

Obesity and Health and Wellbeing in Northampton
A briefing and evidence paper
March 2020
Public Health Northamptonshire, NCC



Obesity and Health and Wellbeing in Northampton Briefing March 2020

Purpose and background

This briefing note and supporting evidence have been produced by the Northamptonshire County Council Public Health team. They are intended to support the creation of planning policy in Northampton Borough relating to fast food takeaways. This is an important issue given the high levels of people who are overweight / obese in the Borough and the significant implications this has for health and wellbeing.

This is part of a body of work between health partners and local planning authorities in the county which seek to deliver healthier communities through the planning process.

Health and wellbeing policy nationally

Rising levels of childhood and adult obesity have been a key part of the government health and wellbeing agenda since the publication of the 2007 Foresight report¹. The Foresight report was the first document to call for the planning system to be a key plank of strategies to address obesity and promote healthy weight environments.

There are many ways to define whether a person is overweight or obese. The most widely used is Body Mass Index (BMI). For most adults, a BMI score over 25 means the individual is defined as overweight, over 30 is defined as obese and 40 or more is defined as severe obesity. BMI is not definitive, for example a muscular person can have a high BMI without excess fat, but for most people it can be a useful indicator of healthy weight.

Adult Obesity

The most recent Health Survey for England² reported by PHE, found that of adults in England aged 16+:

- 7 out of 10 men are overweight or obese 66.9%;
- 6 out of 10 women are overweight or obese 59%.

This has been an upward trend since 1993. The prevalence of excess weight is higher among men than women and the prevalence of obesity is higher among women than men. Women and men living in the most deprived areas are more likely to be obese than those living in the least deprived areas.

Children's Obesity

Patterns and trends in childhood obesity nationally³ show that:

- 1 in 5 children in Reception (aged 4-5 years) is overweight or obese (22.6%);
- 1 in 3 children in Year 6 (aged 10-11 years) is overweight or obese (34.3%).

Overweight Children and young people are more at risk of being overweight or obese as adults, increasing their risk of preventable illnesses.

Data from the National Child Measurement Programme (NCMP)⁴ shows inequalities exist, with rates of obesity in families from the most deprived areas more than double that of the least deprived areas. Analysis of the data shows that the rate of obesity among children in both Reception and Year 6 increases with increased socioeconomic deprivation. The level of Obesity amongst children in the most deprived areas of the country is approximately twice that of the least deprived 10%.

¹ Butland B., et al Tackling Obesities: Future Choices – Project Report 2nd Edition London GOS 2007
<https://www.gov.uk/government/publications/reducing-obesity-future-choices>

² PHE, Patterns and trends in Adult Obesity PHE: Feb 2020

³ PHE, Patterns and trend in Child Obesity February 2020

⁴ NHS Digital, National Child Measurement Programme, England – 2017/18 School Year, 2018

In Northamptonshire, the levels of excess weight and obesity in the most deprived MSOA⁵ is on average 74% higher than in the least deprived. Children's BMI is associated with parents BMI.

Health impacts of being overweight / obese

Nationally⁶, it is estimated that obesity is responsible for more than 30,000 deaths each year. On average, obesity deprives an individual of an extra 9 years of life, preventing many individuals from reaching retirement age. In the future, obesity could overtake tobacco smoking as the biggest cause of preventable death.

Obesity increases the risk of developing a whole host of diseases⁷. Obese people are:

- at increased risk of certain cancers, including being 3 times more likely to develop colon cancer
- more than 2.5 times more likely to develop high blood pressure - a risk factor for heart disease
- 5 times more likely to develop type 2 diabetes

Obesity is the biggest preventable risk factor for cancer after smoking. Public Health England⁸ states the following in relation to the increasing problem of obesity:

- *This is primarily because we are living in an obesogenic environment where less than healthier choices are the default, which encourage excess weight gain and obesity.*
- *The Foresight report states that while achieving and maintaining calorie balance is a consequence of individual decisions about diet and activity, our environment, and particularly the availability of calorie-rich food, now makes it much harder for individuals to maintain healthier lifestyles.*
- *The increasing consumption of out-of-home meals – that are often cheap and readily available at all times of the day - has been identified as an important factor contributing to rising levels of obesity.*

A Public Health priority

Nationally, reducing obesity, particularly among children, is one of the priorities of Public Health England (PHE). PHE aims to increase the proportion of children leaving primary school with a healthy weight, as well as reductions in levels of excess weight in adults. PHE is working to significantly reduce childhood obesity, contributing to the delivery of the government's Childhood Obesity Plan⁹.

