KENT PUBLIC HEALTH OBSERVATORY

Adult Physical Activity

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Adult Physical Activity

Introduction

Physical inactivity is the fourth-leading risk factor for worldwide global mortality[1] and is responsible for more worldwide deaths every year than overweight and obesity[2]. In the UK, physical inactivity is responsible for 17% of annual all-cause mortality and reduces life expectancy by three to five years[3].

Physical inactivity is directly responsible for a range of non-communicable disease conditions and has been identified as the cause of 10.5% of UK coronary heart disease burden, 13% of Type II diabetes, 18% of breast cancers and 19% of colon cancers[4]. An inactive person will also spend 38% more days in hospital than an active person, requires 5.5% more GP visits and accesses 13% more specialist services[5].

The cumulative annual cost of physical inactivity to the national economy has been estimated as £20 bn per year[6] and the annual cost to local authorities in Kent has been calculated at just over £264 million[7].

Physical Activity – definitions and guidelines

These guidelines refer specifically to adults aged 19 to 74.

Physical inactivity is defined by the Chief Medical Officer as an adult who achieves fewer than 30 mins of moderate physical activity per week[8].

The Chief Medical Officer recommends that adults achieve 150 mins of moderate physical activity or 75 mins of vigorous physical activity per week in order to maintain or improve health[9].

To meet these guidelines, the total minutes per week must be achieved:

- over at least two days
- in bursts of 10 mins or longer.

Moderate physical activity includes walking, cycling, gardening or other forms of movement that elicit an increase in heart rate. Vigorous physical activity includes exercise activities such as running, weight training, swimming and active sports.

Effect of physical activity on non-communicable disease

Key conditions that physical activity levels can impact include cardiovascular disease such as: coronary heart disease and ischaemic heart disease, stroke, diabetes and hypertension, some cancers, overweight and obesity, mental health and musculoskeletal conditions[10].

Individuals meeting physical activity guidelines can reduce all-cause mortality by 30%, reduce diabetes risk by 30 to 40%, lower risk of breast cancer by 20% and colon cancer by 30%, and reduce risk of cardiovascular disease, coronary heart disease and stroke by 20% to 35%. Physical activity also reduces the physical decline with age, with a 30% risk reduction in

the prevention or delay in loss of function and physical limitation in older adults,[11] including a 30% reduction in the risk of falls.

Physical activity can also reduce the risk of depression, dementia and Alzheimer. It can improve self-esteem, mood and sleep quality, and reduce levels of anxiety and fatigue[12].

The higher an individual's level of physical activity, the lower their level of health risk and increasing levels of physical activity from any level will result in a reduction in risk. The dose-response relationship for physical activity is greatest in the most inactive people, meaning that for the most inactive people even a minor increase in physical activity will show a significant reduction in risk, at all ages[13].

National Policy and Strategy Drivers

Public Health Outcomes Framework

The Health Improvement section of the Public Health Outcomes Framework contains indicators directly relating to physical activity:

- 2.13(i) Number of physically active adults
- 2.13(ii) Number of physically inactive adults.

Sporting Future: A New Strategy for an Active Nation

In December 2015 the Department for Culture, Media and Sport (DCMS) published a new sports strategy[14] for the UK following a period of consultation. The new strategy recognises the social, health and wellbeing value of community sport and physical activity and clearly articulates the need for all local authorities to embed reducing physical inactivity across the range of services they administer, including public health, education, sports and leisure, and green spaces.

Towards an Active Nation

Sport England followed the DCMS strategy with a new strategy[15] which makes reducing physical inactivity a priority for the sport and leisure sector. Towards an Active Nation outlines the new investment strategy for National Lottery and Exchequer funding, including a focus on reducing physical inactivity.

Everybody Active, Every Day

'Everybody Active, Every Day' is a national implementation framework for physical activity published by Public Health England[16]. This framework outlines the importance of creating environments and cultures that support physical activity including the provision of leisure and sport facilities, outdoor gyms, active travel and walking and cycling opportunities, business workforce engagement and the role of the health sector in promoting physical activity.

