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Executive summary

Introduction

Good nutrition is defined as *'an adequate and, well balanced diet'* vital to good health (WHO 2004). Whilst many people in England eat well, there are a large number who do not, particularly among the more disadvantaged and vulnerable in society (Faculty of Public Health, 2005). In particular, a significant proportion of the population consumes more than the recommended amount of fat, saturated fat, salt and sugar and a diet low in fruit, vegetables, whole grains and oily fish (PHE, 2014).

Poor diet and nutrition are recognised as major contributory risk factors for ill health and premature death thus present a major public health challenge. A poor diet is the biggest contributor to the number of "healthy years" lost due to ill health, disability or early death (Newton J et al, 2015). Good nutrition has a key role to play both in the prevention and management of diet-related diseases such as cardiovascular disease (CVD), cancer, diabetes and obesity (WHO/FAO, 2003).

In Nottinghamshire it is estimated that just over a quarter of adults are consuming the recommended 5 or more portions of fruit and vegetables per day, with women eating more than men and the lowest consumption in the 16-24 and over 75 age groups. Residents in Mansfield eat the least fruit and vegetables per day.

In most parts, this needs assessment takes a life course approach to diet and nutrition. Due to the refresh of the Children and Young People's chapter in 2014, data relating to fruit and vegetable intake and school meal uptake can be found at the following link. Future refreshes will take a full life course approach. Physical activity and excess weight are considered in separate chapters.

Unmet need and gaps

Since the last JSNA refresh in 2012 there is an integrated Tier 1, 2 and 3 obesity prevention and weight management pathway in place. Over the next few years the service numbers accessing Tier 1 healthy eating interventions will be monitored to provide information on percentage uptake, service demand, outcomes achieved and if there are any unmet needs.

It is identified that there is a need to strengthen local assets to ensure that nutrition and healthy eating is being tackled as effectively as possible within the allocated resources. This includes utilising the impact that the wider public health workforce and different professional groups are able to provide, particularly working with planning colleagues to ensure that the opportunities that planning gives, both supports and encourages access to affordable healthy food.

Recommendations for consideration by commissioners

Recommendations		Lead
Strategy and integrated commissioning		
1.	Work with partners across the system to ensure there is no duplication or gaps in diet/nutrition service provision targeting areas and groups whose dietary intake are poorest to maximise health outcomes, monitoring uptake by protected groups.	Public Health, District /Borough Councils and Clinical Commissioning Groups.
Social marketing		
2.	Eating well is promoted through Change4Life across Nottinghamshire Districts	Nottinghamshire County Council and District/Borough Councils
Prevention		
3.	Ensure that healthy eating remains a priority for the commissioning of services for 0-19 age group by the Integrated Children's Hub.	Public Health (Children's Integrated Commissioning Hub)
4.	Work with local Food Banks to support individuals with how to make healthy diet choices within a limited budget.	Public Health
5.	Evaluate the Healthier Options Takeaway (HOT) initiative to assess both the effectiveness and impact of this work developing practice based evidence to inform future work.	Environmental Health and Public Health
6.	Develop closer working relationships between planners and public health professionals to ensure access to fresh, affordable healthier food This could include • Giving consideration to the concentration of food uses in town centres / high street localities • Ensuring opportunities are provided as part of new developments for food growing/allotments or other innovative arrangements.	Planning & Public Health
Service quality and accessibility		
7.	Undertake an audit of progress locally against the NICE quality standards relating to diet and nutrition,	Public Health

	to benchmark and identify areas where improvements are needed.	
8.	Commission dietary interventions that are evidence based and utilise the Standard Evaluation Framework for diet to evaluate.	Public Health and District/Borough Councils
9.	Ensure that health and social care staff understand the importance of Vitamin D and promote supplements to at risk individuals as per NICE guidance.	Clinical Commissioning Groups & Public Health
10.	Continue to build the capability of the workforce to ensure that health and care professionals are clear about promoting the benefits of a healthy diet so that they have healthy conversations (making every contact count) with their patients and service users providing evidence based messages.	Public Health
11.	Within the first year of the new obesity prevention and weight management contract, agree the how the diet outcome will be measured and obtain baseline data to help inform performance targets for the following year.	Public Health

Full JSNA report

What do we know?

1) Who is at risk and why?

Good nutrition is defined as *'an adequate and, well balanced diet'* vital to good health (WHO 2004).The majority of children, young people and adults in the United Kingdom (UK) are not meeting national dietary guidance and eating a diet that is higher than the recommended levels in sugar, fat and salt and low in fruit and vegetables, whole grains and oily fish (PHE, 2014).

A poor diet is a significant cause of ill health and premature death being strongly associated and causally linked with a number of chronic, complex conditions such as obesity, cardiovascular disease, cancer and type 2 diabetes mellitus (WHO, 2014). It is the biggest contributor to disability-adjusted life years (DALYs) the number of "healthy years" lost due to ill health, disability or early death in England (Newton J et al, 2015).Good nutrition has a key role to play both in the prevention and management of these diet-related diseases (WHO/FAO, 2003). A poor diet is also associated with malnutrition (under nutrition) and micronutrient deficiencies. Other effects include negative impacts on mental health, oral health and academic performance (British Medical Association, 2015).

The burden of diet related ill health in the UK is substantial and estimated to lead to approximately seventy thousand premature deaths (Cabinet Office, 2008). Poor diet has the highest impact on the NHS budget, costing around £6billion per year, greater than alcohol consumption, smoking and physical inactivity (Department of Health, 2011; Scarborough P. et al 2011). Improvements in dietary intake would have significant benefits to the health of the population and society as a whole.

Groups at risk of a poor diet include lower socio-economic and socially disadvantaged groups such as the unemployed or those living on benefits, older adults, individuals with disabilities, reduced mobility or severe mental illness, households with dependent children and members of Black and Minority Ethnic (BME) communities (Faculty of Public Health, 2005).

This section considers specific food groups, nutrients and diet and nutrition issues for specific population groups.

Fruit and vegetables

Eating at least 5 portions (400g) of a variety of fruit and vegetables each day can reduce the risk of death from chronic disease, stroke and cancer by up to 20% (FAO/WHO, 2004). Nationally, the average consumption of fruit and vegetables for children (aged 5-15) is 3 portions a day and for adults is 4 portions of fruit and vegetables per day (HSCIC, 2014) Generally, the numbers eating 5 or more portions of fruit and vegetables increases with age however there is a drop in those aged 75 and over with 31% of adults aged 65-74 years consuming 5 or more portions of fruit and vegetables compared to 24.2% of adults aged 75 and over (HSCIC, 2013). National trends show that (HSCIC, 2013):

- Women are more likely to eat 5 or more portions of fruit and vegetables per day than men
- Low income households eat less fruit and vegetables than those with a higher income.

