For feedback, please contact Sandie.Harwood@leicester.gov.uk Last updated 5-Apr-16 Review date 30-Apr-17

Obesity

Introduction

Obesity[1] is defined as the excess accumulation of body fat. Weight gain can occur gradually over time when energy intake from food and drink is greater than energy used through the body's metabolism and physical activity. The recommended measure of overweight and obesity is body mass index (BMI). BMI is calculated by dividing body weight (kilograms) by height (metres) squared. The National Institute for Health and Clinical Excellence (NICE, 2006)[1] has recommended the classifications for defining weight in adults, as detailed in Table 1 below.

Table 1: Body Mass Index Classifications for defining weight in Adults

Classification	BMI
Underweight	<18.5
Healthy Weight	18.5 – 24.9
Overweight	25.0 – 29.9
Obese	30.0 – 39.9
Severe Obesity	>40

Source: *NICE, 2006*

Obesity is a major public health issue and is associated with a range of health problems including type 2 diabetes, cardiovascular disease and cancer. The resulting NHS costs attributable to overweight and obesity are projected to reach £9.7 billion by 2050, with wider costs to society estimated to reach £49.9 billion per year.[2] For Leicester, the estimated annual cost to the NHS for diseases related to overweight and obesity in 2015 is £96.1 million and for diseases related to obesity alone is £55.9 million.[3]

There has been a rapid increase in the prevalence of obesity amongst adults in England. The prevalence of obesity rose from 15% in 1993 to 26% in 2014.[4] There are many factors that contribute to the causes of obesity. The Foresight report (2007)[2] identified various factors that influence obesity, this ranged from a combination of societal, biological, psychological influences to food consumption and activity environment.

Who's at risk and why?

Obesity Prevalence and gender differences

The health risks for adults with obesity are stark.[5] Men who ae obese are:

- Five times more likely to develop type 2 diabetes
- Three time more likely to develop cancer of the colon
- More than two and half times more likely to develop high blood pressure (major risk for stroke and heart disease)

Women who are obese are:

- Almost thirteen times more likely to develop type 2 diabetes
- More than four times more likely to develop high blood pressure
- More than three times more likely to have a heart attack

Results from the 2014 HSE showed around 62% of adults were overweight or obese (65% men and

58% of women). Currently 26% of adults are obese, with prevalence similar among men and women. Men are however more likely to be overweight (41% compared to 31% of women). In England, the prevalence of obesity among adults rose from 15% to 26% between 1993 and 2014. The data show that between 1993 and 2014, the prevalence of morbid obesity was consistently higher among women (increasing from 1.4% in 1993 to 4% in 2014) than among men (increasing from 0.2% in 1993 to 2% in 2014). By 2050 obesity is predicted to affect 60% of adult men and 50% of adult women.[2]

Obesity and Ethnicity

National data shows that obesity rates are higher for certain minority ethnic groups – Black African, Black Caribbean women, Irish men and Pakistani women. There is also evidence that people of Black, South Asian and other minority ethnic groups are at risk of chronic health problems such as diabetes and heart disease, at a lower BMI than the white population, with lower BMI intervention thresholds advised for weight management interventions.[6]

Obesity and Disability

There is limited data on disability and obesity. It is known that people with disabilities are more likely to be obese and have lower rates of physical activity, than the general population.[7]

Obesity and Deprivation

Obesity prevalence significantly increases with deprivation in women in England, but there is no apparent significant relationship between deprivation and obesity in men.[8] For both men and women obesity prevalence decreases with increasing levels of educational attainment.