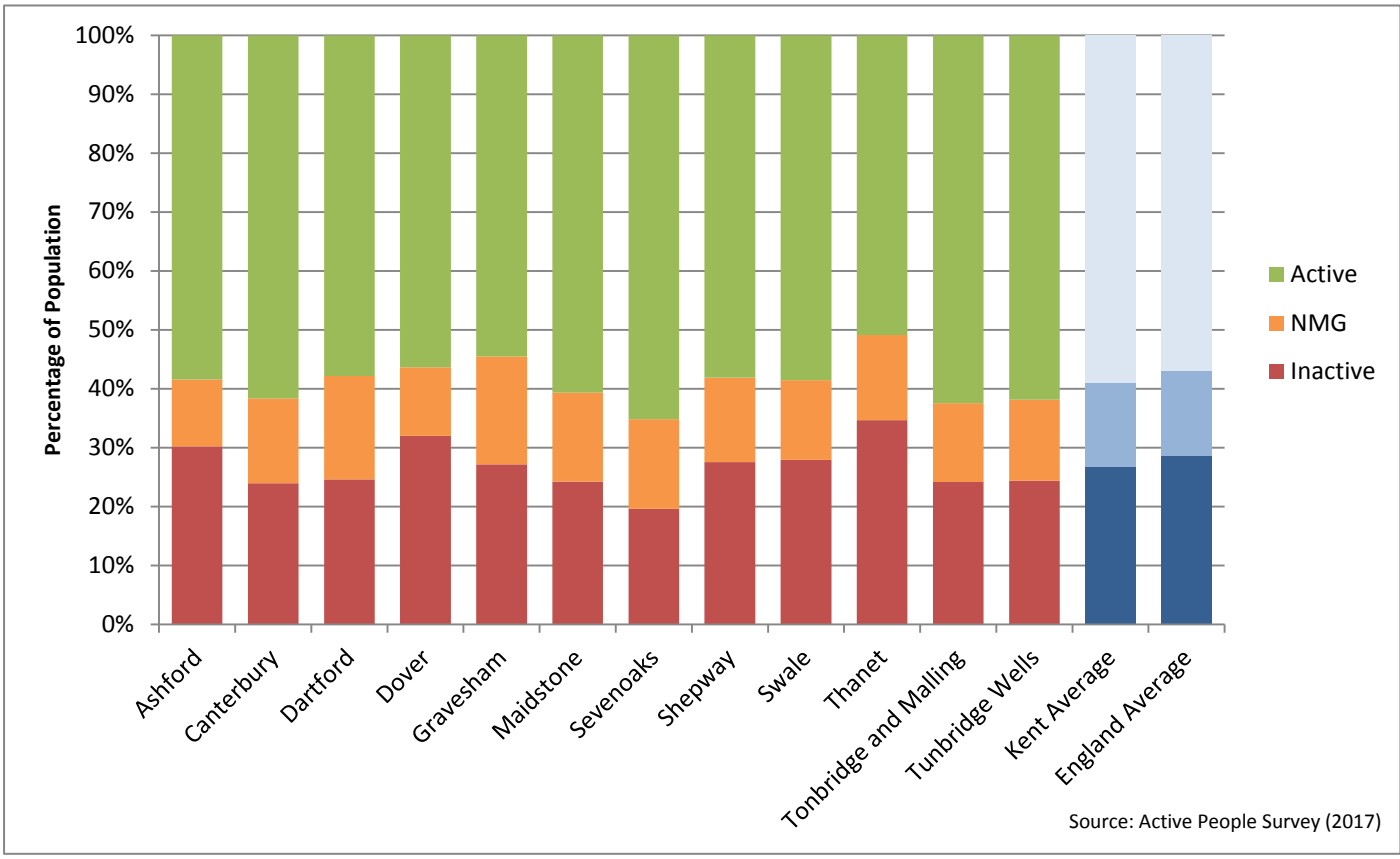
Who's at Risk and Why?

Current statistics

Currently 26.7%[17] of adults in Kent are classed as physically inactive[18], compared to a regional average of 25.1% and national average of 28.7%[19]. A total of 41%[20] of the Kent adult population do not currently meet the recommended levels of 150 mins per week[21], including the 26.7% who are physically inactive.

Currently 59%[22] of adults in Kent meet the guideline of 150 mins per week of physical activity in order to maintain or improve their health[23], compared to a regional average of 60.2% and national average of 57%[24].

