - no significant change compared with stable trend for Kent

Source: PCMD, prepared by KPHO (TG), Nov-17

3.3 Causes of mortality in older people

Mortality rates amongst those aged 65+ are also lower in West Kent than for Kent as a whole. In 2016, 26% of deaths involving people aged 65 or over were from cancer and 27% from circulatory disease; 13% were from mental illness and behavioural disorders (mainly dementia).

Whilst mortality rates amongst those aged 65+ are higher in the most deprived areas of West Kent, the gap between the most and least deprived areas is much less marked than is the case for premature mortality. Mortality rates amongst those aged 65+ are around 20% higher in the most deprived areas of West Kent than the least deprived areas[10].

Figure 34 Mortality for people aged 65 and over – by CCG

Mortality from all causes for people aged 65 and over: by CCG

Age standardised rate per 100,000 people aged 65 and over, classified by underlying cause of death (ICD-10:A00-Y99), 2014-2016

Source: PCMD, prepared by KPHO (TG), Nov-17

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[10] based on Kent IMD 2015 quintiles.

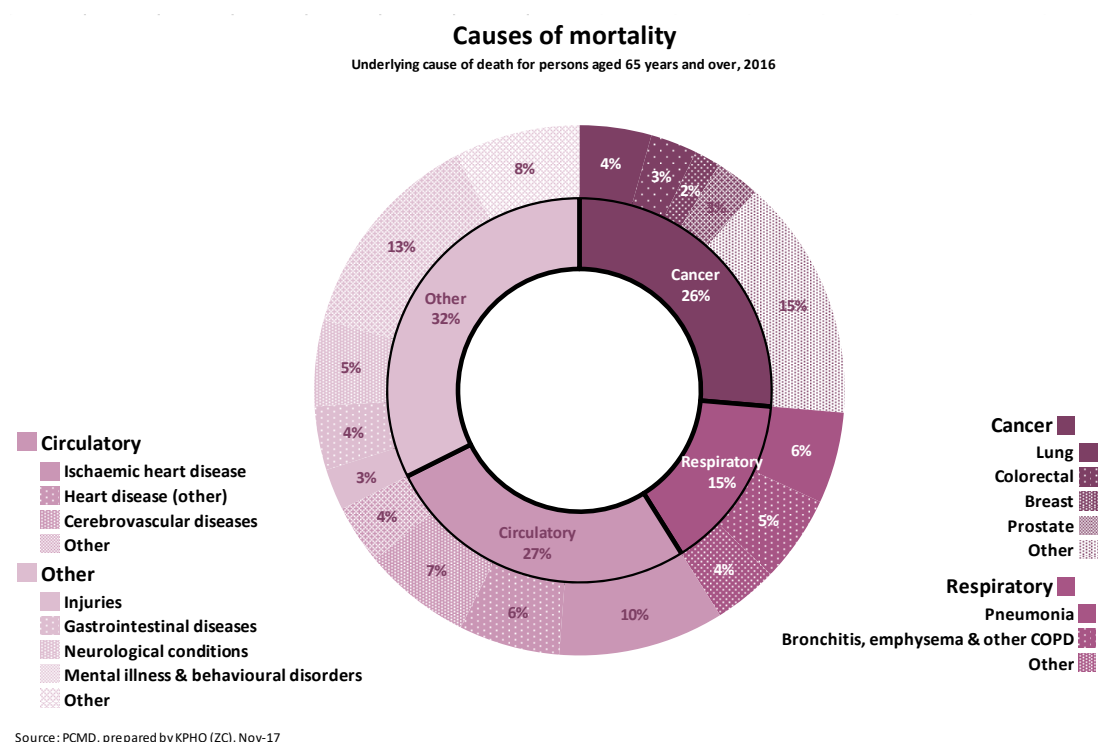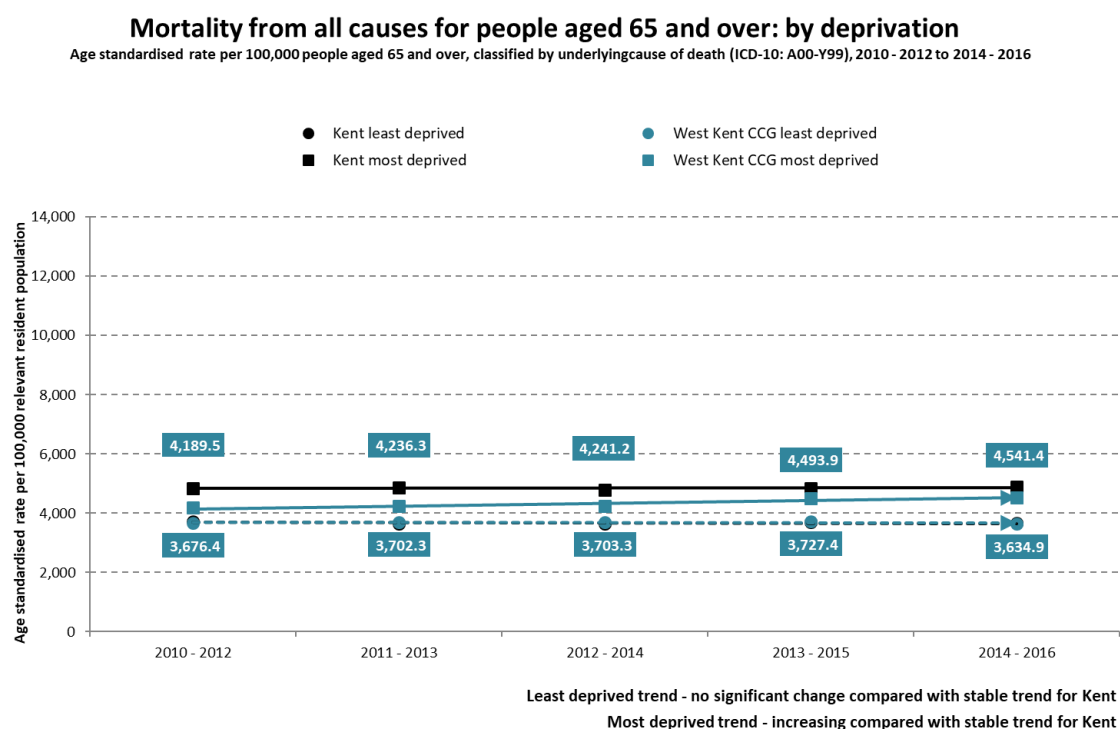## Figure 35 Causes of mortality in people aged 65 and over

Causes of mortality

Underlying cause of death for persons aged 65 years and over, 2016

Circulatory
  Ischaemic heart disease
  Heart disease (other)
  Cerebrovascular diseases
  Other
Other
  Injuries
  Gastrointestinal diseases
  Neurological conditions
  Mental illness & behavioural disorders
  Other

Cancer
  Lung
  Colorectal
  Breast
  Prostate
  Other
Respiratory
  Pneumonia
Bronchitis, emphysema & other COPD
  Other

Source: PCMD, prepared by KPHO (ZC), Nov-17

Figure 36 Mortality for people aged 65 and over – by deprivation

Mortality from all causes for people aged 65 and over: by deprivation

Age standardised rate per 100,000 people aged 65 and over, classified by underlying cause of death (ICD-10: A00-Y99), 2010 - 2012 to 2014 - 2016

Least deprived trend - no significant change compared with stable trend for Kent

Most deprived trend - increasing compared with stable trend for Kent

Source: PCMD, prepared by KPHO (TG), Nov-17

Conclusion:

The population of West Kent overall has a higher life expectancy for male and females, however in six wards life expectancy is significantly lower than the West Kent average.

Mortality rates are declining at a greater rate in the most deprived wards and therefore the gap between the most deprived and least deprived wards is narrowing.
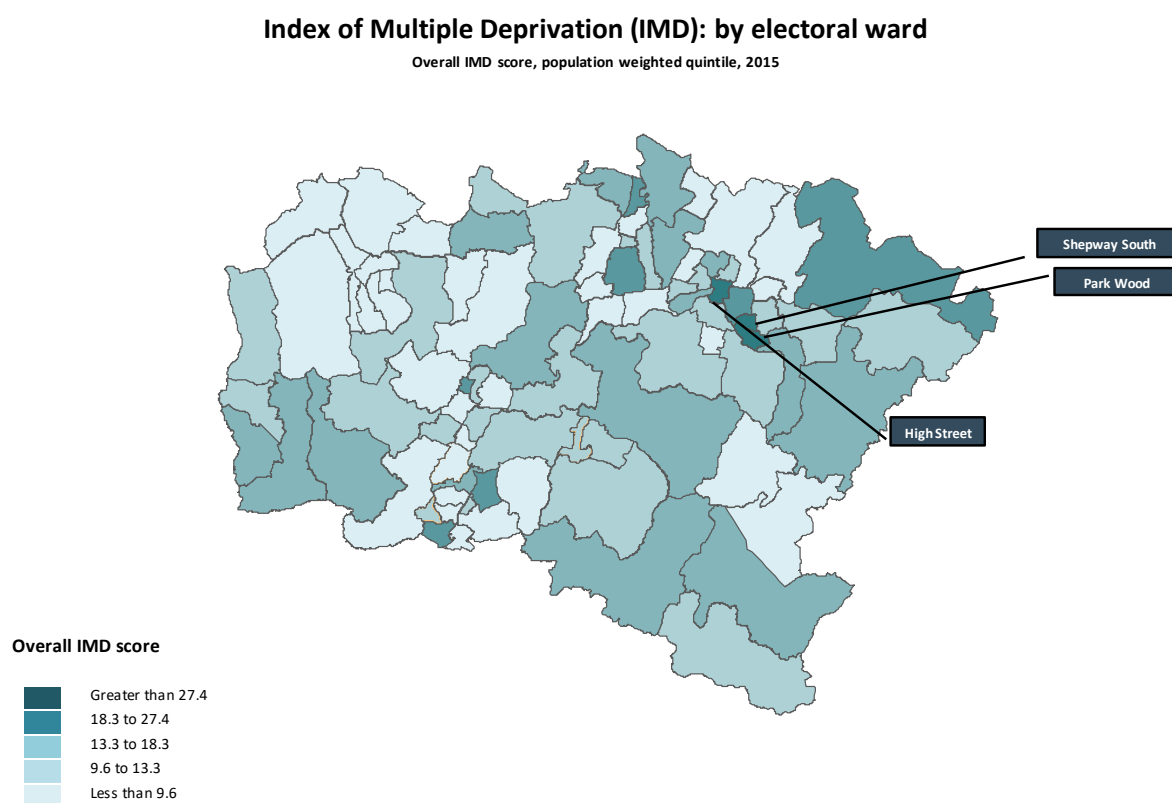
4 Wider determinants affecting health outcomes

4.1 Deprivation - Index of Multiple Deprivation (IMD)

The English Indices of Deprivation 2015 are based on 37 separate indicators, organised across seven distinct domains[11] of deprivation which are combined, using appropriate weights, to calculate the Index of Multiple Deprivation 2015 (IMD 2015). This is an overall measure of multiple deprivation experienced by people living in an area and is calculated for every Lower layer Super Output Area (LSOA), or neighbourhood, in England. IMD has been analysed by Ward for the purposes of this needs assessment.

There are pockets of deprivation throughout West Kent, mainly within urban centres. The east of the CCG is relatively more deprived than the West.

Figure 37 Index of Multiple Deprivation (IMD) – by Ward

Index of Multiple Deprivation (IMD): by electoral ward
Overall IMD score, population weighted quintile, 2015

Overall IMD score

- Greater than 27.4
- 18.3 to 27.4
- 13.3 to 18.3
- 9.6 to 13.3
- Less than 9.6

Source: DCLG, prepared by KPHO (RK), Oct-17

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[11] These are Income Deprivation; Employment Deprivation; Health Deprivation and Disability; Education, Skills and Training Deprivation; Crime; Barriers to Housing and Services; and Living Environment Deprivation.

The 2015 Kent Annual Public Health Report[12] on health inequalities placed a focus on LSOAs within the most deprived decile in Kent, as defined by IMD 2015. This identified the following 5 LSOAs within West Kent[13]:

- E01024374 (Maidstone 009C) – located within High Street ward

- E01024389 (Maidstone 013A) – located within Park Wood ward

- E01024390 (Maidstone 013B) – located within Park Wood ward

- E01024397 (Maidstone 013D) – located within Shepway South

- E01024398 (Maidstone 013E) – located within Shepway South

Deprivation is a key contribution to poor health outcomes and is closely related to wealth. The IMD is a relative measure rather than an individual measure. Knowledge of the location of the most deprived communities is important to understand where the varying health need may be the greatest.

4.2 Unemployment

In 2017 Sevenoaks, Tonbridge & Malling and Tunbridge Wells had the three lowest district unemployment rates, with Maidstone also well below the Kent average.

**Figure 38 Unemployment rate – by district**

Unemployment rate: by district
Average annual rate, calculated as a proportion of those aged 16-64, 2017
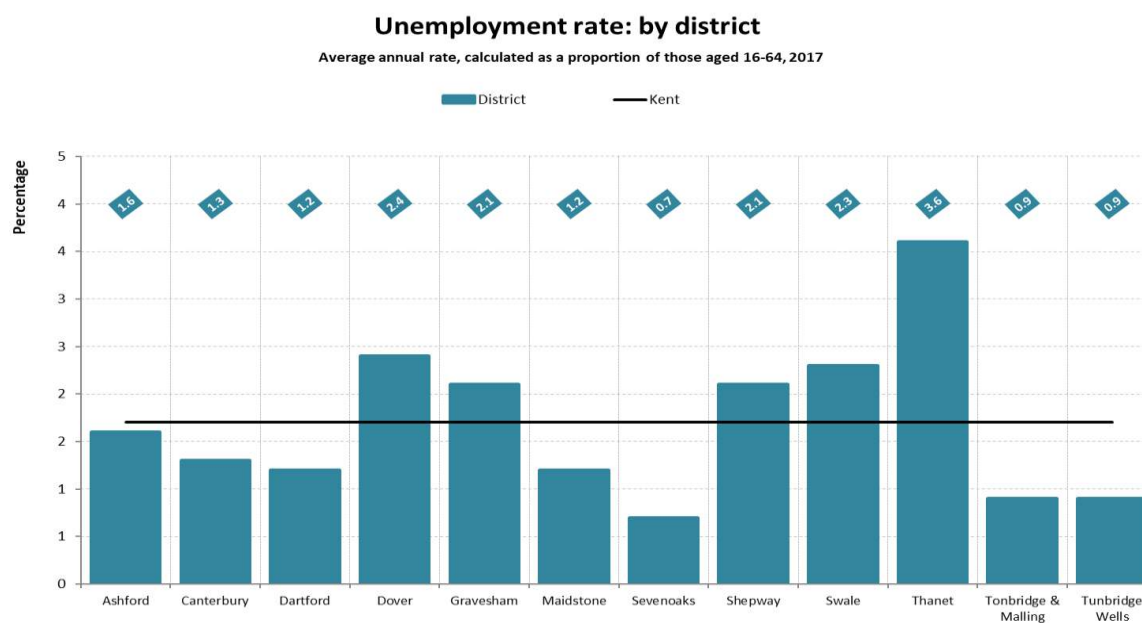
Source: NOMIS, prepared by KPHO (RK), May-18

[12] https://www.kpho.org.uk/__data/assets/pdf_file/0005/57407/Final-Public-Health-Annual-Report-2015.pdf
[13] Further analysis of the most deprived decile LSOAs and their characteristics can be found at https://www.kpho.org.uk/health-intelligence/inequalities/deprivation/mind-the-gap-analytical-report

Figure 39 Annual Unemployment rate by district: trend 2003- 2017
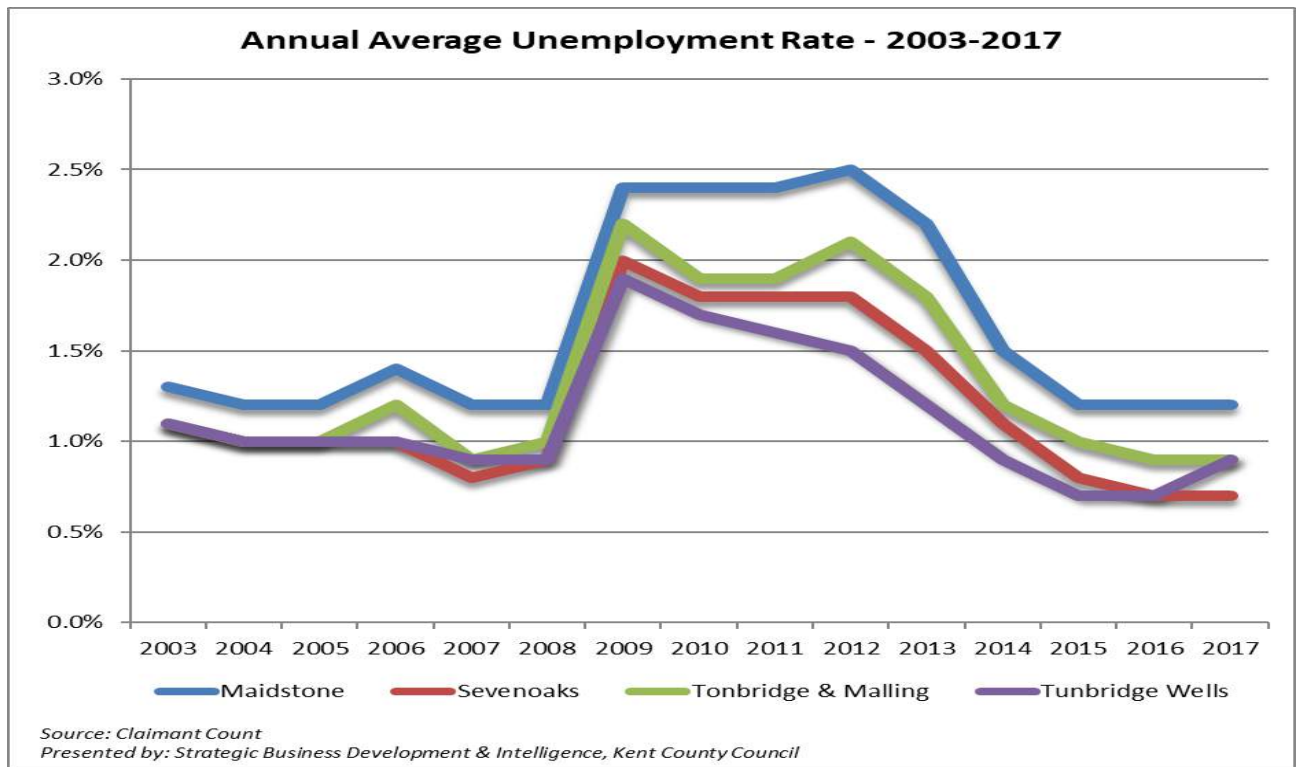
Across the wards in West Kent CCG there is significant ward level variation in unemployment rates. High Street and Shepway South wards in Maidstone had unemployment rates above the Kent average in March 2018.
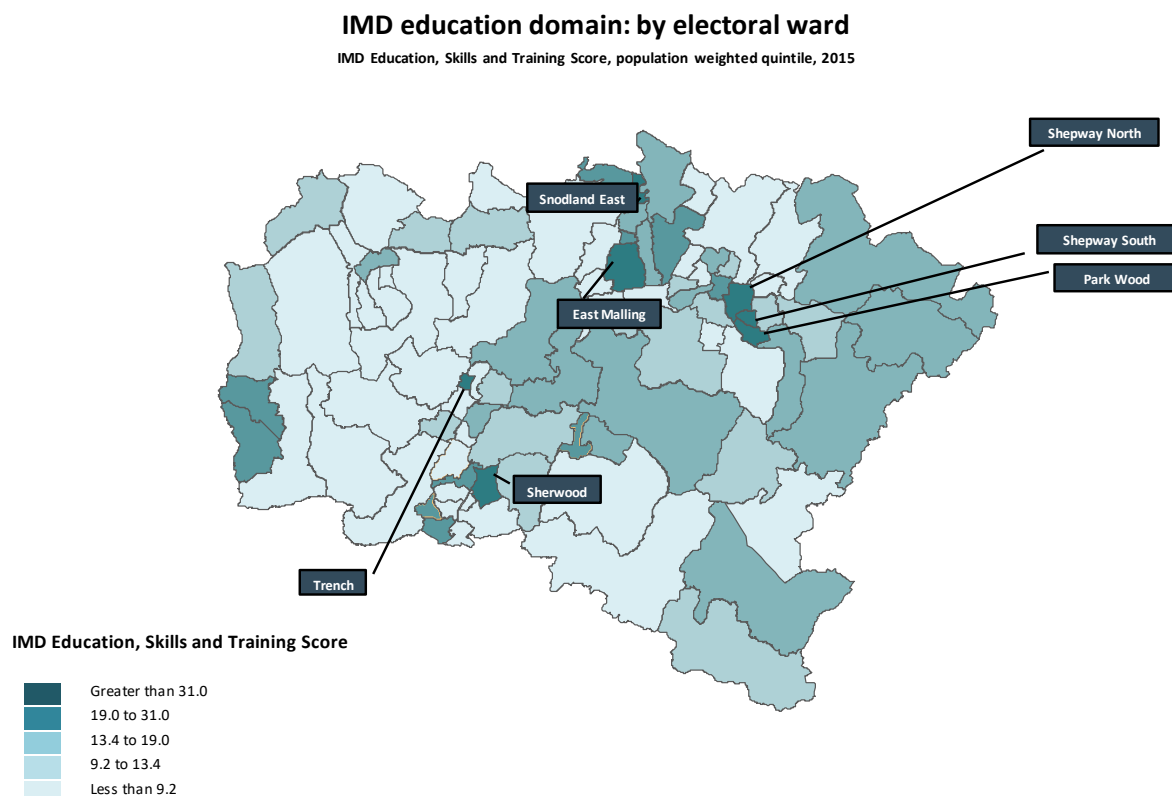
Figure 40 Unemployment rate – by ward
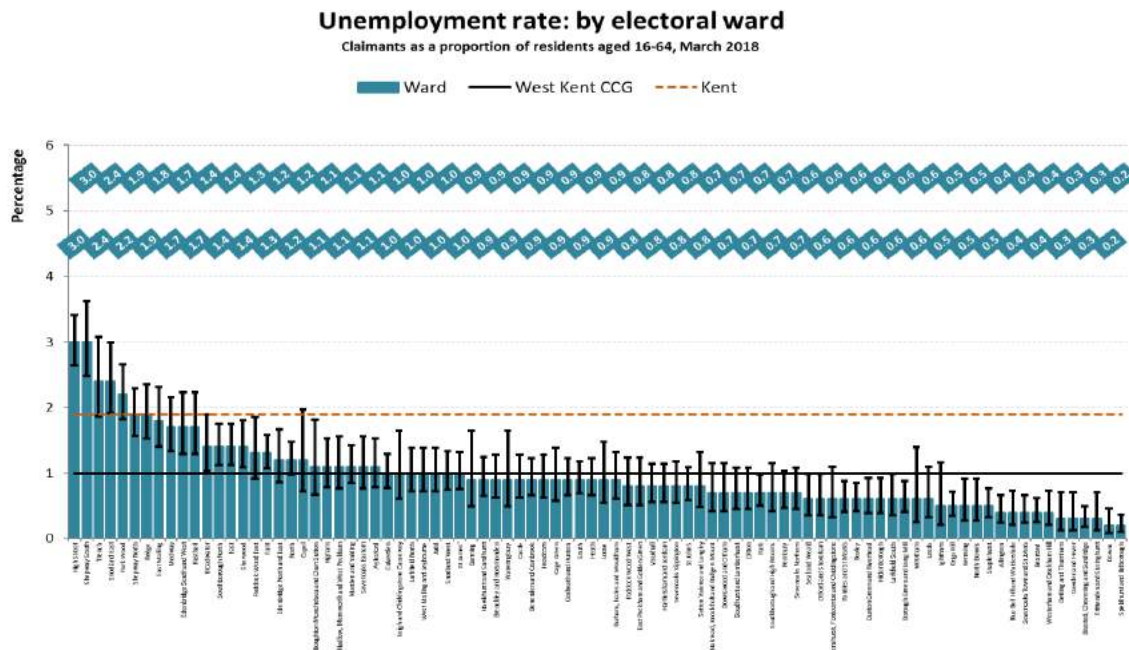
4.3 Education

The education domain of IMD measures lack of attainment and skills in the local population. The indicators are structured into two sub-domains: one relating to children and young people and one relating to adult skills.

Seven wards in West Kent are highlighted as being amongst the 20% most deprived wards for educational attainment for young people and skills for adults across Kent.

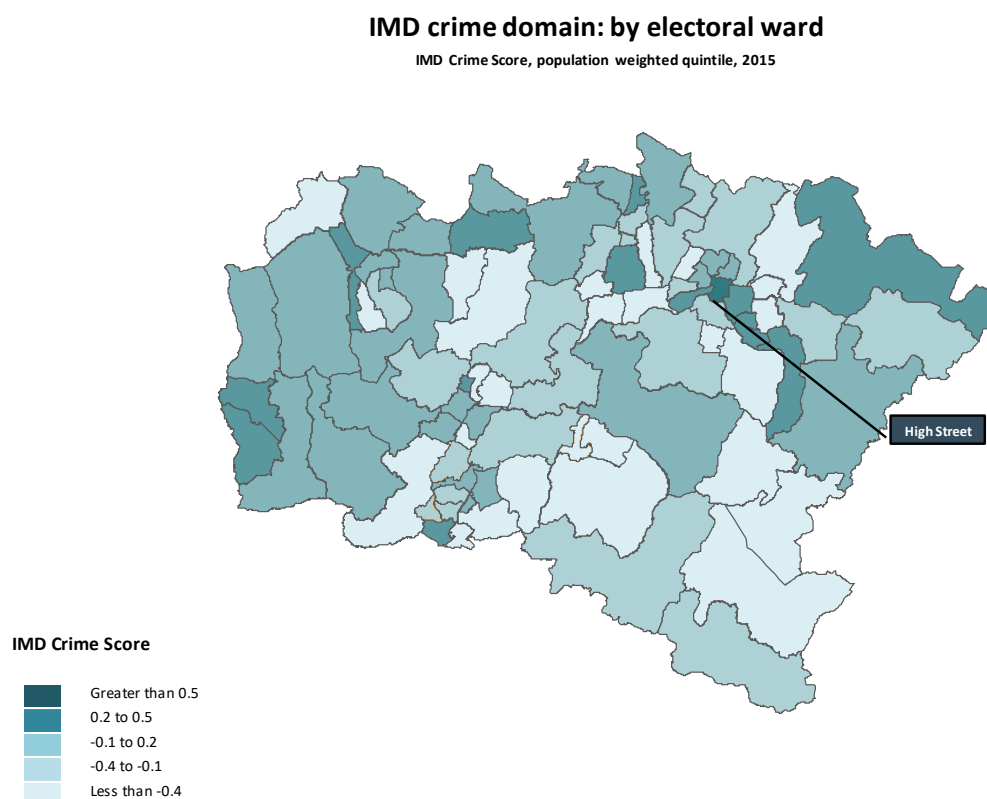**Figure 41 IMD 2015 – Education domain**

IMD education domain: by electoral ward

IMD Education, Skills and Training Score, population weighted quintile, 2015

IMD Education, Skills and Training Score

- Greater than 31.0
- 19.0 to 31.0
- 13.4 to 19.0
- 9.2 to 13.4
- Less than 9.2

Source: DCLG, prepared by KPHO (RK), May-18

4.4 Crime

The crime domain of IMD measures the risk of personal and material victimisation at local level.

High Street ward in Maidstone is highlighted as being amongst the 20% most deprived wards in respect of the risk of personal and material victimisation.

Figure 42 IMD 2015 – Crime domain

IMD crime domain: by electoral ward

IMD Crime Score, population weighted quintile, 2015

High Street

IMD Crime Score

- Greater than 0.5
- 0.2 to 0.5
- -0.1 to 0.2
- -0.4 to -0.1
- Less than -0.4

Source: DCLG, prepared by KPHO (RK), May-18

4.5 Road traffic accidents

There has been year on year decline in numbers of Kent residents killed in transport since 2008 (from 81 to 40). In West Kent, this decline was steeper, seven West Kent residents were killed in transport accidents, compared to 29 in 2008.
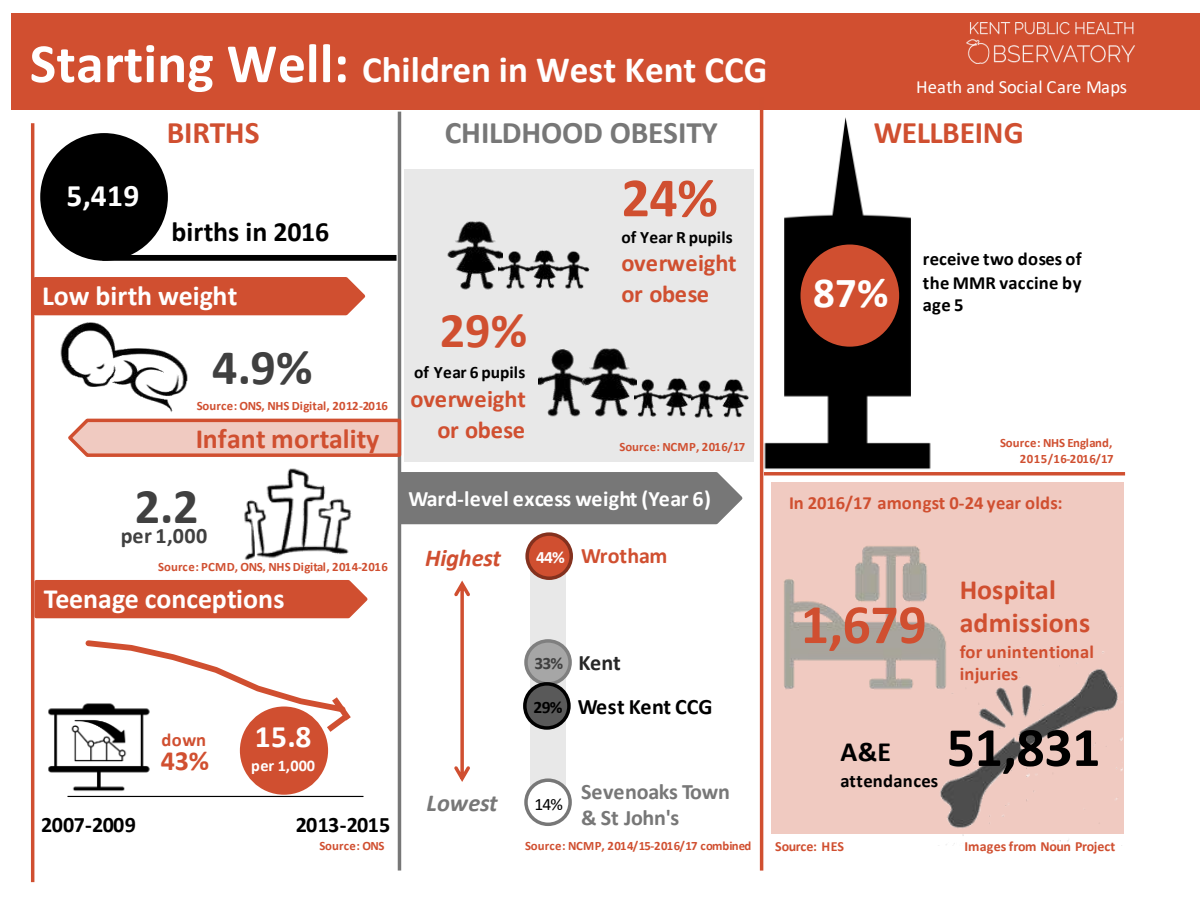
Conclusion

There is variation between wards regarding wider determinants affecting health.

High Street Ward in Maidstone has the highest rates of unemployment and crime.

5 Children and young people

5.1 Infographic summary

The infographic below provides a summary of key data relating to the health and wellbeing of children and young people in West Kent.
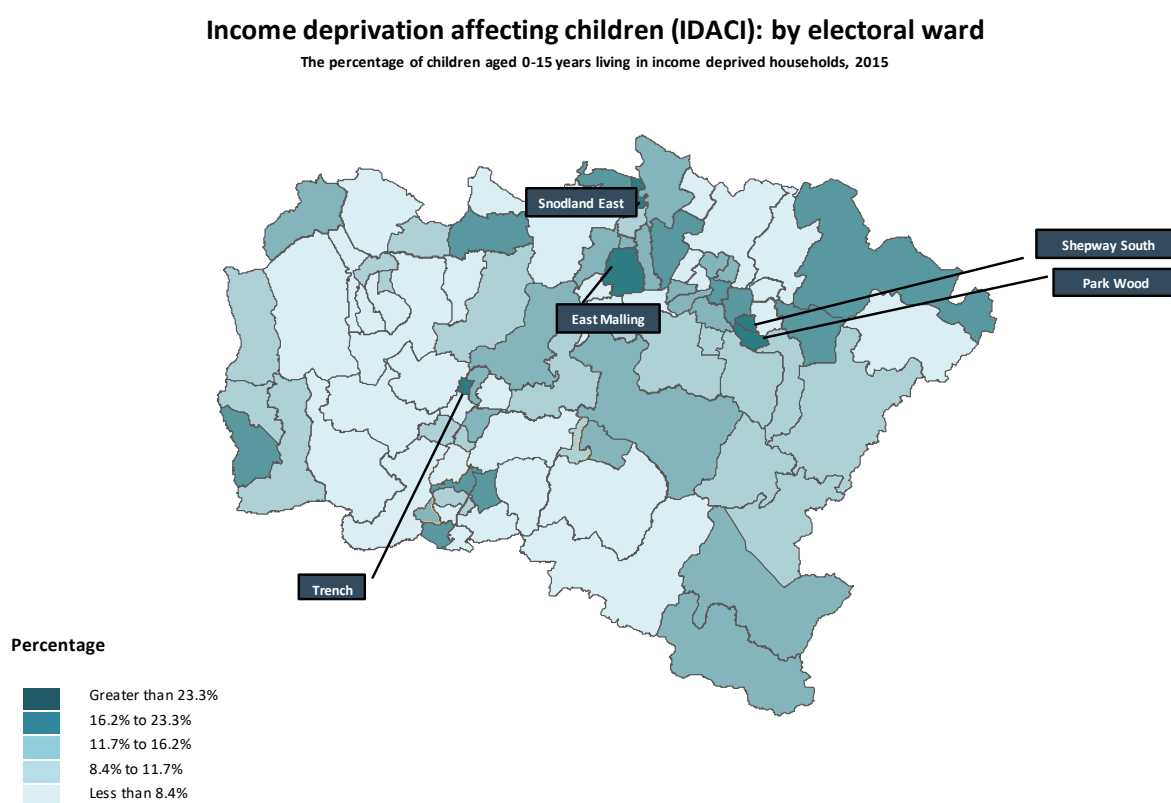

Starting Well: Children in West Kent CCG

KENT PUBLIC HEALTH OBSERVATORY — Heath and Social Care Maps

BIRTHS

5,419 births in 2016

Low birth weight

4.9%
Source: ONS, NHS Digital, 2012-2016

Infant mortality

2.2 per 1,000
Source: PCMD, ONS, NHS Digital, 2014-2016

Teenage conceptions

down **43%**

15.8 per 1,000

2007-2009 — 2013-2015
Source: ONS

CHILDHOOD OBESITY

24% of Year R pupils overweight or obese

29% of Year 6 pupils overweight or obese
Source: NCMP, 2016/17

Ward-level excess weight (Year 6)

Highest
44% Wrotham
33% Kent
29% West Kent CCG
Lowest
14% Sevenoaks Town & St John's
Source: NCMP, 2014/15-2016/17 combined

WELLBEING

87% receive two doses of the MMR vaccine by age 5
Source: NHS England, 2015/16-2016/17

In 2016/17 amongst 0-24 year olds:

1,679 Hospital admissions for unintentional injuries

51,831 A&E attendances
Source: HES — Images from Noun Project

5.2 Income deprivation

Low income has a direct impact on much of children's and parents' lives. Children living in deprived areas are much more likely to be overweight, have poor dental health, have poor control over their diabetes and having a special educational need identified.

There is a separate index of deprivation, which is used to describe deprivation in children. The Income Deprivation Affecting Children Index (IDACI) measures the proportion of all children aged 0 to 15 living in income deprived families. It is a subset of the Income Deprivation Domain, which measures the proportion of the population in an area experiencing deprivation relating to low income. The definition of low income used includes both those people that are out-of-work, and those that are in work but who have low earnings (and who satisfy the respective means tests).

Five wards in West Kent are highlighted as being amongst the 20% most deprived wards in Kent for income deprivation affecting children

Figure 43 IMD 2015 – Income deprivation affecting children (IDACI)

Income deprivation affecting children (IDACI): by electoral ward

The percentage of children aged 0-15 years living in income deprived households, 2015

Percentage

- Greater than 23.3%
- 16.2% to 23.3%
- 11.7% to 16.2%
- 8.4% to 11.7%
- Less than 8.4%

Source: DCLG, prepared by KPHO (RK), Oct-17
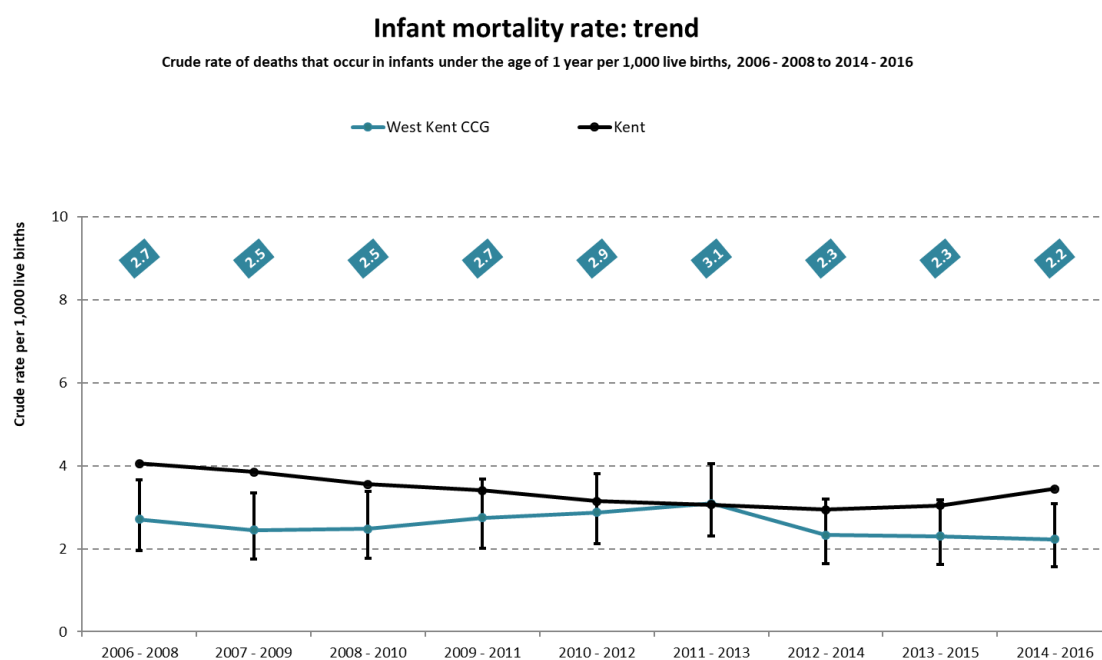
5.3 Infant mortality rate

Infant mortality remains lower in West Kent than the Kent average. However, the same inequality by deprivation that is seen at Kent-level is evident in West Kent, with the infant mortality rate for West Kent residents living in the most deprived 20% areas in Kent far higher than for those living in the least deprived areas. There is some evidence to suggest that the gap is decreasing (see figure 31).

Figure 44 Infant mortality – by CCG

Infant mortality rate: by CCG

Crude rate of deaths that occur in infants under the age of 1 year per 1,000 live births, 2012-2016
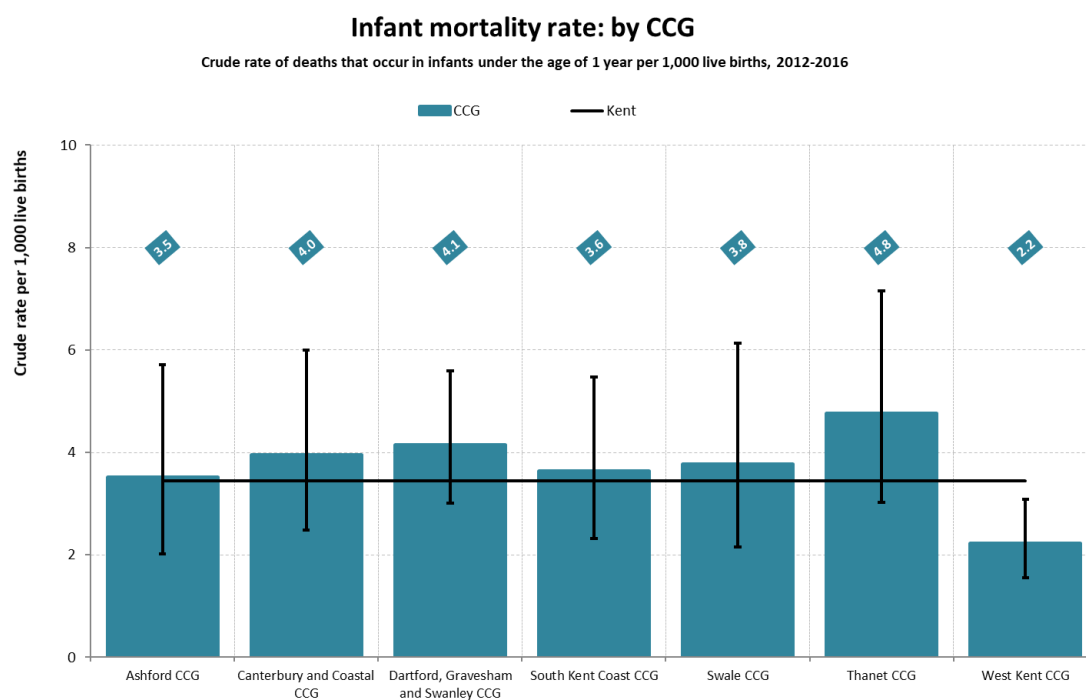
Source: PCMD, ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 45 Infant mortality – trend

Infant mortality rate: trend

Crude rate of deaths that occur in infants under the age of 1 year per 1,000 live births, 2006 - 2008 to 2014 - 2016

West Kent CCG ——— Kent ———

No significant change compared with a decreasing trend for Kent

Source: PCMD, ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 46 Infant mortality – by deprivation
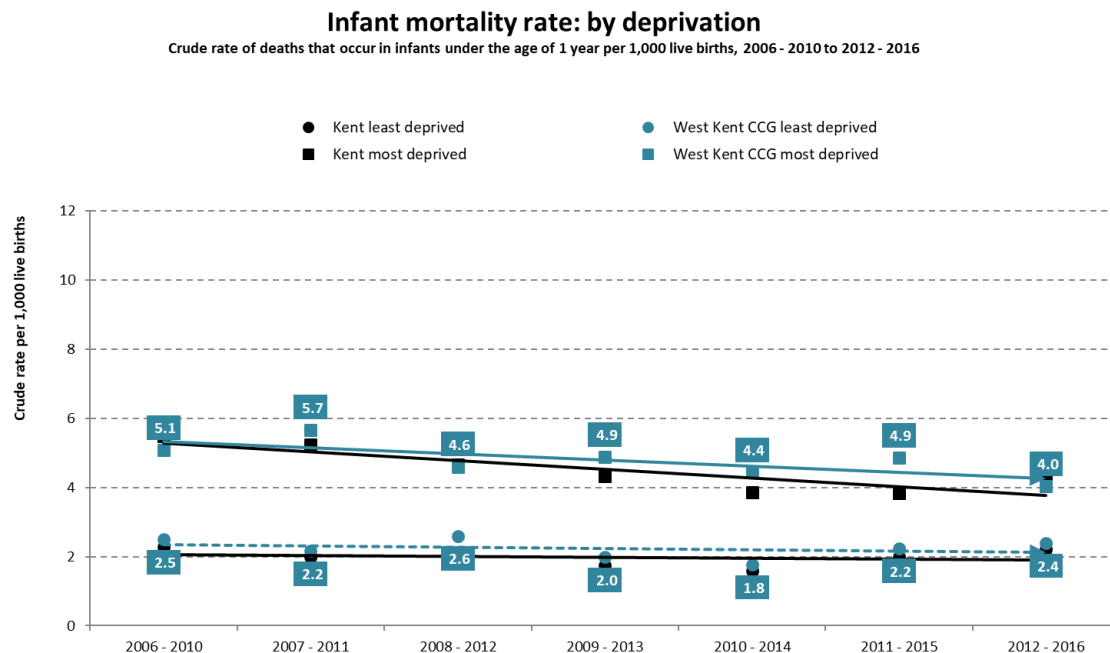
Infant mortality rate: by deprivation

Crude rate of deaths that occur in infants under the age of 1 year per 1,000 live births, 2006 - 2010 to 2012 - 2016

● Kent least deprived   ● West Kent CCG least deprived

■ Kent most deprived   ■ West Kent CCG most deprived

Least deprived trend - no significant change compared with a stable trend for Kent
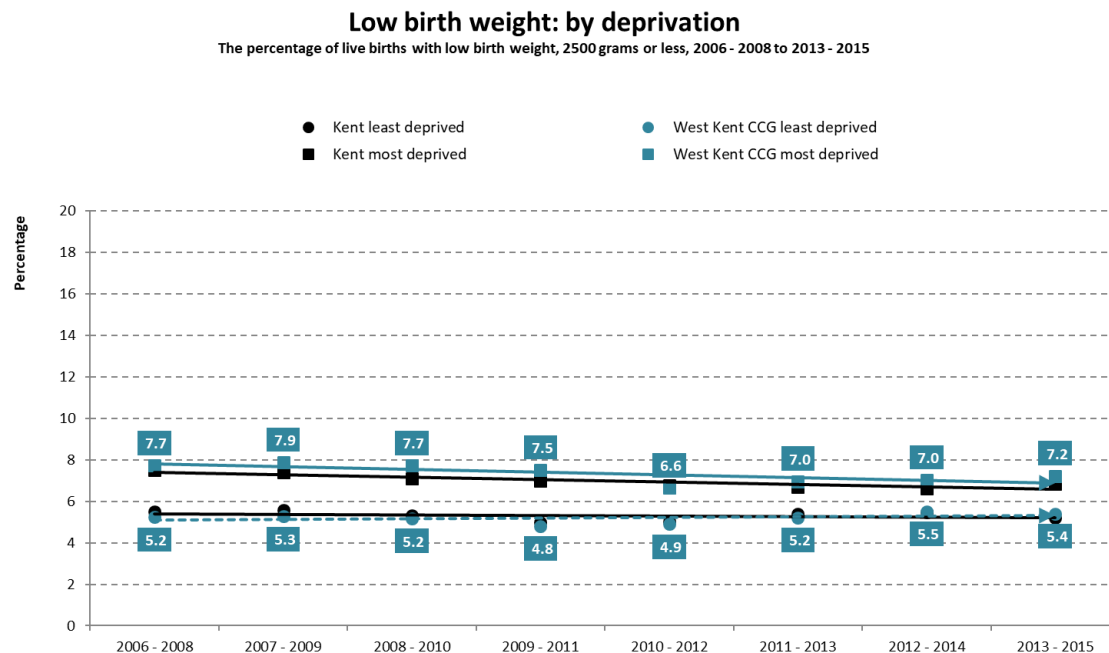Most deprived trend - no significant change compared with a decreasing trend for Kent

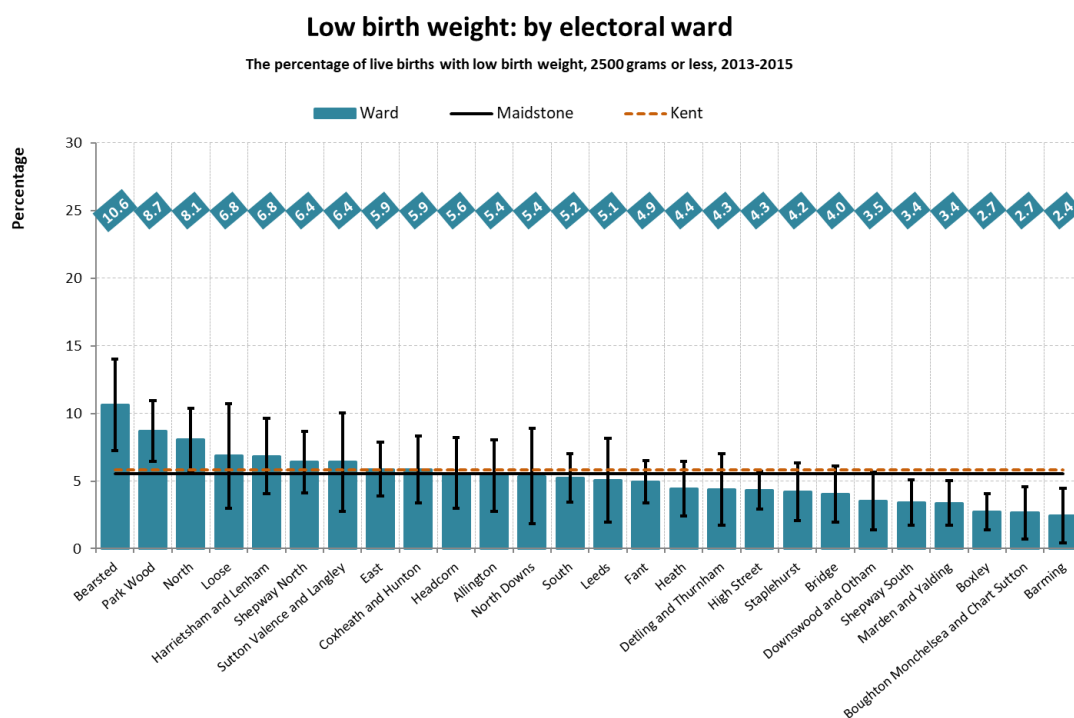Source: PCMD, ONS, NHS Digital, prepared by KPHO (RK), Nov-17

5.4 Low birth weight

The main cause of low birth weight is prematurity and babies born earlier than 26 weeks have greatly increased chances of disability as they grow. There are many causes associated with low birth weight babies including lifestyle issues such as smoking in pregnancy, alcohol and drug misuse.

Levels of low birth weights (the percentage of live births with a birth weight of 2500g or less) are similar in West Kent to the Kent average, and have remained stable over recent years. There is, however, considerable variation between electoral wards. The percentage of babies born with low birth weight is significantly higher than the West Kent average in Bearsted and Park Wood.

A higher proportion of babies born to mothers living in the most deprived areas of West Kent are born with low birth weight (7.2% in 2013-2015) than the least deprived areas (5.4%)[14].

Figure 47 Low birth weight – by CCG

Low birth weight: by CCG

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015
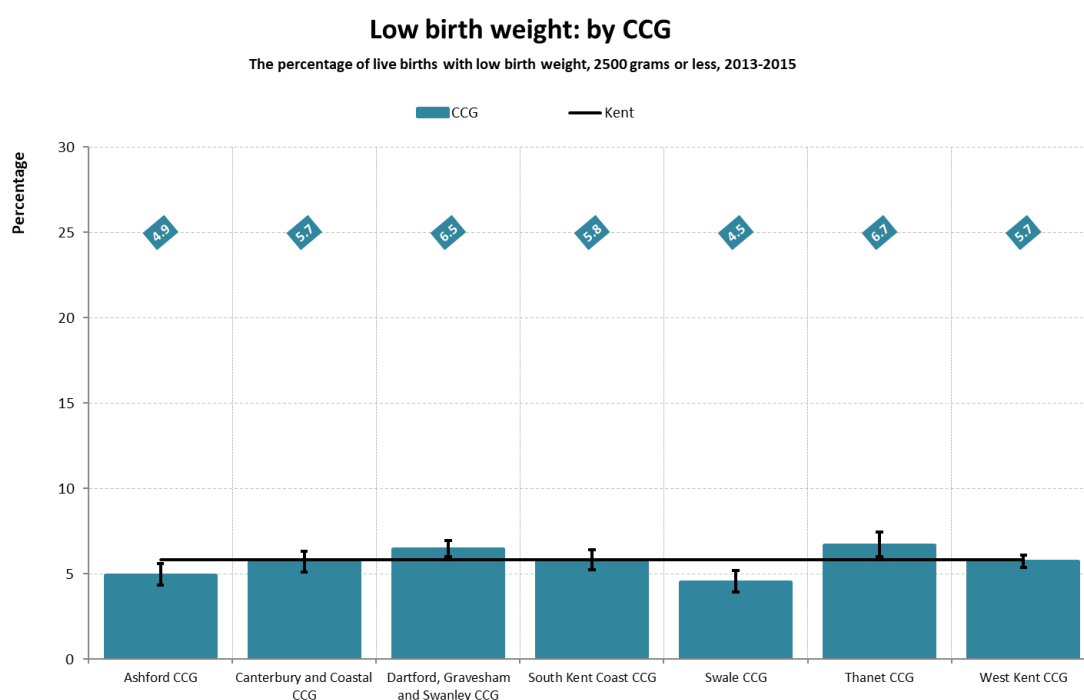
Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

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[14] based on Kent IMD 2015 quintiles.

Figure 48 Low birth weight – trend
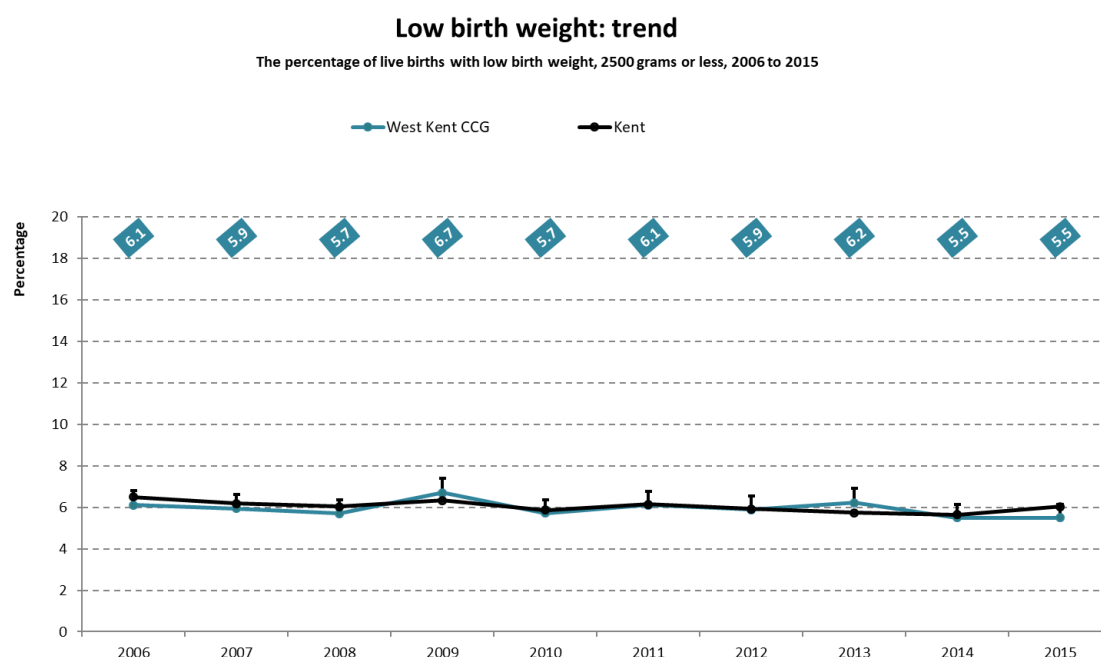
Low birth weight: trend
The percentage of live births with low birth weight, 2500 grams or less, 2006 to 2015

No significant change compared with a decreasing trend for Kent

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

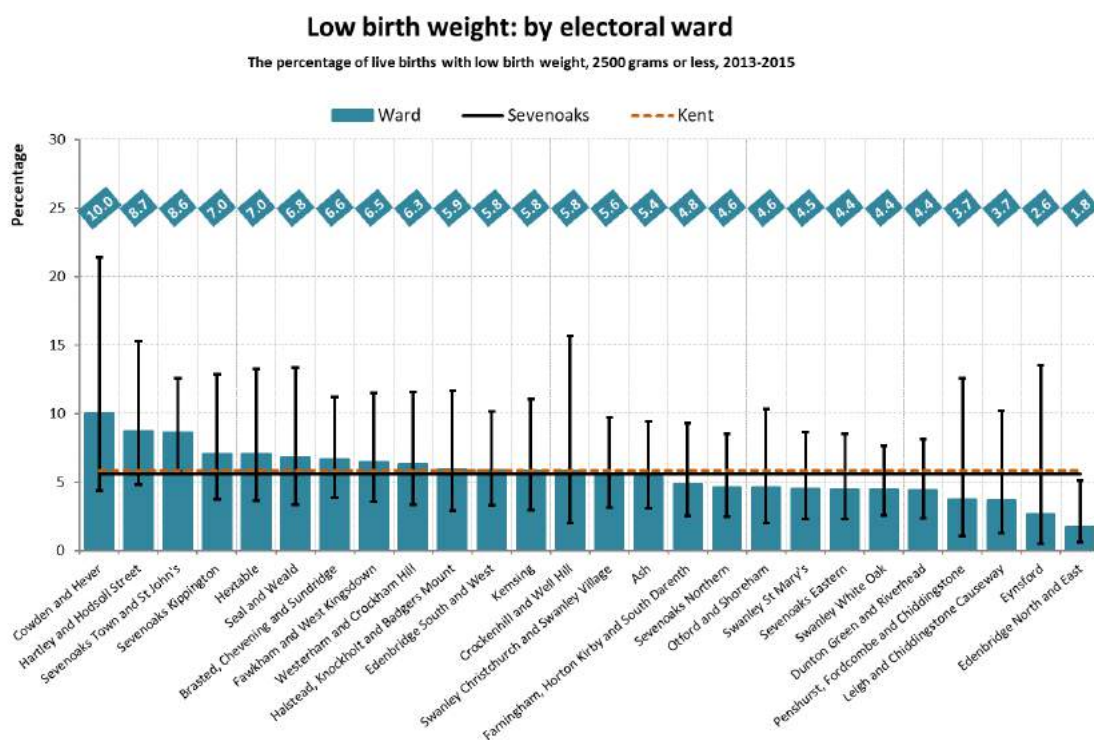## Figure 49 Low birth weight – by deprivation

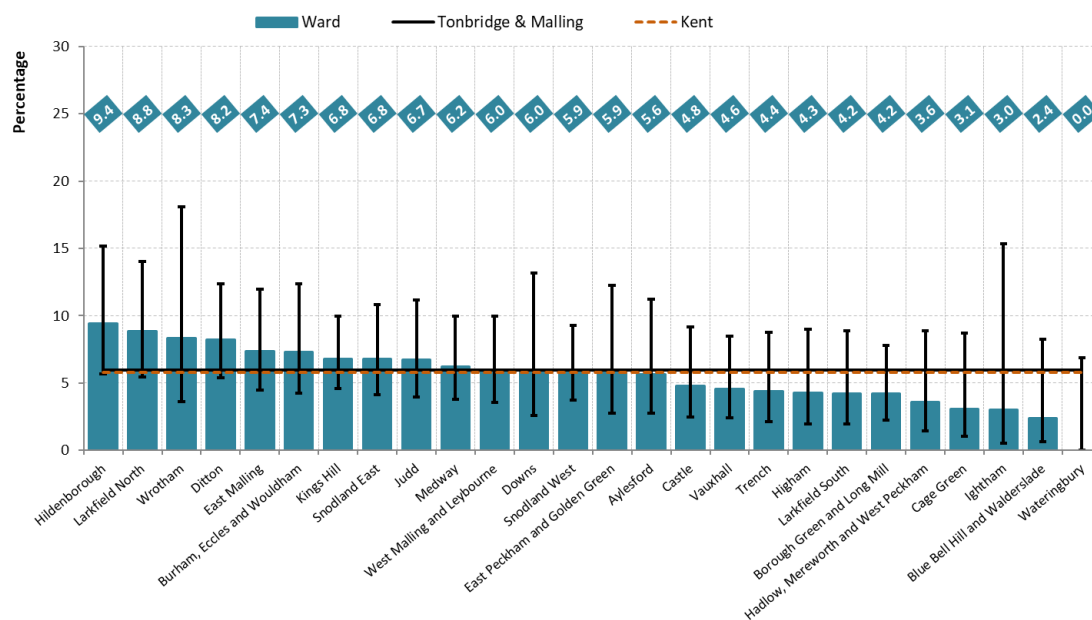### Low birth weight: by deprivation
The percentage of live births with low birth weight, 2500 grams or less, 2006 - 2008 to 2013 - 2015

Least deprived trend - no significant change compared with a stable trend for Kent
Most deprived trend - decreasing with a similar pace of change to Kent

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Figure 50 Low birth weight – by ward

Low birth weight: by electoral ward

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Low birth weight: by electoral ward

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17
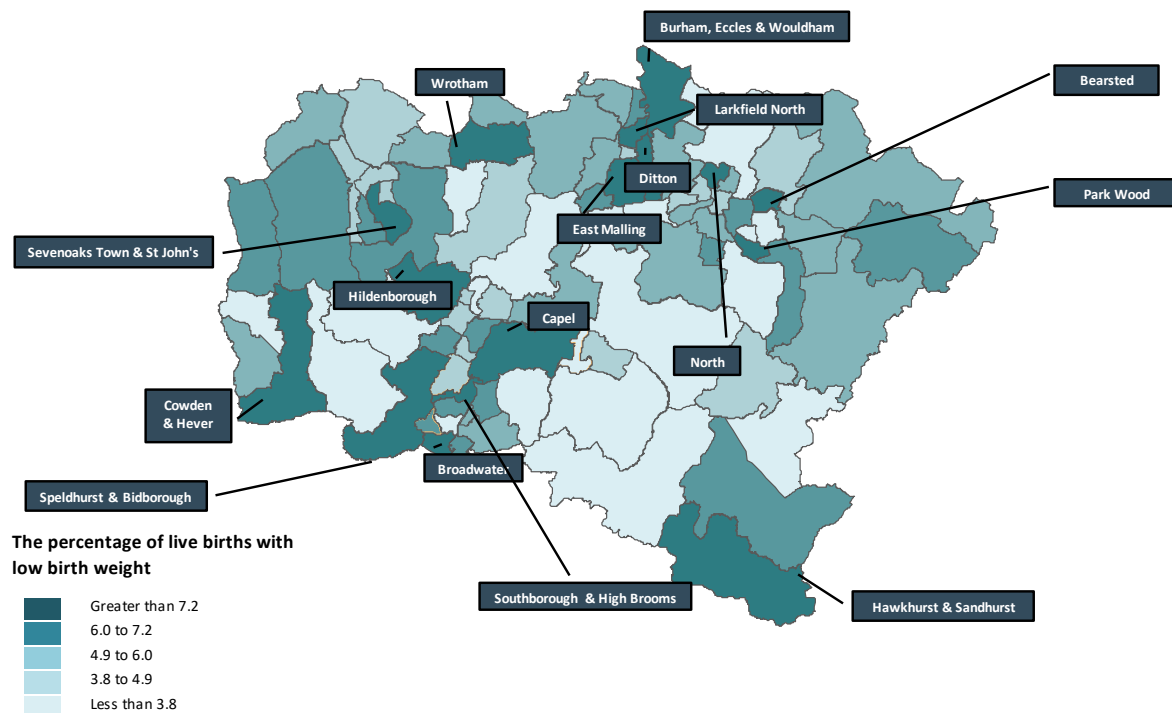
Low birth weight: by electoral ward

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015

Legend: Ward | Tunbridge Wells | Kent

Values (left to right): 8.6, 8.1, 8.0, 7.9, 7.2, 7.1, 7.0, 6.4, 6.4, 6.3, 5.4, 4.9, 4.8, 4.0, 3.5, 3.5, 3.3, 3.3, 3.2, 3.1

Wards: Broadwater, Hawkhurst and Sandhurst, Southborough and High Brooms, Speldhurst and Bidborough, Capel, Sherwood, Benenden and Cranbrook, St John's, Pantiles and St Mark's, Rusthall, Park, St James', Paddock Wood East, Southborough North, Culverden, Pembury, Paddock Wood West, Goudhurst and Lamberhurst, Frittenden and Sissinghurst, Brenchley and Horsmonden

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Low birth weight: by electoral ward

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015

Legend: Ward | Tonbridge & Malling | Kent

Values (left to right): 9.4, 8.8, 8.3, 8.2, 7.4, 7.3, 6.8, 6.8, 6.7, 6.2, 6.0, 6.0, 5.9, 5.9, 5.6, 4.8, 4.6, 4.4, 4.3, 4.2, 4.2, 3.6, 3.1, 3.0, 2.4, 0.0

Wards: Hildenborough, Larkfield North, Wrotham, Ditton, East Malling, Burham, Eccles and Wouldham, Kings Hill, Snodland East, Judd, Medway, West Malling and Leybourne, Downs, Snodland West, East Peckham and Golden Green, Aylesford, Castle, Vauxhall, Trench, Higham, Larkfield South, Borough Green and Long Mill, Hadlow, Mereworth and West Peckham, Cage Green, Ightham, Blue Bell Hill and Walderslade, Wateringbury

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

Low birth weight: by electoral ward

The percentage of live births with low birth weight, 2500 grams or less, 2013-2015

The percentage of live births with low birth weight

- Greater than 7.2
- 6.0 to 7.2
- 4.9 to 6.0
- 3.8 to 4.9
- Less than 3.8

Source: ONS, NHS Digital, prepared by KPHO (RK), Nov-17

5.5   Teenage conceptions

Teenage conception rates have fallen dramatically across Kent since the national teenage pregnancy programme was set up. West Kent continues to make further progress, with rates continuing to decrease over recent years, and remaining well below the Kent average.

Of the West Kent districts, teenage conception rates remain highest in Maidstone, where the rate is similar to the Kent average (and higher than in Sevenoaks, Tonbridge & Malling and Tunbridge Wells). Within Maidstone, teenage conception rates remain above the Kent average in MSOA E02005080, which covers Shepway South ward and part of Park Wood.

Figure 51 Above Kent average conception rates: Shepway South and part of Park Wood
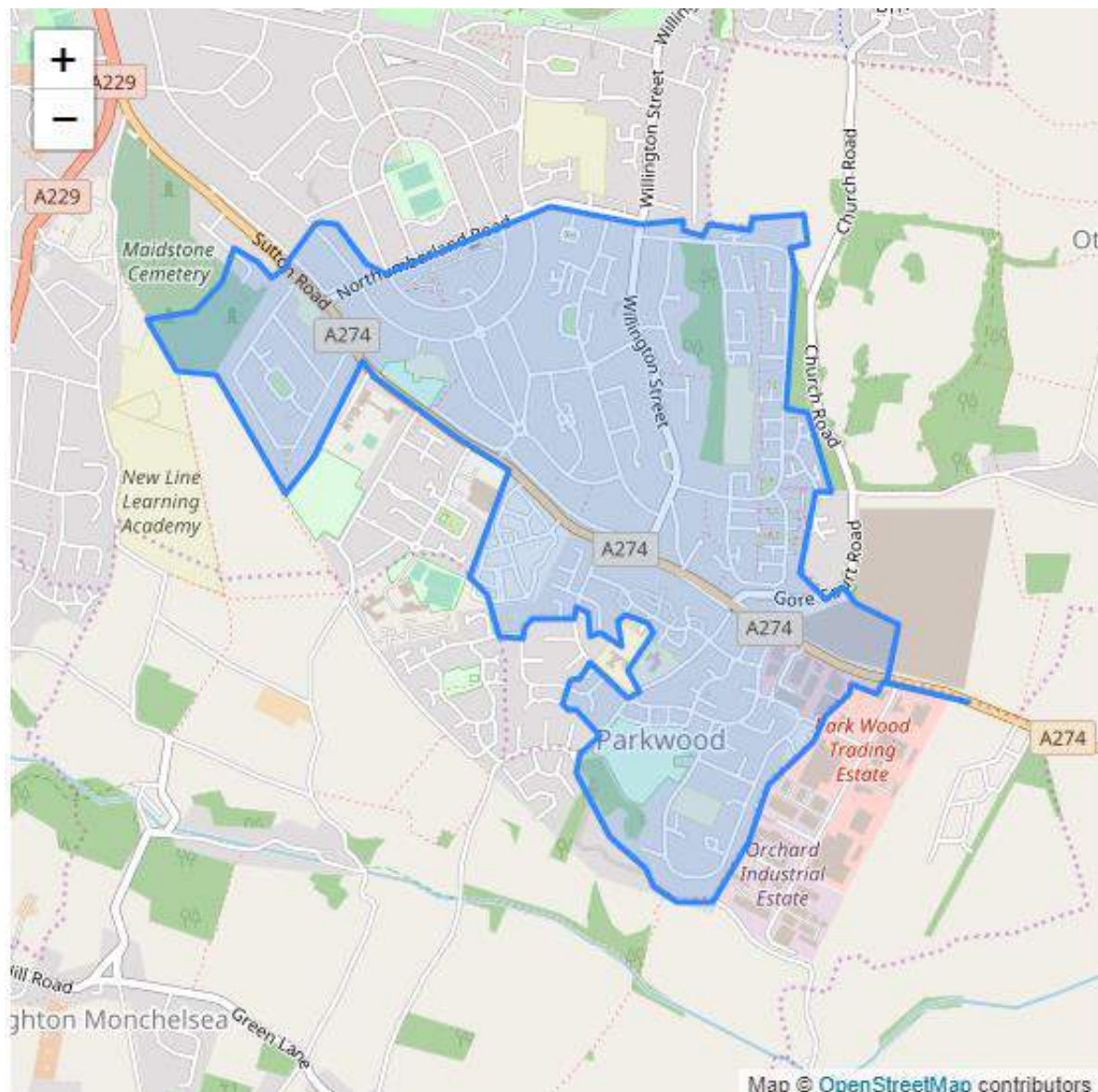
Figure 52 Teenage conceptions – by CCG

Teenage conceptions: by CCG

Rate per 1,000 15-17 year olds, 2013-2015

Source: ONS, prepared by KPHO (TG), Nov-17
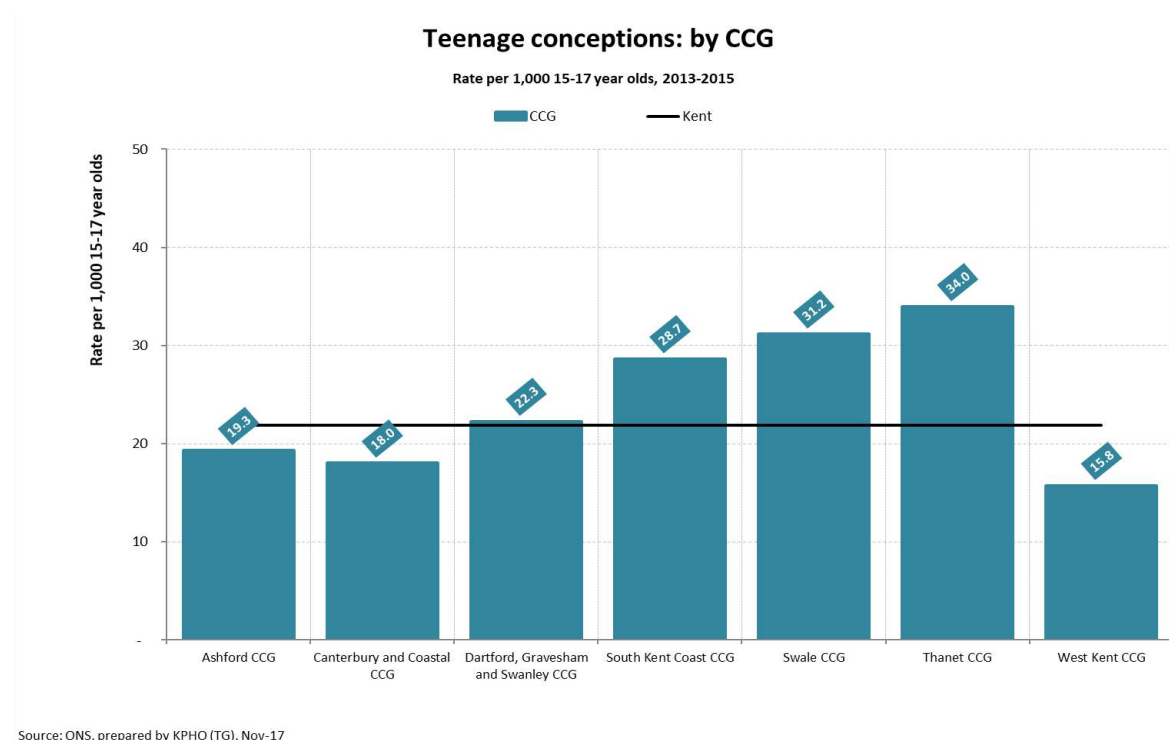
Figure 53 Teenage conceptions by district

Teenage conceptions: by district

Rate per 1,000 15-17 year olds, 2015

Source: ONS, prepared by KPHO (TG), Nov-17
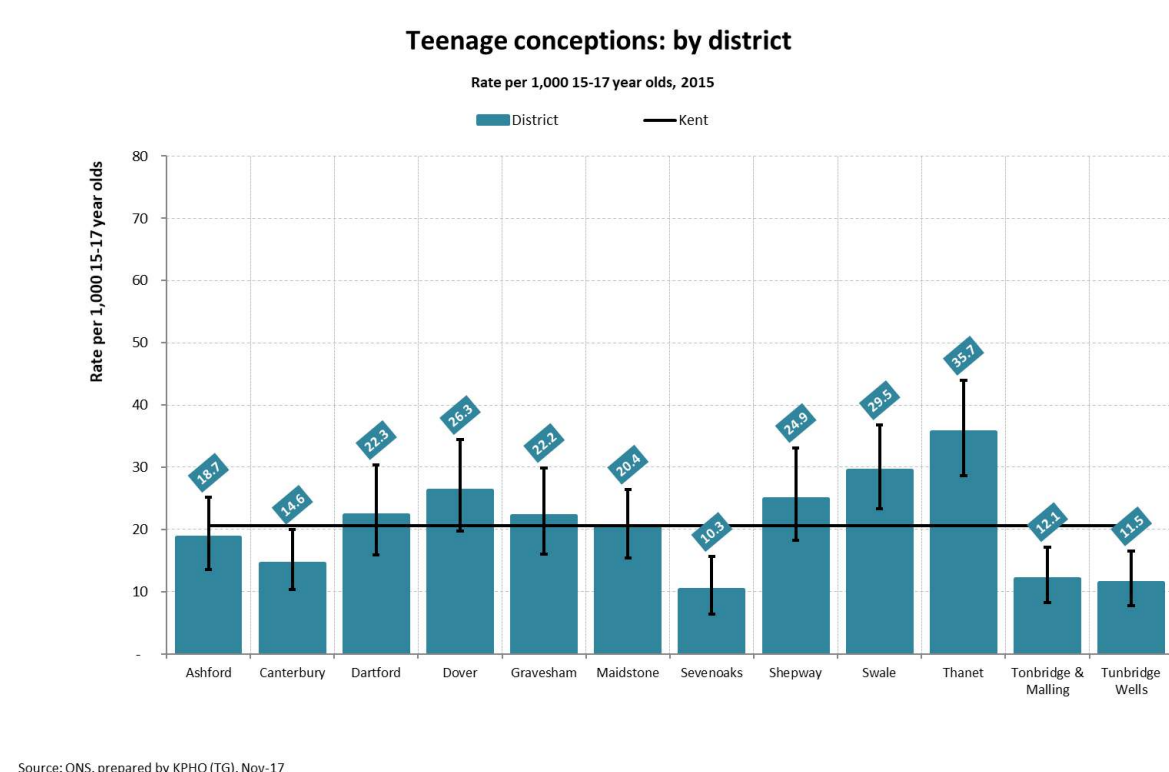
Figure 54 Teenage conceptions: trends
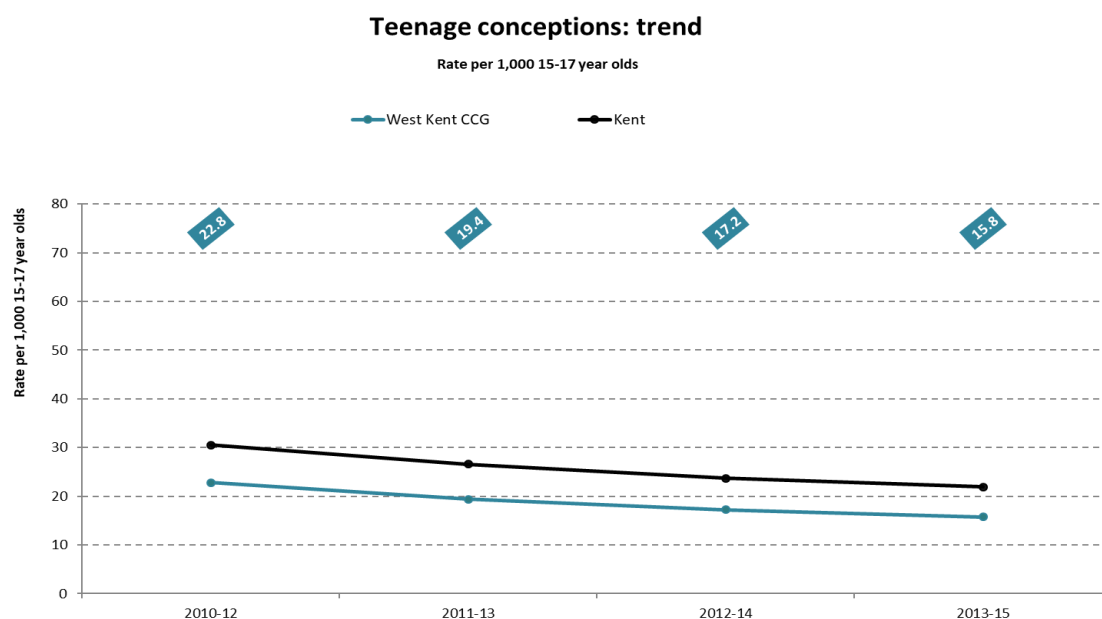
Teenage conceptions: trend

Rate per 1,000 15-17 year olds

West Kent CCG ● ● ● Kent

Decreasing with a similar pace of change to Kent

Source: ONS, prepared by KPHO (TG), Oct-17

Teenage conceptions: trend

Rate per 1,000 15-17 year olds, ONS, 2001 - 2015

England ● ● ● Kent

Source: ONS, prepared by KPHO (TG), Oct-17

Teenage conceptions: trend

Rate per 1,000 15-17 year olds, ONS, 2001 - 2015

Maidstone — Kent

Decreasing with a similar pace of change to Kent

Source: ONS, prepared by KPHO (TG), Oct-17

Teenage conceptions: trend

Rate per 1,000 15-17 year olds, ONS, 2001 - 2015

Sevenoaks — Kent

Decreasing with a similar pace of change to Kent

Source: ONS, prepared by KPHO (TG), Oct-17

Teenage conceptions: trend

Rate per 1,000 15-17 year olds, ONS, 2001 - 2015

Tunbridge Wells ——●—— Kent
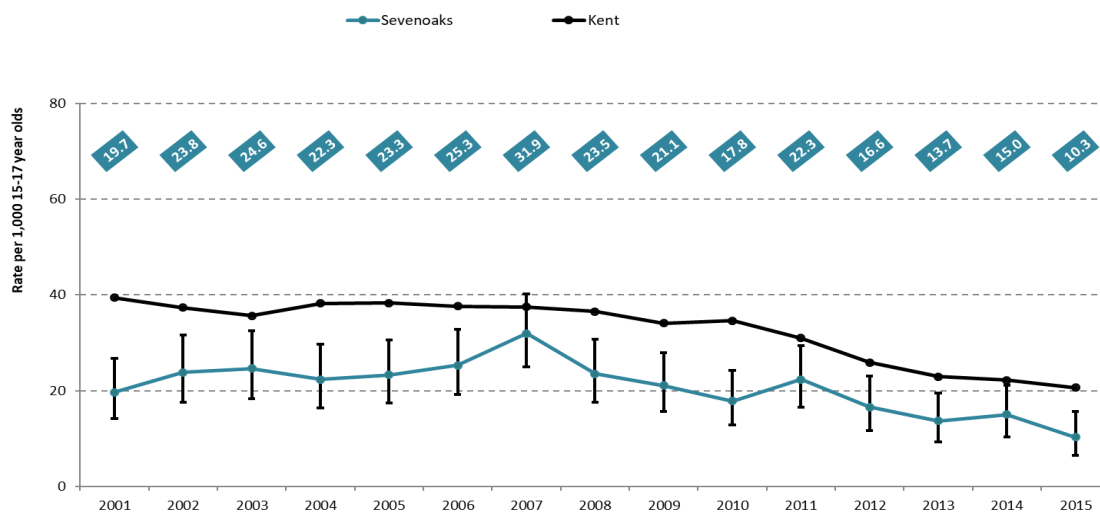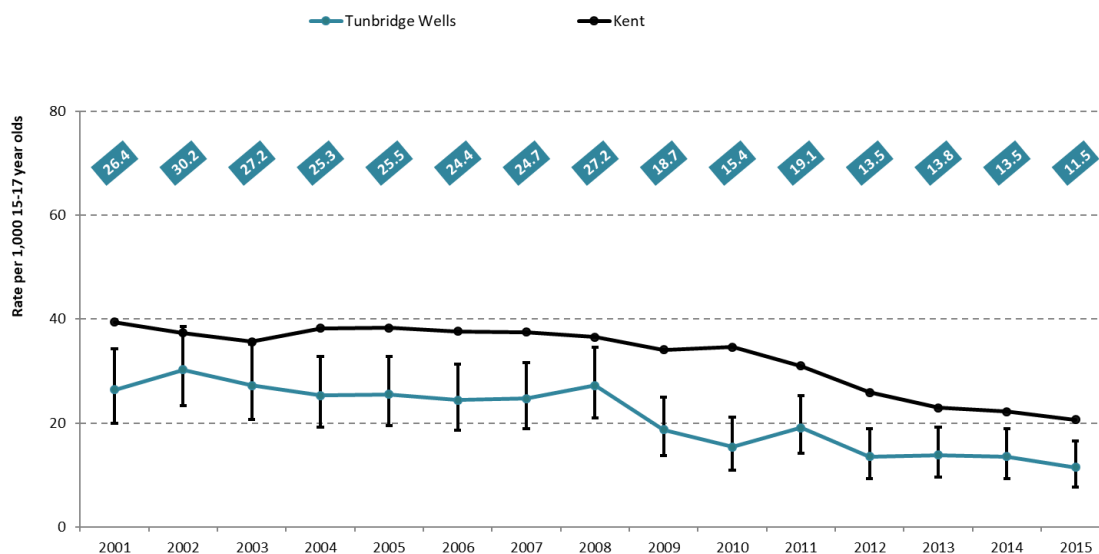
Source: ONS, prepared by KPHO (TG), Oct-17

Decreasing with a similar pace of change to Kent

Teenage conceptions: trend

Rate per 1,000 15-17 year olds, ONS, 2001 - 2015

Tonbridge & Malling ——●—— Kent
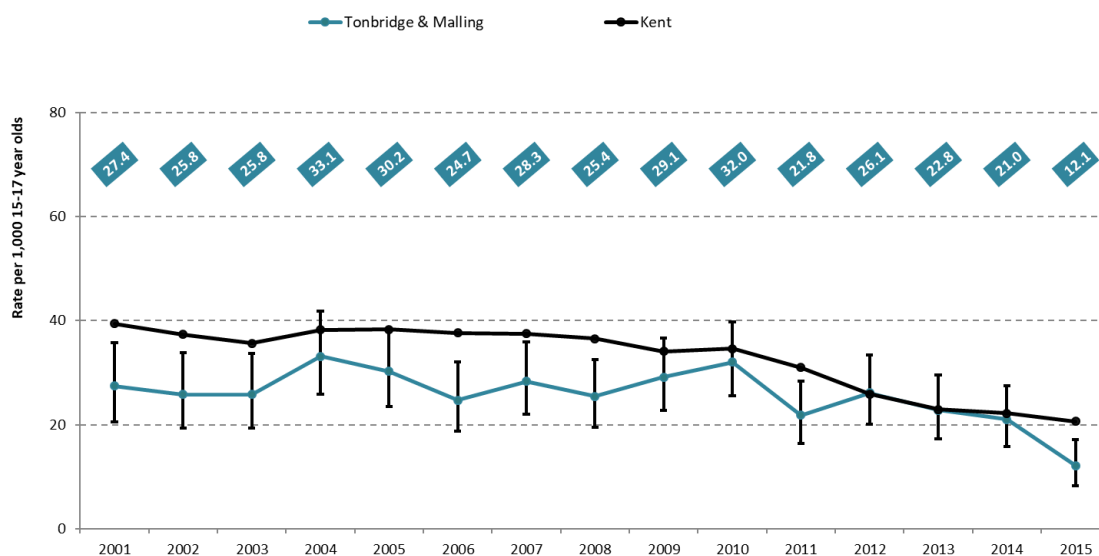
Source: ONS, prepared by KPHO (TG), Oct-17

Decreasing with a similar pace of change to Kent

Breastfeeding

Research has shown that breastfeeding is beneficial for both mothers and babies. Local needs assessment has shown that breastfed babies benefit the health economy in reduced consultations, prescription costs and reducing hospital admissions. Improving breastfeeding rates will impact on ill-health associated with social deprivation, giving the next generation a better start in life.