Obesity and Diabetes

It is estimated that an obese woman is almost 13 times more likely to develop type 2 diabetes than a woman who is not obese.[9]

Pregnant Women

Mother and child are at higher risk of developing health conditions during and after pregnancy if the mother is obese. Nationally, around half of women of childbearing age are currently either overweight or obese and this proportion has been increasing steadily over recent years[10]. The babies of women with a pre-pregnancy BMI of over 35 have an increased risk of perinatal mortality compared with the general maternity population in the UK.[11] More than half of women who die during pregnancy, childbirth or shortly after are either obese or overweight[12] The maternal complications associated with obesity include miscarriage, hypertensive disorders such as pre-eclampsia, gestational diabetes mellitus, infection, thromboembolism, caesarean section, instrumental and traumatic deliveries, wound infection and endometritis (infection in the endometrium).

The level of need in the population

Adult Overweight and Obesity in Leicester

The level of excess weight in adults in Leicester in 2012 is estimated to be 57% (37.4% overweight, 19.6% obese) compared to a national value of 64%.[13] The overall prevalence of obesity (adults aged 16+) in Leicester is 20%.[14] Local estimates of obesity taken from the Leicester Health and Wellbeing Survey 2015 show obesity levels are higher in women compared to men, highest in the 35-64 age group and those in Black/Black British ethnic groups (Table 2).

Table 2: Obesity Prevalence in Leicester, by Gender, Age and Ethnicity

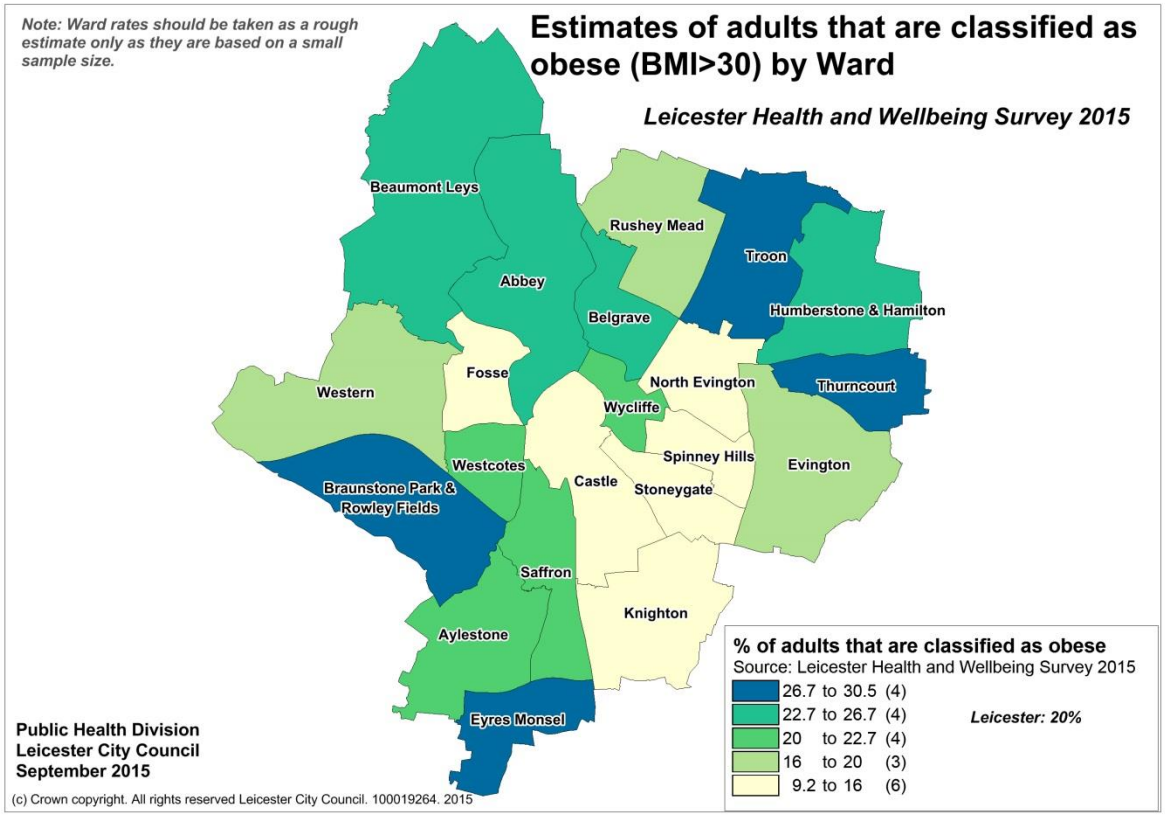
Category			Obesity Prevalence (%)
Gender		Male	18.1%
		Female	22.6%
Age		16-34	14.5%
		35-64	23.9%
		65+	23.4%
Ethnicity		White	22.5%
		Asian/Asian British	16.0%
		Indian	16.5%
	Black/Black British	23.1%	
	BME	17.6%	