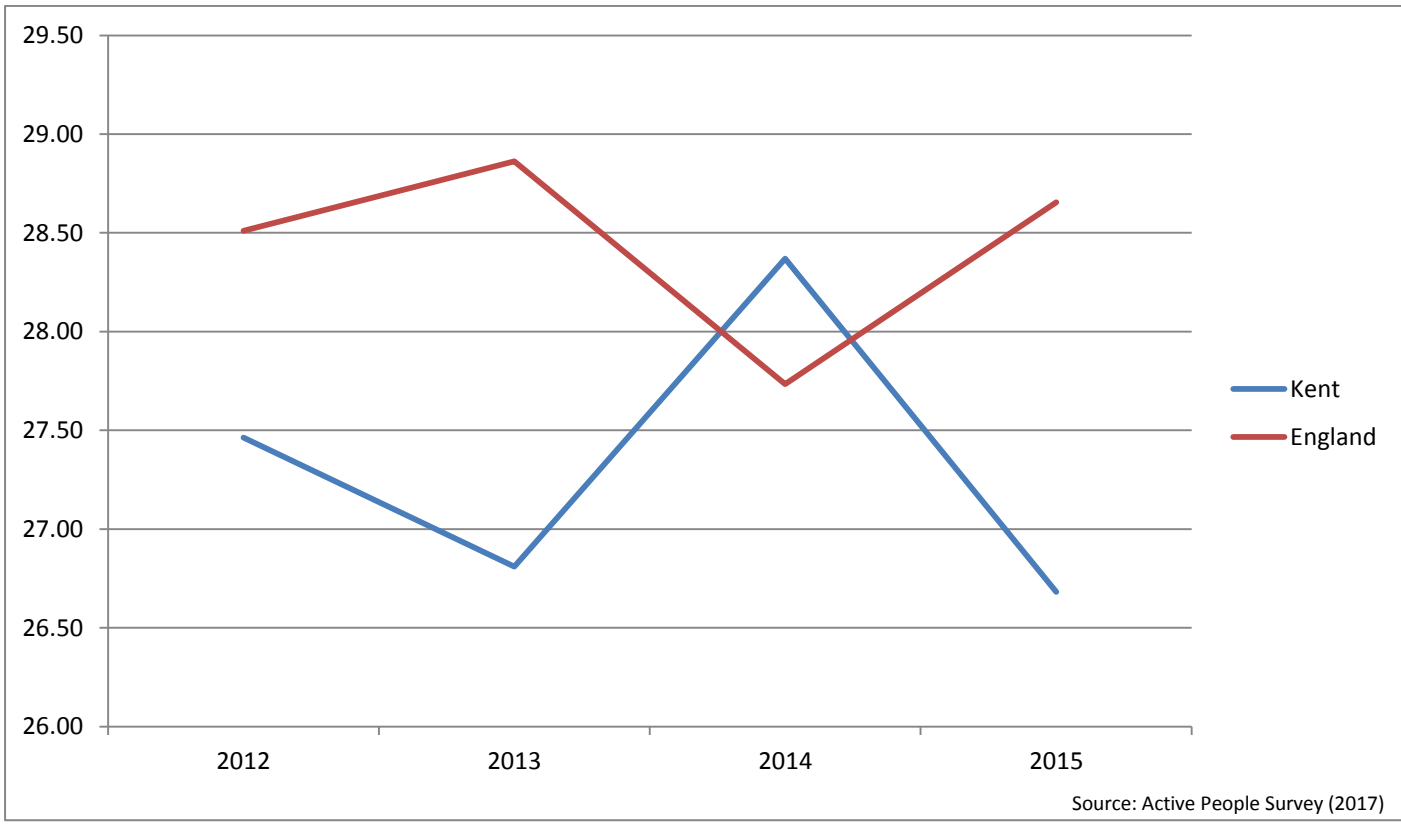
Figure 1: Population physical activity status by local authority area



Changes in physical activity levels over time

Since 2012, the number of physically inactive people in Kent has shown a very small overall net decrease but with yearly fluctuations of up to one percent. The number of people achieving the recommended physical activity guidelines has risen overall, again with yearly fluctuations.

Figure 2: PHOF 2.13ii - Percentage of Physically Inactive Adults (Kent and England, 2012-2015)