- Both young and older people tend to eat less portions of fruit and vegetables than the rest of the population
- People with learning disabilities and socially disadvantaged groups eat less fruit and vegetables.

Sugar

The recent report on 'Carbohydrate and Health' (SACN 2015) identified that:

- Higher consumption of sugars and sugar containing foods and drinks, is associated with greater risk of tooth decay
- Increasing or decreasing the proportion of calories consumed as sugars leads to a corresponding increase or decrease in energy intake
- In children and adolescents consumption of sugars-sweetened drinks as compared with lower calorie drinks, results in greater weight gain and increases in Body Mass Index (weight for height).
- Consumption of sugars-sweetened drinks is associated with an increased risk of type 2 diabetes mellitus.

Public Health England have subsequently published a report 'Sugar Reduction: The evidence for action' (PHE 2015) The recommendations from both reports should inform the Government's National Childhood Obesity Strategy to be published at the beginning of 2016.

Alcohol

There is no clear causal relationship between alcohol consumption and obesity. A recent review (National Obesity Observatory, 2012) identified that:

- Alcohol consumption can lead to an increase in food intake
- Many people are not aware of the calories contained in alcoholic drinks

The effects of alcohol on body weight may be more pronounced in overweight or obese people (National Obesity Observatory, 2012).

Food poverty

Food is the largest item of household expenditure for low income households, after housing, fuel and power costs (DEFRA, 2014). Evidence shows that a healthy diet, with adequate fruit and vegetables, is more expensive than a diet that is based mainly on foods that are considerably higher in fat and sugar (Drenowski, A & Darmon, N. 2005).

For many deprived households it is economically easier to consume a diet that is cheaper and a higher calorie value (high in fat, salt and sugar) as fruit and vegetables tend to be more expensive and do not 'fill up' a hungry family. In England, there is widespread access to cheap, palatable, energy dense food lacking in nutritional value. A diet that is high in fat and sugar increases calorie intake and contributes to higher rates of obesity within this socio-economic group (HSCIC, 2014). Evidence shows that the level of fast food consumption is an independent predictor of obesity (De Vogli, R et al 2014).

There has been a significant increase in people living in food poverty over the last ten years partially due to changes to the benefits system (All Party Parliamentary Inquiry into Hunger in the UK, 2014). Food poverty is defined as *'the inability to obtain healthy affordable food'* (Department of Health, 2005) but it is widely recognised that it is also as much about access to unhealthy food. For many, access to emergency food aid through Food Banks has become

a lifeline. Between 2006 and 2011, one in five people using Trussell Trust Food Banks named debt as the main reason for their hunger (All Party Parliamentary Inquiry into Hunger in the UK, 2014). Emergency Food Bank Parcels tend to be non-perishable items and as such do not often contain fresh fruit and vegetables. It has been identified that Food Banks could be a mechanism by which other services such as Citizen Advice Bureau (CAB), housing and welfare rights could reach families in need and connect to local community provision such as social eating / community allotment initiatives and cooking on a budget.

Children and Young people

Healthy eating during childhood and adolescence is vital as a means to ensure healthy growth and development and to set up a pattern of positive eating habits through into adult life (SACN, 2011).The promotion of evidence based healthy eating messages is fundamental to ensure healthy eating patterns are established in early years to help prevent diet-related deficiencies and malnutrition in vulnerable infants, children and adults. Nationally, the Healthy Start scheme ensures that breastfed babies over 6 months of age and all children between 1 and 4 years receive daily vitamin drops (containing vitamins A, C and D) (NICE 2008).

Adults aged 65 years and over

Good nutrition is as important to the good health of older people as it is for all adults but there are specific nutritional issues as people get older**.** Many older people, particularly those who live on their own, find it challenging to eat regular healthy meals due to issues of decreased appetite, lack transport to shops and living on a reduced income (The Scottish Government). Dietary supplements of vitamin D are recommended for people over the age of 65 (NICE 2014).

Learning Disabilities

People with learning disabilities are more likely than those in the general population to have nutritionally-related ill health. They are frequently poorer, live in more challenging circumstances, and may be socially excluded, all factors which may contribute to poorer eating patterns. Issues relating to body weight (both overweight and underweight), swallowing difficulties, gastro-oesophageal reflux disorder, diabetes, bowel disorders and oral health are frequently reported amongst this group (Crawley, H 2007).

Severe mental illness

The mortality rate among people with a severe mental illness aged 18-74 is three times higher than that of the general population (HSCIC, 2013) and on average die 15-20 years earlier than the general population with physical health problems tending to be the main factor (Brown, S., et.al; 2010). The prevalence of modifiable risk factors (including poor diet) which contribute to premature mortality is much more common in people with mental health problems. This increases with the severity of mental health condition (Department of Health, 2014)

Black and minor ethnic (BME) communities

Many people from minority ethnic groups have healthier eating patterns than the White population. However, there are, of course, considerable variations in dietary patterns across and within ethnic groups. These eating patterns are influenced by many factors including availability of food, level of income, health, food beliefs, dietary laws, religion, cultural patterns and customs. Additional factors include age (and in particular, generation), region of origin and occupation. Migrants may find it difficult to maintain their traditional eating habits after

moving country as familiar foods may be hard to find and more expensive than Western equivalents. The majority of migrants alter their eating habits following migration, combining part of their traditional diet with some of the less healthy elements of the Western diet. Age and generation are two major factors determining the extent to which diets changed, with processed foods more likely to be consumed by younger generations than older generations (National Obesity Observatory, 2011).

2) Size of the issue locally

2.1) Children and young people

The reader should refer back to the 'Excess weight in Children and Young People's' chapter (2014) for information relating to diet including fruit and vegetable intake and school meal uptake. Future refreshes of this chapter will include updates on these.