Source: *Leicester Health and Wellbeing Survey 2015*

Ward estimates from the Leicester Health and Wellbeing Survey 2015 show there is variation within the city although there are no significant differences in comparison to the Leicester average (Figure 1 and 2).

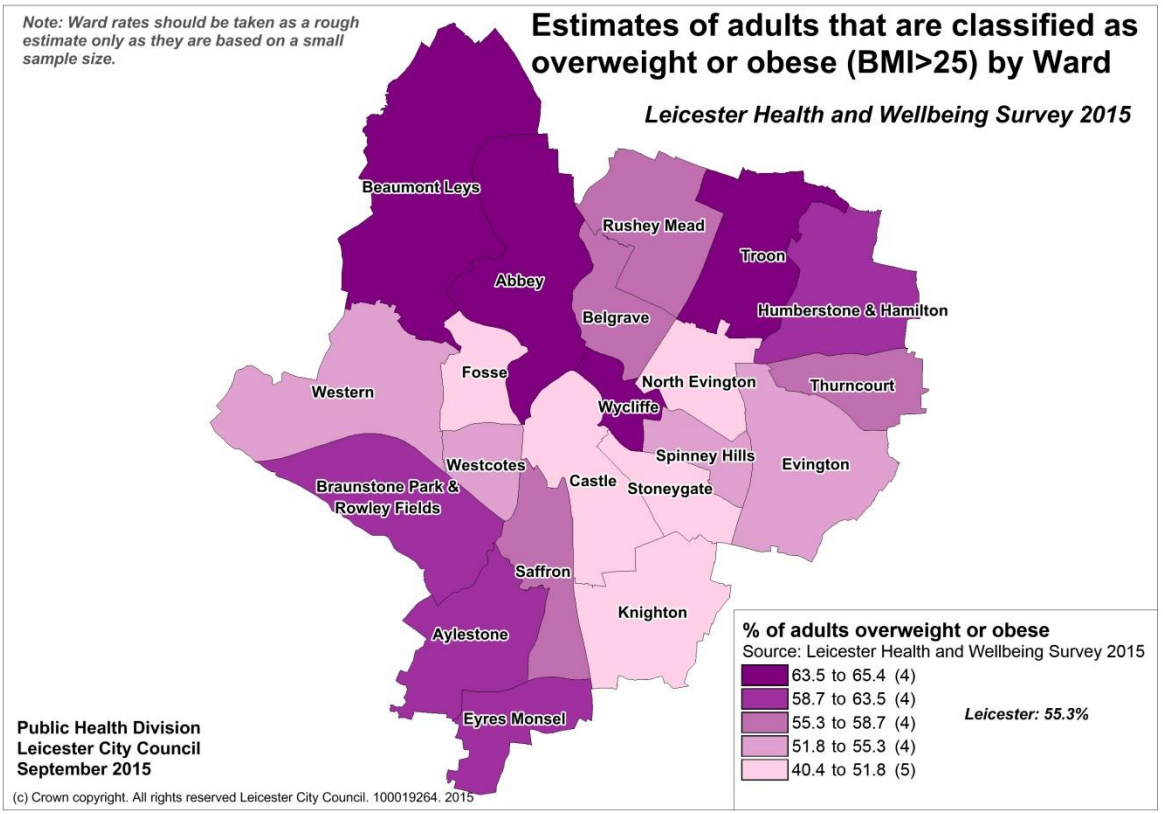
Note: Data is presented at ward level in the maps below as the numbers are too small to show at lower geographies such as the Census 2011 lower or middle super output areas . Ward areas are purely administrative and can include communities with different population characteristics which are shown as an average over the area. The Census super output areas are smaller geographical areas developed around populations with similar characteristics so are less likely to mask differences across the area.