Public health approaches acknowledge that the high proportion of people who are overweight or obese is a complex issue that must be tackled in a variety of ways. Local authorities and the planning systems are a key aspect of planning and creating an environment that encourages and supports citizens maintaining a healthier weight:

- Actively promoting walking and cycling;
- Enabling easier access to healthier food and drink;
- Supporting a diverse and healthy high street retail offer.

Current health policy encourages a whole systems approach to tackling obesity:

2014 – Everybody active everyday. An evidence based approach to physical activity PHE

Planning healthy weight environments (TCPA)

2017 – Walking and cycling investment strategy (Dept. of Transport)

2020 – Advancing our health: Prevention in the 2020's (DHSC green paper)

2020 – Using the planning system to promote healthy weight environments (PHE)

⁵ Middle Layer Super Output Areas (MSOA), are a geographical hierarchy designed to improve the reporting of small area statistics in England and Wales. They are built from groups of contiguous Lower Layer Super Output Areas (LSOAs for each postcode).

⁶ Public Health England, Health Matters: Obesity and the Food Environment

www.gov.uk/government/publications/health-matters-obesity-and-the-food-environment/health-matters-obesity-and-the-food-environment--2

⁷ Ibid 3

⁸ Ibid 3

⁹ PHE, 2018, Promoting healthy weight in children, young people and families: a resource to support local authorities.

The National Planning Policy Framework (NPPF)¹⁰ makes it clear that local authorities have a responsibility to promote healthy and safe communities by fostering a well-designed and safe built environment, with accessible services and open spaces that reflect current and future needs and support communities' health and well-being. The NPPF sets out explicit policy requirements pertinent to promoting healthy weight environments. These can help frame and inform actions when preparing local plans and making planning decisions. E.g.

91. Planning policies and decisions should aim to achieve healthy, inclusive and safe places which:

c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.

The LGA has also published case studies where the planning system has been used as part of a holistic approach to the challenge of obesity.

Healthier food environments

In the UK, 27% of adults and 19% of children eat meals out of the home at least once a week and takeaway food consumption peaks in young adults aged 19-29 years¹¹. Takeaway foods tend to contain high levels of fat, saturated fats, sugar, and salt, and lower levels of micronutrients^{12 13}. Some takeaway food can represent a low-cost option to the consumer, which may enhance its appeal to children and other consumers with low discretionary incomes¹⁴. Evidence shows that regular consumption of takeaway food over time has been linked to weight gain¹⁵.

The NICE Public Health Guideline on Cardiovascular disease prevention¹⁶, recommends action to encourage local planning authorities to restrict planning permission for takeaways and other food retail outlets in specific areas (for example, within walking distance of schools).

There are an increasing number of studies that identify the role of physical access to takeaway food outlets in promoting unhealthy diet and obesity¹⁷. For example, research has shown associations between exposure to takeaway outlets, takeaway consumption and body weight in adults¹⁸. There was some evidence that these associations were stronger in groups with lower levels of education, which may contribute further to socioeconomic inequalities in obesity¹⁹.

¹⁰ Ministry of Housing, Communities and Local Government (MHCLG), National Planning Policy Framework, February 2019.

¹¹ Adams, J., et al., Frequency and socio-demographic correlates of eating meals out and take-away meals at home: cross sectional analysis of the UK national diet and nutrition survey, waves 1-4 (2008-12). *International Journal of Behavioural Nutrition and Physical Activity* 12(51): 1-9 2005

¹² Jaworowska, A., Blackham, T., et al., Determination of salt content in hot takeaway meals in the United Kingdom. *Appetite*, 59: 517-522, 2012

¹³ Jaworowska, A., Blackham, T., et al., Nutritional composition of takeaway food in the UK, *Nutrition and Food Science* 44(5): 414-430, 2014

¹⁴ Drewnowski, A., and Specter, S. E., Poverty and obesity: the role of energy density and energy costs, *American Journal of Clinical Nutrition* 79: 6-16, 2004

¹⁵ Pereira, M. A., A. I., Kartashov et al, Fast food habits, weight gain, and insulin resistance (the CARDIA study): 15 year prospective analysis, *The Lancet*, 2005. 365(9453):p. 36-42

¹⁶ NICE, Cardiovascular disease prevention, Public Health Guideline (PH25). June 2010

¹⁷ Lake, A., Neighbourhood food environments: Food choice, foodscapes and planning for health. *Proceeding of the Nutrition Society*, 77(3), 239-246, 2018

¹⁸ Fraser L.K., & Edwards K.L., Leeds 2010; Burgoine, T et al 2014, Cambridgeshire; Burgoine, T., et al UK Biobank 2018.