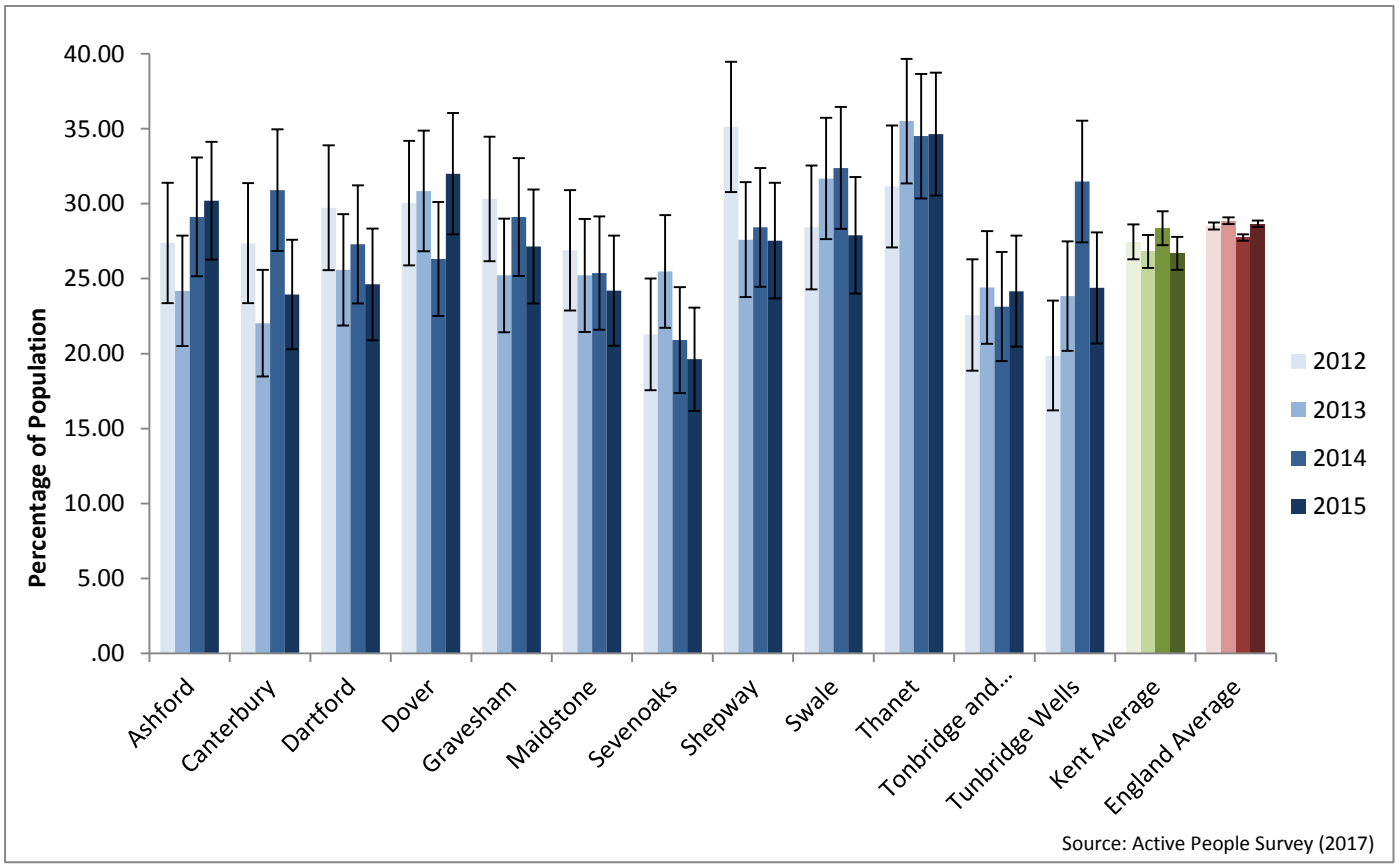


The percentage of the Kent population failing to achieve the minimum 30 mins per week required has shown a net decrease since 2012 from 27.46% to 26.68%. This is in contrast to the national trend, which has shown a very small net increase.

Table 1: PHOF 2.13ii - Percentage of Physically Inactive Adults (All Districts, Kent and England, 2012-2015)

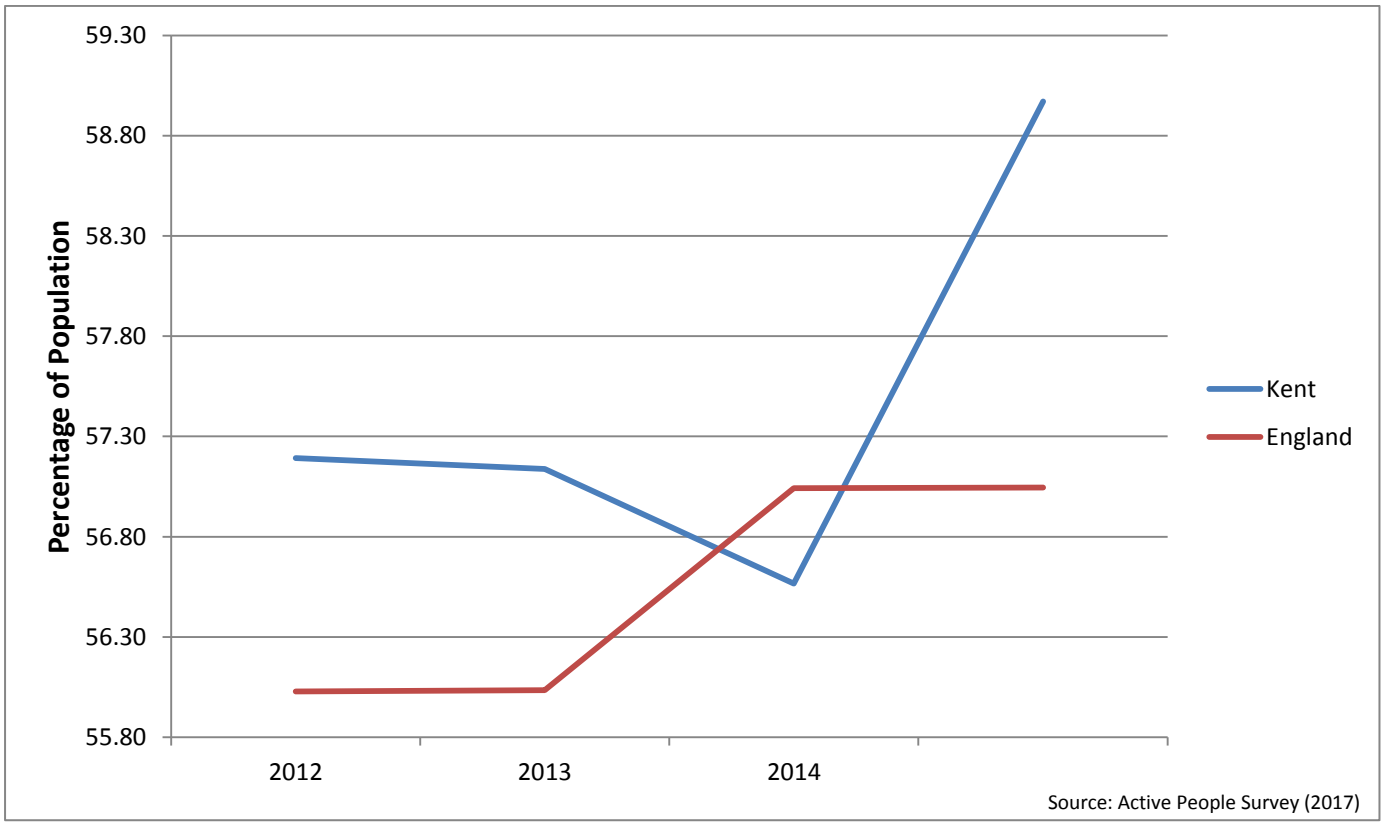
Area	2012	2013	2014	2015
Ashford	27.37	24.19	29.12	30.20
Canterbury	27.37	22.02	30.91	23.94
Dartford	29.73	25.59	27.29	24.62
Dover	30.04	30.85	26.31	32.00
Gravesham	30.32	25.21	29.11	27.14
Maidstone	26.90	25.22	25.37	24.19
Sevenoaks	21.29	25.47	20.90	19.62
Shepway	35.12	27.60	28.42	27.54
Swale	28.42	31.68	32.38	27.90
Thanet	31.15	35.50	34.50	34.64
Tonbridge and Malling	22.58	24.40	23.14	24.16
Tunbridge Wells	19.87	23.83	31.48	24.38
Kent Average	**27.46**	**26.81**	**28.37**	**26.68**
England Average	28.51	28.86	27.73	28.65