Figure 1: Estimates of Obese Adults by Ward in Leicester



Source: *Leicester Health and Wellbeing Survey 2015*

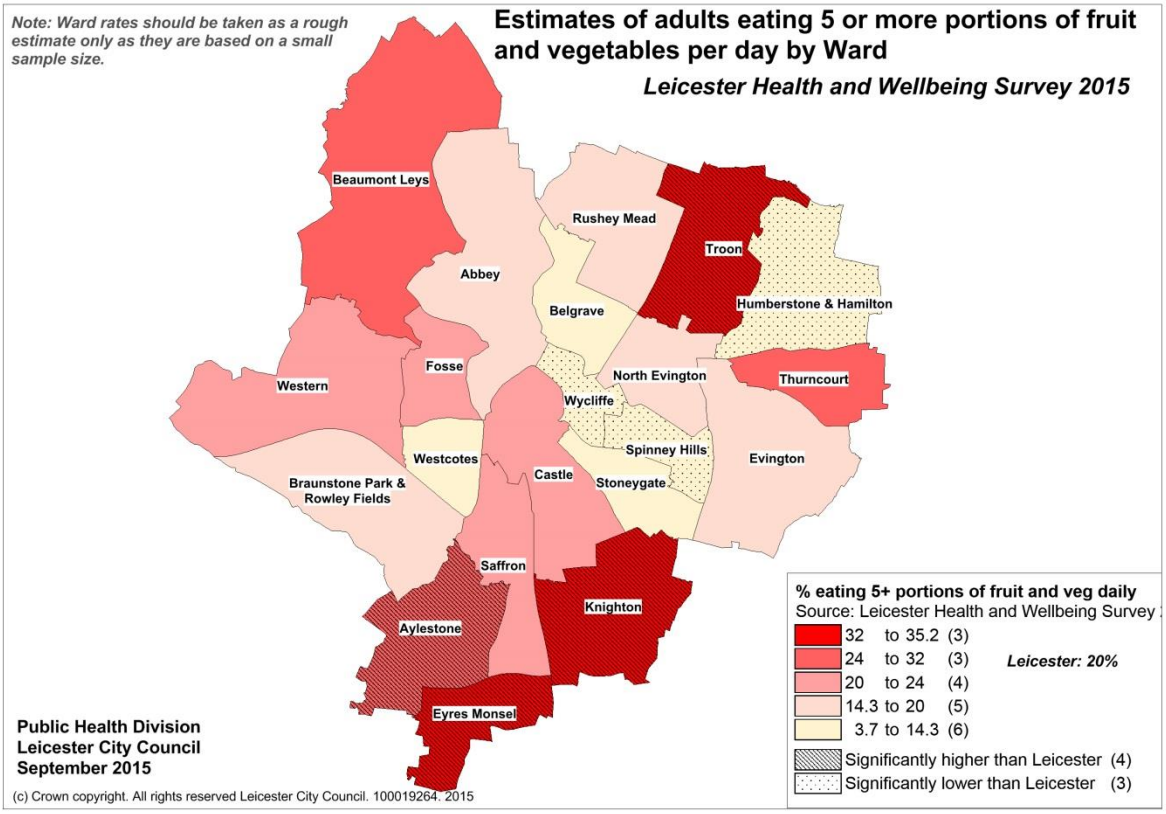
Figure 2: Estimates of Overweight or Obese Adults by Ward in Leicester