2.2) Adults

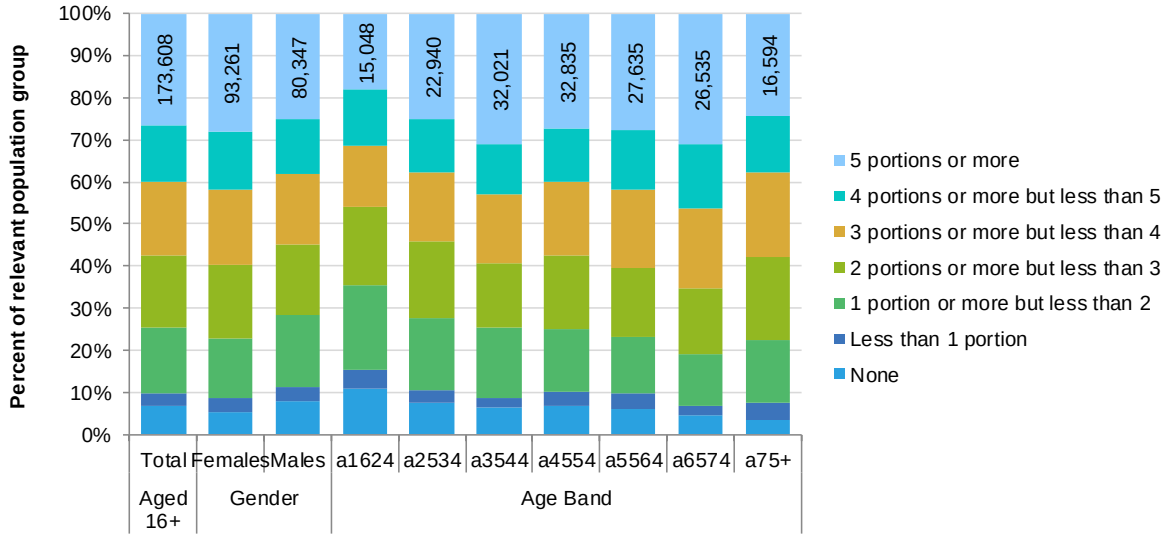
The measurement of dietary intake and nutritional status is complex. Self-reported fruit and vegetable consumption is the main measure used to assess public health nutrition. Self-report methods rely on the accurate reporting of food intakes by a sample of individuals within a population and may be subject to sources of random and systematic error.

Two sets of data can currently be used to estimate the number and percentage of adults aged 16 and over consuming the recommended 5 portions of fruit and vegetables per day:

- Data from the annual *Health Survey for England* applied to the population of Nottinghamshire (Figures 1& 2. Table 1)
- Data from the *Public Health Outcomes Framework* (PHOF 2.11i, 2.11ii, 2,11iii) Health Improvement Domain for the proportion of adults aged 16 and over consuming 5 portions of fruit and vegetables per day, average portions of fruit eaten and average portions of vegetables eating at local authority level. Information obtained via the national Active People's Survey. Data was published in May 2015; however an error has been found with the application of survey weight and so has now been removed from the website. Consequently, it has not been possible to present this information in this chapter revision.

These do not capture data relating to some of the at risk population groups identified earlier in the chapter.

Figure 1: Estimated fruit and vegetable consumption in the Nottinghamshire population aged 16+ by number of portions of fruit and vegetables per day. Modelled estimate based on national (age, gender) rates: 2013.



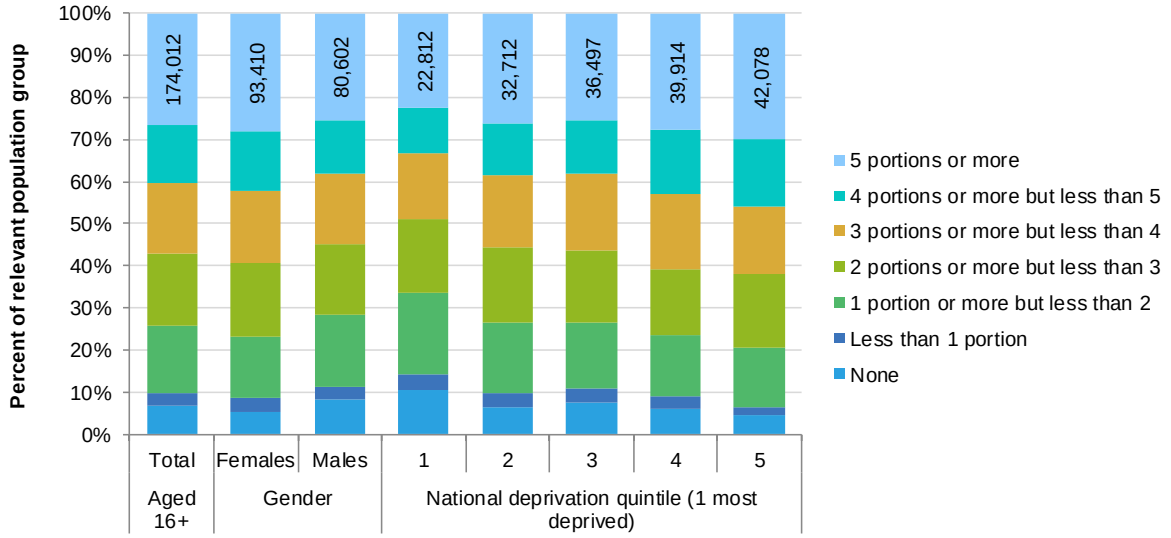
Source: HSE 2013 national fruit and vegetable consumption (Age, Gender) rates for those aged 16+, ONS Mid-Year population estimates 2013

In Nottinghamshire it is estimated that:

- Almost 174,000 adults (16+) consume or more portions of fruit and vegetables per day, representing approximately 27% of the population.
- More females than males consume 5 or more portions of fruit and vegetables per day (27.9% and 25.2% respectively).
- The 16 – 24 and over 75 age groups have the lowest percentage eating 5 or more portions of fruit and vegetables per day

Future refreshes of this chapter will compare this data to National and East Midlands data.

Figure 2: Estimated fruit and vegetables consumption of adults aged 16 and over in Nottinghamshire County. Modelled estimate based on national (deprivation, gender) rates: 2013.



Source: HSE 2013 national fruit and vegetable consumption (IMD Deprivation, Gender) rates for those aged 16+, ONS Mid-Year population estimates 2013

- In Nottinghamshire it is estimated that adults in higher deprivation quintiles are more likely than those in lower derivation quintiles to report eating five or more portions of fruit and vegetables per day. The proportion of adults eating five or more portions of fruit and vegetables per day is 22.3% in the most deprived quintile and 30.1% in the least deprived quintile.

Table 1: Estimated number and percentage of adults aged 16 and over in Nottinghamshire County and Districts consuming 5 portions or more of fruit and vegetables per day. Modelled estimate based on national (deprivation, gender) rates 2013.