Across the four West Kent districts, breastfeeding rates captured at both the new born = (babies aged between 10-14 days) and 6-8-week health visitor contact are well above the Kent average in Sevenoaks, Tonbridge & Malling and Tunbridge Wells, but similar to the Kent average in Maidstone. There is considerable variation between electoral wards. Breastfeeding prevalence in Kent is significantly lower than the West Kent average both at the new born visit and at 6-8 weeks in:

- Shepway South

- Shepway North

- Snodland East

- Park Wood

- Snodland West

- Ditton

Breastfeeding prevalence at 6-8 weeks is around 50% higher in the least deprived areas of West Kent than the most deprived areas (56.3% for areas of West Kent falling into the most deprived Kent quintile compared with 36.5% for areas falling into the least deprived Kent quintile).

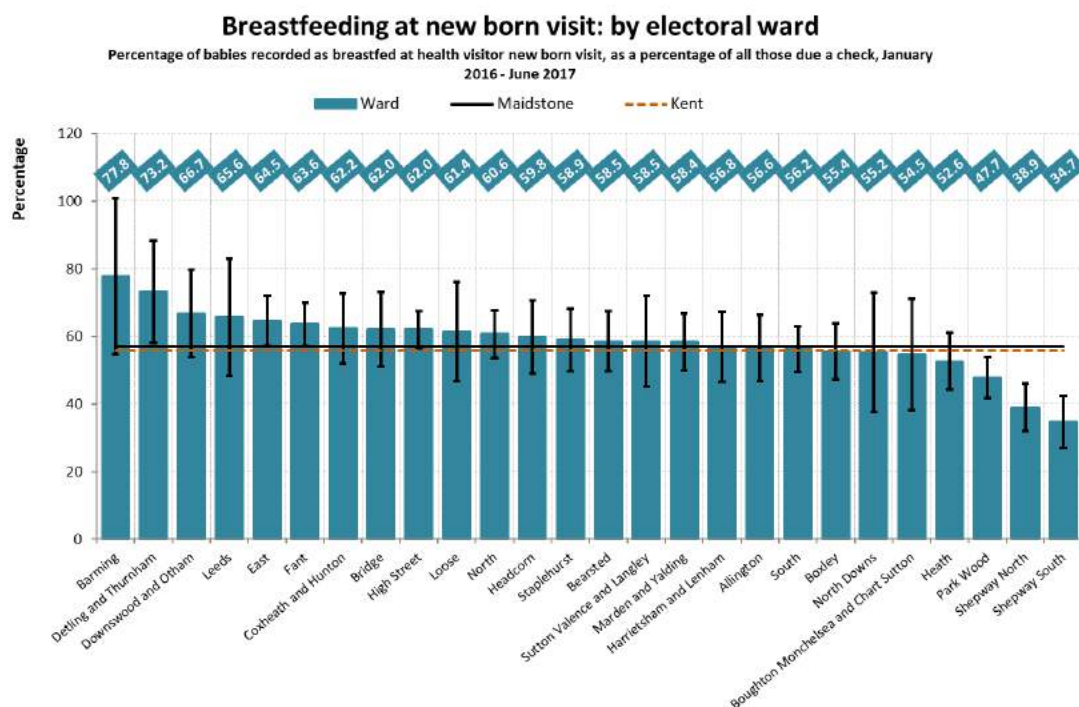## Figure 55 Breastfeeding at new born visit – by CCG

Breastfeeding at new born visit: by CCG

Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017
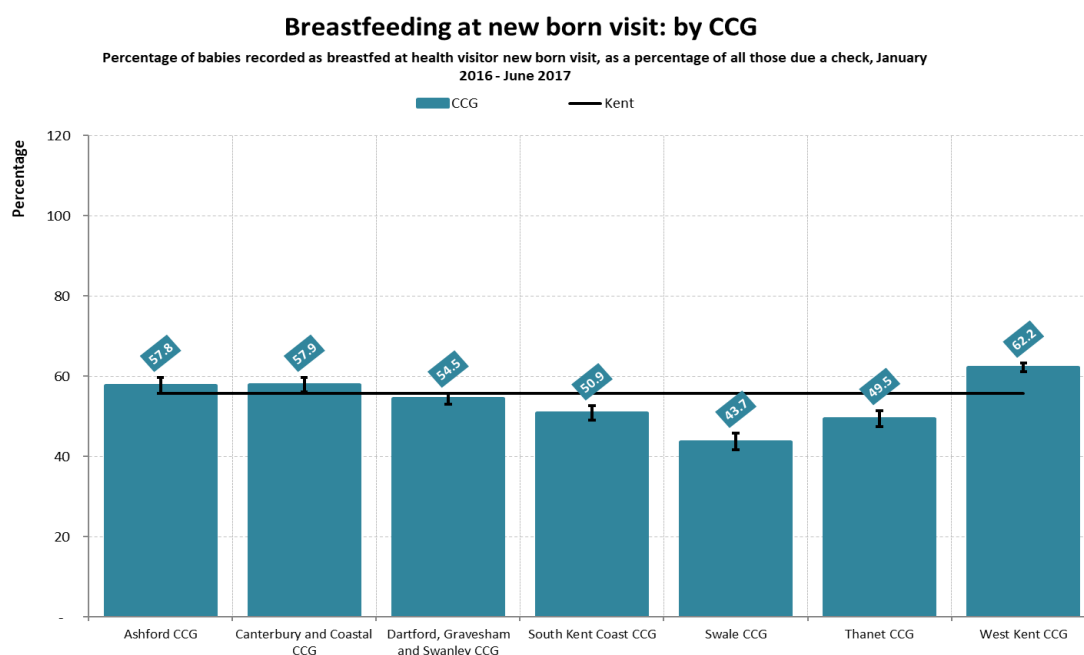
Source: KCHFT, prepared by KPHO (RK), Nov-17

Figure 56 Breastfeeding at new born visit – by district

Breastfeeding at new born visit: by district
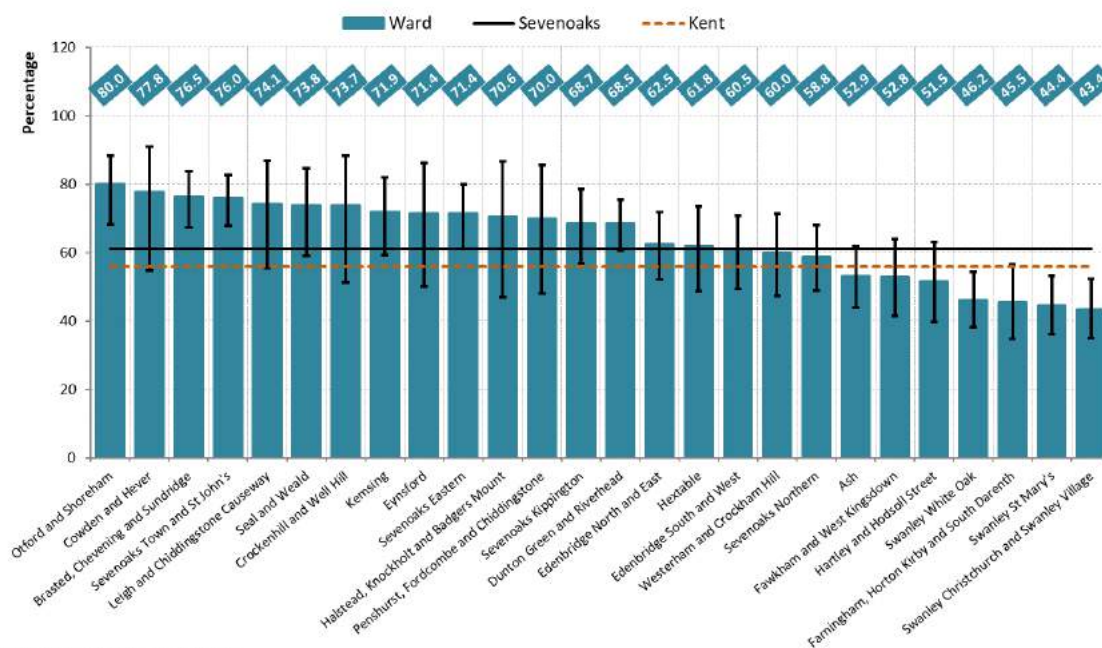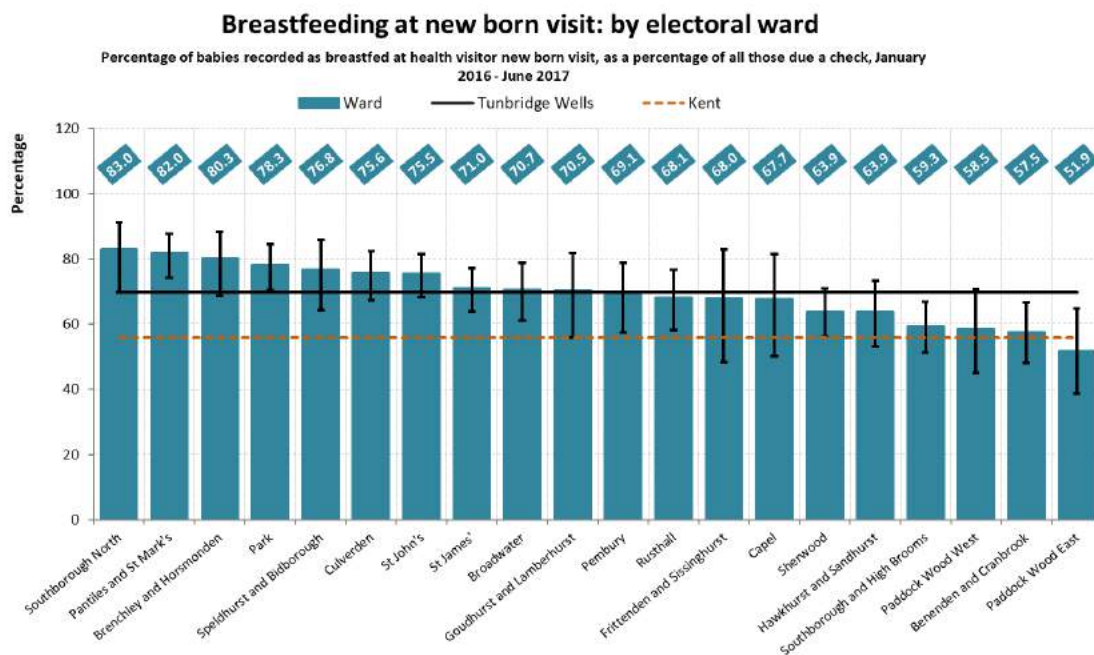
Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017
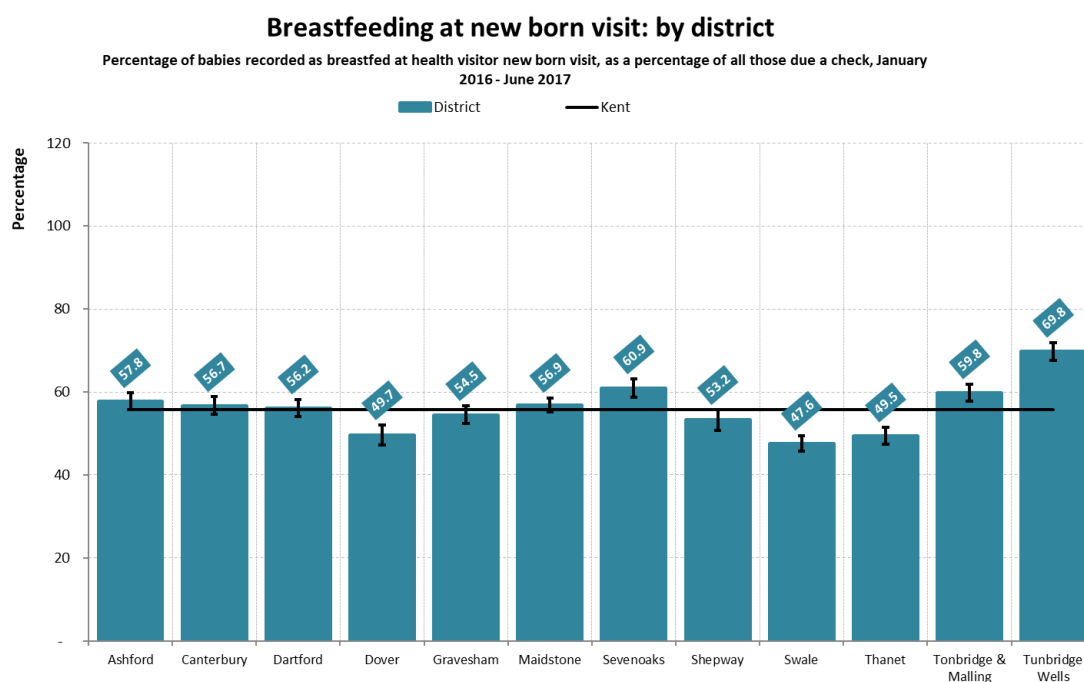
Source: KCHFT, prepared by KPHO (RK), Nov-17

Figure 57 Breastfeeding at new born visit – by ward

Breastfeeding at new born visit: by electoral ward

Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017
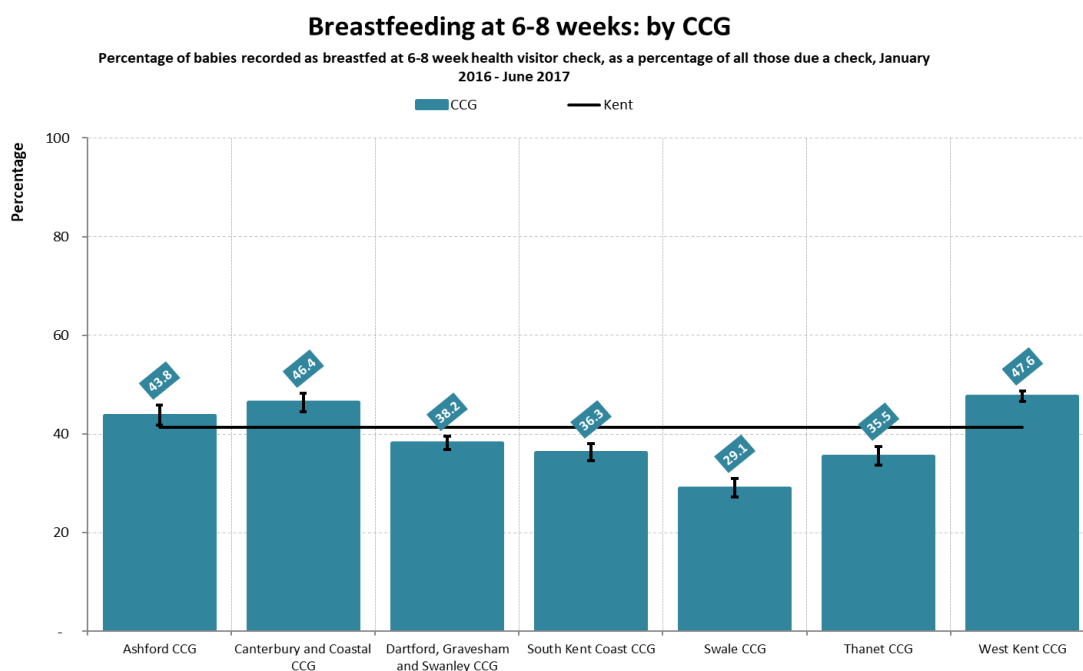
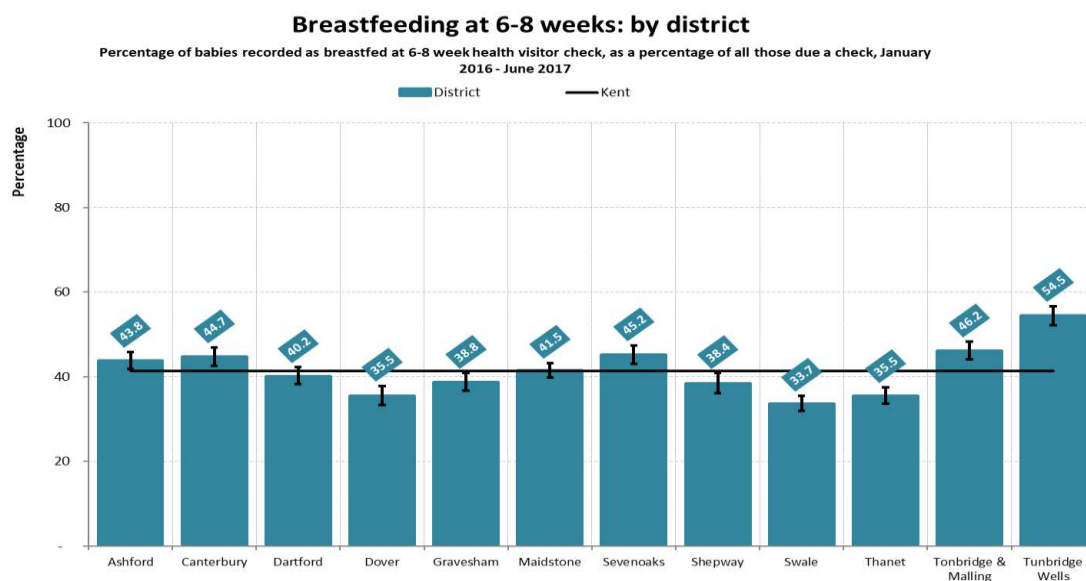Source: KCHFT, prepared by KPHO (RK), Nov-17

Breastfeeding at new born visit: by electoral ward

Percentage of babies recorded as breastfed at the newborn visit, as a percentage of all those due a check, Jan 2016 - June 2017

Percent

Less than 53.8
53.8 to 60.0
60.0 to 67.7
67.7 to 83.0
Greater than than 83.0

Source: KCHFT, prepared by KPHO (RK), Oct-17

Breastfeeding at new born visit: by electoral ward

Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Breastfeeding at new born visit: by electoral ward

Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017
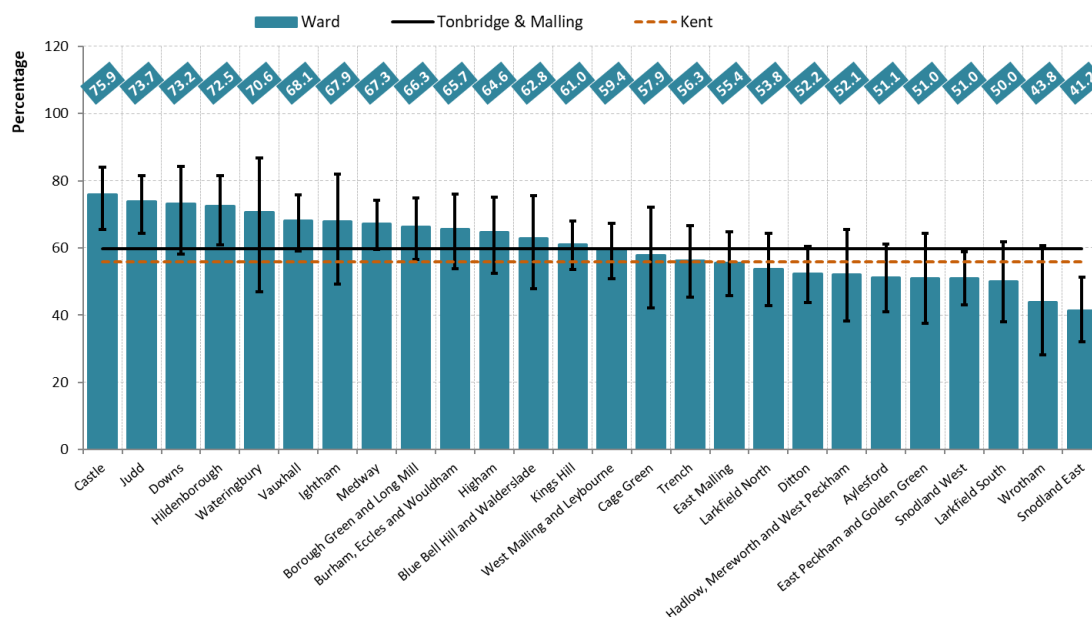
Source: KCHFT, prepared by KPHO (RK), Nov-17

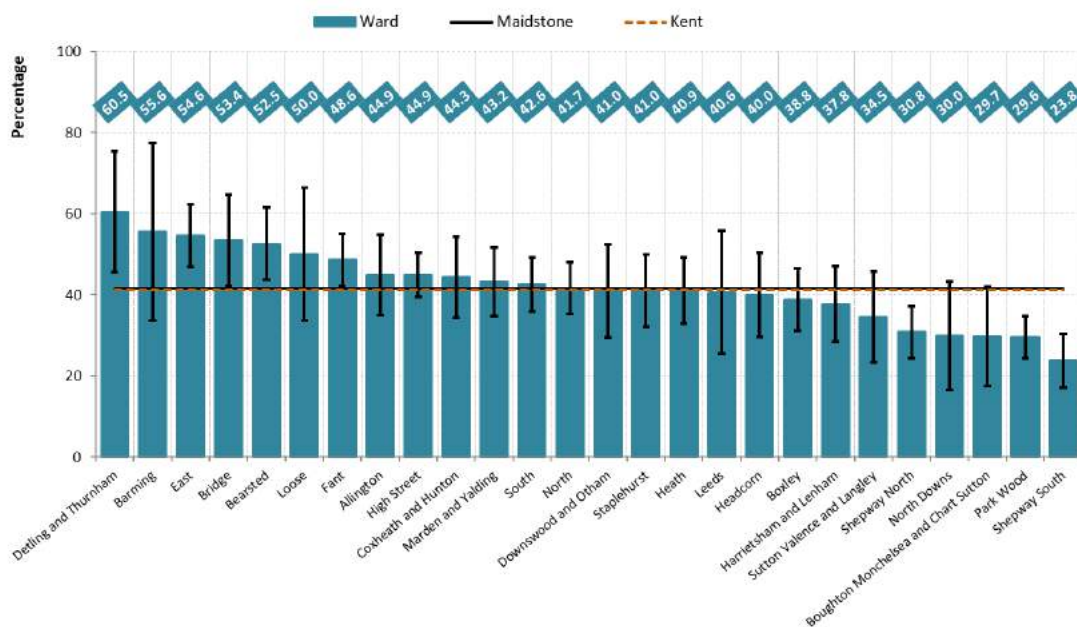**Breastfeeding at new born visit: by electoral ward**

Percentage of babies recorded as breastfed at health visitor new born visit, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Figure 58 Breastfeeding at 6-8 weeks – by CCG
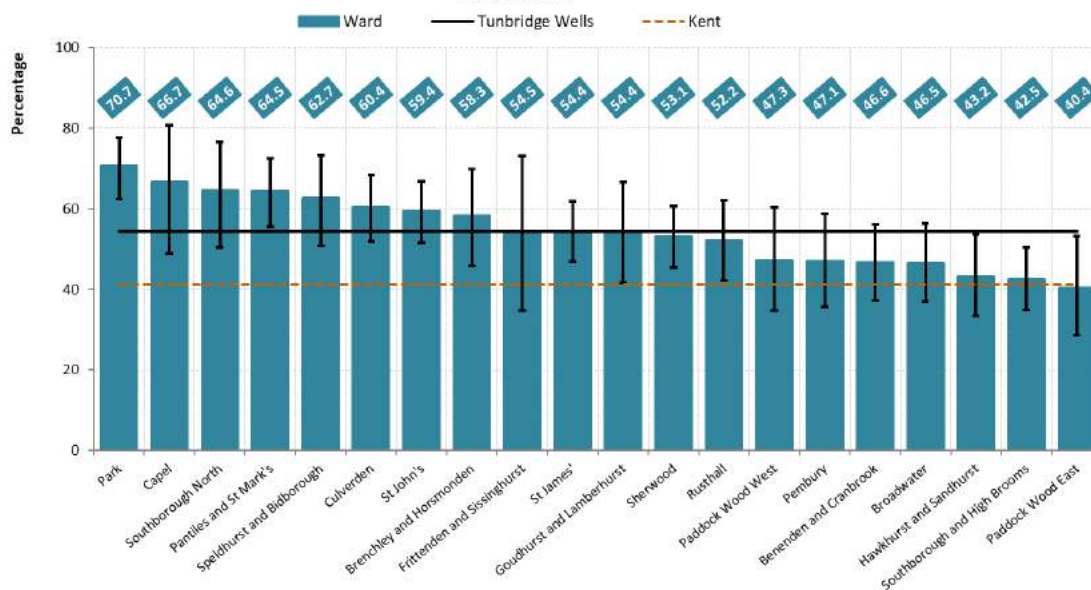

Breastfeeding at 6-8 weeks: by CCG

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Figure 59 Breastfeeding at 6-8 weeks – by district
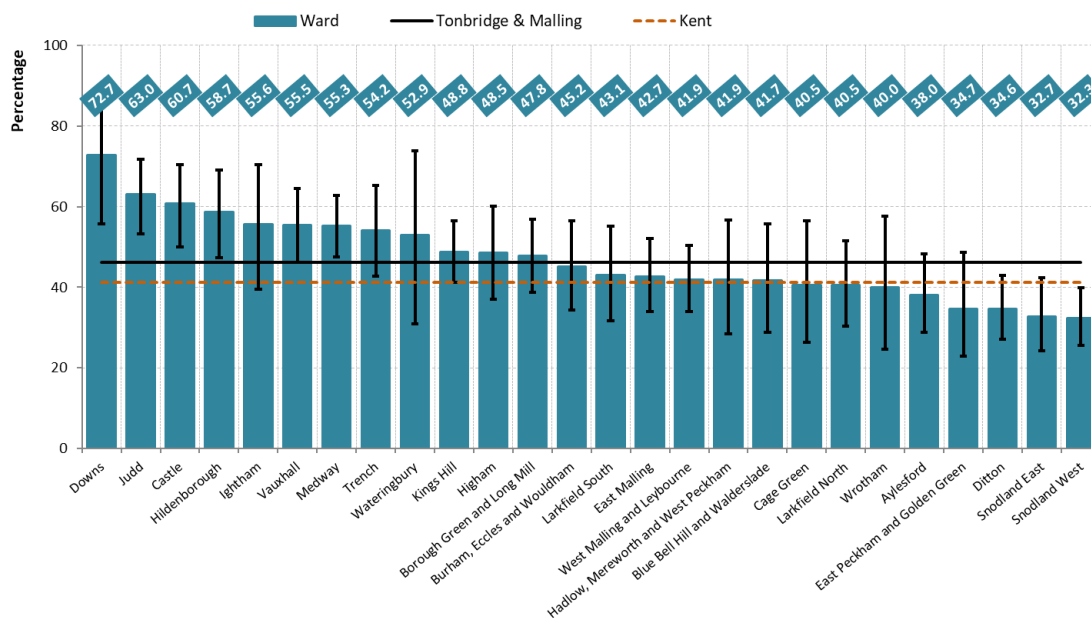

Breastfeeding at 6-8 weeks: by district

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Figure 60 Breastfeeding at 6-8 weeks – by ward

Breastfeeding at 6-8 weeks: by electoral ward

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, Jan 2016 - June 2017

Percentage of babies recorded as breastfed at 6-8 weeks

- Less than 33.5
- 33.5 to 40.4
- 40.4 to 45.0
- 45.0 to 53.4
- Greater than 53.4

Source: KCHFT, prepared by KPHO (RK), Nov-17

Breastfeeding at 6-8 weeks: by electoral ward

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017
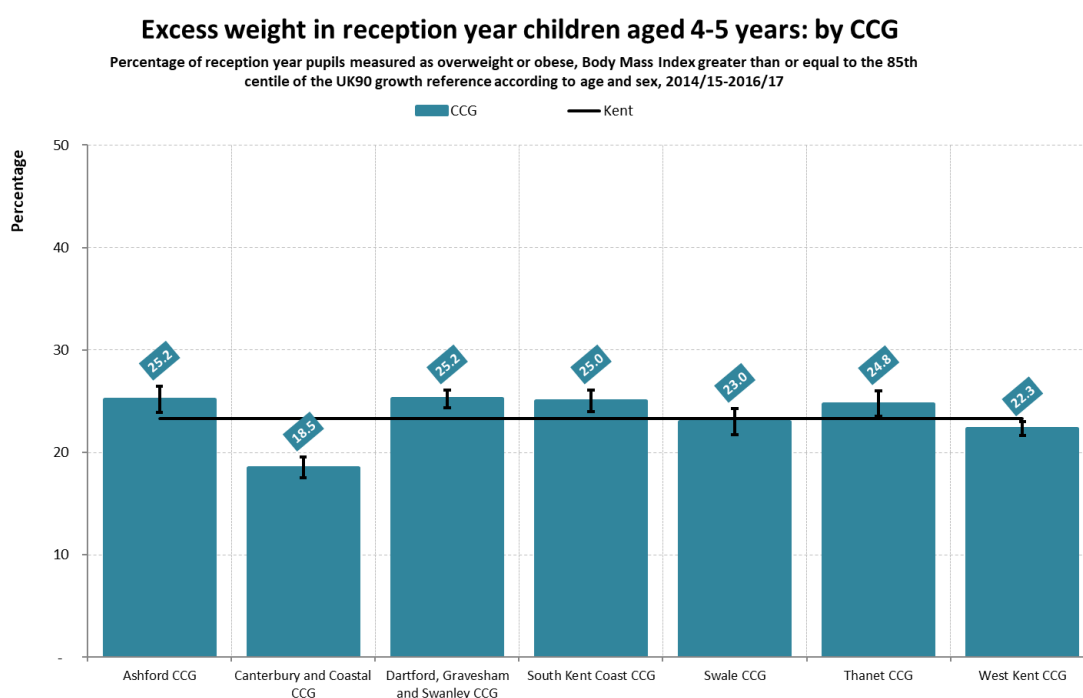

Breastfeeding at 6-8 weeks: by electoral ward

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Breastfeeding at 6-8 weeks: by electoral ward

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Breastfeeding at 6-8 weeks: by electoral ward

Percentage of babies recorded as breastfed at 6-8 week health visitor check, as a percentage of all those due a check, January 2016 - June 2017

Source: KCHFT, prepared by KPHO (RK), Nov-17

Excess weight

Whilst excess weight levels amongst year 6 pupils in three of the four West Kent districts are lower than the Kent average, excess weight levels amongst reception year pupils are similar to the Kent average across all four West Kent districts. There is considerable variation between electoral wards. Excess weight levels for year six pupils are significantly higher than the West Kent average in Wrotham, North Downs, Paddock Wood East, Shepway North, Broadwater, Larkfield South and High Street. Excess weight levels for reception year pupils are significantly higher than the West Kent average in Benenden & Cranbrook, Hadlow, Mereworth & West Peckham, Rusthall, Trench and Allington.

Excess weight levels in reception year are around a third higher in the most deprived areas of West Kent than the least deprived areas (28.3% for areas of West Kent falling into the most deprived Kent quintile compared with 21.5% for areas falling into the least deprived Kent quintile). The gap increases so that by year 6 excess weight levels are 43% higher in the most deprived areas of West Kent than the least deprived areas (34.5% for areas of West Kent falling into the most deprived Kent quintile compared with 24.1% for areas falling into the least deprived Kent quintile)

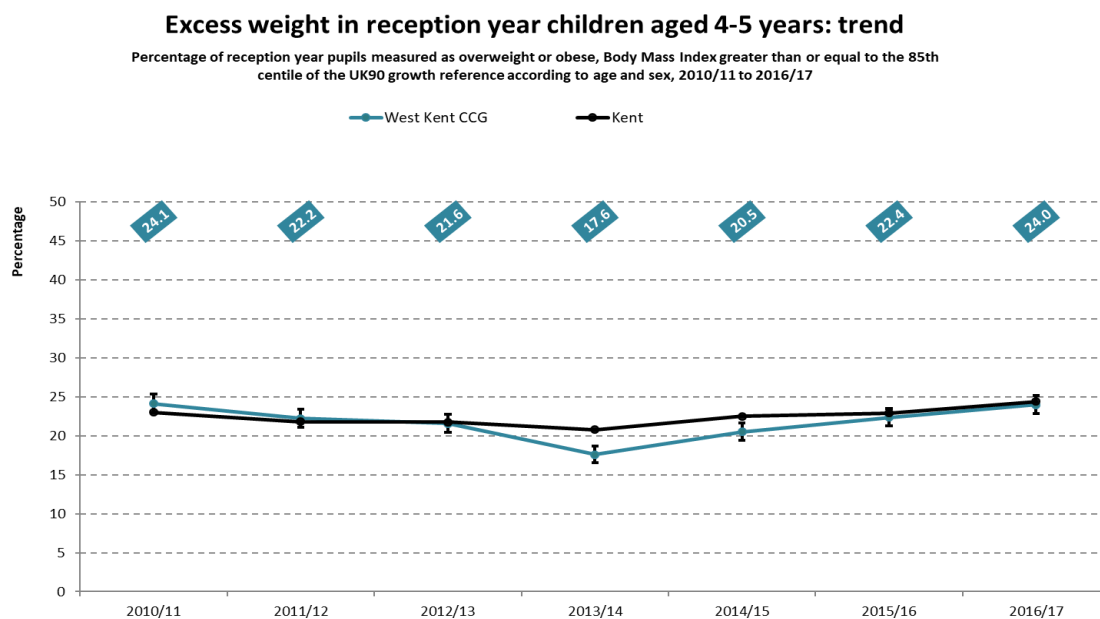**Figure 61 Excess weight in reception year children – by CCG**

Excess weight in reception year children aged 4-5 years: by CCG

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

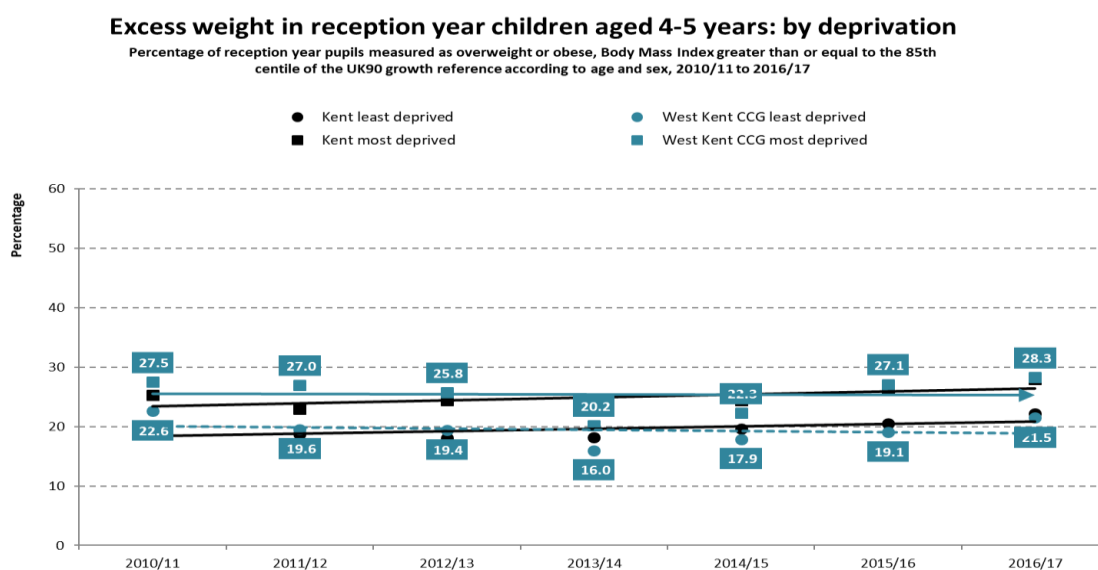## Figure 62 Excess weight in reception year children – by district

Excess weight in reception year children aged 4-5 years: by district

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17
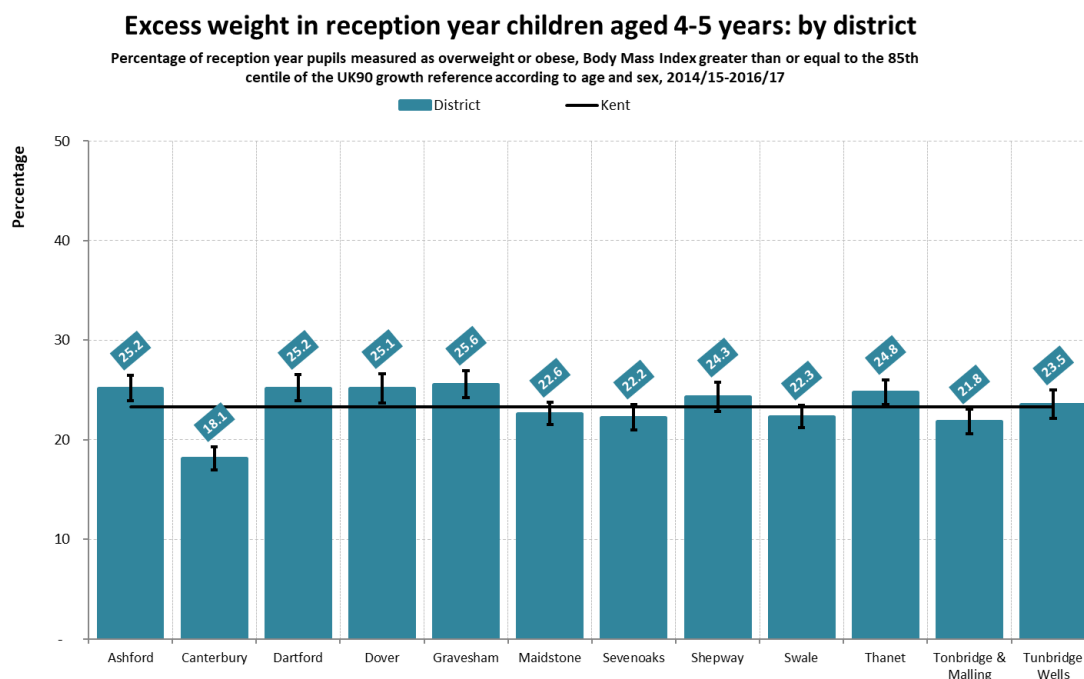
Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Figure 63 Excess weight in reception year children – trend

Excess weight in reception year children aged 4-5 years: trend
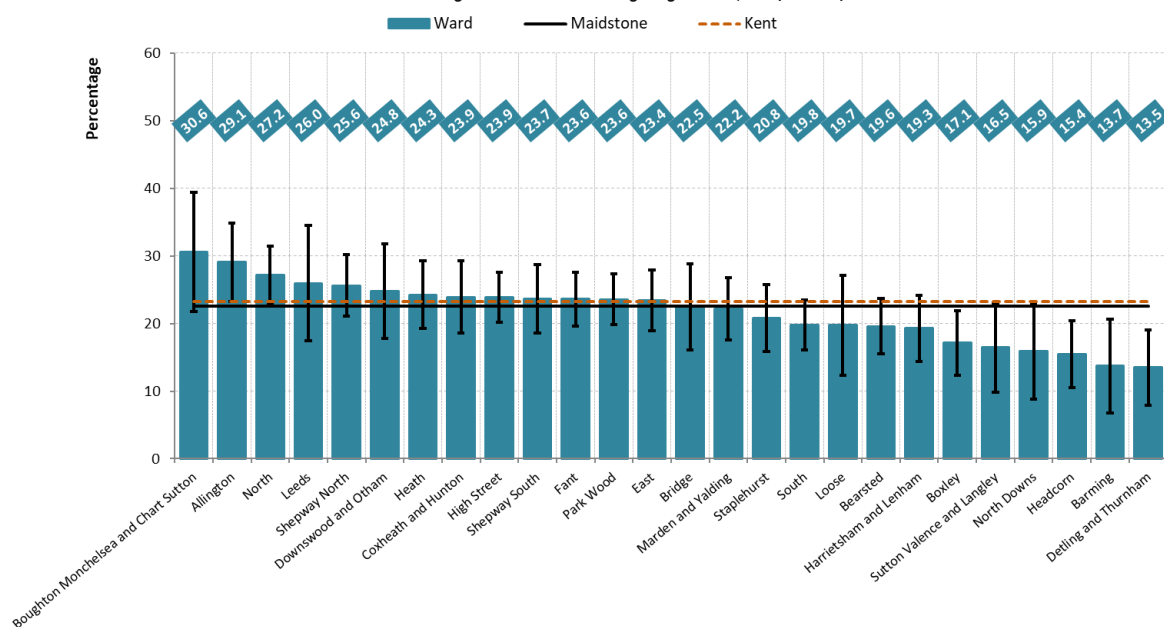
Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2010/11 to 2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 64 Excess weight in reception year children – by deprivation

Excess weight in reception year children aged 4-5 years: by deprivation
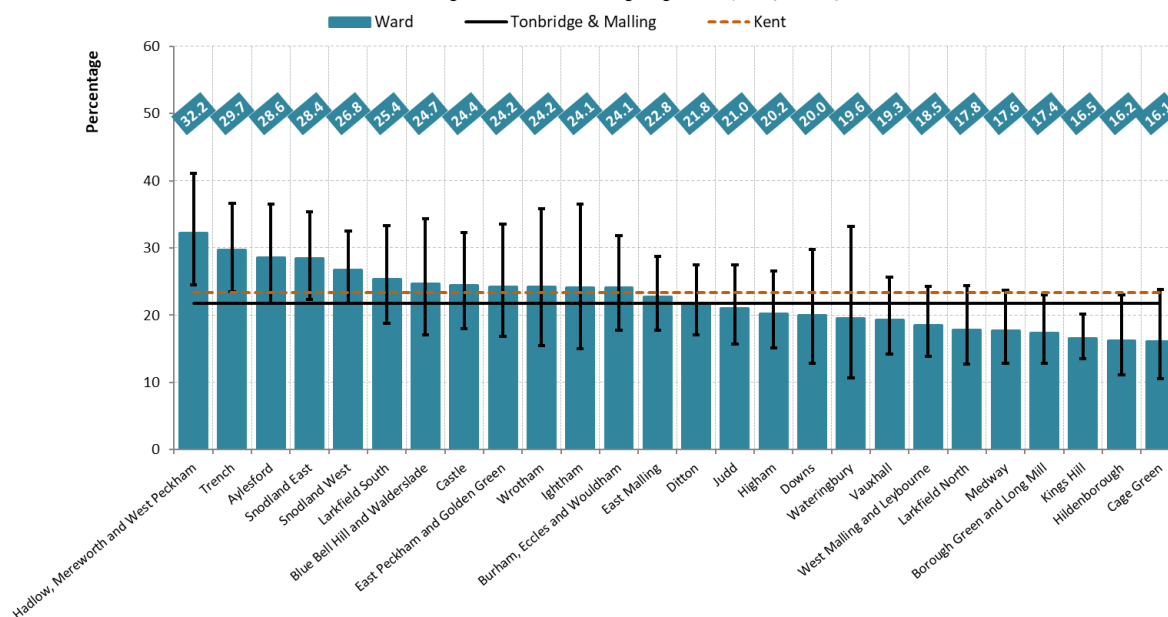
Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2010/11 to 2016/17

- ● Kent least deprived
- ■ Kent most deprived
- ● West Kent CCG least deprived
- ■ West Kent CCG most deprived

Least deprived trend - no significant change compared with a stable trend for Kent
Most deprived trend - no significant change compared with a stable trend for Kent

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 65 Excess weight in reception year children – by ward

Excess weight in reception year children aged 4-5 years: by electoral ward

Pecentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2016-17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

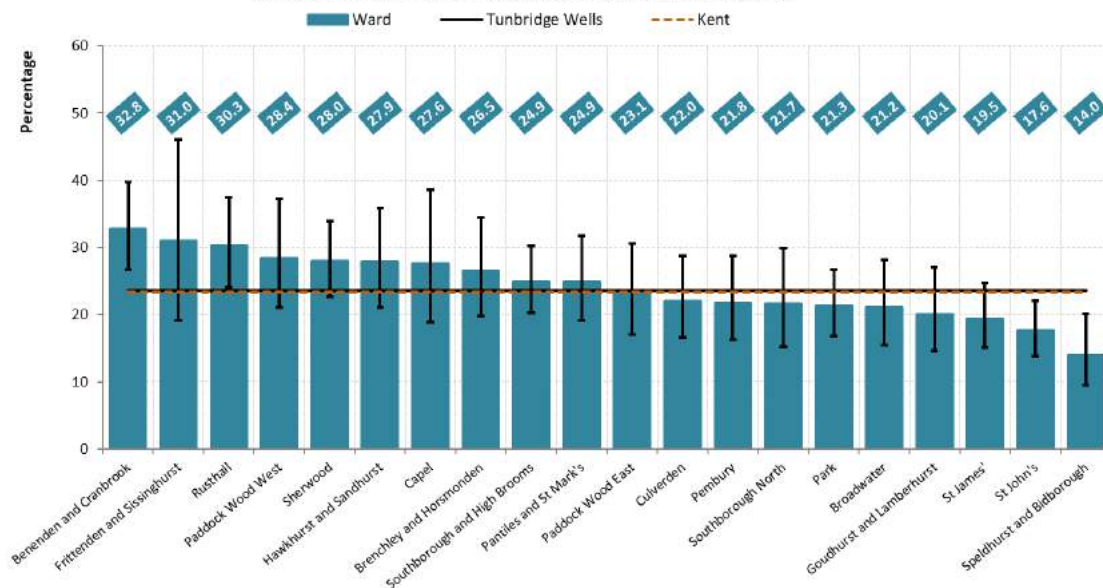## Excess weight in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Excess weight in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17
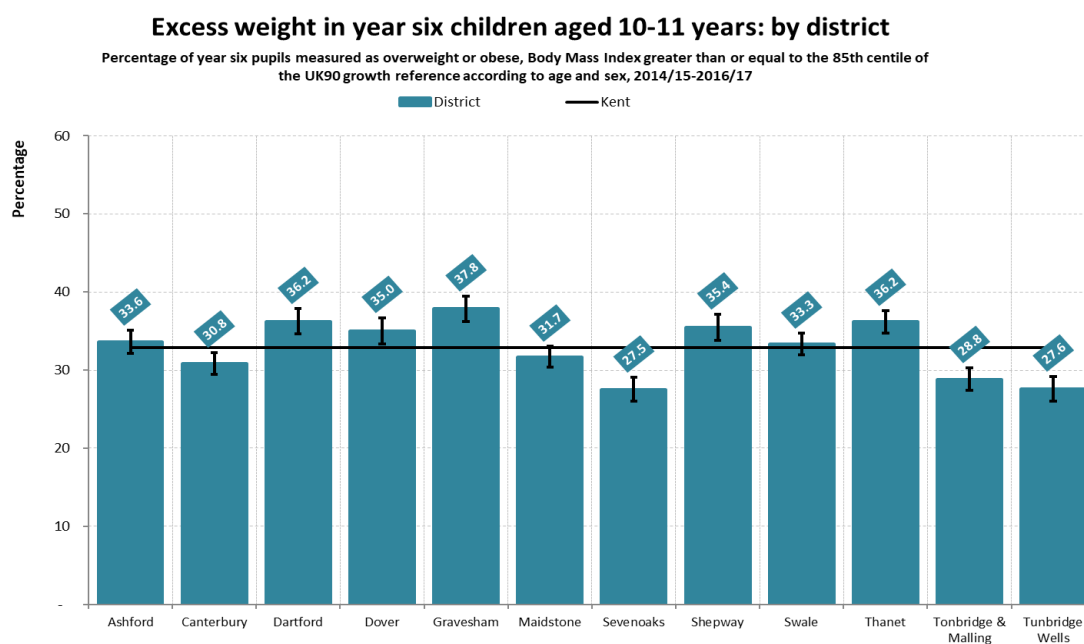

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Excess weight in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Excess weight in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

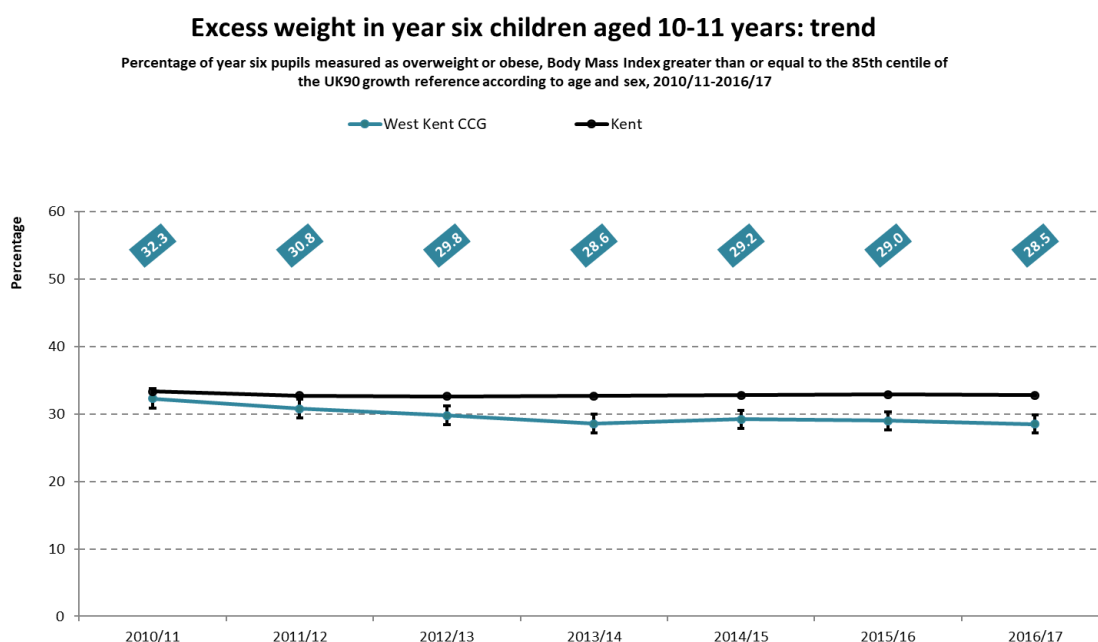## Figure 66 Excess weight in year 6 children – by CCG

Excess weight in year six children aged 10-11 years: by CCG

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17
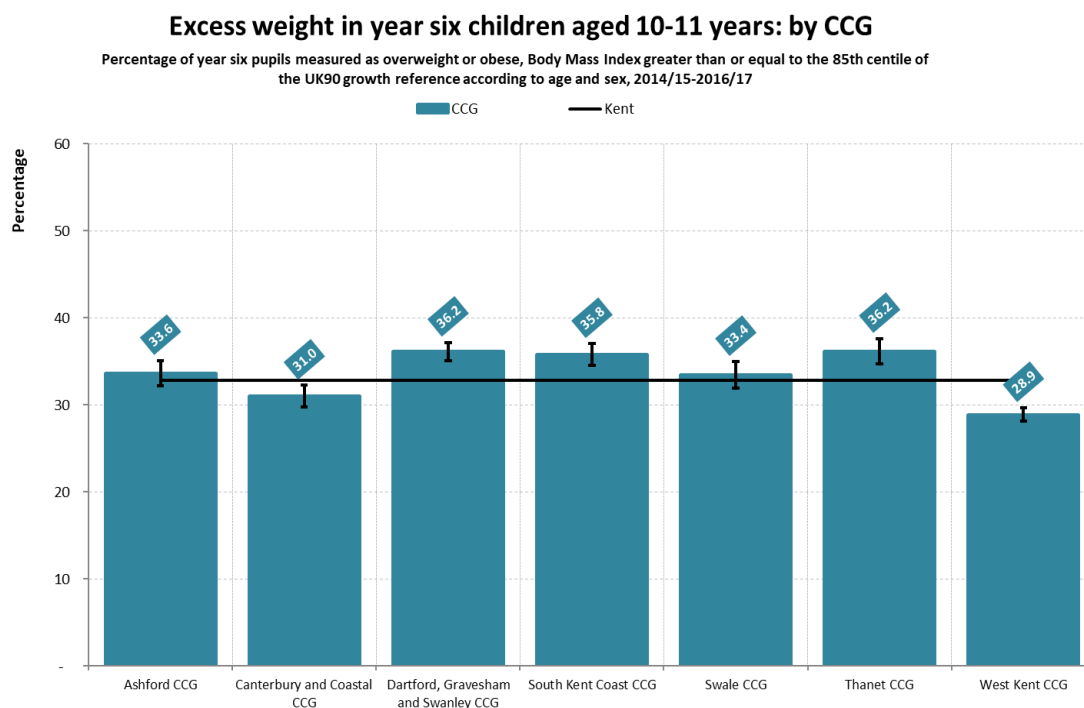
Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Figure 67 Excess weight in year 6 children – by district

Excess weight in year six children aged 10-11 years: by district

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Figure 68 Excess weight in year 6 children – trend

Excess weight in year six children aged 10-11 years: trend

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2010/11-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 69 Excess weight in year 6 children – by deprivation
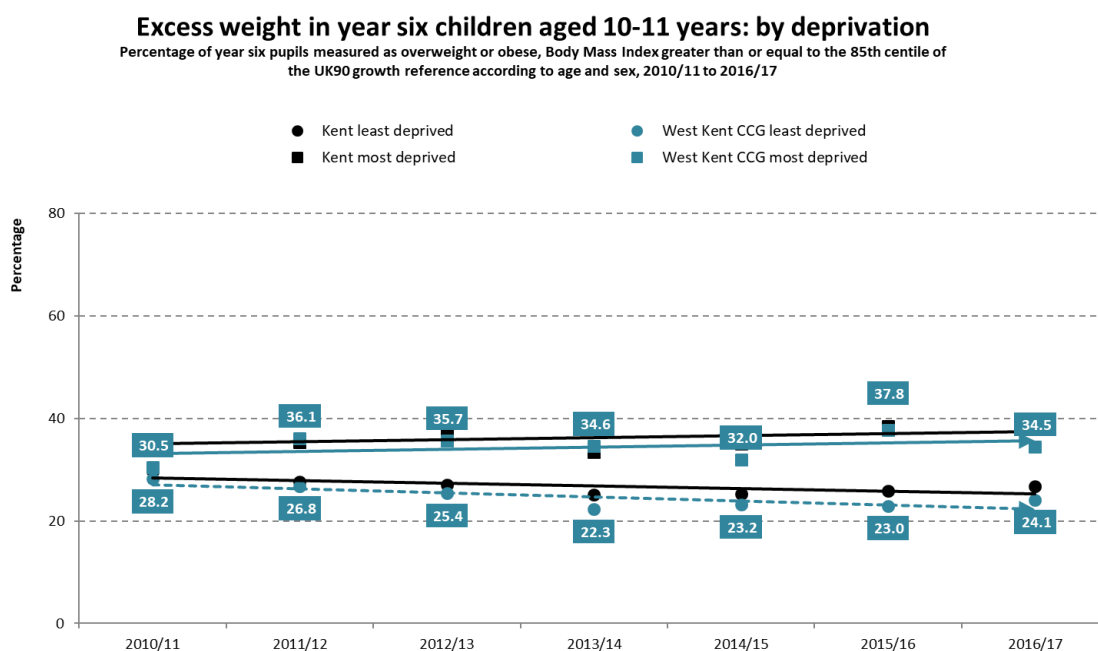
Excess weight in year six children aged 10-11 years: by deprivation

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2010/11 to 2016/17

Least deprived trend - decreasing compared with a stable trend for Kent
Most deprived trend - no significant change compared with a stable trend for Kent

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 70 Excess weight in year 6 children – by ward

Excess weight in year six children aged 10-11 years: by electoral ward

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

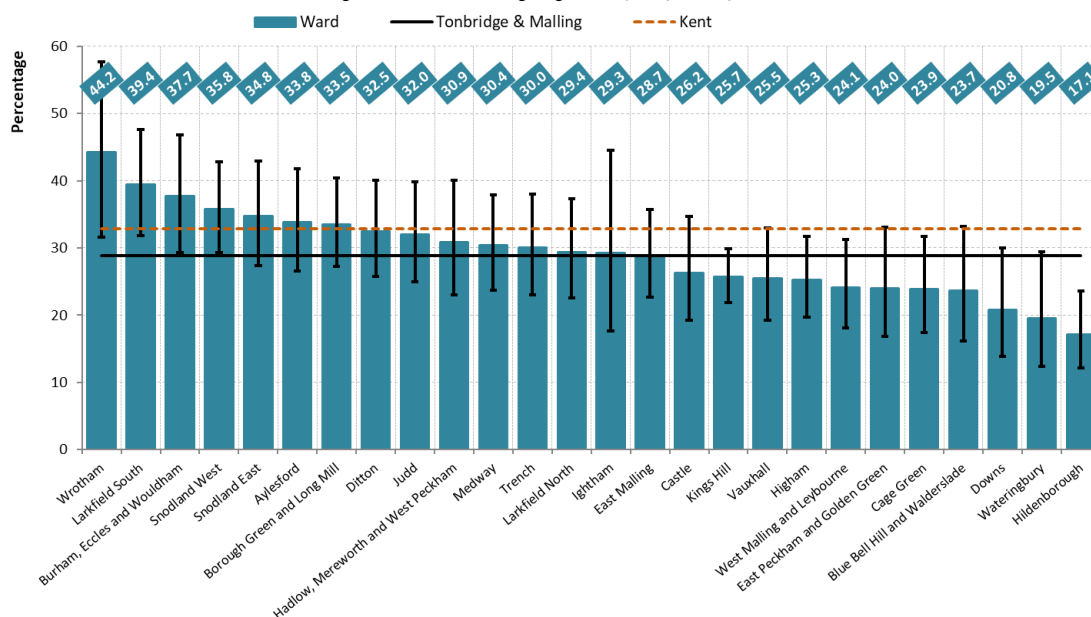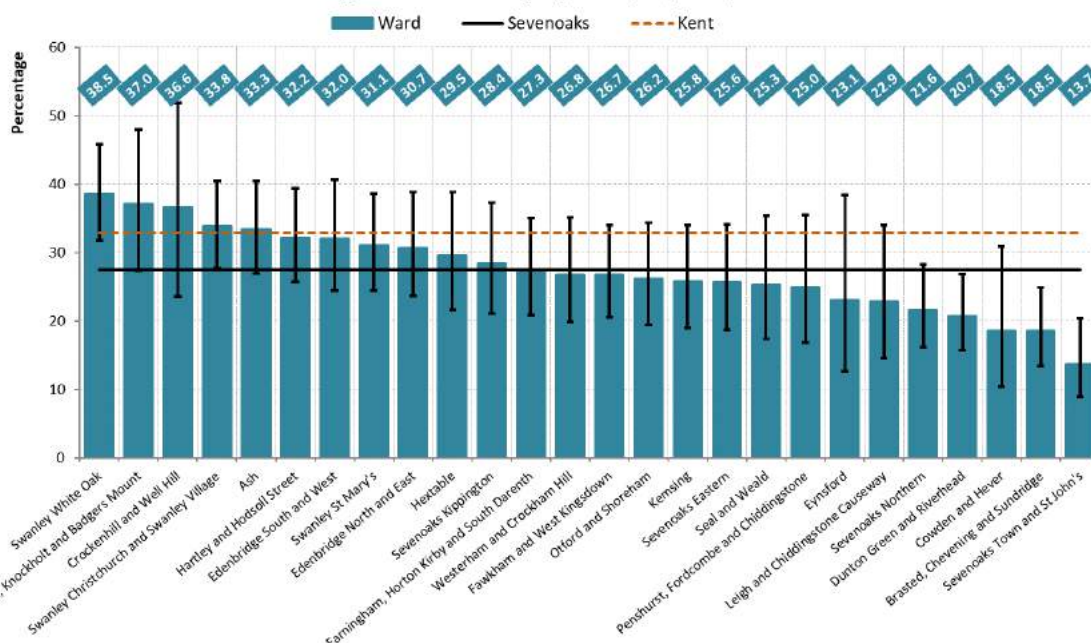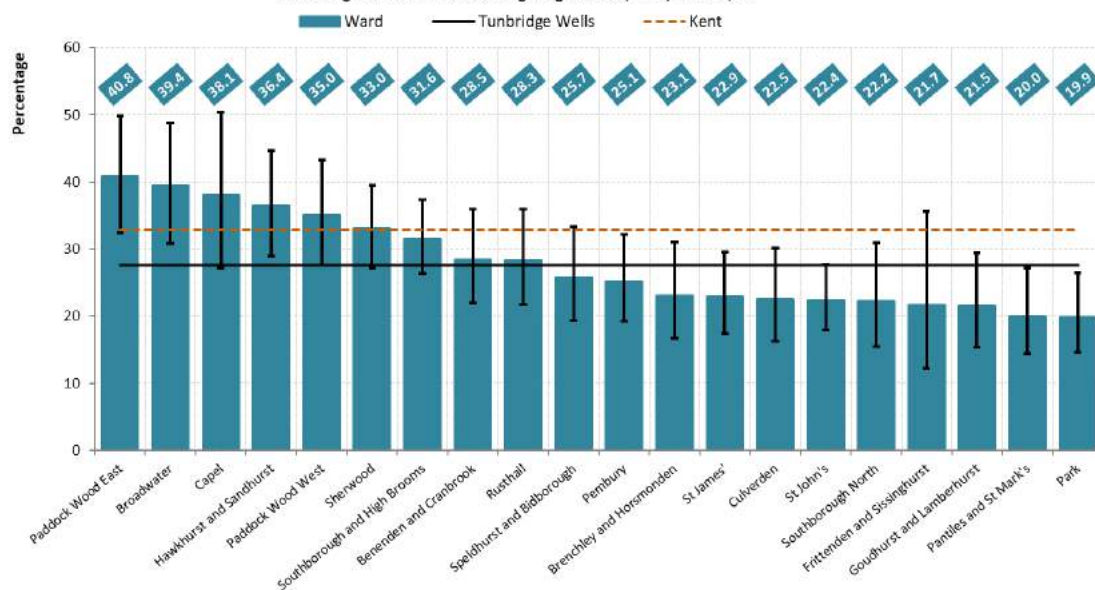### Excess weight in year six children aged 10-11 years: by electoral ward

Pecentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Excess weight in year six children aged 10-11 years: by electoral ward

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Excess weight in year six children aged 10-11 years: by electoral ward

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Excess weight in year six children aged 10-11 years: by electoral ward

Percentage of year six pupils measured as overweight or obese, Body Mass Index greater than or equal to the 85th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

5.6 A&E attendances

The age-standardised rate of A&E attendances in children in West Kent is lower than the Kent average, both for children aged 0-4 and for children aged 0-19. Of the West Kent districts, Sevenoaks has the highest A&E attendance rates, which are also higher than the Kent average. Trend analysis suggests that the A&E attendance rates in West Kent are increasing, as they are across Kent as a whole, particularly in the least deprived areas. There is, however, considerable variation between electoral wards. A&E attendance rates are significantly higher than the West Kent average for both 0-4-year olds and 0-19-year olds in:

- Aylesford
- Cowden & Hever
- Dunton Green & Riverhead
- East Malling
- Edenbridge North & East
- Edenbridge South & West
- High Street
- Kemsing
- North Downs
- Park Wood
- Sevenoaks Eastern
- Sevenoaks Northern
- Sherwood
- Westerham & Crockham Hill

A&E attendance rate are around 30% higher in the most deprived areas of West Kent than the least deprived areas, for both 0-4-year olds and 0-19-year olds.

Figure 71 A&E attendances in children aged 0-4 years – by CCG

Accident & Emergency attendances in children aged 0-4 years: by CCG

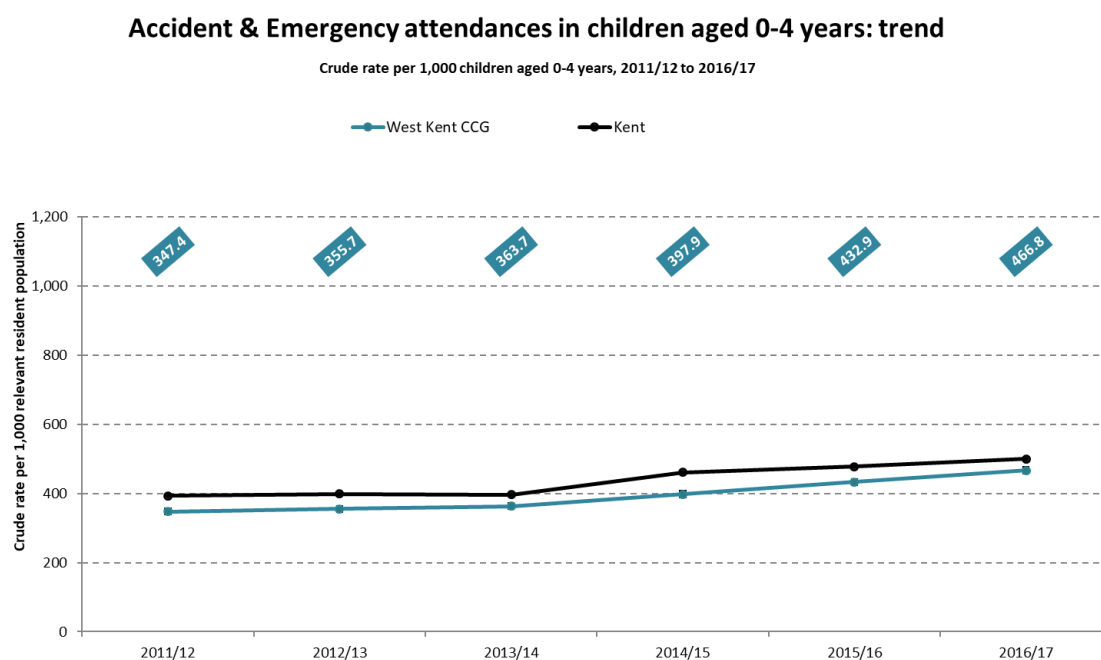Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17
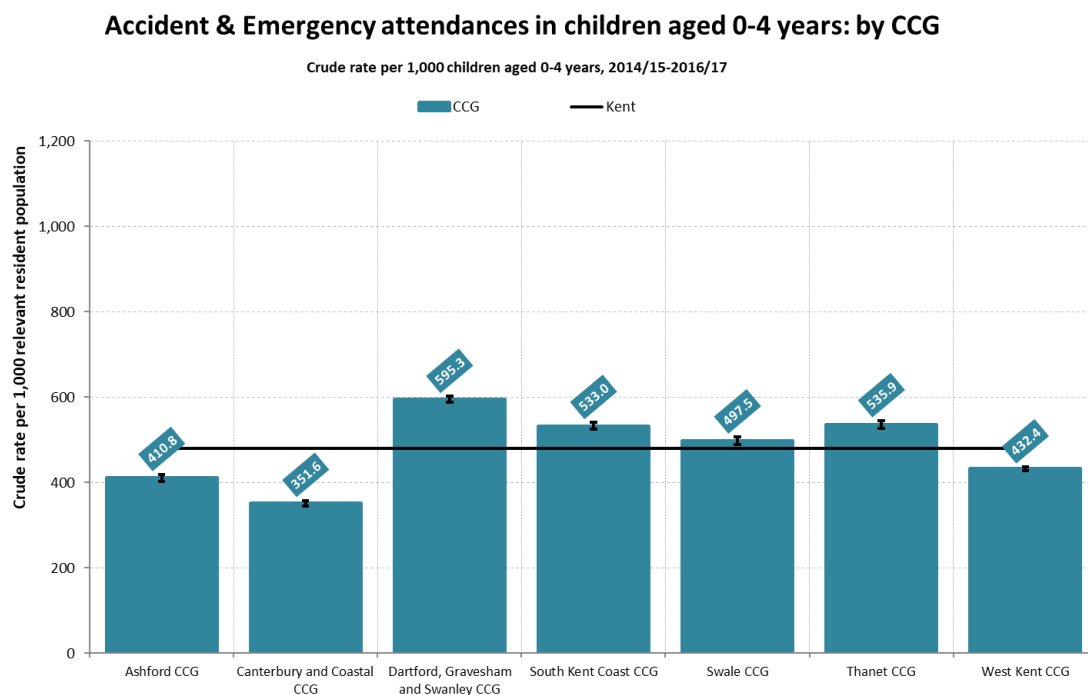
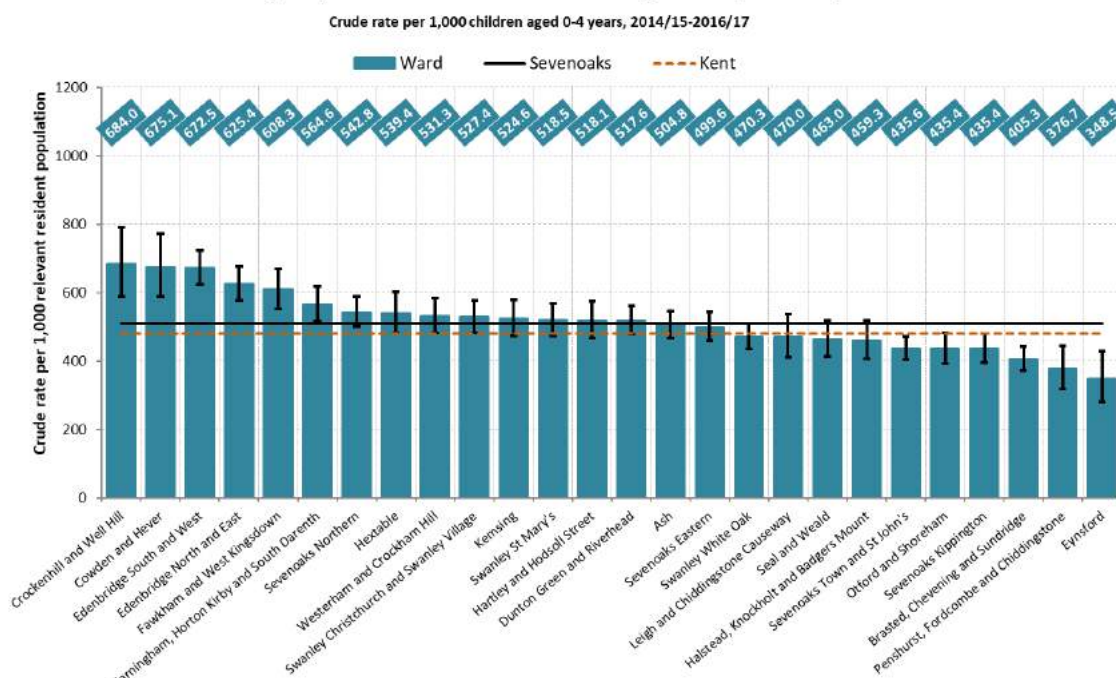Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 72 A&E attendances in children aged 0-4 years – by district

Accident & Emergency attendances in children aged 0-4 years: by district

Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17
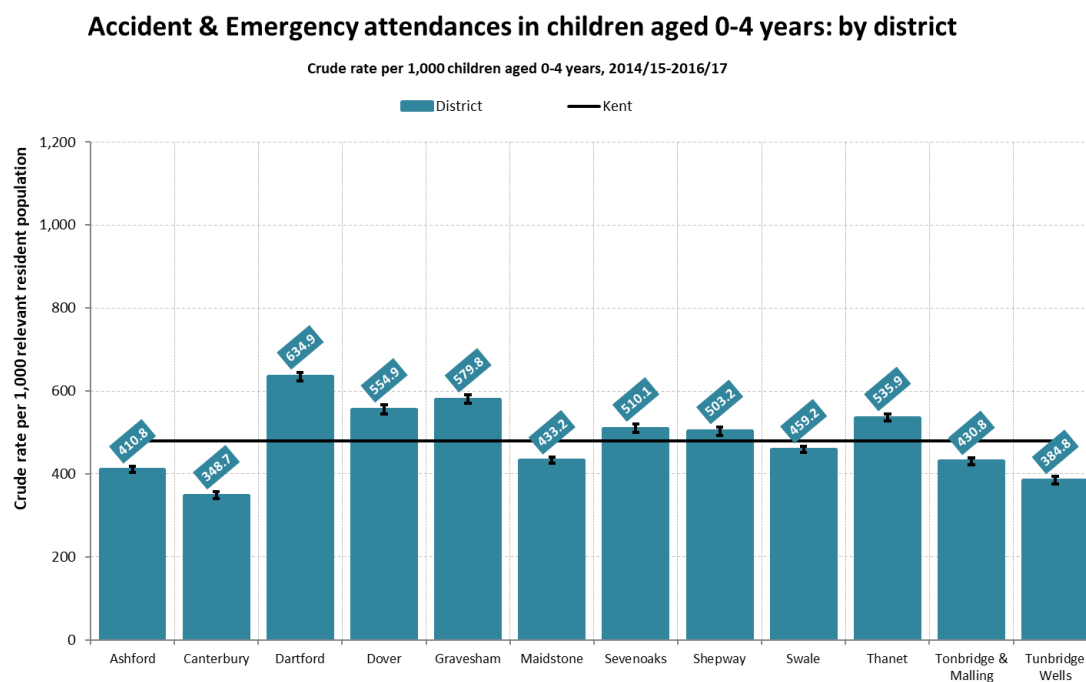
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

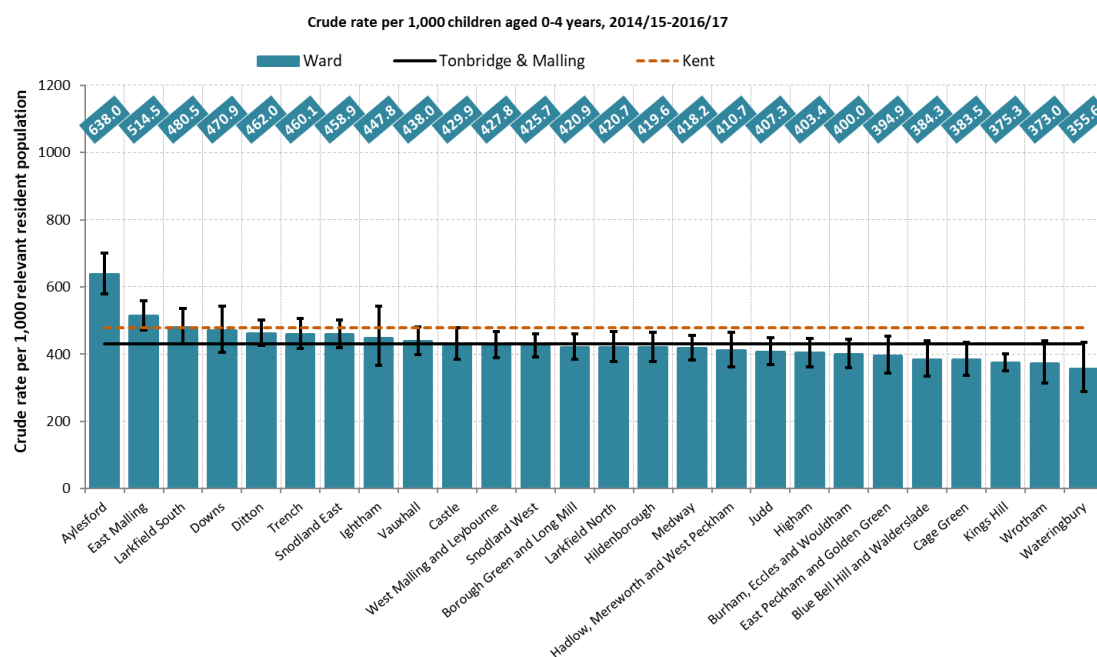## Figure 73 A&E attendances in children aged 0-4 years – trend

Accident & Emergency attendances in children aged 0-4 years: trend

Crude rate per 1,000 children aged 0-4 years, 2011/12 to 2016/17

Increasing with a similar pace of change to Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 74 A&E attendances in children aged 0-4 years – by ward
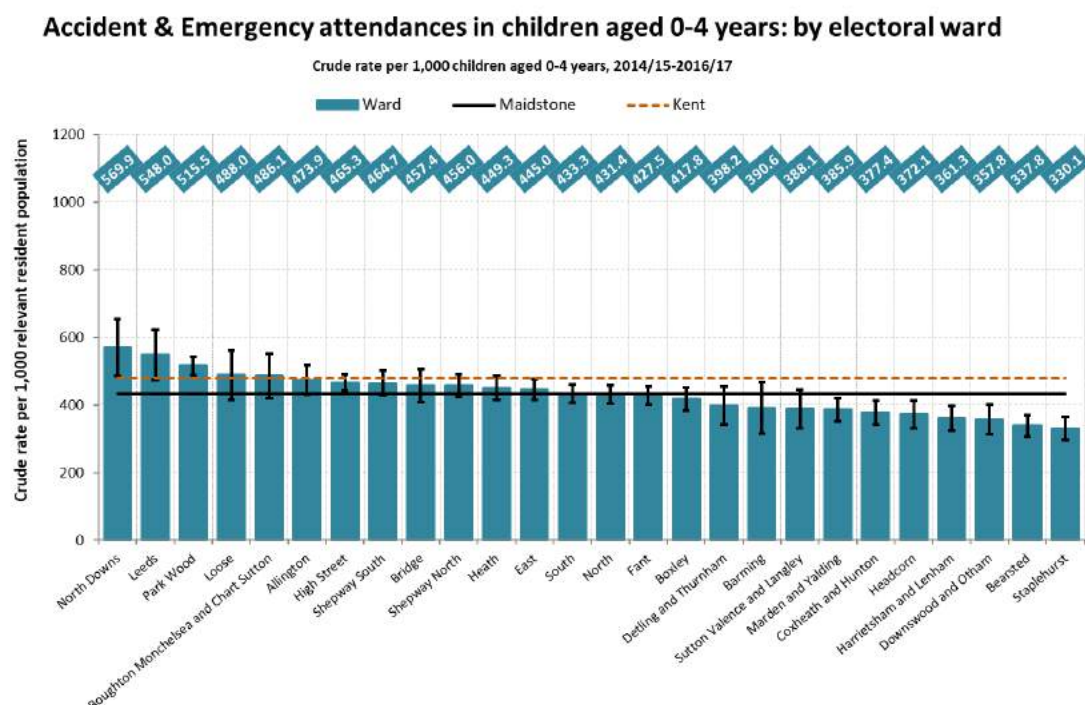
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17
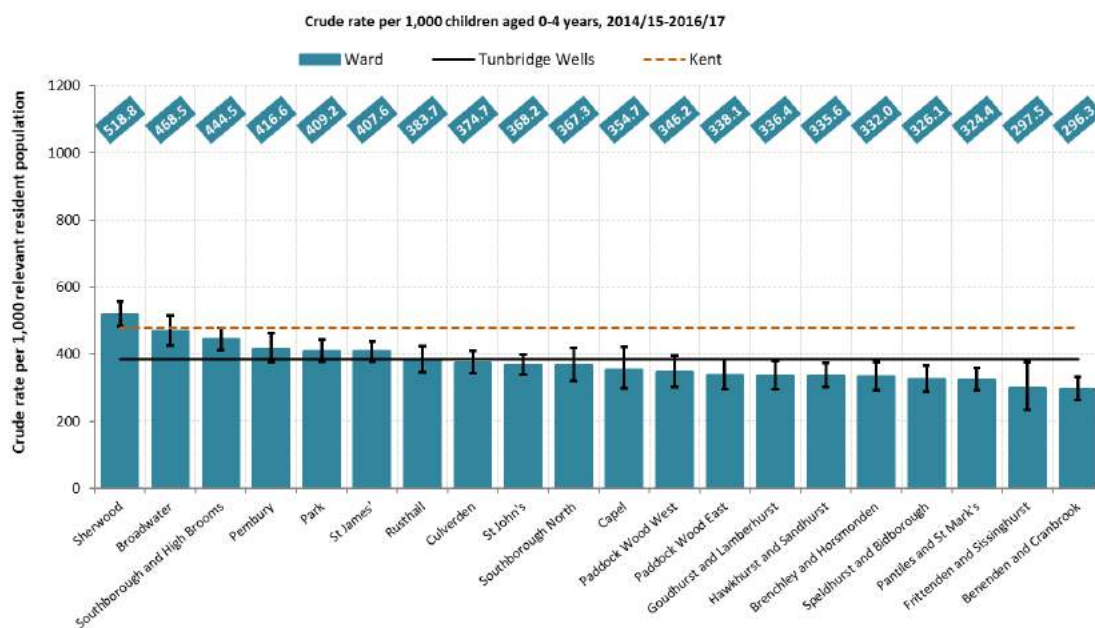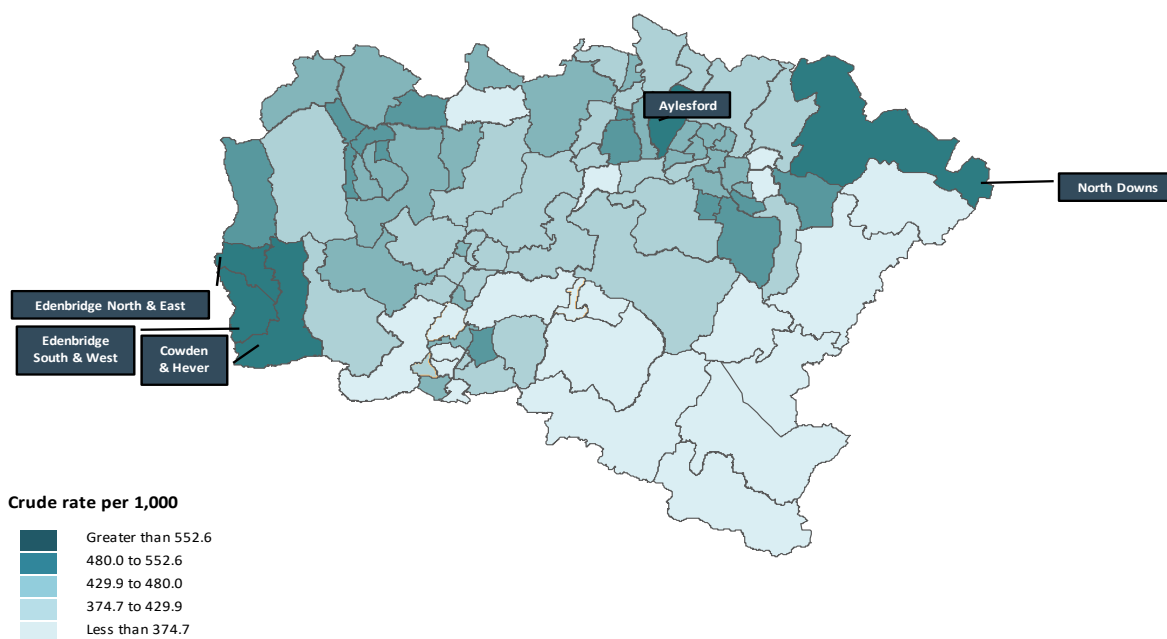
Accident & Emergency attendances in children aged 0-4 years: by electoral ward

Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children aged 0-4 years: by electoral ward

Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17
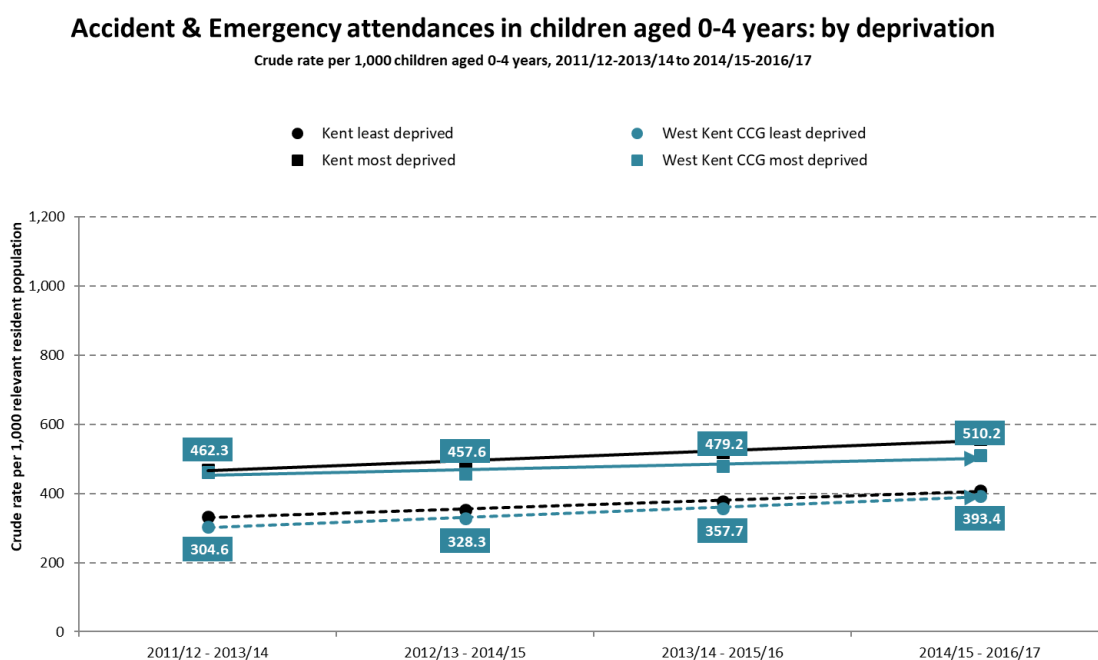
Accident & Emergency attendances in children aged 0-4 years: by electoral ward

Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children aged 0-4 years: by electoral ward

Crude rate per 1,000 children aged 0-4 years, 2014/15-2016/17

Crude rate per 1,000

- Greater than 552.6
- 480.0 to 552.6
- 429.9 to 480.0
- 374.7 to 429.9
- Less than 374.7

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 75 A&E attendances in children aged 0-4 years – by deprivation

Accident & Emergency attendances in children aged 0-4 years: by deprivation

Crude rate per 1,000 children aged 0-4 years, 2011/12-2013/14 to 2014/15-2016/17

Least deprived trend - increasing with a similar pace of change to Kent
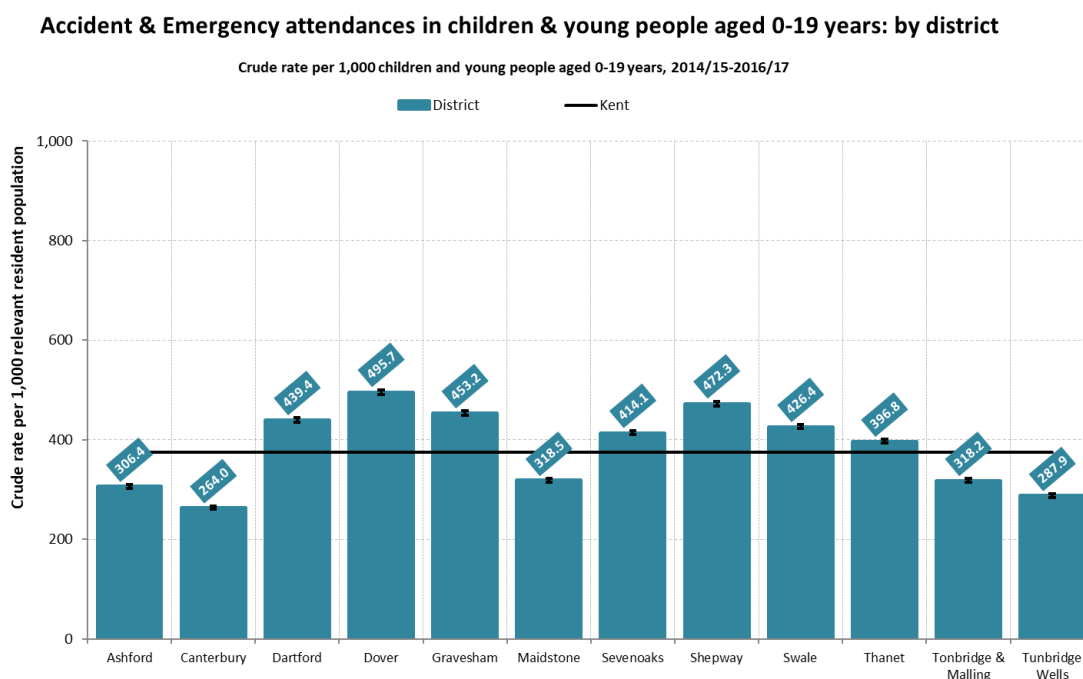Most deprived trend - no significant change compared with an increasing trend for Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

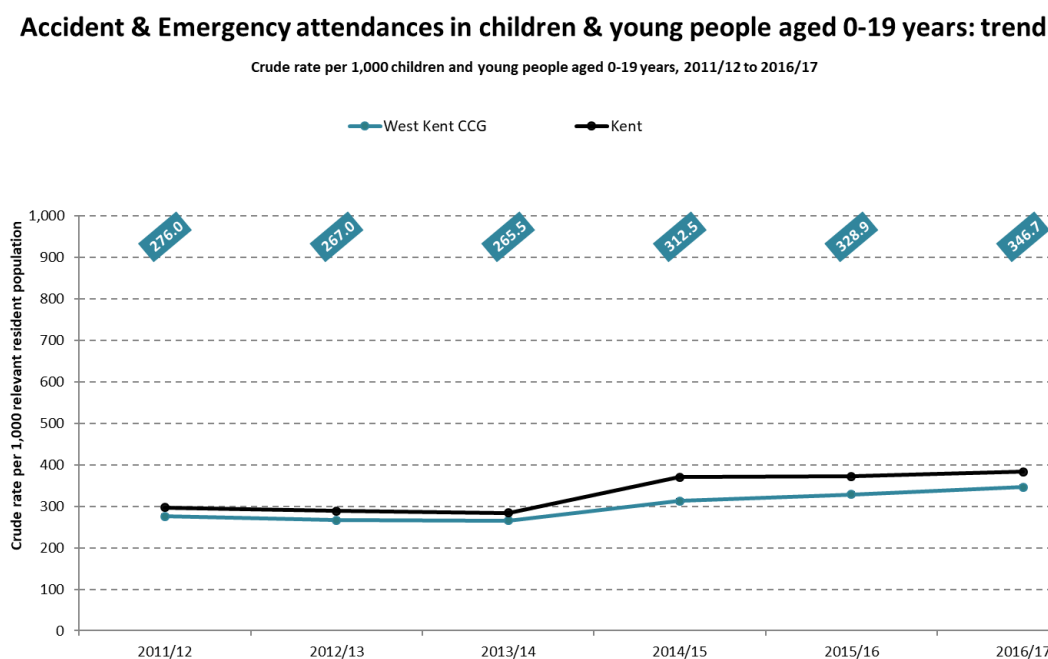## Figure 76 A&E attendances in children aged 0-19 years – by CCG

Accident & Emergency attendances in children & young people aged 0-19 years: by CCG

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17
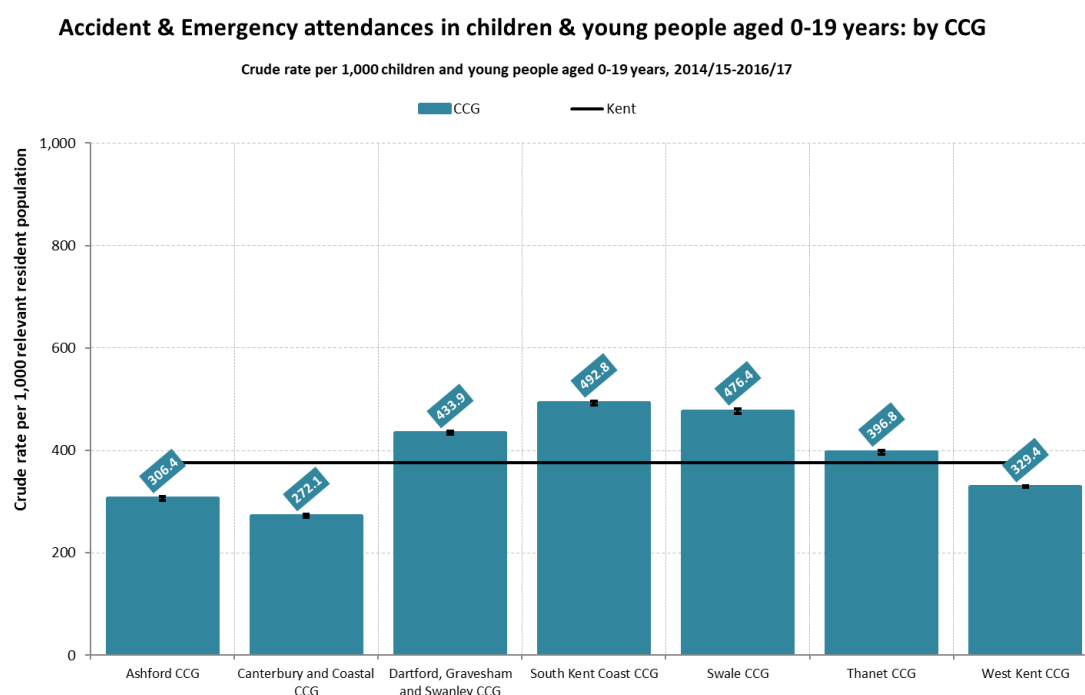
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 77 A&E attendances in children aged 0-19 years – by district

Accident & Emergency attendances in children & young people aged 0-19 years: by district

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

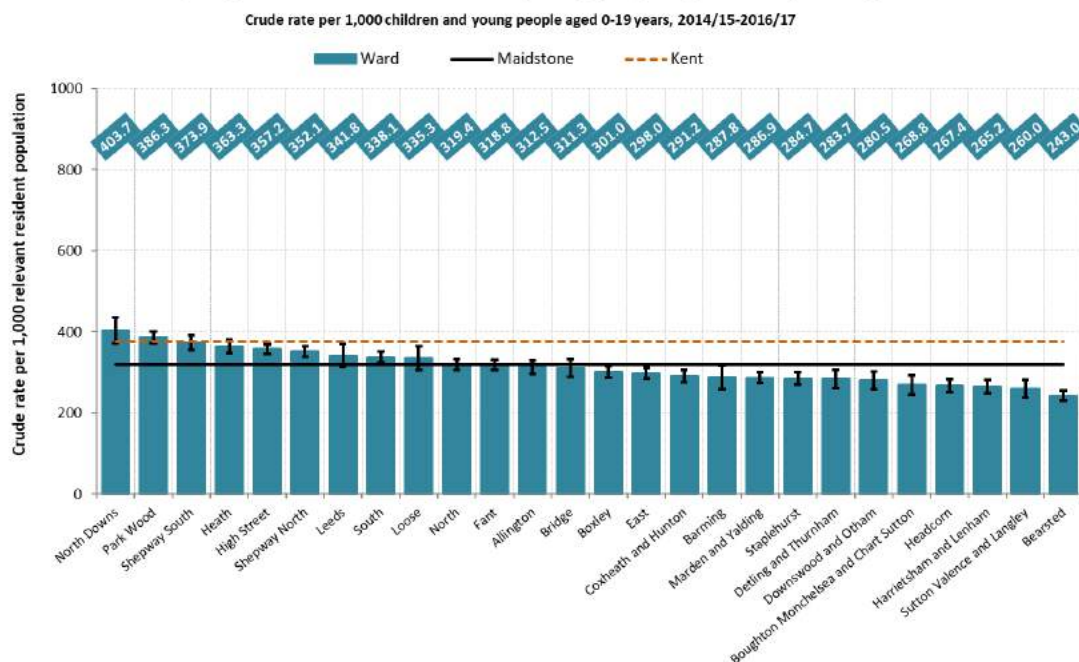## Figure 78 A&E attendances in children aged 0-19 years – trend

Accident & Emergency attendances in children & young people aged 0-19 years: trend

Crude rate per 1,000 children and young people aged 0-19 years, 2011/12 to 2016/17

Increasing with a similar pace of change to Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17
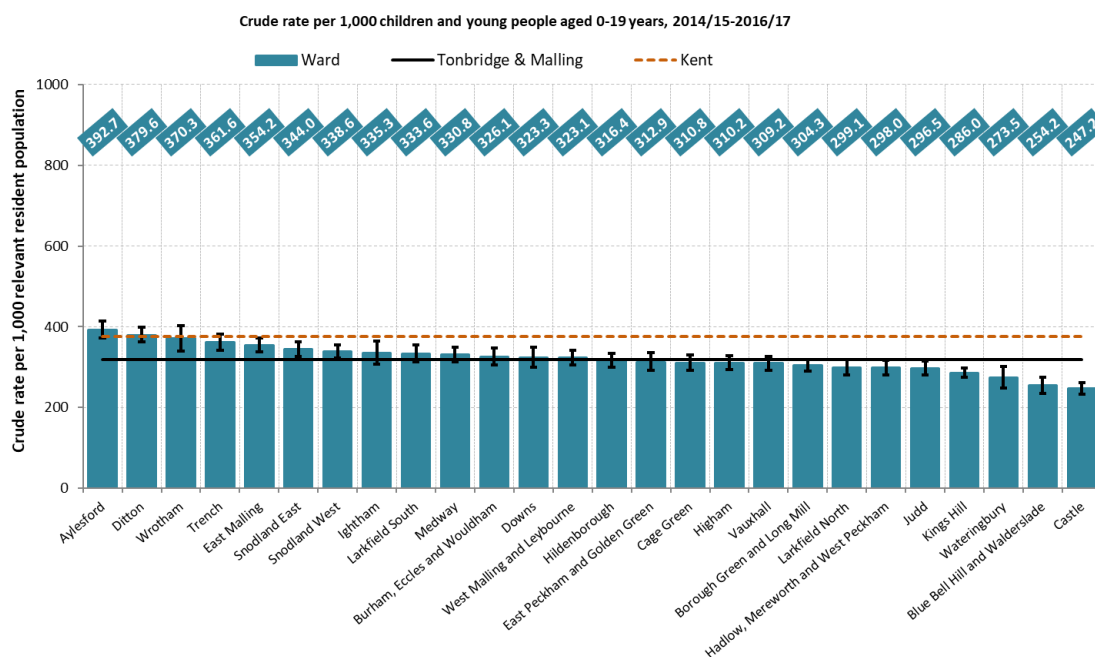
Figure 79 A&E attendances in children aged 0-19 years – by ward

Accident & Emergency attendances in children & young people aged 0-19 years: by electoral ward

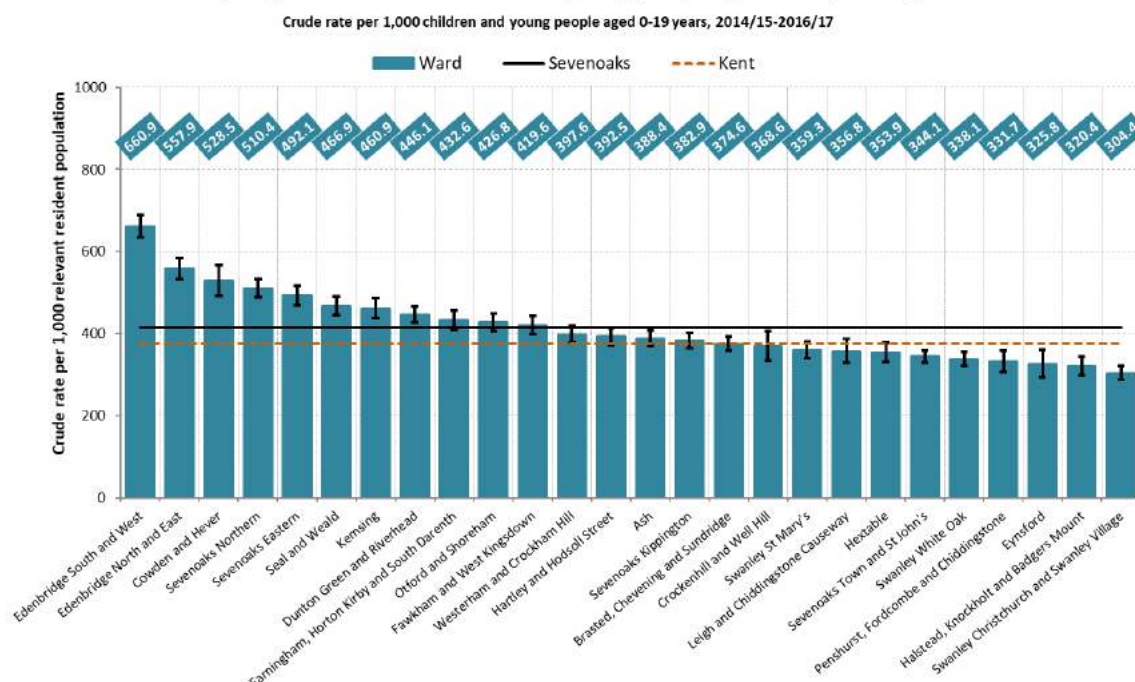Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children & young people aged 0-19 years: by electoral ward

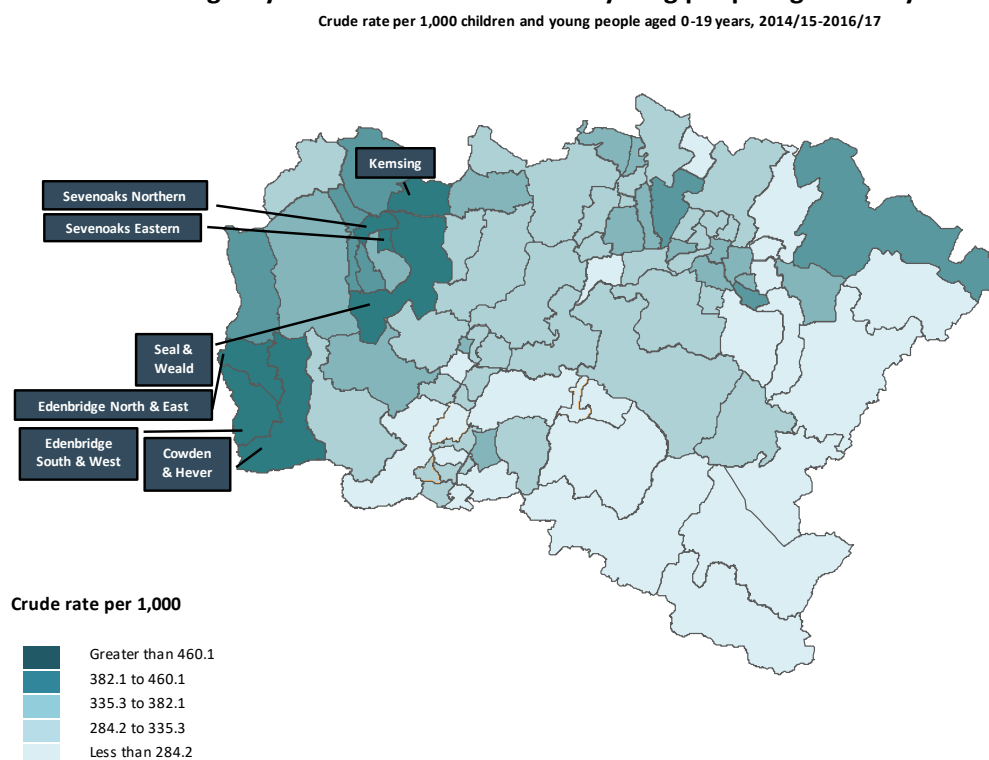Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children & young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17
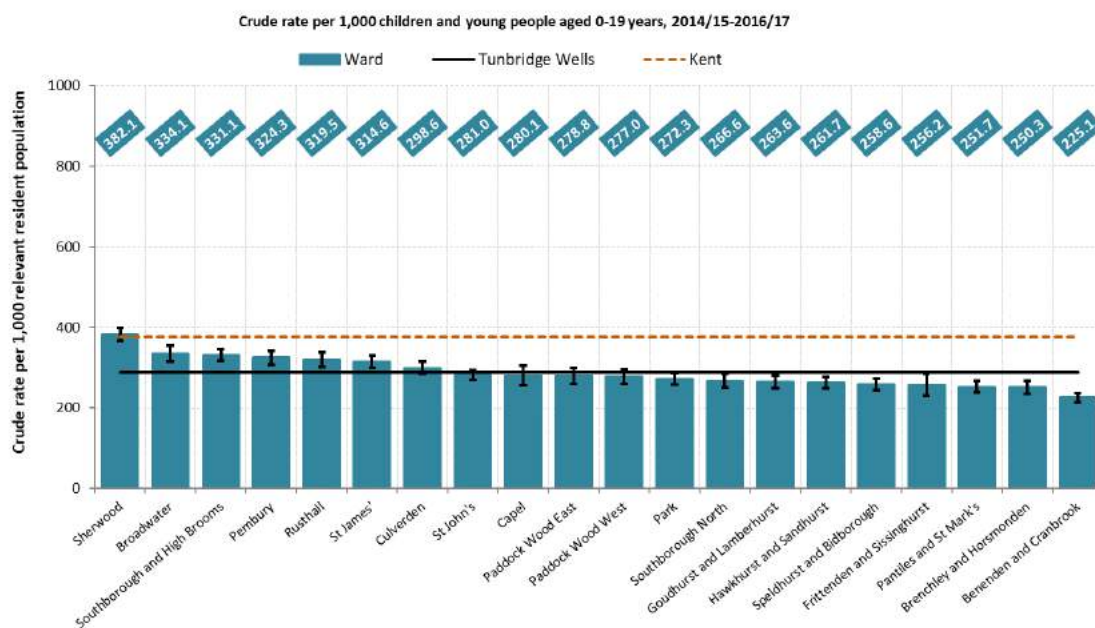
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children & young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Crude rate per 1,000

- Greater than 460.1
- 382.1 to 460.1
- 335.3 to 382.1
- 284.2 to 335.3
- Less than 284.2

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Accident & Emergency attendances in children & young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 80 A&E attendances in children aged 0-19 years – by deprivation

Accident & Emergency attendances in children & young people aged 0-19 years: by deprivation

Crude rate per 1,000 children and young people aged 0-19 years, 2011/12-2013/14 to 2014/15-2016/17
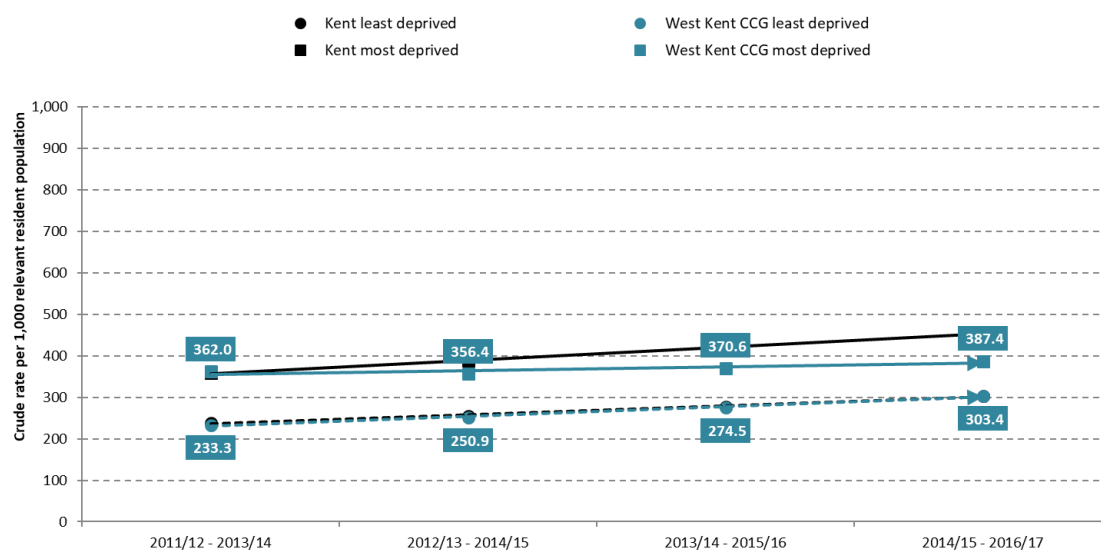
Least deprived trend - increasing with a similar pace of change to Kent

Most deprived trend - no significant change compared with an increasing trend for Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17
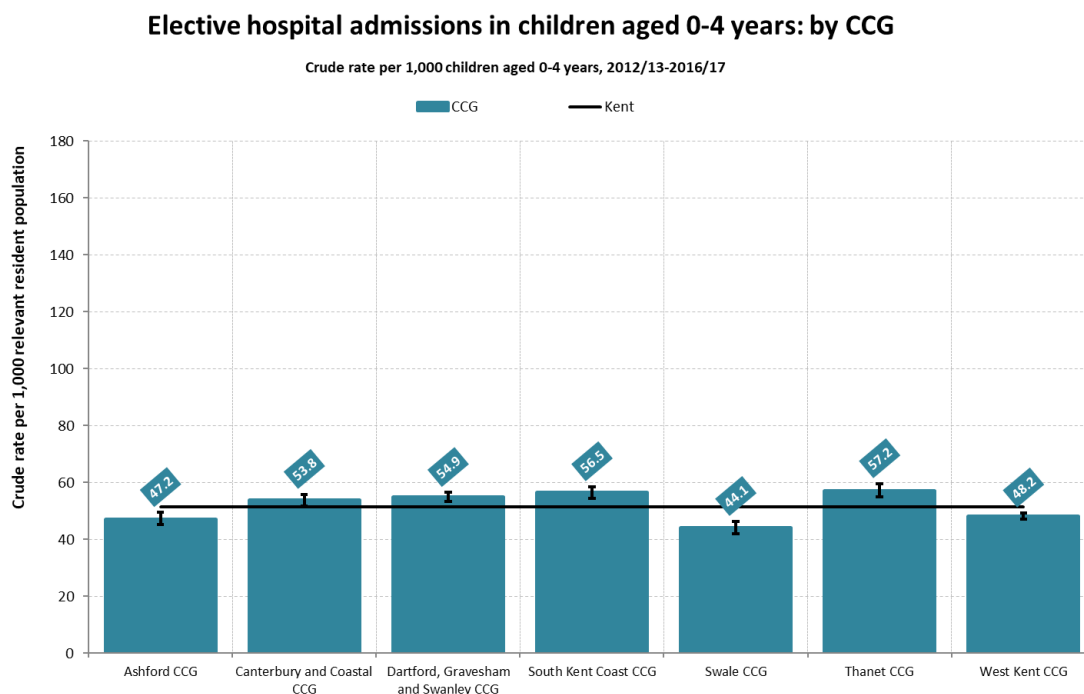
5.7 Elective hospital admissions

The age-standardised rate of elective hospital admissions in children in West Kent is lower than the Kent average, both for children aged 0-4 and for children aged 0-19. Most elective admissions were due to paediatrics neurology and paediatrics categories respectively. Of the West Kent districts, Sevenoaks has the highest elective admission rates, which are also higher than the Kent average. Trend analysis suggests that the elective admission rates in West Kent are increasing for 0-19s, as they are across Kent as a whole. There is, however, considerable variation between electoral wards. Elective hospital admission rates are significantly higher than the West Kent average for both 0-4-year olds and 0-19-year olds in:

- East Malling

- Marden & Yalding

- Trench

- Sevenoaks Kippington

- East

However, some of these admission rates are due to a high number of re-admissions of a cases and removal of these from the analysis reduced the rates in Marden & Yalding and in Halstead, Knockholt & Badgers Mount to similar rates compared with other WK CCG wards.

Figure 81 Elective hospital admissions in children aged 0-4 years – by CCG
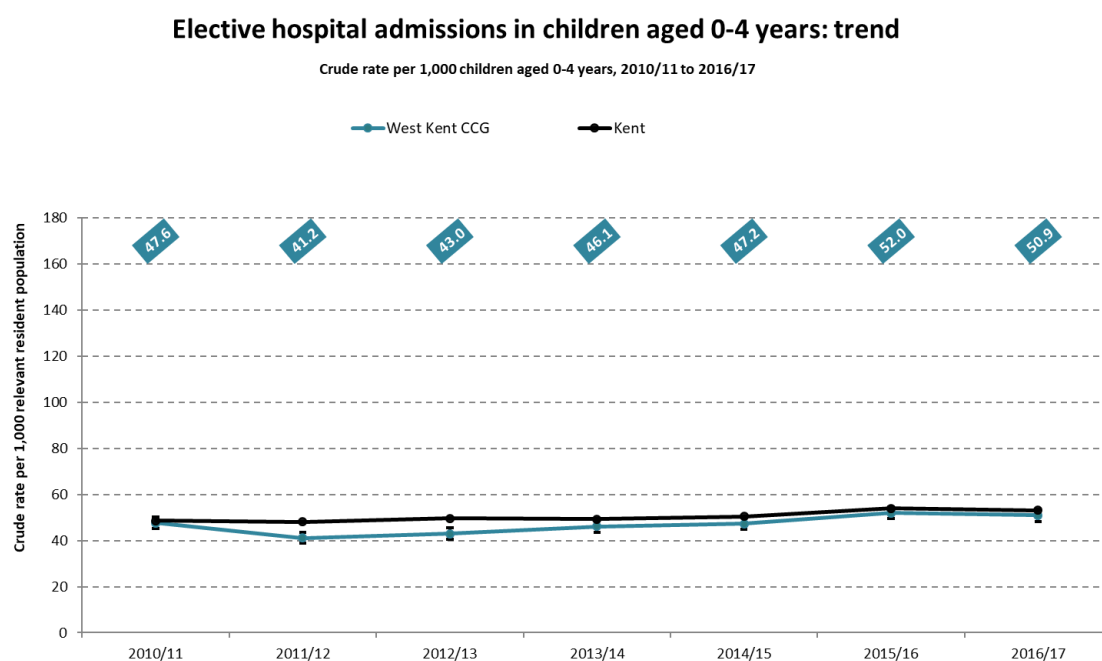

Elective hospital admissions in children aged 0-4 years: by CCG

Crude rate per 1,000 children aged 0-4 years, 2012/13-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 82 Elective hospital admissions in children aged 0-4 years – by district

Elective hospital admissions in children aged 0-4 years: by district

Crude rate per 1,000 children aged 0-4 years, 2012/13-2016/17
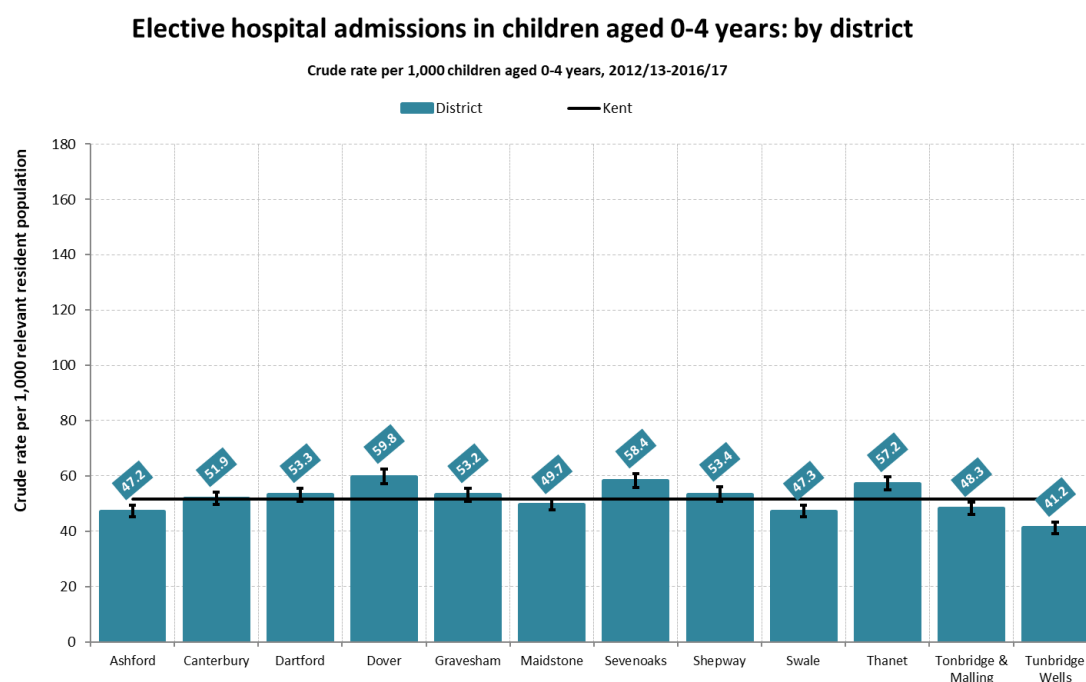
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 83 Elective hospital admissions in children aged 0-4 years – trend

Elective hospital admissions in children aged 0-4 years: trend

Crude rate per 1,000 children aged 0-4 years, 2010/11 to 2016/17

No significant change compared with a increasing trend for Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

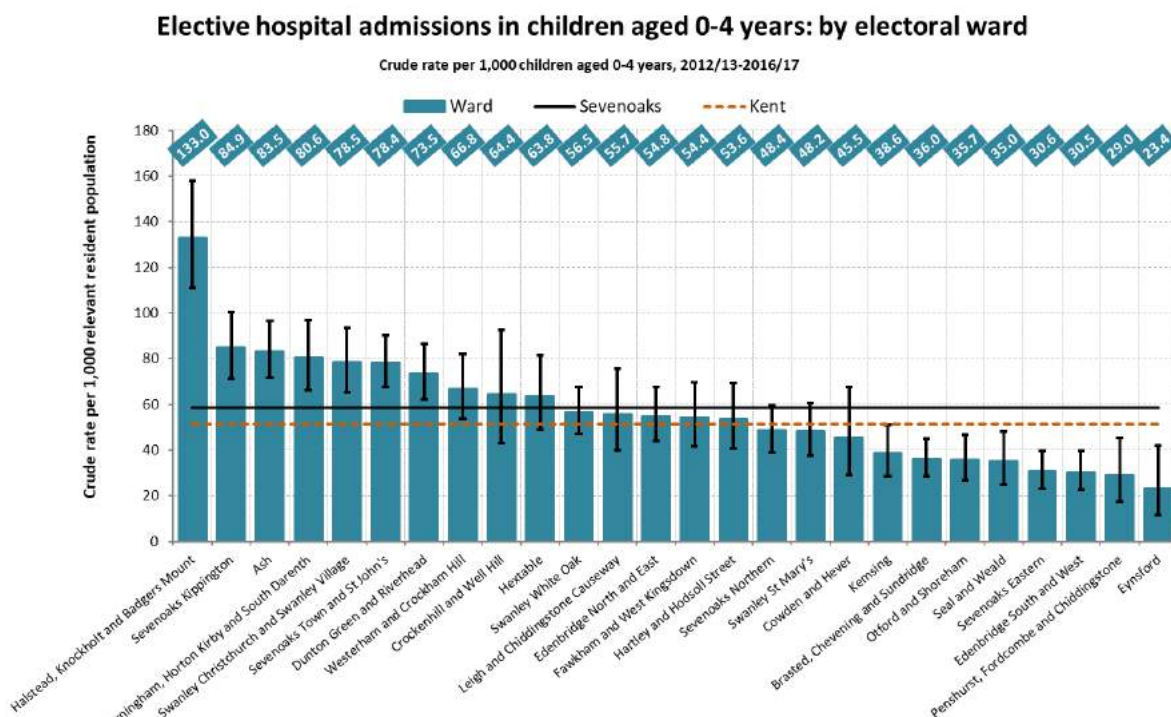**Figure 84 Elective hospital admissions in children aged 0-4 years – by ward**
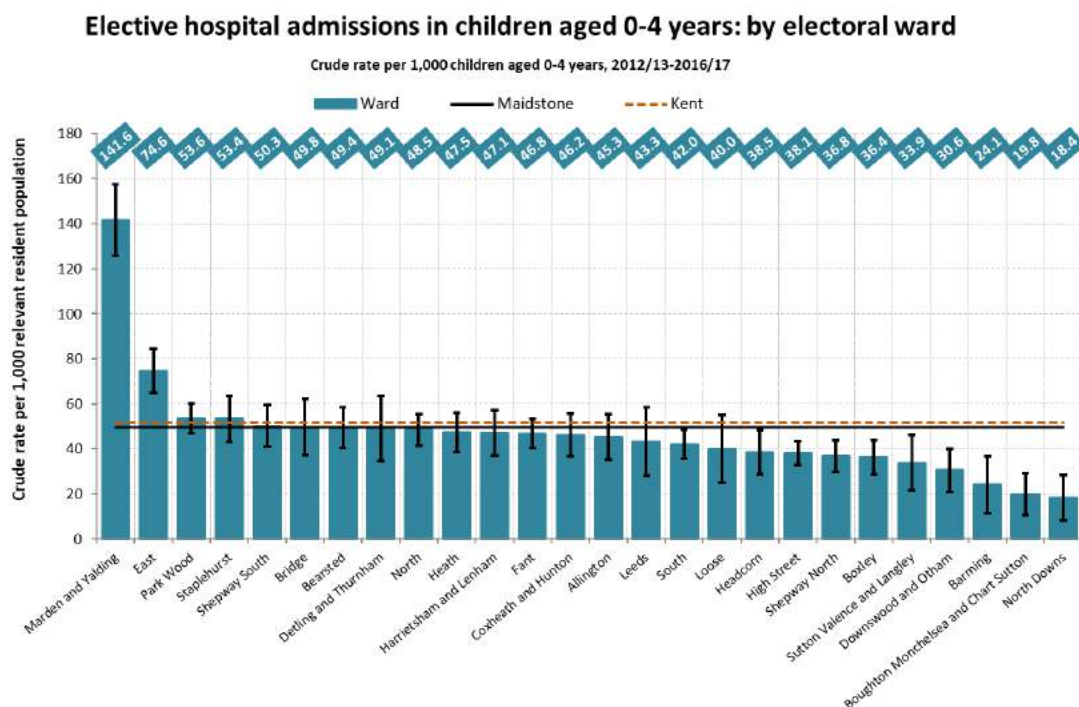
Elective hospital admissions in children aged 0-4 years: by electoral ward
Crude rate per 1,000 children aged 0-4 years, 2012/13-2016/17

Elective hospital admissions in children aged 0-4 years: by electoral ward
Crude rate per 1,000 children aged 0-4 years, 2012/13-2016/17

Elective hospital admissions in children aged 0-4 years: by electoral ward

Crude rate per 1,000 children aged 0-4 years, 2012/13-2016/17

Crude rate per 1,000

- Greater than 63.1
- 50.3 to 63.1
- 43.3 to 50.3
- 36.4 to 43.3
- Less than 36.4

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 85 Elective hospital admissions in children aged 0-19 years – by CCG

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

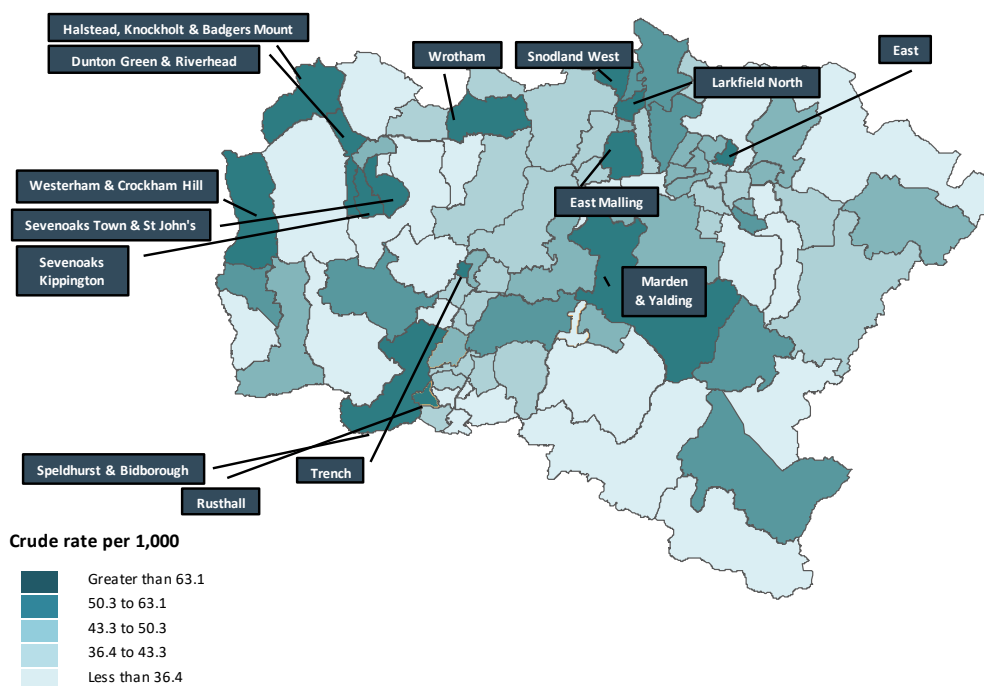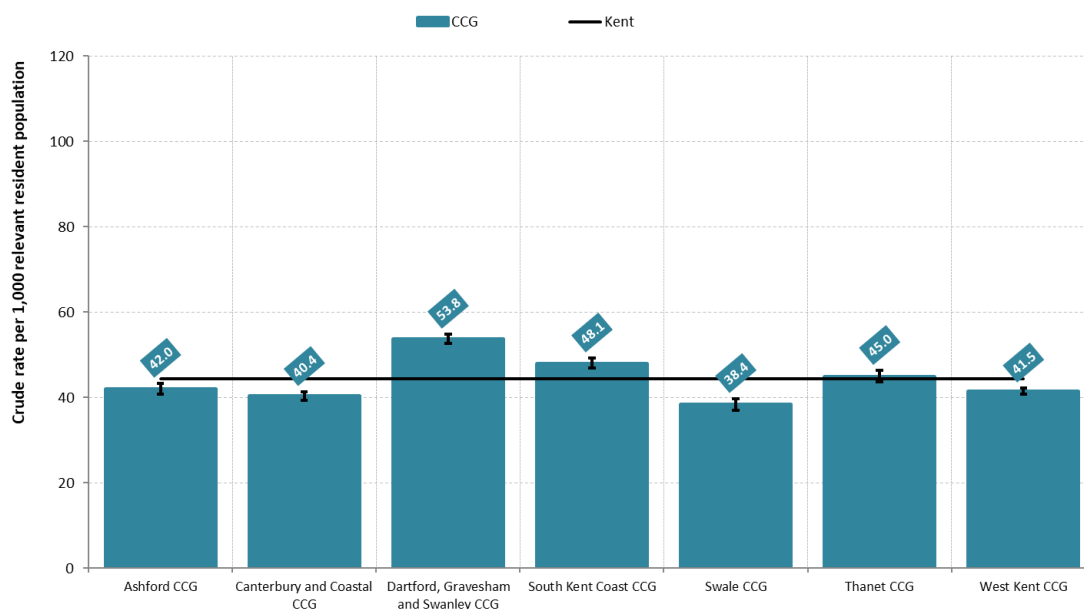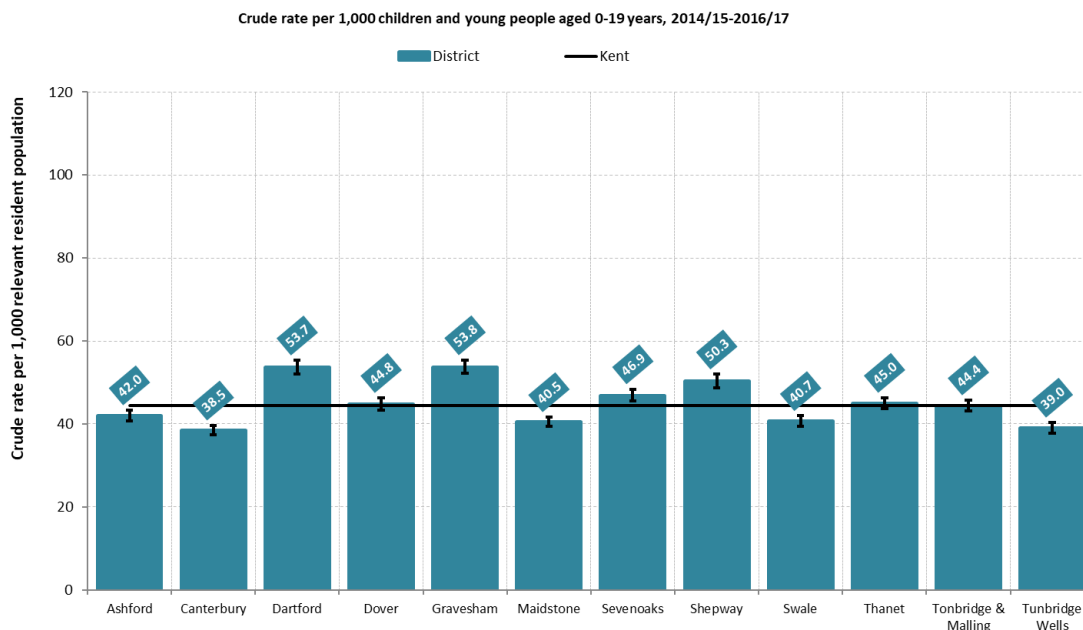**Figure 86 Elective hospital admissions in children aged 0-19 years – by district**

Elective hospital admissions in children and young people aged 0-19 years: by district

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Figure 87 Elective hospital admissions in children aged 0-19 years – trend

Elective hospital admissions in children and young people aged 0-19 years: trend

Crude rate per 1,000 children and young people aged 0-19 years, 2010/11 to 2016/17

Increasing with a similar pace of change to Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

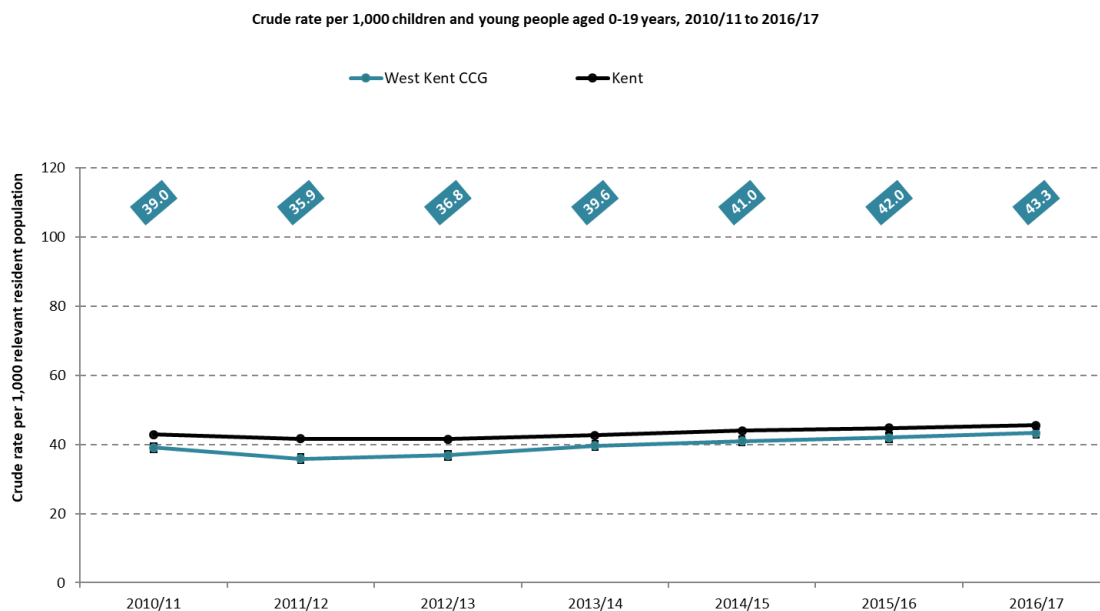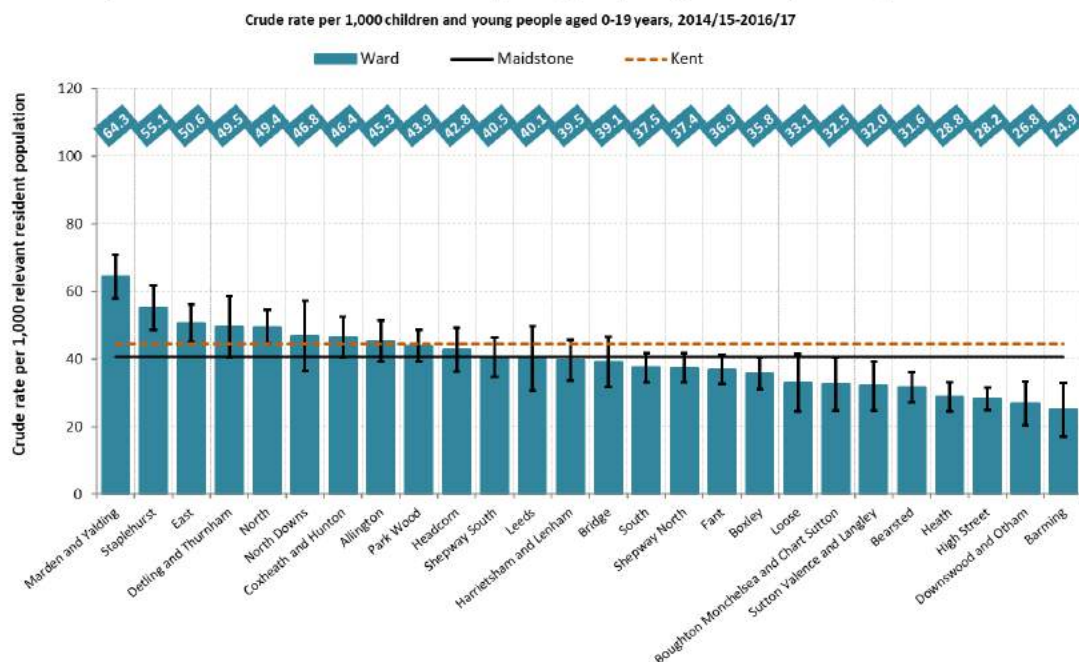**Figure 88 Elective hospital admissions in children aged 0-19 years – by ward**

Elective hospital admissions in children and young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Elective hospital admissions in children and young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Elective hospital admissions in children and young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

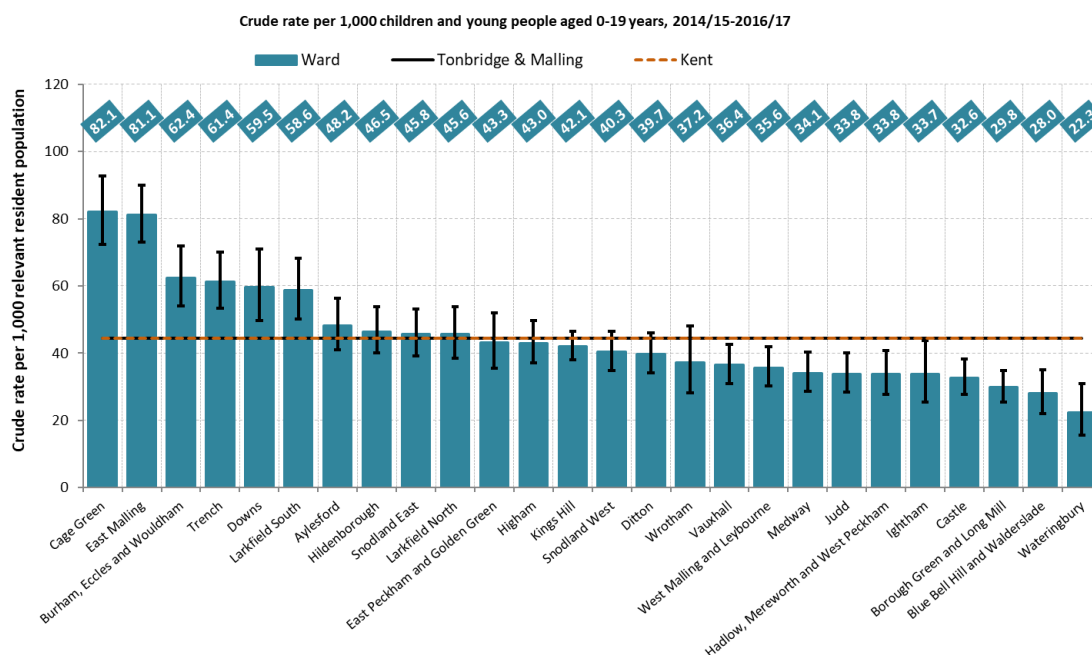## Elective hospital admissions in children and young people aged 0-19 years: by electoral ward

Crude rate per 1,000 children and young people aged 0-19 years, 2014/15-2016/17

Crude rate per 1,000

- Greater than 53.9
- 46.1 to 53.9
- 39.9 to 46.1
- 34.2 to 39.9
- Less than 34.2

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

5.8   Vision Screening

Vision screening for 4-5-year olds is recommended by the national screening committee. This recommendation supports population wide screening in Reception Year R to identify lazy eye, which can be mild but can become more serious if left untreated or if sight in the other eye is lost or damaged. The screening also identifies squint and refractive errors. Screening at this time is key as children are not of an age where they are able to describe the issue with their vision and after the age of 8 (although some studies may suggest this period is longer) the window of opportunity to rectify issues closes. All undetected vision problems can result in an impact on their education and participation in activities and sports can be reduced. The recommendation outlines that the programme should be led by Orthoptists.   One study found that 8.7% of children taking part in a population screening programme failed the screening test, indicating reduced vision, with 2% being identified with a result denoting a potential visual impairment.[15]

Until the commencement of the new school health contract in April 2017, Vision Screening in Kent was limited to East Kent. This was recognised as a major inequity impacting on the health and wellbeing of West and North Kent's children. The new contract carried the requirement to carry out screening in West and North Kent. This first round of screening took place in the 2017/18 school year. Unfortunately, because of organisational difficulties only around 50% of North and West Kent's children were screened by July 2018. The catch up for those schools who missed the screening will be carried out in December 2018. The table 2 below describes the screening for the first 50% of West Kent children and the projected number for the full population cohort.

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[15] Bruce A, Fairley L, Chambers B, et al. Impact of visual acuity on developing literacy at age 4–5 years: a cohort-nested cross-sectional study. BMJ Open 2016;6: e010434. doi:10.1136/ bmjopen-2015-010434

Table 2: Estimated visual screening for West Kent Children

	Screened so far*	Projected whole population screening by December 2018
Number of children who were eligible for screening	5663	5663
Number of children who were screened	2541	5004
Number of children who failed or were unable to compete	270 (10.6%)	532 (10.6%)
Number of children seen by MTW as urgent according to screening result	25 (1%)	50 (1%)
Children on MTW waiting list	275	543

*These numbers are approximate as Sevenoaks children were reported with the Dartford, Gravesham and Swanley team data and could not be separated.

A screening pathway was agreed between MTW and KCHFT, the provider of the school health service for referral where there was a failure, or the child was unable to complete was to the Orthoptic Service. CCGs were informed through several routes of the intention to begin vision screening and that this would have an impact on the referrals through to the orthoptic service. However, when the referrals were received by MTW, they stated they would not see the children referred without additional funding. As a result, albeit the most severely impacted children have been seen by the orthoptic service (this is at a higher threshold than the "visual impairment" level set by the prevalence study), the rest remain on the waiting list. The screening for 2018/19 cohort has been paused. The inequity for West Kent's children with regards to vision screening remains with children continuing to have untreated and undetected vision problems.

Conclusion:

Whilst overall infant mortality is decreasing in West Kent, the rate of decrease is lower in the most deprived wards of West Kent compared to the West Kent average.

Rates of low birthweight are highest in the most and least deprived wards (Bearsted and Parkwood), this requires further investigation.

Teenage conception rates are falling in West Kent overall, they remain high in Maidstone, particularly in Shepway South and Parkwood.

Vaccine uptake in West Kent overall is low in keeping with the Kent average, the practises with the lowest uptake are in Tunbridge Wells.

Breast feeding prevalence in new born and at 6-8 weeks is around 40-50% higher in the least deprived wards in West Kent compared to the most deprived wards.
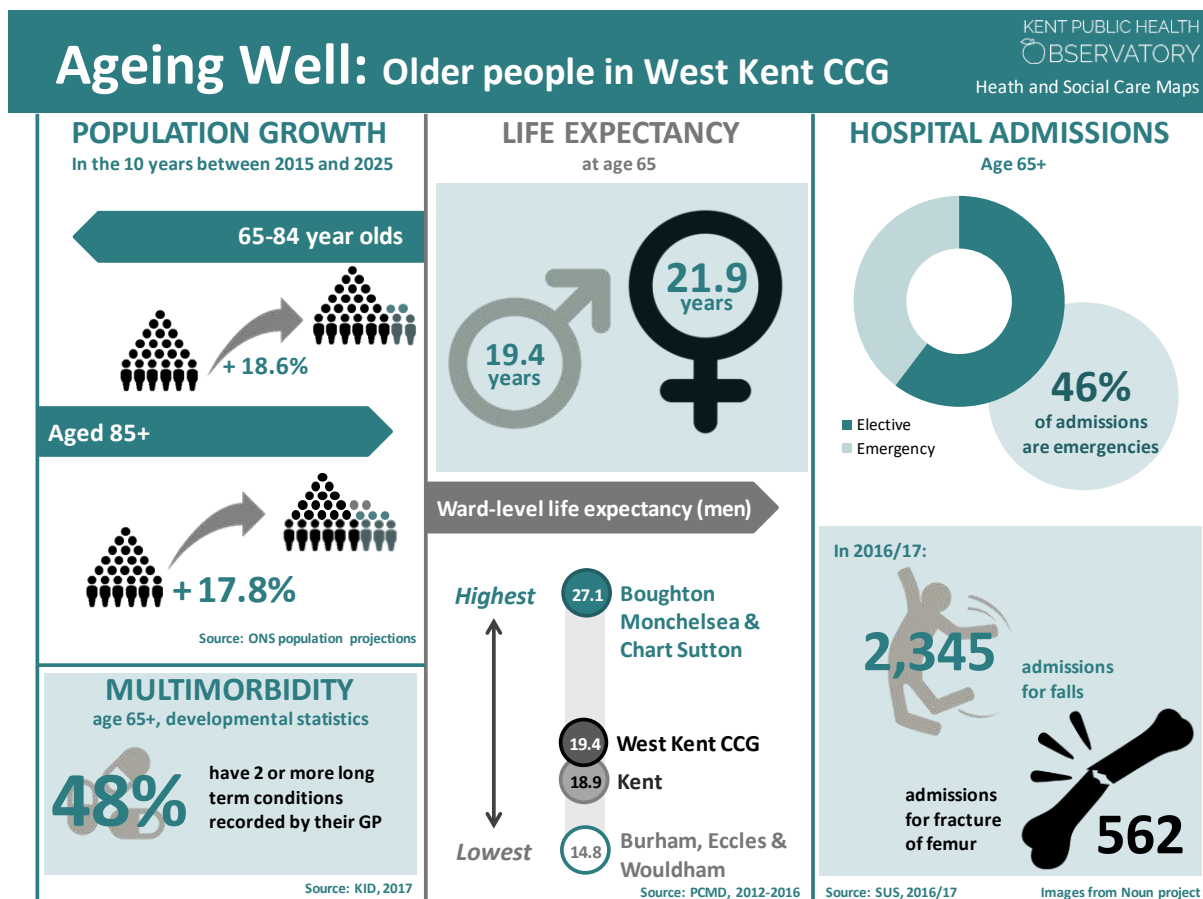
Rates of excess weight in reception year are 30 % higher in the most deprived wards compared to least deprived, this difference rises to 43% in year 6. The rate of obesity in children is increasing for the most deprived whereas it's reducing for the least deprived.

In West Kent A&E attendances for children aged below 19 years are highest in Sevenoaks.
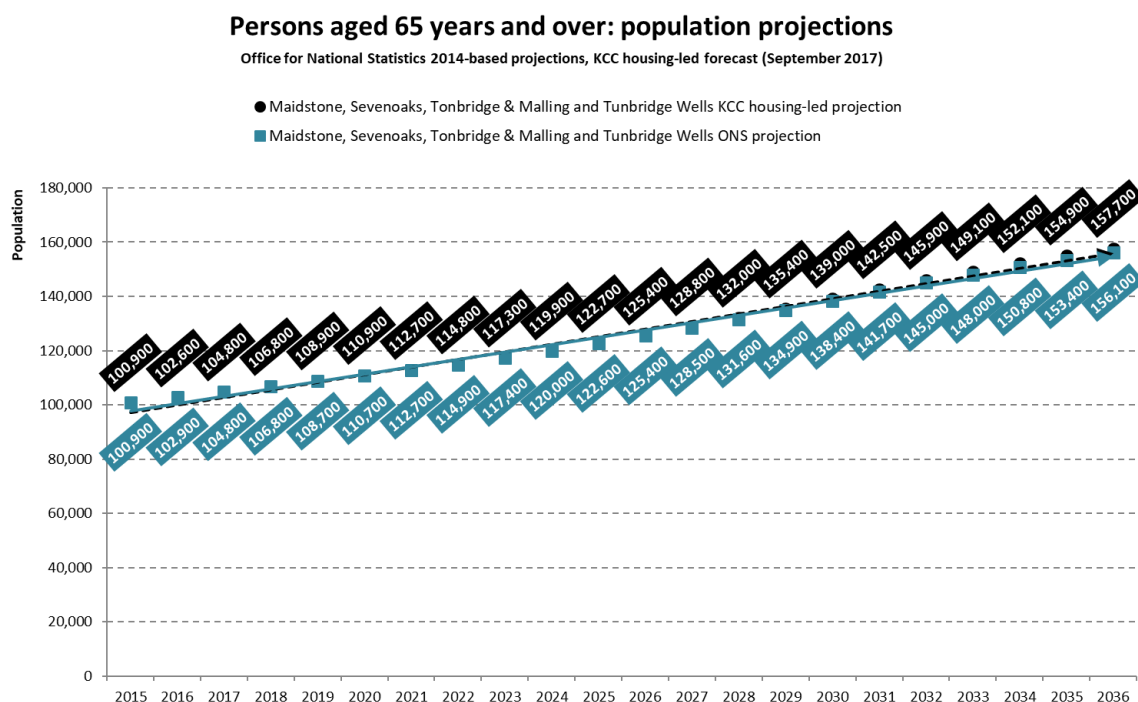
6 Older people

6.1 Infographic summary

The infographic below provides a summary of key data relating to the health and wellbeing of older people in West Kent.

Ageing Well: Older people in West Kent CCG

POPULATION GROWTH
In the 10 years between 2015 and 2025

65-84 year olds

+ 18.6%

Aged 85+

+ 17.8%

Source: ONS population projections

MULTIMORBIDITY
age 65+, developmental statistics

48% have 2 or more long term conditions recorded by their GP

Source: KID, 2017

LIFE EXPECTANCY
at age 65

19.4 years

21.9 years

Ward-level life expectancy (men)

Highest

27.1 Boughton Monchelsea & Chart Sutton

19.4 West Kent CCG

18.9 Kent

Lowest

14.8 Burham, Eccles & Wouldham

Source: PCMD, 2012-2016

HOSPITAL ADMISSIONS
Age 65+

- Elective
- Emergency

46% of admissions are emergencies

In 2016/17:

2,345 admissions for falls

562 admissions for fracture of femur

Source: SUS, 2016/17   Images from Noun project

6.2   Population growth

As outlined in Section 4.1, the population of people aged 65+ is predicted to increase significantly between 2016 and 2036: by 52% based on ONS projections and 54% based on the KCC housing-led forecasts.

Figure 89 Population projections - Ages 65+

Persons aged 65 years and over: population projections
Office for National Statistics 2014-based projections, KCC housing-led forecast (September 2017)

● Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells KCC housing-led projection
■ Maidstone, Sevenoaks, Tonbridge & Malling and Tunbridge Wells ONS projection

Source: ONS, KCC, prepared by KPHO (RK), May-18

Increases in the number of people aged 85+ are likely to be even more significant, with both the ONS projections and KCC housing-led forecasts suggesting a c.130% increase (i.e. that the size of the 85+ population will more than double over a 20-year period).

Based on the West Kent population cohort model, explained in detail below, the progression of needs over time was projected. The number expected to have high or very high frailty without any changes in the rates of progression between 2018 and 2030 is 11,100 to 13,700 (+23%).

Figure 90 Numbers of patients progressing high or very high frailty per year
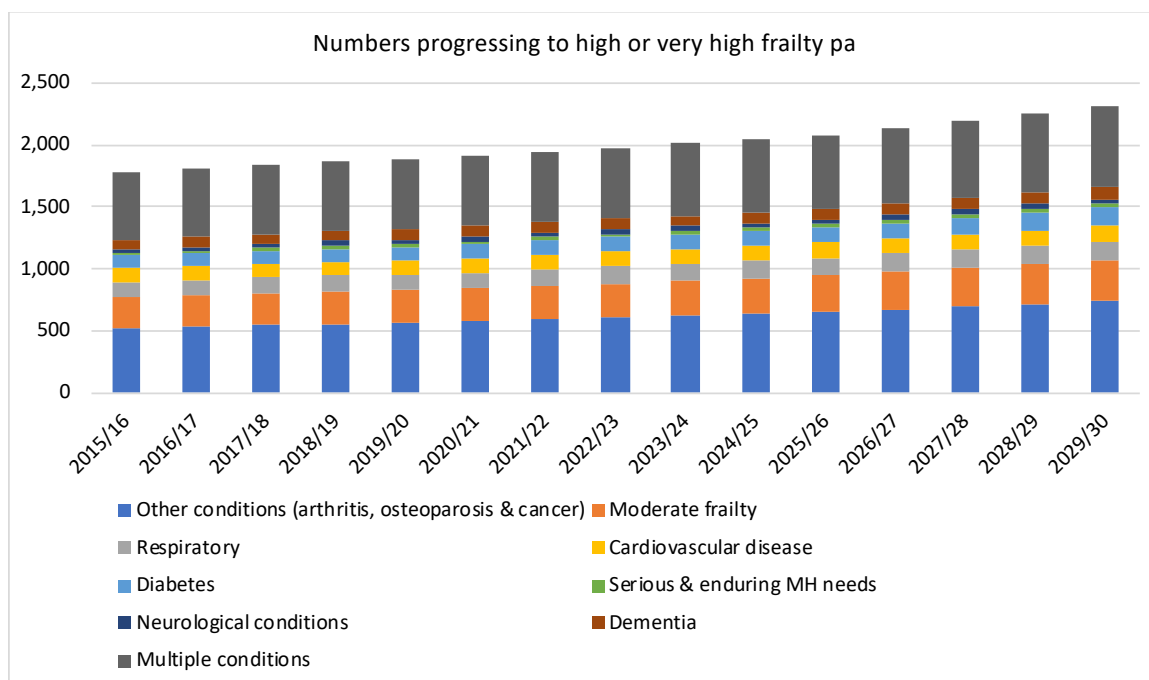
A number of cohorts of patients are at risk of progression of needs, such as those with moderate frailty, multiple conditions, respiratory conditions or cardiovascular disease etc.

Figure 91 Cohorts at risk of progression of needs and numbers of patients in each cohort progressing to high and very high frailty in 2018
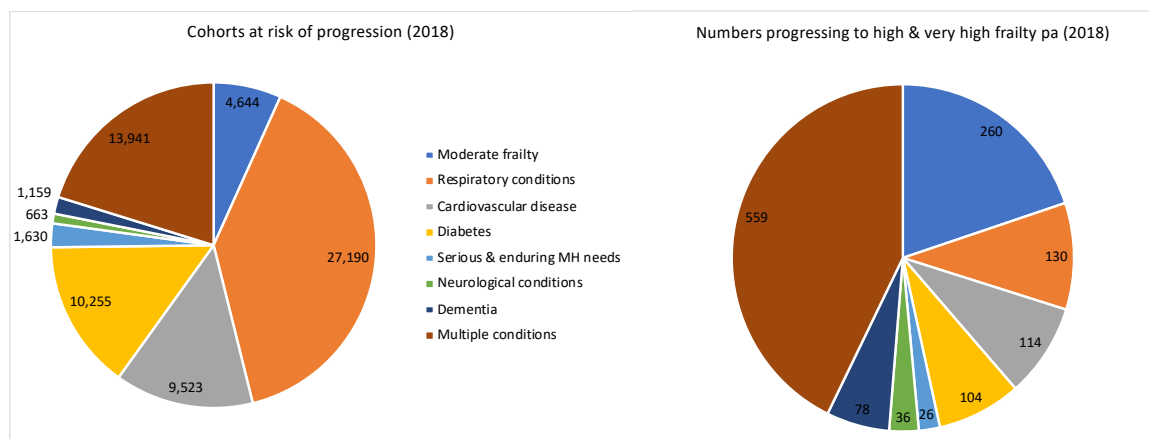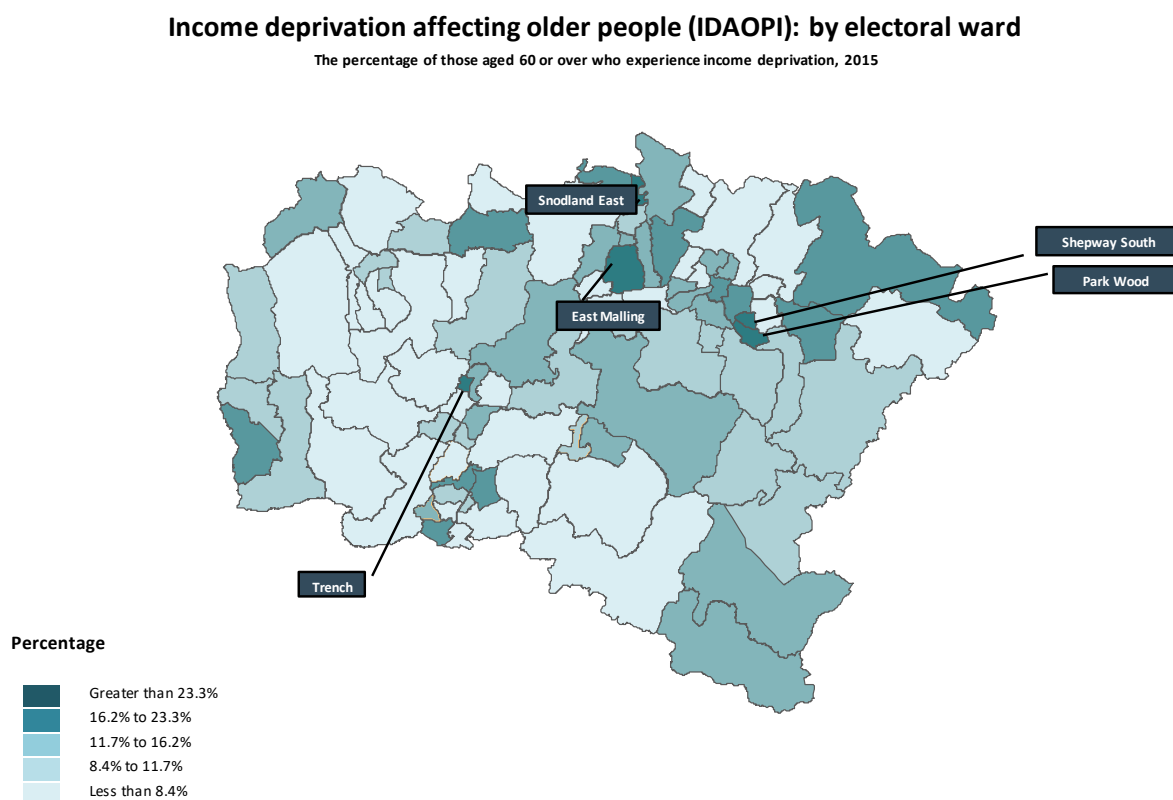

Highest number and highest rate of progression can be found in those with moserate frailty and multiple conditions.

6.3   Income deprivation

There is a separate index of deprivation which is used to describe deprivation in older people. The Income Deprivation Affecting Older People Index (IDAOPI) measures the proportion of all those aged 60 or over who experience income deprivation. It is a subset of the Income Deprivation Domain which measures the proportion of the population in an area experiencing deprivation relating to low income.

Five wards in West Kent are highlighted as being amongst the 20% most deprived wards for income deprivation affecting older people.

Figure 92 IMD 2015 – Income deprivation affecting older people (IDAOPI)

Income deprivation affecting older people (IDAOPI): by electoral ward

The percentage of those aged 60 or over who experience income deprivation, 2015

Percentage

- Greater than 23.3%
- 16.2% to 23.3%
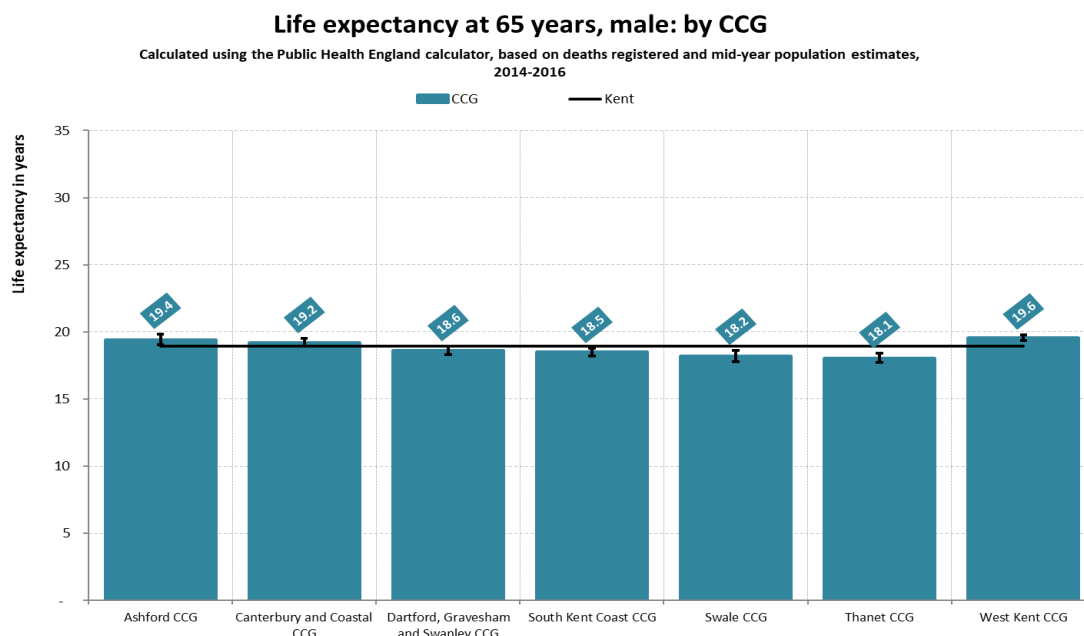- 11.7% to 16.2%
- 8.4% to 11.7%
- Less than 8.4%

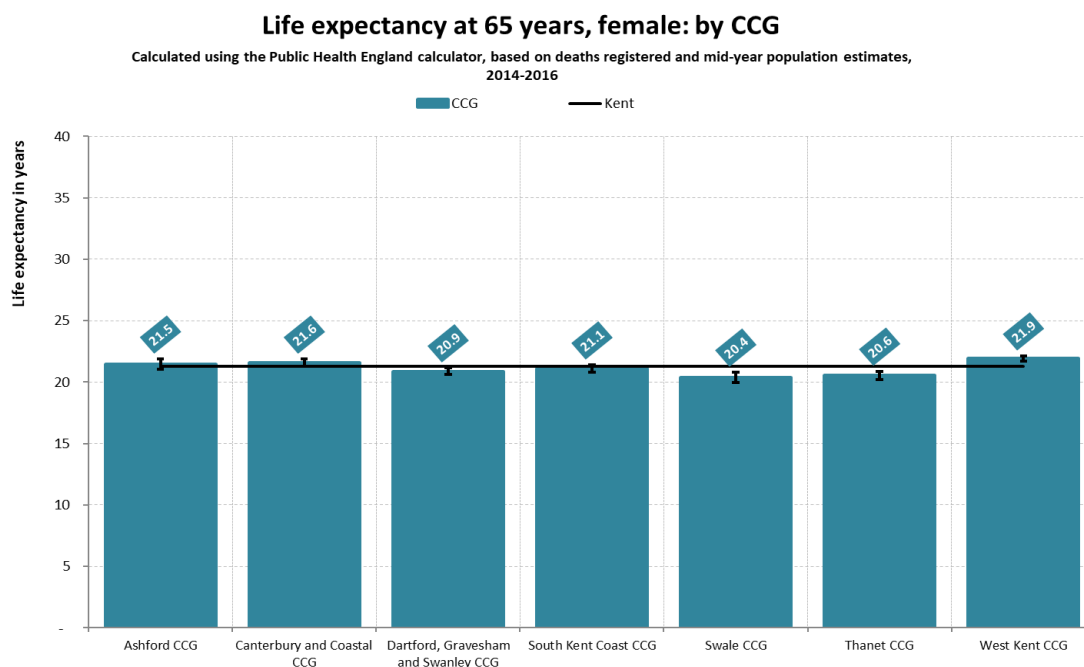Source: DCLG, prepared by KPHO (RK), Oct-17

6.4 Life expectancy

Life expectancy at 65 is 19.6 years for males and 21.9 years for females, higher than the Kent averages of 18.9 and 21.3 years respectively.

Figure 93 Life expectancy at 65 – by CCG

Life expectancy at 65 years, male: by CCG

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2014-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

Life expectancy at 65 years, female: by CCG

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2014-2016
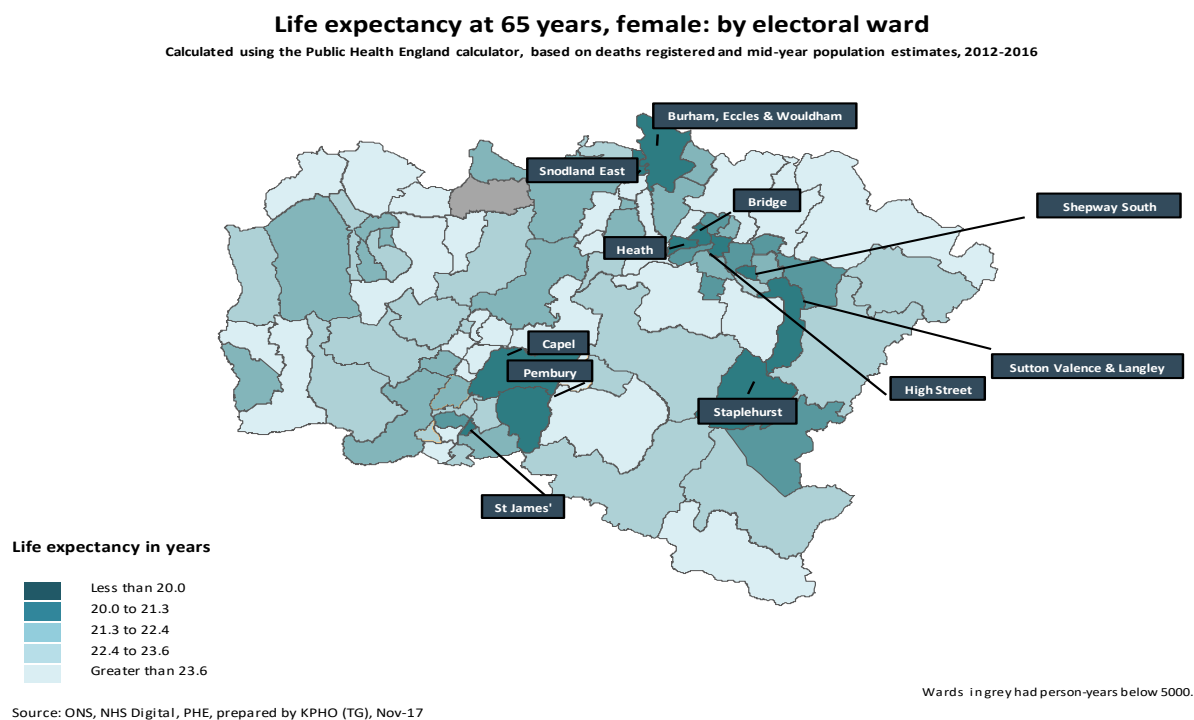

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

There is significant variation in ward-level life expectancy at 65 across the CCG. Culverden and Hawkhurst & Sandhurst have significantly higher life expectancy at 65 than the West Kent average for both males and females.