Source: *Leicester Health and Wellbeing Survey 2015*

The Leicester Health and Wellbeing Survey 2015 also reports a percentage of 20% of adults eating 5 or more portions of fruit and vegetables a day. Ward estimates show variation within the city where 4 areas (Aylestone, Knighton, Eyres Monsell and Troon) have significantly higher levels of healthy eating in comparison to the Leicester average. There are 3 areas (Wycliffe, Spinney Hills and Humberstone and Hamilton) that have significantly lower levels of healthy eating in comparison to Leicester (Figure 3).

Figure 3: Estimates of Adults eating 5 or more portions of fruit and vegetables per day by Ward in Leicester



Source: *Leicester Health and Wellbeing Survey 2015*

Obesity and Long Term Conditions

The prevalence of diagnosed diabetes among people aged 17 years and older in NHS Leicester City CCG is 8.7% compared to 7.3% in comparator CCGs. It is estimated that over 90% of diagnosed diabetes cases are Type 2, and that around a third of the projected rise in diabetes prevalence results from the increase in obesity levels.

The Diabetes Health Profile 2015[15] states that among people with diabetes in NHS Leicester City Clinical Commissioning Group (LC CCG), the risk of a stroke was 71.7% higher and the risk of a heart attack was 110.9% higher, compared to population without diabetes. A person with diabetes in the CCG was also at a 158.9% higher risk of heart failure and a 157.1% higher risk of angina than the population without diabetes.

Maternal Obesity

In 2010/11, 25% of Leicester City women booked with University Hospitals of Leicester were recorded as being overweight and 19% were obese (higher than the national rate of 15.6%).

Using 6 years data (2006-11) it is shown that with increasing age, the proportion of women that are obese increases, ranging from 9% in the 15– 19 year olds to 25% in the 40–44 years olds. Black women had the highest rate of obesity (27.1%), followed by White women (19.7%) and Asian women (11.4%).[16]

Current services in relation to need

NICE (2006) recommend that any weight loss programmes are only recommended if they fulfil the following criteria:

- Are based on a balanced healthy diet
- Encourage regular physical activity
- Expect people to lose no more than 0.5 – 1kg (1 – 2 lbs) a week

Weight management services are organised by tiers.
Tier 1 covers universal services that can support weight management (such as open access services and health promotion); tier 2 covers lifestyle interventions; tier 3 covers specialist weight management services; and tier 4 covers bariatric surgery.

Tier 1 - Leicester promotes and signposts to open access universal services and opportunities, particularly those offered through sports and leisure centres, sports and active travel.

Tier 2 – A Lifestyle services review is underway and due to report by the end of March 2016. The Lifestyle service review includes the weight management programmes and will agree the most appropriate model going forward. The current model has created challenges with the number of participants being significantly less than the estimated level of need.

Currently there are three commissioned weight management programmes for adults with slightly different eligibility criteria. The Get Healthy Lifestyle hub undertakes a holistic assessment with the referred client and then agrees which is the most appropriate service for them.

- Weight Watchers on referral is a universal programme for people who are overweight or obese and without multiple other complex health problems, referred via their GP or other health professional.
- Leicestershire Partnership Trust provide targeted weight management groups for people who are overweight or obese and with additional needs, who may not access traditional groups, such as those with learning difficulties or mental health problems. The annual target is 147 year.
- Leicestershire Partnership Trust also provide enhanced programmes for people who are obese and have multiple comorbidities and so may need the specialist input of a dietician. These programmes are known as DHAL (for South Asians) and LEAP. The annual target is 268 a year.

Tier 3 – There is a gap with no local tier 3 provision of a specialist multidisciplinary team weight management service, although the DHAL and LEAP programmes described in tier 2 could be considered the dietetic component. Public Health England co-ordinated a national working group to clarify the commissioning responsibilities for 'Joined up clinical pathways for obesity'. Tier 3 is the responsibility of clinical commissioning.