5 portions or more	Aged 16+ Estimated	Total	*Estimated*
Organisation	**number**	**residents**	***percent***
Bassetlaw	23,769	93,641	*25.4*
Mansfield	21,676	86,133	*25.2*
Ashfield	25,127	98,536	*25.5*
Newark and Sherwood	25,507	95,796	*26.6*
Gedling	25,840	94,282	*27.4*
Broxtowe	25,300	92,276	*27.4*
Rushcliffe	26,793	92,148	*29.1*
Nottinghamshire County	**174,012**	**652,812**	***26.7***

Source: HSE2013 national fruit and vegetable consumption (IMD Deprivation, Gender) rates for those aged 16+, ONS Mid-Year population estimates 2013

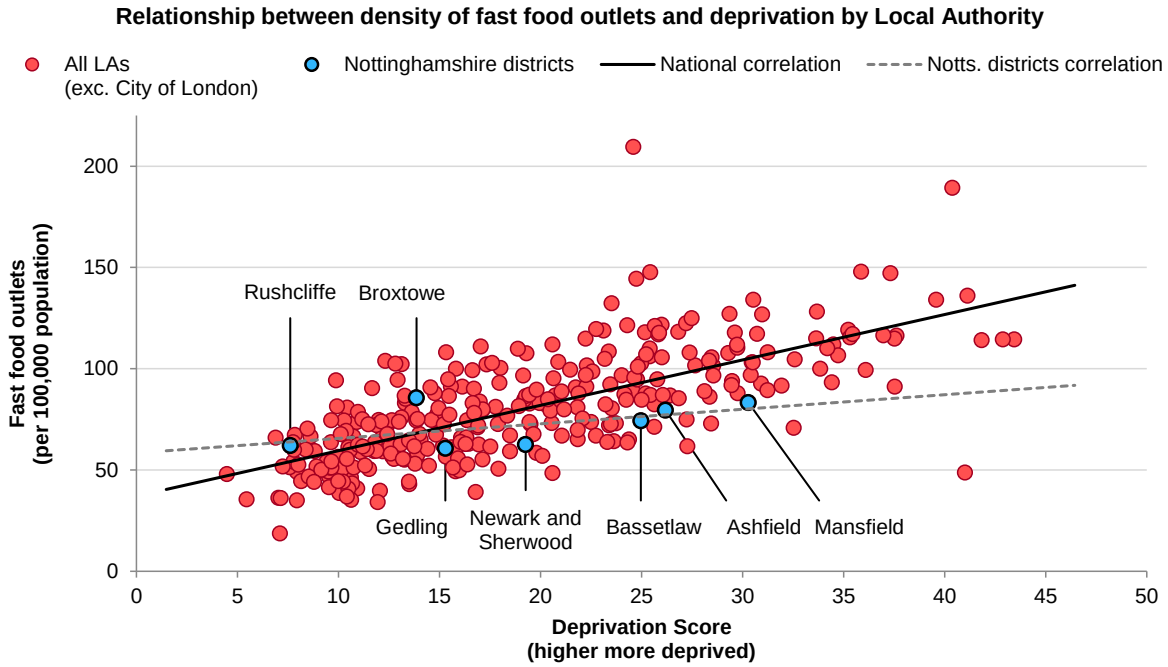
- Residents in Rushcliffe and residents in Mansfield are estimated to be more likely and least likely respectively to consume 5 or more portions of fruit and vegetables per day. Almost 30% of residents in Rushcliffe are estimated to consume 5 or more portions of

fruit and vegetables per day compared to approximately 25% of Mansfield, Bassetlaw and Ashfield residents

Fast food outlet density

Using national data on fast food and takeaway outlets, fast food delivery services and fish and chip shops, Figure 3 shows the relationship between the density of fast food outlets and deprivation by national local authorities with Nottinghamshire County districts highlighted, Figure 4 shows the density of fast food outlets for Nottinghamshire County and its districts and Figure 5 compares the density of fast food outlets to Nottinghamshire County's statistical neighbours.

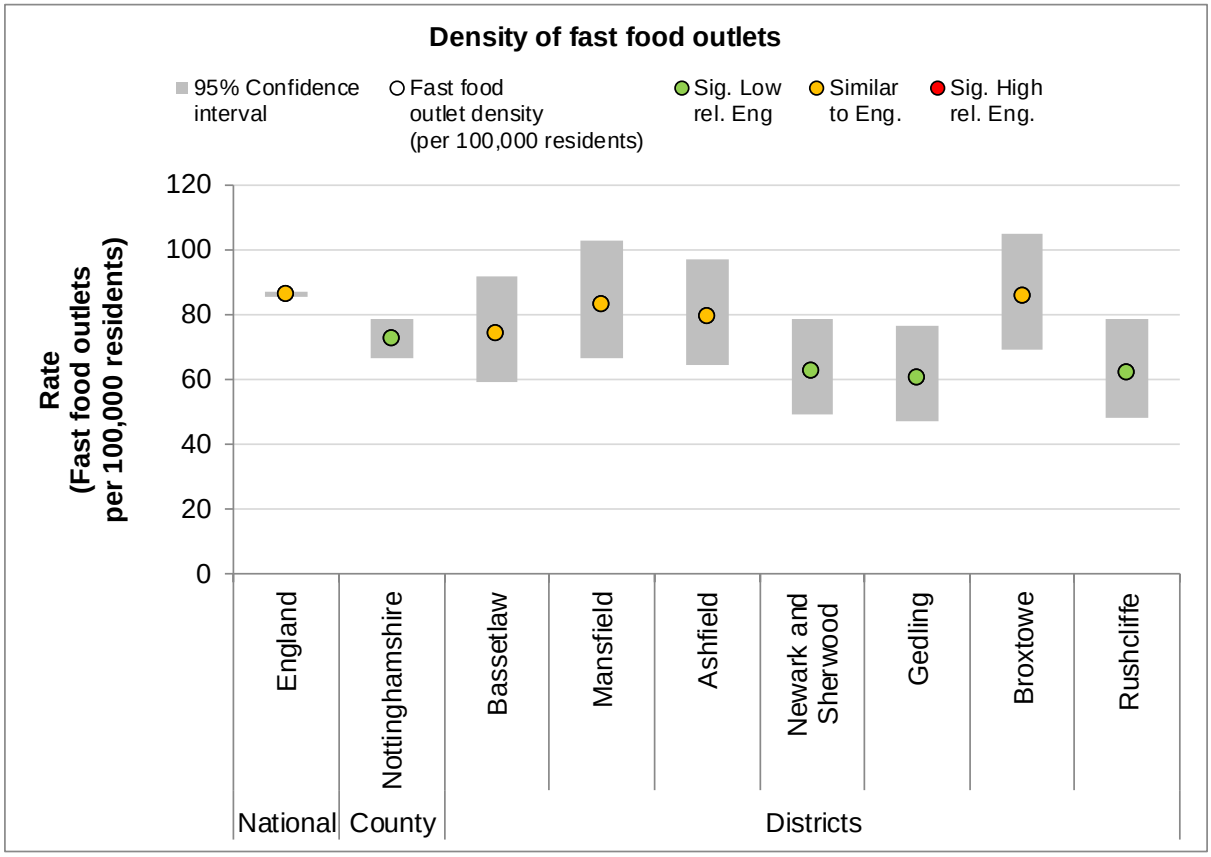
Figure 3: Relationship between density of fast food outlets and deprivation by national local authorities with Nottinghamshire County districts highlighted.



