Joint Strategic Needs Assessment (JSNA) Summary

Public Health Sciences, Hull City Council
NHS Hull Clinical Commissioning Group

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INTRODUCTION

Hull is an amazing City. We believe our citizens and our communities are its greatest asset. It is a place that has a history of welcoming and supporting the most vulnerable, including those seeking refuge from other countries. It is a City of strong partnership working and a shared vision of what is required to improve the lives of our residents. It is a great place to be born, live, learn, work, have a family and grow older. Through Freetown, one of our twin cities, Hull is proud to have a strong connection to Sierra Leone. This connection reflects how much we value diversity and equality. The City has a sense of optimism for the future on the back of the announcement in November 2013 of Hull as UK City of Culture 2017, closely followed by news about Siemens confirming their investment in a major offshore wind turbine manufacturing facility coming to Hull. Soon after came news in relation to the much needed transport infrastructure A63 upgrade. Hull is a recovering City. We have been devastated by the legacy of a World War 2 bombing campaign and the loss of the thriving port and fishing industry. The City has recently survived major floods. Hull now suffers some of the highest levels of deprivation in the UK and, despite progress, remains close to the bottom of key league tables for employment, health, educational achievement, poverty and digital access. However, a decade of major regeneration schemes and investment across the City has already had a huge beneficial impact. The continuing regeneration of the City centre and housing stock has added to the City’s renewed sense of optimism. Hull is a changing City. Overall people are far healthier than they were in the past. Unfortunately not everyone in the City has the opportunity to thrive. This is unfair and unjust. Health inequalities are not inevitable. The Director of Public Health Annual Report focuses on improving mental wellbeing and physical activity, and reducing social isolation using the City of Culture as a unique opportunity to ‘kick start’ long-term change and build a lasting legacy. Hull is a proud City. Hull is similar to many other cities and urban areas in northern England. Like other cities that score particularly badly on the Index of Multiple Deprivation, we are characterised by a very “tight” boundary around our urban centre (but, fortunately, coterminous with the Hull Clinical Commissioning Group area) so that the more prosperous (and healthier) outer suburbs are instead part of a different local authority. This also places major restrictions on our finances as our ability to generate income from the Council tax and business rates from the City’s suburbs and satellite business developments is hugely limited. However, this is not to underestimate the impact that poverty and deprivation have in Hull, and the resulting impact on the health and wellbeing of our population. Overall, the story of Hull is a story of a City that is proud and optimistic and wants to share its sense of freedom and space with the rest of the UK.

This JSNA summarises what the issues are, what the local situation is and what the strategic needs are in relation to over 70 topic areas. Note that quite a lot of these topics overlap or are associated, and information is not necessarily included in all these sections. For example, there are topic areas for both screening and breast cancer, and for maternal health and breastfeeding, and deprivation and crime, etc. So it might be necessary to look in more than one section for the information you require. After general context, health, and lifestyle factors, the topics are broadly ordered around the three outcomes from the Health and Wellbeing Board Strategy [1]: the best start in life; healthier, longer, happy lives; and safe and independent lives.

More detailed information is available in our detailed JSNA Toolkit reports, our JSNA Hull Atlas, Health and Lifestyle Survey reports, Social Capital Survey reports, and local analysis of the Public Health Outcomes Framework (all available at www.hullpublichealth.org). Further information is also given on page 111 and includes abbreviations, glossary, information on the local surveys completed, details of comparator areas used in this report, etc.

This complements other overarching strategy documents for Hull such as the Health and Wellbeing Board Strategy [1], the City Plan [2] and the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans [3], and the Director of Public Health Annual reports [4-6] as well as other strategies on very specific areas and topics.

This JSNA summary is a ‘living’ document, updated frequently, and any comments, corrections and additions would be welcome.
CONTEXT OF NEED

Everything around us impacts on health and wellbeing, and our health and wellbeing impacts on everything we do.

Dahlgren and Whitehead illustrated the determinants of population health and wellbeing in the following diagram [7].

Determinants of population health and wellbeing

This ‘context of need’ section of this report examines the geographical area, population and summarises some of these broader determinants of health and wellbeing such as information on deprivation, housing, the environment, crime, social capital, social isolation, social care, and caring and carers.

Information on schools including educational attainment is covered within the section on children and young people (commencing page 58), information on the labour market and benefit claimants are covered in the section on working-age adults (commencing page 63) and behavioural and lifestyle factors are covered in the section commencing on page 37.
GEOGRAPHICAL AREA

What’s the issue?

In order to improve health and reduce inequalities, it is important to understand the make-up of the local population and geographical area. Features within the geographical areas, such as rivers or the location of residential, commercial and industrial areas, or the way in which boundaries have been derived can influence health needs of the local population, and also their access to services.

What’s our situation?

The city and port of Hull lies on the banks of the river Humber and is positioned at the gateway to Europe. It is linked to the national motorway networks from the west via the M62 and to the south across the Humber Bridge via the M180. Hull is surrounded by the East Riding of Yorkshire a largely rural area containing a number of suburbs immediately adjacent to the city.