¹⁹ Burgoine, T., et al., Does neighbourhood fast-food outlet exposure amplify inequalities in diet and obesity? A cross sectional study. *American Journal of Clinical Nutrition*, 2016. 103: p.1-8

Health and wellbeing in Northamptonshire

As with many parts of the country, the county of Northamptonshire and the Borough of Northampton are facing significant health and wellbeing challenges. This is recognised by the Northamptonshire Health and Care Partnership (www.northamptonshirehcp.co.uk).

The nature of population health and wellbeing challenges are varied and complex. In summary, although people are generally living longer lives, they are spending more years in poor health and more are suffering from long term illnesses. This poor health is influenced by many factors including diet, excess weight, physical inactivity, tobacco use, alcohol and various other social and environmental factors. This in turn has negative impacts on their quality of life, has a severe impact on the sustainability of health care services due to increasing demand and is ultimately damaging to the economy as higher levels of long-term illness lead to lower levels of economic productivity.

Obesity in Northampton

Levels of people who are overweight / obese within the population are of great concern in the county as they are across the country in general. Appendix 1, 'Fast Food Outlets and Obesity in Northampton', provides key information on the local picture for Northampton Borough. Key points from this are:

1. In Northampton, 68.1% of the adult population over the age of 16 are overweight or obese (England 62%). Children measured through the NCMP programme show levels of 22.7% of children in reception (aged 4-5 years) rising to 36.4% for year 6 children (aged 10-11).
2. Using the NCMP data Table 1 provides the levels of childhood obesity by ward. Both this table and Chart 1 highlight that Billing is the ward with the highest levels of obesity for children in Northampton.
3. Analysis of a range of data has identified the obesity hotspots for the county the boroughs and districts. This is measured at Middle Layer Super Output Areas (MSOA's) (built from groups of contiguous LSOA's). Map 1 and 2 demonstrate these hotspots for Northamptonshire and Northampton. Nine of the top twenty obesity hotspots in the county are in Northampton. Billing and Brookside are number three and four for the county.
4. As a further indicator of healthy diets, Northampton has lower levels of fruit and vegetable consumption as measured by the levels of 5-a-day consumption in Chart 2.
5. Analysis of national data shows there is a statistical correlation between the density of fast food outlets and the prevalence of obesity. Northampton has the third highest density in the county, 86.9% per 100,000 people. It also has the third highest prevalence of excess weight in adults in the county at 68.1%.
6. In Northamptonshire, Castle ward has the highest number of fast food outlets with 59 as demonstrated in table 3.
7. The proximity of access to fast food outlets is highlighted in Map 3 with Map 4 highlighting the location of secondary schools across Northampton in relation to the levels of deprivation in the borough. All 4 maps demonstrate common areas across obesity hotspot areas, deprivation and fast food access.

The Northamptonshire Health and Wellbeing Strategy

The Northamptonshire Joint Health and Wellbeing Strategy²⁰ recognises the importance of the role that local environments and new development / spatial planning can play in supporting good health and wellbeing. Key elements / priorities of the strategy include:

- Creating environments which support, promote and sustain healthier lifestyle choices, including healthier food environments and active travel options;
- Supporting healthy childhood, including reducing the numbers of children who are overweight.
- The importance of prevention of ill health, acknowledging that continuing to treat illness at current rates is financially unsustainable.

Northamptonshire Director of Public Health Annual Report 2018/19

Locally, obesity is a health and wellbeing priority, identified in the Northamptonshire Joint Health and Wellbeing Strategy²¹ developed by the Northamptonshire Health and Wellbeing Board.

Additionally, the Director of Public Health annual report²² for 2018/19, published in April 2019, includes the following recommendation.

Recommendation - 3. The unhealthy weight of our children and young people has been referred to as a generation time bomb that can have lifelong health implications. We must get to the root cause to tackle this complex, multi-factored problem by working with and educating communities, schools and families to take a lead role in preventing our children becoming overweight and addressing the issue early if it arises.