The following wards have significantly lower life expectancy at 65 than the West Kent average for both males and females:
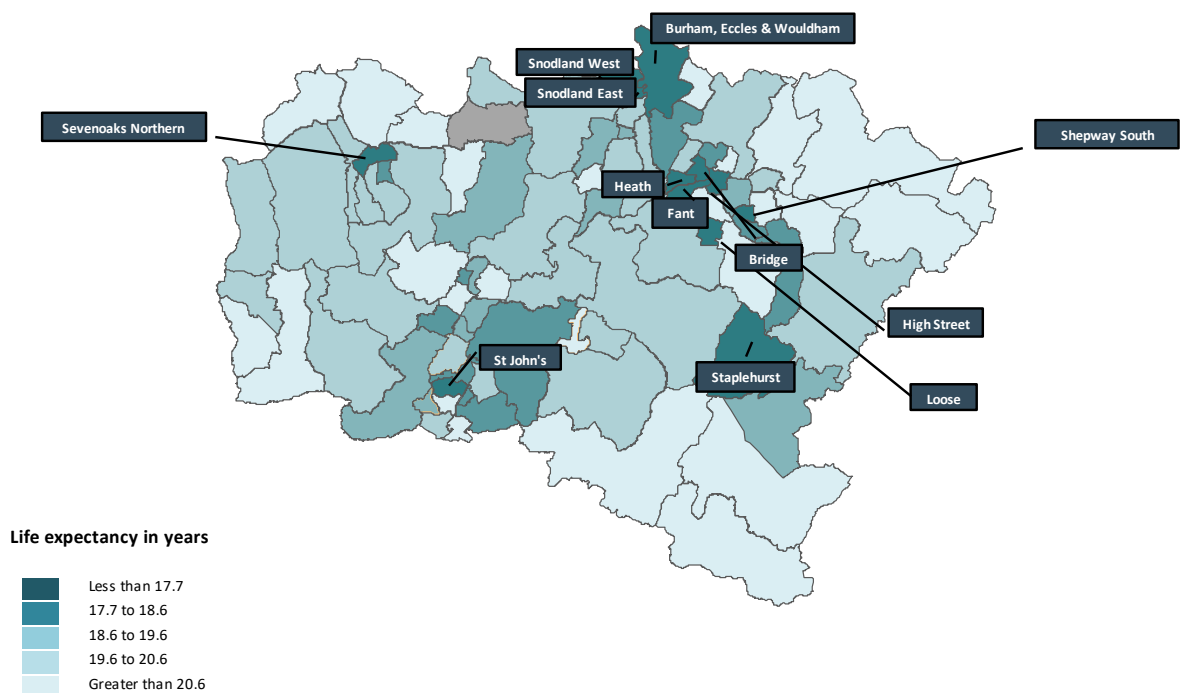
- Bridge
- Fant
- Heath
- High Street
- Shepway South
- Staplehurst
- Sutton Valence & Langley
- Burham, Eccles & Wouldham
- Snodland East
- Wrotham
- Pembury

Figure 94 Life expectancy at 65 – by ward

Life expectancy at 65 years, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Life expectancy in years

- Less than 20.0
- 20.0 to 21.3
- 21.3 to 22.4
- 22.4 to 23.6
- Greater than 23.6

Wards in grey had person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

Life expectancy at 65 years, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Life expectancy in years

- Less than 17.7
- 17.7 to 18.6
- 18.6 to 19.6
- 19.6 to 20.6
- Greater than 20.6

Wards in grey had person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Nov-17

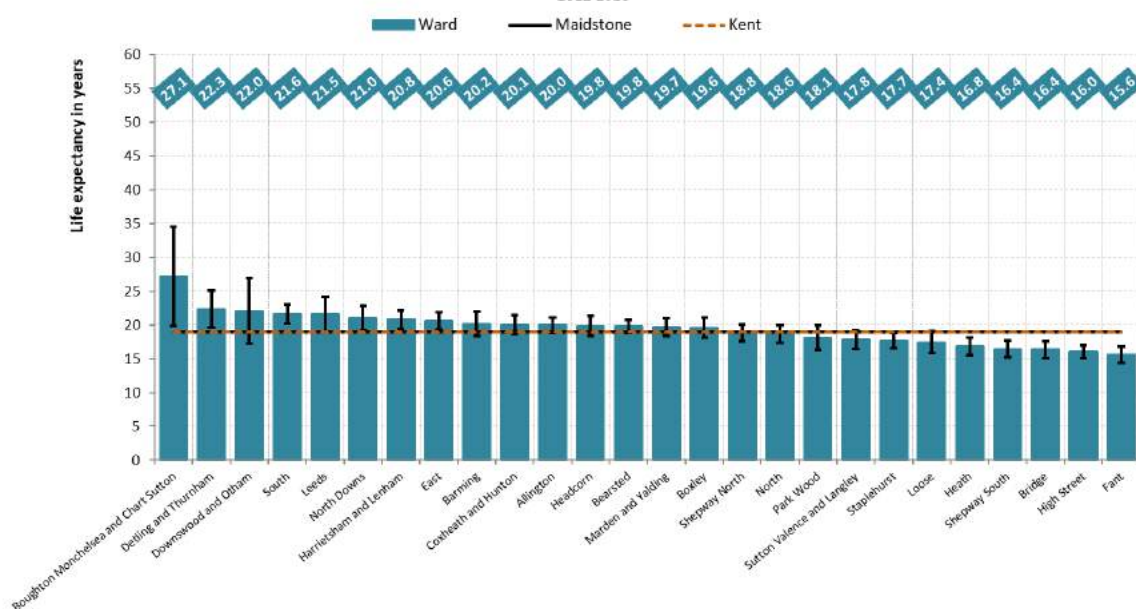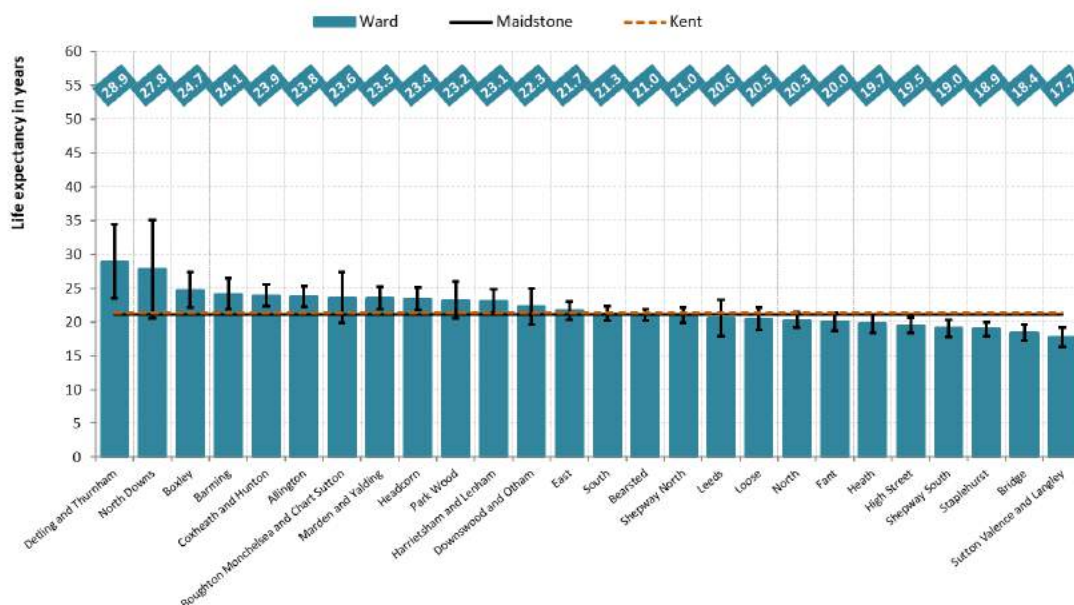### Life expectancy at 65 years, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

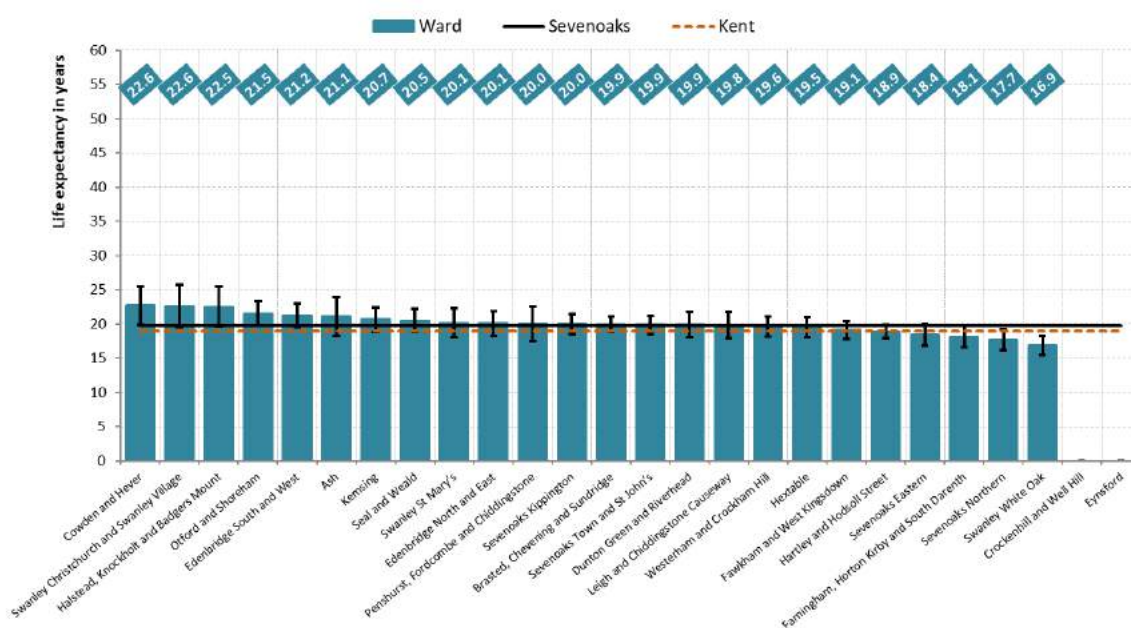## Life expectancy at 65 years, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Wards with no data are due to person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Wards with no data are due to person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016
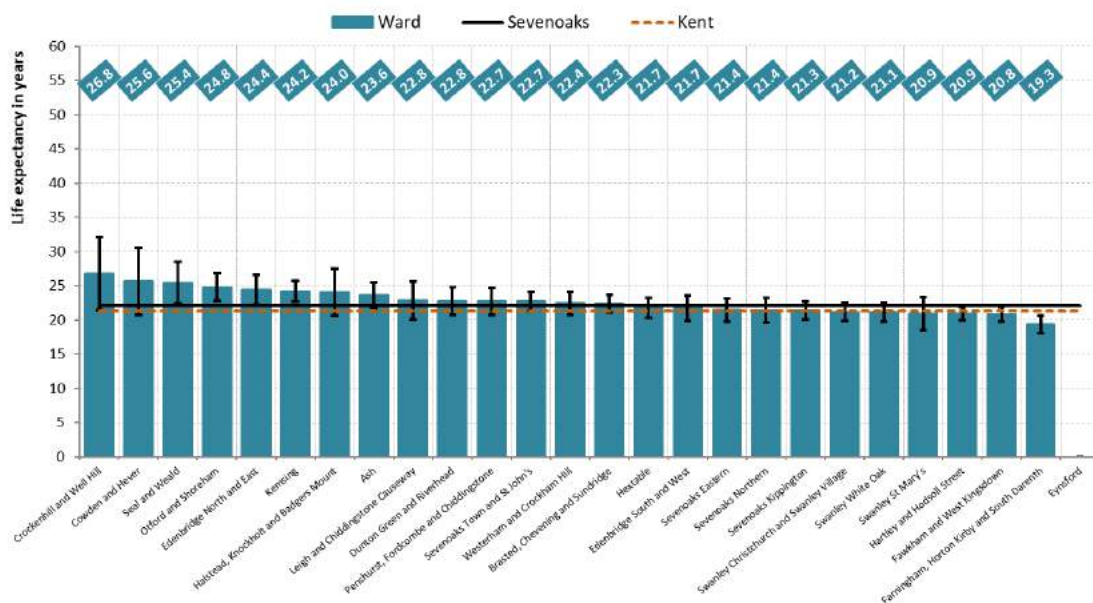

Wards with no data are due to person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016
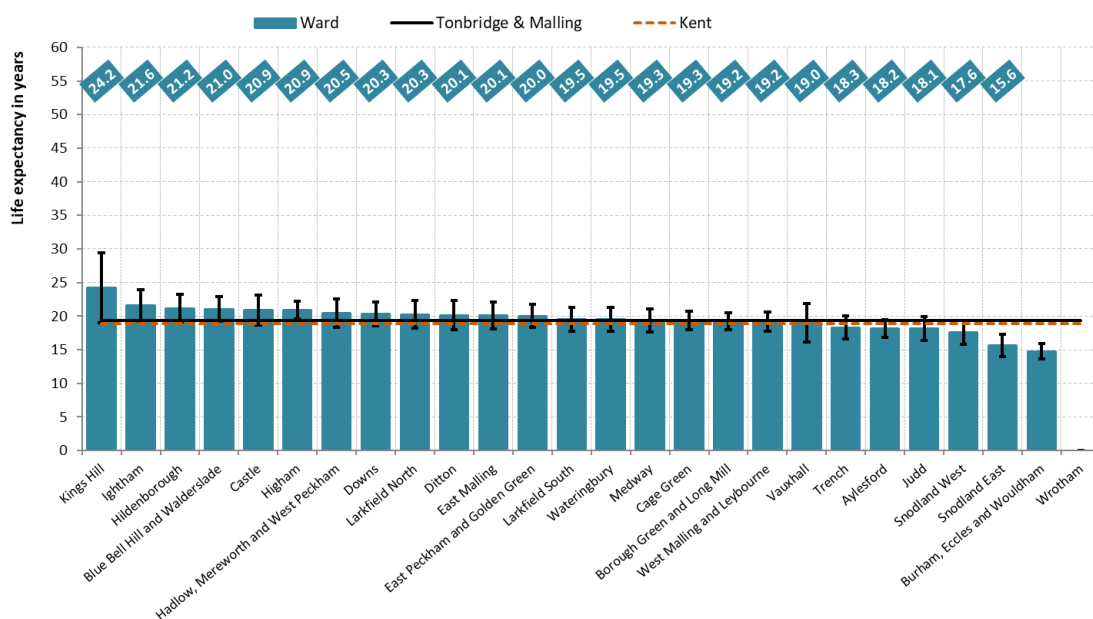

Wards with no data are due to person-years below 5000.

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, male: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Life expectancy at 65 years, female: by electoral ward

Calculated using the Public Health England calculator, based on deaths registered and mid-year population estimates, 2012-2016
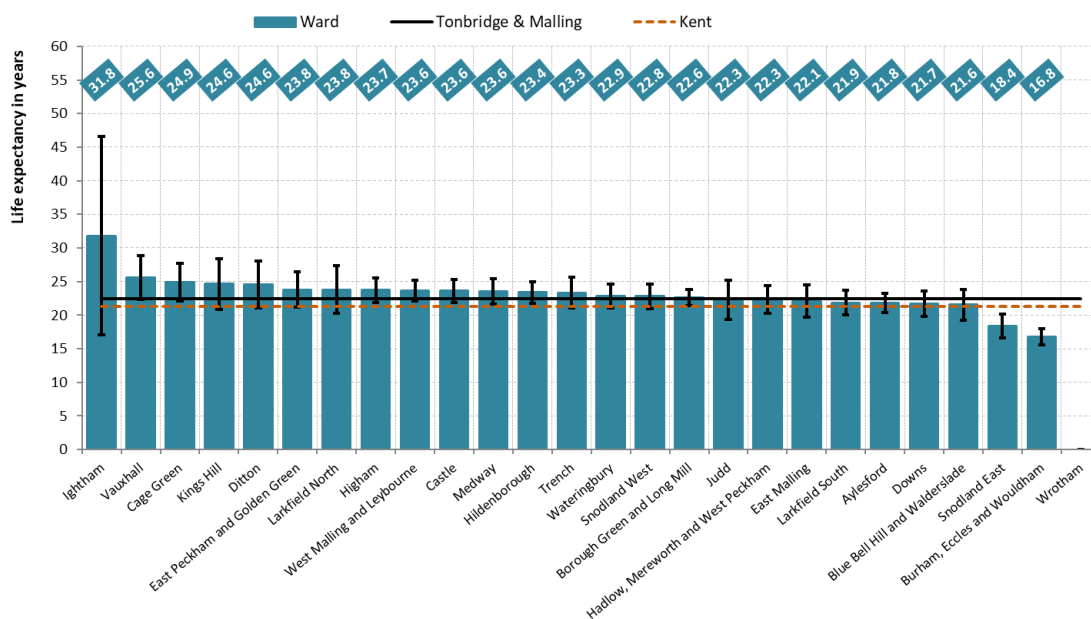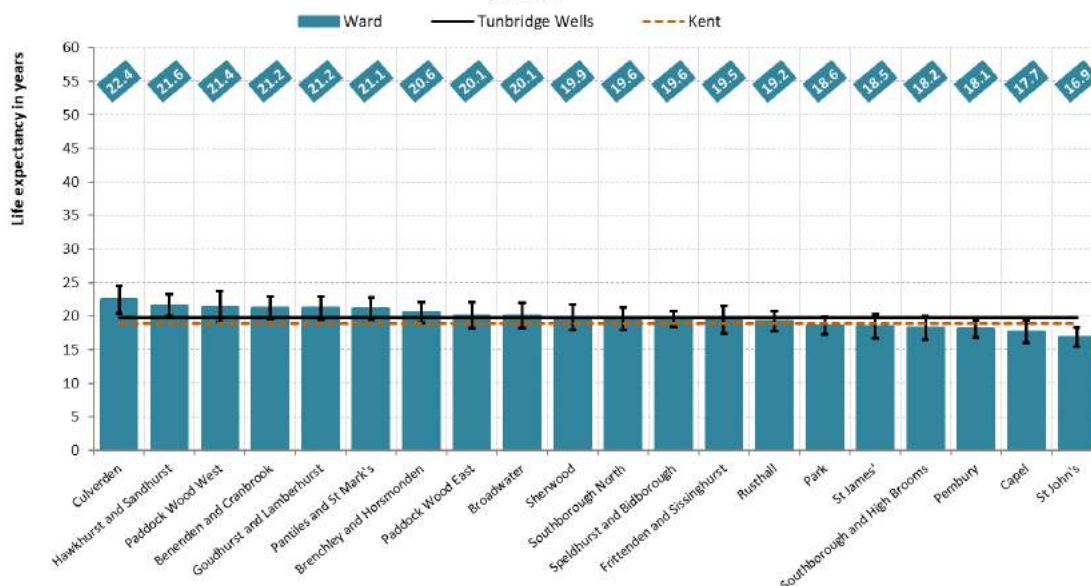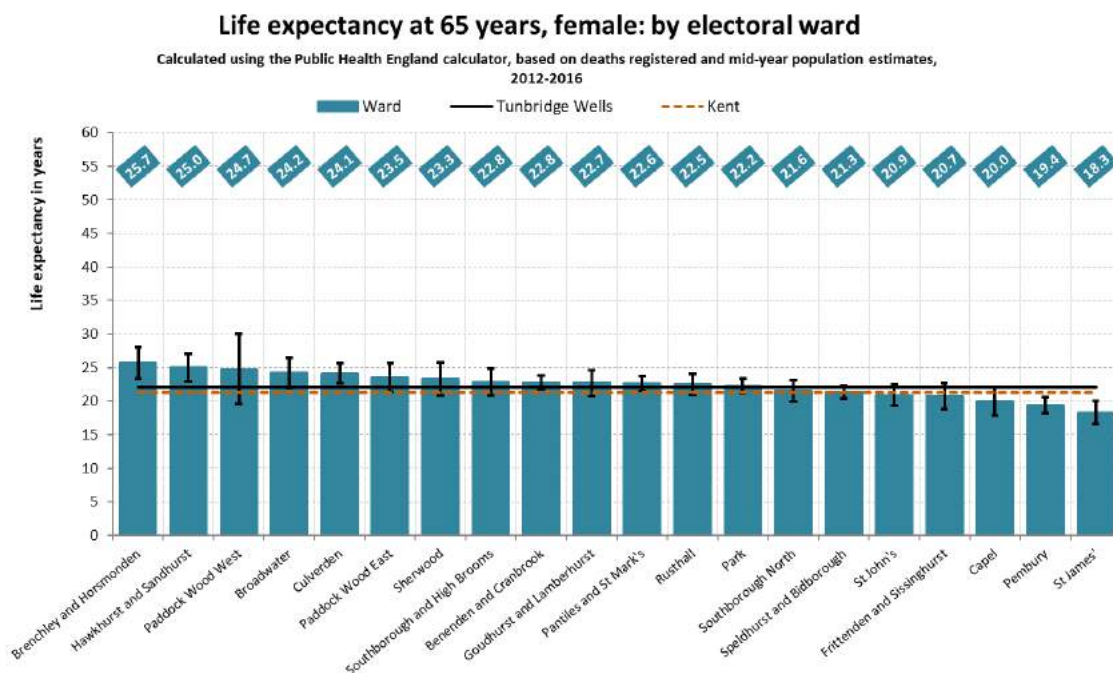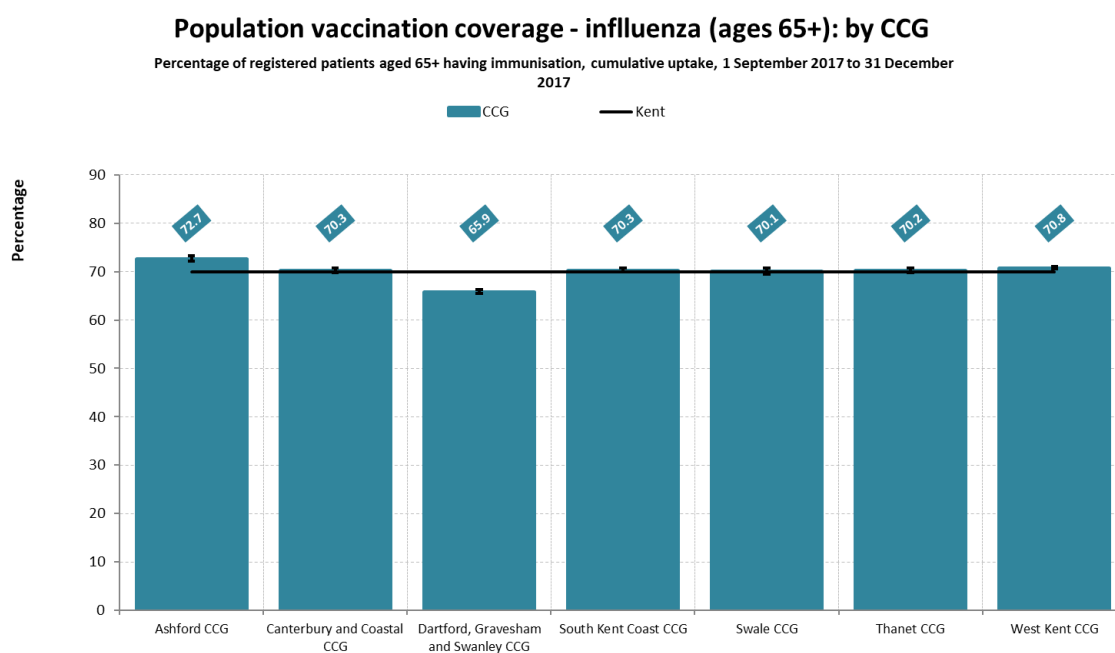
Legend: Ward — Tunbridge Wells ---- Kent

Values shown on bars: 25.7, 25.0, 24.7, 24.2, 24.1, 23.5, 23.3, 22.8, 22.8, 22.7, 22.6, 22.5, 22.2, 21.6, 21.3, 20.9, 20.7, 20.0, 19.4, 18.3

Wards (left to right): Brenchley and Horsmonden, Hawkhurst and Sandhurst, Paddock Wood West, Broadwater, Culverden, Paddock Wood East, Sherwood, Southborough and High Brooms, Benenden and Cranbrook, Goudhurst and Lamberhurst, Pantiles and St Mark's, Rusthall, Park, Southborough North, Speldhurst and Bidborough, St John's, Frittenden and Sissinghurst, Capel, Pembury, St James'

Source: ONS, NHS Digital, PHE, prepared by KPHO (TG), Oct-17

Seasonal flu vaccination

Flu is an unpleasant but usually self-limiting disease for most healthy people, with recovery generally within a week. However, certain population cohorts such as older people, pregnant women and those with underlying disease are at particular risk of severe illness if they catch flu.

The national uptake ambition for flu vaccination in the 65+ populations is 75% but provisional end of December 2017 cumulative uptake data for West Kent CCG on influenza vaccinations given from 1 September 2017 to 31 December 2017 suggests that this target was not met. The analysis of 2017/18 winter deaths suggest increasing influenza vaccine uptake may reduce excess seasonal mortality however this is yet to be qualified further. (Editorials, Rise in mortality in England and Wales in first seven weeks of 2018 BMJ 2018; 61 doi: https://doi.org/10.1136/bmj.k2127 (Published 11 May 2018)

Figure 95 Influenza vaccination uptake in registered patients aged 65+ - by CCG

Population vaccination coverage - inflluenza (ages 65+): by CCG

Percentage of registered patients aged 65+ having immunisation, cumulative uptake, 1 September 2017 to 31 December 2017
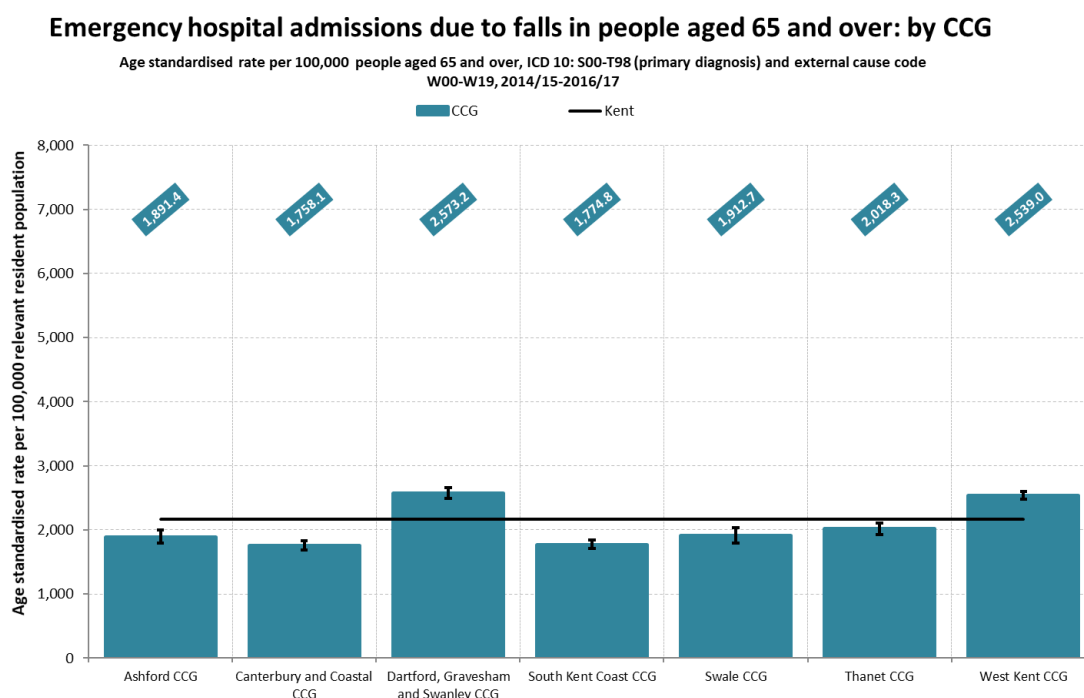

Source: Public Health England, prepared by KPHO (RK), May-18

6.5 Falls

The age-standardised rate of emergency hospital admissions due to falls amongst those aged 65+ is higher in West Kent than the Kent average, and higher than the Kent average in all four of the West Kent districts. Trend analysis suggests that the admission rate has remained stable over recent years. There is, however, considerable variation between electoral wards. The hospital admission rate due to falls is significantly higher than the West Kent average in:

- Bridge

- High Street

- Shepway North

- Burham, Eccles & Wouldham

- Medway

- Pembury

Figure 96 Hospital admissions due to falls in people aged 65+ – by CCG

Emergency hospital admissions due to falls in people aged 65 and over: by CCG

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code W00-W19, 2014/15-2016/17
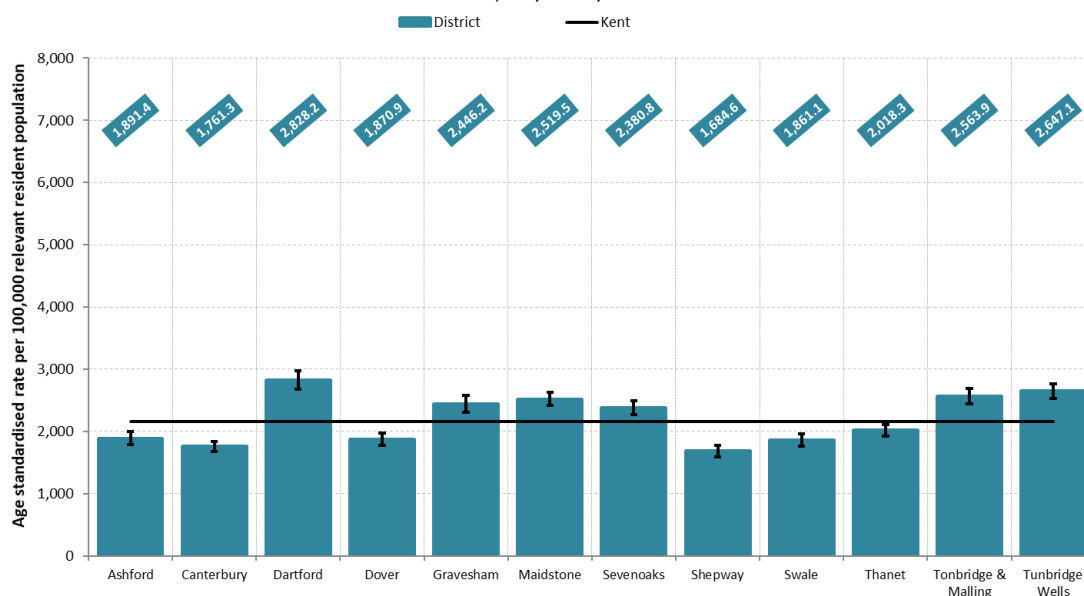

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Figure 97 Hospital admissions due to falls in people aged 65+ – by district

Emergency hospital admissions due to falls in people aged 65 and over: by district

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code
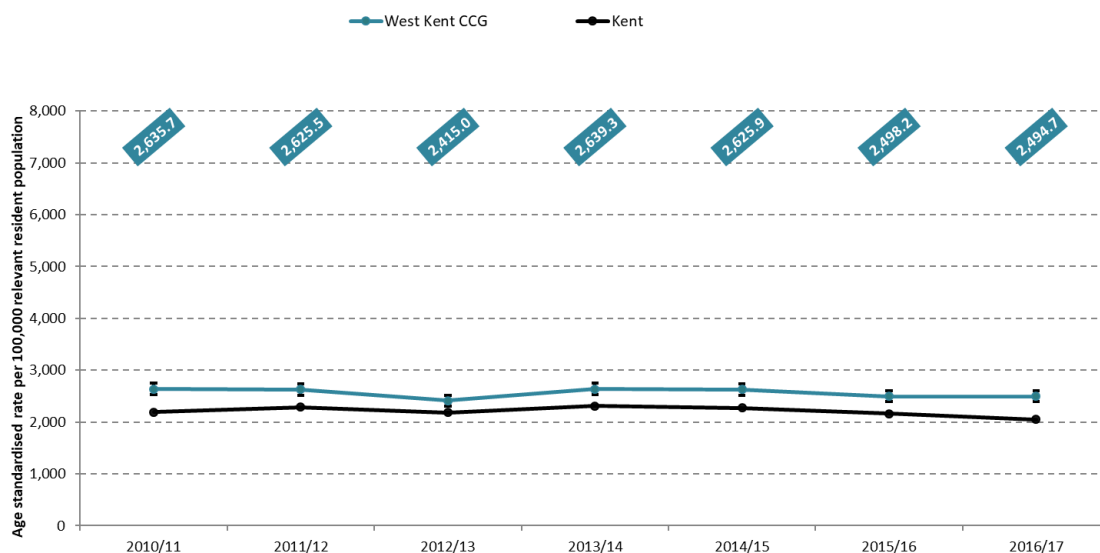W00-W19, 2014/15-2016/17

Legend: District ▬ Kent

District	Rate
Ashford	1,891.4
Canterbury	1,761.3
Dartford	2,828.2
Dover	1,870.9
Gravesham	2,446.2
Maidstone	2,519.5
Sevenoaks	2,380.8
Shepway	1,684.6
Swale	1,861.1
Thanet	2,018.3
Tonbridge & Malling	2,563.9
Tunbridge Wells	2,647.1

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Figure 98 Hospital admissions due to falls in people aged 65+ – trend

Emergency hospital admissions due to falls in people aged 65 and over: trend

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code
W00-W19, 2010/11 to 2016/17

Legend: West Kent CCG ▬ Kent

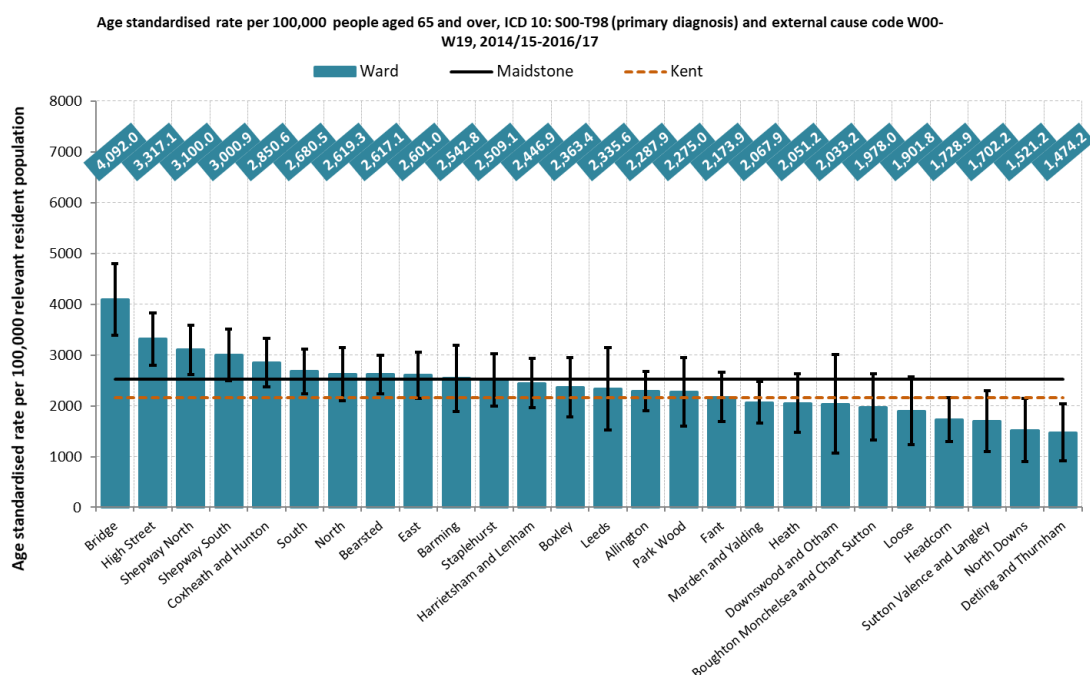| Year	Rate
2010/11	2,635.7
2011/12	2,625.5
2012/13	2,415.0
2013/14	2,639.3
2014/15	2,625.9
2015/16	2,498.2
2016/17	2,494.7

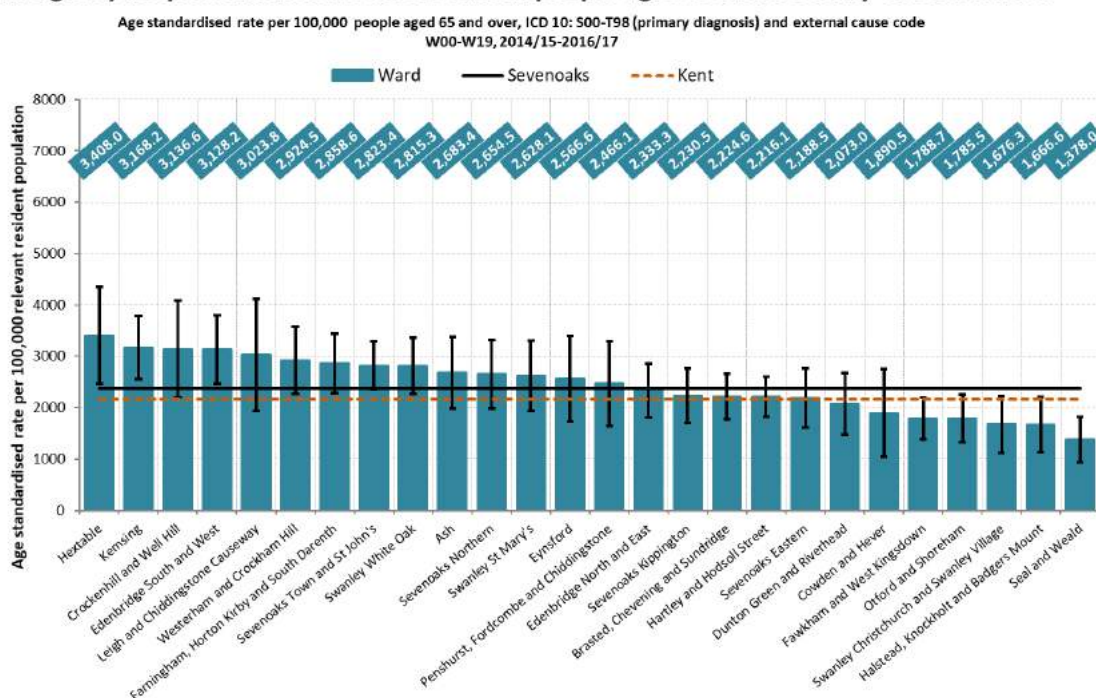**No significant change compared with a stable trend for Kent**

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Figure 99 Older people more likely to be experiencing social isolation and loneliness in West Kent by electoral ward
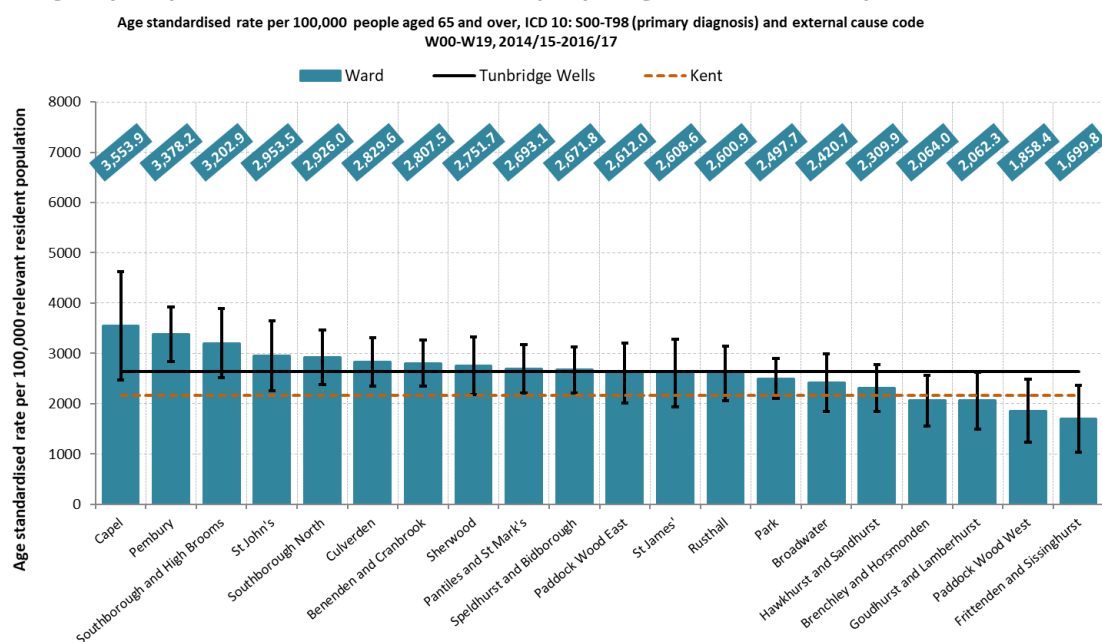
Emergency hospital admissions due to falls in people aged 65 and over: by electoral ward

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code W00-W19, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Emergency hospital admissions due to falls in people aged 65 and over: by electoral ward

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code W00-W19, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Emergency hospital admissions due to falls in people aged 65 and over: by electoral ward

**Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code
W00-W19, 2014/15-2016/17**

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Emergency hospital admissions due to falls in people aged 65 and over: by electoral ward

**Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code
W00-W19, 2014/15-2016/17**

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

Emergency hospital admissions due to falls in people aged 65 and over: by electoral ward

Age standardised rate per 100,000 people aged 65 and over, ICD 10: S00-T98 (primary diagnosis) and external cause code W00-W19, 2014/15-2016/17

Age standardised rate per 100,000 people aged 65 and over

- Greater than 2672.7
- 2232.0 to 2672.7
- 1930.3 to 2232.0
- 1693.7 to 1930.3
- Less than 1693.7

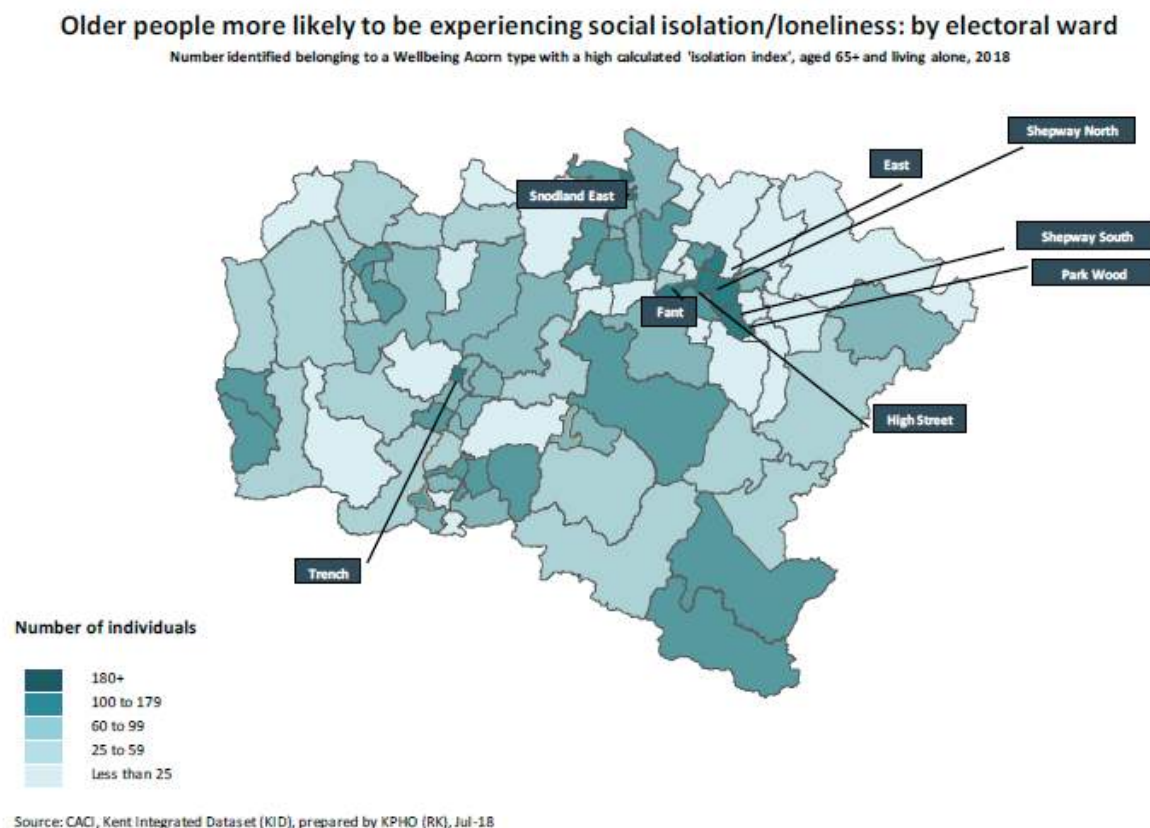Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (TG), Nov-17

6.6 Social Isolation

Research has shown that, in terms of negative health outcomes, lacking social connections is comparable to smoking 15 cigarettes a day, and has worse health outcomes than risk factors such as obesity and physical inactivity. It has been calculated that loneliness increases the likelihood of mortality by 26% in older people. Research also suggests that social frailty has a stronger impact on the onset of depressive symptoms than physical frailty or cognitive impairment.

This section provides an analysis of West Kent residents aged 65+ who have been identified as living alone and falling into one of the 11 Wellbeing Acorn types identified as having a higher than average isolation index. The ACORN classifications are on based on demographic, socio-economic, population and consumer behaviour. The ACORN segments are used provide insights into people's behaviour, lifestyle and attitudes.
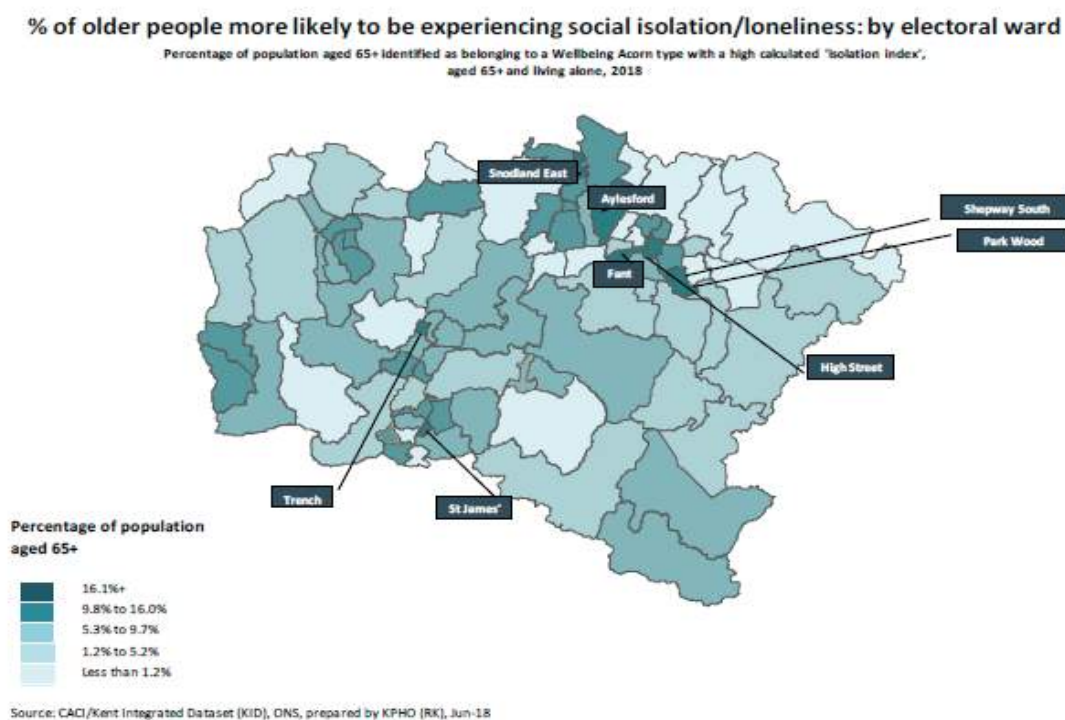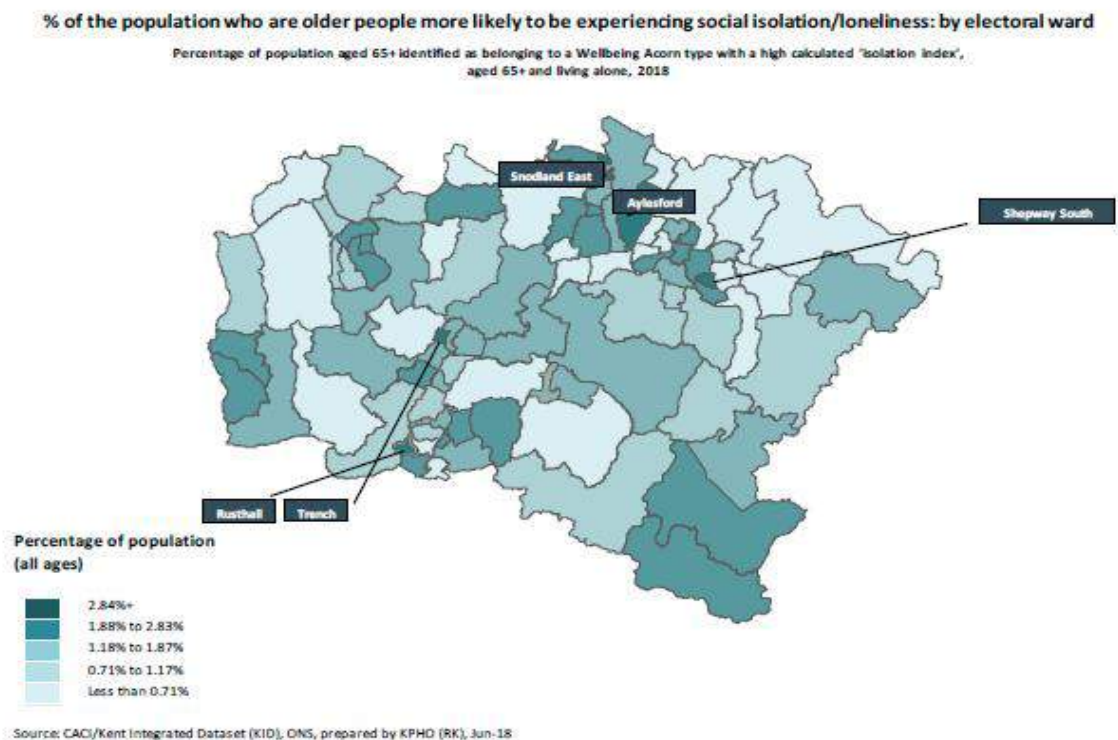
The maps below show wards in West Kent with high numbers of individuals identified. Wards falling into the highest quintile are highlighted, i.e. the 20% of Wards with the highest numbers of older residents identified.

Figure 100 Percentage of the total West Kent population identified as being at risk by ward

Older people more likely to be experiencing social isolation/loneliness: by electoral ward
Number identified belonging to a Wellbeing Acorn type with a high calculated 'isolation index', aged 65+ and living alone, 2018

Number of individuals

180+
100 to 179
60 to 99
25 to 59
Less than 25

Source: CACI, Kent Integrated Dataset (KID), prepared by KPHO (RK), Jul-18

The maps below show wards in West Kent with high percentages of their populations identified as being older people more likely to be experiencing social isolation or loneliness. Results are shown based both on the percentage of the total population identified as being at risk, and on the percentage of the population aged 65+. In each case wards falling into the highest quintile are highlighted, i.e. the 20% of Wards with the highest percentages of residents identified.

Figure 101 Percentage of the population aged 65+ identified as being at risk by ward

% of the population who are older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index',
aged 65+ and living alone, 2018

Percentage of population
(all ages)

- 2.84%+
- 1.88% to 2.83%
- 1.18% to 1.87%
- 0.71% to 1.17%
- Less than 0.71%

Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

% of older people more likely to be experiencing social isolation/loneliness: by electoral ward

Percentage of population aged 65+ identified as belonging to a Wellbeing Acorn type with a high calculated 'isolation index',
aged 65+ and living alone, 2018

Percentage of population
aged 65+

- 16.1%+
- 9.8% to 16.0%
- 5.3% to 9.7%
- 1.2% to 5.2%
- Less than 1.2%

Source: CACI/Kent Integrated Dataset (KID), ONS, prepared by KPHO (RK), Jun-18

6.7 Veterans

There are 5, 116 veterans living in West Kent, making up two percent of all residents aged 16-64 years, which is consistent with that across Kent. Within West Kent, the proportion of veterans is lower (1%) in Sevenoaks and Tunbridge Wells.

Most veterans in West Kent are male (94%), white (97%) and aged 40-64 years (54%).

Housing arrangements are consistent with England overall, with just over half (53%) owning their own property with a mortgage or loan.

In comparison to England, general health of veterans has been rated better in West Kent; 47% perceived their health as 'very good', compared to 44% in England overall. 89% reported their day to day activities are not limited compared to 85% in England.

A higher proportion of veterans in West Kent (36%) have received higher education (degree BSc/BA or higher degree MA/PhD) compared to England overall (30%) and less 10% vs. 13%) have no academic or professional qualification.

Similarly, a higher proportion of veterans are in full-time employment in West Kent (64%) compared to England (64%) or are self-employed (15% vs 12%).

Conclusions:

West Kent has higher admission rates for falls in those aged above 65 years compared to Kent.

Recommendations

The highest impact will be achieved by focusing on cohorts with high numbers and high rates of progression of needs, therefore interventions should be targeted at, for example, those with moderate frailty or multiple conditions.

Districts already provide a range of services (some through the OneYou assessments) in the community that impact on falls prevention and social isolation. For example, Tombridge and Malling Borough Council provide services for home improvements. In this regard further work is required to examine the effectiveness of these services particularly in terms of impact on health service demand.

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7 Sexual health

Sexual health is affected by many factors. These include lifestyles, childhood and adolescent experiences, adult experiences and exposure to risk and health status. Key challenges include Adverse Childhood Experiences [ACE]s, domestic violence, mental health, alcohol use and Harmful Sexual Behaviours (HSB)s.

7.1 Demographics

The population in West Kent needing or potentially needing sexual health services is significant; the female population aged 15-44 years in West Kent CCG is 85,582.

The general fertility rate in West Kent has remained constant over the last three years with a rate of 63.0 per 1,000 females 15 – 44 years compared to the England and Wales average rate of 61 in 2017.

The total period fertility rate [TFR] is the average number of children a woman would have if she experienced current age specific fertility rates throughout her reproductive life span. (See table 3). The TFR in Maidstone, Sevenoaks and Tonbridge and Malling districts are relatively higher than the whole of the Kent, with Tunbridge Wells marginally lower; and all are above the England rates.

Table 3 Total period fertility rate, 2017

	Total period fertility rate [TFR]
England and Wales	1.76
Kent	1.89
Maidstone district	1.96
Sevenoaks district	1.93
Tonbridge and Malling district	2.00
Tunbridge Wells	1.84

Source: KCC- Population data

7.2 Reproductive health

Many pregnancies are unplanned. It is helpful, using the NATSAL study below, to retrospectively estimate unplanned pregnancy in a subsequent year and consider how to support those age ranges where this is higher.

Figure 102 Age profile of unplanned pregnancies from NATSAL[1] survey vs total conceptions in 2016, England

Age Group	16-19	20-24	25-29	30-34	35-39	40-44
% unplanned	21%	23%	16%	23%	12%	5%

Source: PHE presentation 2017

Figure 103 Unplanned pregnancies and all conceptions- age profile

Source: NASTAL and ONS, prepared by KPHO (MP), August 2018
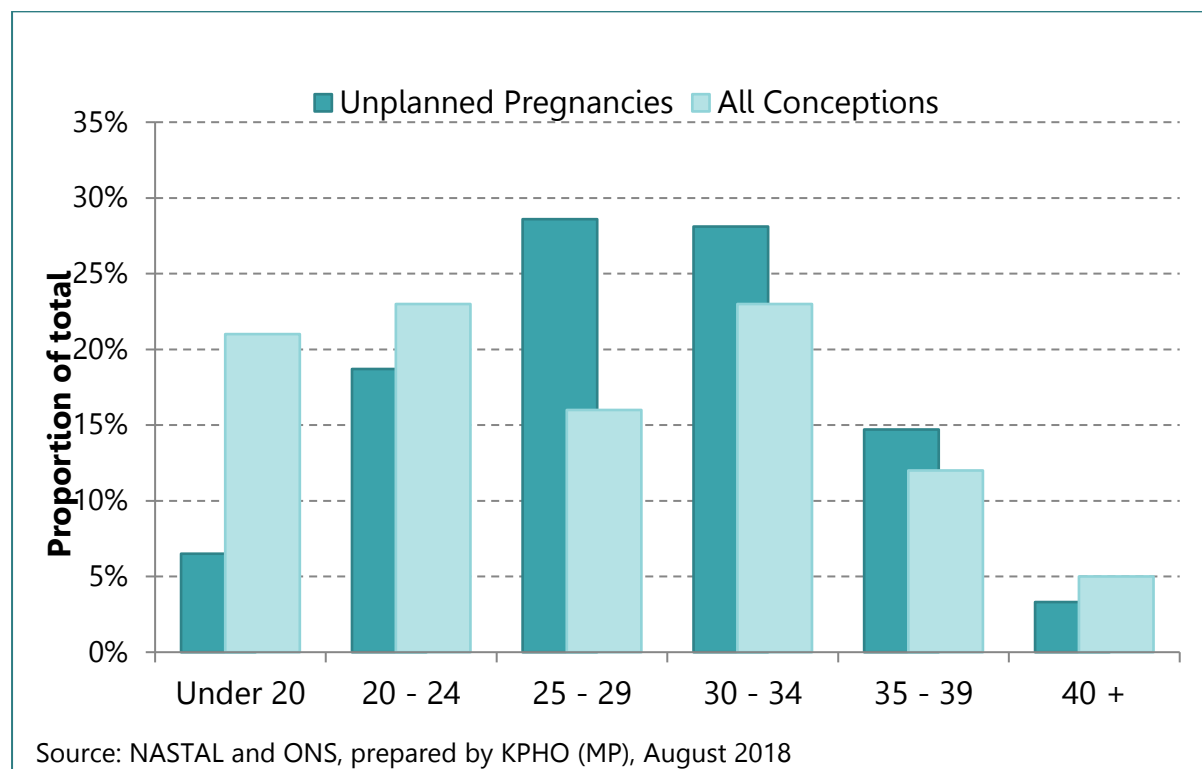
7.3 Pregnancy and birth

The number of births in Kent has remained similar in recent years at approximately 17,500 per annum. In West Kent, there were around 5,467 births in 2017 (modelled estimates due to boundary difference from district level)

7.3.1 Termination of pregnancy

In 2016, there were around 1132 terminations (equivalent to 13.8/1000 females aged 15-44) terminations in West Kent, a 3% drop from the previous year. While the rate in the area were lower than Kent and England, the trend, as with these geographies were relatively unchanged. In some cultures, termination is used as a form of contraception; this does not, however, explain uptake of this service.

Table 4 Legal abortions: Number and rates of abortion, 15- 44-year-old females by CCG and locality Office of residence 2013-2016

	Total number				**Abortion rate per 1,000 resident females aged 15-44 years**			
	2013	2014	2015	2016	2013	2014	2015	2016
England					16.1	16.1	16	16
West Kent CCG	1126	1240	1171	1132	14	15.1	14	13.8
Kent LA	4343	4323	4432	4217	15.7	15.6	16	15.2

Source: ONS

Table 5 Percentages of method of abortion and repeat abortions, 15 –44-year-old females by CCG and locality office of residence 2015-2017

year		Method of abortion		Repeat abortion		
		Total Medical %	Surgical %	Repeat abortions all ages %	Repeat abortions under 25 years %	Repeat abortions 25 year & over %
2017	England	64.6	35.4	38.8	26.7	46.7
	West Kent CCG	54.6	45.4	40.8	28.2	49.8
	Kent	53.9	46.1	40.7	27.4	50.5
2016	England	61.2	38.8	38.4	26.7	46.3
	West Kent CCG	57	43	39	27	48
	Kent	53	47	39	26	49
2015	England	54.2	45.1	37.8	26.3	46.1
	West Kent CCG	52	48	35	22	43
	Kent	47	53	39	25	50

Source: ONS

7.3.2 Contraception

The most common form of contraception used in Kent is oral contraception with microgynon [a combined pill] being the most frequently prescribed in primary care.

Trained commissioned community pharmacists offer free emergency oral contraception, levonelle and ella to females aged 30 and under.

Figure 104 Free emergency oral contraception provided to 30-year-old and under females through pharmacies 2015/16 – 2017/18
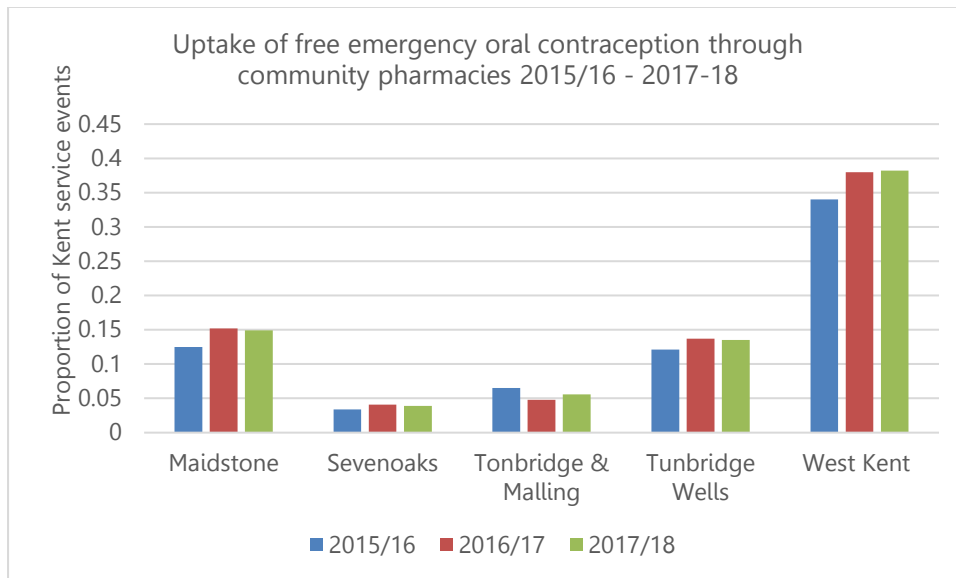
Source: Performance data

The graph above illustrates that whilst there has been a growth in the uptake of this service since 2015/16 from facilities in West Kent this is only seen in Maidstone and Tunbridge Wells districts who continue to have proportionately the most activity. Please note these are open access and do not include any service in Swanley. The number of events in West Kent in 2017/18 was 2045. Across Kent most use of this service is amongst 17 and 18-year olds.

The investment by public health in the workforce development of primary care practitioners in West Kent CCG to attain the letters of competency [LoC] to provide long acting reversible contraception (LARC) between April 2015 and December 2017 has been substantial. There are two LoCs; one for Intrauterine therapy [IUT] and one for Sub-dermal implants [SDI]. The need for workforce development was identified through initial audit which highlighted that approximately 1 in 3 LARC procedures were removed early. Follow up audit from quarters 1 and 2 2015/16 and subsequently 2017/18 suggests that these have reduced in Kent, showing the proportion of early removals over this time period at 14.4% in West Kent CCG.

Table 6 LARC excluding injections prescribed in primary care, specialist and non-specialist SHS per 1,000 females aged 15-44 years 2015 and 2016.

	Total rate of LARC excluding injections prescribed in primary care, specialist and non-specialist SHS per 1,000 females aged 15-44 years		The rate of LARC prescribed in primary care per 1,000 females aged 15-44 years	
	2015	2016	2015	2016
Maidstone district	53.8	57.6	39.6	44.2
Sevenoaks district	44.2	44.2	37.7	36.3
Tonbridge and Malling district	52.7	53.7	45.8	45.4
Tunbridge Wells district	52	53.9	42.1	46
Kent LA	48.4	47.8	36.4	36.3
England	48.2	46.4	29.8	28.8

Source: PHE fingertips

CCGs[2] have the responsibility for commissioning vasectomy services, however vasectomy reversals are not routinely funded. There is variation in activity between CCGs, with Ashford and South Kent Coast CCGs showing considerably higher rates than the rest of Kent.

Most vasectomies are delivered in primary care. Of the 4,898 procedures between 2014 and 2017, less than 5% (222) were done in hospital settings. The average age of Kent residents having a vasectomy was 40 years.

Table 7 Combined primary and secondary sterilisation procedure counts, by CCG 2014-2017

Vasectomy Procedure Counts	2014	2015	2016	2017	Total
NHS Ashford CCG	170	163	161	195	689
NHS Canterbury And Coastal CCG	95	103	109	181	488
NHS Dartford, Gravesham And Swanley CCG	139	178	143	177	637
NHS South Kent Coast CCG	178	228	245	326	977
NHS Swale CCG	44	64	75	157	340
NHS Thanet CCG	85	68	112	145	410
NHS West Kent CCG	370	359	356	272	1357
Kent	1081	1163	1201	1453	4898

Source: Kent Integrated dataset [KID]

There is no national data available at sub-England level for female sterilisation.

Most of the activity was delivered in secondary care. Of these, 342 of 364 sterilisation procedures across the four years were also coded with a caesarean procedure. 90 procedures were found in primary care. There were differences seen across the Kent CCGs, with West Kent and Canterbury & Coastal CCGs notably lower.

Table 8 Combined primary and secondary Sterilisation procedure counts, 2014-2017

Female Sterilisation Counts	2014 & 2015	2016 & 2017	Total
NHS Ashford CCG	27	26	53
NHS Canterbury And Coastal CCG	22	24	46
NHS Dartford, Gravesham And Swanley CCG	52	59	111
NHS South Kent Coast CCG	48	37	85
NHS Swale CCG	31	24	55
NHS Thanet CCG	33	41	74
NHS West Kent CCG	18	12	30
Kent	231	223	454

Source: Kent Integrated dataset

In England and Wales, the average age of first-time mothers in 2016 was 28.8 years[3], whereas that for Kent female residents having a sterilisation between 2014-2017, it was 33.5 years. The need to maintain fertility for longer may go some way to explain the change in demand for female sterilisation.

7.4   Sexually transmitted infections [STI]

The main STIs reported publicly available include Gonorrhoea, Syphilis, Chlamydia, Genital herpes, Genital warts and HIV. The increase in the detection of gonorrhoea and syphilis in Kent has mirrored national trends.   There has been a steady increase in the prevalence of HIV in Kent over the last six years.

New episodes of genital warts or Human Papilloma Virus (HPV) are the most common viral STI. The diagnoses rate of genital warts per 100,000 has decreased since 2013 in Kent and England. This is likely to be as a result of the HPV vaccination programme which was introduced in 2008. The impact for individuals with this infection can be a prolonged course of treatment requiring multiple visits to the service and reoccurring outbreaks.

The most commonly diagnosed STI in Kent is chlamydia (2339 females equivakent to 1,272/100,000 females aged 15-24). Rates in Kent need to improve but a recent Kent wide needs assessment has identified that the proportion of females being offered a sexual health screen at first attendance in sexual health services has dropped sharply since 2015. Highest levels of positivity are detected through the online service online and with the number of people using this service increasing, rates overall should increase.

New STI diagnoses are reducing in Kent but there are pockets where infections are higher. In West Kent CCG this has been seen particularly in Maidstone district.

Kent is an outlier for Pelvic inflammatory disease [PID] and ectopic pregnancy, two issues affecting females potentially from undetected chlamydia or gonorrhoea infection. Emerging evidence is suggesting that Mycoplasma Genitalium may be another undetected infection responsible for PID. The districts in Kent with rates of ectopic pregnancies higher than the Kent average of 114.8 per 100,000 female population aged 15-44 years in 2016/17 included Maidstone 139.0 and Tonbridge and Malling 134.8 per 100,000 female population aged 15-44 years.

West Kent CCG has had varying prevalence of HIV amongst 15- 59-year olds in the last six years. Recent figures indicate Maidstone having the highest rates of diagnosis (1.42/1000) across the area, an increasing pattern similar to that across the whole of Kent – here, rates were up 36%, from .97/1000 to 1.32/1,000 between 2011 and 2017.

The numbers of individuals with a late diagnosis of HIV in Kent have reduced by 18.4% between 2009-11 and 2015-17. The proportion diagnosed late, however, was up 12% points, from 49.8% to 61.7% over the same time period. Across England, late diagnosis was down 9% points, from 50.2% to 41.1% over the same periods. The trends in late diagnosis show significantly increasing rates of late diagnosis in Kent in contrast to decreases in England.

Most late diagnosis of HIV is amongst the heterosexual community in Kent. Offering and encouraging uptake of HIV tests amongst this group and in a range of settings, including primary care as well as offering access to online testing, should help with the earlier diagnosis of new cases and onward referral to treatment.

7.5 Local sexual health service provision

The sexual health services available to the resident and non-resident population in West Kent CCG which are identified on the website www.kent.gov.uk/sexualhealth are as follows:

Non-resident services

Integrated sexual health clinics – with all age provision services or services for those aged 25 years and under. These are available in Tonbridge, Tunbridge Wells, Maidstone, Sevenoaks with outreach clinics in Cranbrook, Parkway [Maidstone], Hadlow and Edenbridge.

32 pharmacies in WK CCG have contracts to provide free emergency oral contraception to women aged 30 years and under.

Kent county council has ensured there is regular provision of sexual health services in the prisons in Kent, two of which are situated in West Kent CCG. HMP Maidstone, a category B prison which holds male foreign nationals and HMP East Sutton a category C prison for females serving the end of their sentences.

Resident only services

Psychosexual therapy is available through GP referral and is held in venues across WK CCG.

Practices in WK CCG with a GMS contract provide contraceptive services, and of the 60 practices in WK CCG, 55 [9 in 10] have contracts with the local authority to provide LARC.

Online STI testing for those aged 16 and over provides testing for chlamydia, gonorrhoea, syphilis, HIV, Hepatitis B and/or Hepatitis C depending on the risk identified by the service user.

Condom provision through the 'Get it' programme is accessible to under 25-year olds from many outlets across the WK CCG area.

Online condom provision through the 'Get it' programme is accessible for those aged 16 -24 years.

Out of area

Most Kent residents accessing sexual health services out of area, access them in London with high proportions from residents of West Kent CCG. This may reflect the community accessing services whilst working in London.

Conclusion:

Abortion rates in West Kent are higher than the national average, but lower than in Kent overall.

There is a higher use of emergency contraception provided by pharmacies in Maidstone compared to the West Kent average, however, LARC provision rates are higher in West Kent compared to Kent overall.

Maidstone appears to have higher rates of complications from STI such as ectopic pregnancy and pelvic inflammatory disease.

Recommendations

- Raising awareness about routes of infection of HIV and the value of earlier diagnosis, as symptoms may not be visible.

- The populating of information regarding partner notification from primary care diagnosed STIs onto a Kent wide system

- Promoting access to planned contraception for females aged 25-29 years

[1] NATSAL http://www.natsal.ac.uk/media/2102/natsal-infographic.pdf

[2] DH [2013] Commissioning Sexual Health Service and Interventions
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/144184/Sexual_Health_best_practice_guidance_for_local_authorities_with_IRB.pdf

[3]https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsbyparentscharacteristicsinenglandandwales/2016

8 Lifestyle factors affecting health

8.1 Alcohol

Alcohol misuse leads to a range of public health problems and acute conditions, such as alcohol poisoning, violence and accidents which can be attributed to alcohol. There are a number of alcohol related chronic conditions such as alcohol-induced pancreatitis, chronic liver disease and stomach cancer which all lead to reduced health and wellbeing and at worst, loss of life. Alcohol misuse contributes to stroke and hypertension, as well as mortality related to liver disease.

Consequently, the public health effects of high alcohol consumption can be seen across the whole society. This ranges from the need to access hospital care to social effects such as the economic burden due to loss of employment and reduced capacity to work. Further negative effects of alcohol are seen both at individual and community level, for example, behavioural changes resulting in acts of violence, anti-social behaviour, accidents or crime, risky sexual activity leading to teenage conceptions and sexually transmitted infections, and poor educational attainment.

The rate of admissions to hospital for alcohol-specific conditions in West Kent is similar to the Kent average. There is significant variation across practices, with 11 practices having significantly higher hospital admission rates than the West Kent average and 17 practices with significantly lower hospital admissions for alcohol-specific conditions than the West Kent average.

Figure 105 Hospital admissions for alcohol-specific conditions – by CCG
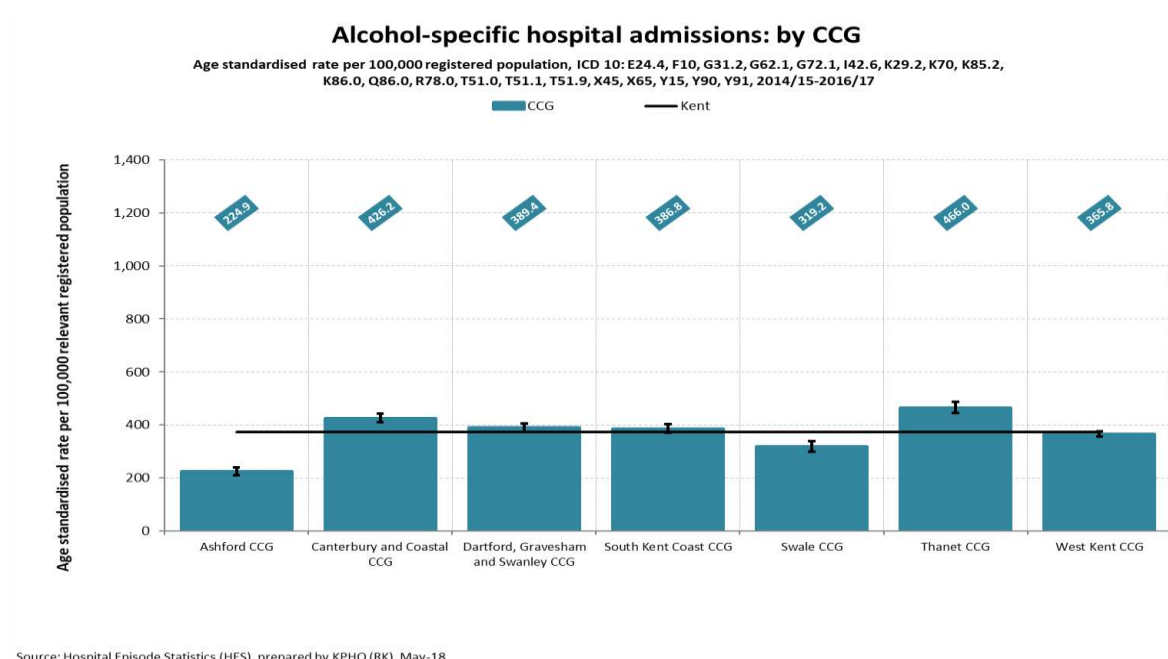
Figure 106 Hospital admissions for alcohol-specific conditions – by GP practice

Alcohol-specific hospital admissions: by GP practice
Age standardised rate per 100,000 registered population, ICD 10: E24.4, F10, G31.2, G62.1, G72.1, I42.6, K29.2, K70, K85.2, K86.0, Q86.0, R78.0, T51.0, T51.1, T51.9, X45, X65, Y15, Y90, Y91, 2014/15-2016/17
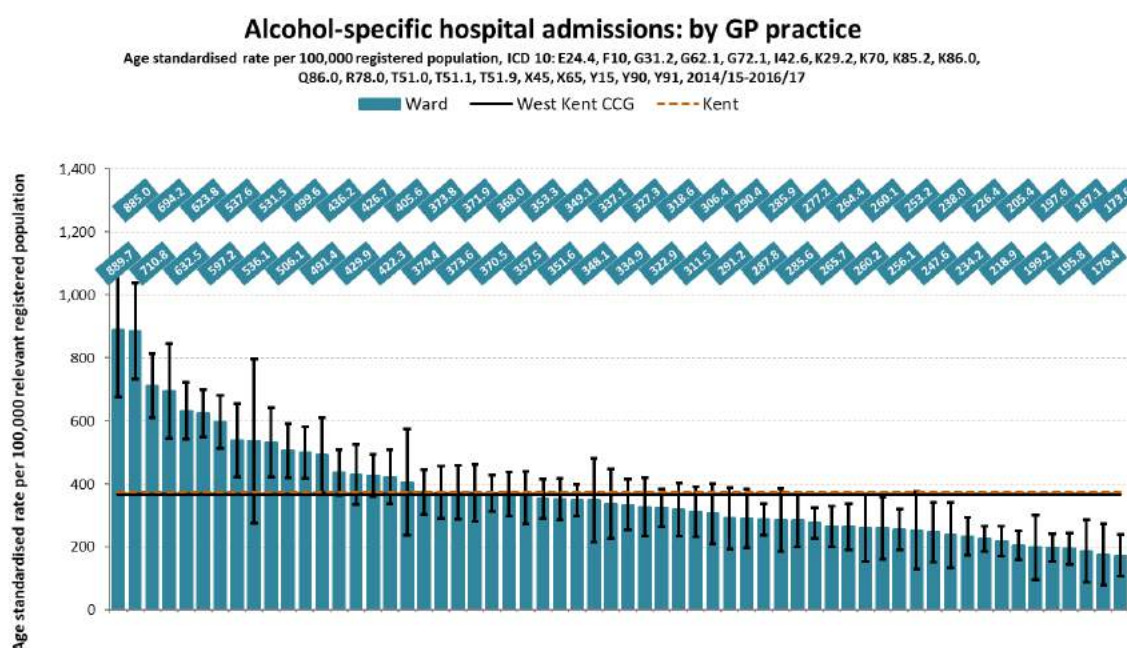
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Table 9 Alcohol related hospital admissions by district

Alcohol-related hospital admission (broad): directly standardised rate per 100,000 population (Persons)		
Location	Rate	95% confidence interval
South East Region	1258	1255-1261
Kent	1088	1072-1105
Maidstone	1065	1015-1118
Sevenoaks	967	911-1024
Tonbridge & Malling	967	911-1025
Tunbridge Wells	953	896-1013

The rate of alcohol related admission per 100,000 is lower in Kent (1088) compared to the South East Region (1258), and lower in West Kent compared to Kent.

It is estimated that more than 100,000 adults in West Kent are drinking over 14 units of alcohol a week[16].

Alcohol and Drug misuse services in West Kent have been re- commissioned and since April 2016 services are provided by CGL (https://www.changegrowlive.org/) with an increased focus on case-working and wrap around support, utilising the skills and assets within the Health and Wellbeing Team and the Programmes/Groupwork Team as well brokering support from partner and community based agencies and the West Kent Volunteers and Recovery Champions to develop comprehensive recovery support plans for all service users.

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[16] Calculated based on Health Survey for England data on adults drinking over 14 units of alcohol a week for Kent (2011-14), applied to the mid-2016 18+ resident population for West Kent CCG.

8.2   Smoking

Smoking is a major cause of lung cancer, cardiovascular disease and chronic obstructive pulmonary disease (COPD). Smoking also contributes to many other cancers and conditions, such as high blood pressure.

Smoking prevalence has decreased significantly since 2012. The latest figures from the Annual Population Survey suggest that smoking prevalence in Kent was 15% in 2016 compared with 21% in 2012. Smoking prevalence still differs significantly across the four West Kent districts. Whilst the survey estimates that, in 2016, only 8% of adults in Sevenoaks smoked, this increases to 17% in Maidstone.

Figure 107 Smoking prevalence – by district
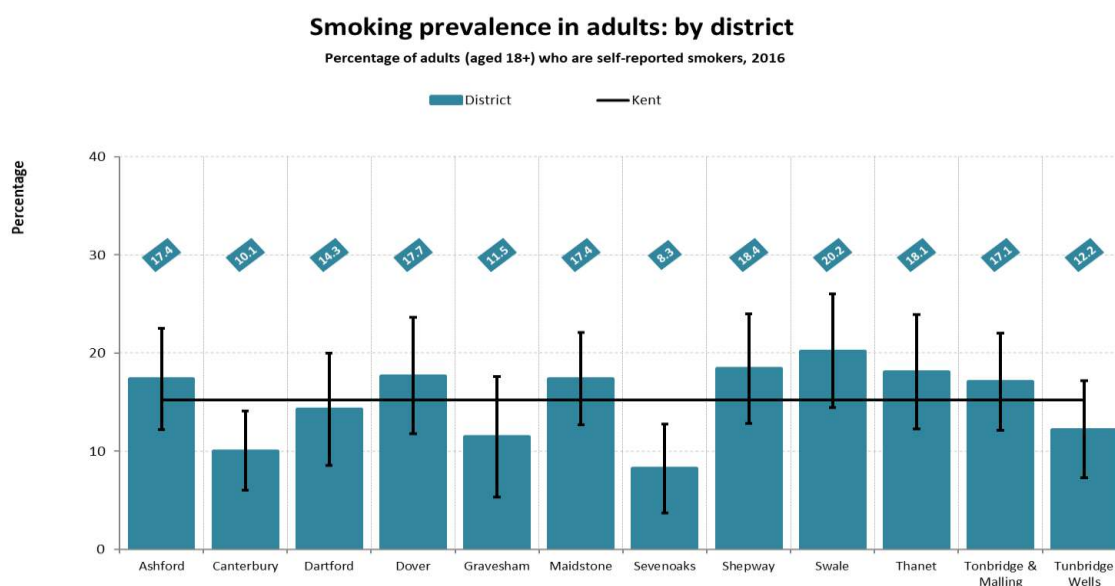
Source: Annual Population Survey (APS), prepared by KPHO (RK), Feb-18

Figure 108 Smoking prevalence – trend

Smoking prevalence in adults: trend
Percentage of adults (aged 18+) who are self-reported smokers, 2012 to 2016
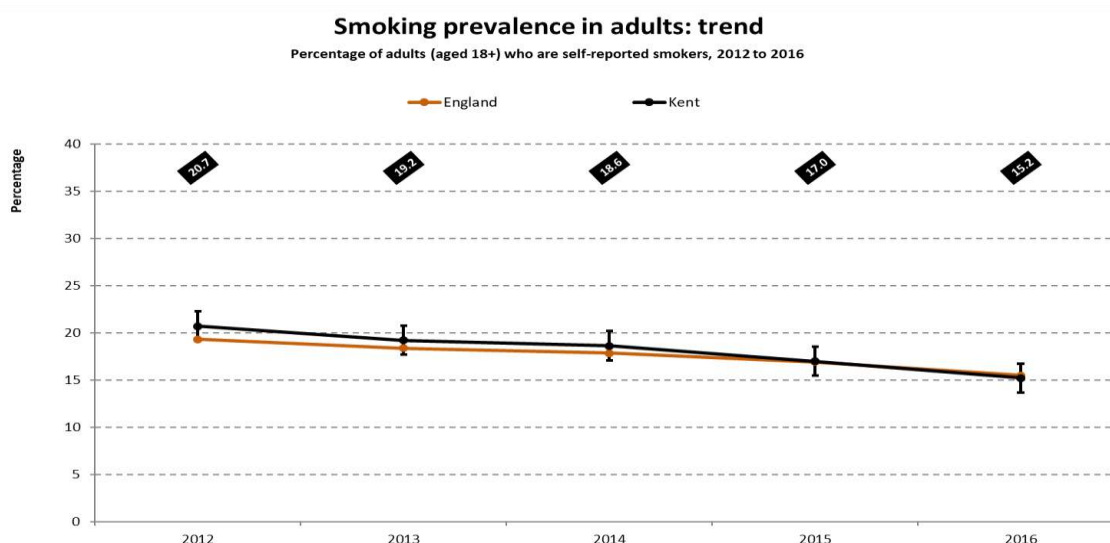
Source: Annual Population Survey (APS), prepared by KPHO (RK), Feb-18

8.3 Obesity

8.3.1 Adult obesity

Obesity can contribute to a range of health conditions such as hypertension, type 2 diabetes and heart disease. Obesity is a general issue requiring collective effort from all stakeholders.