Source: Adapted from PHE NOO Fast food outlet density report 2013 URL: http://www.noo.org.uk/visualisation IMD2010 Local Authority Summaries

- There is a positive association between deprivation and density of fast food outlets, with more deprived areas having more fast food outlets per 100,000 population. Nationally, 50% of the variation in density can be accounted for by deprivation. There is a weaker association across the Nottinghamshire County Districts in which 30% of the variation is accounted for by deprivation (PHE/NOO, 2013).

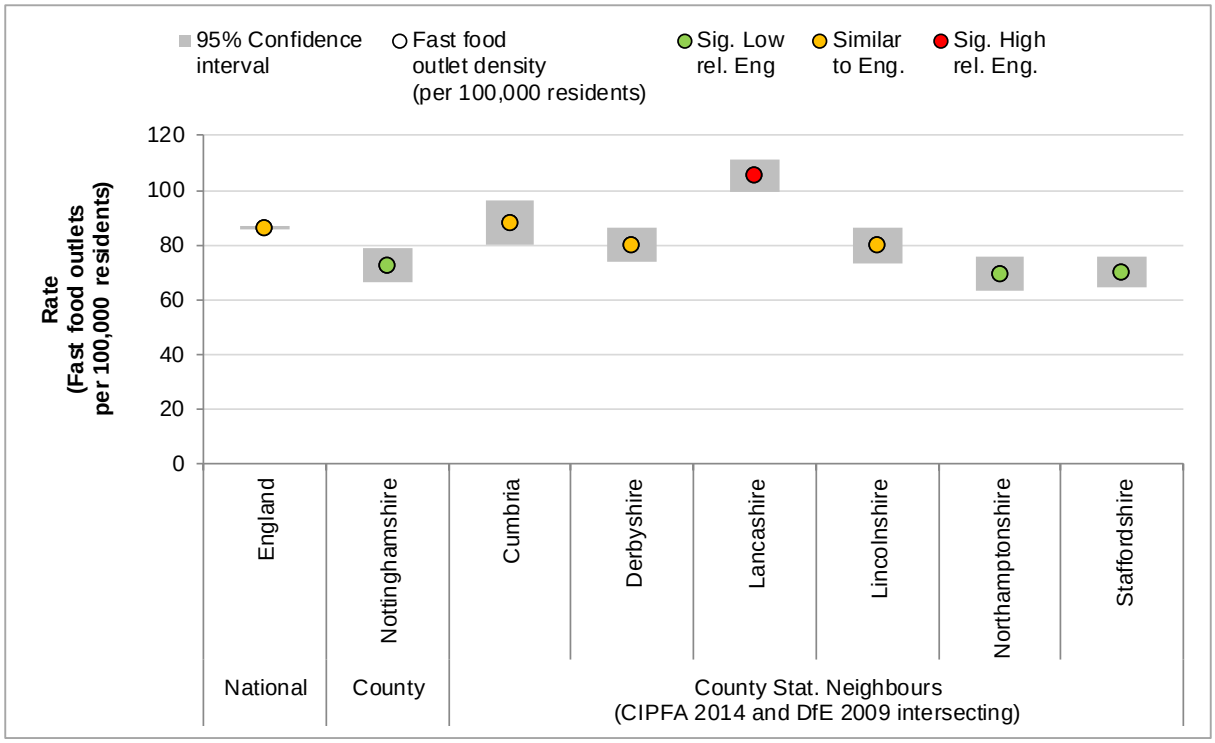
Figure 4: Fast food outlet density: Nottinghamshire County and Districts



Source: PHE NOO Fast food outlet density report 2013 URL: http://www.noo.org.uk/visualisation

- In 2013, 570 fast food outlets were identified across Nottinghamshire County with over 72 per 100,000 resident population.
- Nottinghamshire County has a **statistically lower** density of fast food outlets than the England average. This is mirrored in Gedling, Newark and Sherwood and Rushcliffe.
- Ashfield, Bassetlaw, Broxtowe and Mansfield have a **statistically similar** density of fast food outlets to the England average (PHE/NOO, 2013).

Figure 5: Fast food outlet density: Nottinghamshire County and its statistical neighbours



Source: PHE NOO Fast food outlet density report 2013 URL: http://www.noo.org.uk/visualisation

- The range of fast food density per 100,000 population between Nottinghamshire County and its statistical neighbours is between 69.3 and 105.1.
- Nottinghamshire has the third lowest density of fast food outlets per 100,000 residents when compared to its statistical neighbours[1] (PHE/NOO, 2013).

3) Targets and performance

Public Health Outcomes Framework (PHOF)

[1] Statistical neighbours have been taken from Chartered Institute of Public Finance & Accountancy (CIPFA) 2014 and Department for Education (DfE) 2009 nearest neighbour reports. CIPFA is relevant for general population but mostly adults, whereas DfE is relevant to children. There is overlap between the two lists and the six that appear in both lists have been used as the statistical neighbour set. These are Cumbria, Derbyshire, Lancashire, Lincolnshire, Northamptonshire and Staffordshire.

Within Domain 2 (Health Improvement) of the PHOF 2013-16 (Department of Health 2012) the following indicators collected as part of the Sport England Active People's Survey are used to measure fruit and vegetable consumption:

- Indicator 2.11i Fruit and Veg '5 A DAY'
- Indicator 2.11ii Average portions of fruit eaten
- Indicator 2.11iii Average portion of vegetables eaten

Data for these indicators has not been able to be presented in section 2 but will be in subsequent refreshes of this chapter.

NICE quality standards

These are concise sets of prioritised statements designed to drive measurable quality improvements within a particular area of health or care. They are derived from the best available evidence such as NICE guidance and other evidence sources accredited by NICE. There are currently 3 quality standards that have statements relating to diet and nutrition

- Nutrition support in adults – QS24 NICE (2012). There are five quality statements relating to malnutrition and nutrition support.
- Obesity: prevention and lifestyle weight management in children and young people QS 94 NICE (2015). There are three quality statements relating to diet and nutrition:
    - Statement 1: Vending machines
    - Statement 2: Nutritional information at the point of choosing food and drink options
    - Statement 3: Prominent placement of healthy options
- Nutrition: improving maternal and child nutrition QS98 NICE (2015). There are four quality statements relevant to diet/nutrition
    - Statement 1: Pregnant women attending antenatal and health visitor appointments are given advice on how to eat healthily in pregnancy
    - Statement 3: Pregnant women and the parents and carers of children under 4 years who may be eligible for the Healthy Start scheme are given information and support to apply.
    - Statement 5: Parents and carers are given advice on introducing their baby to a variety of nutritious foods to complement breast milk or formula milk
    - Statement 6: Parents and carers receiving Healthy Start food vouchers are offered advice on how to use them to increase the amount of fruit and vegetables in their family's diet.