²⁰ Northamptonshire Joint Health and Wellbeing Strategy 2016-2020

https://www3.northamptonshire.gov.uk/councilservices/health/health-and-wellbeing-board/Documents/NCC149648_Health_Wellbeing_Board_Report_A4_24pp_AW2_NoBleed-Singles.pdf

Unpub.

²¹ Ibid 8

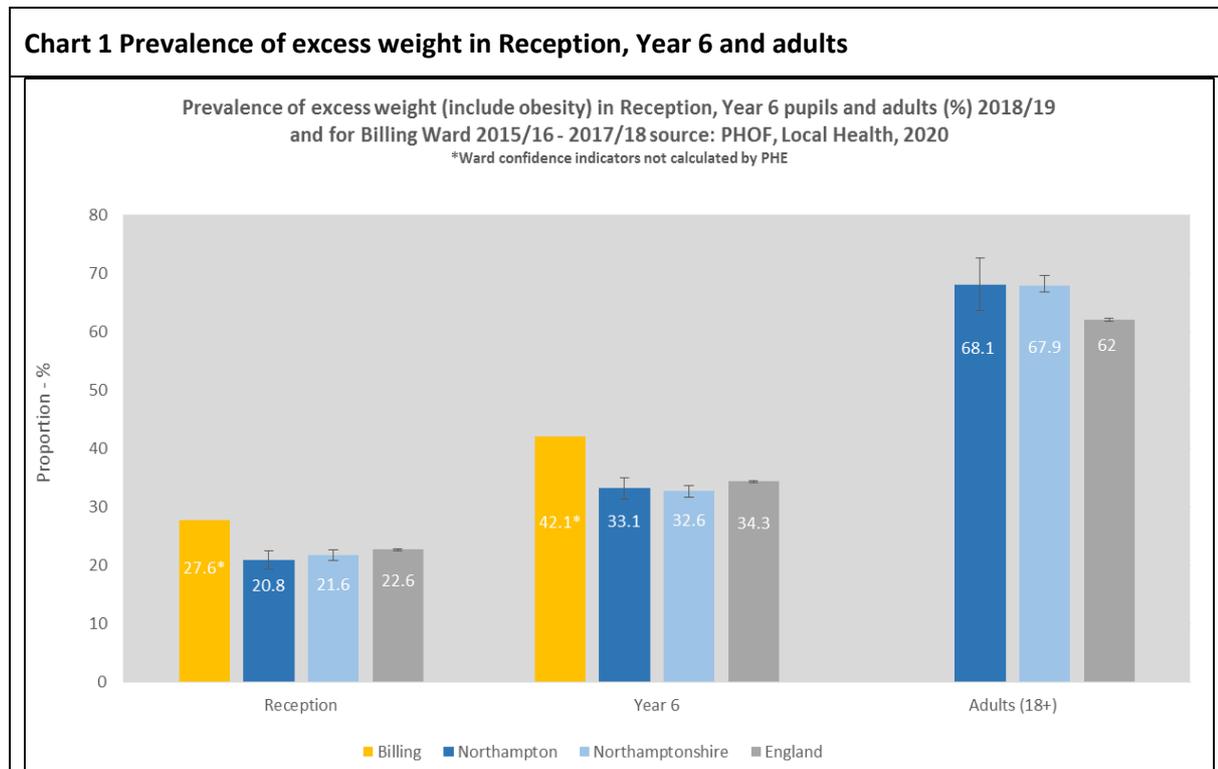
²² Northamptonshire Director of Public Health Annual Report 2018/19

<https://www3.northamptonshire.gov.uk/councilservices/health/health-and-wellbeing-board/Documents/NCC%20Public%20Health%20Annual%20Report%202019.pdf> Unpub

Appendix 1: Fast Food Outlets and Obesity in Northampton

Obesity

Levels of obesity in Northampton are demonstrated in Chart 1 below. In Northampton, 1 in 3 Year 6 pupils were classified as overweight or obese in 2018/19. The proportion increases with age as 2 out of every 3 adults in Northampton were overweight or obese in 2018/19. This rate was significantly higher than the England average. The chart also shows the results for Billing Ward, as this is the Ward with the highest proportion of children with excess weight in Year 6. There are no confidence intervals shown at Ward Level as the numbers are too small to do this accurately.



The proportions of children with excess weight or obesity at reception and year 6 are shown in the Table 1 below. The National Child Measurement Programme (NCMP) measures the height and weight of children in reception class (aged 4 to 5 years) and year 6 (aged 10-to 11 years), to assess overweight children and obesity levels within primary schools. This provides annual data and can be used nationally and at a local level to support local public health initiatives and inform the local planning and delivery of services.