Figure 3: PHOF 2.13ii - Percentage of Physically Inactive Adults (All Districts, Kent and England, 2012-2015)



Levels of physical inactivity by district show yearly variation; Thanet has consistently been the most inactive Kent district, whilst Sevenoaks and Tunbridge Wells have been the most active. There is also a sizeable gap between the districts with the most and least active people, with 34% of the Thanet population classed as physically inactive compared to just 19% in Sevenoaks.

Figure 4: PHOF 2.13i - Percentage of Physically Active Adults (Kent and England, 2012-2015)



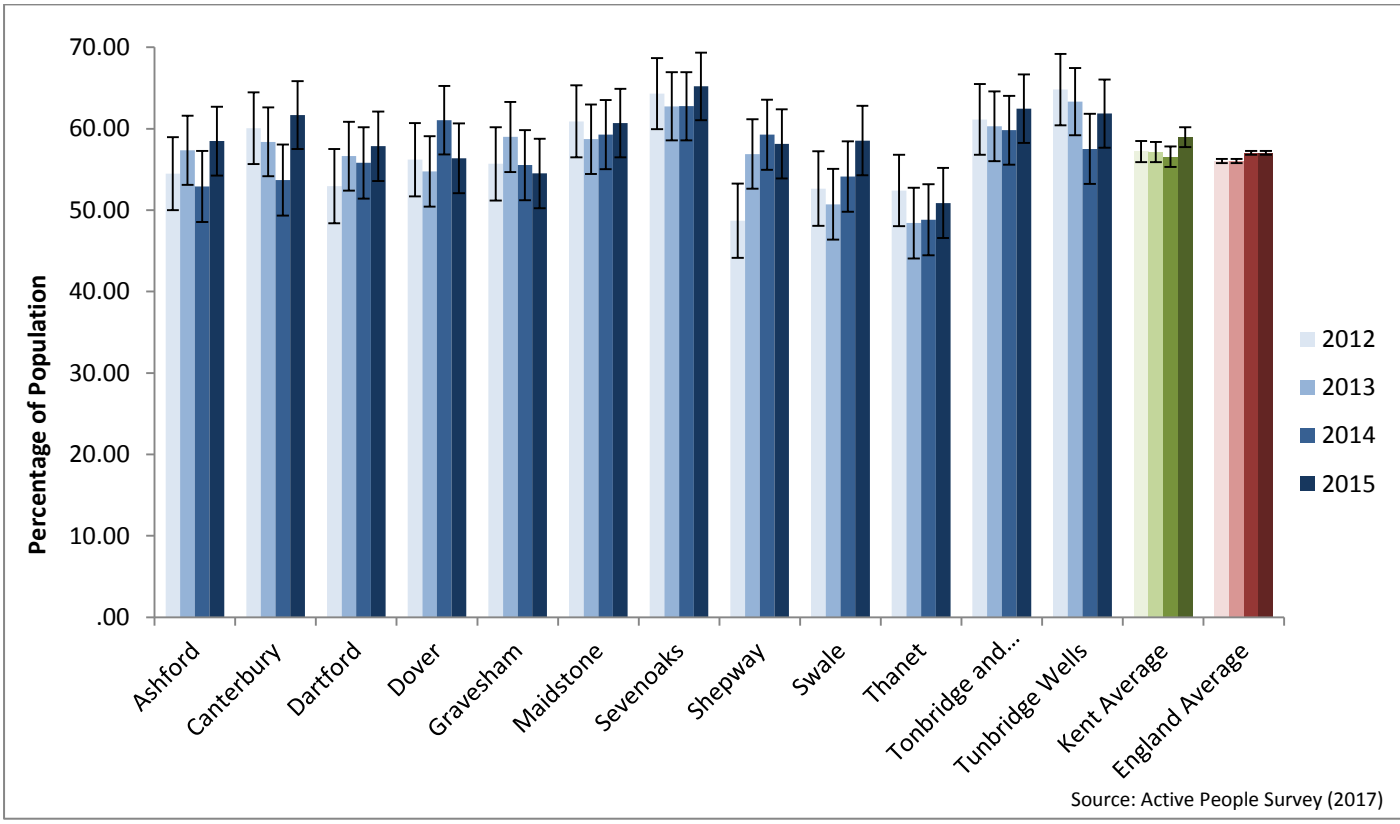
The percentage of the Kent population achieving the 150 mins required to maintain or improve health[25] has increased in the last year following two years of decline. The percentage of adults achieving the recommended levels of physical activity in Kent is now above the national average.