It is unclear if all of these quality standards are being met in Nottinghamshire.

School Meal Standards (2015)

Food served in some schools and academies in England must meet the school food standards so that children have healthy, balanced diets. The school food standards apply to all maintained schools, and academies that were founded before 2010 and after June 2014.

Hospital Food Standards (2014)

The NHS has mandatory food standards included in the NHS Standard Contract and hospitals are ranked on food quality on NHS Choices. The food quality standards include:

- Hospitals should screen patients for malnutrition and patients should have a food plan
- Hospitals must take steps to ensure patients get the help they need to eat and drink, including initiatives such as protected meal times where appropriate.
- Hospital canteens must promote healthy diets for staff and visitors – the food offered will comply with government recommendations on salt, saturated fats and sugar.
- Food must be sources in a sustainable way so that it is healthy, good for individuals and for the food industry.

In addition it is recommended that all hospitals develop a food and drink policy that aims to encourage healthy eating, high quality food production, sustainability and excellent nutritional care.

The recent Department of Health guidance on 'The efficient management of healthcare estates and facilities' (Nov 2014) sections 3.23 & 3.24 acknowledges that food outlets and vending machines can be good sources of income. However, it is important that operators support the main business of the NHS – promoting and maintaining health as well as dealing with ill health. NHS service providers are recommended to work with retailers and vending machine operators to increase the range and visibility of healthy food options for customers and reduce the availability of more unhealthy options.

4) Current activity, service provision and assets

Strategy

The Framework for Action on Tackling Excess Weight (2013-18) and associated action plan developed by the Obesity Integrated Commissioning Group is the delivery mechanism for the Nottinghamshire Health and Wellbeing strategy to tackle excess weight. Priorities include key actions on diet and nutrition:

- Increase healthier food choices in out of home provision such as fast food outlets by working with Environmental Health Officers and Trading Standards.
- Increase the number of workplaces that are promoting and supporting healthy eating initiatives
- Identify how planning activities can support healthy eating.

Current local service provision

From April 2013, Public Health in Local Authorities became the responsible commissioner for locally led nutrition initiatives via funding from the Public Health Grant. Since the last JSNA update, Tier 1 community nutrition services previously commissioned by Public Health have been decommissioned and a competitive tender has been undertaken for an obesity prevention and weight management service covering Tiers 1, 2 and 3. Tier 1 includes targeted healthy eating prevention and early intervention activities as well as providing brief intervention and motivational interviewing for frontline health and social care staff. Nottinghamshire County Council (NCC) awarded the new Obesity Prevention and Weight Management integrated service to Everyone Health, Sport and Leisure Management (SLM) in December 2014. The service went live on 1st April 2015 and will run until 31st March 2019 with a potential one by one, two year extension. This new service has been commissioned on achievement of outcomes of which one is around diet. The first year of the contract will be used to determine

the tools to measure these outcomes and provide a baseline before setting performance targets for future years. Future updates of this JSNA chapter will provide detail on healthy eating activity and dietary outcomes of the service.

Assets

The table below provides an overview of the current assets there are in Nottinghamshire which support work around diet and nutrition.

Asset	Description
Societal influences	
Change4Life	Change4Life is the national social marketing programme focussing on promoting healthy weight across the life course including eating well. The national programme and Change4Life and Start4Life branding is utilised locally by services and districts.
Front of pack labelling	Front of pack nutrition labelling scheme provides the information that food and drink companies can put on the front of their packaging in the form of: energy (kilojoules and kilocalories) only, or energy plus fat, saturates, sugars and salt. The UK 2013 voluntary scheme recommends a format for this information that uses colour coding and percentage 'reference intakes'.
Government's Public Health Responsibility Deal: Food pledges	Launched in March 2011, there are 10 collective pledges to support the core commitment to encourage and enable people to adopt a healthier diet. This will support and enable our customers to eat and drink fewer calories through actions such as product/ menu reformulation, reviewing portion sizes, education and information, and actions to shift the marketing mix towards lower calorie options.
COUNTY LEVEL INTERVENTIONS /INITIATIVES	
Early Years, Children and Young People	
Family Nurse Partnership	Intensive support programme for teenage parents to have a healthy pregnancy and improve the health of their child.
Healthy Start	Healthy Start is a UK-wide government scheme to improve the health of low-income pregnant women and families on benefits and tax credits. Women also qualify during the whole of their pregnancy if they are under 18 when they apply, even if they don't get any benefits or tax credits. Pregnant women and children over one and under four years old can get one £3.10 voucher per week. Children under one year old can get two £3.10 vouchers (£6.20) per week. They can be spent on milk, plain fresh or frozen fruit and vegetables (fruit and vegetables with nothing added), or infant formula milk in a wide variety of local shops and supermarkets and with milkmen that have registered to take part in the scheme. Every eight weeks, beneficiaries also get vitamin coupons with their vouchers. The coupons are either for Healthy Start women's tablets or Healthy Start children's drops.

Asset	Description
Healthy Child Programme	The early identification and prevention of obesity is a key priority in HCP. All families are given information and advice around breastfeeding through information and advice around breastfeeding, healthy weaning, healthy eating and active play.
Children's Centres	54 of the Children's Centres (93%) are engaged in the Healthy Early Years status which encourages healthy lifestyles, including physical activity and healthy eating. 33 have achieved gold status, 21 are working towards gold and 4 have yet to engage.
School Food Plan	The School Food Plan a national initiative supported by The Secretary of State for Education which aims to: • Increase the take up of free school meals • Raise the standards of school food • Implement universal frees school meals for all infant children. This allows children to have a free, nutritionally balanced hot meal. The Nottinghamshire School Meals Service is involved in the provision of universal free school meals for those schools it has responsibility for and to support take up of free school meals. Schools in Nottinghamshire are encouraged to get involved with all aspects of the School Food Plan, including the work on this being led by the Food for Life Partnership.
School nursing and healthy schools	A proposed remodelling of the intervention is taking place. The new model will aim to provide advice and guidance to schools on a range of public health priorities, including healthy eating.
Workplaces	
Nottinghamshire Wellbeing at Work: Workplace Health Award	The scheme aims to provide small, medium and large sized organisations with the opportunity to promote and enable better health and wellbeing in the workplace. The scheme is open to all organisations regardless of industry (or sector). Theme 3 is around healthy weight. Locally within Nottinghamshire there has been an increase in numbers signed up to The Workplace Health Scheme as it has been rolled out throughout the County with 9 new workplaces signed up to the revised County model, and a further 8 pending (June 2015)
Adults with long term conditions	
Staying well (Expert Patient programme	This County wide programme is run under licence from the Department of Health (DOH) and has a main focus is on self- management for people with long term conditions. Part of the 6 week programme follows the Eatwell Plate and food labelling key messages with hints and tips of how to easily incorporate into daily life. The main focus is on helping people to make informed choices about eating more healthily to help them best manage their health. The Scheme is funded by the Clinical Commissioning groups (CCGs) and covers all Districts (apart from Bassetlaw and Nottingham City).
Other	