The latest figures from the Active Lives Survey suggest that 61% of adults in Kent are overweight or obese. Whilst Tunbridge Wells has excess weight levels below this Kent average, they are even higher in Maidstone (69%).

Figure 109 Excess weight in adults – by district

Adults classified as overweight or obese: by district
Percentage of adults (aged 18+) classified as overweight or obese, 2016/17
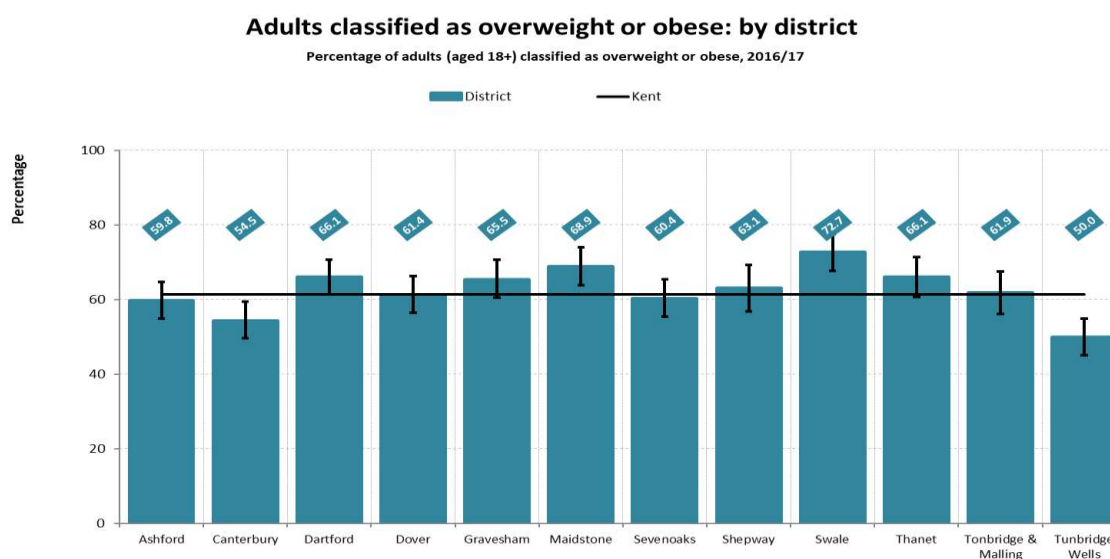
Source: Public Health England (based on Active Lives survey, Sport England), prepared by KPHO (LLY), May-18

8.3.2 Childhood obesity

Childhood obesity is a well-known risk factor for developing diabetes as an adult; however, there are a small but rising number of children who are developing Type 2 diabetes at a very early age due to their weight.

Childhood obesity levels are slightly lower in West Kent than the Kent average. However, whilst obesity levels amongst year 6 pupils have remained stable over recent years, there is some evidence to suggest that obesity in reception year pupils is increasing. The gap between children living in the most and least deprived parts of West Kent is also increasing. In 2016/17 obesity levels amongst reception year children living in the most deprived areas of West Kent were 63% higher (13.4%) than those living in the least deprived areas (8.2%)[17]. Obesity levels amongst year 6 pupils living in the most deprived areas (20.8%) were nearly double that of pupils living in the least deprived areas (10.8%).

There is considerable variation between electoral wards. Obesity amongst reception year pupils is significantly higher than the West Kent average in:

- Shepway North
- Shepway South
- Snodland West
- Trench
- Sherwood

Obesity amongst year 6 pupils is significantly higher than the West Kent average in:

- Coxheath & Hunton
- High Street
- Park Wood
- Shepway North
- Aylesford
- Larkfield South
- Paddock Wood East

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[17] based on Kent IMD 2015 quintiles.
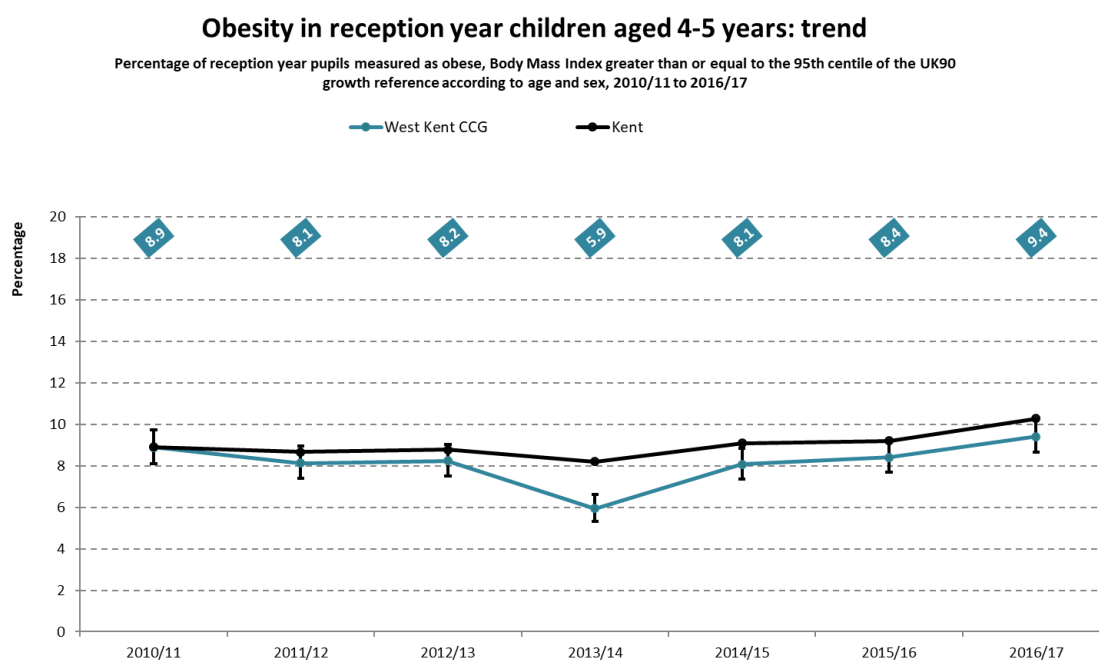
Figure 110 Childhood obesity – by CCG

Obesity in reception year children aged 4-5 years: by CCG

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in year six children aged 10-11 years: by CCG

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Figure 111 Childhood obesity – trend

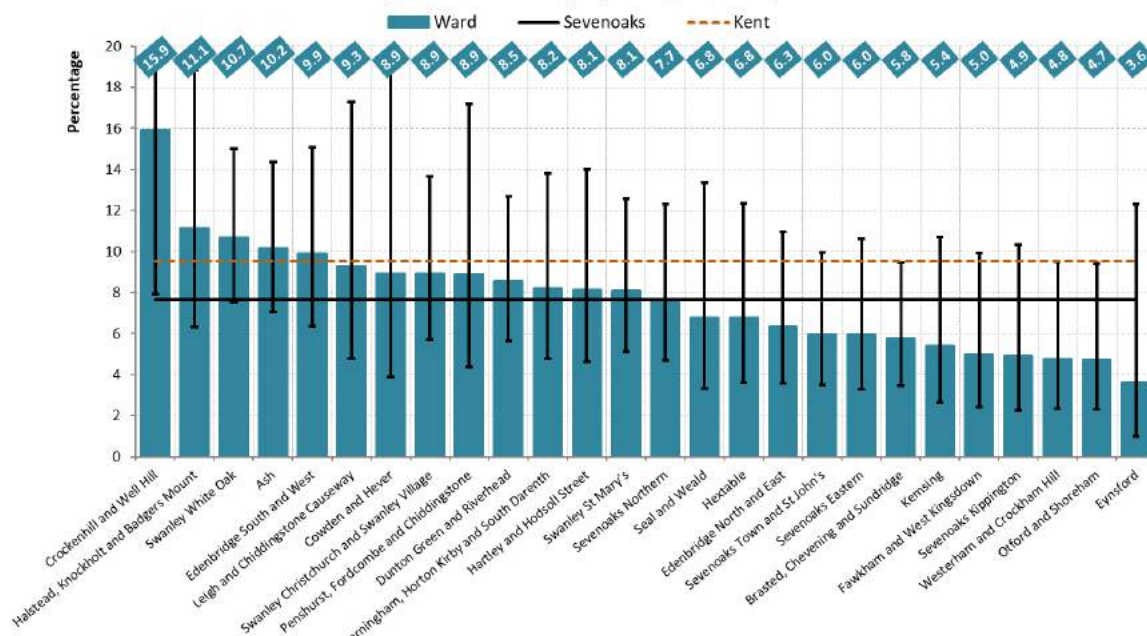### Obesity in reception year children aged 4-5 years: trend

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90
growth reference according to age and sex, 2010/11 to 2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Obesity in year six children aged 10-11 years: trend

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90
growth reference according to age and sex, 2010/11 to 2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 112 Childhood obesity – by deprivation

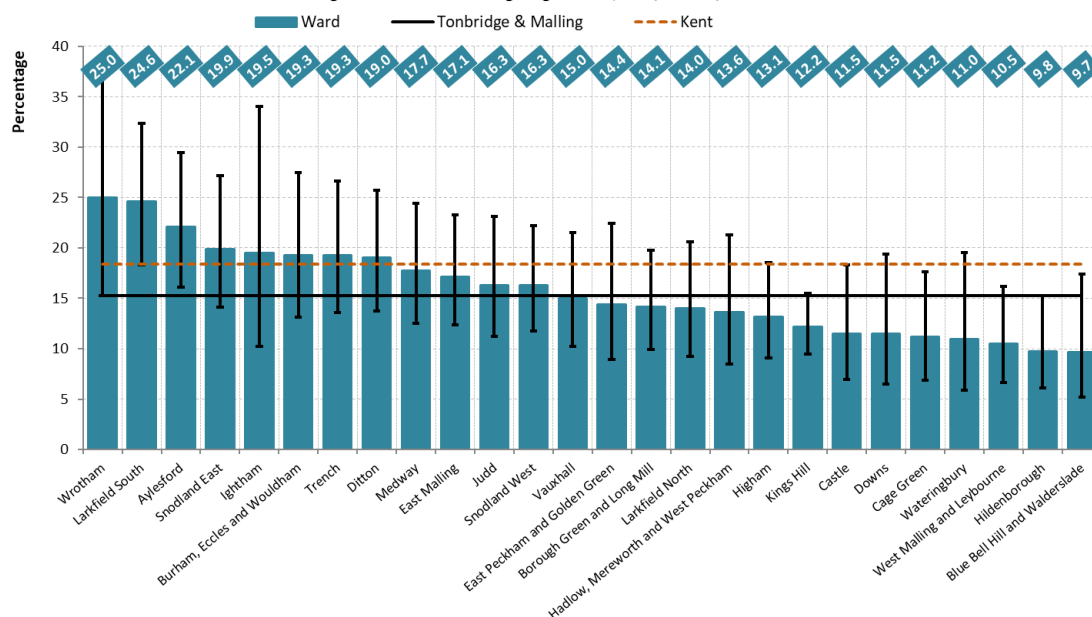## Obesity in reception year children aged 4-5 year: by deprivation

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the
UK90 growth reference according to age and sex, 2010/11 to 2016/17

● Kent least deprived   ● West Kent CCG least deprived
■ Kent most deprived   ■ West Kent CCG most deprived

Least deprived trend - no significant change compared with a stable trend for Kent
Most deprived trend - increasing with a similar pace of change to Kent

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

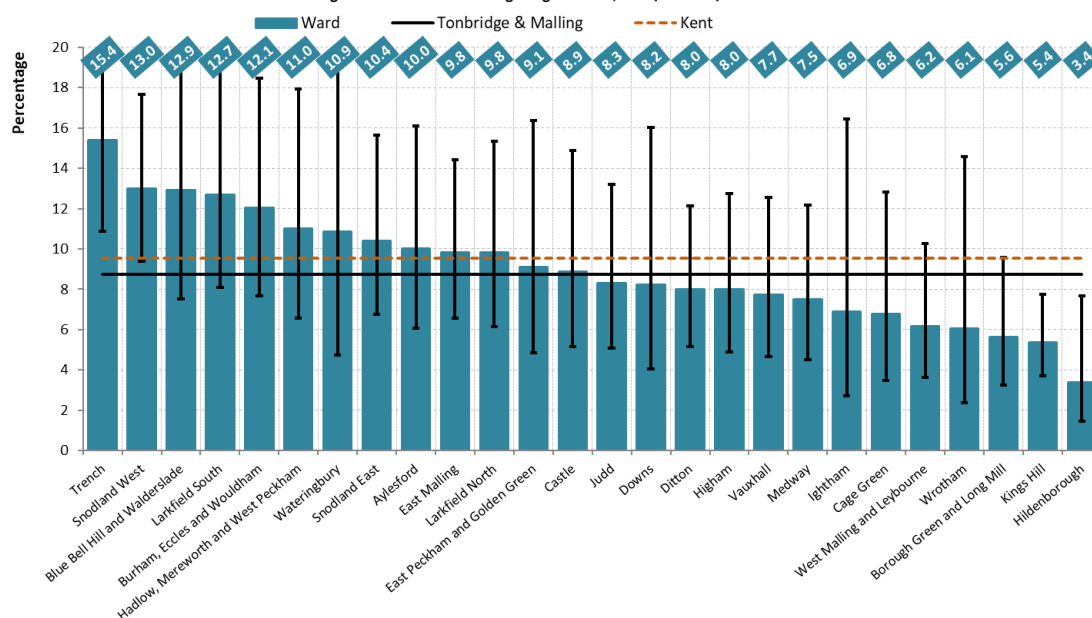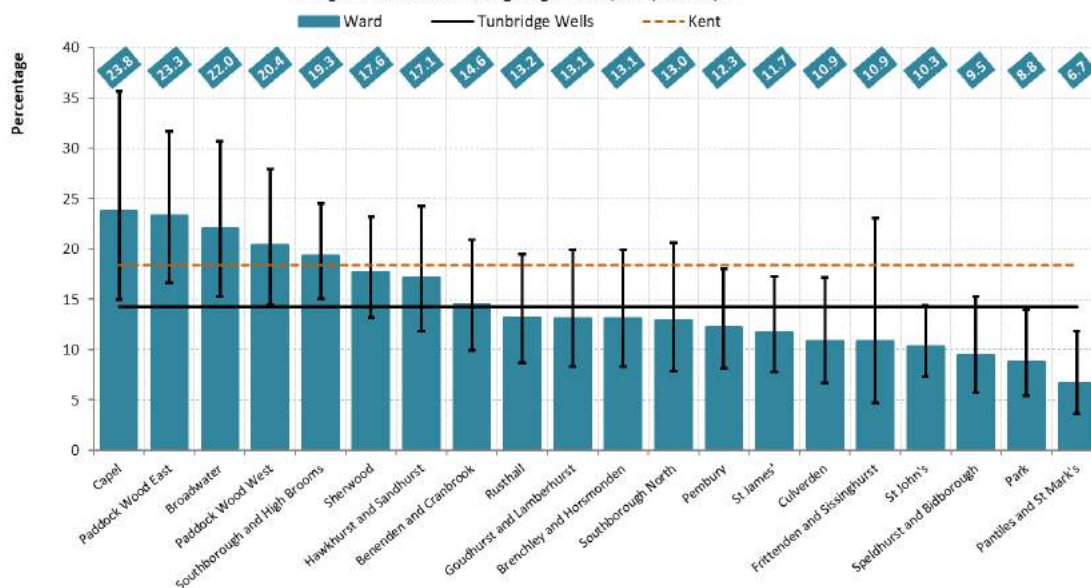## Obesity in year six children aged 10-11 years: by deprivation

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the
UK90 growth reference according to age and sex, 2010/11 to 2016/17

● Kent least deprived   ● West Kent CCG least deprived
■ Kent most deprived   ■ West Kent CCG most deprived

Least deprived trend - decreasing compared with an stable trend for Kent
Most deprived trend - no significant change compared with an stable trend for Kent

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Figure 113 Childhood obesity – by ward

Obesity in reception year children aged 4-5 years: by electoral ward
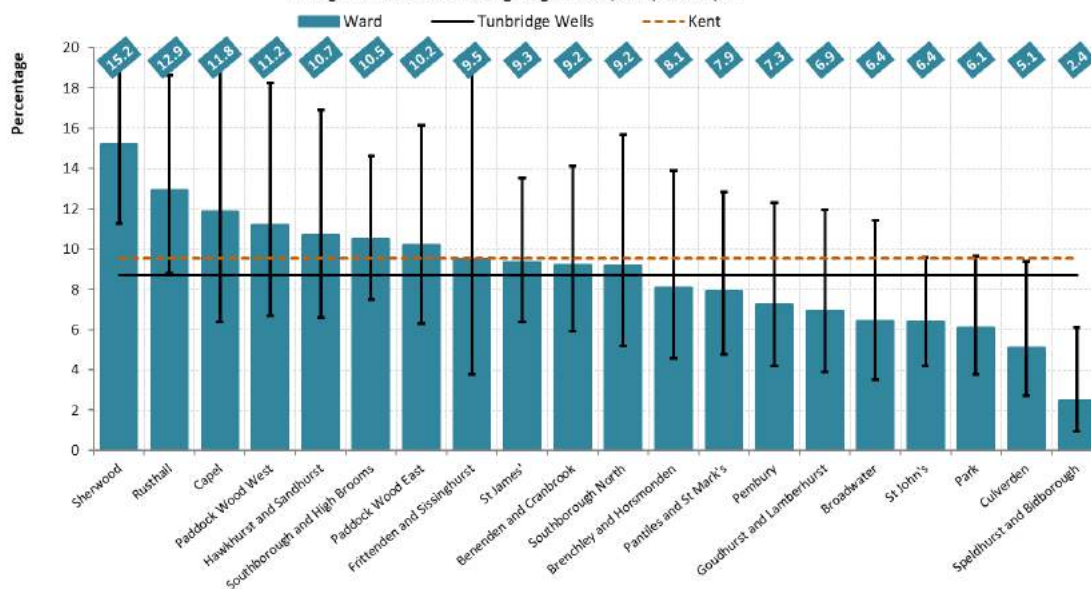
Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in year six children aged 10-11 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

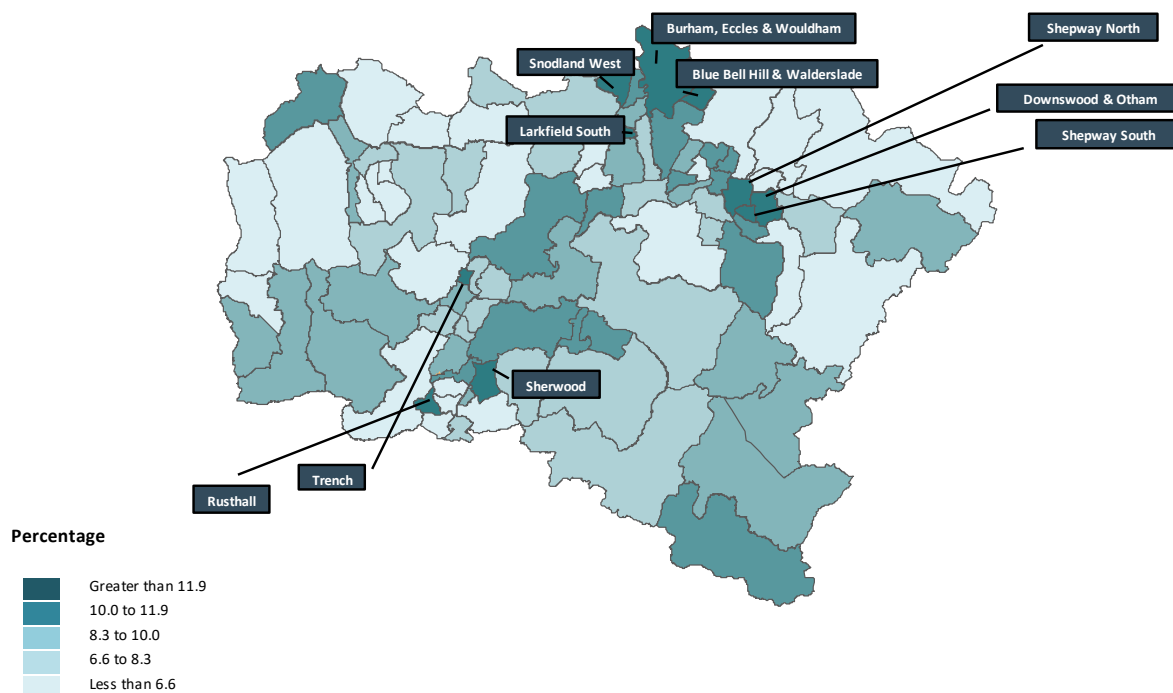## Obesity in year six children aged 10-11 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in reception year children aged 4-5 years: by electoral ward
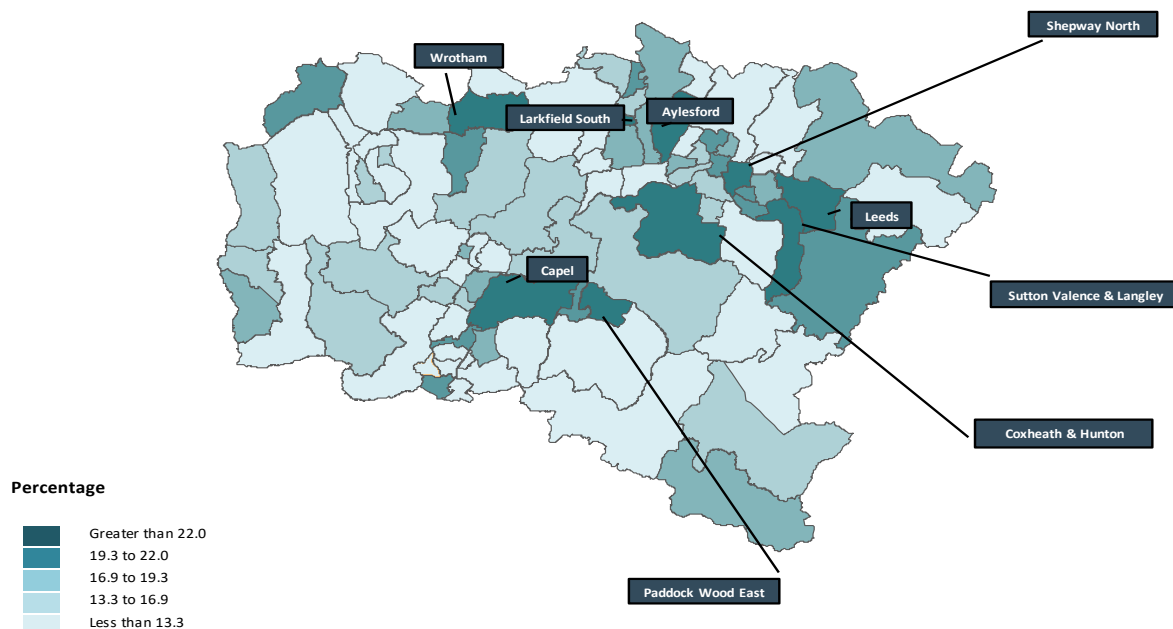
Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in year six children aged 10-11 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Legend: Ward ▬ Tonbridge & Malling ▬ ▬ ▬ Kent

Values (left to right): 25.0, 24.6, 22.1, 19.9, 19.5, 19.3, 19.3, 19.0, 17.7, 17.1, 16.3, 16.3, 15.0, 14.4, 14.1, 14.0, 13.6, 13.1, 12.2, 11.5, 11.5, 11.2, 11.0, 10.5, 9.8, 9.7

Wards: Wrotham, Larkfield South, Aylesford, Snodland East, Ightham, Burham, Eccles and Wouldham, Trench, Ditton, Medway, East Malling, Judd, Snodland West, Vauxhall, East Peckham and Golden Green, Borough Green and Long Mill, Larkfield North, Hadlow, Mereworth and West Peckham, Higham, Kings Hill, Castle, Downs, Cage Green, Wateringbury, West Malling and Leybourne, Hildenborough, Blue Bell Hill and Walderslade

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Legend: Ward ▬ Tonbridge & Malling ▬ ▬ ▬ Kent

Values (left to right): 15.4, 13.0, 12.9, 12.7, 12.1, 11.0, 10.9, 10.4, 10.0, 9.8, 9.8, 9.1, 8.9, 8.3, 8.2, 8.0, 8.0, 7.7, 7.5, 6.9, 6.8, 6.2, 6.1, 5.6, 5.4, 3.4

Wards: Trench, Snodland West, Blue Bell Hill and Walderslade, Larkfield South, Burham, Eccles and Wouldham, Hadlow, Mereworth and West Peckham, Wateringbury, Snodland East, Aylesford, East Malling, Larkfield North, East Peckham and Golden Green, Castle, Judd, Downs, Ditton, Higham, Vauxhall, Medway, Ightham, Cage Green, West Malling and Leybourne, Wrotham, Borough Green and Long Mill, Kings Hill, Hildenborough

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in year six children aged 10-11 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in reception year children aged 4-5 years: by electoral ward

Percentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2014/15-2016/17

Source: NCMP, NHS Digital, prepared by KPHO (TG), Nov-17

Obesity in reception year children aged 4-5 years: by electoral ward

Pecentage of reception year pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2016-17

Snodland West

Burham, Eccles & Wouldham

Shepway North

Blue Bell Hill & Walderslade

Downswood & Otham

Larkfield South

Shepway South

Sherwood

Rusthall

Trench

Percentage

- Greater than 11.9
- 10.0 to 11.9
- 8.3 to 10.0
- 6.6 to 8.3
- Less than 6.6

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Obesity in year six children aged 10-11 years: by electoral ward

Percentage of year six pupils measured as obese, Body Mass Index greater than or equal to the 95th centile of the UK90 growth reference according to age and sex, 2016-17

Wrotham

Shepway North

Larkfield South

Aylesford

Leeds

Capel

Sutton Valence & Langley

Coxheath & Hunton

Paddock Wood East

Percentage

- Greater than 22.0
- 19.3 to 22.0
- 16.9 to 19.3
- 13.3 to 16.9
- Less than 13.3

Source: NCMP, NHS Digital, prepared by KPHO (TG), Oct-17

Recommendations:

To take action to tackle obesity, practices must understand obesity prevalence within their registered populations and commission services to support individuals to address eating habits and improve physical activity.

At CCG level practices must work with the local authorities to take action in making changes at environmental and policy level to enable people to be more active and eat more appropriately.

- Interventions at an earlier age are required to reduce the prevalence at reception as well as interventions for school aged children through the Healthy Schools programme and Family Weight Management Programmes

8.4 Fruit and vegetable consumption

Five portions of fruit and vegetable consumption is an indicator of health as it is associated with life style factors and with affordability.

The latest figures from the Active Lives Survey suggest that 59% of adults in Kent meet the recommended '5-a-day' on a 'usual day'. Whilst fruit and vegetable consumption in Maidstone is very similar to the Kent average, there is some evidence to suggest higher consumption rates in Sevenoaks, Tonbridge & Malling and Tunbridge Wells.

Figure 114 Fruit and vegetable consumption in adults – by district
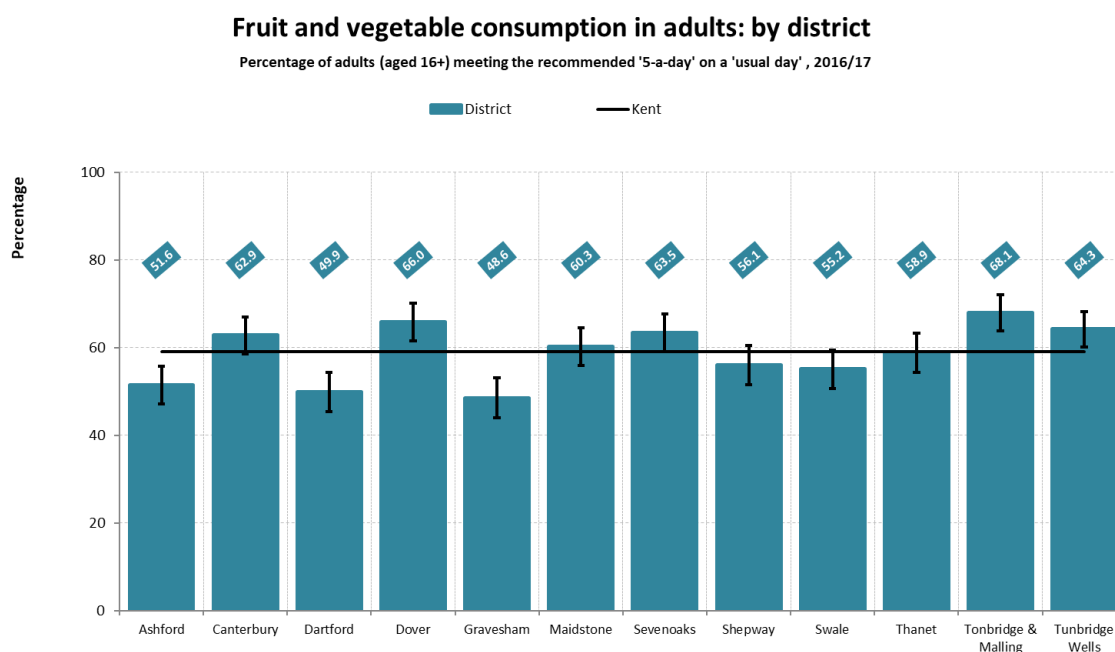
Fruit and vegetable consumption in adults: by district

Percentage of adults (aged 16+) meeting the recommended '5-a-day' on a 'usual day' , 2016/17

Source: Public Health England (based on Active Lives, Sport England), prepared by KPHO (LLY), May-18

Recommendations:

Work with District Councils and other partners to provide affordable fresh produce.

Commission services to support individual behaviour change for adopting a healthy lifestyle in areas with lower consumption rates of '5-a-day'

8.5 Physical inactivity

The latest figures from the Active Lives Survey suggest that 20% of adults in Kent are physically inactive (i.e. they do less than 30 moderate intensity equivalent minutes of physical activity per week). All four of the West Kent districts have physical inactivity levels that are not statistically significantly different to this Kent average.

Figure 115 Physical inactivity in adults – by district
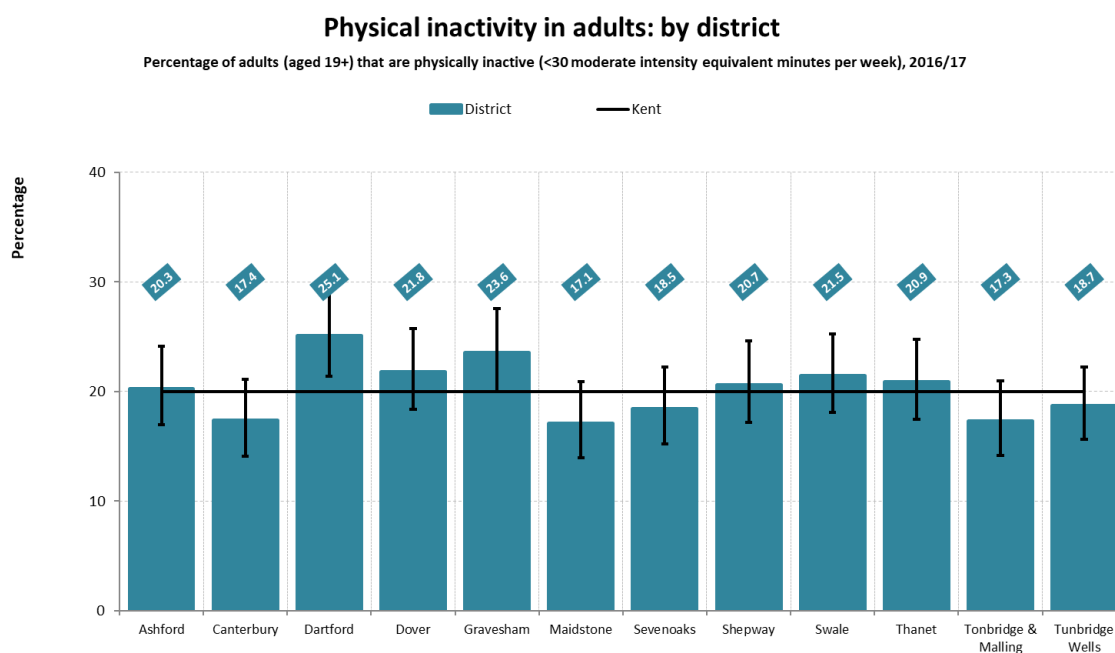
Physical inactivity in adults: by district

Percentage of adults (aged 19+) that are physically inactive (<30 moderate intensity equivalent minutes per week), 2016/17

Source: Public Health England (based on Active Lives, Sport England), prepared by KPHO (LLY), May-18

Conclusion:

Whilst overall West Kent has similar admissions rates for alcohols specific admissions, 11 practices have significantly higher and 7 have significantly lower alcohol specific admission rates compared to Kent.

Obesity levels are 63% higher in the most deprived areas compared to the least deprived areas for reception year. This gap nearly doubles for year 6.

There is a significant variation in smoking prevalence with Sevenoaks having the lowest rate (8%) compared to the highest (17 %) in Maidstone.

9   Healthcare utilisation and disease distribution

9.1   Health checks

The ACORN classifications are on based on demographic, socio-economic, population and consumer behaviour. The ACORN segments are used provide insights into people's behaviour, lifestyle and attitudes.

Within Kent, persons categorised by house hold types 'Affluent Achievers' and 'Comfortable Communities' are more likely to complete a Health Check when compared with persons categorised as being 'Financially Stretched' or in 'Urban Adversity'. The group type 'Rising Prosperity' showed no effect one way or the other.

Figure 116 Odds ratio of completing a Health Check by ACORN type (persons)

Produced by KPHO (GAA, April 2017)
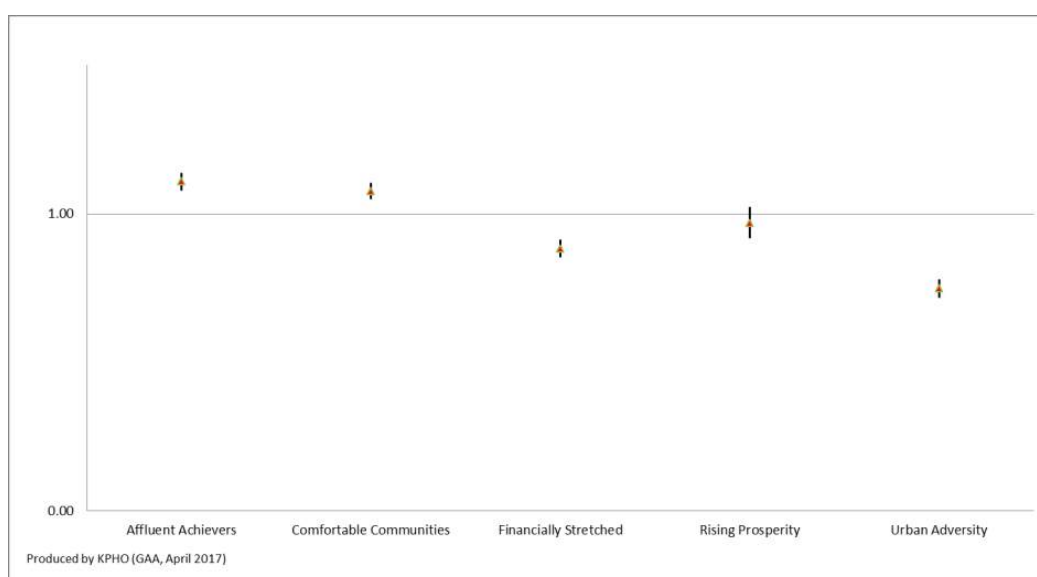
9.2 Diabetes

Diabetes poses a major public health challenge for the local population. It is a significant cause of morbidity. Diabetes reduces the life expectancy of people with type 1 by about 15 years and type 2 by about 10 years. If not well managed individuals with diabetes could have co-morbidities resulting in complications such as:

Diabetic emergencies: Hypoglycaemia, diabetic ketoacidosis, other diabetic comas

Chronic complications: blindness, kidney disease, coronary heart disease, foot ulcers, amputations, and neuropathy.

Many of these complications are preventable with better control of blood glucose level, control of high blood pressure and blood cholesterol and routine screening such as diabetic retinal screening.

The QOF recorded diabetes prevalence in West Kent is lower than for most other Kent CCGs, but there is variation across practices. Fifteen of the 60 West Kent practices included in the 2016/17 QOF have a recorded diabetes prevalence significantly higher than the West Kent average. Thirteen practices record a diabetes prevalence significantly below the West Kent average.

Obesity is one of the risk factors for type 2 diabetes. There is also variation in recorded obesity prevalence across practices.

Figure 117 Recorded diabetes prevalence – by CCG (of registration)

Recorded prevalence of diabetes: by CCG

Percentage of patients aged 17+ recorded on GP QOF registers as having diabetes mellitus, 2016/17
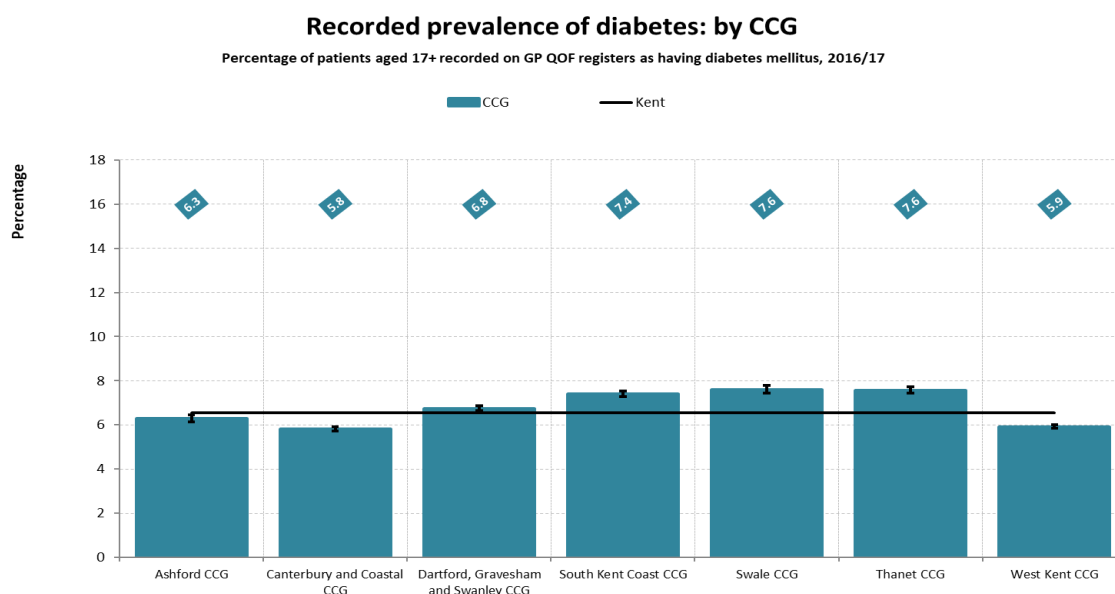
Source: QOF, prepared by KPHO (RK), May-18

Figure 118 Recorded diabetes prevalence – by GP practice

Recorded prevalence of diabetes: by GP practice
Percentage of patients aged 17+ recorded on GP QOF registers as having diabetes mellitus, 2016/17
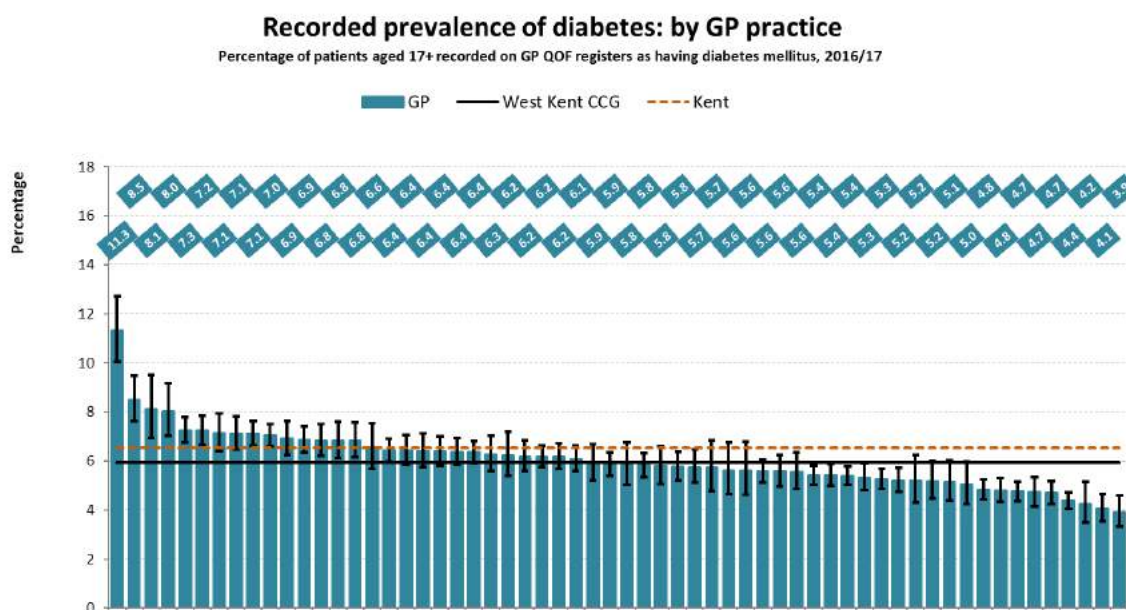
Source: QOF, prepared by KPHO (RK), May-18

Figure 119 Recorded obesity prevalence – by GP practice

Recorded prevalence of obesity: by GP practice
Percentage of patients aged 18+ recorded on GP QOF registers as obese, 2016/17
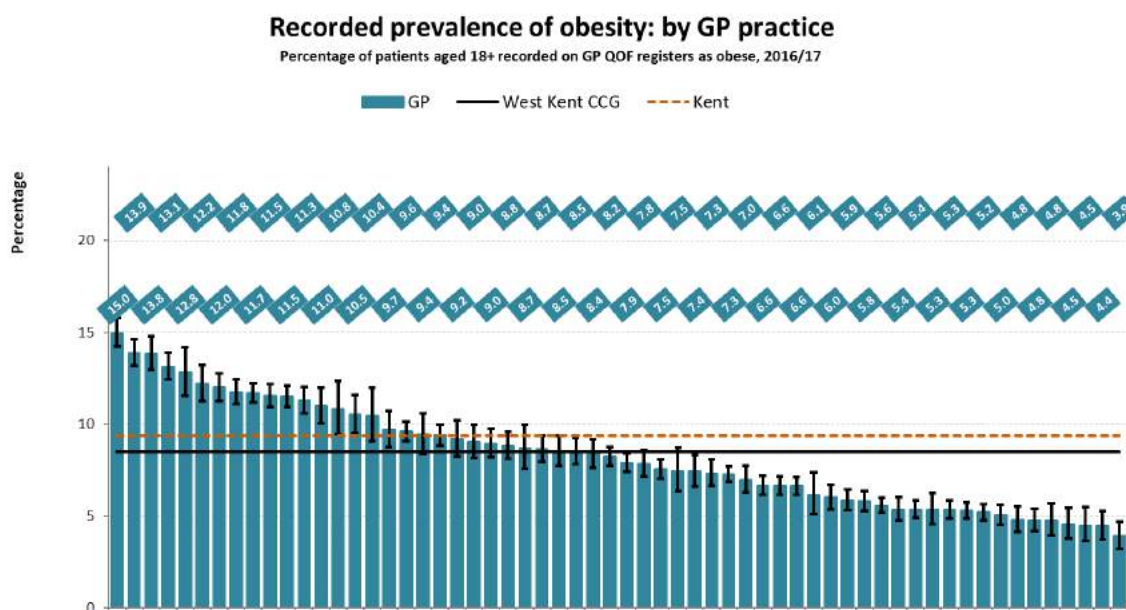
Source: QOF, prepared by KPHO (RK), May-18

The rate of emergency admissions to hospital for diabetes in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 5 practices having significantly higher emergency hospital admission rates and 13 having significantly lower rates than the West Kent average.

One practice in West Kent, has high emergency hospital admissions for diabetes, but low recorded prevalence. Conversely, three practices have low emergency hospital admissions for diabetes, but high recorded prevalence.

Figure 120 Emergency hospital admissions for diabetes – by CCG

Emergency hospital admissions for diabetes: by CCG

Age standardised rate per 100,000 registered population, ICD 10: E10-14 (primary diagnosis), 2012/13-2016/17
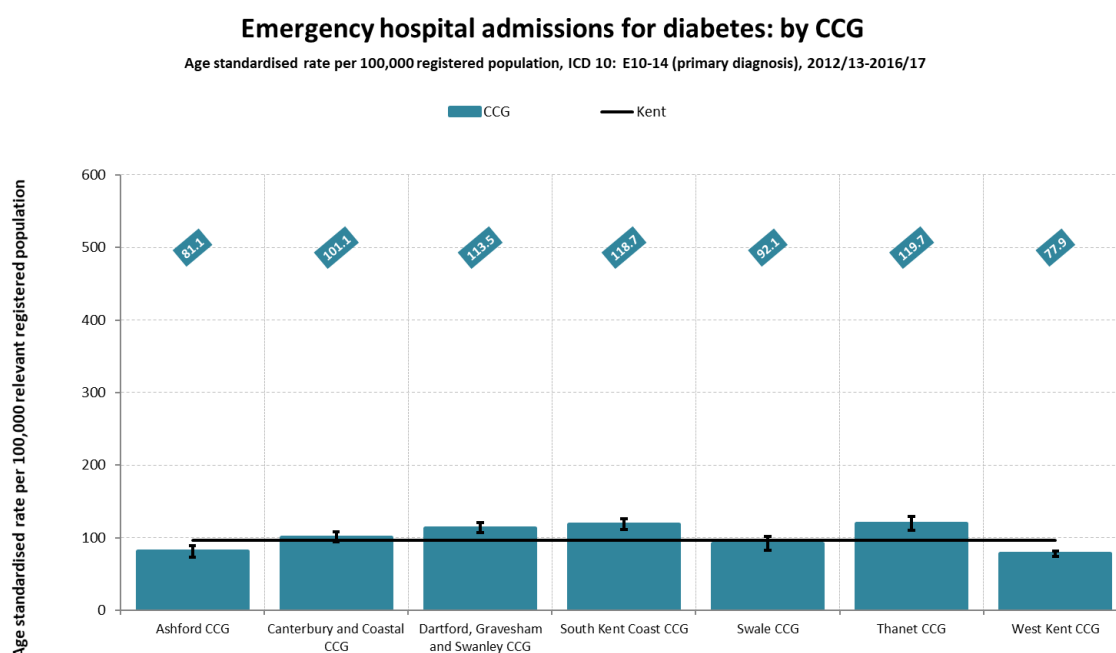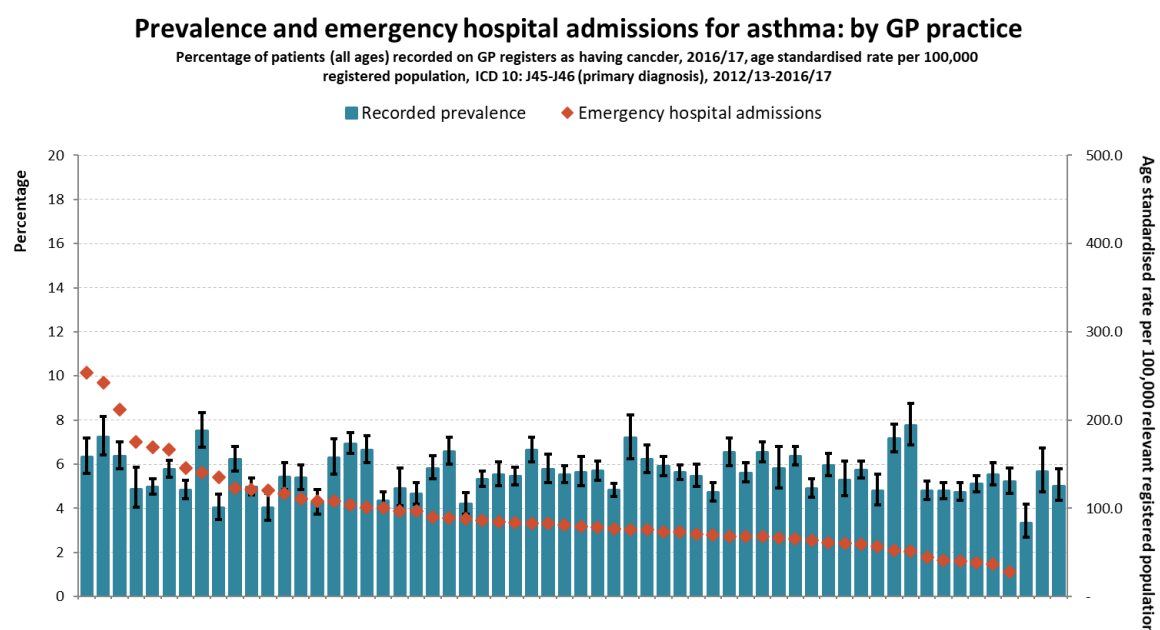

Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 121 Emergency hospital admissions for diabetes – by GP practice

Emergency hospital admissions for diabetes: by GP practice
Age standardised rate per 100,000 registered population, ICD 10: E10-14 (primary diagnosis), 2012/13-2016/17
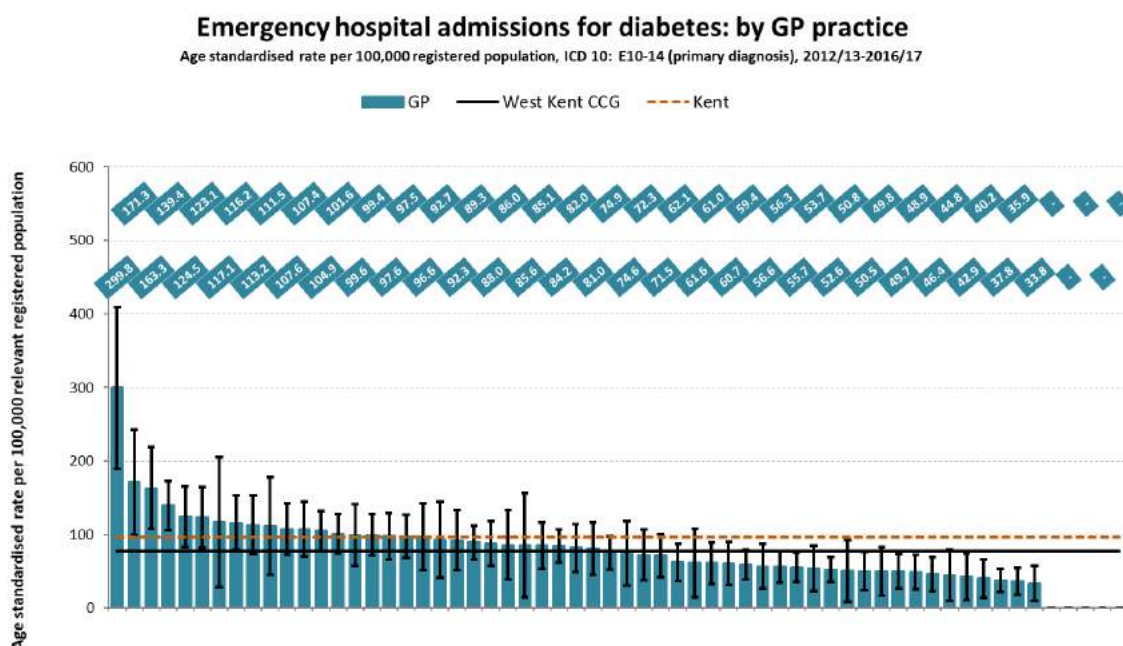
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 122 Prevalence and emergency hospital admissions for diabetes – by GP practice

Prevalence and emergency hospital admissions for diabetes: by GP practice
Percentage of patients (aged 17+) recorded on GP registers as having diabetes, 2016/17, age standardised rate per 100,000
registered population, ICD 10: E10-14 (primary diagnosis), 2012/13-2016/17
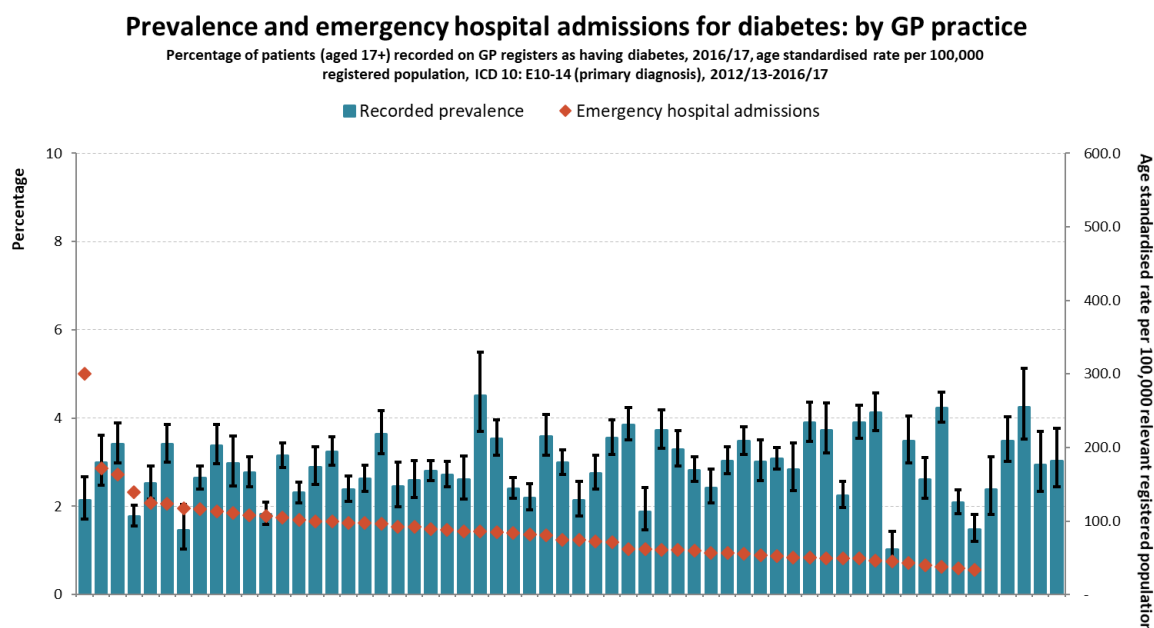
Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Conclusion:

There is variation in Diabetes related admissions, 5 practices have higher admissions rates compared to the West Kent average and 13 practices are significantly lower admission rates.

Londsdale Medical Centre has higher admission rates for Diabetes but low recorded prevalence.

Recommendations:

There needs to be greater activity with respect to prevention which needs to be grounded in local interventions rather than just giving advice. Interventions need to be able to identify undiagnosed diabetics as well as the cohort of patients inadequately supported in Primary Care.

There needs to be greater emphasis on obesity given the relationship BMI shares with diabetes.

Optimizing health checks to 'find the missing thousands' and for referral into lifestyle programs to reduce risks.

Secondary prevention for people with diabetes is important to prevent complications. Local primary care providers of care should be made aware of rates of emergency admissions for diabetic complications and structure services accordingly.

All diabetes patients except those with existing eye conditions and under the care of a specialist should attend annual screening to prevent retinopathy.

Specialized services such as education, podiatry, dietetics and psychology require additional support to ensure equitable access across West Kent, in anticipation of the predicted rise in increasing numbers of people who will be diagnosed with diabetes.

9.3   Respiratory diseases

Asthma and Chronic Obstructive Pulmonary Disease are the two most common chronic lung diseases. Lung diseases can affect an individual's level of mobility and their activities of daily living.

9.3.1   Asthma

Asthma affects both children and adults and is one of the most common chronic conditions. The recorded prevalence for asthma for West Kent is 5.5%; the same as the Kent average. There are 15 practices with significantly higher recorded asthma prevalence than the West Kent average and 16 practices with significantly lower recorded asthma prevalence than the West Kent average.

Figure 123 Recorded asthma prevalence – by CCG (of registration)

Source: QOF, prepared by KPHO (RK), May-18

Figure 124 Recorded asthma prevalence – by GP practice

The rate of emergency admissions to hospital for asthma in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 6 practices having significantly higher emergency hospital admission rates and 10 having significantly lower rates than the West Kent average.
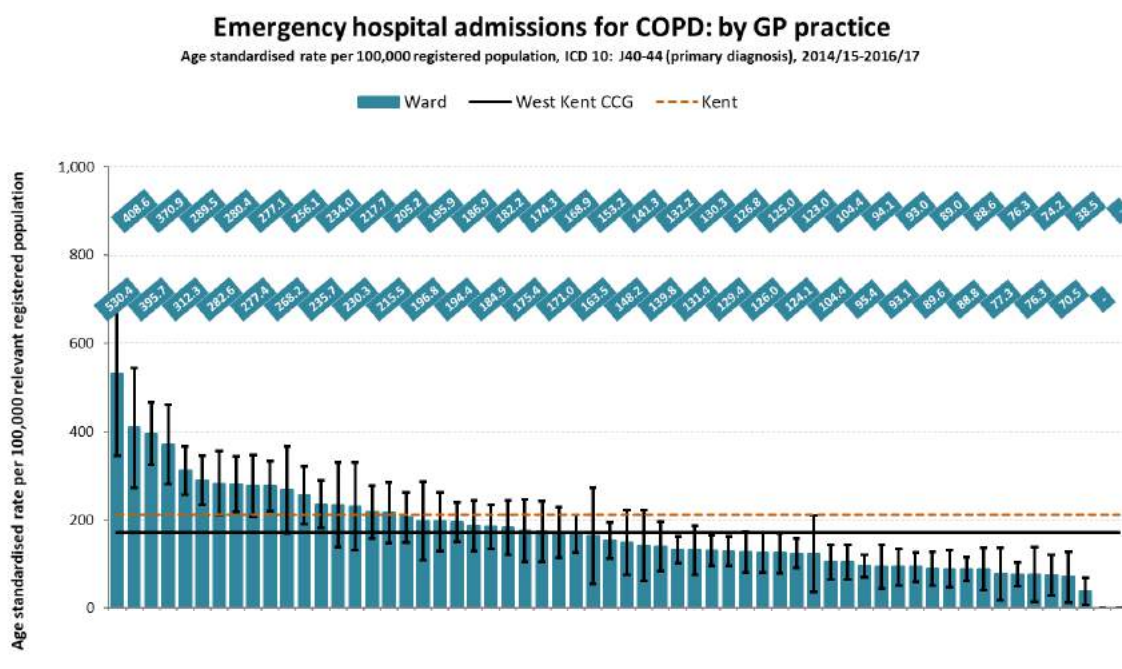
Three practices in West Kent have high emergency hospital admissions for asthma, but low recorded prevalence. No practices have low emergency hospital admissions for asthma, but high recorded prevalence.

Figure 125 Emergency hospital admissions for asthma – by CCG

Emergency hospital admissions for asthma: by CCG

Age standardised rate per 100,000 registered population, ICD 10: J45-J46 (primary diagnosis), 2012/13-2016/17
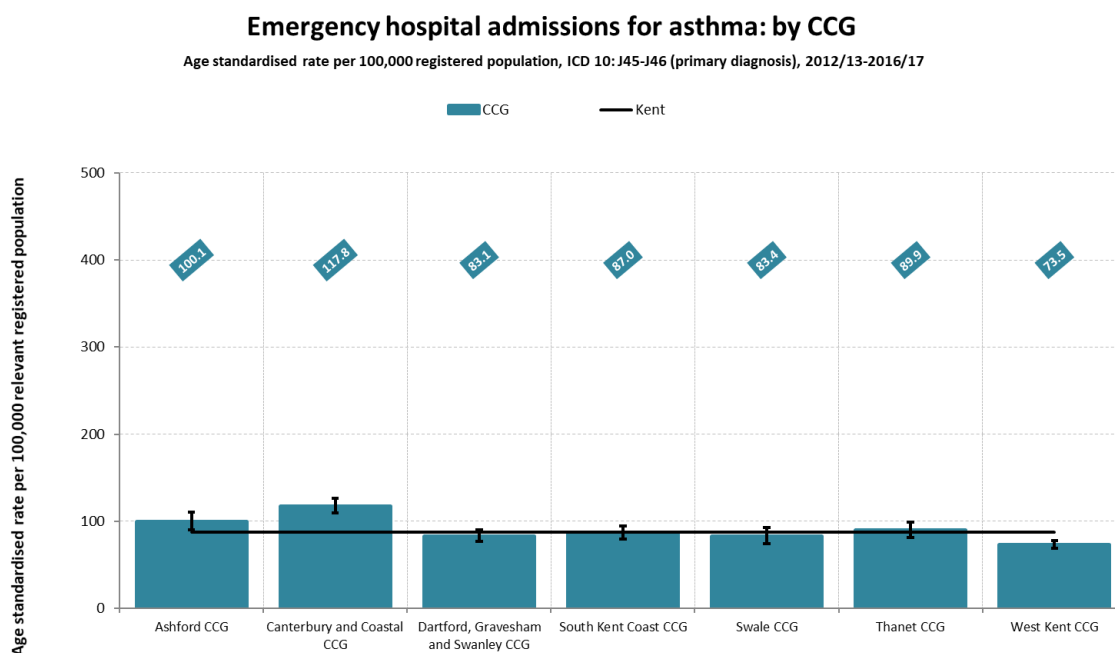
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 126 Emergency hospital admissions for asthma – by GP practice

Emergency hospital admissions for asthma: by GP practice

Age standardised rate per 100,000 registered population, ICD 10: J45-J46 (primary diagnosis), 2012/13-2016/17
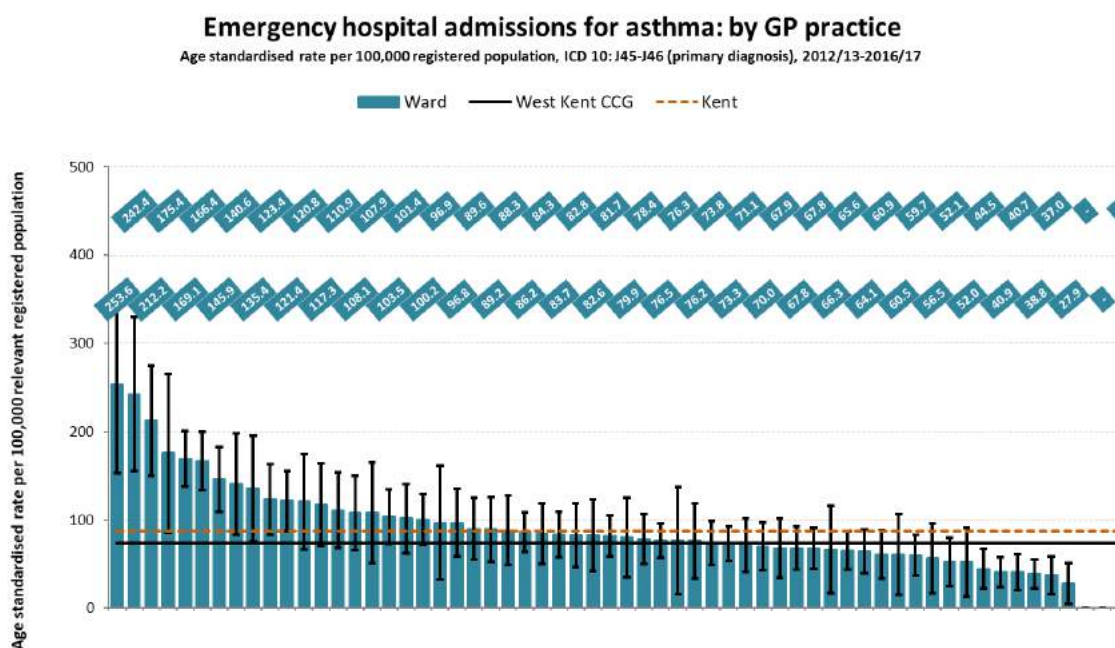
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 127 Prevalence and emergency hospital admissions for asthma – by GP practice

Prevalence and emergency hospital admissions for asthma: by GP practice

Percentage of patients (all ages) recorded on GP registers as having cancder, 2016/17, age standardised rate per 100,000
registered population, ICD 10: J45-J46 (primary diagnosis), 2012/13-2016/17

Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

9.3.2   Chronic Obstructive Pulmonary Disease (COPD)

COPD is a general term that is used to describe several conditions, including chronic bronchitis and emphysema. The primary cause of COPD is smoking. Recorded COPD prevalence in West Kent is lower than the Kent average, but there is high variability across practices. There are 14 practices with significantly higher recorded COPD prevalence than the West Kent average and 13 practices with significantly lower recorded COPD prevalence than the West Kent average.

Figure 128 Recorded COPD prevalence – by CCG (of registration)

Recorded prevalence of COPD: by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having COPD, 2016/17
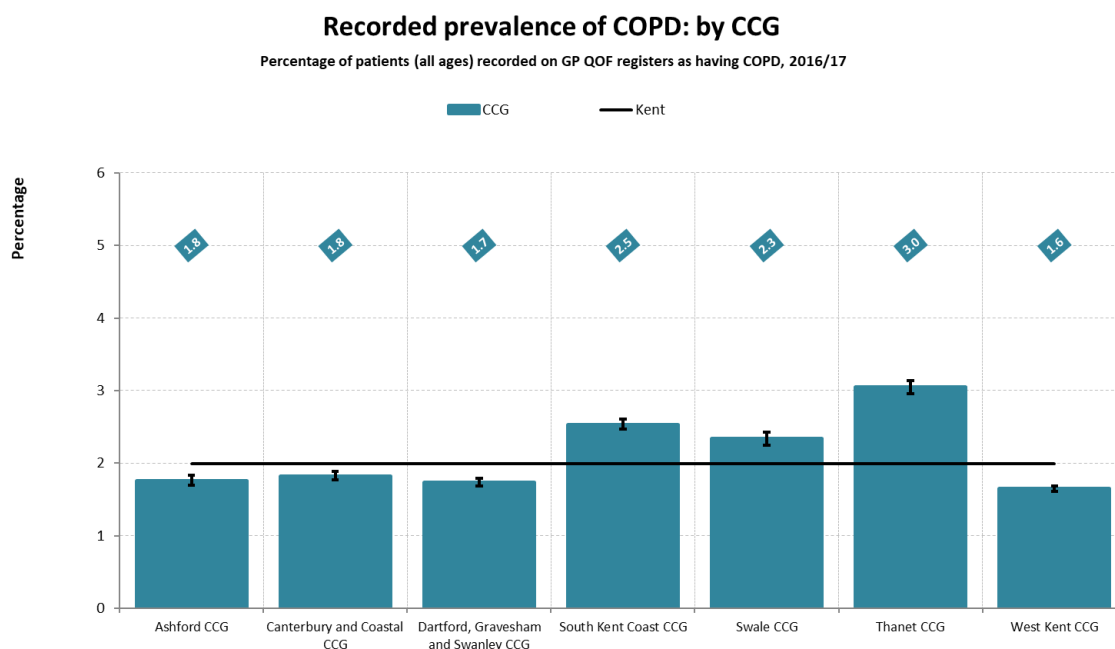
Source: QOF, prepared by KPHO (RK), May-18

Figure 129 Recorded COPD prevalence – by GP practice

Recorded prevalence of COPD: by GP practice

Percentage of patients (all ages) recorded on GP QOF registers as having COPD, 2016/17
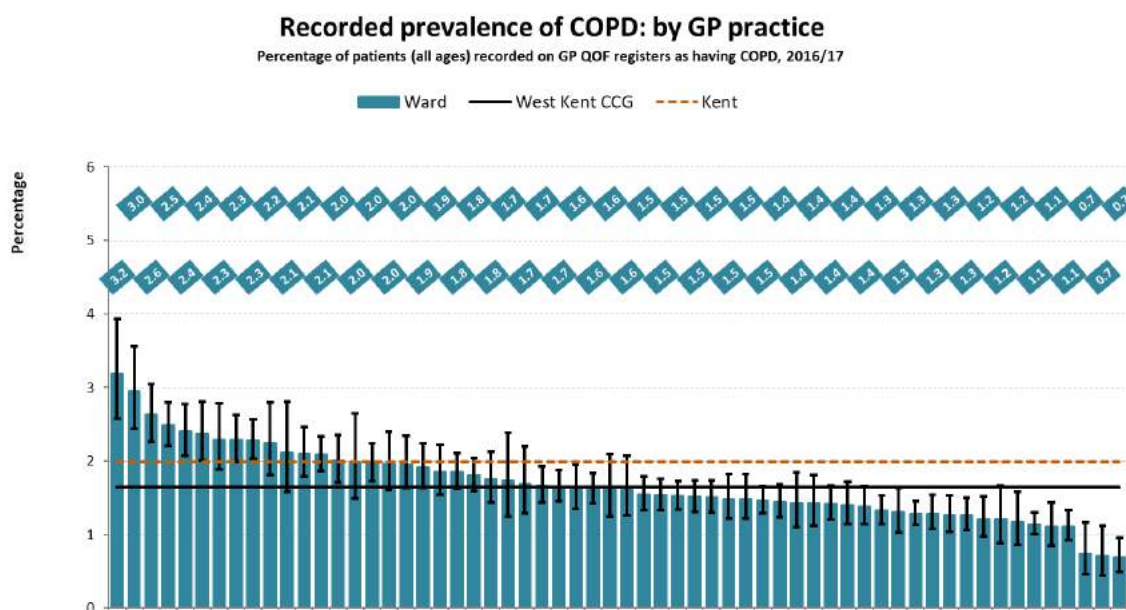
Source: QOF, prepared by KPHO (RK), May-18

The rate of emergency admissions to hospital for COPD in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 12 practices having significantly higher emergency hospital admission rates and 22 having significantly lower rates than the West Kent average.

No practices in West Kent have high emergency hospital admissions for COPD, but low recorded prevalence, but one practice has low emergency hospital admissions for COPD, but high recorded prevalence.

Figure 130 Emergency hospital admissions for COPD – by CCG
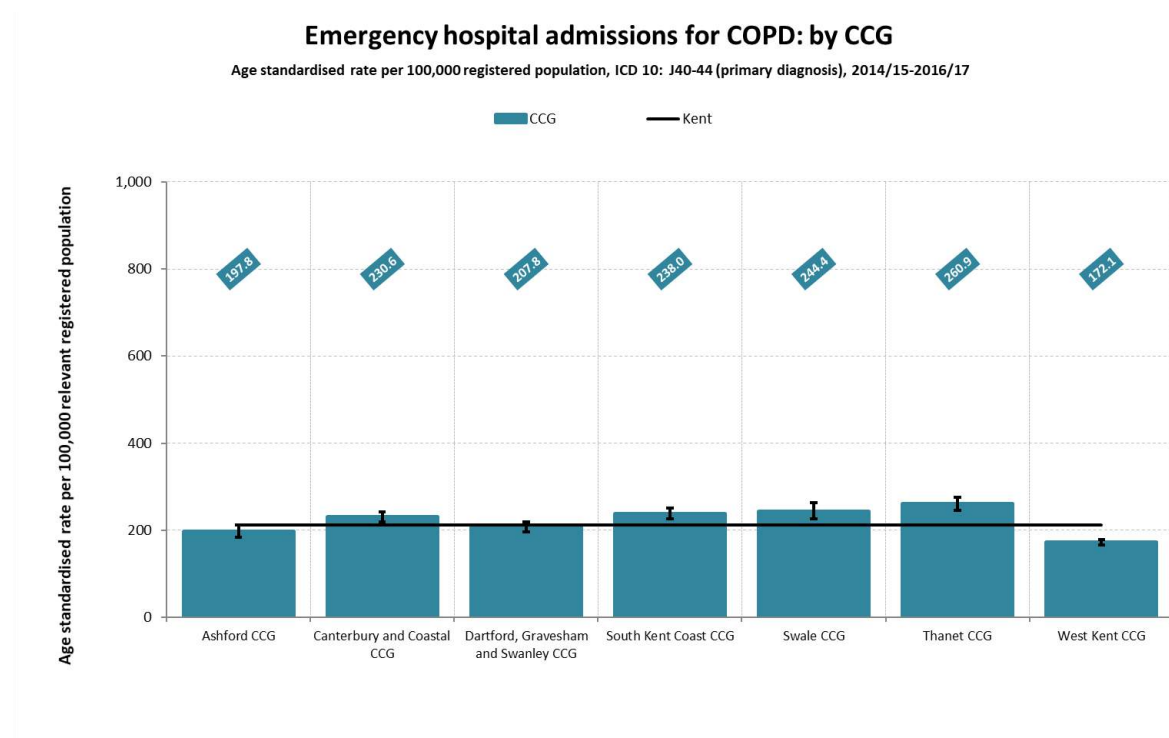
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 131 Emergency hospital admissions for COPD – by GP practice

Emergency hospital admissions for COPD: by GP practice
Age standardised rate per 100,000 registered population, ICD 10: J40-44 (primary diagnosis), 2014/15-2016/17

Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 132 Prevalence and emergency hospital admissions for COPD – by GP practice

Prevalence and emergency hospital admissions for COPD: by GP practice
Percentage of patients (all ages) recorded on GP registers as having COPD, 2016/17, age standardised rate per 100,000 registered population, ICD 10: J40-44 (primary diagnosis), 2014/15-2016/17
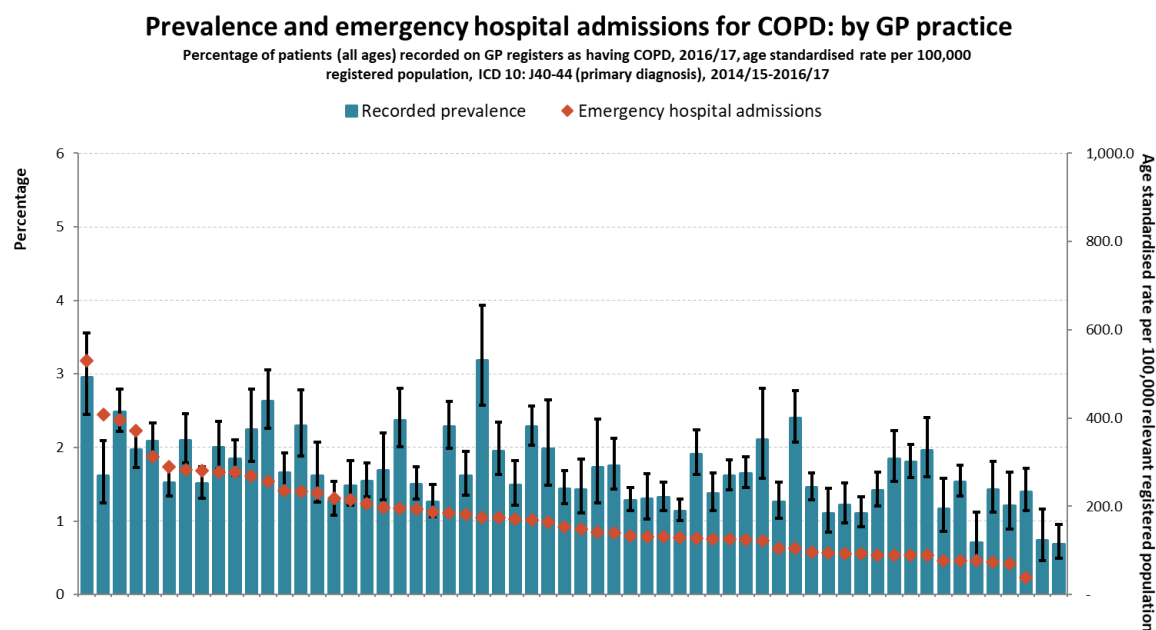
Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Based on estimates of disease counts calculated using a logistic regression model developed by Imperial College based on CPRD, it is estimated that 0.6% of the registered population in West Kent have undiagnosed COPD. This is below the Kent average.

There are 20 practices with significantly higher predicted undiagnosed COPD rates than the West Kent average.

Figure 133 Estimated prevalence of undiagnosed COPD – by CCG (of registration)

Source: Imperial College London, prepared by KPHO (RK), May-18
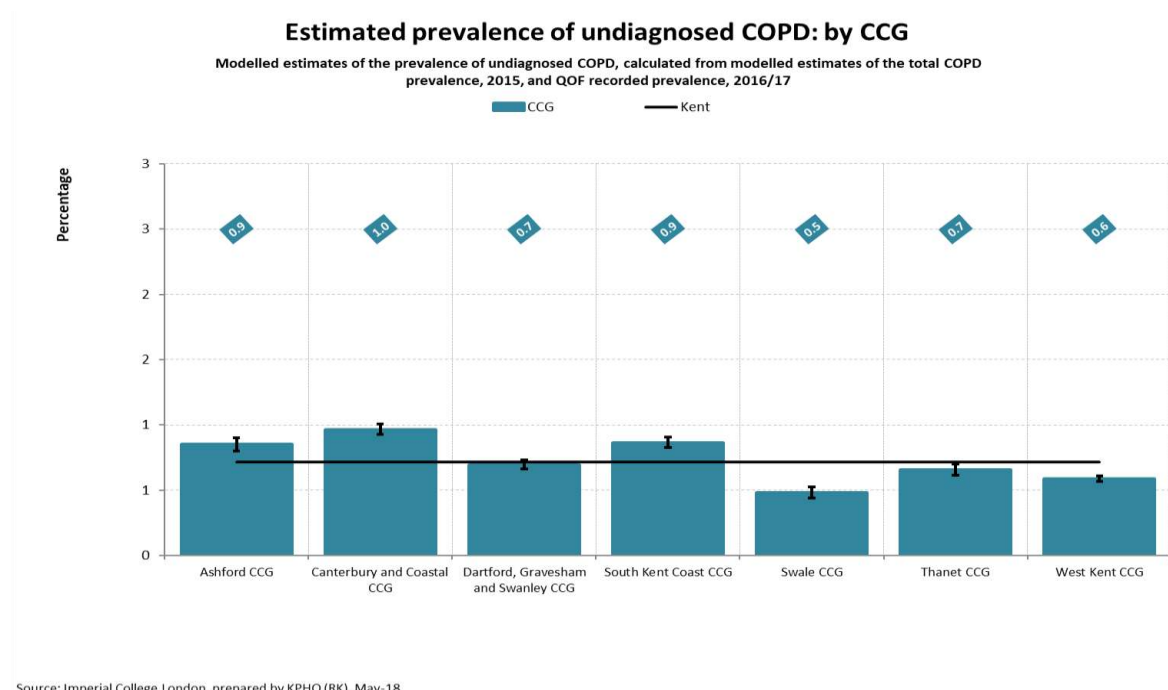
Figure 134 Estimated prevalence of undiagnosed COPD – by GP practice

Source: Imperial College London, prepared by KPHO (RK), May-18
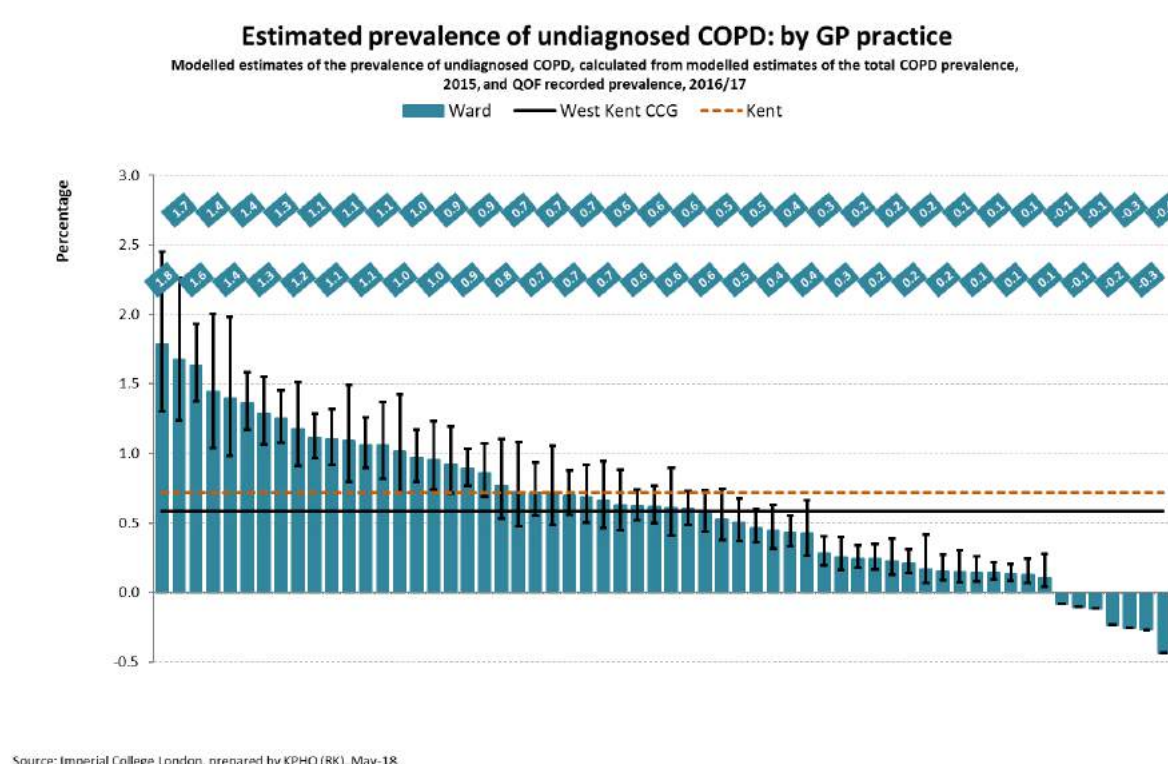
9.3.3 Smoking cessation

Smoking is the main cause of COPD and therefore smoking cessation is an integral part of the management of COPD.