Table 1: National Child Measurement Programme (NCMP) data, 3 year average (2015/16- 2017/18) percentage		
Ward	Excess weight Reception	Excess weight Year 6
Billing	27.6	42.1
Park	25.6	41.5
Castle	22.9	40.9
St David's	25.2	39.7
Spencer	26.0	39.5
Rushmills	24.2	39.3
Brookside	28.6	38.9
Kings Heath	24.5	38.7
Eastfield	23.3	38.2
Obelisk	22.5	37.9
Riverside	23.6	37.3
Semilong	21.0	37.0
Talavera	25.8	36.9
Delapre and Briar Hill	22.8	36.9
Trinity	23.4	36.9
Rectory Farm	27.1	36.5
New Duston	14.9	35.6
Sunnyside	23.0	35.5
Northampton	22.8	35.0
Headlands	27.2	34.4
Boothville	22.8	34.3
England	22.4	34.2
West Hunsbury	23.4	33.7
Old Duston	20.6	33.1
Parklands	22.8	33.1
Spring Park	22.9	32.6
Phippsville	22.3	31.6
Abington	19.8	31.3
Westone	28.7	30.4
Kingsthorpe	18.6	30.2
East Hunsbury	20.7	30.2
Upton	20.1	29.9
Kingsley	21.8	29.8
St James	24.7	29.3
Nene Valley	17.6	27.4

Public Health Analysts in Northamptonshire CC have developed the following methodology to locate Obesity Hotspots in the County in order to identify areas for targeted work. The obesity hotspot score is produced at Middle Super Output Areas (MSOA) level from the combination of 4 domains. Domain 1 (Prevalence of overweight and obesity) is the most important, and each following domain contribute to the overall score but with diminishing weight.

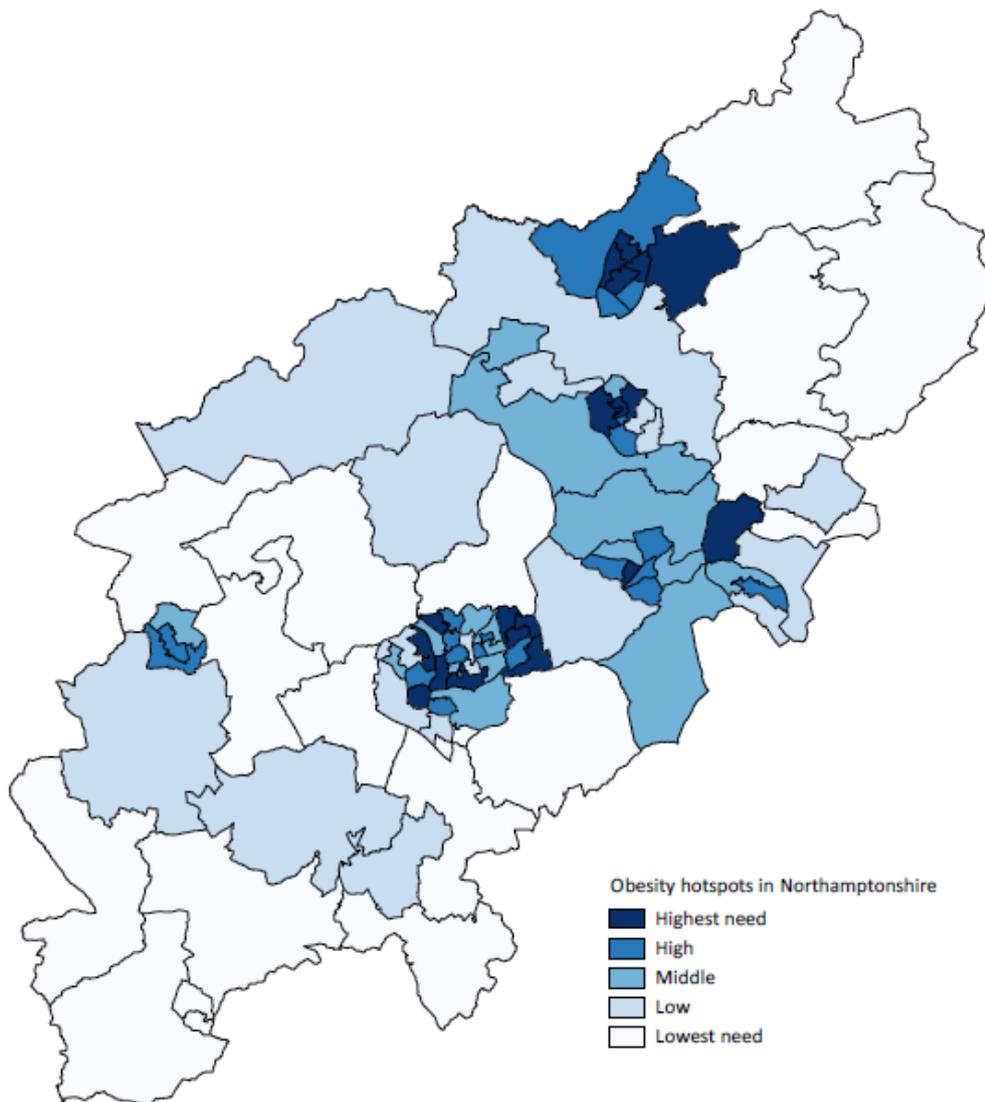
- Domain 1 Prevalence of overweight and obesity
- Domain 2 Physical activity
- Domain 3 Healthy diet
- Domain 4 Associated health conditions