Asset	Description
Pulp friction smoothie bar project	A Community Interest company (CIC) run by young adults with learning disabilities who promote healthy eating through the smoothie bike project, travelling Kitchen and Social eating initiative. The CIC deliver throughout the County.
DISTRICT/LOCALITY INTERVENTIONS/INITIATIVES	
Provision of allotment spaces	Allotment availability within all Districts is monitored as an action within the Framework for Action on Excess weight. The monitoring of demand enables assessing of need and expansion where necessary. All districts have supported community food growing projects either through small grant funding or provision of allotment space.
Grow and Grow	This four year community growing project is funded by Reaching Communities funding and operates within Broxtowe Borough. The project offers a variety of methods to support and encourage community growing, targeting areas and communities of highest need. The project is currently looking to develop a county wide remit.
Healthier Options Takeaway	The Healthier Options Takeaway (HOT) merit scheme (piloted by Rushcliffe Borough Council) was rolled out to the rest of the Nottinghamshire Districts in January 2015 This aims to increase the accessibility and awareness of healthier options in hot food takeaways and sandwich shops. Other benefits include: • Increasing customer choice • Increasing customer satisfaction and sales • Enhancing the reputation of the business • Receiving a certificate and promotional material to display in premises Each district is to have a minimum of 12 businesses achieving the merit in the first 12 months (84 businesses across the county) targeting those takeaways situated in areas of high deprivation within each district. A quality assurance system is in place to assess the accuracy of completion of self-assessment forms and provide confidence in the scheme. There are currently 22 businesses across the county that have been awarded the HOT scheme. A clear monitoring and evaluation framework has been developed to assess both the effectiveness and impact of this work developing practice based evidence to inform future work. The evaluation will consider three themes outcomes, equity and process.
Fast food takeaway mapping	On a national level there is evidence to suggest the link between high numbers of takeaway businesses and proximity to schools. Work undertaken at District level suggests clustering of takeaways in areas of deprivation and in some cases within close proximity to schools.
Local development plans/core strategies	Currently limited joint working with planners and public health to ensure that the built and natural environment

Asset	Description
	encourages a healthy and sustainable food system, providing or constraining opportunities for healthy and unhealthy food access.
Food bank provision for Families in North Nottinghamshire	This report commissioned by Nottinghamshire County Council and undertaken by Sheffield Hallam University documents food bank provision in the districts of Newark & Sherwood and Bassetlaw. The research aims to provide an understanding of the numbers and characteristics of those accessing food banks in the area, with a particular focus on the extent of food poverty amongst children.

5) Evidence of what works



The UK's national food guide, the eatwell plate, defines the government's advice on a healthy balanced diet. The eatwell plate does not:

- apply to children under 2 years of age because they have different needs. Between the ages of 2 and 5, children should gradually move to eating the same foods as the rest of the family, in the proportions shown on the eatwell plate.
- include references to frequency of serving and recommended portion sizes, other than in relation to fruit and vegetables such as at least 5 portions of a variety a day, or eat 2 portions of fish a week, one of which should be oily. This is consistent with government advice and is in accordance with the available evidence.

Increasing the consumption of fruit and vegetables can significantly reduce the risk of many chronic diseases (FAO/WHO, 2004). Research has shown that an increase of one portion of fruit or vegetables a day lowers the risk of coronary heart disease by 4% and the risk of stroke by 6%, and can help lower blood pressure (Wang, X. et al 2014).

A large body of evidence suggests that fish consumption, particularly of oily fish, reduces cardiovascular disease risk; furthermore, there is also evidence that increased fish consumption might have beneficial effects on foetal development (SACN, 2004). Oily fish can contain low levels of pollutants that can build up in the body. For this reason there are maximum recommendations for the number of portions for different groups of people.

- Women and girls should eat no more than two portions of oily fish a week if they are thinking about becoming pregnant in future or if they are currently pregnant or breastfeeding. This is because pollutants found in oily fish may affect the development of a baby.
- Men and boys, and women and girls who know they won't become pregnant in future can eat up to four portions of oily fish a week.

The recent report on 'Carbohydrate and Health' (SACN 2015) advises that the term 'free sugars' be adopted in the UK to describe the types of sugars that need to be consumed in smaller amounts and advises that average intake of these should not exceed 5% of total dietary intake roughly 30grams or 7 sugar cubes, alongside minimising sugary drinks and increasing fibre intake for all age groups from 2 years upwards.

Vitamin and mineral supplements are not a replacement for good eating habits. Most people can get all the nutrients their body needs by choosing a variety of foods, in the proportions shown, from the main 4 food groups in the eatwell plate. Some population groups need certain supplements, for which there are government recommendations (NICE, 2008; NICE 2011). All women thinking of having a baby should have a folic acid supplement, as should any pregnant women up to week 12 of her pregnancy. Folic acid can help to prevent neural tube defects, such as spina bifida (NICE, 2008). Vitamin D supplements should be taken by all pregnant and breastfeeding women, children aged six months to five years, and people aged 65 and over. People who are not exposed to much sun - for example, people who are housebound (stay indoors) for long periods of time or cover up their skin when outdoors should also take vitamin D supplements (NICE 2011). All children aged six months to five years should take a supplement containing vitamins A, C and D. This is a precaution because growing children may not get enough, especially those not eating a varied diet, such as fussy eaters (NICE, 2008). Nationally, the Healthy Start scheme ensures that breastfed babies over 6 months of age and all children between 1 and 4 years receive daily vitamin drops (containing vitamins A, C and D) (NICE 2008).