GP recorded offers of support/treatment to smokers are similar in West Kent to the Kent average, but there is high variability across practices. There are 9 practices with much lower recorded offers of support/treatment to smokers than the West Kent average.

Figure 135 GP record of an offer of support/treatment to smokers – by CCG (of registration)

GP record of an offer of support/treatment (smokers): by CCG

Patients recorded as current smokers who have been offered support and treatment for smoking cessation within the preceding 24 months, 2016/17

CCG ▬ Kent

CCG	Value
Ashford CCG	90.1
Canterbury and Coastal CCG	87.9
Dartford, Gravesham and Swanley CCG	88.3
South Kent Coast CCG	90.5
Swale CCG	90.7
Thanet CCG	86.4
West Kent CCG	88.5
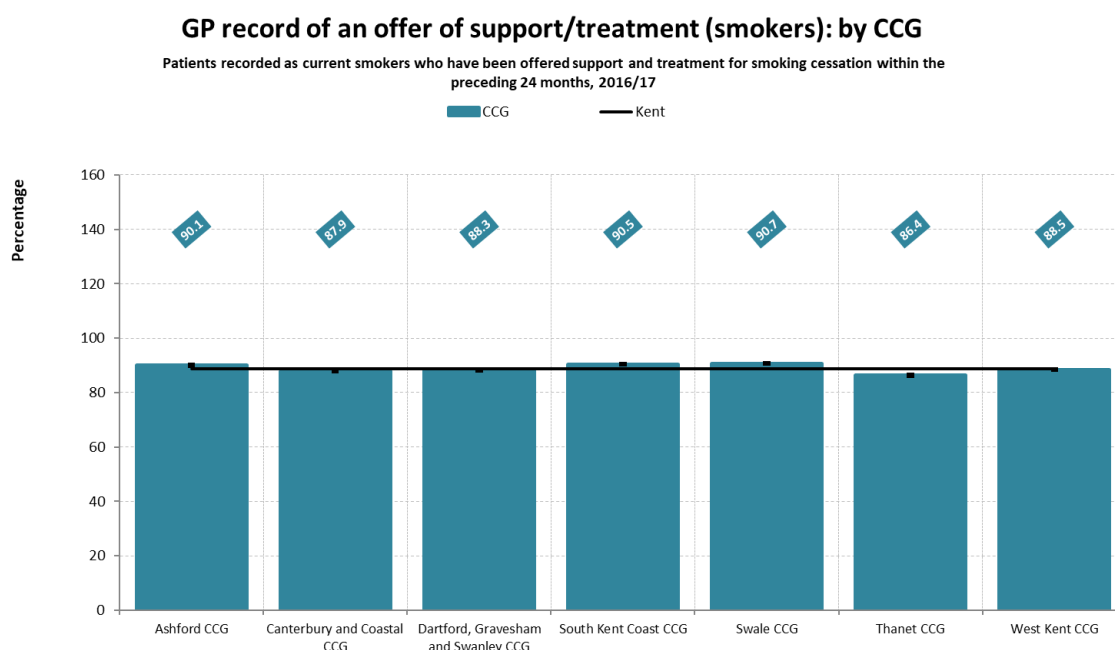
Source: QOF, prepared by KPHO (RK), Jun-18

Figure 136 GP record of an offer of support/treatment to smokers – by GP practice
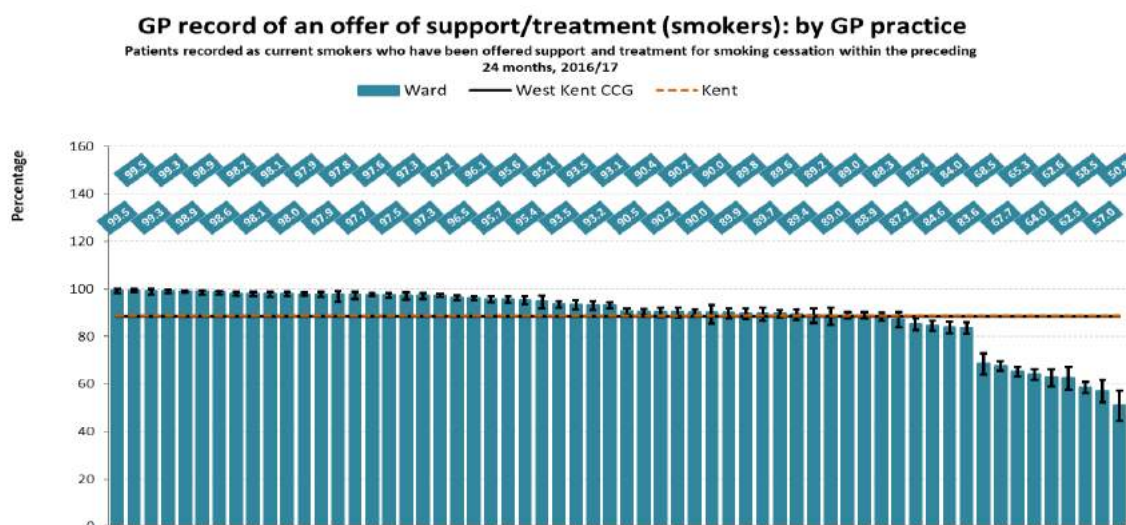
The chart below compares smoking prevalence as recorded on GP registers with GP records of an offer of support/treatment.

Figure 137 Smoking prevalence and GP record of an offer of support/treatment to smokers – by GP practice

Conclusion:

3 practices have higher emergency admissions for asthma but lower prevalence.

There is significant variation across at least half of all practices with either higher or lower prevalence of COPD compared to the West Kent average, however only one practice (Headcorn) has lower than expected prevalence against higher rates of emergency admissions for COPD. This requires further improvement in primary care management similar to practices in other long term conditions

9 practices have much lower rates of offering treatment to smokers compared to the West Kent average.

Asthma

To undertake targeted work with practices with low prevalence of Asthma and high admission rates and explore if patients could be better managed in primary care.

COPD

Active case finding for individuals with COPD should encouraged.

COPD should be considered in patients over the age of 35 who have a risk factor (generally smoking) and who present with exertional breathlessness, chronic cough, regular sputum production, frequent winter 'bronchitis' or wheeze.

All COPD patients still smoking, regardless of age should be encouraged to stop, and offered help to do so, at every opportunity.

Pulmonary rehabilitation should be made available to all appropriate people with COPD including those who have had a recent hospitalization for an acute exacerbation.

Practices should understand local variation in the management of individuals with COPD and implement model of best practice.

9.4 Cardiovascular Diseases (CVD)

CVD is a term used to describe disorders of heart and blood vessels. These diseases include Coronary Heart Disease, Coronary Artery Disease and Cerebrovascular disease which may lead to angina and heart failure and strokes.

9.4.1 Coronary Heart Disease (CHD)

Recorded CHD prevalence in West Kent is lower than the Kent average, but there is high variability across practices. There are 12 practices with significantly higher recorded CHD prevalence than the West Kent average and 12 practices with significantly lower recorded CHD prevalence than the West Kent average.

**Figure 138 Recorded CHD prevalence – by CCG (of registration)**

Recorded prevalence of Coronary Heart Disease (CHD): by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having CHD, 2016/17
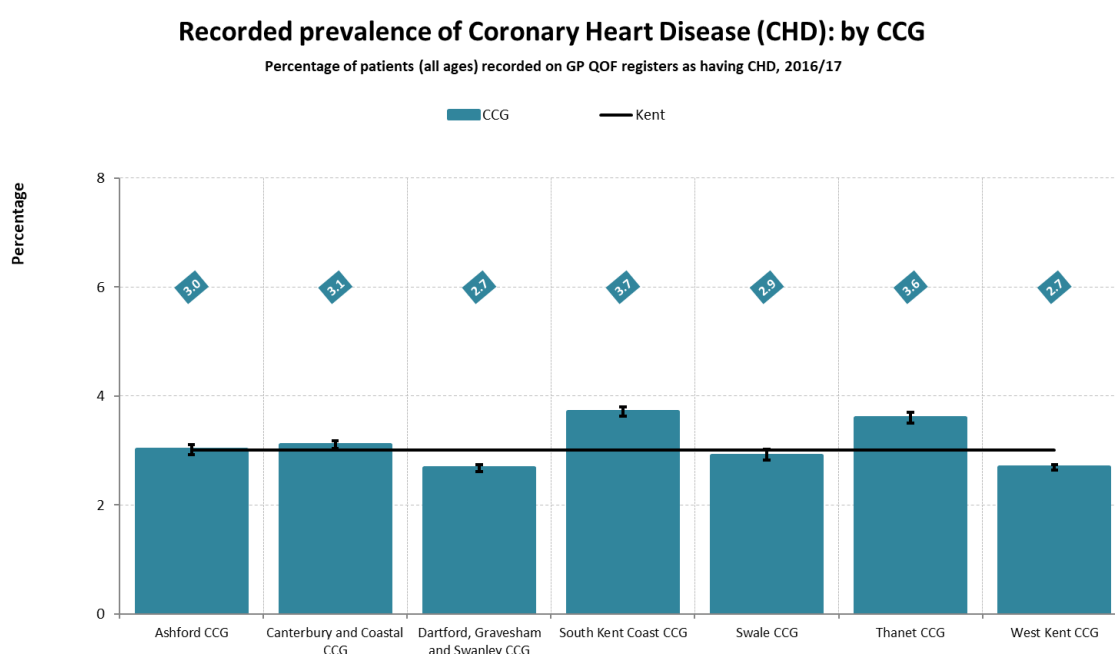
Source: QOF, prepared by KPHO (RK), May-18
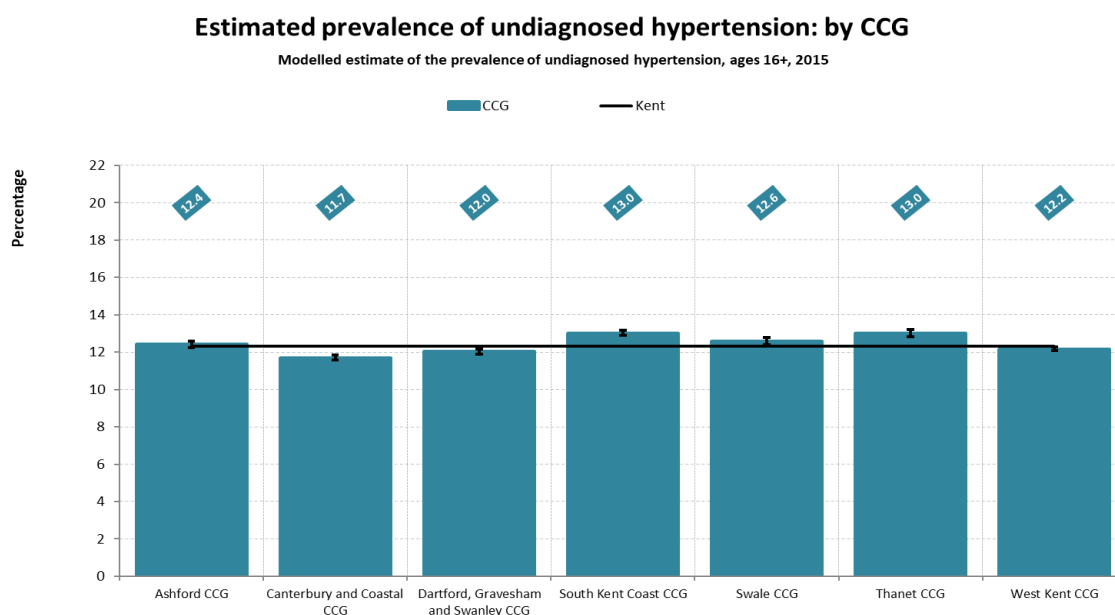
Figure 139 Recorded CHD prevalence – by GP practice

Recorded prevalence of Coronary Heart Disease (CHD): by GP practice
Percentage of patients (all ages) recorded on GP QOF registers as having CHD, 2016/17
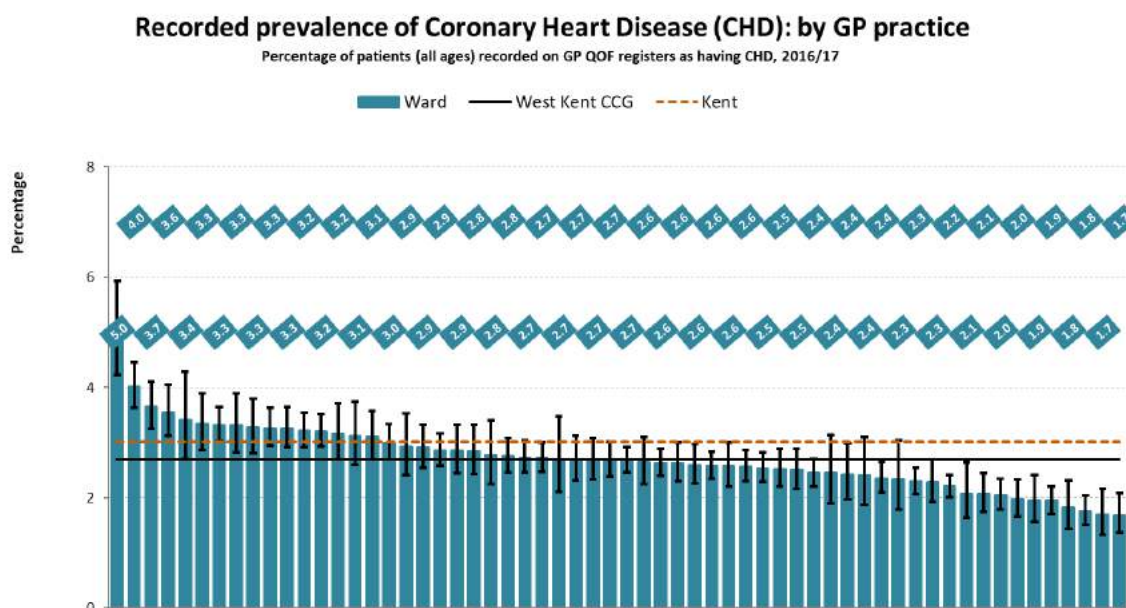
Source: QOF, prepared by KPHO (RK), May-18

The rate of emergency admissions to hospital for coronary heart disease in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 5 practices having significantly higher emergency hospital admission rates and 6 having significantly lower rates than the West Kent average.

No practices in West Kent have high emergency hospital admissions for CHD, but low recorded prevalence. Two practices have low emergency hospital admissions for CHD, but high recorded prevalence.

Figure 140 Emergency hospital admissions for CHD – by CCG

Hospital admissions for coronary heart disease (CHD): by CCG
Age standardised rate per 100,000 registered population, ICD 10: I20-I25 (primary diagnosis), 2014/15-2016/17

Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18
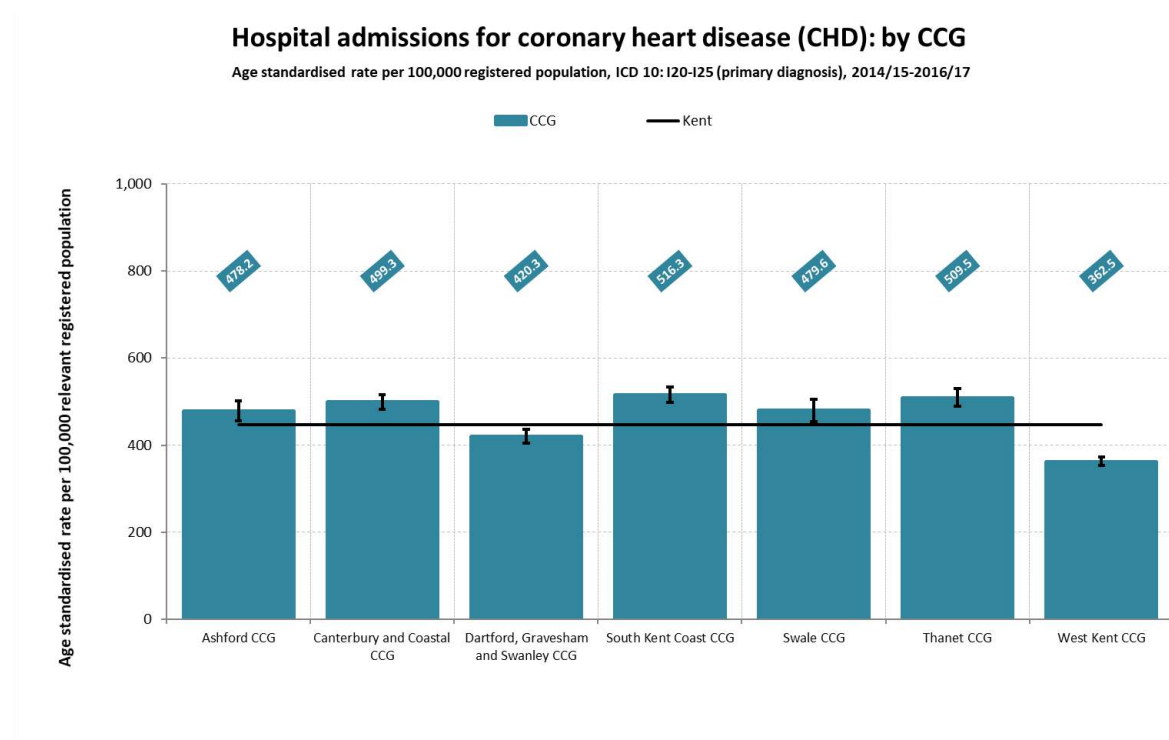
Figure 141 Emergency hospital admissions for CHD – by GP practice

Hospital admissions for coronary heart disease (CHD): by GP practice
Age standardised rate per 100,000 registered population, ICD 10: I20-I25 (primary diagnosis), 2014/15-2016/17

Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18
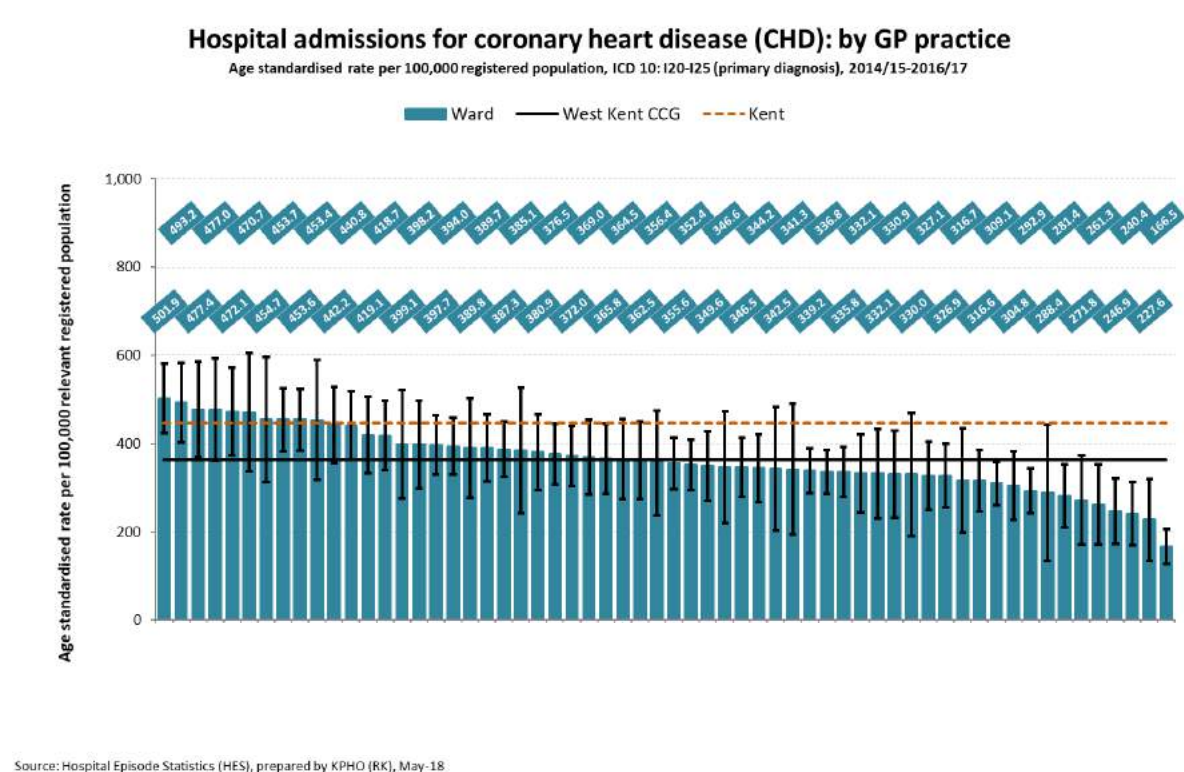
Figure 142 Prevalence and emergency hospital admissions for CHD – by GP practice

Prevalence and emergency hospital admissions for coronary heart disease (CHD): by GP practice

Percentage of patients (all ages) recorded on GP registers as having cancder, 2016/17, age standardised rate per 100,000 registered population, ICD 10: I20-I25 (primary diagnosis), 2014/15-2016/17

■ Recorded prevalence　◆ Emergency hospital admissions
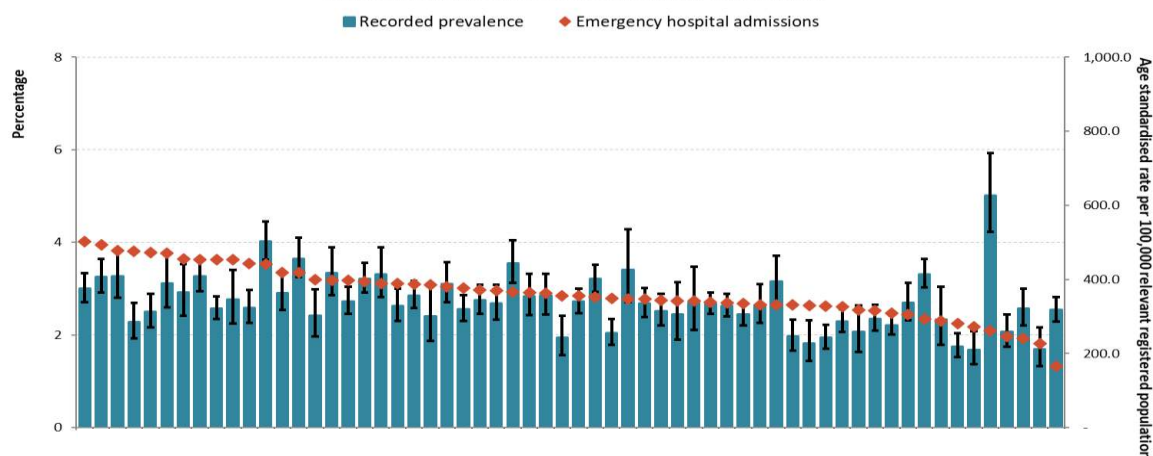
Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

9.4.2　Hypertension

Persistent hypertension is one of the risk factors for stroke and heart failure and is also a major cause of chronic kidney disease. Chronic Kidney Disease could also be as a result from complications for individuals with diabetes.

Recorded hypertension prevalence in West Kent is slightly lower than the Kent average, but there is high variability across practices. There are 20 practices with significantly higher recorded hypertension prevalence than the West Kent average and 18 practices with significantly lower recorded hypertension prevalence than the West Kent average.

Figure 143 Recorded hypertension prevalence – by CCG (of registration)

Recorded prevalence of hypertension: by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having hypertension, 2016/17

■ CCG　— Kent
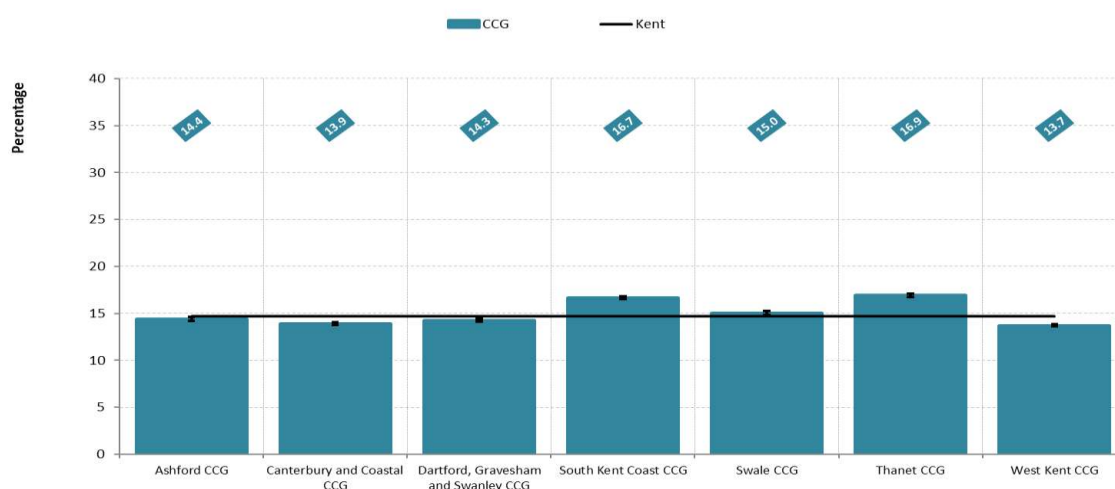
Source: QOF, prepared by KPHO (RK), May-18

Figure 144 Recorded hypertension prevalence – by GP practice

Recorded prevalence of hypertension: by GP practice
Percentage of patients (all ages) recorded on GP QOF registers as having hypertension, 2016/17
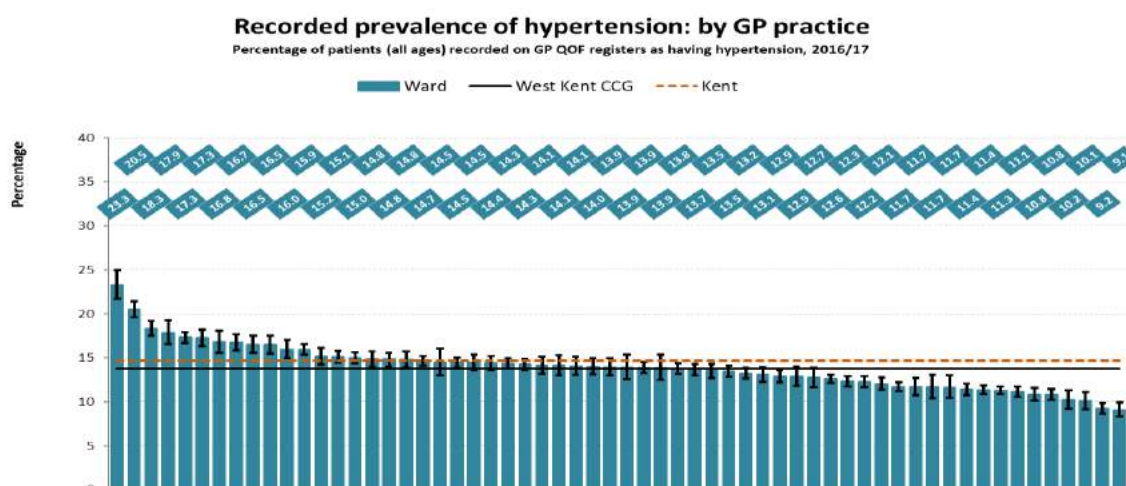
Source: QOF, prepared by KPHO (RK), May-18

Based on a predictive model developed by Imperial College London[18], it is estimated that 12.2% of the registered population in West Kent have undiagnosed hypertension. This is similar to the Kent average.

There are 3 practices with significantly higher predicted undiagnosed hypertension rates than the West Kent average and 6 practices with significantly lower predicted undiagnosed hypertension rates than the West Kent average.

Figure 145 Estimated prevalence of undiagnosed hypertension– by CCG (of registration)

Estimated prevalence of undiagnosed hypertension: by CCG
Modelled estimate of the prevalence of undiagnosed hypertension, ages 16+, 2015

Source: Imperial College London, prepared by KPHO (RK), May-18

Figure 146 Estimated prevalence of undiagnosed hypertension – by GP practice

Estimated prevalence of undiagnosed hypertension: by GP practice
Modelled estimate of the prevalence of undiagnosed hypertension, ages 16+, 2015
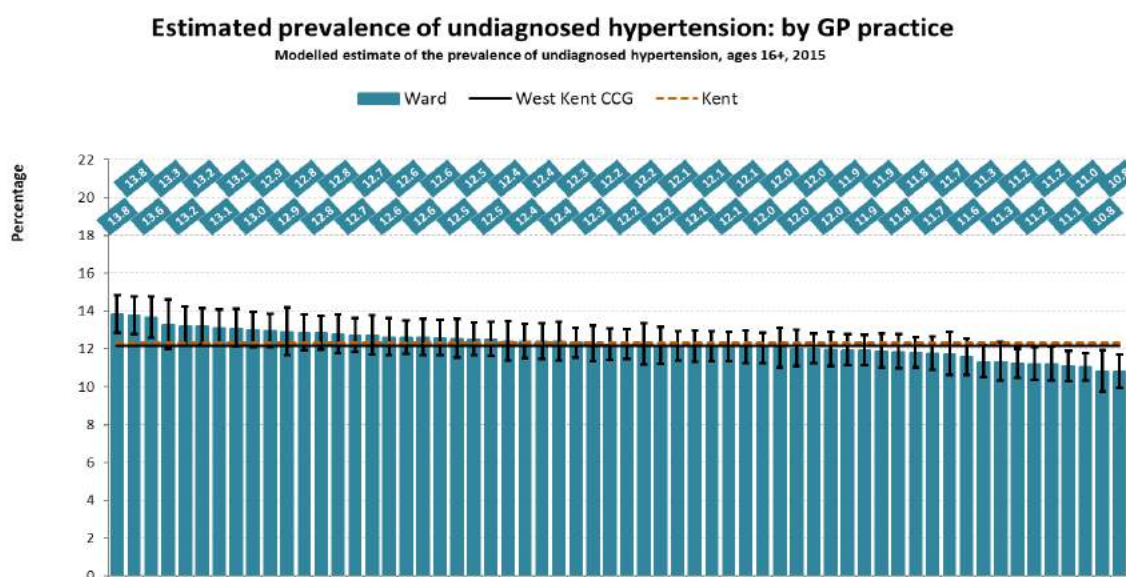
Source: Imperial College London, prepared by KPHO (RK), May-18

9.4.3 Stroke

Recorded prevalence of stroke and transient ischemic attack (TIA) in West Kent is similar to the Kent average, but there is high variability across practices. There are 12 practices with significantly higher recorded stroke and TIA prevalence than the West Kent average and 10 practices with significantly lower recorded stroke and TIA prevalence than the West Kent average.

Figure 147 Recorded prevalence of stroke and TIA – by CCG (of registration)
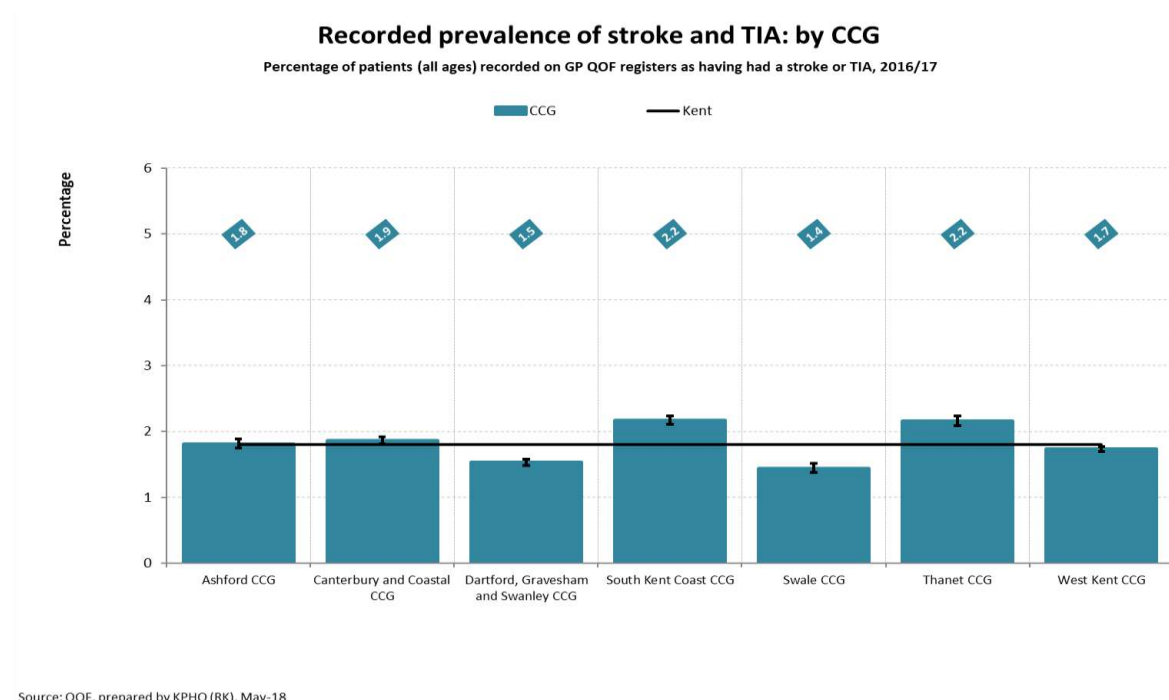
Figure 148 Recorded prevalence of stroke and TIA – by GP practice
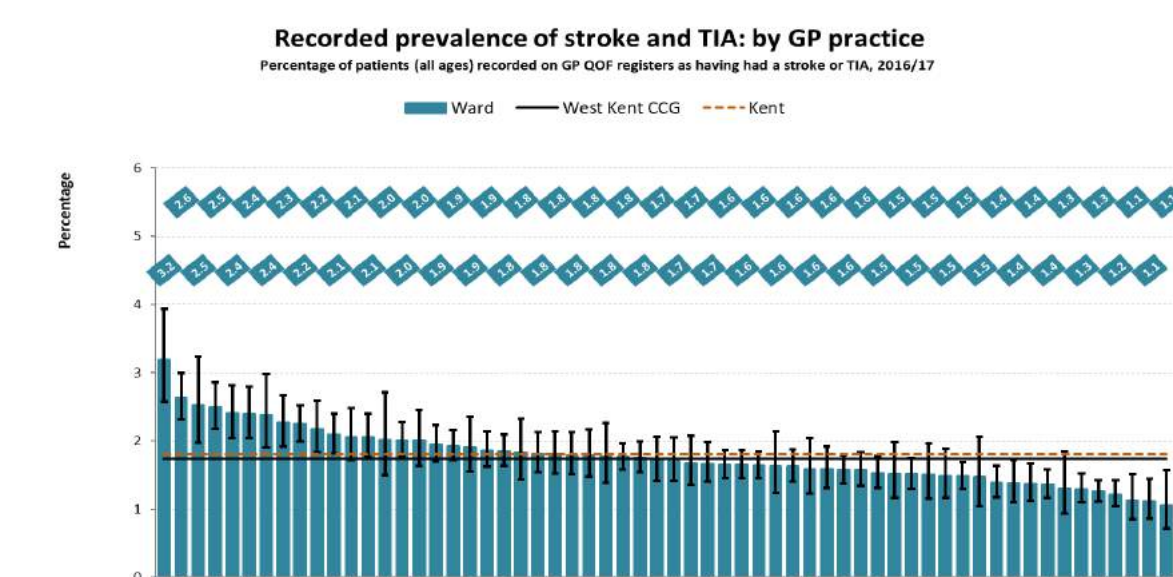
9.4.4 Atrial Fibrillation (AF)

The recorded prevalence of atrial fibrillation (AF) in West Kent is similar to the Kent average, but there is high variability across practices. There are 16 practices with significantly higher recorded AF prevalence than the West Kent average and 16 practices with significantly lower recorded CHD prevalence than the West Kent average.

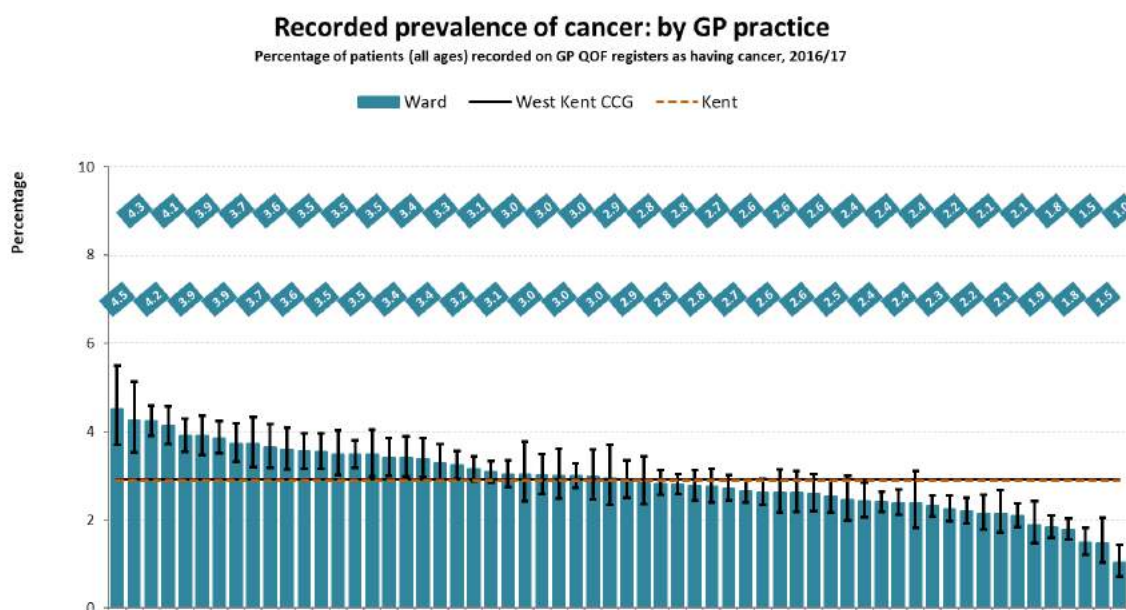**Figure 149 Recorded prevalence of atrial fibrillation (AF) – by CCG (of registration)**
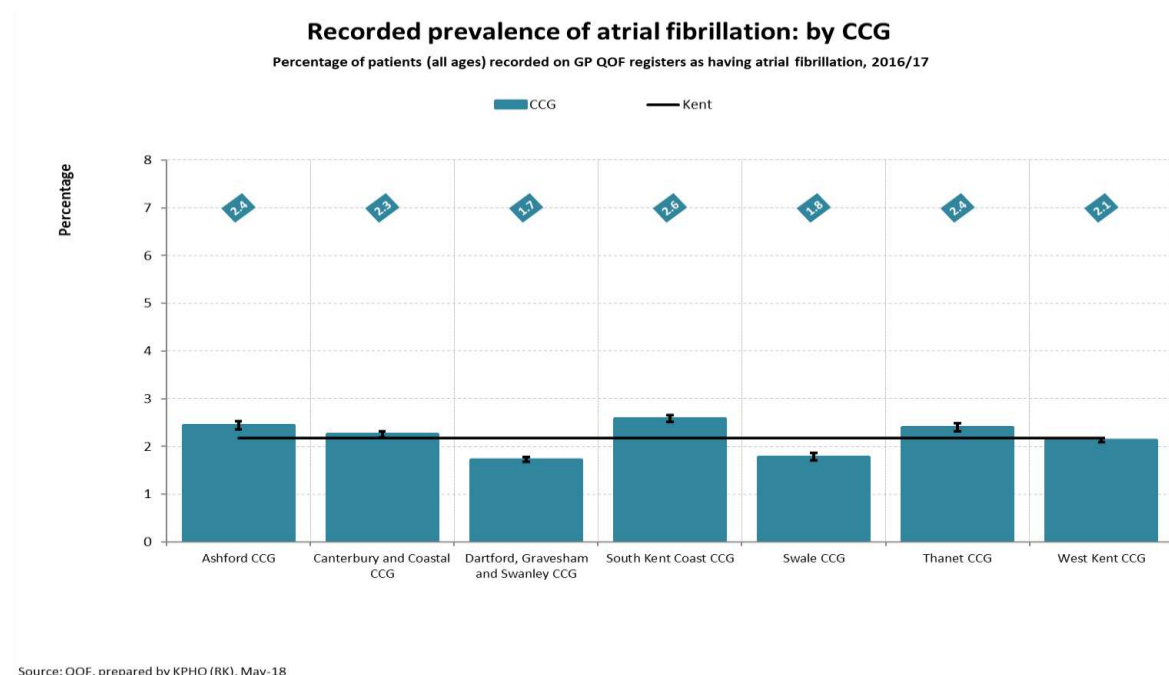
Figure 150 Recorded prevalence of atrial fibrillation (AF) – by GP practice
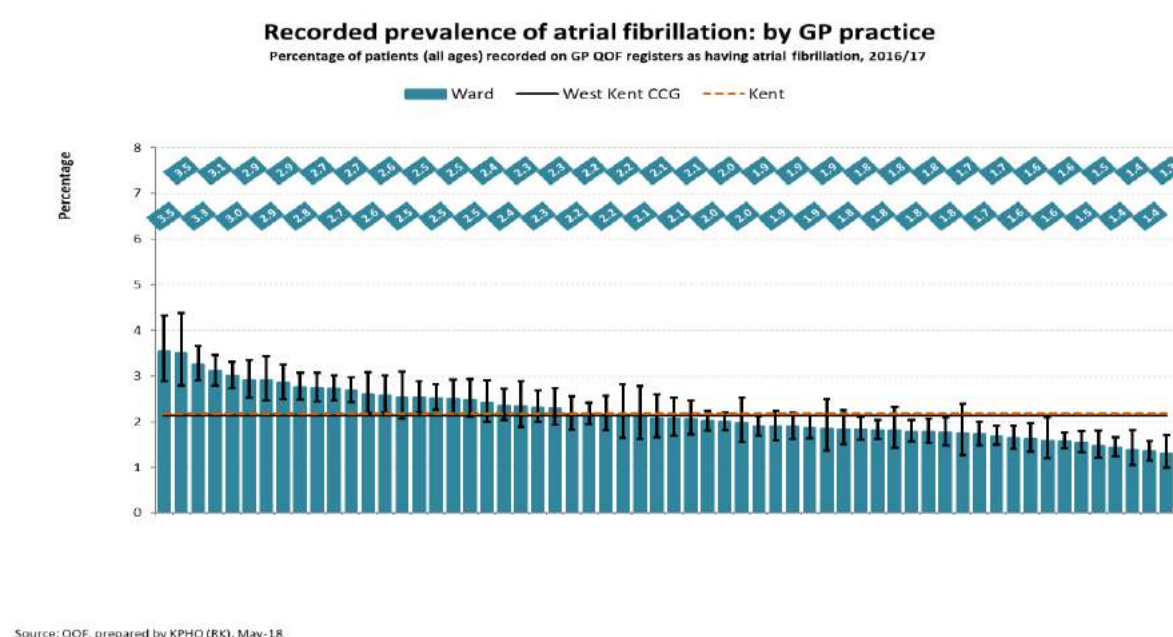
Conclusion:

At least 24 practices have higher recorded prevalence of CHD compared to the Kent average, whilst emergency admissions for CHD generally are lower. There is variation at practice level as well, with at least 2 practices showing higher recorded prevalence but lower admission rates for CHD, which shows good primary care management of disease.

At least 38 practices have either significant higher or lower recorded prevalence of hypertension compared to the West Kent average

22 practices have either higher or lower recorded prevalence of stroke compared to the West Kent average.

Similarly, there are at least 32 practices with higher or lower recorded prevalence of atrial fibrillation compared to the West Kent average.

Recommendation

Increase the uptake of health checks to identify persons with cardiovascular risks

Four key areas of AF management should be addressed to improve outcomes in terms of stroke prevention:

- diagnosis of AF

- identification of those at high risk of stroke

- initiation of anticoagulant therapy in line with national guidelines

- maintenance of adequate anticoagulation / medicines optimisation

9.5 Cancer

Most cancers can be prevented by adopting healthy lifestyles and refraining from smoking, excessive alcohol consumption and poor diet.

Recorded cancer prevalence in West Kent is similar to the Kent average, but there is high variability across practices. There are 19 practices with significantly higher recorded cancer prevalence than the West Kent average and 15 practices with significantly lower recorded cancer prevalence than the West Kent average.

One-year cancer survival rates in West Kent are improving and continue to be slightly higher than the Kent and Medway average (73.8% for cancers diagnosed in 2015 compared with 72.3% for Kent and Medway).

Figure 151 Recorded cancer prevalence – by CCG (of registration)

Recorded prevalence of cancer: by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having cancer, 2016/17
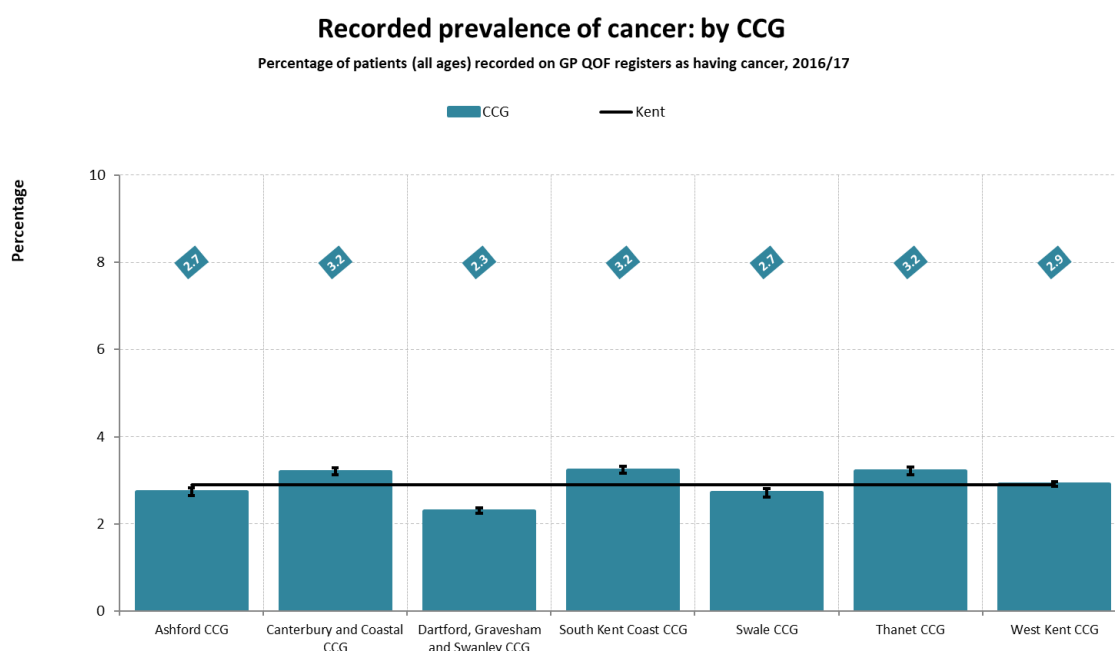
Source: QOF, prepared by KPHO (RK), May-18

Figure 152 Recorded cancer prevalence – by GP practice

Recorded prevalence of cancer: by GP practice
Percentage of patients (all ages) recorded on GP QOF registers as having cancer, 2016/17

Source: QOF, prepared by KPHO (RK), May-18

Figure 153 One-year cancer survival index – by CCG

One-year cancer survival index (%): trend
All cancers combined, by calendar year of diagnosis, 2000 to 2015
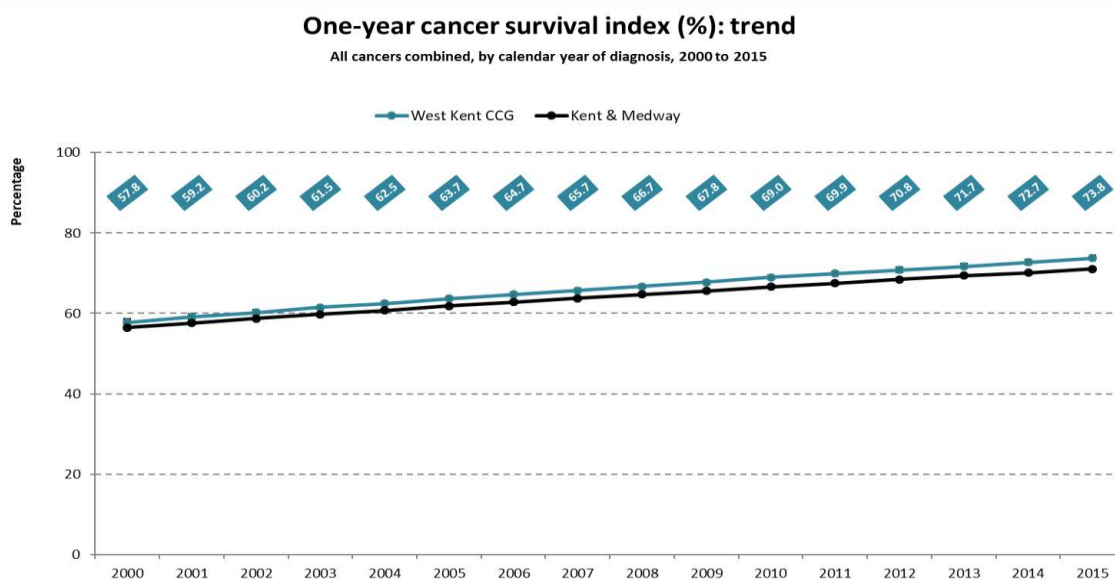
Increasing with a faster pace of change than Kent

Source: ONS, prepared by KPHO (RK), May-18

The rate of emergency admissions to hospital with cancer in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 4 practices having significantly higher emergency hospital admission rates and 5 having significantly lower rates than the West Kent average.

Two practices in West Kent have high emergency hospital admissions with cancer, but low recorded prevalence. Conversely, two practices have low emergency hospital admissions with cancer, but high recorded prevalence.

Figure 154 Emergency hospital admissions with cancer – by CCG

Emergency hospital admissions with cancer: by CCG

Age standardised rate per 100,000 registered population, ICD 10: C00-C97, D00-D09, D33, D37-D48, 2014/15-2016/17

Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18
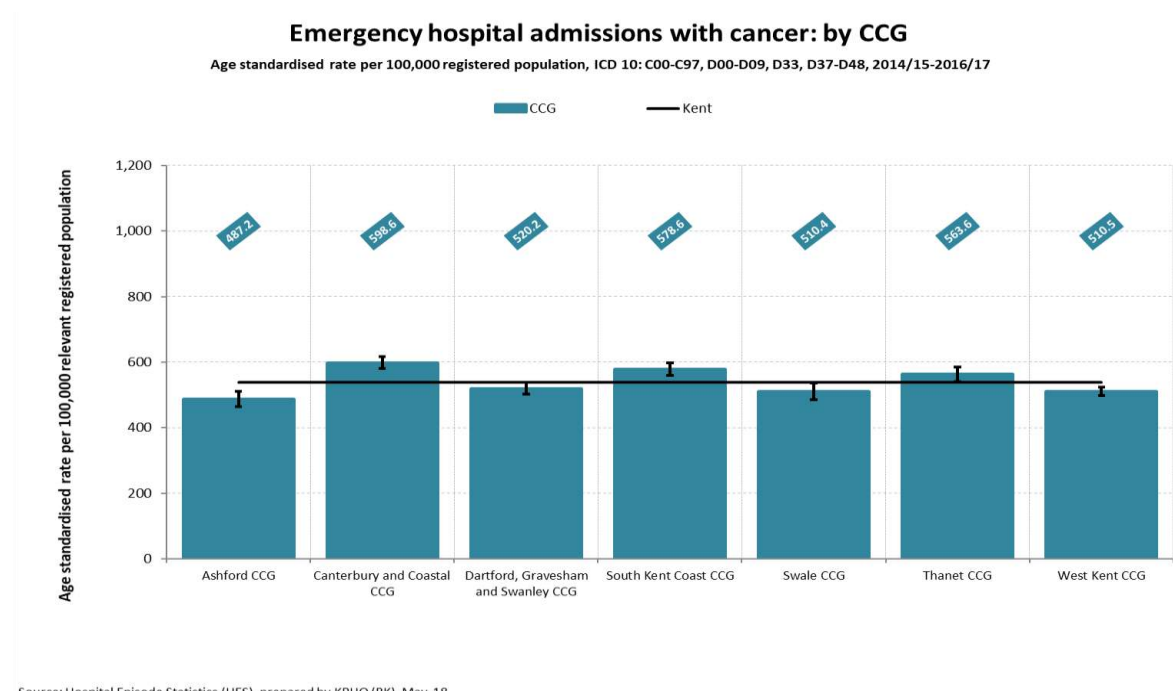
Figure 155 Emergency hospital admissions with cancer – by GP practice

Emergency hospital admissions with cancer: by GP practice
Age standardised rate per 100,000 registered population, ICD 10: C00-C97, D00-D09, D33, D37-D48, 2014/15-2016/17
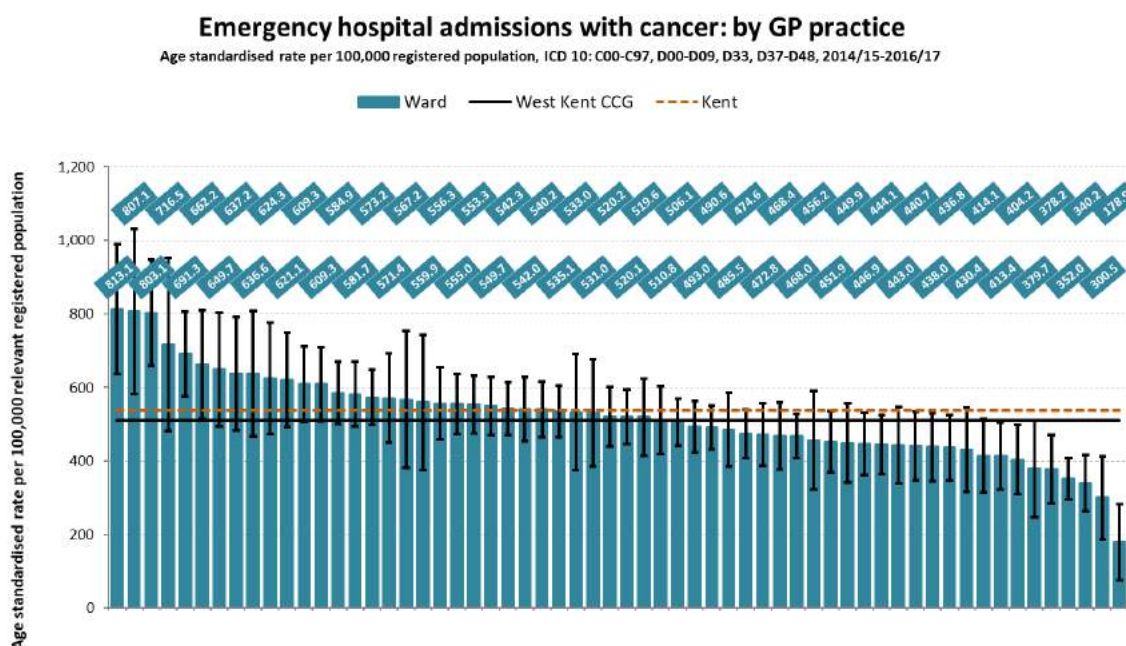
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 156 Prevalence and emergency hospital admissions with cancer – by GP practice

Prevalence and emergency hospital admissions with cancer: by GP practice
Percentage of patients (all ages) recorded on GP registers as having cancder, 2016/17, age standardised rate per 100,000 registered population, ICD 10: C00-C97, D00-D09, D33, D37-D48, 2014/15-2016/17
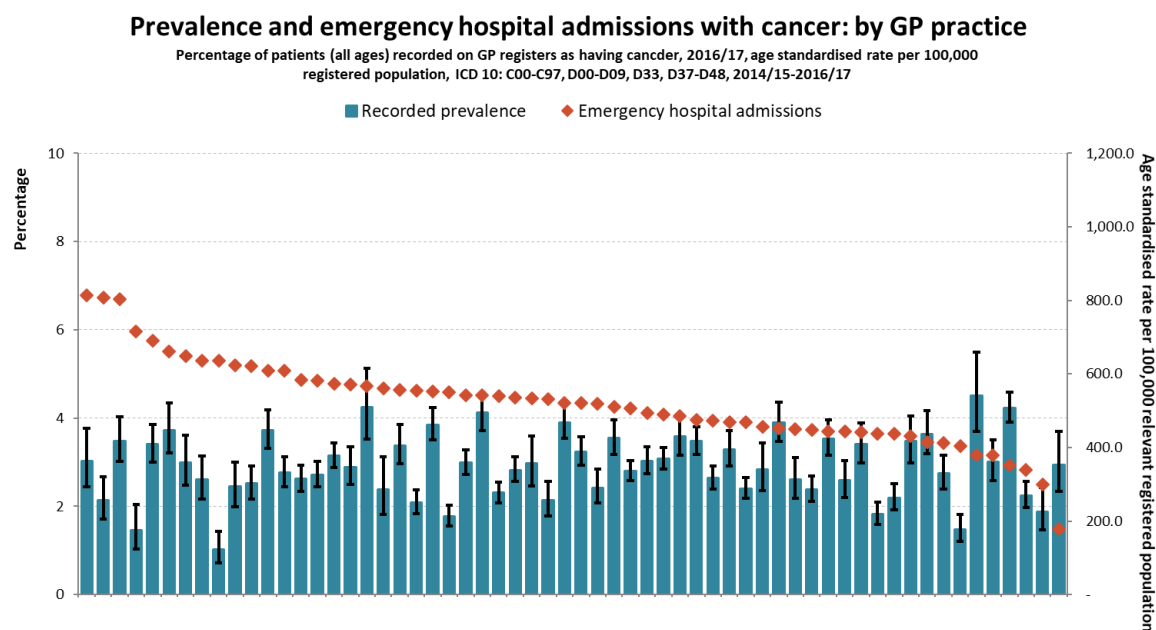
Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Conclusion:

34 practices have either higher or lower prevalence of cancer compared to the West Kent average. The 1-year survival rates are improving and slightly higher than the Kent and Medway average.

Recommendations:

To identify practice level variation in cancer referral rates, emergency admission rates and cancer screening uptake rates by practices and develop remedial action plan.

To work with Kent and Medway Cancer Collaborative for raising public awareness of signs and symptoms of cancer.

To develop initiatives for people to seek help earlier, facilitating earlier diagnosis of cancer in primary care and prompt referral for treatment in secondary care.

Investigate how demographic changes will impact on demand on services.

9.6 Screening programmes

9.6.1 Screening – National Programmes

National screening programmes are stipulated in an agreement between the Department of Health and Social Care and NHS England – the Public Health Functions Agreement also known as the "Section 7a Agreement" which is revised annually.

https://www.gov.uk/government/publications/public-health-commissioning-in-the-nhs-2018-to-2019

https://www.england.nhs.uk/publication/public-health-national-service-specifications/

Locally, NHS England (South East) – this is subject to NHSE reorganisation – has a Public Health Commissioning Team and embedded in this is a Public Health England team, the Kent and Medway Screening and Immunisation Team. This section has largely been produced by this team. The team works with West Kent CCG, practices and NHS Providers to improve screening rates and ensure safety and quality standards are met.

The aim of national screening programmes is to improve health by detecting treatable disease early and to promptly refer onwards to treatment services and in some cases prevent disease. A balance must be struck to ensure that unnecessary or over investigation is minimised whilst not missing many cases. This balance, as well as acceptable costs must be struck for screening programmes to go ahead. A key characteristic is the need for consistently high quality in all stages of a screening programme.

In all programmes the aim is to offer informed choice as to whether to participate or not. There are targets for coverage, or sometimes for uptake, which should be achievable if programme information is of good quality and the programmes are accessible and acceptable.

West Kent CCG and the practices within it have a direct and key role in some screening programmes e.g. taking samples for cervical screening. In other programmes there can be strong influence through supporting or endorsing programmes and in individually informing patients about screening programmes.

National Screening Programmes are conventionally grouped and named:

Antenatal and Newborn Screening Programme, which comprises

- Infectious Diseases in Pregnancy

- Sickle and Thalassemia Screening

- Downs and Fetal Anomaly Screening

- Newborn Bloodspot Screening

- Newborn Infant Physical Examination

Cancer Screening Programmes

- Cervical Screening

- Breast Screening

- Bowel Cancer Screening, including Bowel Scope

Adult Screening Programmes (non-cancer)

- Abdominal Aortic Aneurysm Screening

- Diabetic Eye Screening

Screening Statistics

There are many measures in screening programmes, used to indicate how well they are functioning. The majority are technical measures of performance or quality.

Several years ago, key performance indicators were developed, about three for each programme, and these usually provide information on coverage, the speed of the screening process and a key measure to do with referrals for treatment. They are reported by screening providers usually quarterly, some indicators are annual. These are published:

https://www.gov.uk/government/publications/nhs-screening-programmes-kpi-reports-2017-to-2018

9.6.2   Antenatal and Newborn Screening Programme

The majority of this is offered as part of antenatal and postnatal care, through midwifery and associated services, e.g. ultrasound departments and, for Newborn Infant Physical Examination, paediatrics. Uptake of the screening programmes is very good and usually meets standards.

One concern for West Kent is that the access of children referred from the Newborn Hearing Screening Programme to Paediatric Audiology Services (Commissioned by West Kent CGG) is poor as only 50-60% of children are seen within the required time. The standard is 90% and many areas achieve 100%. At one time it was the worst in the South of England.

9.6.3 Cancer Screening Programmes

9.6.3.1 Cervical Screening

The key concern is that coverage has been falling:

Figure 157 Coverage cervical screening 2010-2017
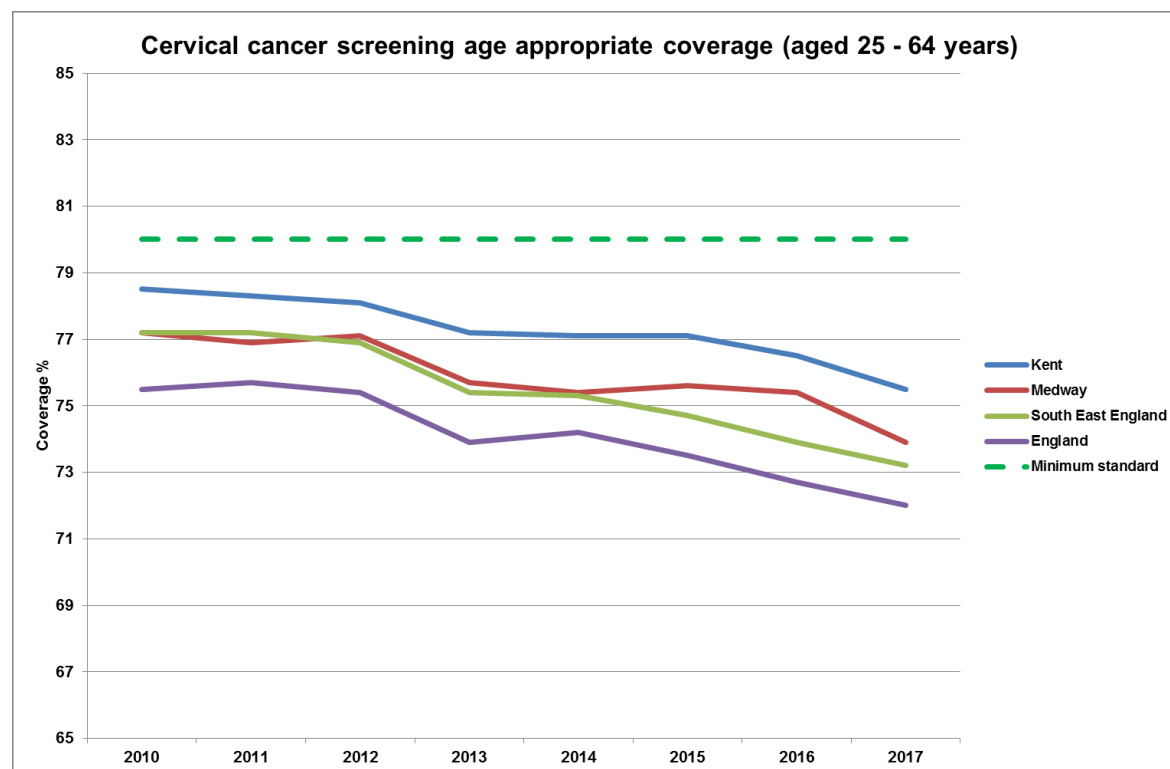
Latest coverage figures for West Kent are 74.5% for 25-49 yr. olds and 79.0% and 50-64 yr. olds. The target is 80%. The gap to achieve 80% in the younger age group represents about 4,500 women in West Kent.

There is a need to make this screening programme more relevant, acceptable and accessible. Coverage varies considerably by general practice and it is clear that practice organisation has a major influence on coverage rates achieved.

Figure 158 Cervical cancer screening rate by GP practice

Cervical cancer screening rate: by GP practice
Percentage of women aged 25-64 screened for cervical cancer within the target period, 2016/17
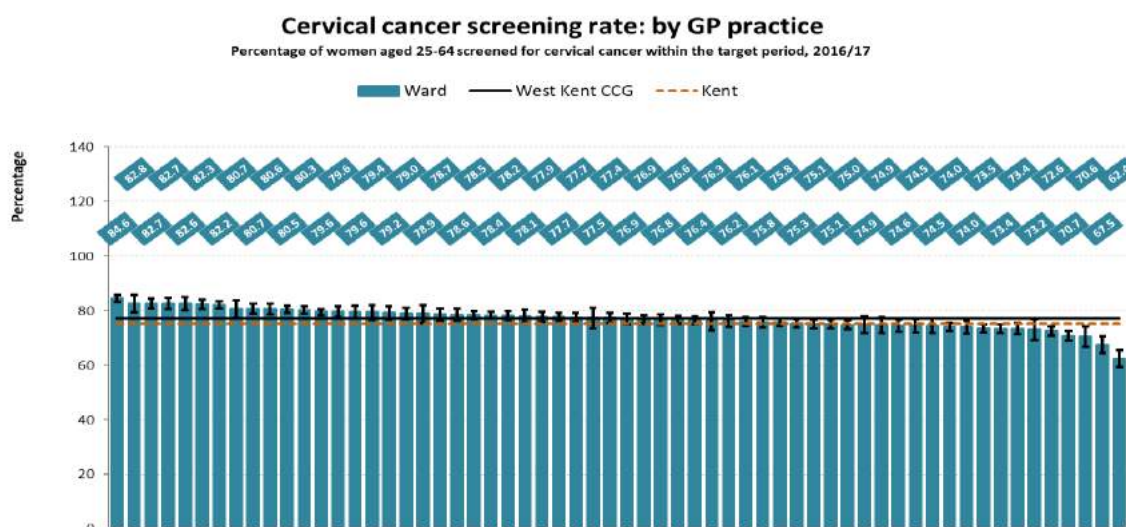
Source: Open Exeter, prepared by KPHO (RK), May-18

9.6.3.2 Breast Screening

Coverage of breast cancer screening is falling.

Figure 159 Breast cancer screening coverage 2010-2017

Breast cancer screening 3 year coverage (aged 53 - 70 years)
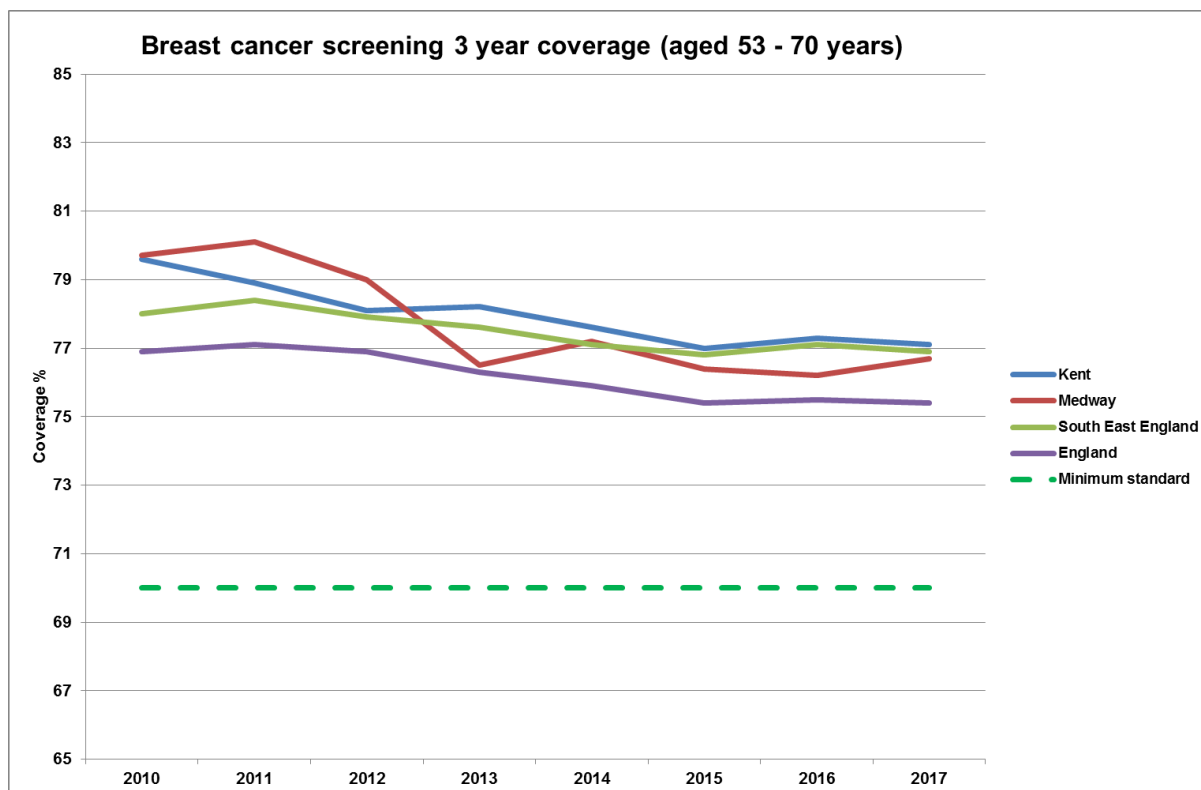
The Maidstone Breast Screening unit covers West Kent CCG. Latest figures for Jan-March 2018 show uptake at 71%. The acceptable threshold is 70% (which will soon be breached) and the achievable threshold is 80%.

A major influence on uptake is the proximity to women and the accessibility of the mobile screening units. In West Kent there has been some difficulty in the use of the Angel Centre in Tonbridge. There is a clear need to support effective siting of mobile mammography units.

Figure 160 Breast cancer screening rate by GP practice

Breast cancer screening rate: by GP practice
Percentage of women aged 50-70 screened for breast cancer in the last 36 months, 2016/17
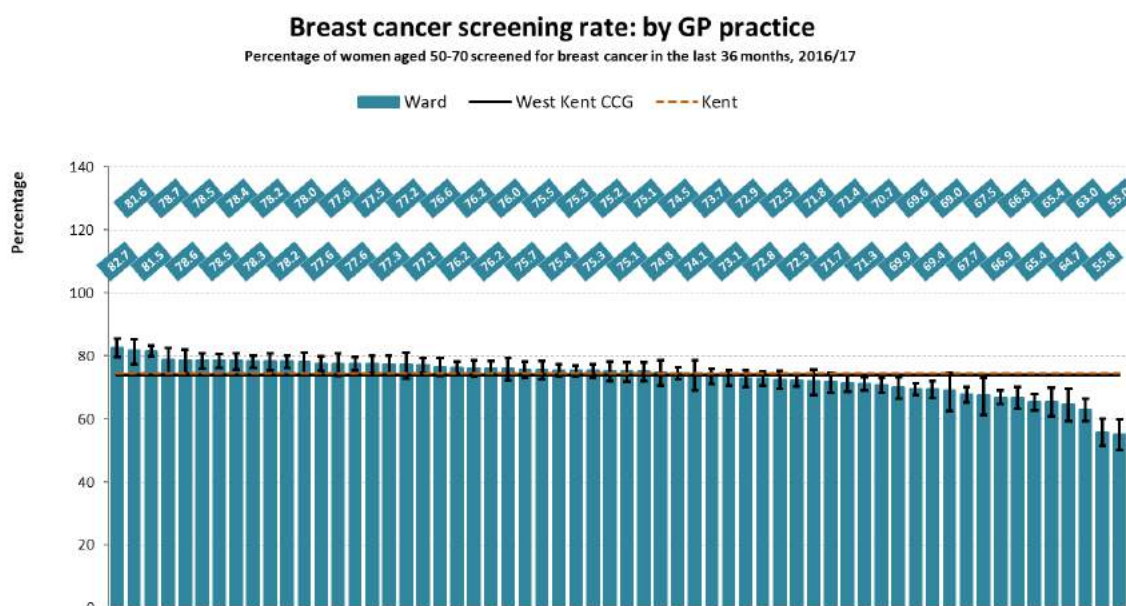
Source: Open Exeter, prepared by KPHO (RK), May-18

9.6.3.3 Bowel Cancer Screening, including Bowel Scope

West Kent has generally good uptake for Bowel Cancer Screening compared to the rest of Kent – 65.4% for invitations in Jan- March 2018. However, the uptake for this screening programme varies considerably from practice to practice and is much lower for those who would benefit the most from screening i.e. in socially deprived areas and in men.

Though invitations for screening do not come from general practice, practices have been shown to able to influence uptake significantly by promoting this programme or through endorsement of invitations. West Kent CCG has a scheme to encourage practices to contact "non-responders"

Figure 161 Bowel cancer screening rate

Bowel cancer screening rate (60-74): by GP practice
Percentage of persons aged 60-74 screened for bowel cancer in the last 30 months, 2016/17
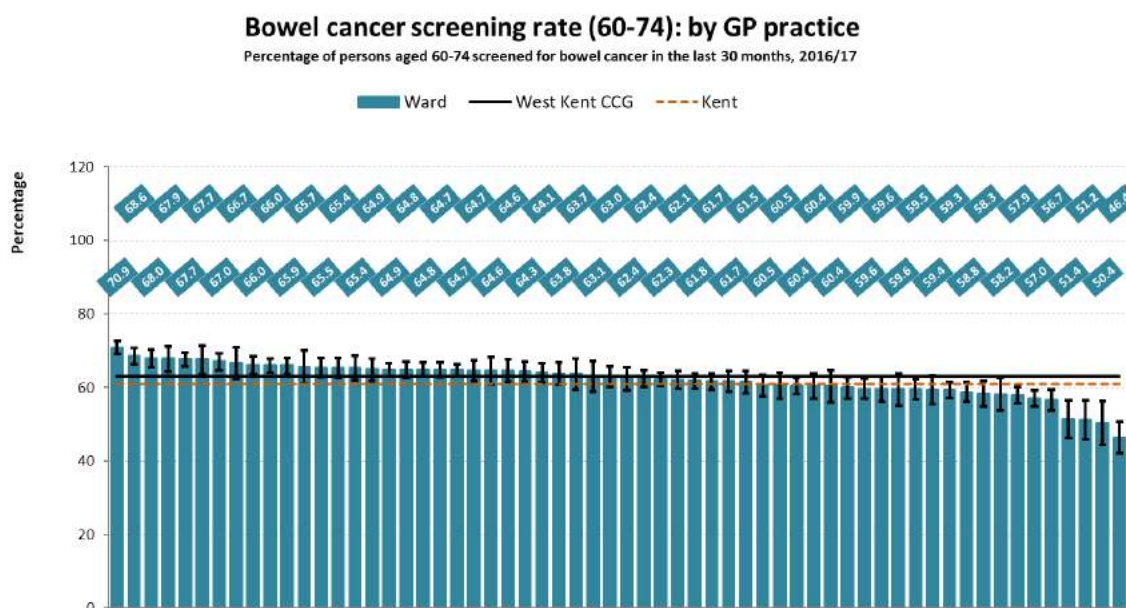
Source: Open Exeter, prepared by KPHO (RK), May-18

Bowel Scope, which comprises and invitation for sigmoidoscopy at age 55 years has been in place in West Kent for several years – West Kent was the first area in England to implement this programme at scale (it is still not available for many areas e.g. most of Dartford, Medway and East Kent). Uptake is about 50%.

A current problem with Bowel Cancer Screening in West Kent is that there is no more endoscopy capacity – which is required for screening as a new test is being introduced that will lead to a greater demand for colonoscopy. There are several options being explored, including how other services use endoscopy.

9.6.4 Aortic Aneurysm Screening Programme

Coverage for Kent in 2016/17 is 82% and varies little from year to year. Within that, West Kent is probably slightly higher. These figures compare favourably with England. Access is very good, with many clinic sites available across West Kent.

9.6.5 Diabetic Eye Screening programme

Uptake is generally good, 82% for Kent and Medway is the last published figure for Jan-March 2017. This programme had been gradually changing – from a van-based service to fewer, static locations though compared to services in other parts of England still provides relatively local access. The change improves efficiency and reliability of equipment.

9.7 Immunisations

Immunisation – National Programmes

National immunisation programmes are stipulated in an agreement between the Department of Health and Social Care and NHS England – the Public Health Functions Agreement also known as the "Section 7a Agreement" which is revised annually.

https://www.gov.uk/government/publications/public-health-commissioning-in-the-nhs-2018-to-2019

https://www.england.nhs.uk/publication/public-health-national-service-specifications/

Locally, NHS England (South East) – this is subject to NHSE reorganisation – has a Public Health Commissioning Team and embedded in this is a Public Health England team, the Kent and Medway Screening and Immunisation Team. This section has largely been produced by this team. The team works with West Kent CCG, practices and NHS Providers to improve immunisation rates.

The aim of national immunisation programmes is in general to provide herd immunity and most immunisations have a target of 95% population coverage or uptake (usually used interchangeably in immunisation) There are exceptions, where the vaccination does not provide herd immunity, i.e. prenatal pertussis and shingles, where the protection is for that individual.

The complete national immunisation schedule is found here:

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/741543/Complete_immunisation_schedule_sept2018.pdf

It may be grouped:

Seasonal Flu

• Children aged 2 and 3 years (but not four years or older) on 31 August 2018

• Children in school years Reception, 1, 2, 3, 4 and 5

• Over 65 years

• Under 65 and in a clinical risk group

• All pregnant women

• GP and Practice Staff

• Frontline Healthcare Workers

Adult Immunisation Programme

• Pneumococcal

• Shingles

School Aged Immunisation Programme

• Human Papillomavirus (HPV)

• Teenage Booster (Td/IPV)

• Meningococcal ACWY

Childhood Immunisation Programme

• COVER data

Immunisations for Those at Risk

• Neonatal Hepatitis B

• Neonatal BCG

• Prenatal Pertussis

Immunisation statistics

Uptake figures and available form two main sources. Both start from general practice.

1. ImmForm is a system that collates immunisation summary statistics though usually monthly electronic extracts of general practice data performed by general practice system suppliers' i.e. EMIS etc. Published data is available by CCG but not by individual practice.

2. COVER is a quarterly publication of childhood immunisation data supplied in summary form from Child Health Information Systems (CHIS), which in turn rely on individual patient immunisation information from general practices (not always reliable in Kent) COVER produces summary statistics by Local Authority area (Upper Tier, so at the level of Kent County Council). Data is not available by CCG or individual practice.

3. NHS Digital published in December 2017, for the first time, childhood immunisation statistics, for 2016/17, at the individual practice level. The source for this was an electronic extraction from CHIS databases. The data is viewable as tables and also through an interactive Power BI platform providing interactive maps at STP, CCG and GP practice level. It is expected that this will be refreshed with 2017/18 data.

Immunisation statistics can vary considerably over time; therefore, it is important to try to base assessments and actions on up to date information. Recent information is often not publically or routinely available at a West Kent CCG level or an individual practice level.

The Screening and Immunisation Team provide a 30-page Statistical Report which provides a commentary on collated data from a variety of sources. It is regularly refreshed.

The latest version is enclosed – click on the icon:

1810_KSS_Imms_Dat
a_v1.doc

9.8 Mental health

People with mental illness experience higher rates of morbidity and have a lower life expectancy then those without mental illness. Individuals with chronic physical health problems are also more likely to experience mental health problems: 30% of patients with a long-term condition have a mental health problem. (Source KID) There are two main categories of mental illness referred to as 'common mental illness' [depression, anxiety] and 'severe and enduring mental illness' [schizophrenia (psychosis) and bi-polar disorder].

The 2014 APMS survey highlights higher rates of common mental health problems being found among younger women (aged 16 to 24 years) compared to their male peers. In 1993, young women of this age group were twice as likely to have symptoms of a common mental health problem - at 19.2% - compared to young men - at 8.4%. This increased by 2014, where these symptoms are nearly three times more common in young women (26.0%) than men (9.1%). The findings also show that nearly 25% of young women in this age group have self-harmed in their life. These stark patterns indicate the need for the STP to support the development of effective strategies for preventing common mental health problems in women. It is likely that these strategies will need to take into consideration that men are known to be under represented in diagnosis of common mental illness, but there is a combination of a range of factors which women are more vulnerable to experiencing in their life time (such as domestic violence, physical and sexual abuse) which interact with one another. Source (APMS)

Recorded prevalence of serious mental health conditions in West Kent is similar to the Kent average. As expected, there is practice level variation; 9 practices have significantly higher recorded serious mental health condition prevalence than the West Kent average and12 practices with significantly lower recorded menta health prevalence than the West Kent average.