Each domain is made up of a number of indicators. Weighting is given according to the importance of domain and the quality and strength of the data. Some data is only available at district level but is applied to all MSOAs within that district. Each MSOA gets a score for each domain and an overall obesity hotspot score.

Map 1 shows the hotspot scores for the whole of Northamptonshire for comparison, and Map 2 shows just Northampton to show the MSOAs in detail.

Map 1: Obesity Hotspots in Northamptonshire

Obesity hotspots: place based analysis on obesity using data from PHE Fingertips, Local Health and Sports England (all 2019 data)

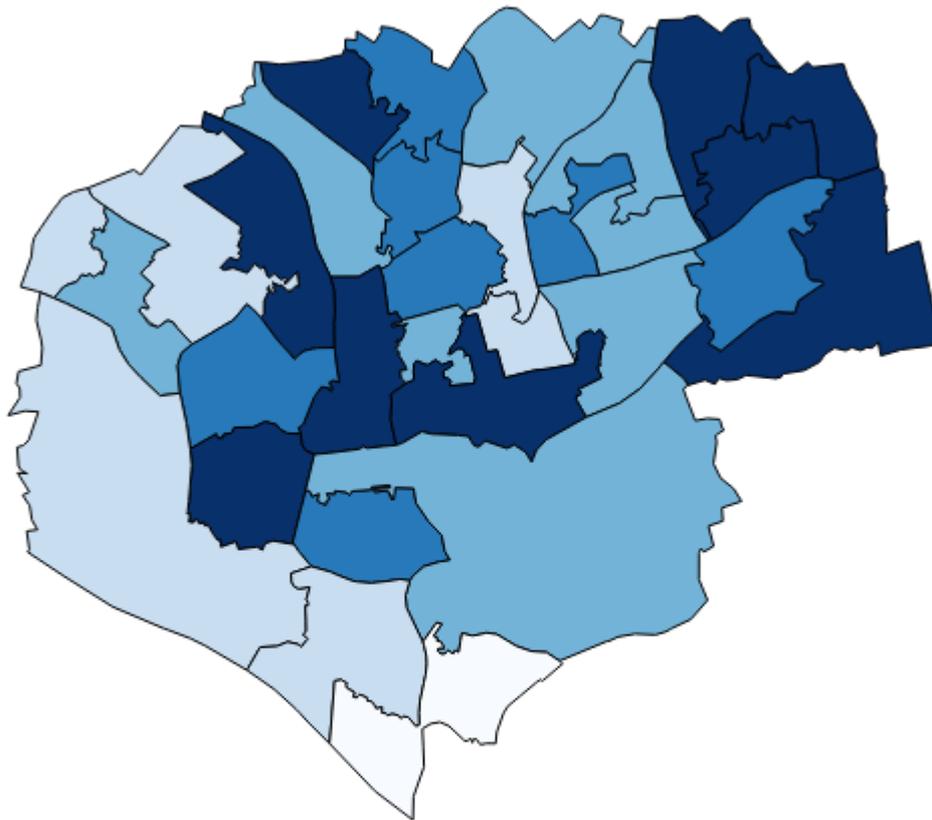


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Map 2: Obesity Hotspots in Northampton