The Foresight report (Butland B et al. 2007) highlights food consumption and food environment as predominant themes in the obesity system map which combined with other key elements such as physical activity plays a vital part in the healthy weight of the population. This report indicates the importance of quality, quantity (portion size) and frequency (snacking patterns) of an individual's diet as well as the influence of the environment on an individual's food choices, for example a decision to eat more fruit and vegetables may be influenced by the availability and quality of fruit and vegetables near home.

The National Institute for Health and Clinical Excellence (NICE) develop guidance documents - the key documents which make reference to a healthy diet include:

- Nutrition support in adults (2006) CG32
- Obesity (2006) CG43
- Maternal and child nutrition (2008) PH11
- Prevention of cardiovascular disease (2010) PH25
- Weight management before, during and after pregnancy (2010) PH27
- Obesity: working with local communities (2012) PH42
- Overweight and obese children and young people: lifestyle weight management services (2013) PH47
- Lipid modification: cardiovascular risk assessment and the modification of blood lipids for the primary and secondary prevention of cardiovascular disease (2014) CG 181
- Managing overweight and obesity in adults: lifestyle weight management (2014) PH 53
- Obesity: identification, assessment and management of overweight and obesity in children, young people and adults (2014) CG189
- Vitamin D: increasing supplement use among at-risk groups (2014) PH56
- Maintaining a healthy weight and preventing excess weight gain among children and adults (2015) NG7
- Dementia, disability and frailty in later life – mid-life approaches to delay or prevent onset (2015) NG16

Key documents produced by Public Health England which make reference to diet and nutrition are:

- Obesity & the environment briefing: regulating the growth of fast food outlets (Mar 14)
- The eatwell plate: how to use it in promotional material (Aug 14)
- Healthier and more sustainable catering (Aug 14)

Commissioning Nutrition and Hydration 2015-2018 published by NHS England (Oct 15) provides guidance to commissioning for the nutrition and hydration needs of the population.

The planning system can play a key role in improving public health. The National Planning Policy Framework (Department for Communities and Local Government, 2012) is clear that the purpose of the planning system is to contribute to the achievement of sustainable development, which includes the health, social and cultural wellbeing of local communities. The health and wellbeing of populations require healthy and sustainable food systems (Barton H et al, 2015). The places we live and work can either provide, or constrain opportunities for healthy and unhealthy food access. Planners can shape food growing and production, where food retail development should go, ensure the right balance of use classes and prevent any negative cumulative impact of multiple premises in the same vicinity. The recent publication 'Planning Healthy Weight Environments' by the Town and Country Planning Association and Public Health England (TCPA/PHE, 2014) gives guidance on how local authority planners can create places that enable people to achieve and maintain a healthy weight with access to a healthy diet being one of the areas considered.

6) What is on the horizon?

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The Vitamin D and Health report is currently being consulted on.

Children and Young People

The commissioning of 0-5 children's public health transferred from NHS England to local authorities in October 2015. This includes health visiting and Family Nurse Partnership ((FNP) targeted services for teenage mothers). This transfer will join-up that already done by Local Authorities for public health services for children and young people 5-19, (and up to age 25 for young people with Special Educational Needs and Disability [SEND]). One of the high impact areas for the Healthy Child Programme is healthy weight, healthy nutrition (including physical activity)

7) Local Views

A consultation with service users, current providers and key stakeholders took place between October 2013 and December 2013 to help define what approach obesity prevention and weight management service provision should look like in Nottinghamshire. Children, young people and adults who responded to the questionnaire were supportive of preventative services which improve healthy eating. Respondents would like to see a variety of preventative interventions in a range of settings including schools, youth clubs, with a large majority of respondents keen to see the establishment of community cooking courses being offered. A summary can be found here.

What does this tell us?

8) Unmet needs and service gaps

Since the last JSNA refresh there is an integrated Tier 1, 2 and 3 obesity prevention and weight management pathway in place. Over the next few years the service numbers accessing Tier 1 healthy eating interventions will be monitored to provide information on percentage uptake, service demand, outcomes achieved and if there are any unmet needs.

It is identified that there is a need to strengthen local assets to ensure that nutrition and healthy eating is being tackled as effectively as possible within the allocated resources This includes utilising the impact that the wider public health workforce and different professional groups are able to provide, particularly working with planning colleagues to ensure that the opportunities that planning gives, both supports and encourages access to affordable healthy food.

9) Knowledge gaps

The gaps in knowledge include:

- Local data on dietary habits of children, young people and adults and some of the at risk populations groups identified earlier.

- Lack of coherent information and evaluation of all the community and voluntary sector nutrition/ diet interventions across the county.

What should we do next?

10) Recommendations for consideration by commissioners

Recommendations		Lead
Strategy and integrated commissioning		
1.	Work with partners across the system to ensure there is no duplication or gaps in diet/nutrition service provision targeting areas and groups whose dietary intake are poorest to maximise health outcomes, monitoring uptake by protected groups.	Public Health, District /Borough Councils and Clinical Commissioning Groups.
Social marketing		
2.	Eating well is promoted through Change4Life across Nottinghamshire Districts	Nottinghamshire County Council and District/Borough Councils
Prevention		
3.	Ensure that healthy eating remains a priority for the commissioning of services for 0-19 age group by the Integrated Children's Hub.	Public Health (Children's Integrated Commissioning Hub)
4.	Work with local Food Banks to support individuals with how to make healthy diet choices within a limited budget.	Public Health
5.	Evaluate the Healthier Options Takeaway (HOT) initiative to assess both the effectiveness and impact of this work developing practice based evidence to inform future work.	Environmental Health and Public Health
6.	Develop closer working relationships between planners and public health professionals to ensure access to fresh, affordable healthier food This could include • Giving consideration to the concentration of food uses in town centres / high street localities • Ensuring opportunities are provided as part of new developments for food growing/allotments or other innovative arrangements.	Planning & Public Health
Service quality and accessibility		
7.	Undertake an audit of progress locally against the NICE quality standards relating to diet and nutrition, to benchmark and identify areas where improvements are needed.	Public Health
8.	Commission dietary interventions that are evidence based and utilise the Standard Evaluation Framework for diet to evaluate.	Public Health and District/Borough Councils
9.	Ensure that health and social care staff understand the importance of Vitamin D and promote	Clinical Commissioning Groups & Public Health

	supplements to at risk individuals as per NICE guidance.	
10.	Continue to build the capability of the workforce to ensure that health and care professionals are clear about promoting the benefits of a healthy diet so that they have healthy conversations (making every contact count) with their patients and service users providing evidence based messages.	Public Health
11.	Within the first year of the new obesity prevention and weight management contract, agree the how the diet outcome will be measured and obtain baseline data to help inform performance targets for the following year.	Public Health

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