Figure 162   Recorded serious mental health condition prevalence – by CCG (of registration)

Recorded prevalence of serious mental health conditions: by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having a serious mental health condition, 2016/17
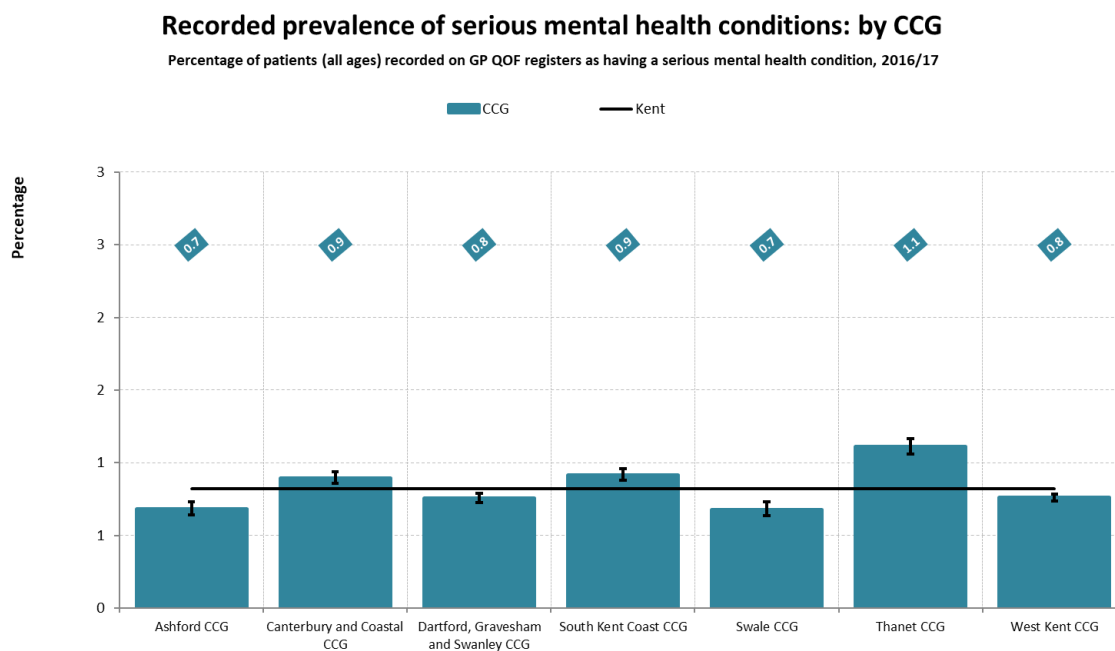
Source: QOF, prepared by KPHO (RK), May-18

Figure 163 Recorded serious mental health condition prevalence – by GP practice

Recorded prevalence of serious mental health conditions: by GP practice

Percentage of patients (all ages) recorded on GP QOF registers as having a serious mental health condition, 2016/17
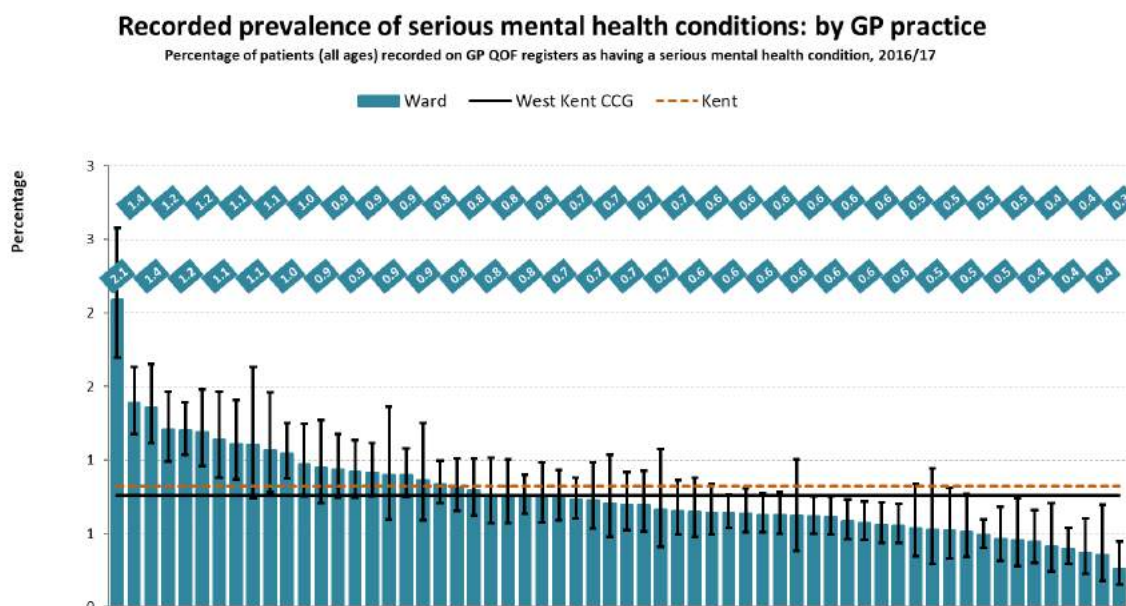
Source: QOF, prepared by KPHO (RK), May-18

It is estimated that 22% of the population of West Kent CCG are suffering from a common Mental Health Disorder (Source APMS 2014).

Around 0.75% of the West Kent CCG population are reported to have a serious mental illness. This is below the prevalence rate for both Kent and England. This is a good indicator that primary care is managing patients with SMI, but caution should be taken as there is variation across the CCG GP practices. (Source Kent QOF data, see Figure 165 and 166)

Figure 164 Prevalence Rates for Serious Mental Illness within Kent

Prevalence of serious mental illnesses by practice within Kent, QOF, 2015/2016, all ages

Source: QOF, prepared by KPHO (LLY), 11/16
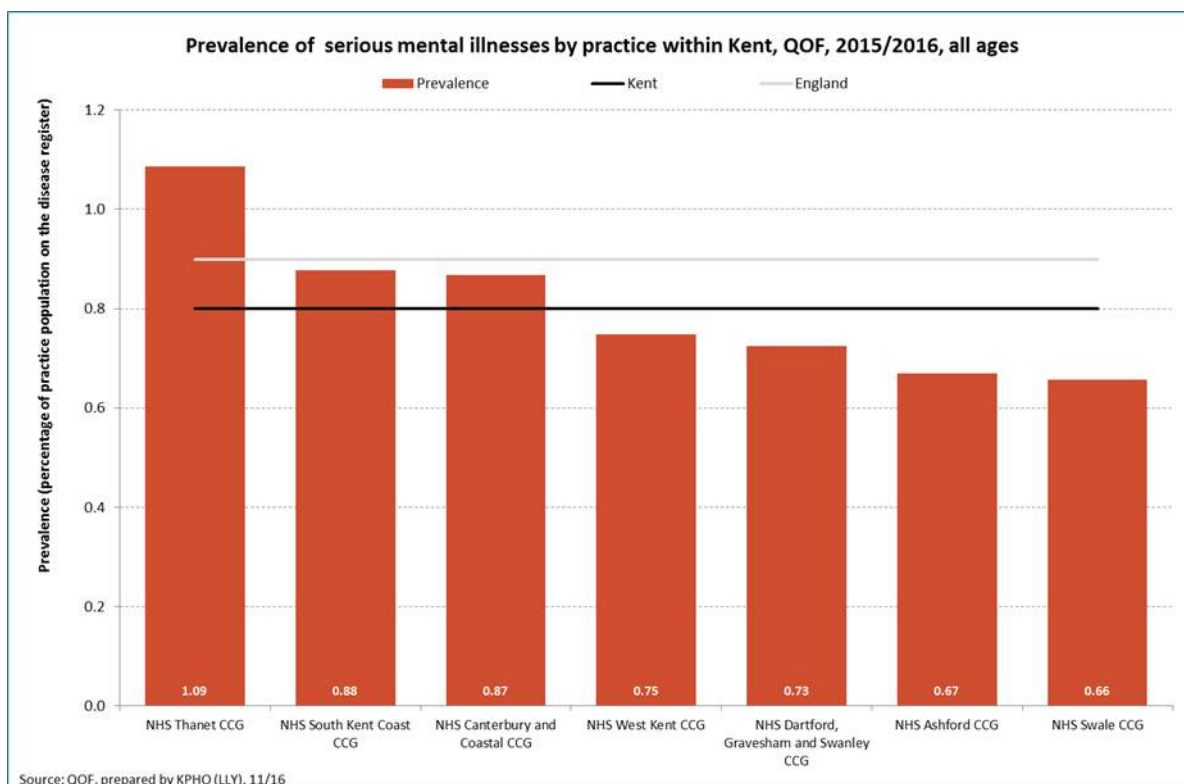
Figure 165 Variation in practice level prevalence for serious mental illness
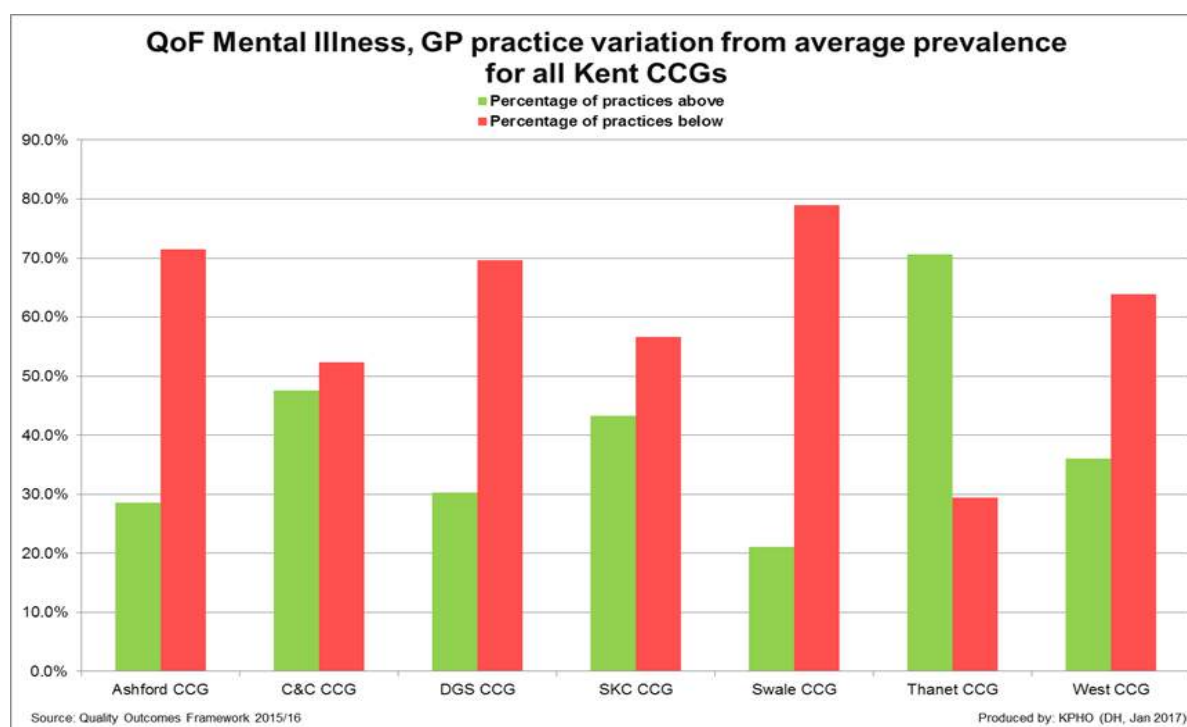
The rate of emergency admissions to hospital for mental health conditions in West Kent is lower than the Kent average. Again, there is significant variation across practices, with 6 practices having significantly higher emergency hospital admission rates and 6 having significantly lower rates than the West Kent average. The rate of emergency admissions for self-harm in West Kent is also below the Kent average. 200 patients per 100,000 population with 72% being females and 37% between the ages 16 – 25.

No practices in West Kent have high emergency hospital admissions for serious mental health conditions, but low recorded prevalence; nor low emergency hospital admissions, but high recorded prevalence.

Figure 166 Emergency hospital admissions for mental health conditions – by CCG

Hospital admissions for mental health conditions: by CCG

Age standardised rate per 100,000 registered population, ICD 10: F (primary diagnosis), 2014/15-2016/17
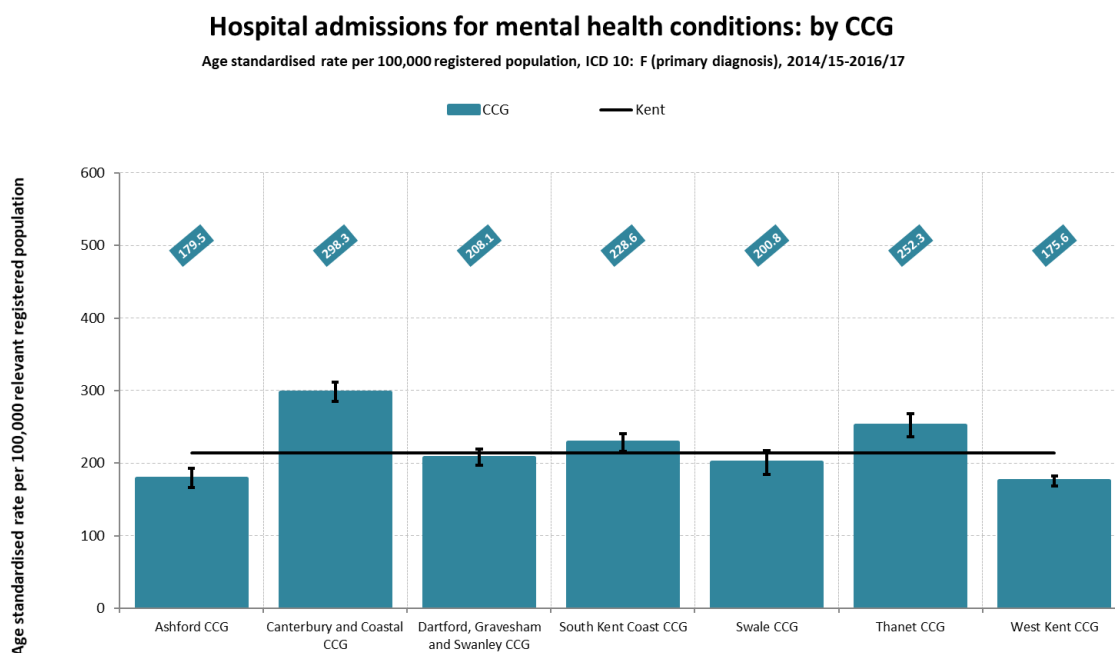
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 167 Emergency hospital admissions for mental health conditions – by GP practice

Hospital admissions for mental health conditions: by GP practice

Age standardised rate per 100,000 registered population, ICD 10: F (primary diagnosis), 2014/15-2016/17
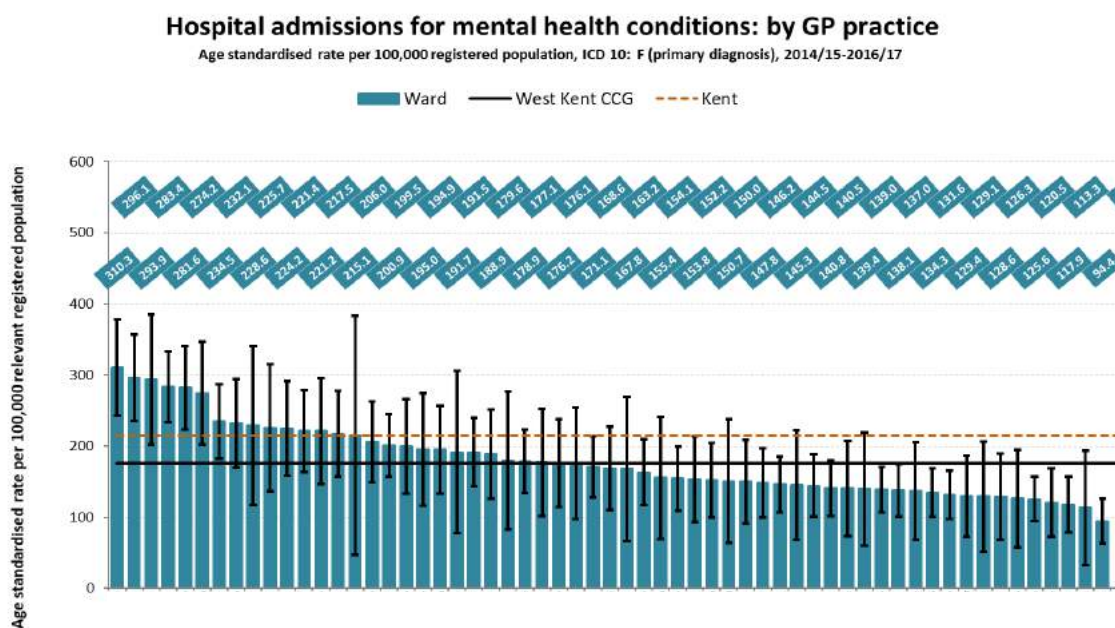
Source: Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Figure 168 Prevalence and emergency hospital admissions for serious mental health conditions – by GP practice

Prevalence and hospital admissions for serious mental health conditions: by GP practice

Percentage of patients (all ages) recorded on GP registers as having cancder, 2016/17, age standardised rate per 100,000 registered population, ICD 10: F (primary diagnosis), 2014/15-2016/17
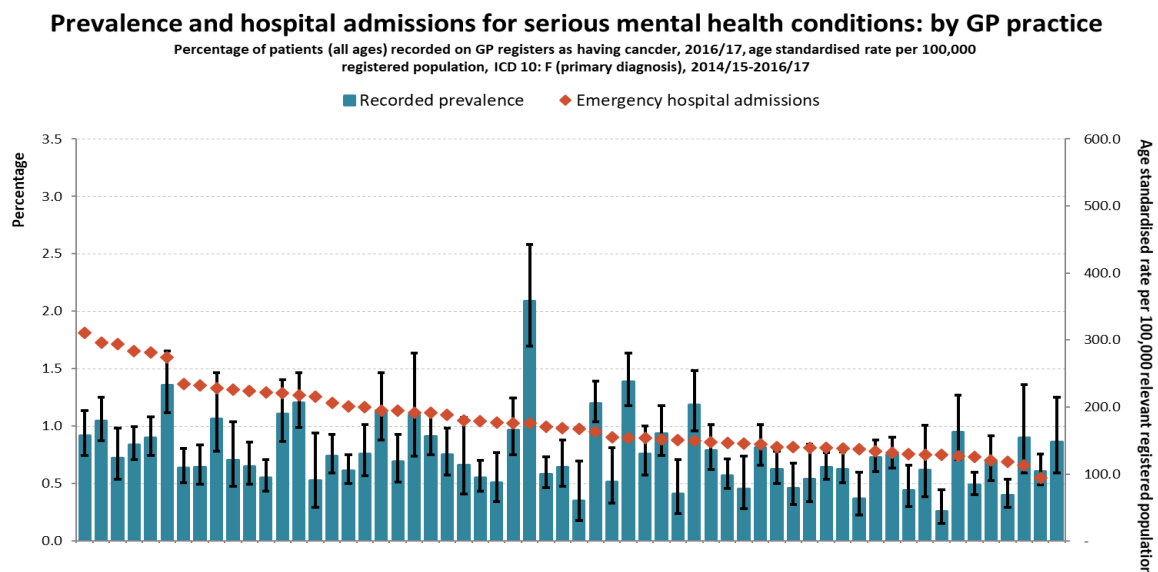
Source: QOF, Hospital Episode Statistics (HES), prepared by KPHO (RK), May-18

Recorded prevalence of depression in West Kent is also similar to the Kent average, but there is again high variability across practices. There are 19 practices with significantly higher recorded prevalence of depression than the West Kent average and 29 practices with significantly lower recorded depression prevalence than the West Kent average.

Figure 169 Recorded depression prevalence – by CCG (of registration)

Recorded prevalence of depression: by CCG

Percentage of patients (aged 18+) recorded on GP QOF registers as having depression, 2016/17
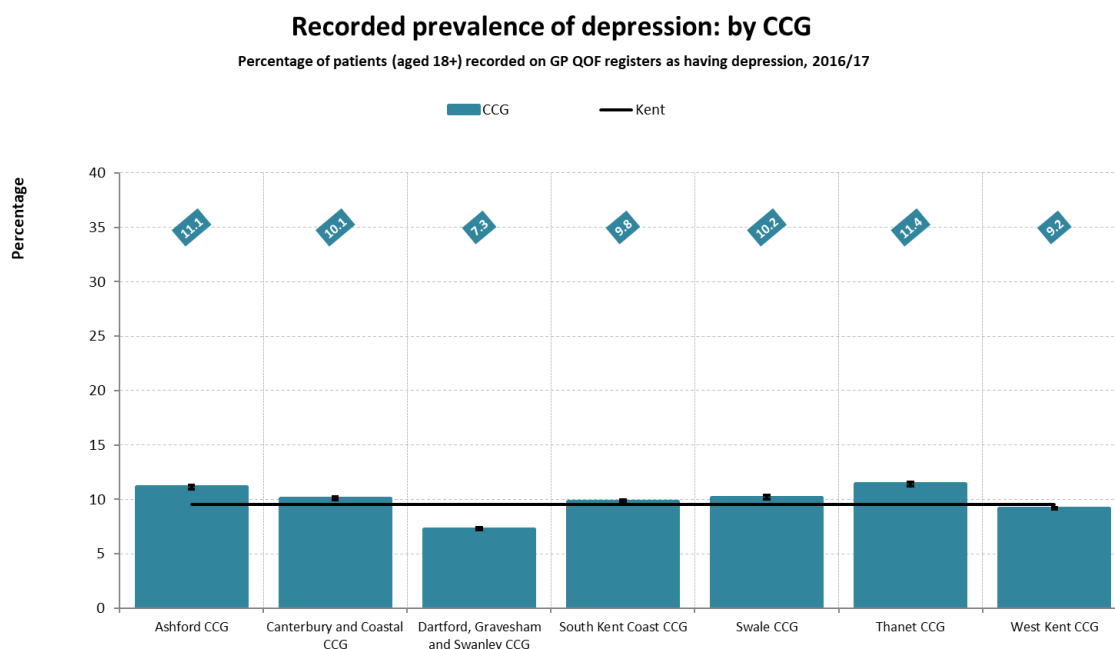
Source: QOF, prepared by KPHO (RK), May-18

Figure 170 Recorded depression prevalence – by GP practice

Recorded prevalence of depression: by GP practice

Percentage of patients (aged 18+) recorded on GP QOF registers as having depression, 2016/17
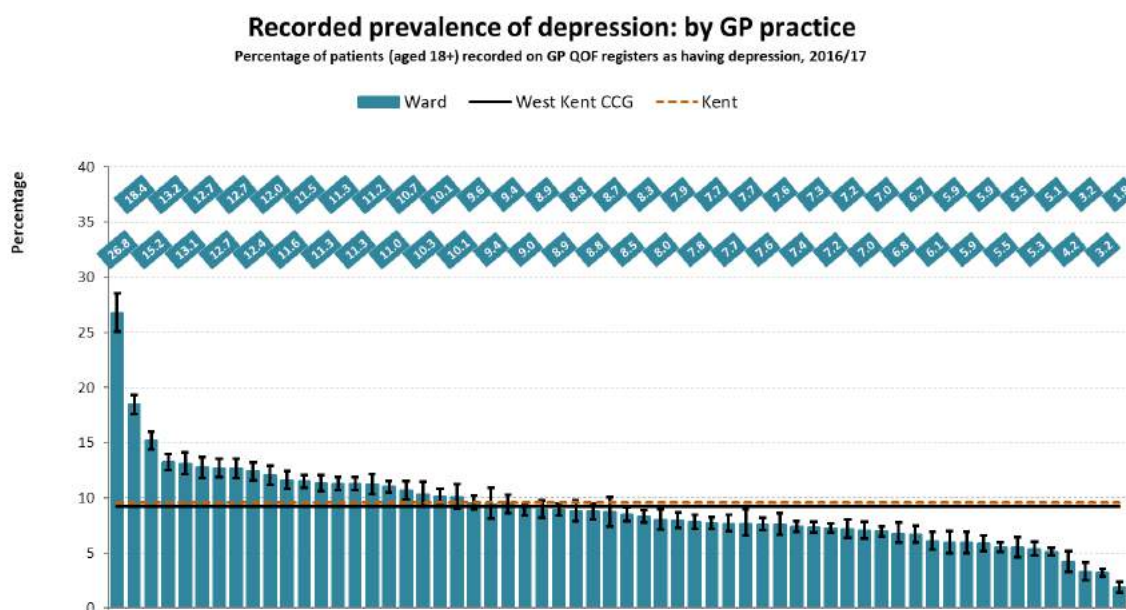
Source: QOF, prepared by KPHO (RK), May-18

The numbers of West Kent patients recorded to have psychosis remained and is projected to remain level 2013 – 2020 (KPHO)

Figure 171 Numbers of West Kent patients with psychosis

Kent CCGs		2013		2016		2020
NHS West Kent CCG		1156		1155		1159

In West Kent approximately 900 adults (800 male/100 female) suffer from anti-social Personality Disorder and 1220 adults are recorded to have Borderline Personality Disorder (400 males/820 females). (Source KPHO)

Between 2014 – 2016 135 people committed suicide (92 males/43 females). This equates to 11.7 per 100,000 population. The male suicide rate (16.4/100 000) is the lowest in Kent, the female suicide rate is the second highest (7.0/100 000)

9.8.1 Child and Adolescent Mental Health (CAMHS)

Enjoying mental health wellbeing is central to the overall development of children and young people. Mental health problems in children are associated with educational failure, family disruption, disability, offending and antisocial behaviour, placing demands on social services, schools and the youth justice system.

Incidence and prevalence

It is estimated that 50% of lifetime mental illness (except dementia) begins by the age of 14[19] and 75% by age 24[20]. The enduring nature of and deterioration of mental health disorders which start in childhood mean that intervening with children is critical for preventing adult mental health as well as the poorer life chances that result from mental ill health in childhood which have a cumulative impact into adulthood. The current best estimates of the prevalence of mental illness in children and young people suggests that 9.2% of children aged 5 to 16 years have a diagnosable mental health condition[21]. These prevalence estimates date from research conducted in 2004; the release of updated figures from a 2016 survey is due and prevalence is expected to have increased significantly.

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[19] *Kessler RC, Amminger GP, Aguilar-Gaxiola S, Alonso J, Lee S, Bedrihan Urstun T (2007). Age of onset of mental disorders: a review of recent literature. Current Opinion in Psychiatry 20(4): 359-364.*

[20] *Kessler R, Berglund P, demler o et al. (2005) lifetime prevalence and age-of-onset distributions of dsM-Iv disorders in the national comorbidity survey Replication. Archives of General Psychiatry 62: 593–602.*

[21] https://fingertips.phe.org.uk/profile-group/mental-health/profile/cypmh/data#page/0 *[accessed 14th May 2018]*

Acute activity

Figure 172 Emergency hospital admissions 10-24 years

Emergency hospital admissions for self-harm in young people aged 10-24 years: by CCG

Age standardised rate per 100,000 children and young people aged 10-24 years, ICD 10: X60-X84 (main recorded cause),
2012/13-2016/17
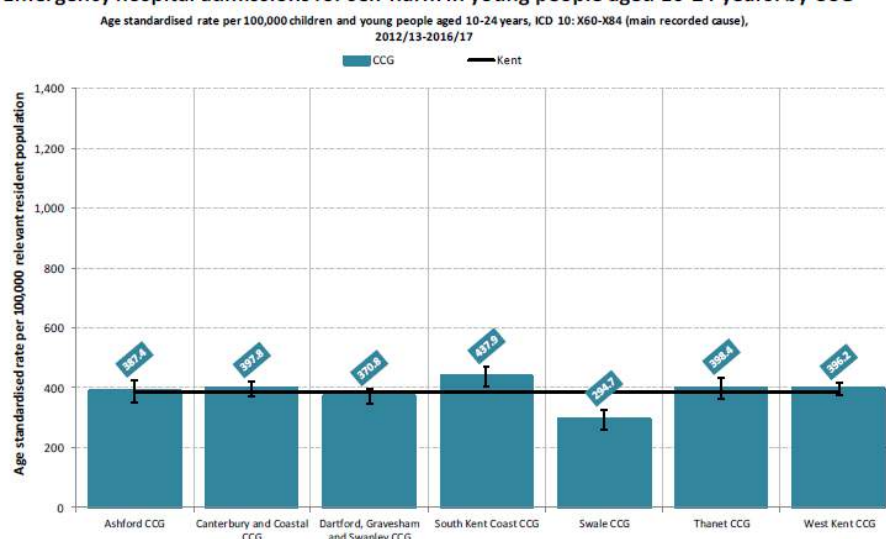
Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

Based on pooled data for 2012/13 to 2016/17 West Kent CCG (396.2) had a slightly higher emergency admission rate for self-harm per 100,000 population aged 10 to 24 than Kent (384.8).

Figure 173 Emergency admissions 10-24 years: trend

Emergency hospital admissions for self-harm in young people aged 10-24 years: trend
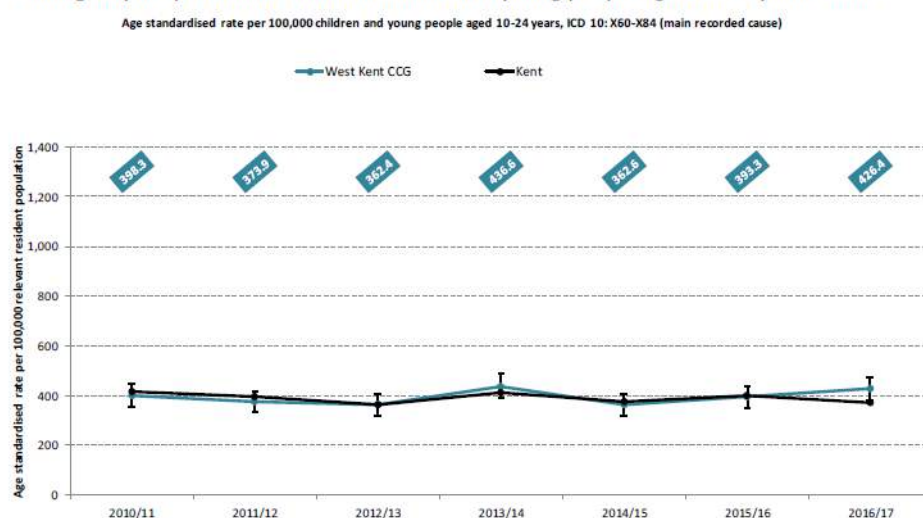
Age standardised rate per 100,000 children and young people aged 10-24 years, ICD 10: X60-X84 (main recorded cause)

No significant change compared with a stable trend for Kent

Source: Hospital Episode Statistics (HES), NHS Digital, ONS, prepared by KPHO (RK), Nov-17

In 2016/17, the emergency admission rate for self-harm among 10 to 24-year olds was slightly higher than the rate for Kent. However, there is no significant change in the trend of emergency self-harm admissions compared with Kent.

Services

Across Kent and Medway, NELFT provide specialist Mental Health Services for children and young people alongside KMPT for Early Intervention Psychosis services. Addaction 's Mind and Body Programme provides an early intervention self harm programme in secondary schools across Kent alongside an Emotional Wellbeing and Mental Health service delivered in schools through KCHFT's School Public Health Service. Headstart Kent is a Big Lottery funded programme which is part of Kent County Council's Early Help and Preventative Services. It is a research and development programme which aims to build resilience in 10-16-year olds preventing them from experiencing common mental health problems. Headstart Kent's programme takes a universal and targeted approach. It includes the development of a Resilience Hub which provides access to resources for children and young people, parents and carers and professionals and includes a toolkit for whole school health improvement, access to training on Resilience focussed conversations with young people. HeadStart Kent's targeted offer includes mentoring, online counselling 'KOOTH' which will be available in Maidstone in September 2018 and Tonbridge and Malling in November 2019.

Access to services

Children and Young People's access to Mental Health Services is monitored by NHS England through the Mental Health Services Dataset. The Five Year Forward View aims to ensure that 35% of the estimated diagnosable mental health need is met by evidence-based interventions in community settings. Performance data for 2017/18, collected by NHS Digital, shows that access to mental health services among young people in West Kent CCG is lower per proportion of the CYP population with a MH condition than both the rest of Kent and England[22]. There are known limitations associated with this dataset, including methodology of calculating access.

As evidenced in The Kent Local Transformation Plan[23], there is an imbalance in the number of CYP accessing more specialist services compared to earlier intervention and universal services. In West Kent CCG, as in the rest of Kent, access to earlier intervention services needs to increase.

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[22] https://files.digital.nhs.uk/EE/F486C9/CYP%20Access%20Reference%20Tables%202017-18.xlsx
[23] https://www.kent.gov.uk/__data/assets/pdf_file/0008/63818/Transforming-health-and-social-care-in-Kent-and-Medway.pdf

<u>Services outcomes</u>

Outcomes data at a CCG level is currently only routinely reported by Mind and Body; however, national and local drives aim to increase the consistent collection and use of outcomes data within our CYP MH services.

Mind and Body (Addaction)

A review of Mind and Body's early intervention self-harm programme has recently been conducted by Addaction and the University of Bath[24]. Overall, the Mind and Body programme resulted in an efficient identification, referral and support for young people engaging in self-harm and/or risk-taking behaviour. Mind and Body had a positive impact on young peoples' awareness, thoughts, feelings, behaviours relating to self-harm and risk-taking and on their overall well-being.

In West Kent CCG, nearly 2,000 CYP aged between 13 and 17 years received information and advice about self-harm and risk-taking behaviours in the 2017/18 academic year. In West Kent CCG, 138 CYP completed the Mind and Body programme in the 2017/18 academic year. Compared to their pre-intervention interviews, 78.2% of CYP reported an overall improvement in their mental wellbeing following participation in Mind and Body (target 70%). The percentage of participants who reported a reduction in number of days in which they thought about self-harming was 85.4% (target 60%, n=41) and 93.8% of participants reported they were better able to manage risks relating to self-harm following participation.

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[24]https://www.addaction.org.uk/sites/default/files/public/attachments/mind_and_body_impact_report_2017.pdf

Conclusion

There are at least 21 practices with either higher or lower prevalence of mental health conditions compared to the West Kent average.

Whilst the rate of emergency admissions for mental health conditions in West Kent overall is lower than the Kent and Medway average there is significant variation across practices; 12 practices have either significantly higher or lower admission rates compared to the West Kent average.

Similarly, at least 48 practices in West Kent have either significantly higher or lower recorded prevalence of depression compared to the West Kent average.

CYP in West Kent have a slightly higher emergency admission rate than Kent and Medway however the trend has not changed over time.

Recommendations:

Understanding of mental health needs at practice level needs to be developed and patients with co-morbidities who would benefit by more intensive support from services identify

Best practices to increase access to early CYP intervention services should be investigated. Service Commissioners should continue to ensure that appropriate key performance data is recorded and available to share by service providers that enables evidence to be gathered by appropriate organisations on the impact of interventions and potential gaps in the support provided by both services and other community assets. (MH service commissioners)

Service audits focussed on access and outcomes should include a focus on appropriate groups thought to be at greater risk. (Mental Health commissioners & KCC PH)

Physical health check targets for people with serious and common mental illnesses should be conducted and appropriate support offered as part of commissioned core mental health services. (MH Commissioners)

Mental health service commissioners should continue ensure people with long term conditions are encouraged to access NHS Talking Therapy services. (MH Commissioners)

CCGs should consider commencing access audits focussed particularly in more deprived communities where need levels will be greater. (CCGs) Access to services by ethnic group will need auditing in Kent. (MH commissioners contract data)

Service providers in Kent need to audit access to their services for Black and Minority Ethnic Groups. (MH Commissioners – contract data requirement)

Commissioners should monitor national progress on quality improvement in care planning approaches. (MH commissioners)
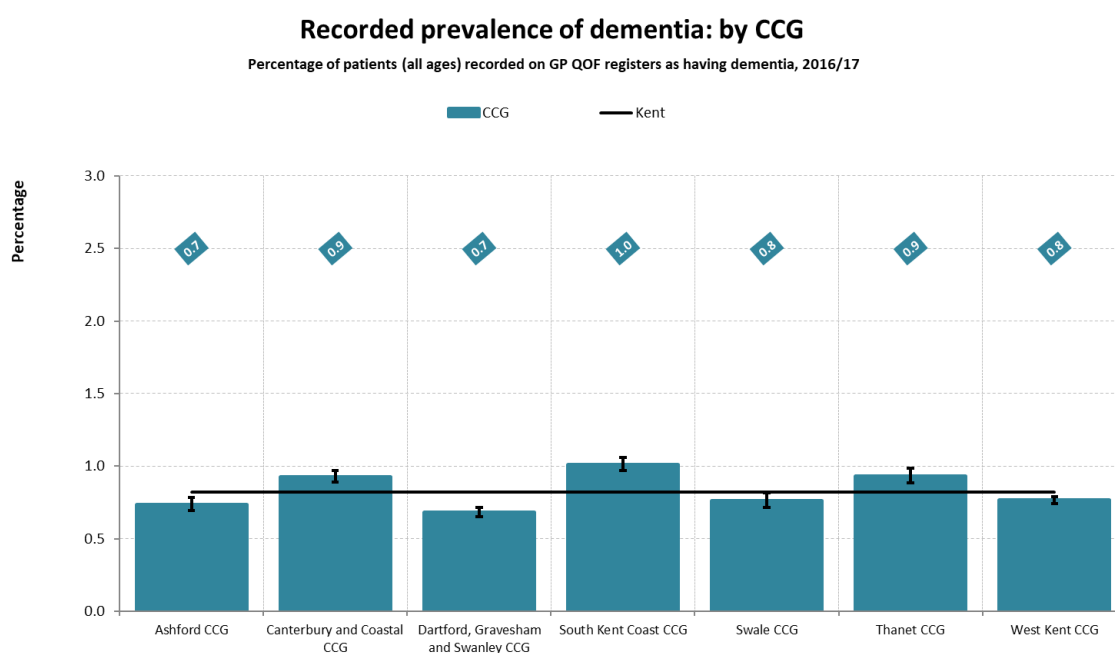
9.9 Dementia

The term 'dementia' is used to describe a syndrome, resulting in progressive decline in multiple areas of function such as decline in memory, reasoning, communication skills and the ability to carry out daily activities. The individual with dementia may also develop behavioural and psychological symptoms such as depression and psychosis.

In Kent, the expected number of elderly people >65 yrs. with a limiting long-term illness is expected to increase from 120,000 in 2012 to 145,000 in 2020. Of these, the expected number of elderly people with dementia is expected to increase from just under 20,000 in 2012 to just under 25,000 people in 2020.

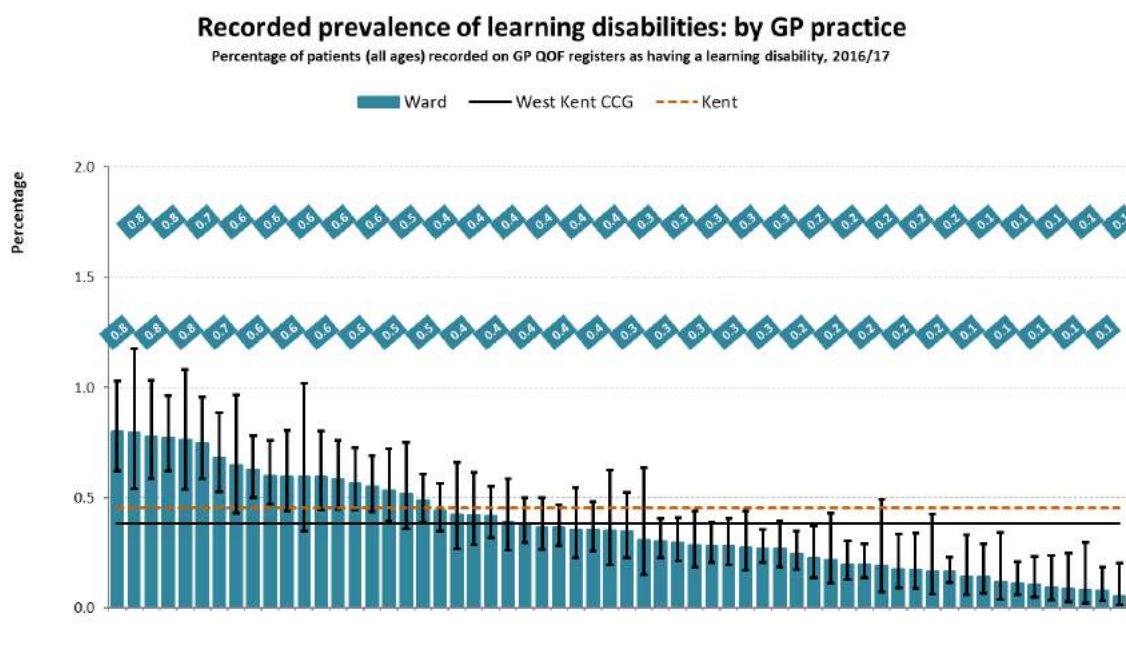Recorded prevalence of dementia in West Kent is similar to the Kent average, but there is high variability across practices. There are 12 practices with significantly higher recorded prevalence of dementia than the West Kent average and 17 practices with significantly lower recorded dementia prevalence than the West Kent average.

Figure 174 Recorded dementia prevalence – by CCG (of registration)
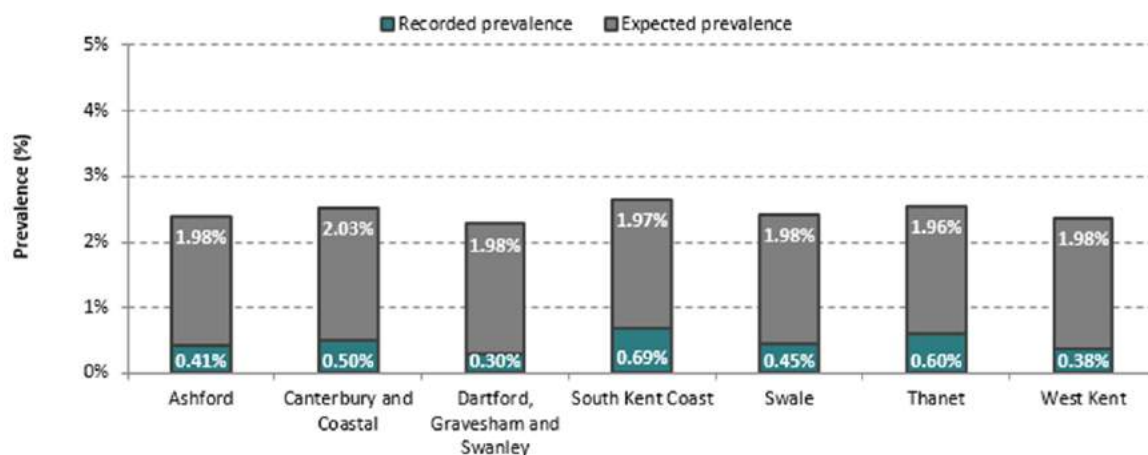

Source: QOF, prepared by KPHO (RK), May-18

Figure 175 Recorded dementia prevalence – by GP practice
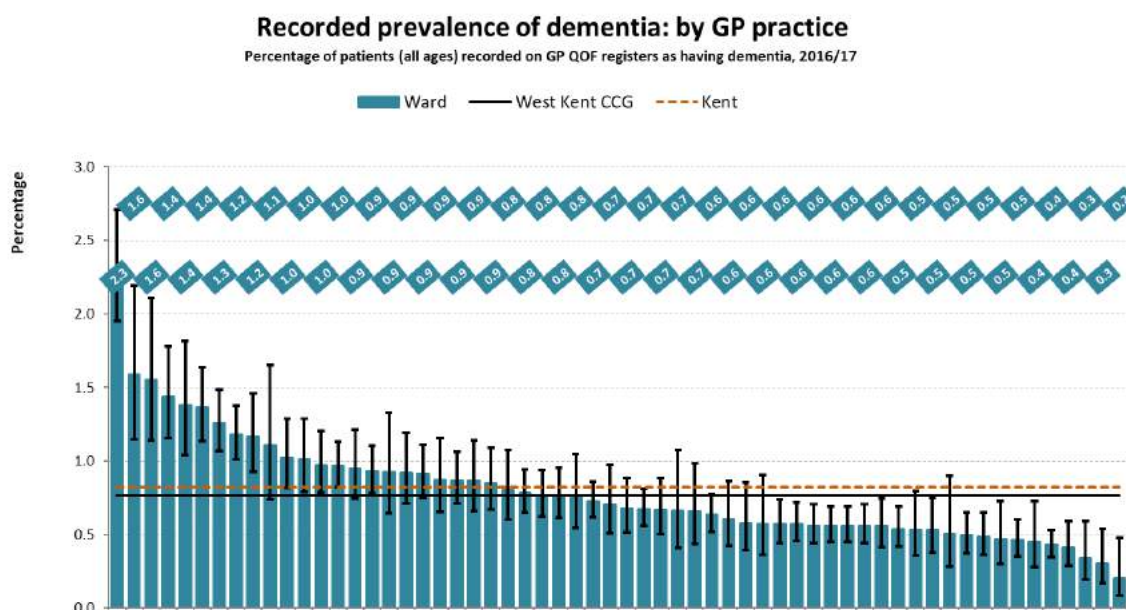
Source: QOF, prepared by KPHO (RK), May-18

Dementia mainly affects older people, and so an ageing population has significant implications in respect of potential future dementia prevalence. Work conducted in Kent using data from the KID on recorded dementia prevalence, and the KCC housing-led population forecasts suggests that the numbers of individuals with recorded dementia across the four West Kent districts will increase by 18% by 2023 and by 41% by 2028.

KCC has commissioned a range of services and support for People Living with Dementia and their Families/Carers to promote inclusive, Dementia Friendly Communities community where people living with dementia and their carers are active participants within community life.

Conclusions:

At least 29 practices in West Kent have significantly higher or lower prevalence of dementia compared to the West Kent average.

Recommendations:

Develop an evaluation of existing services to determine the impact of dementia friendly initiatives on health and social care demand, and establish the case for further investment in this area.

Awareness of practices with higher rates of Dementia and appropriate structure of their services.

9.10 Learning disability

The term 'learning disability' commonly refers to a group of individuals with a history of developmental delay, a delay in or failure to acquire a level of adaptive behaviour and/or social functioning expected for their age and in whom there is evidence of significant intellectual impairment. Individuals with learning disabilities have an increased risk of early death and the risk of dying before the age of 50 has been found to be 58 times greater than in the general population. People with Down's syndrome have a higher incidence of medical problems than the general population; 30-45% have congenital heart disease; 6% have gastrointestinal anomalies; 1% develop childhood leukaemia; there is an increased incidence of hypothyroidism; the majority of individuals develop early-onset dementia; 70% have hearing problems; 50% have sight difficulties and many have increased levels of severe periodontal disease (Learning Disability JSNA 2010).

Recorded prevalence of learning disability in West Kent is slightly lower than the Kent average, but there is high variability across practices.

There are 15 practices with significantly higher recorded prevalence of learning disabilities than the West Kent average and 17 practices with significantly lower recorded learning disability prevalence than the West Kent average.

Figure 176 Recorded learning disability prevalence – by CCG (of registration)

Recorded prevalence of learning disabilities: by CCG

Percentage of patients (all ages) recorded on GP QOF registers as having a learning disability, 2016/17
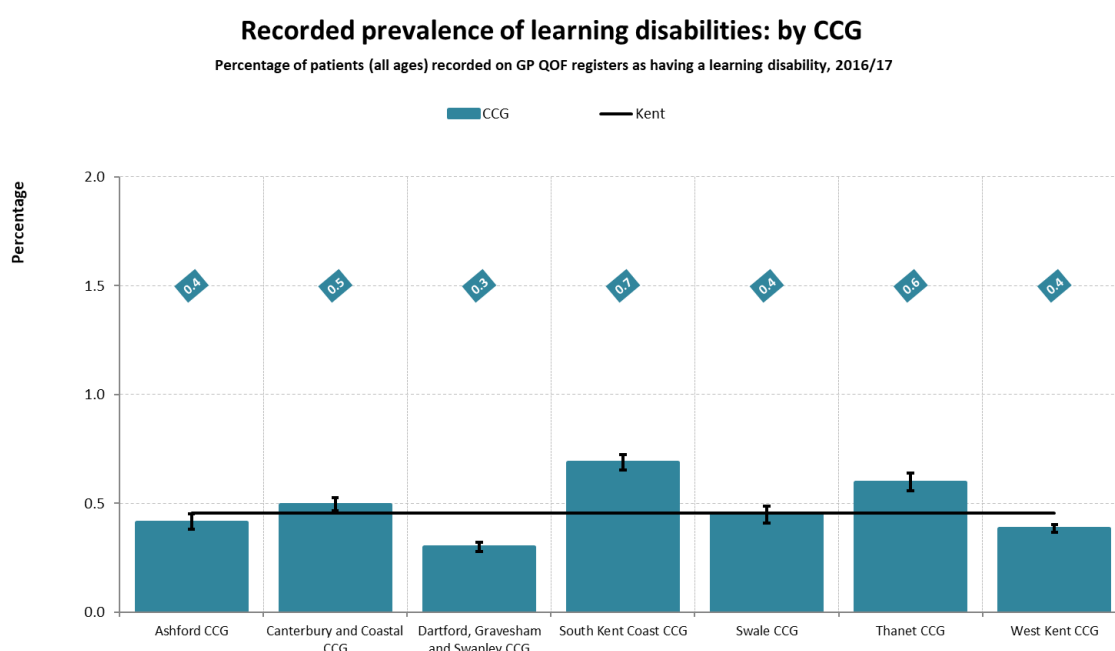
Source: QOF, prepared by KPHO (RK), May-18

Figure 177 Recorded learning disability prevalence – by GP practice

Recorded prevalence of learning disabilities: by GP practice
Percentage of patients (all ages) recorded on GP QOF registers as having a learning disability, 2016/17

Source: QOF, prepared by KPHO (RK), May-18

Figure 178 Recorded and expected prevalence of learning disability in Kent

Source: Emerson 2004, PCIS, QOF, prepared by KPHO (ZC), August 2018

Comparing the gap between expected and recorded prevalence of learning disabilities, this may equate to as many as 24,000 undiagnosed cases across Kent in 2016/17.

Figure 179 Health checks in people with learning disabilities
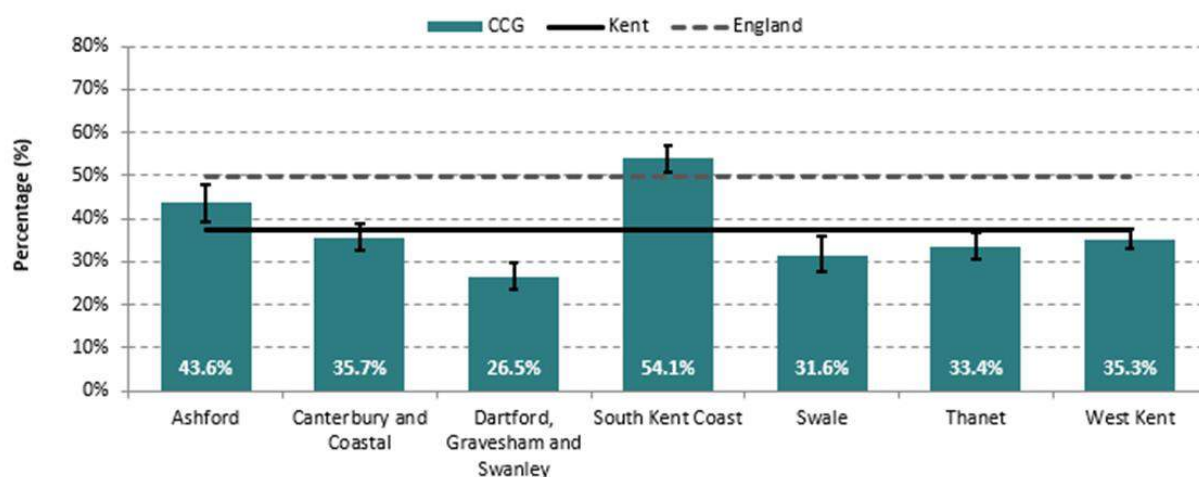
Source: NHS Digital, prepared by KPHO (ZC), August 2018

Uptake of health checks in Kent was lower than England in 2016/17. Compared to Kent –
uptake in West Kent CCGs was also lower.

Figure 180 Seasonal influenza vaccination of people with learning disabilities
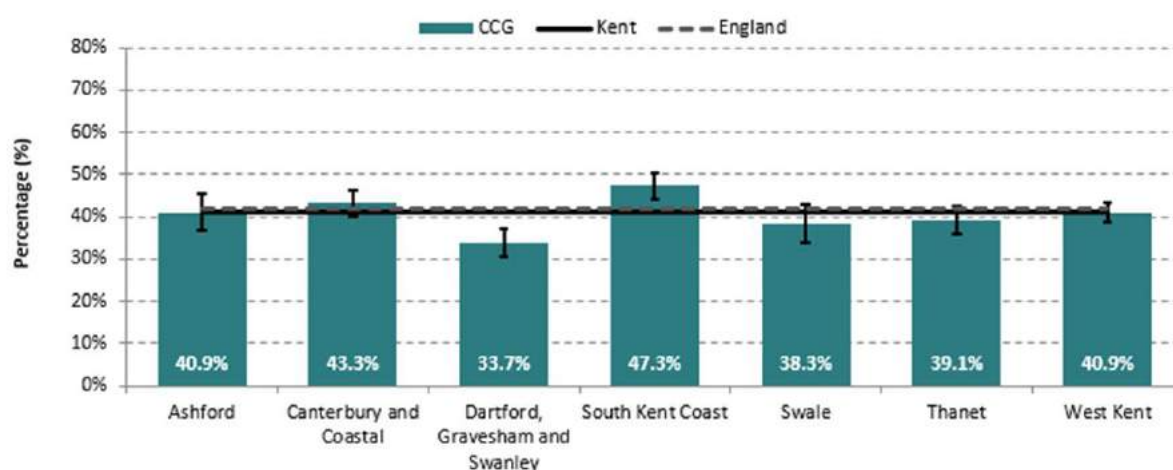
Source: NHS Digital, prepared by KPHO (ZC), August 2018

Uptake of seasonal flu vaccination in Kent was similar to England and West Kent was similar
to Kent in 2016/17.

Figure 181 Uptake of cervical screening in people with learning disabilities
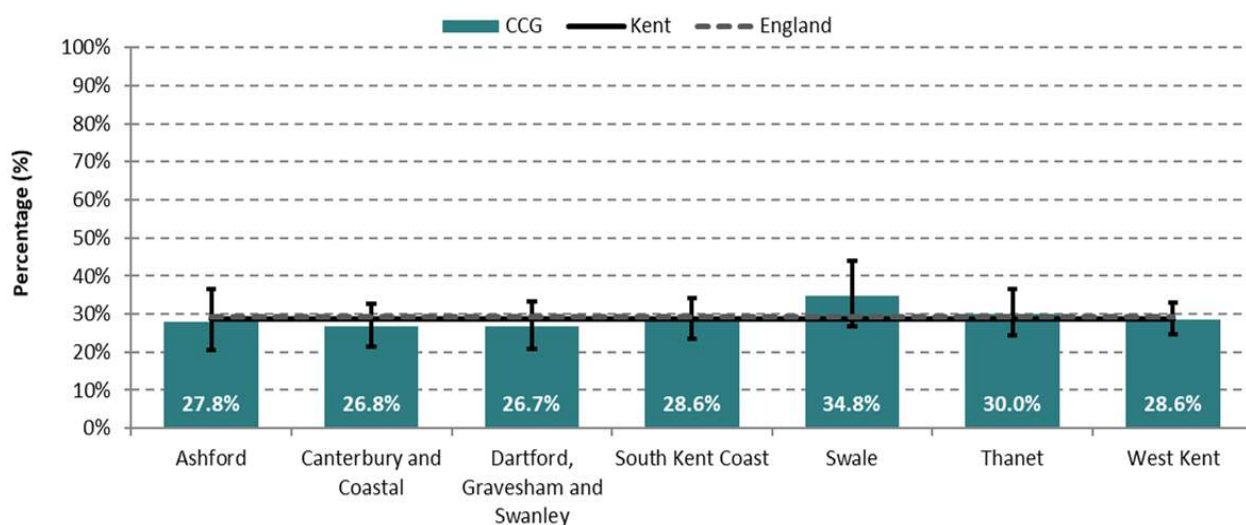
Source: NHS Digital, prepared by KPHO (ZC), August 2018

Cervical screening in females aged 24 to 64 in West Kent CCG was similar to Kent and England overall in 2016/17.

Conclusions:

Thirty-two practices have recorded a higher or lower prevalence of learning disabilities compared to the West Kent average.

Recommendations:

GP practices should sign up for the DES LD annual health check since this facilitates early intervention for the management of Long Term Conditions.

More work should be done with the primary care teams to actively case find persons with learning disability particularly in those practices with low prevalence.

The provision of healthy diet and adequate opportunity for physical activity within residential accommodation for persons with learning disabilities should be appraised and the Service Level Agreements adjusted to maximise such healthy living opportunities – led by Adult Social Services.

All agencies should be rigorous in assuring that persons with learning disability receive appropriate services with regard to sight and hearing, in recognition that their population needs are predicted as being greater than the general population.

9.11 Multimorbidity

Analysis of multimorbidity has been conducted using data from the Kent Integrated Dataset (KID). Please see the underlined methodology section for further details.

Based on the 56 practices flowing data into the KID at the time of the analysis, multimorbidity prevalence in West Kent is lower than the Kent average, but there is high variability across practices.

The number of morbidities (long term conditions) and the proportion of people with multimorbidity increases with age. Nearly half (47%) of those aged 65+ in West Kent are recorded by their GP as multimorbid, rising to 66% amongst those aged 85+.

Multimorbidity prevalence also increases with the deprivation of the area in which people live; 20% of those living in the most deprived areas of West Kent[25] are recorded as multimorbid compared to 16% in the least deprived areas.

There are 24 practices with significantly higher recorded prevalence of multimorbidity than the West Kent average and 19 practices with significantly lower recorded multimorbidity prevalence than the West Kent average.

Figure 182 Multimorbidity prevalence (developmental statistics) – by CCG (of registration)

Multimorbidity (developmental statistics): by CCG

Patients recorded by their GP as having 2 or more long-term conditions
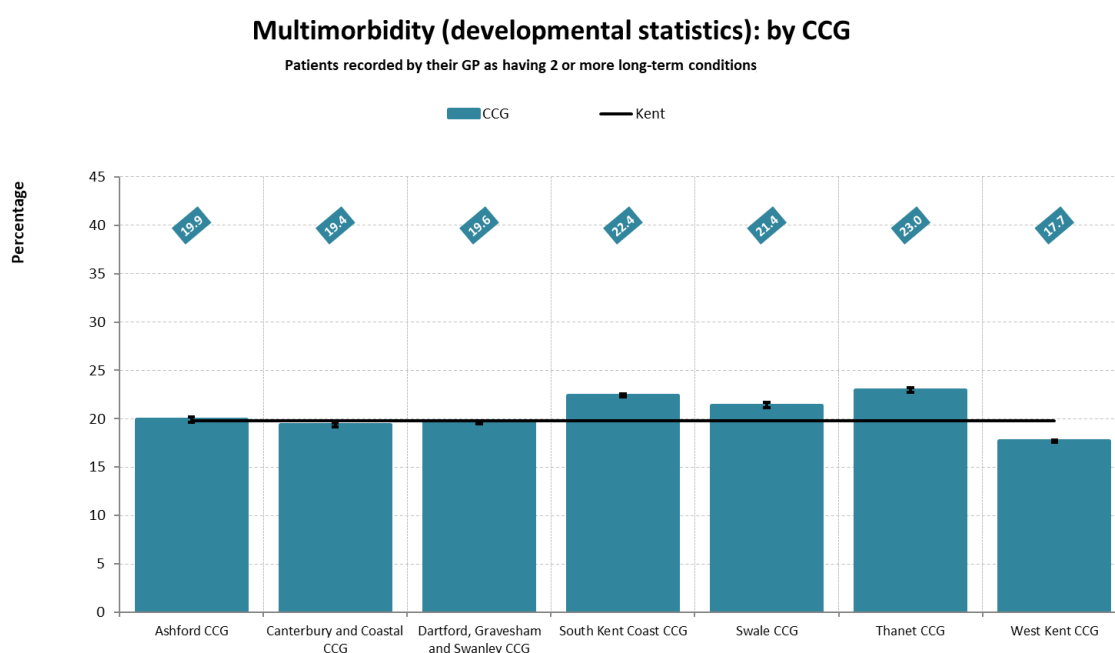
Source: QOF, prepared by KPHO (RK), May-18

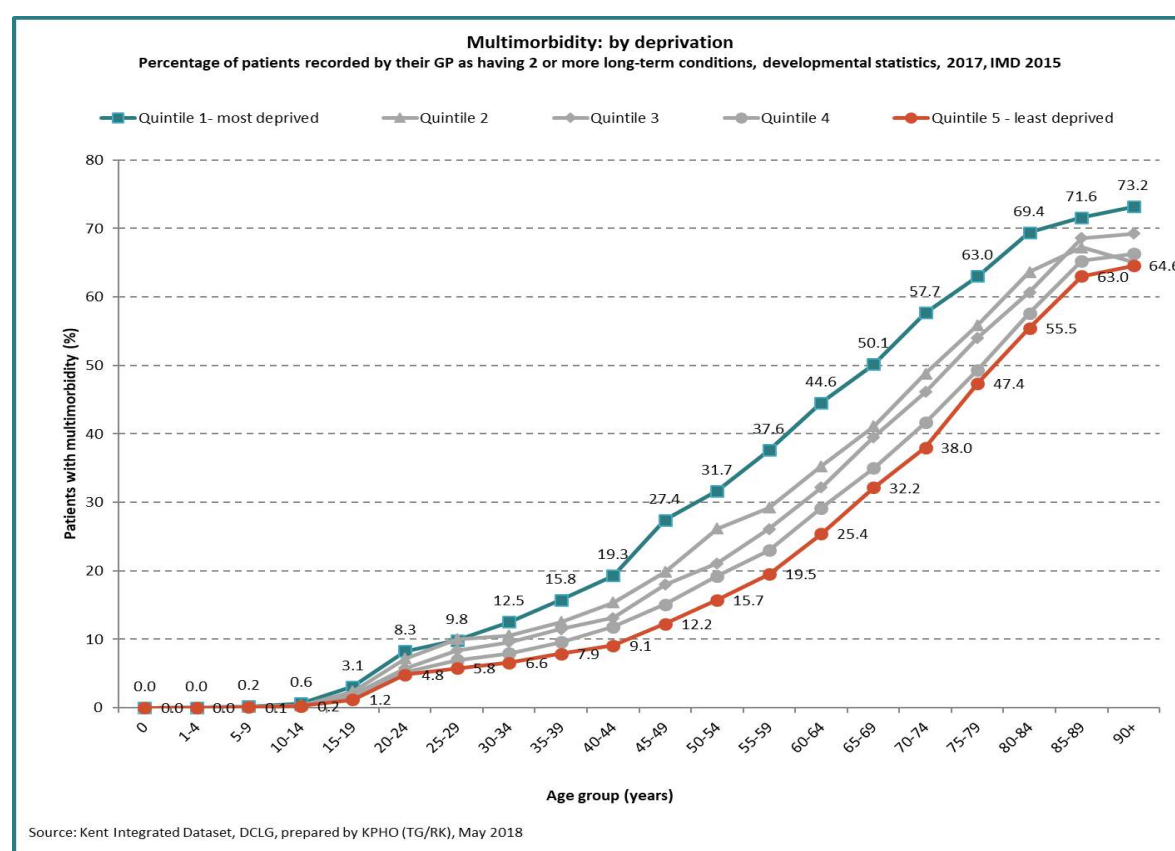[25] based on Kent IMD 2015 quintiles.

Figure 183 Multimorbidity prevalence (developmental statistics) – by GP practice

Multimorbidity (developmental statistics): by GP practice
Patients recorded by their GP as having 2 or more long-term conditions
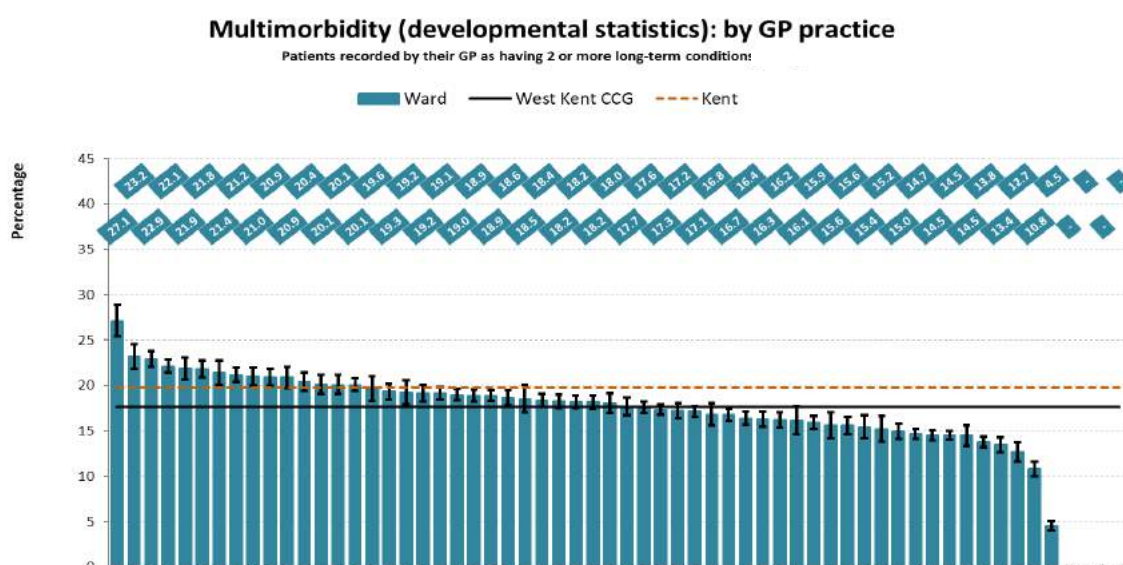
Source: QOF, prepared by KPHO (RK), May-18

Figure 184 Multimorbidity prevalence (developmental statistics) – by age and deprivation

Multimorbidity: by deprivation
Percentage of patients recorded by their GP as having 2 or more long-term conditions, developmental statistics, 2017, IMD 2015

Source: Kent Integrated Dataset, DCLG, prepared by KPHO (TG/RK), May 2018

9.11.1 Long term condition combinations

Across the 56 West Kent GP practices flowing data into the Kent Integrated Dataset (KID), the most common combination of long-term conditions is hypertension and obesity, with 4.1% recorded by their GPs as having both conditions. Other common combinations of multimorbidity in West Kent are obesity and depression (3.2%), hypertension and diabetes (2.4%), hypertension and depression (2.1%), and diabetes and obesity (2.0%).

Figure 185 Multimorbidity prevalence (developmental statistics) – disease combinations

Multimorbidity (developmental statistics): Prevalence of long term condition combinations

Patients recorded by their GP as having specific combinations of long term conditions, West Kent CCG, May 2018

Source: Kent Integrated Dataset (KID), prepared by KPHO (TG), May 2018

* Figures relate to persons resident in Kent and registered at a GP participating in the KID in May 2018
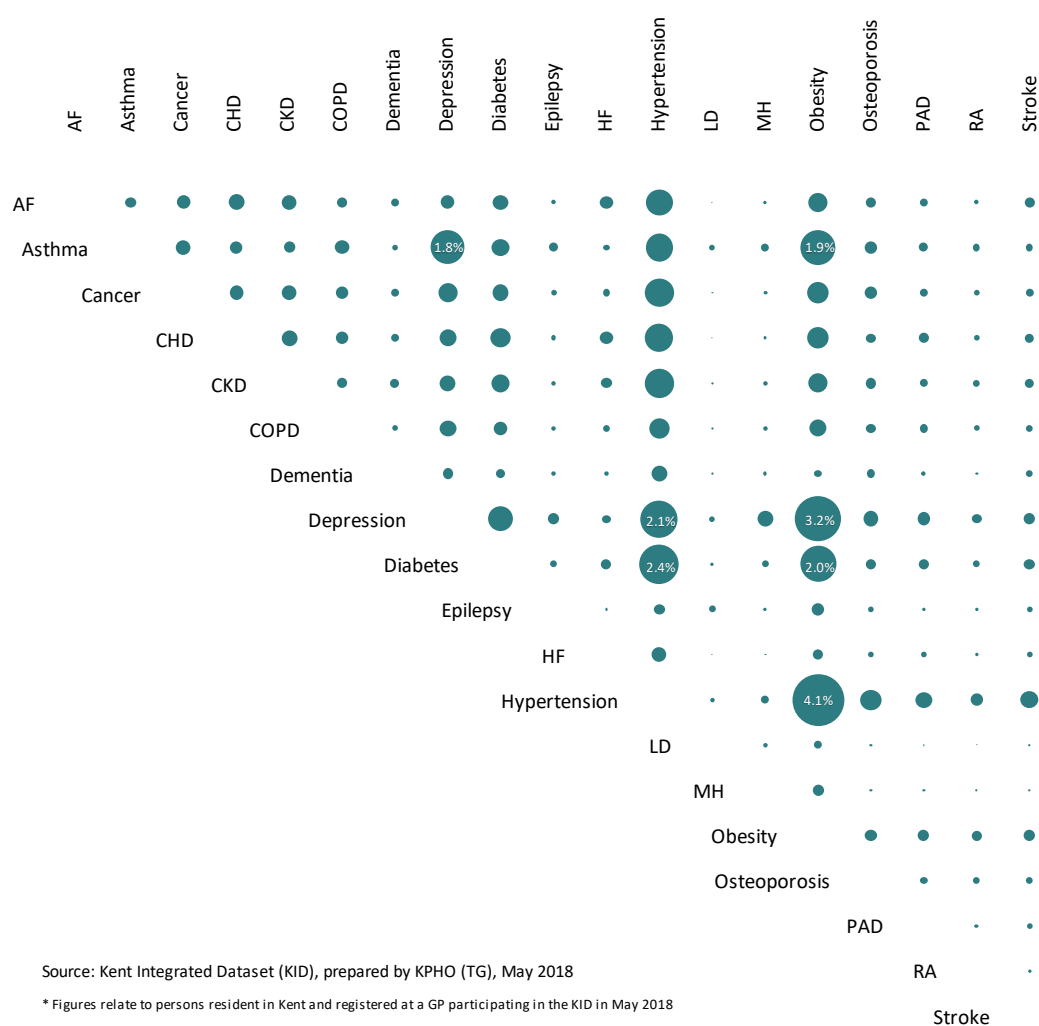
Conclusions:

The latest Multimorbidity analysis using West Kent GP data indicates the most common combination of morbidities are: i) hypertension and obesity, ii) obesity and depression, iii) hypertension and Diabetes, vi) hypertension and depression and v) Diabetes and obesity.

Recommendations:

Further research is required to explore patterns of multimorbidity in West Kent population should facilitate improved primary care management including prescribing

10 Modelling population health needs using Systems Dynamics

10.1 Background

A systems dynamic model has been developed to simulate population health needs and service demand for Kent (http://www.kpho.org.uk/joint-strategic-needs-assessment/jsna-population-cohort-model). The model outputs monthly forecasts of the overall shape of population health needs and demand for services over a 25-year period from 2012.

The objectives for this modelling were:

1.   To create a System Dynamics model that will provide population level projections of adult health needs with a view to assessing overall population health and wellbeing, and demands placed upon health and care services;

2.   To identify, and project the impact of key public health interventions and strategies on health and care outcomes and utilisation. Such interventions include the following:

- The impact of smoking prevalence reductions and smoking cessation interventions;

- The impacts of interventions to reduce obesity;

- The impact of increasing primary prevention of hypertension.

10.2 Methods

This approach uses epidemiological information to estimate the contributions of changes in population-level risk factors relating to health and wellbeing and changes in the uptake of evidence-based interventions over time.

The model requires a range of input data. Current values for various parameters in the model were chosen using a combination of available evidence, the knowledge and experience of the local stakeholders. Some of the data used included studies from British Household Panel Survey (BHPS) English Longitudinal Study of Ageing (ELSA), and the local Kent Integrated Dataset (KID). The model was calibrated to the West Kent population validation process has also explored the sensitivity of the model to changes in input parameters.

The 'best case' scenario was developed based on the following:

- Continued reductions in levels of smoking,

- a reversal of the current trends in levels of obesity,

- and improved diet and reduced physical inactivity.

These are all proven indicators for the incidence of conditions that lead to poor health and reduced life expectancy. This 'best case' is compared against a hypothetical position in which risk factor levels have not been decreasing, and as such, will demonstrate the contribution to improved life expectancy and the overall burden of health needs that

improvements in risk factor prevalence has and will continue to make. Appendix 1 gives details of how model assumptions have been developed.

10.3 Using the Model to Explore Scenarios

10.3.1 Factors contributing to changing health needs in West Kent

The factors contributing to demographic change, and therefore to the shape of future health needs, include:

- Natural demographic growth, which will contribute an ageing process reflecting the national picture and will lead to increases in the very old who are likely to be frail,

- Net-migration, which in Kent is significant, and in the short term, is likely to add to the relatively young and therefore, overall healthy people in Kent,

- The prevalence of risk factors that impact on the incidence of specific health conditions, leading to an increase in people with specific or multiple conditions.

We have described how these are addressed in terms of the modelling in the previous section. The different population dynamics described above combine into a single model, with the ability to explore the impact of reducing key risk factors.

10.3.2 Scenarios for overall 'burden of health' calculations

The 'best case' scenario described in this section relies on the following assumptions regarding risk factors:

- That levels of smoking, reducing since 2000, continue to do so;

- That rising levels of obesity are reversed from 2017 due to a range of public health and related healthy eating initiatives at national and local level;

- That diet continues to improve leading to reduced blood pressure and cholesterol;

- That physical inactivity continues to reduce.

Each of these risk factors impacts on the incidence of certain conditions, which the modelling tool deals with individually, but which we have combined in this section to provide an overall sense of the changing health needs of the population.

Figure 187 shows the growth in the overall adult population of West Kent, which increases in all three broad categories, based on the 'best case' scenario.

Figure 186 West Kent population growth – healthy, with a health condition, with multiple and complex condition and frail (based on the 'best case' scenario described above)


Population growth	2012	2017	2022	2027	2032	2037
■ Frail	9791	11519	12989	14413	16133	18256
■ Multiple	17767	19089	20425	21732	22919	24016
■ Single	50312	52707	55675	58765	61843	64893
■ Healthy	278075	291696	304443	315988	327634	338941
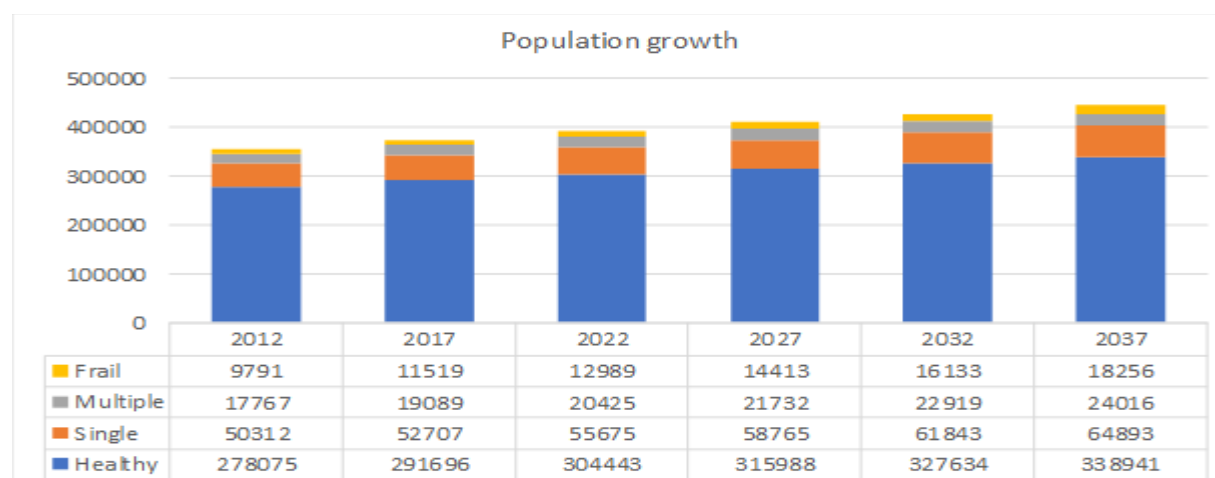
The relative contribution of the different assumptions underlying this scenario can be seen in appendix 1. In summary, this suggests that:

- The benefits of reduced levels of smoking are noticeable, but continue to increase over the next 25 years, partly in response to continued reductions, but also because the benefits of having given up, or preferably never having started to smoke, are often only fully realised in later life;

- However, even with reduced smoking levels the prevalence of health conditions in the population continues to rise as a proportion of the whole population;

- The addition of reduced levels of obesity, diet and physical activity improvements further reduce the levels of, at a population level;

- There is approximately a 1% reduction in frailty when assessing the impact of all four underlying risk factors. However, frailty will continue to increase significantly, almost doubling between 2017 and 2037. The 'best case' in the longer term is to see the numbers who are healthy and those with single or multiple conditions and frail population grow

Figure 187 The percentage of people with a health condition, healthy, multiple and complex or frail under different scenarios.

Healthy population
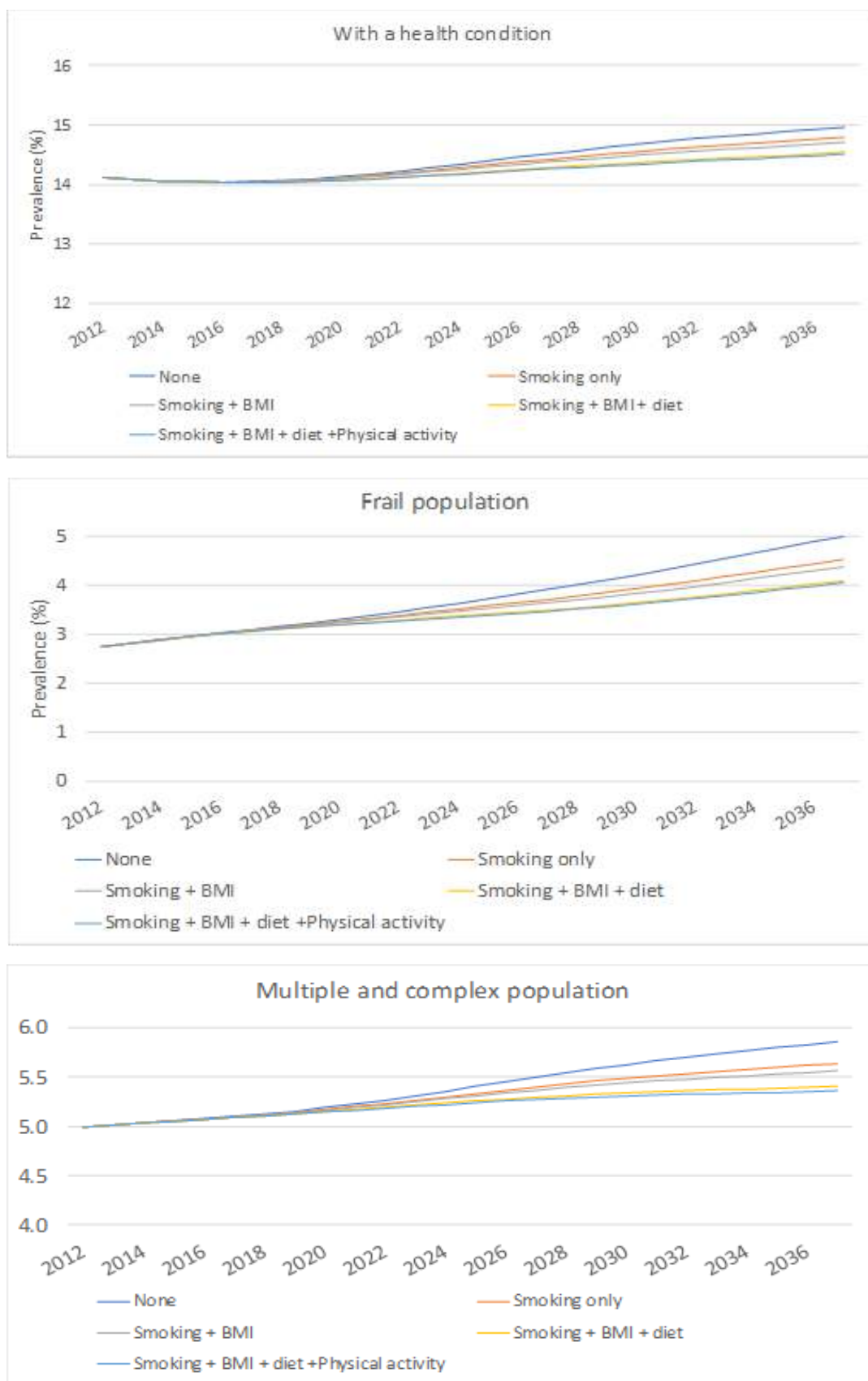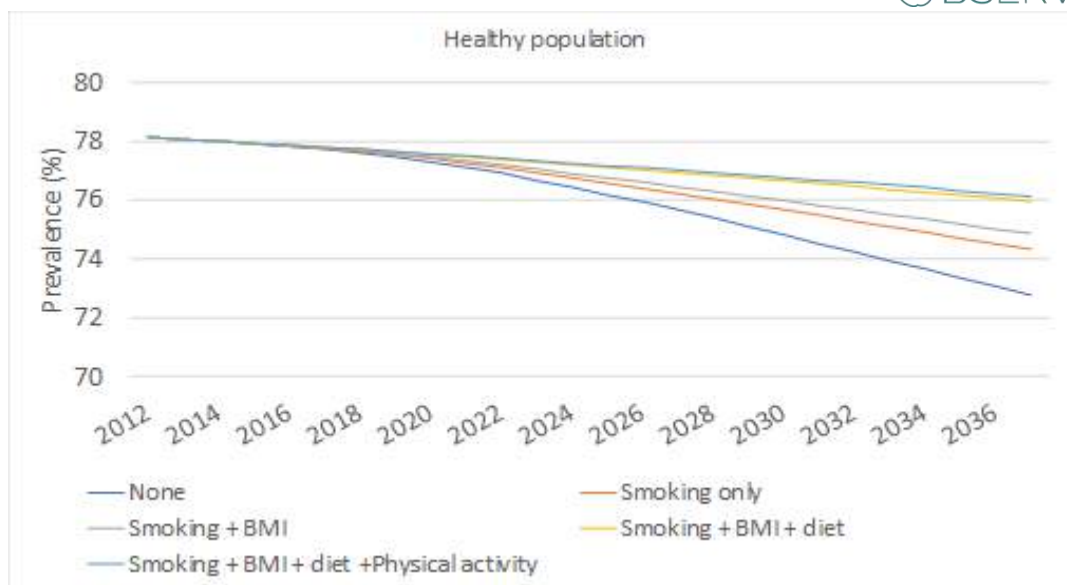
The model results illustrate a continued increase in the absolute growth in most conditions / cohorts mainly as a result or the continued growth in the older population. Table below presents the change in prevalence across conditions illustrating the:

- reductions expected in cardiovascular and respiratory conditions, due to reductions in smoking, diet and physical activity;

- the increase expected in diabetes, due to continued increases in obesity and;

- the increase in dementia, neurological and frailty.

Table 10 Modelled prevalence of individual conditions (including overlap of conditions with multiple and frail cohorts

Condition	2012	2017	2022	2027	2032	2037	Change (2017 to 2037)
Asthma	8.8	8.7	8.6	8.4	8.2	8.0	-7.8
CHD	4.1	4.1	3.9	3.7	3.7	3.7	-9.7
COPD	2.4	2.5	2.4	2.3	2.3	2.3	-8.0
Diabetes2	4.8	5.1	5.7	6.3	6.9	7.4	48.8
HF	0.3	0.3	0.3	0.3	0.3	0.3	13.6
Stroke	2.1	2.2	2.1	2.0	2.0	2.1	-5.2
Frail moderate	2.7	2.8	2.9	3.0	3.1	3.2	13.8
Multiple LTC	4.4	4.6	4.7	4.8	4.9	5.0	9.7
SEMI	0.5	0.5	0.5	0.5	0.4	0.4	-9.4
Neuro	0.3	0.3	0.3	0.4	0.4	0.4	22.3
Dementia	0.7	0.7	0.8	0.8	0.8	0.9	30.7
LD	0.3	0.3	0.3	0.3	0.3	0.4	26.6
Frail severe	2.8	3.1	3.3	3.5	3.8	4.1	37.1

10.4 Further scenario development – the smoking cessation example

The impact of improved rates of smoking cessation has been explored.