Table 2: PHOF 2.13i - Percentage of Physically Active Adults (All Districts, Kent and England, 2012-2015)

Area	2012	2013	2014	2015
Ashford	54.47	57.35	52.90	58.47
Canterbury	60.06	58.38	53.70	61.66
Dartford	52.94	56.63	55.80	57.85
Dover	56.20	54.75	61.05	56.37
Gravesham	55.68	58.99	55.53	54.51
Maidstone	60.90	58.72	59.28	60.70
Sevenoaks	64.32	62.75	62.76	65.19
Shepway	48.70	56.90	59.26	58.13
Swale	52.65	50.71	54.12	58.54
Thanet	52.41	48.42	48.81	50.87
Tonbridge and Malling	61.14	60.29	59.82	62.46
Tunbridge Wells	64.80	63.34	57.53	61.86
Kent Average	**57.19**	**57.14**	**56.57**	**58.97**

England Average	56.03	56.03	57.04	**57.05**

Figure 5: PHOF 2.13i - Percentage of Physically Active and Inactive Adults - Active Adults (All Districts, Kent and England, 2012-2015)



Levels of physical activity by district also show yearly variation. Thanet has consistently had the least number of active people, whilst Sevenoaks has had the most. There is also a sizeable gap between the districts with the most and least active people, with only 50% of the Thanet population meeting guidelines compared to 65% in Sevenoaks.

Populations at risk

There is a strong relationship between levels of physical inactivity and socio-economic status[26], so much so that people living in the most deprived areas are twice as likely to be physically inactive as those living in the least deprived areas[27]. Populations experiencing high deprivation are likely to have additional disease burden that increasing levels of physical activity will help to prevent or manage, including excess weight, hypertension and mild to moderate depression. Physically inactive people from populations in areas of highest deprivation should be considered the primary target group for increasing levels of physical activity.

Interrogation of market segmentation tools showed five key population groups of inactive people in Kent. Maps and geographic information system (GIS) layers showing the

distribution of these groups in Kent by output area are available on the Kent and Medway Public Health Observatory website[28].

Table 3

Group	Kent Population	Population Percentage	Description
Group 1 -Residents aged 55 and over on low incomes, often living in social housing	66,947	4.5%	• High risk individuals • Age-related decline in activity levels • Experiencing deprivation & health inequalities • Lowest levels of activity of any group
Group 2 - Younger residents on low incomes living in social housing (aged 20-50)	15,758	1.1%	• Lower risk individuals • Range of activity levels within group • Experiencing deprivation & health inequalities
Group 3 - Comfortable off singles and couples aged over 55	241,128	16.1%	• Lower risk individuals • Weak link with deprivation & health inequalities • Age-related decline in activity levels
Group 4 - Families on low incomes with school age children, many living in areas of high deprivation	34,780	2.3%	• Lower risk individuals • Range of activity levels within group • Experiencing deprivation & health inequalities
Group 5 - South Asian singles aged 55+ who own their own home	3,228	0.2%	• Some high risk individuals • Weaker link with deprivation & health inequalities • Range of activity levels within group

Other physical activity concerns in key demographic groups include:

- men are more active than women in virtually every age group[29]
- physical activity declines with age, to the extent that by the age of 75 years only one in ten men and one in 20 women are active enough for good health[30]
- on average, disabled people are half as likely as non-disabled people to be active with over 80% of people with learning disabilities failing to achieve the minimum recommended level[31] and only one in four people with learning difficulties taking part in physical activity each month[32].