Obesity hotspots: place based analysis on obesity using data from PHE Fingertips, Local Health and Sports England (all 2019 data)



Obesity hotspots in Northampton:

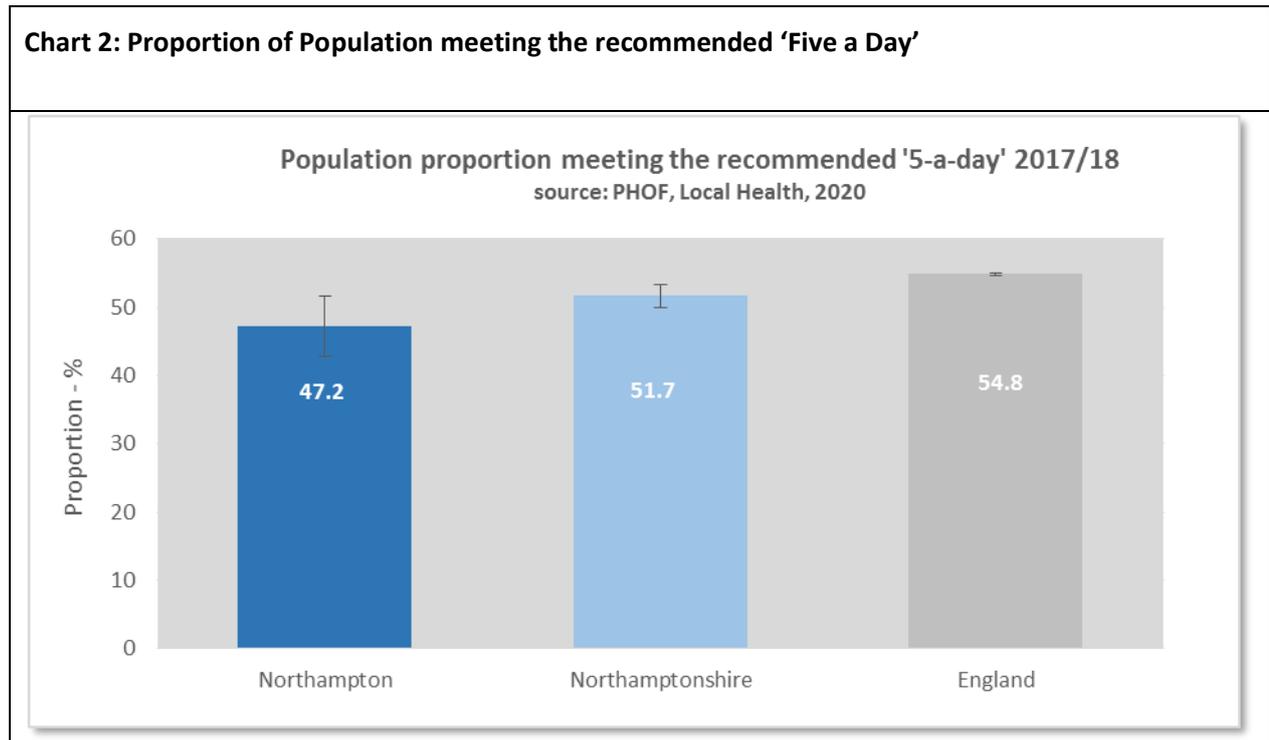
-  Highest need
-  High
-  Middle
-  Low
-  Lowest need

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Healthy Diet

Eating enough fruit and vegetables is key to a healthy diet. In Northampton, 47.2% of the population meet the recommended 5-a-day. This is significantly lower when comparing against the England average as shown in chart 2 below.



Fast food outlets

National data shows that the prevalence of excess weight in adults is closely associated with the density of fast food outlets ($r=0.25$, $p<0.001$). Northamptonshire data provides clear evidence of this association.

Table 2 below shows the number and density of fast food outlets and excess weight in adults by district. The density of fast food outlets in Northampton was 86.9 per 100,000 population, which was the third highest in the county (2017), compared to 41.0 for Corby the lowest. The prevalence of excess weight in adults in Northampton was also the third highest in the county at 68.1 that is, in every 3 adults (aged 18+), 2 were classified as overweight or obese. This rate was higher than the county average (67.9%).