Figure below shows the output from the model from 2012 to 2037 for the prevalence of respiratory conditions across Kent:

- Run 1 shows the growth in respiratory conditions had smoking prevalence remained at levels in 2012;

- Run 2 shows the impact of reduced levels of smoking, largely through people not starting to smoke;

- Run 3 shows the additional benefit of an enhanced reduction in smoking cessation from 2018 by 5% for people who already smoke.

The significant observation is the additional benefit in terms of respiratory condition prevalence from the latter intervention. The actual difference at the end of the model run is a reduction of c. 400 on a population of about 10,000 people with COPD. This is in part because giving up smoking is not as beneficial as never taking it up, and because the effect only starts in 2016. Figure below shows the same three scenarios for levels of smoking and smoking cessation, on this occasion with its impact on emergency inpatients admissions for COPD.

Figure 188 The impact of reduced rates of smoking (Run 2) and smoking cessation (Run3) on the prevalence of respiratory conditions
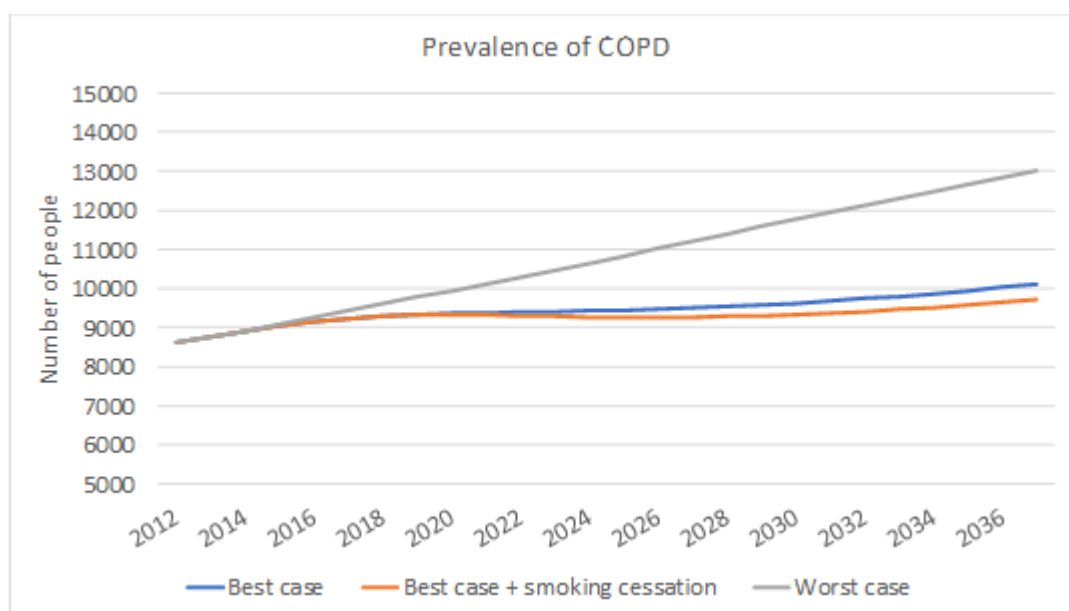
Figure 189 The impact of reduced rates of smoking (Run 2) and smoking cessation (Run 3) on inpatient admissions for COPD.
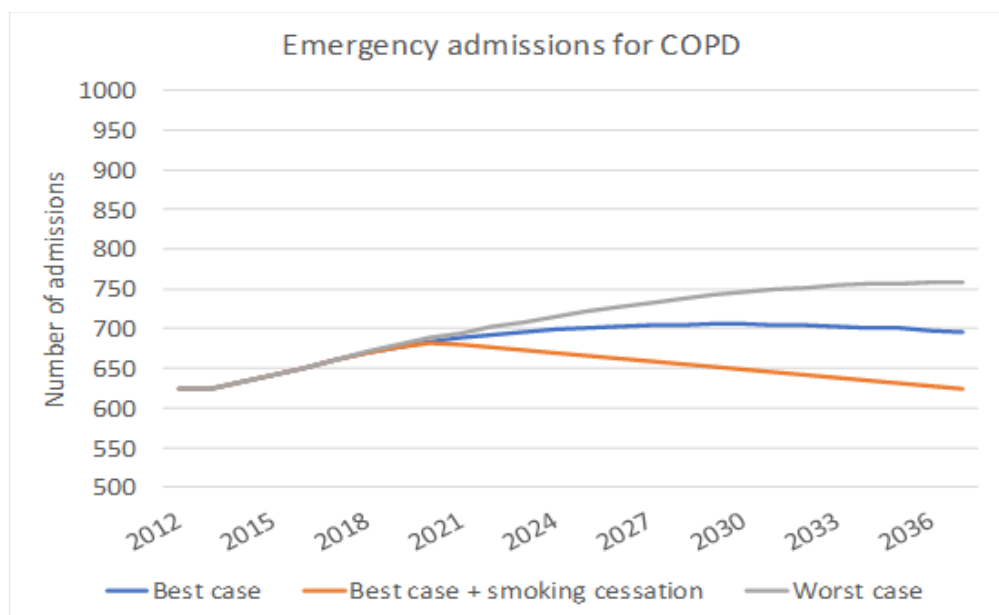
10.5 Life expectancy and healthy life expectancy at 18

The model currently develops outcomes for individual cohorts and health and care utilisation under different scenarios, but an approximation for health and life expectancy at age 18 is used as a summary measure of health improvement. This is illustrated in the figure below which represents the impact of risk factors upon life expectancy at 18 years. We show the equivalent outputs with the latter interventions included for healthy life expectancy in the figure below.

Figure below illustrates the impact of the four underlying risk factors upon life expectancy at age 18 up to 2037. The impacts are as follows:

- 5 years for smoking;

- 2 years for BMI reversal;

- 4 years for improved diet and;

- 2 years for physical inactivity;

Figure below illustrates the impact of the four underlying risk factors upon healthy life expectancy at age 18 up to 2037. The impacts are as follows:

- 4 years for smoking;

- 1.5 years for BMI reversal;

- 3 years for improved diet and;

- 0.5 years for physical inactivity;

The charts show that improvements in life expectancy occur across the 20 years period, whereas for healthy life expectancy improvements plateaux at about 2027. This plateaux because the ageing process increases the incidence from the healthy to single, multiple and frail cohorts.

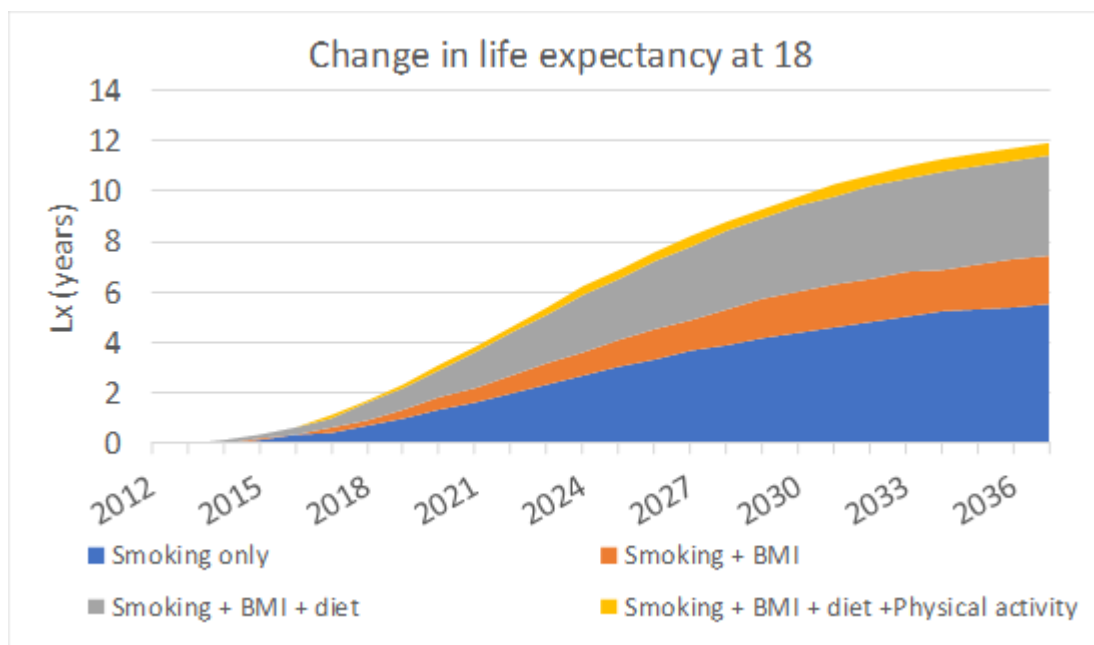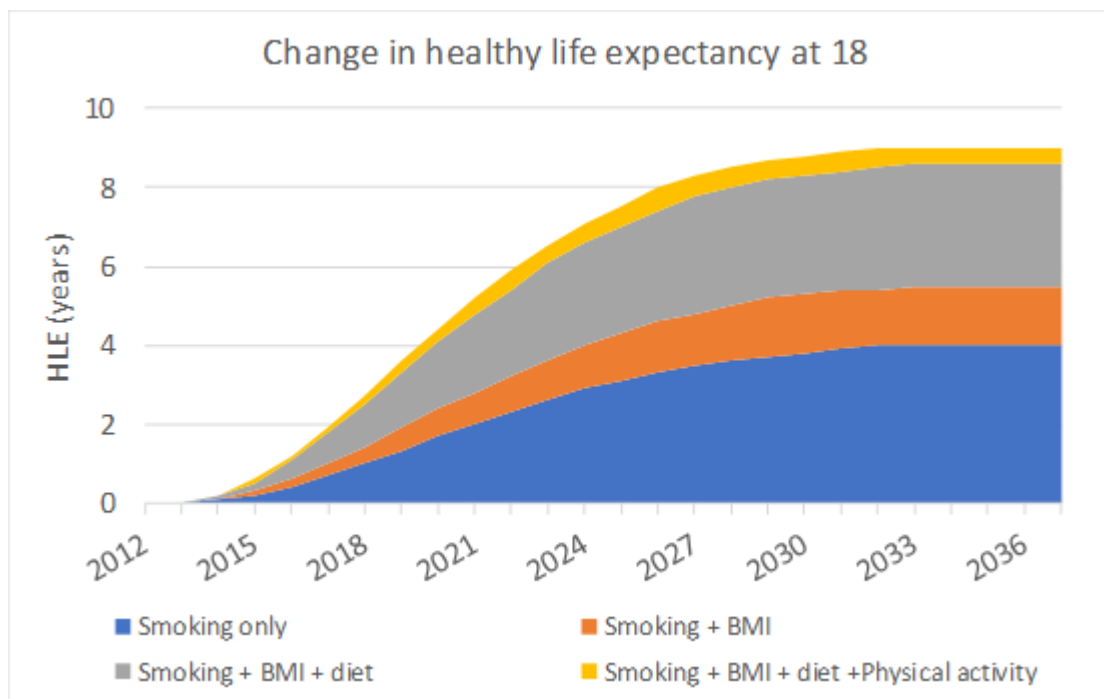**Figure 1901 Life expectancy at 18 years and risk factor impacts**

Figure 191 Healthy life expectation at 18 and risk factor impacts

10.6 Deaths

The model reflects the total population at any point in time, which on the baseline run is closely calibrated to the local housing led population projections. We have also ensured that the model reflects the total 'inflows' (people passing 18 and net inward migration). The consequence of this is that the balancing figure is deaths. Figure 193 showed the mortality rates from the different population cohorts in the model, which means that we can get a good understanding of the future projection for the number of deaths, and from which cohort they would come from.

Figure 1923 Share of deaths from the three main groups within the population from 2012 to 2037
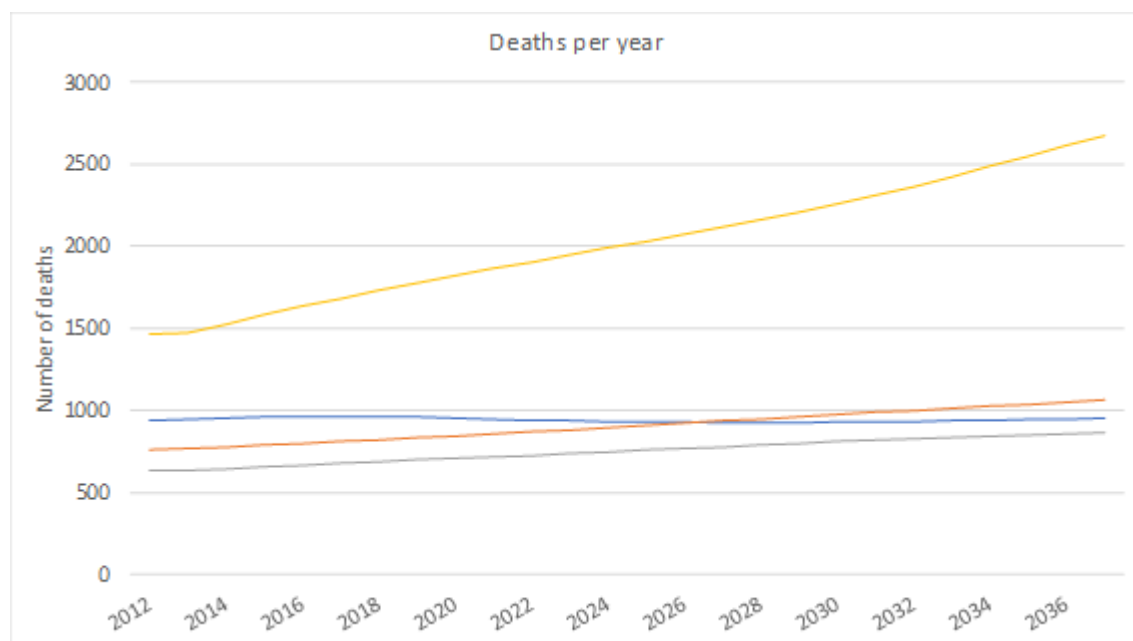
Figure below shows the overall numbers of deaths per month simulated by the model. Across the whole of England, the number of deaths was still falling up to 2014 due to the overall effects of increased life expectancy.

What is also of significance, however, is the changing balance of the cohorts from which the deaths are coming, with increasing numbers of people who are frail. In summary, regarding deaths, we see

- The total number of deaths reduces compared to the baseline scenario over the next 25 years when levels of smoking, BMI, diet and physical activity change in the ways described in this report, by c.400 per year by 2027 and c.800 per year by 2037 – this contributes to the modelled outputs of a higher population as a result of improved health over the same period;

- The number of deaths for people who are frail increasing from c.1,700 per year to 2,600 per year a month over the 20-year period;

- The percentage of deaths from the frailty cohort is currently stable at c.40% but rises to 48% over the next 20-25 years under the 'best case' scenario.

Figure 1934 Total deaths per month under the baseline (Run1) and 'best case' (Run 2) scenarios from 2012 to 2037
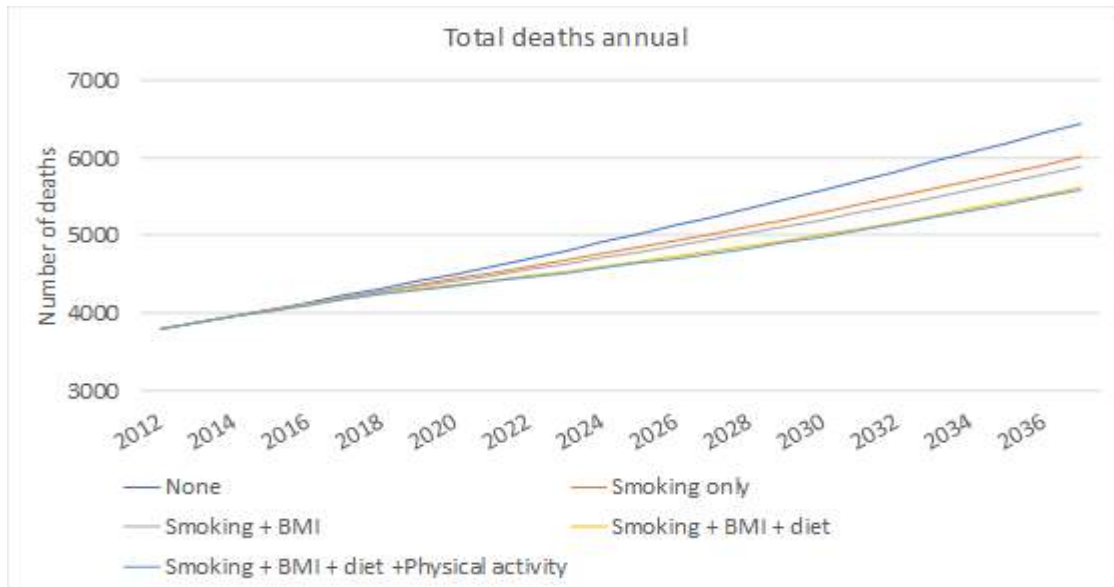
10.7 Children and Young People

This section provides a look at some of the model outputs that can be generated from the cohort model for children and young people. In this case we are going to present a sample of model results related to children with Adverse Childhood Experiences (ACE).

ACEs are, as the name implies, experiences that adversely affect children.

The evidence cites issues commonly categorised as ACEs. This is not necessarily an exclusive list. In part based on the CDC ACE (https://www.cdc.gov/violenceprevention/acestudy/about.html) questions - refer to the respondent's first 18 years of life.

Five Direct

- Sexual abuse by parent / caregiver.

- Emotional abuse by parent / caregiver.

- Physical abuse by parent / caregiver.

- Emotional neglect by parent / caregiver.

- Physical neglect by parent / caregiver.

Five Indirect

- Parent / Caregiver addicted to alcohol / other drugs.

- Witnessed abuse in the household

- Family member in prison

- Family member with a mental illness.

Parent / Caregiver disappeared through abandoning family / divorce.

The impacts of a 20% decrease in ACE for West Kent CCG would result in a:

- 3% reduction in severe mental illness in adults by 2037;

- 2% reduction in diabetes for adults by 2037 and;

- 3% reduction in stroke for adults by 2037.

The result shows that improvements in ACE can impact upon adult health outcomes but delays in impact(s) exist.

Figure 194   The impact of a 20% reduction In ACE upon the prevalence of severe mental illness, 18 years and over
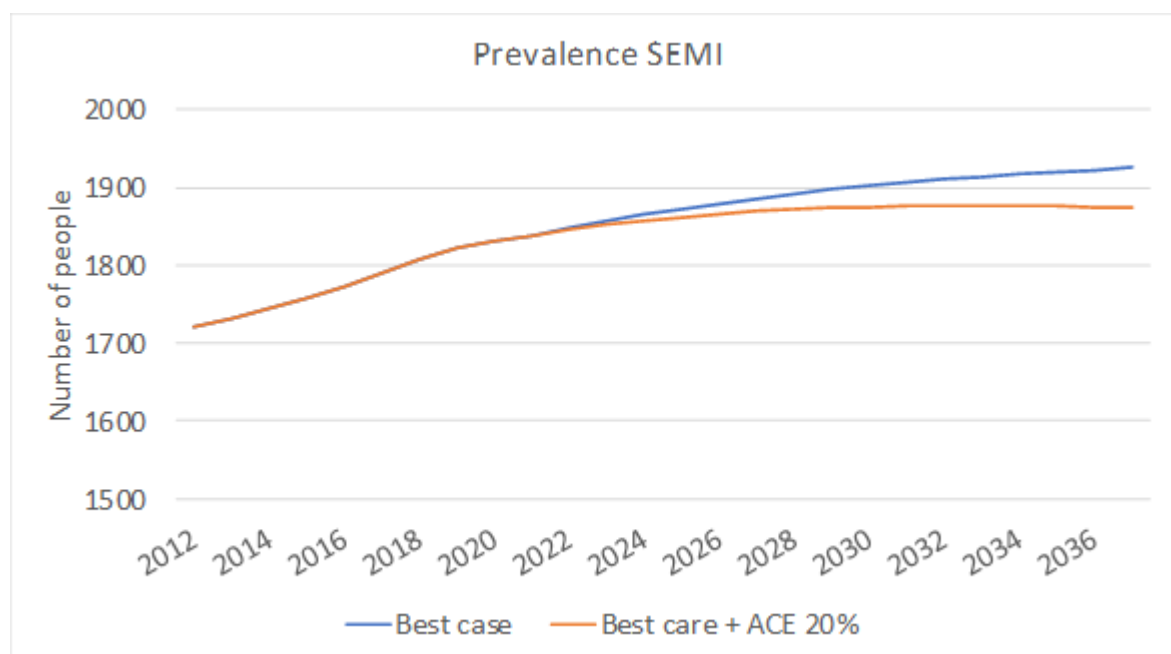
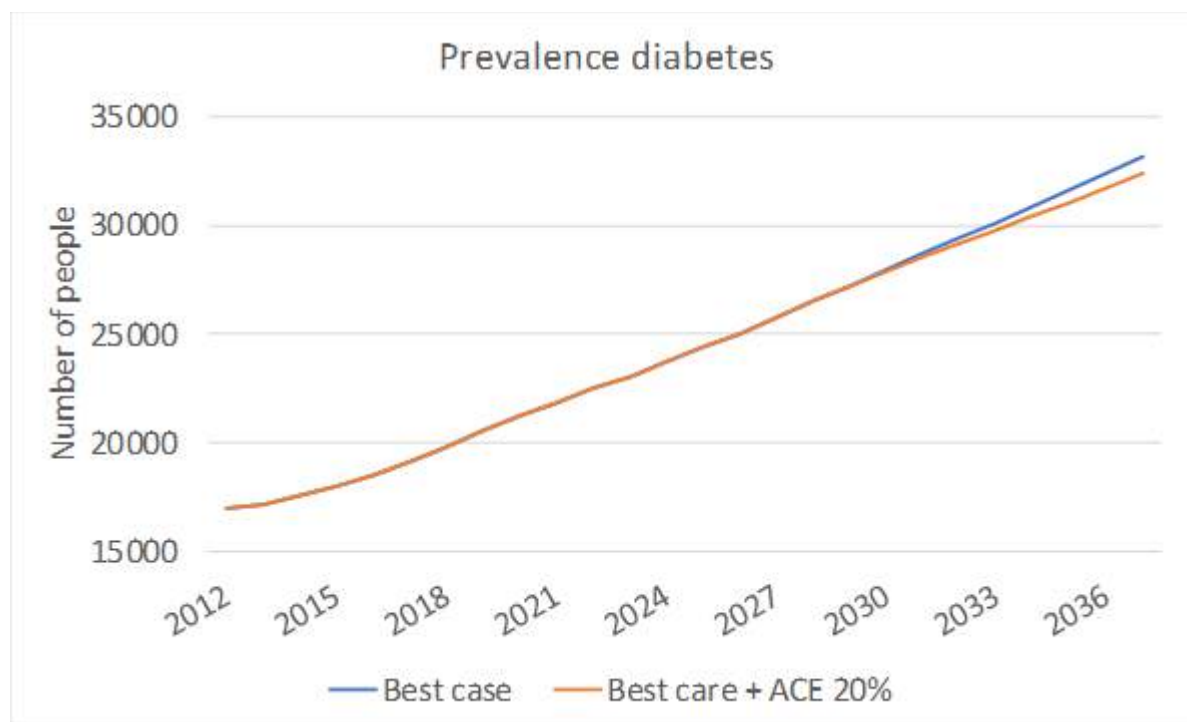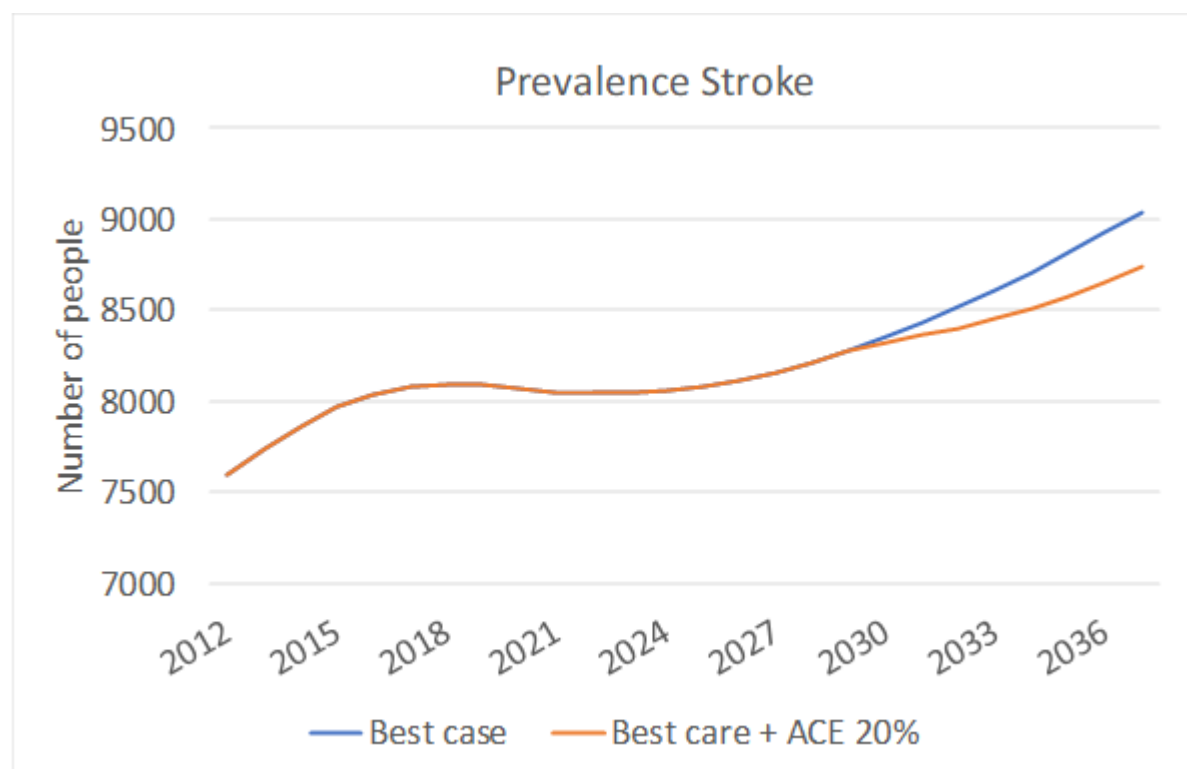**Figure 195 The impact of a 20% reduction In ACE upon the prevalence of diabetes, 18 years and over**

Figure 196 The impact of a 20% reduction In ACE upon the prevalence of stroke, 18 years and over

10.8 Simulating the use of health and care resources

In the context of a significantly growing population for West Kent over the medium to long term great care needs to be taken to estimating actual demand on services, given a mix of considerations.

An important caveat is that the modelling of the demand for health and care resources in this way does not take account of service transformation, for example the local care model described below. The outputs should only therefore be used as an indication of underlying demand, which may be addressed in different ways, rather than as projections of actual resource needs.

However, the scenarios above, and the way in which the underlying population health demand drivers inform the wider health and care resource planning, do provide a valuable starting point for this journey.

10.9 Health and care contacts

To help determine the demand for health and care services, data from the Kent Integrated Dataset (KID) about whether an individual has been admitted to hospital or attended A&E in the last 12 months was analysed into cohorts, along with contacts with other services.

Table 21 Cohort analysis (contact with services), Health and care utilisation rates per 1000 population (KID)[26]

Cohort	GP attendances	A&E attendances	Emergency admission	Elective admissions	Outpatients attendances	Domiciliary Care	Residential Care	Nursing Care
Healthy	212.8	18.8	5	10.2	87.7	1	0.7	0.3
Asthma	393.9	27	6.4	12.4	118	0.9	0.2	0
CHD	610.6	35.1	16.1	27.3	209.1	3	1.3	0.7
COPD	706	41.9	20.1	29.3	224.6	4.5	1.1	0.4
Diabetes type 2	677.4	28	10.4	21.8	181.5	3.7	1.2	0.6
HF	838.9	50.4	27.4	30.4	272.5	13.5	4.1	0.6
Stroke	589.1	40.7	19.9	25.1	211.8	22.1	8.1	7.6
Frail moderate	718.5	38	17.8	37.3	259.7	8.9	4.6	2.3
Multiple LTC	605.4	39.7	19.8	28.1	247.4	8.8	2.6	1.3
Severe MH	678.1	52.3	17	12.5	170.1	10.4	20.8	1.4
Neuro	761.1	47.2	23.7	24.8	366.3	32.5	15.6	7.3
Dementia	631.5	62.8	35.6	11.5	144.2	51.7	80	28.4
LD	580.9	58.3	15	9.8	119.9	21	160.9	1
Severe Frail	1078.3	78.7	44.1	38.7	353.6	39.9	20.6	7.1

10.10 Demand ratios for services

Figure 198 shows the demand ratio for five key services using utilisation rates from the KID and based on the 'best case' scenario described above. The first thing to recognise in interpreting this output is the underlying total population growth over the 25 years

modelled, which is c.23%. The increases in service use for general practice, planned care,

urgent and emergency care and social care contacts of between 29% and 48% are therefore in excess of the rise in total population.

Figure 197 Modelled growth in demand for inpatient/urgent care needs
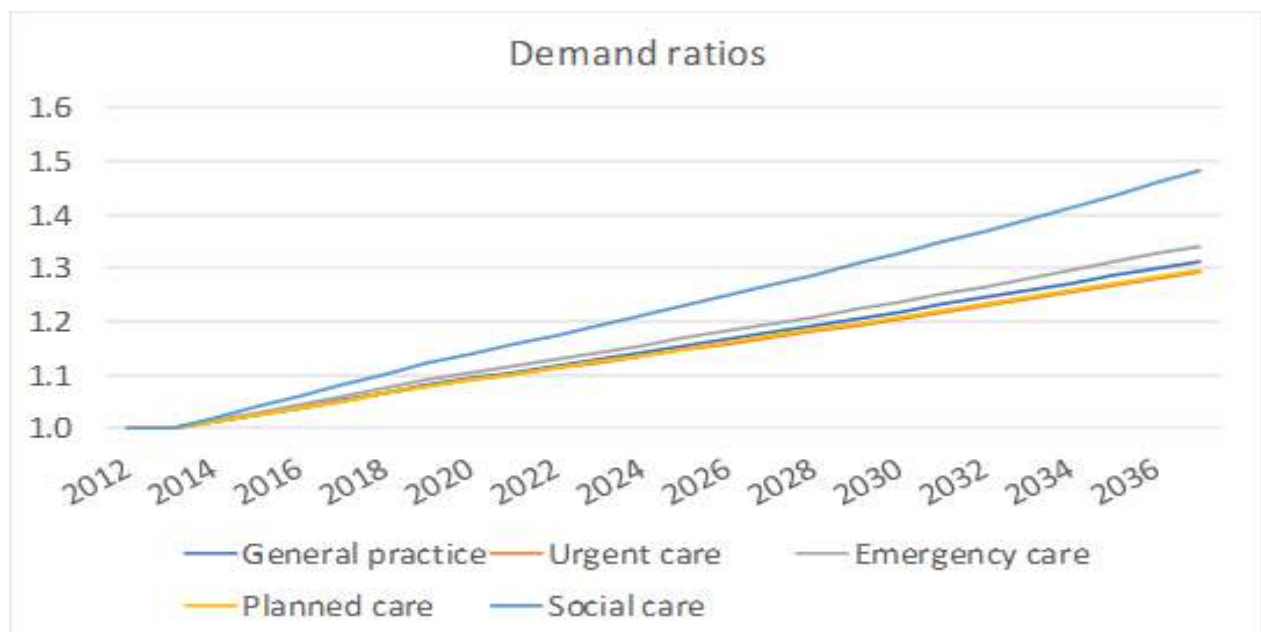
10.11 Health and care impacts

This section illustrates the impacts that trends in underlying risk factors can have upon health and care utilisation and costs. Figure 199 shows the change in the number of unscheduled admissions from 2012 to 2037 related to changes in underlying risk factors. This shows that improving risk factors has an impact upon admissions, but the trend is still one that is increasing.

Figure 198 Modelled growth in demand for inpatient/urgent care needs
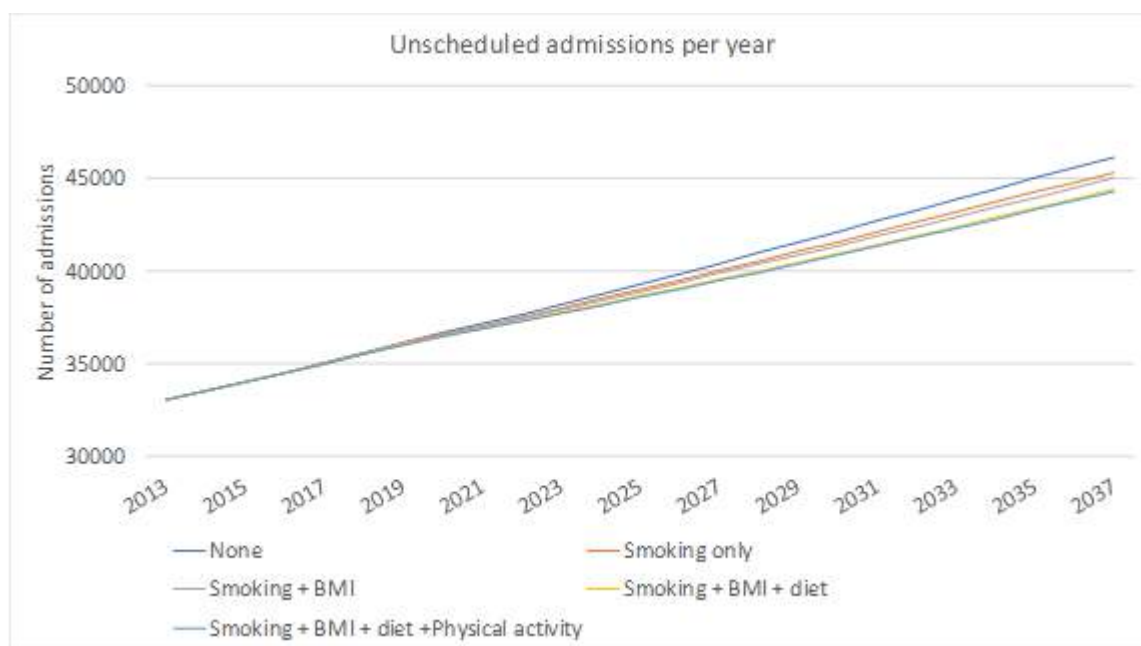
The table below illustrates another facility of the model to project the impact of utilisation and costs of risk factor reductions and public health interventions. In this case the results illustrate the absolute change in emergency admissions resulting from the five modelled risk factor changes. (Cost of an emergency admission in this case is £2,000).

In summary, regarding emergency admissions we see:

- The cumulative impact of risk factor reduction is large but takes 10-15 years until that becomes significant, highlighting the delay between risk factor change and health and health care outcomes.

- Over the 25 years of the model the reductions in risk factors results in an average reduction in costs of £1-1.5 million.

Table 32 Impact of risk factor reductions upon emergency admissions, 2012- 2037

	2012	2017	2022	2027	2032	2037
None	33020	35006	37640	40400	43278	46175
Smoking only	33020	34993	37503	40018	42633	45334
Smoking + BMI	33020	34988	37445	39866	42386	45016
Smoking + BMI + diet	33020	34973	37307	39537	41890	44408
Smoking + BMI + diet +Physical activity	33020	34969	37277	39471	41799	44307
Cumulative difference in admissions						
None	-	-	-	-	-	-
Smoking only	-	-19	-396	-1785	-4497	-8349
Smoking + BMI	-	-28	-569	-2523	-6286	-11599
Smoking + BMI + diet	-	-51	-989	-4205	-10133	-18286
Smoking + BMI + diet +Physical activity	-	-56	-1079	-4551	-10890	-19534
Cost savings, cumulative						
None	-	-	-	-	-	-
Smoking only	-	-£38,943	-£792,742	-£3,570,927	-£8,993,884	-£16,697,294
Smoking + BMI	-	-£56,653	-£1,137,190	-£5,046,178	-£12,571,144	-£23,198,190
Smoking + BMI + diet	-	-£102,576	-£1,978,208	-£8,410,519	-£20,266,984	-£36,571,556
Smoking + BMI + diet +Physical activity	-	-£112,799	-£2,158,145	-£9,102,849	-£21,780,938	-£39,067,834
Cost savings, annual						
None	-	-	-	-	-	-
Smoking only	-	-£7,789	-£79,274	-£238,062	-£449,694	-£667,892
Smoking + BMI	-	-£11,331	-£113,719	-£336,412	-£628,557	-£927,928
Smoking + BMI + diet	-	-£20,515	-£197,821	-£560,701	-£1,013,349	-£1,462,862
Smoking + BMI + diet +Physical activity	-	-£22,560	-£215,815	-£606,857	-£1,089,047	-£1,562,713

10.12 West Kent service transformation modelling projects

A number of modelling projects have been done for West Kent in recent years. We report on two projects here. The intelligence for them has been built on the use of KID, the West Kent JSNA cohort model above, through detailed engagement with local stakeholders to address specific challenges for both commissioners and providers of services. They are:

1. Modelling the impact of developing 'new primary care' services for adults with mental health needs.

2. Understanding the contribution necessary from 'local care' to achieve the STP transformation objectives and to reduce pressures on the acute care system.

10.13 Adult mental health services

The purpose of this project was to explore the contribution and impact that was possible from the development of integrated health and social care teams with enhanced Mental Health capacity and capability at a population level of 40-60,000 (i.e. place), with a focus on primary care. This work built on a local 'Concept Paper' for the development of Adult Mental Health services[27].

Having considered the future service model for a primary care led adult mental health service in West Kent it was recognised that there was a need to understand the capacity implications for both New Primary Care and existing Secondary Care Services. The extent of change envisaged by the local discussion paper is significant. Figures below demonstrate the 'before and after', with not only the boundary between primary and secondary care changing but have some of the key care functions being redefined.
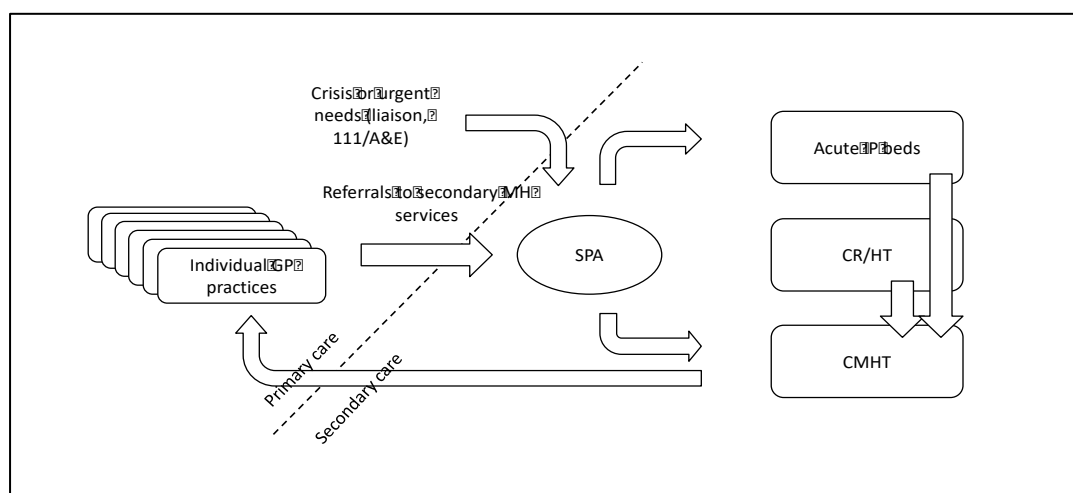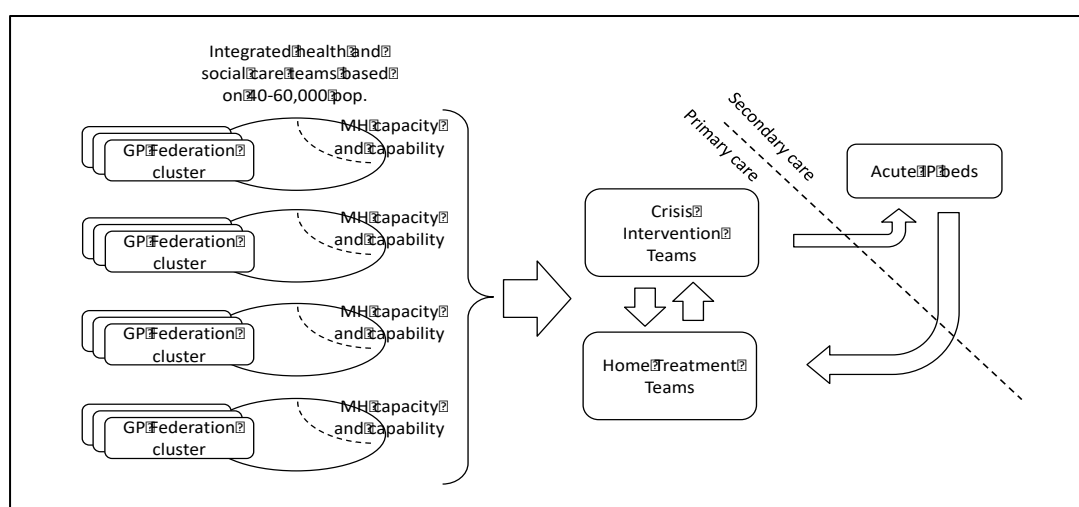
Figure 199 Current service model


Figure 200 Future service model

[27] Adult Mental Health, Concept paper for the March 2016 CCG. Dr David Chesover, Clinical Lead, Mental Health

The modelling work built on public health intelligence regarding the expected prevalence of mental health needs within the 16-64 age group. It was estimated that c.53,000 people (18%) would have some sort of mental health need, although only 4,000 (1.5%) of these will be severe. For the purposes of the modelling the change over time in the expected number of people with a severe mental health needs were used as a demand driver. This translated into an expected growth in the prevalence of severe mental health needs for the adult population over the next 10yrs as 0.28%pa, i.e. growing from 4,020 to c.4,136. Whilst this growth is small, it has been factored in to the model. The number of people supported by secondary care identified in the September 2016 caseload audit (see below) was 1,502, i.e. c.34% or one third of those expected to have a need.

At the time of the project (September 2016) a full caseload audit had recently been undertaken of non-Care Programme approach (non-CPA) clients within the South West Kent and Maidstone community teams. This audit considered whether a client could be supported in primary care either with existing service provision, or with enhanced 'New Primary Care' capacity and capability. The audit also provided an opportunity for 'cleansing' the data, for example where cases had either been closed but not removed from the IT system, or where people's CPA/non-CPA status needed updating.

Figure 202 reflects the existing service model for this client group in the form of a flow diagram. This is a necessary step in developing the systems model as each 'stock' and 'flow' will have implications for the overall system behaviour. For example, the flow into Psychology requires an initial wait for a CMHT assessment, a further wait for a Psychology assessment, and potentially a third wait for treatment. If psychological treatments are available within NPC in the future, and if a proportion of non-CPA patients are also supported in NPC, then for a significant group of people these waits will theoretically be removed in the future.

Figure 201 Pathway reflecting the current service model (for the key, refer to Table 13)
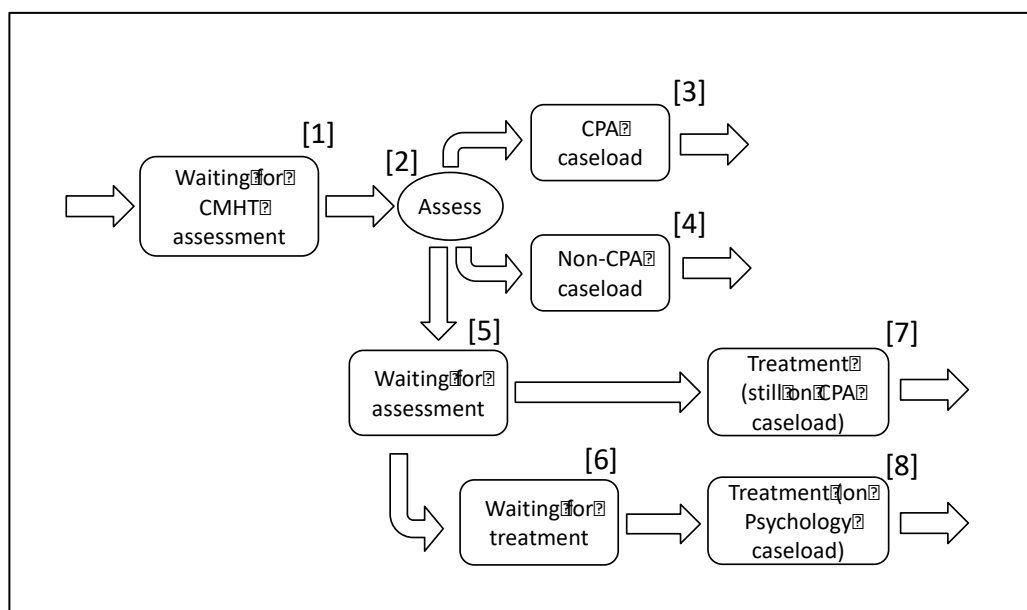
To populate the systems model in a way that reflects Figure 202 the outputs of the non-CPA audit were reviewed to produce a 'starting position' for the model. This is shown in table below.

Table 43 Summary of community caseload audit outputs

Key	Description	Maidstone	SWK	TOTAL
1	Open caseload, waiting for assessment	200 (estimate after cleansing)	318 (open cases less those on a pathway)	518
2	The 'disposition' on assessment – calculated based on the intelligence in the audit plus previous activity data provided by the Trust for the Kent-wide modelling work	Currently: • 28% proceed to CPA caseload • 28% to non-CPA caseload • 44% to psychology service (of whom c.20% are also on a CPA caseload)		
3	Number on CPA pathway	320	416 (after adjusting for non-CPA to CPA allocation of cases)	736
4	Number on non-CPA pathway	319	447 (after adjustment)	766
4b	*Total current & NPC suitability:*	*77 now* *122 NPC (excluding 38 on Clozapine)*	*174 now* *214 NPC (excluding 16% on Clozapine)*	*587 (77% of non-CPA)*
5	Waiting for Psychology assessment	19	61 (31 non-CPA)	80
6	Waiting for Psychology treatment	45 (assumed mainly non-CPA)	53 (50 non-CPA)	98
7	Psychology treatment (CPA)	43	153 (using Maidstone split would give 29 CPA and 124 non-CPA)	383
8	Psychology treatment (non-CPA)	187		
8b	*Transfer to NPC:*	*c.240 (all except CPA)*	*c.200*	*c.440 (78% of non-CPA)*

The key data from table above that is used in the systems model is:

- That there were around 766 non-CPA clients supported by secondary care (CMHTs), of which c.587 (77%) could be supported in primary care (251 of these could be transferred to primary care now without the development of NPC);

- That of the 561 in the secondary care psychology system (including those who are waiting for assessment, or subsequently for treatment) c.440 (78%) could be transferred to NPC.

Alongside the transfer of responsibility for a cohort of non-CPA patients from secondary to primary care, the new service model illustrated below is expected to have several other impacts on the system.

We took learning from elsewhere to inform assumptions about alternative pathways, for example in Kingston-upon-Thames, where a reduction of 16% in acute bed use had been achieved on the introduction of new models of care, and in Swindon, where occupancy of beds had reduced from 100% to 71%. Additional assumptions built in to the model were therefore:

- That progression to higher levels of need requiring specialist care input would be slowed by 25% due to enhanced capacity and capability in primary care;

- That there would be new pathways following a mental health crisis that would enable more people to be supported in primary care or with home treatment packages instead of requiring an inpatient admission;

- That there would be a slightly reduced length of stay in an acute bed for those who need it due to improved support in primary care.

These assumptions are reflected in the model interface below as well as the model outputs derived from the combined scenario described above.

Figure 202   Systems model interface – assumptions

Figure 203 Selected model outputs using the default assumptions
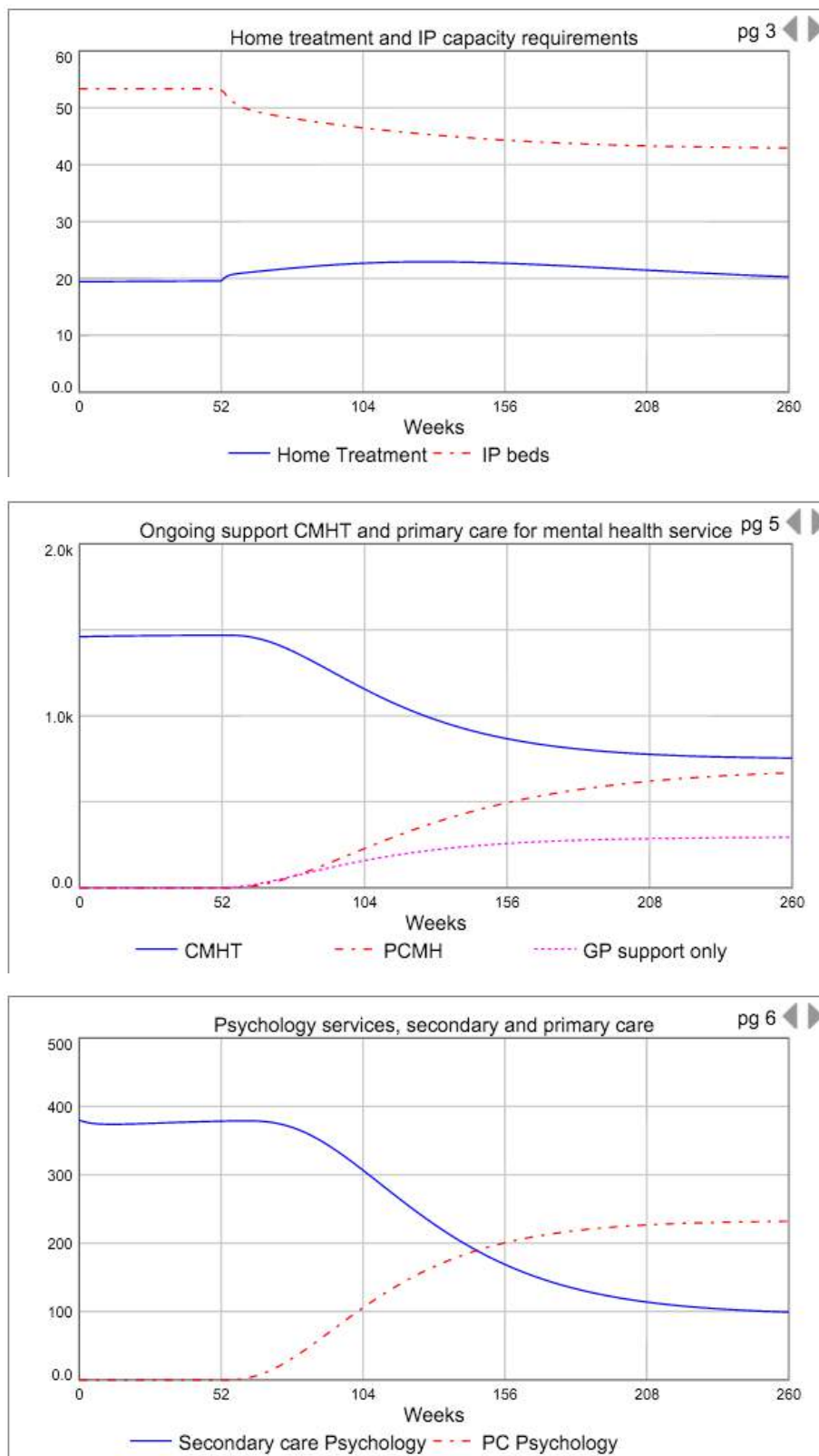
In summary, the modelling suggests:

- Inpatient bed capacity requirements fall from 53 to 43, or by 19%;

- Home Treatment capacity rises from 19 to 22, but then falls back to 20 in the longer term – this is because the benefits of improved/reduced crisis events take longer to materialise but do eventually cancel out some of the transfer of capacity from inpatient to home treatment services;

- From a total CMHT caseload of c.1,500 at present, the future shape of support would see this reduced by about a half, albeit with the CPA clients remaining in the secondary care system;

- The number of non-CPA patients supported in primary care would total 700 in NPC and c.300 just by GPs – note that the overall increase in the numbers supported is a function of an assumptions greater length of time being supported in primary care;

- People receiving Psychological therapy input in the 'secondary care' system would fall from just under 400 to c.100, whilst those provided with Psychological support in NPC would be .230 – note that the overall reduction in people in the 'Psychology system' is a function of the removal of significant periods of waiting.

Whilst the assumptions built in to the model are reasonable expectations they cannot be taken as guaranteed. We therefore tested the model for sensitivity to each assumption, for example we have here reproduced a scenario in which:

- The % reduction in crisis events is reduced from 25% to 15%;

- The shape of disposition following crisis is 45% to home treatment (mid-way between the current 37.6% and aspirational 50%), 45% to inpatient (previously 60%) and 10% back to NPC (mid-way between none and the aspirational 20%);

- Roughly half of the anticipated non-CPA shift to NPC is not achieved.

Compared to the outputs described above there is still a reduction in inpatient bed capacity requirements from 53 to 45, whilst CMHTs continue to support c.1,100 clients and psychology input is split into c.240 in secondary care and c.120 in NPC. The level of ambition in securing impact from the implementation of NPC can be reflected in the modelling tool now, as and the new service model is implemented. Learning from that implementation may then challenge and refine the assumptions within the model and open new ways of conceptualising and exploring future service configuration.

10.13.1 The West Kent Local Care Model

The development of Local Care is critical to the transformation and sustainability of health and social care systems as described in Kent & Medway Sustainability and Transformation Partnership (STP) plans. The West Kent element of the STP assumptions for system transformation were subjected to testing through this piece of modelling work in order to build greater confidence amongst local partners in those assumptions and to quantify the capacity and capability required within Local Care.

The approach used in developing this modelling work was one that combined population health needs, service transformation and the resource requirements for Local Care in a single system with clear and transparent assumption building and the ability to explore 'what-if' futures in a 'safe' way using the simulation tool.

The key objective for the modelling was to develop a system dynamics model that reflects current STP assumptions and that builds ownership and confidence in implementing the Local Care Model, which required the model to reflect the Local Care system being designed; contextualised and calibrated a Kent-wide approach that underpins the STP to local data and assumptions; included a comparison of the available demand drivers underpinning the 'do nothing' scenario and which produced outputs that scale the capacity requirements in Local Care for West Kent.

The STP Local Care Investment Plan was based on a range of key data items and assumptions including the identification of four Points of Delivery (PODs) i.e. high level activity assumptions for A&E, Non-Elective admissions (NEL), outpatient appointments (OP) and Elective admissions (EL); historic trends in demand for these four PODs (13/14 to 15/16) have been used to project forward from 15/16 to 20/21; and two further assumptions that drive outputs from the spreadsheet modelling, i.e. length of stay (LOS) and occupied bed days (OBD) for both NEL and EL. The segmentation approach for the current STP modelling has age as the primary category (0-15, 16-69, >70), followed by 8 segments, including 'chronic conditions 4+' with the focus being on the >70s with >4 chronic conditions, although the 'residual challenge' for other cohorts is identified. A percentage reduction in each of the 4 PODs, and in LOS, are then applied to the 'do nothing' 20/21 figure using either 'best in class' benchmarking or other evidence of potential reductions and are phased over the 5yr period.

The Local Care system dynamics model reflects this approach, but also has some key distinctives:

- It retains the four POD structure for purposes of triangulation and financial mapping;

- It explores local trends and cohort needs using a calibrated version of the Kent-wide cohort model and blends these to give a new demand driver for each POD;

- Segments by cohort of need, not age (a needs-led rather than actuarial approach);

Identifies impact through care function assumptions as they operate on pathways of need rather than benchmarked/best-in-class methodology (operational rather than statistical assumption building).

The structure of the system dynamics model built for this purpose is illustrated in below as well as the model interface.
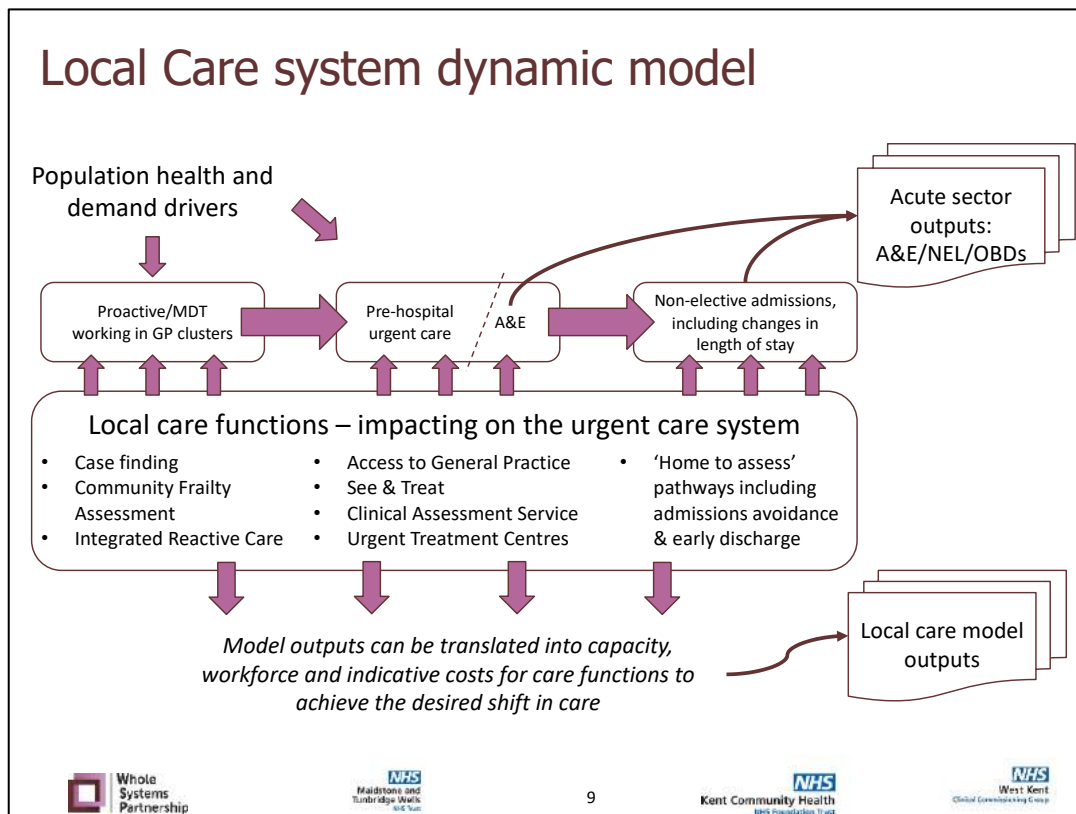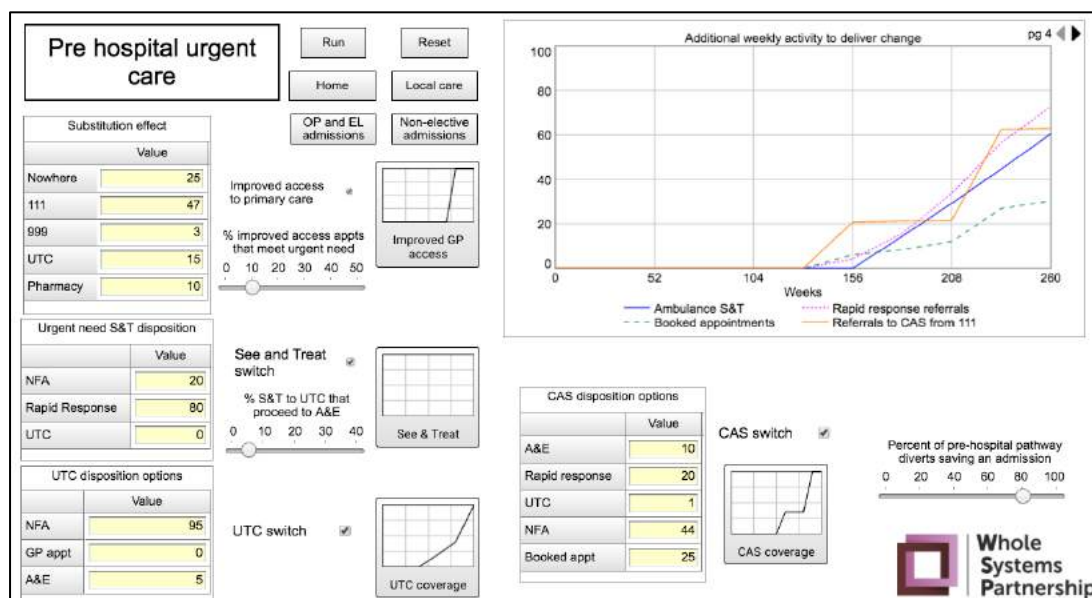
Figure 204 Schematic of the local care model

Figure 205 Local Care model interface (illustrating the pre-hospital urgent care part of the system)

The engagement process that supported the development of this model led to the development of:

- A local consensus about the demand drivers for the four PODs;

- Agreement on a range of implementation profiles for each of the different care functions that mapped onto one or more of proactive case finding; integrated reactive care; pre-hospital urgent care; integrated discharge; or planned care solutions;

- Agreement on assumptions about the impact of these care functions, with scope for testing and scenario building.

The model outputs identified the capacity necessary in each care function described in below alongside the anticipated impact on the four PODs within the STP plans. This has led to much greater confidence and alignment of plans across acute, community, primary and social care, which is now being built on through a process of model development and the translation of outputs into considerations that will drive future workforce plans.

10.14 Summary

The modelling tool has provided us with an initial appreciation of some of the medium to longer term challenges of improving population health and wellbeing. We have noted already the significantly increasing proportion of the population who we expect to be frail. In addition, the model throws light on the following:

Life expectancy: this continues to increase, but the modelling has suggested that any further increases could plateau during the 2020's and 30's unless significant health improvement measures are taken.

Healthy life expectancy: current indications are that the years spend in poor health, including being frail, are increasing at a greater rate than total life expectancy, meaning reduced healthy life expectancy – our modelling suggests that this will have been particularly the case during the early 2020's but will moderate during the later 2020's and 30's, although any reversal of this is not within scope of the combined prevention measures included in the model at the moment,

The number of deaths: these will continue to rise, currently estimated at c.1,400 a month, rising to c.1,600 a month by the end of the 2030's, with the percentage of deaths from those who are frail increasing from c.32% at present to around 37%,

Service utilisation: the modelling has demonstrated the impact of changing population health needs on different health and care services, although our assumptions have not been 'normalised' to West Kent – increases above the growth in total population are evident across all service types included, but particular increases are noted in services relating to the increase in the frailty population, for example social care home support.

The distinctives of the approach are the combination of both a population and a cohort approach, coupled with simulation modelling, in an environment that allows for testing future 'what if' questions, particularly those associated with prevention and wellbeing.

This report demonstrates progress in developing an improved understanding of changing population health needs, and what can be done to address them, using 'stock and flow' modelling.

It therefore presents an exciting opportunity to inform the development of the local Joint Strategic Needs Assessment, and therefore the Health and Wellbeing Strategy at a time when 'whole population', 'whole system' solutions are required. It also therefore provides an invaluable contribution to help understand the wider context and challenges of sustainability within the local CCG.

11 Conclusion

The West Kent population is living longer and developing multiple long-term conditions and frailty. The need for care varies by patient group and locally. Age distribution varies from practice to practice – 26 practices have higher proportions of people aged 65 and above whereas 12 practices have higher proportions of <5years. ONS estimates a migration of approximately 3300 per year. Overall, the CCG population is expected to increase over the 20 years across all age groups, ranging from 7% for under 5 year olds to 130% for 85+ years. Of note, depending on which tool is used, population projection based on ONS differ from KCC housing lead forecast by about 2 %. The segregated systems of primary care, secondary care, social care and informal care are struggling to meet current demands and will be put under increased pressure in the future due to an expanding population with complex needs.

To improve efficiency and effectiveness in health care there is a growing need for strengthening the role and impact of ill-health prevention. Therefore, it is strategically important for commissioners to implement a population-based prevention approach to commissioning health and social care services.

As expected across the CCG geographical boundary there are variations in factors affecting health and at a practice level there are local variations in QOF indicators. These are described and summarized in the individual chapters. Specific recommendation s for localities are provided where appropriate.

The results of the modelling approach described in this needs assessment illustrate that risk factor changes have a significant impact upon the future health of the population. It also shows that testing the implementation of public health interventions is useful and can illustrate the potential short and long-term impacts both for population health and for health care costs.

For example, the effects on healthy life expectancy at 18 through the reduction in smoking an increase of 4 years for just smoking prevention can increase by another 5 years if we were to include weight management diet, improvement and physical activity.

There is overwhelming evidence that people with long term conditions place disproportionate pressure on current health and social care services. People with LTC (around 29% of the population) use 50% of GP appointments; 58% of A&E attendances; 59% of practice nurse appointments; 64% of outpatient appointments; and 70% of inpatient days, (Kings Fund 2011). Evidence suggests that prevalence of multi-morbidity increased substantially with age (most people with age 65 and over). There is also evidence to suggest that there is early onset of multi-morbidity in most deprived areas compared with most affluent (Barnett et al 2012).

Considering the projected population growth, it is essential that Commissioners prevent ill health through primary prevention as well as commission services for tertiary prevention. Using risk scarification tools at practice level for identifying most vulnerable population at risk of hospital admissions will provide a platform for proactive management and prevent avoidable secondary care admissions.

12 Recommendations

The aging population and advances in medical care that enhance life expectancy are increasing the prevalence of chronic diseases. A large proportion of chronic disease is due to preventable, behavioural causes.

This emphasises the importance of primary, secondary and tertiary prevention approaches encompassing e.g. obesity and tobacco smoking prevention in addition to vaccinations and cancer screening.

We have now come together as an STP programme to realize this in a concerted effort.

Therefore, recommendations for commissioners are abstracted from the broader Kent and Medway STP programme and special emphasis is given to prevention.

12.1 STP Priorities

The four key priorities of Kent and Medway STP are prevention, local care, hospital care and mental health.

12.2 Prevention

The prevention programme will concentrate activities on obesity and physical activity, reducing alcohol-related harm and preventing and stopping smoking.

12.3 Local Care

Local care will result in better access to care and support in the community. It is known that people with long term health problems want co-ordinated support by professionals, easy access to services and to only have to tell their story once.

Several extended practices will be set up across Kent and Medway and multi-disciplinary, place-based teams will form around these practices to integrate care, particularly for frail patients, people with complex needs including mental health needs and patients at the end of their lives. Out of hours services will also be improved.

12.4 Hospital Care

Where hospital care is needed, the STP will ensure it is of the best quality, this will include a consideration of whether hospital is the right place for the patient or whether they would be better cared for at home.

Kent and Medway have consulted on stroke and vascular services and are reconfiguring services to improve care for stroke patients, including the development of Hyper-Acute Stroke Units (HASU) in the county.

12.5 Mental Health

It is important that mental health is seen as an integral part of local care and to have parity with physical health. To improve care, a single phone number for people in mental health crisis will be available. People needing a mental health bed will be placed in the county and people who have been placed out-of-area for specialist care will be brought back to the county, closer to their homes and communities.

Children and young people's mental health and emotional wellbeing will be prioritised, and early interventions will be put in place for those people experiencing psychosis for the first time.

12.6 Current Activities

The STP prevention workstream aims to make prevention the responsibility of all health and social care services, employers and the public in Kent and Medway to allow delivery of prevention interventions at scale and realisation of improved population health outcomes. The involvement of secondary care clinicians in secondary and tertiary prevention is stressed as these complement the population-level primary prevention initiatives of the STP. It is felt important that all health and social care pathways start with prevention and it is the aim of the workstream to ensure that this is reflected in all the work of the STP so that health inequalities are reduced and deaths from preventable conditions avoided.

Much work has been done to co-produce the STP prevention work plan with GPs in West Kent. This has not only informed the local position in West Kent, but also influenced the plans for work across Kent and Medway.

The current plans include:

- Delivering workplace health initiatives, aimed at improving the health of staff delivering services,

- Industrialising clinical treatments related to lifestyle behaviours and treating these conditions as clinical diseases,

- Treating both physical and mental health issues concurrently and effectively,

- Concentrating prevention activities in four key areas which are described below,

The main areas for focus for prevention activities in Kent and Medway have been identified and are:

12.6.1 Obesity and Physical Activity:

Apply a whole systems approach including implementation of 'Let's Get Moving' physical activity pathway in primary care at scale across Kent and Medway. Increase capacity in Tier 2 Weight Management Programmes from 2,348 to 10,000.

12.6.2 Smoking Cessation and Prevention:

Acute trusts becoming smoke-free with trained advisors, tailored support for the young and youth workers, pregnant and maternal smokers and people with mental health conditions.

12.6.3 Workplace Health:

Working with employers on lifestyle interventions and smoking and alcohol misuse, providing training programmes for improved mental health and wellbeing in the workplace

12.6.4 Reduce Alcohol-Related Harms in the Population:

'Blue Light initiative' addressing change-resistant drinkers. 'Identification and Brief Advice' (IBA) in hospitals ('Healthier Hospitals initiative') and screening in GPs. Alcohol health messaging to the general population.

Business cases have been submitted to the Programme Board for the obesity and smoking cessation and prevention workstreams. These included the Return on Investment calculations for these initiatives, which demonstrated value for money. These business cases have been agreed in principle, but the funding required is not available from the public health budgets of Kent and Medway as these are already allocated to the prescribed functions of public health. The additional funding required has not yet been identified.

Future service transformation is contingent on robust data analysis to help estimate potential impacts and benefits.

While a significant amount of modelling has been done on the programme areas as well as the JSNA population cohort, further modelling scenarios need to be developed and tested such as the following:

12.7 Recommendation for future modelling questions

12.7.1 Population

1. How will the population outside of WK affect services, taking into consideration population growth?

2. How significant will the impact be of transient people working and visiting in the WK area?

3. In a 'do nothing' scenario how will inequalities naturally change over time, and how may interventions now and in the future affect health inequality across WK?

4. What will be the impact on morbidity and mortality if more resources would be invested in specific prevention strategies (e.g. obesity)?

12.7.2 Mental Health

1. What would be the impact of improved social and health care services such as back to work programmes, family support and community management of long-term condition on mental health services usage?

2. What would be the impact of improved mental health services for children and young people on presentation with mental health disorders later in life?

3. What would be the impact of rising cases of dementia on acute services in a do-nothing scenario?

12.7.3 Services

1. What will be the impact of integrating local health, mental health and social care services for long-term and complex conditions (e.g. in terms of demand on acute services, length of hospital stay)

2. What will be the impact of investing in primary, secondary and tertiary prevention on delivery of care for chronic conditions in none acute hospital settings.

3. What will be the impact of interventions supporting carers on admissions and length of hospital stay?

4. What would be the impact of improved care of preceding conditions (CVD, AF, DM)?

12.7.4 Obesity

1. What impact would improving maternal obesity have on paediatric health and social care usage?

2. What impact would decreasing childhood obesity make on health care services in 10/20 years?

12.7.5 Children and young people

1. What impact would improvement (increase staff, paediatric training) in primary care workforce make on paediatric hospital admissions and A&E attendance for diabetes, epilepsy, asthma?

2. What impact would invest in prevention services for injuries in 0-4-year olds and above on health and social care usage?

12.7.6 Cancer

1. What will be the impact of investment in an increased workforce in cancer services?

2. What will be the impact of improved primary prevention strategies e.g. stop smoking services, weight loss and physical activity programmes on demand on services?

3. What will be the impact of introduction of new screening tests/direct access to diagnostics on overall cancer mortality?

4. What will be the impact of cancer community hubs for delivering services (e.g. chemo, palliative) in community/home on secondary services?

13 References

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Kessler R, Berglund P, demler o et al. (2005) lifetime prevalence and age-of-onset distributions of dsM-Iv disorders in the national comorbidity survey Replication. Archives of General Psychiatry 62: 593–602.

https://fingertips.phe.org.uk/profile-group/mental-health/profile/cypmh/data#page/0 [accessed 14th May 2018]

14 Appendices

Developing the cohort model assumptions

Cohorts of health needs for adults

Previous engagement work and experience has developed a method to help identify the types of conditions that enable adults with different health needs to be grouped relative to their current and future demands for services (Figure 207).

Figure 206   Conceptualisation of population cohorts underpinning the modelling tool
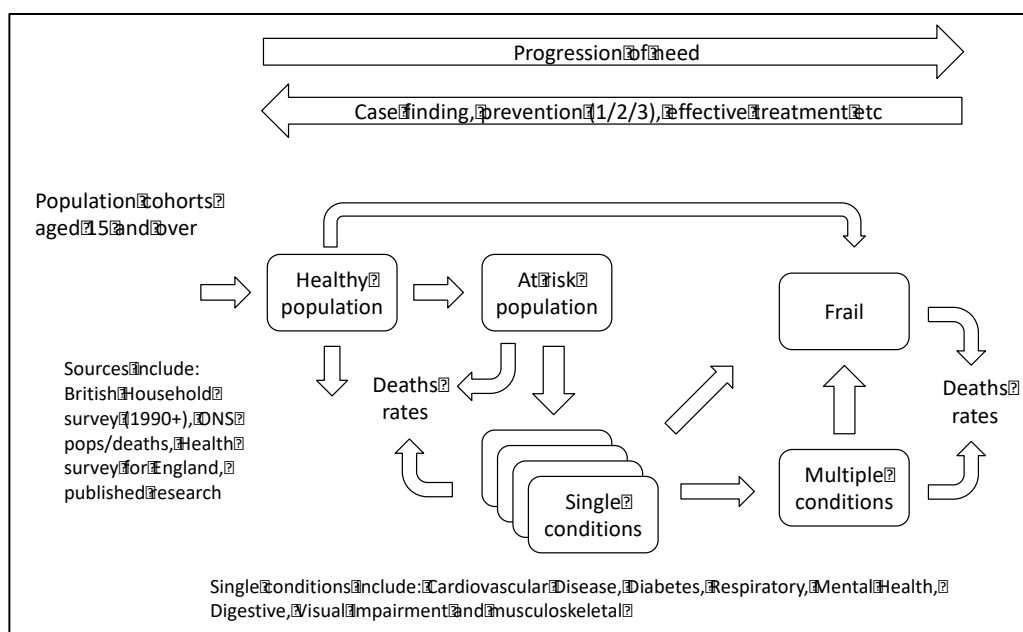
Our initial modelling has been guided by the engagement work about cohorts and the use of a whole system approach. In this case we have used 14 cohorts that can be readily identified from the British Household Panel Survey (BHPS) and English Longitudinal Study of Ageing (ELSA), each with differing needs and demands for health and care services. The cohorts are distinct from each other so that an individual can only be in one cohort at a time but can change cohorts from one-time step to the next. They are also grouped as a hierarchy so that people who are frail have, on average, the highest health and care needs, followed by multiple conditions and coronary heart disease.

Table 54 Baseline cohort prevalent and mortality rates (ELSA)

	Age groups (years)					
Cohorts	18-49	50-59	60-64	65-74	75-84	85+
Healthy	89.6	76.8	70.2	58.8	43.2	31.8
Asthma	7.0	8.5	7.0	6.3	4.1	2.9
CHD	0.2	1.6	3.0	5.2	8.3	5.6
COPD	0.2	1.1	2.3	1.7	1.4	1.0
Diabetes type 2	1.0	3.9	5.7	5.5	5.3	4.6
HF	0.0	0.0	0.0	0.0	0.0	0.0
Stroke	0.1	0.5	1.0	1.7	2.9	2.1
Moderately Frail	0.0	1.8	2.2	2.6	5.2	6.0
Multiple LTC	0.9	4.3	6.6	8.7	12.7	11.8
Severe mental health	0.6	0.8	0.5	0.2	0.0	0.0
Neuro	0.0	0.1	0.7	0.4	0.9	0.2
Dementia	0.0	0.3	0.5	0.4	1.7	1.9
LD	0.3	0.3	0.3	0.2	0.1	0.0
Severe Frail	0.0	0.0	0.0	8.5	14.2	32.2

To create the cohorts of health need, annual incidence, prevalence and mortality rates were calculated using the BHPS and ELSA. Baseline incidence, prevalence and mortality were used to calculate the ongoing prevalence of each cohort. Prevalence rates were combined with population estimates for the same age groups to produce the baseline position. The data is aggregated further into cohort and social class, which enables the number of adults by area to be calculated. This approach is used with the aim of adjusting health needs for deprivation when considering different geographical areas.

Table 65 Annual incidence per 1,000 population (BHPS)

Cohort	Healthy to cohort	Single to multiple	Frail to severe	Death rate
Healthy	0.0	0.5	2.0	4.0
Asthma	1.5	10.7	2.4	3.7
CHD	1.6	25.3	8.0	24.0
COPD	1.1	43.6	25.8	36.9
Diabetes type 2	2.2	33.6	10.3	14.5
HF	0.0	0.0	0.0	0.0
Stroke	1.0	58.3	22.9	23.0
Moderately Frail	2.1	8.5	54.2	50.7
Multiple LTC	4.1		38.9	37.3
Severe mental health	0.1		10.5	8.0
Neuro	0.3		47.6	64.3
Dementia	0.6		65.6	73.8
LD	from CYP model		8.0	
Severe Frail				140.1

Figure 208 shows how, using the British Household Survey, and adjusting for Kent socio-demographics, we arrived at an initial breakdown of needs for the purpose of this part of the project. The picture that emerges does not capture all comorbidities and is therefore an underestimate of this area of need, with corresponding increases in the estimate of numbers with single conditions.

In addition to the baseline demographics and need groupings, each cohort has a demand rating for health and care services, which includes GP appointments, outpatient attendances, hospital admissions, seen by a nurse, received social care support (home care, meals on wheels, social worker) etc…. When changes in the balance of cohort needs occur, influenced by risk factors which impact on the incidence of certain conditions, we can model potential impacts on service utilisation. The prevalence of risk factors for smoking, bodyweight and hypertension are calculated from the cohort study and the health survey for England, and impact on the healthy cohort within the model.

Figure 207 Adult health needs: cohort hierarchy
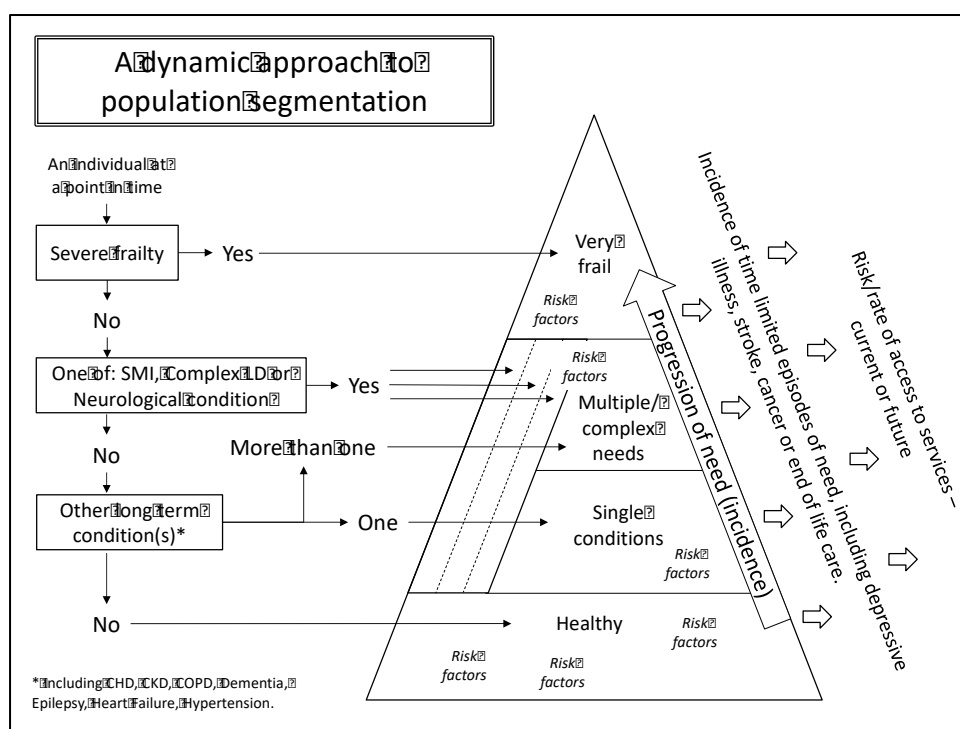
The impact of risk factors on the population

The rate of incidence and mortality for different cohorts is moderated by the impact of changing risk factors using the calculated population attributable fraction (PAF) for each risk factor. The three risk factors in this model were smoking prevalence (and cessation), pre-diabetes (and bodyweight) and untreated or treated hypertension. The PAF calculates the proportion of the incidence and/or mortality of a cohort that is related to individual risk factors. When the risk factor profile changes e.g. the number of people taking up or quitting smoking changes, the population attributable fraction is adjusted, which either increases or decreases the cohort incidence and mortality rate.

The transition from the healthy cohort has been the focus of this work, but risk factors influencing the rate of death within each cohort, particularly in relation to secondary prevention for hypertension treatment have also been included.

Trends in risk factors from 2000 to 2009 are used as the basis for future changes up to 2037 (Figure 209). This shows that the percentage of people smoking is decreasing by approximately 0.4% per year, for BMI it is increasing 0.2 kg/m2, for BP it is reducing by 0.2 per mmHg, for cholesterol it is reducing by 0.01 mmol/l per year and untreated hypertension is decreasing by 0.2% per year. Data from the Kent public health team shows similar a prevalence in smoking to the national picture.

Table 16 Annual risk factor changes

	Change (+/-)
Smoking	-0.4
BMI	0.2
BP	-0.4
Cholesterol	-0.01
Physical inactivity	-0.5

Calibration and comparison with West Kent data

The model has been calibrated to the West Kent population in a number of ways. These include using the demographic profile, migration, age, deprivation and risk factors so that the model replicates as close as possible the changing shape of the Kent population over time, as currently reflected in the local Kent Housing led population projections.

Comparing the cohort prevalence and the local population projections illustrates that the model provides a reliable projection of total population (Figure 209). Further analysis of KID data would enable a comparison to individual cohort prevalence, but it is not in scope at the current stage of the project. Table 5 summarises the respective demographic and local assumptions to which the model has been calibrated.

Table 77 Local baseline demographic and deprivation data

Assumptions	Kent
Health areas	West Kent CCG
Baseline population (over 18)	463,650 (mid-2012), c.480,475 (2017) and 570,960 (mid-2037) – a growth of 19% over the 23 years between 2017 and 2037
Number of people migrating in per year	c.9,000 people aged 18 and over net-migration into West Kent per year
Deprivation	West Kent has more affluent profile of social class as England as a whole

Figure 2089 Kent housing-led population projections and model outputs (2012 to 2037)

Figure 1 - Population projections