Behavioural characteristics of inactive people

Physical inactivity, including sedentary behaviour, is one of a number of unhealthy behaviours that negatively affect health and people in areas of higher deprivation often display several of these unhealthy behaviours. The other common unhealthy behaviours that accompany physical inactivity are poor diet leading to excess weight, smoking and alcohol consumption.

Insight into behavioural drivers of unhealthy behaviours commissioned by Kent Public Health[33] found that the main reasons for the presence of unhealthy behaviours, and the barriers to living more healthy lives, in people in areas of deprivation include:

- unhealthy behaviours are incredibly accessible and offer a way to exert choice and control
- unhealthy behaviours are often default coping strategies for dealing with more acute challenges
- consistent habit loops for all four behaviours enables them to be used interchangeably
- unhealthy habits reinforce one another.

Inactive people in areas of higher deprivation also identify with people in their immediate environment, so living in close contact with large numbers of other inactive people means that the individual will be more likely to remain inactive.

Opportunities for engaging populations identified as being at risk

Opportunities to engage with at-risk populations are available through both structured and opportunistic channels in health and community settings, including:

- primary care, including during new patient registrations or through screening existing disease registers or other practice records
- aligning with other NHS initiatives to measure health outcomes for example blood pressure, body mass index or blood glucose levels
- existing community health and care services, for example NHS Health Checks, the adult obesity care pathway, stop smoking clinics and community pharmacies
- clinical condition-specific pathways such as cardiac rehabilitation, diabetes management and stroke rehabilitation
- partnerships with organisations including local authorities, housing associations, community groups, charities supporting physical or mental health and wellbeing, police and community safety and other community welfare organisations
- other local authority health and social care services including family support services, social workers, welfare or employment support services
- organisations with specific memberships of religion, faith, belief or ethnicity groups
- disability groups, charities and residential services.

Identifying physically inactive individuals

Screening individuals for levels of physical activity should be done using a validated physical activity screen, such as:

- General Practice Physical Activity Questionnaire (GP**PAQ)**[34]
- International Physical Activity Questionnaire (IPAQ)[35]
- Single-item screen.

Care should be taken over the selection of screening tools, including ensuring the tool is validated for use with the participant cohort and whether the tool is appropriate for screening only or can be used for measuring pre and post-intervention changes in physical activity levels. Measurement of physical activity using pedometers, smartphone apps or other devices should take into account the type and intensity of activity undertaken and whether the measurement tool is appropriate for the activity being monitored.

The Level of Need in the Population and Assessment of Future Need

An individual's level of physical activity can be placed in one of three risk categories, where risk refers to the likelihood of developing non-communicable disease caused by or exacerbated by a lack of physical activity.

Table 4

Risk Level	Category	% Kent Population	Definition
High risk	Inactive	26.7%	Fewer than 30 cumulative minutes per week of moderate physical activity[36]
Moderate risk	Not meeting guidelines	14.3%	Fewer than 150 but more than 30 cumulative minutes per week of moderate physical activity
Low risk	Meeting guidelines	59%	Achieving or exceeding 150 cumulative minutes per week of moderate physical activity or 75 minutes of vigorous physical activity[37]

- the highest level of need for physical activity services, interventions and support is in the highest risk group as inactive people are at high risk of developing disease conditions as a direct result of inactivity
- individuals not meeting guidelines are at moderate risk of disease conditions but are not at high risk of developing disease conditions as a result of inactivity
- individuals who meet or exceed physical activity guidelines are at no significant risk of developing disease conditions as a result of physical inactivity.

Assessment of future need

Levels of physical activity are declining. The need for support in for the most inactive people is expected to rise in future; there has been a 20% reduction in physical activity levels over

the last 50 years and projections suggest that a further 15% drop is likely by 2030. By this time, the average British person will expend just 25% more energy than if they had spent the day in bed[38]. This decline in levels of physical activity is likely to impact rates of major non-communicable disease conditions.

Current Services in Relation to Need

Current provision of and access to physical activity opportunities and facilities

There are a wide range of services and opportunities to facilitate achieving the recommended 150 mins of physical activity per week, including free-to-use natural environment assets, walking or cycling in towns and cities, taking part in organised sport and leisure activities, and specialist sports provision.

Sport England's Active Places Power[39] lists over 3,900 recognised sites for recreational or competitive sport in Kent including over 2,300 grass pitches, 340 sports halls, 335 tennis courts, 150 swimming pools and 130 artificial grass pitches. Flagship facilities in Kent include Cyclopark in Gravesend, Julie Rose Stadium in Ashford and Royal St George's golf course in Sandwich all of which host national and international sporting events in addition to providing specialist sports facilities for community and recreational use. There are also a number of private commercial gyms and commercial health and fitness service providers.