LA name	Count of fast food outlets	Density of fast food outlets, rate per 100,000 population	Excess weight in adults (including obesity) 2017-18
Corby	28	41.0	66.2
Daventry	45	55.5	66.6
East Northamptonshire	68	74.4	69.5
Kettering	89	89.9	66.5
Northampton	195	86.9	68.1
South Northamptonshire	51	56.8	61.5
Wellingborough	74	94.4	75.8

Source: PHE - Density of fast food outlets in England 2017

The following table shows the wards with highest numbers of fast food outlets in Northampton. Northampton has the ward with the highest number of fast food outlets (Castle Ward). Only 13 wards in Northamptonshire had 10 or more outlets, and five of these were in Northampton

LA name	Ward code	Ward name	count
Northampton	E05008842	Phippsville	10
Northampton	E05008824	Abington	11
Northampton	E05008829	Dolapre and Briar Hill	12
Northampton	E05008847	St James	13
Northampton	E05008828	Castle	59

Source: PHE - Density of fast food outlets in England 2017

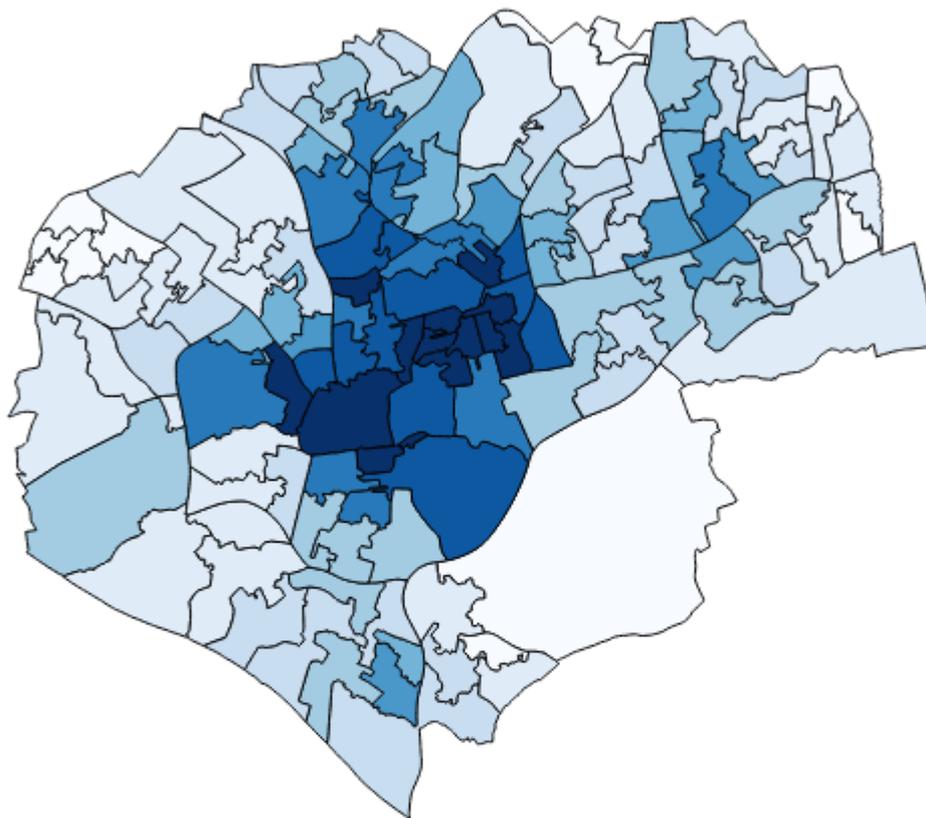
It is recognised that the number of fast food outlets will change on a regular basis. The data is a specific snapshot at a point in time (31/12/2017) and is taken from work undertaken by Public Health England using data from the Food Standards Agency's (FSA) Food Hygiene Rating Scheme (FHRS) data, administered by local authorities.

The density of fast food outlets means that there is easy access to this food provision. Map 3 shows the distance from a fast food outlet for the Lower Super Output Areas and unsurprisingly the areas compare to the wards that are shown as dark blue on the hotspot map (the map is of LSOAs rather than wards).

Map 3 Distance from Fast Food outlets

Distance from fast food outlets by LSOAs using National deciles.

Source: Access to Health Assets and Hazards CDRC 2019



Distance from fast food outlets



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The following Map 4, highlights the wards the secondary schools are located in relation to the levels of deprivation for Northampton.

Map 4: Locations of Secondary Schools in Northampton

Locations of secondary schools in Northampton and index of multiple deprivation (IMD) by LSOA, 2019

**Produced by Public Health Intelligence Team,
Northamptonshire County Council 2019**