Tier 4 – Currently NHS England commission tier 4 bariatric surgery but this responsibility is being transferred to Clinical commissioning groups from 2016. NICE (2014) [17] revised criteria for surgical interventions recommends bariatric surgery as a treatment option for people with obesity if all of the following criteria are fulfilled:

- They have a BMI of 40 kg/m^2 or more, or between 35 kg/m^2 and 40 kg/m^2 and other significant disease (for example, type 2 diabetes or high blood pressure) that could be improved if they lost weight.
- All appropriate non-surgical measures have been tried but the person has not achieved or

maintained adequate, clinically beneficial weight loss.
- The person has been receiving or will receive intensive management in a tier 3 service[10].
- The person is generally fit for anaesthesia and surgery.
- The person commits to the need for long-term follow-up.

Bariatric surgery is the option of choice (instead of lifestyle interventions or drug treatment) for adults with a BMI of more than 50 kg/m2 when other interventions have not been effective.

Other related services

There are a number of related lifestyle services that cannot be classed as weight management programmes but include improving healthy eating and increasing physical activity alongside other health behaviours.

Parkwood's Get Healthy Leicester Lifestyle hub provides two related services :

- The Lifestyle hub undertakes a holistic assessment with clients referred from their GP or other health professional and some self-referrals. Subject to meeting the service specific referral criteria, the client will select which of the Lifestyle services to be referred to including weight management programmes, The Active Lifestyle (exercise on referral) scheme, STOP smoking and others.

- The health trainer service – identifies and engages with adults of 18 years and over with additional targets for people living in Leicester's most deprived neighbourhoods, BME communities and men who need additional support to make and sustain changes in their behaviour towards a healthier lifestyle. Weight management and becoming more active are the two lifestyle behaviours that people most want to tackle.

There is more information on physical activity services in Leicester on the Get Active web page.

Projected services use and outcomes in 3-5 years and 5-10 years

The prevalence of obesity and overweight in adults is predicted to reach around 70% by 2034.[18]

In the UK, past trends predict that between 2010 and 2030, the prevalence of obesity will rise from 26% to 41–48% in men, and from 26% to 35–43% in women. This equates to 11 million more obese adults by 2030, 3.3 million of whom would be older than 60. Obesity-related diseases are projected to add to health-care costs by £1·9–2bn a year in the UK by 2030.[19]

The scale of the problem means that the resources of local government and the NHS will be insufficient to solve it in isolation. It is vital therefore to engage with all aspects of society including the general public, private companies and voluntary organisations to better understand how together we can help people achieve and maintain a healthy weight.

Unmet needs and service gaps

- There is an absence of a coordinated approach across the healthy weight agenda, there are many smaller scale projects being undertaken, with less clarity on the larger strategy.
- Some of the services provided are lacking in scale and evidence of effectiveness and cost effectiveness is limited. Despite requiring commissioned services to use the Standard Evaluation Framework[20] for weight management interventions, there is a lack of high quality

monitoring and evaluation data available for many interventions, making drawing conclusions or comparisons challenging. There is a gap for people who require tier 3 specialist multidisciplinary teams which is the responsibility of Clinical Commissioning Groups.

Recommendations for consideration by commissioners

- A partnership healthy weight strategy and action plan is developed.
- Leicester City Clinical Commissioning Group lead the development of an integrated obesity pathway
- Leicester City Council review its public health lifestyle services to propose options for providing an efficient, effective, high quality, value for money service model.

Key contacts

Jo Atkinson, Consultant in Public Health, Leicester City Council,
Jo.Atkinson@leicester.gov.uk

Kajal Lad, Public health analyst, Leicester City Council,
Kajal.lad@leicester.gov.uk

Stephanie Dunkley, Public health principal, Leicester City Council,
Stephanie.Dunkley@leicester.gov.uk

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