Availability of built facilities for sport and recreation is generally higher in the urban population centres such as Maidstone, Canterbury, Dartford and Gravesham with lesser availability in areas with lower population density.

Kent has a particular strength in natural environment assets due to the diversity and accessibility of natural environment settings including farmed land, woodland, grassland, and both inland and coastal waterways[40]. Kent has two areas of outstanding natural beauty (AONB) in the Kent Downs and the High Weald, which have UK statutory protection equivalent to that of National Parks. Kent also has a number of managed country parks, local and urban parks, green infrastructure, amenity grassland, and over 4,200 miles of public rights of way such as footpaths, bridleways and byways. There are a number of structured opportunities for increasing levels of physical activity through the natural environment, largely delivered by organisations in the charities, community and public sector. There are also a range of commissioned and led services made available to populations with high physical inactivity including Sky Ride and Walking for Health.

Large-scale or strategic changes to physical activity opportunities and facilities are not necessary to increase population levels of physical activity in Kent. Addressing the quality, accessibility and local provision of facilities or access in response to local need and protecting existing sport and leisure assets such as local authority grass fields are key issues, but must be locally driven and focussed in areas with populations experiencing higher deprivation.

Changing individual behaviour

There is currently no county-wide approach to reducing physical inactivity. Emphasis in commissioning should be placed on programmes and services that engage with individuals identified as physically inactive and support long-term behavioural change.

Kent County Council Public Health does not currently commission a county-wide service specifically for the purpose of reducing physical inactivity. A pilot project was commissioned in 2015 to test a delivery approach based on the Department of Health's Let's Get Moving (LGM) commissioning model[41], with follow-up testing at six and 12 months showing that this model is a cost-effective and successful way of increasing levels of physical activity.

Evidence of What Works

NICE Guidance

NICE has produced a number of guidelines giving recommendations on how people can be encouraged to meet physical activity guidelines.

Table 5: Summary of NICE Guidance on increasing levels of physical activity

Guideline	Date of Publication	Title
PH2	2006	Four commonly used methods to increase physical activity
PH8	2008	Physical activity and the environment
PH13	2008	Promoting physical activity in the workplace
PH41	2012	Walking and Cycling: local measures to promote walking and cycling as forms of travel or recreation
PH44	2013	Physical activity: Brief advice for adults in primary care
PH54	2014	Exercise referral schemes to promote physical activity

- for the Department of Health, NICE produced guidance on four common methods used to increase the population's physical activity levels. The four interventions considered were: brief interventions in primary care, exercise referral schemes, pedometers and community-based walking and cycling programmes[42]
- this guidance has been partially updated by 'Walking and Cycling'[43], and 'Physical Activity: brief advice for adults in primary care'[44]. The brief advice document aims to support routine provision of brief advice on physical activity in primary care practice
- a recent update on exercise referral schemes[45] concluded that exercise referral is not recommended for increasing levels of activity in the population
- guidelines have also been produced on physical activity and the environment[46] and promoting physical activity in the workplace[47].

Brief intervention and motivational interviewing

Let's Get Moving [48] is a behaviour change intervention developed by the NHS and Department of Health designed to provide a systematic approach to identifying and supporting adults to become more active, for the purpose of both the prevention and management of inactivity-related chronic disease.

An evaluation of the Let's Get Moving pilot found brief intervention and motivational interviewing to be a feasible method of reducing physical inactivity[49]. This approach is also recommended in NICE commissioning guidance[50]. NICE also established that brief intervention for physical activity in primary care is cost effective, with the strength of cost-effectiveness increasing for patients over the age of 54[51].

Unmet Needs and Service Gaps

There is a requirement for a county-wide service to systematically identify those at risk of developing long-term conditions as a result of physical inactivity. This needs to be focussed in areas of high deprivation and population-level prevalence of physical inactivity, and individuals should be supported to increase their levels of physical activity.

Recommendations for Commissioning

It is recommended that programmes be commissioned to address physical inactivity based on the brief intervention and motivational interviewing model[52]. The pathway should include:

A comprehensive recruitment and referral process focussing on at-risk populations.

- brief intervention, motivational interviewing and support for behavioural change in an appropriate setting and delivered by an appropriate agent
- signposting to a range of local activity services, facilities and appropriate opportunities based on patient preferences, confidence to change and level of motivation
- ongoing support to patients over at least 12 months following intervention.

Services should be integrated where possible with pathways for other health improvement and health promotion services, and should be linked to wider provision of sport, leisure and physical activity opportunities in both managed facilities and services and in the natural environment.

Additional local action recommended to promote physical activity include:

- protecting and improving existing grass playing fields
- maintaining and improving public rights of way
- integrating physical activity into transport and environmental planning and services
- improving physical activity assets and facilities in response to identified demand
- increasing use of the natural environment for physical activity and health reasons.

Key Contacts

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