In November 2013, Hull was announced as the winner of the UK’s City of Culture 2017 [8]. Hull is also a Purple Flag city recognising excellence in the management of town and city centres at night.

In relation to the characteristics of Hull, one problem relatively unique to Hull is its tight geographical boundaries. Most cities such as Hull are relatively deprived, but most other local authority or NHS boundaries for that city cover some more affluent suburban areas. Hull has very few affluent suburbs within its boundaries, and it is estimated that around 2,500 people in Hull move to the ‘leafy suburbs’ in East Riding of Yorkshire just outside Hull’s boundary each year. The people that tend to move will often do so because of children and better schools, better quality and choice of housing, etc. The more aspirational, successful and motivated people will tend, on average, to have increased mobility. This also affects the employment and skills profile of Hull. Furthermore, owing to Hull’s somewhat isolated location, people may be less likely to be influenced by positive health factors and changes occurring elsewhere in other geographical areas. Due to Hull’s high levels of deprivation and tight boundaries, Hull is often at the bottom of national league tables and among the ‘worst’ for various indicators for both health and the wider determinants of health. As a result, there are often negative comments made about Hull, which can influence attitudes, health and lifestyle. Within local qualitative research projects, there were certainly some residents that had a “what’s the point?” attitude with regard to their health and lifestyle changes [9], however, others felt that this was just an excuse “You can lead a healthy lifestyle anywhere, it’s not the place – I staunchly defend Hull– it’s about choices” [10].

Other geographical areas have been defined on the basis of Clinical Commissioning Group (CCG) boundaries, and Sustainability and Transformational Plans (STPs) [11] have been produced for all 44 STP areas in England. Hull is included within the Humber, Coast and Vale (HCV) STP [3, 12], which includes five other local CCGs (see page 111 for more information).

For more detailed information, see the JSNA Toolkit: Geographical Area report.

What are the strategic needs?

Most of the above factors are fixed and not amenable to change. However in the absence of altered boundaries, they reinforce the need for close and collaborative working with local geographic partners, particularly in the East Riding of Yorkshire, and areas included within the HCV STP.

The upside of Hull’s tight boundaries is that access to central services in Hull City Centre is relatively good for the majority of the public, with good transport links radiating to and from the City Centre. Links such as bus routes are often less good between communities “around the edge” of Hull, which may be physically near to one another but not have easy access.

There has been significant recent investment in the city of Hull revealed within Hull’s City Plan as well as investment obtained prior to the start of 2017 linked with the UK City of Culture 2017 [8]. Further details about the City Plan, the City of Culture and its legacy, recent investment in the city and future investment plans for the city are given on page 111.

The local Humber, Coast and Vale “Start Well, Live Well and Age Well” STP [3] aims to move towards place-based provision of services (see page 111 for more information).
**POPULATION**

**What’s the issue?**

In order to improve health and reduce inequalities, it is important to understand the make-up of the local population. People at different ages and stages of their lives have different health needs. Furthermore, people from different backgrounds defined on the basis of Black and Minority Ethnic (BME) group, socio-economic group, gender, age, sexuality, religion and other factors may seek professional medical help to a lesser or greater degree than the general population reflected by access to health care. Certain geographical areas will have higher proportions of specific populations such as couples with young families, older people, students, and other groups and this will influence the health needs for different geographical areas. Understanding the population is an essential tool in determining current and future health needs.

**What’s our situation?**

Based on mid-year resident population estimates from the Office for National Statistics [13], the population of Hull was 260,240 in 2016, a increase of increase of 1,245 since 2015 and 2,530 since 2014. To mid-year 2016, there were 3,552 births and 2,490 deaths in the year. Each five year age band from 0-4 to 60-64 contains between 5% and 7% (between 12,900 and 17,900 people in each five age group) of the overall population with the exception of those aged 20-24 years (8.6%), 25-29 years (8.9%) and 30-34 years (7.4%) partly due to the student population. Overall, there were 34,460 residents aged 0-9 years, 28,415 aged 10-19, 45,607 aged 20-29, 35,055 aged 30-39, 32,721 aged 40-49, 32,603 aged 50-59, 25,446 aged 60-69, 15,823 aged 70-79, 8,556 aged 80-89, and 1,554 aged 90+ years. Around one-fifth of the population was aged 0-16 years, another fifth aged 17-28 years, another fifth aged 29-43 years, another fifth aged 44-59 years, and the final fifth aged 60+ years.

![Population structure shown for Hull (bars) compared to England average (line)](image)

Based on the GP registration file for January 2017, the estimate of the resident population is slightly higher at 271,658 residents with 295,374 patients registered with General Practices in Hull [14].

*For more detailed information, see the JSNA Toolkit: Demography and Demographics report.*

**What are the strategic needs?**

At different life-stages, people have very different needs. For instance, among areas with a high percentage of families, maternal health, breastfeeding, vaccinations and immunisations, and a good start in life are important issues. Students and young people may need advice and support in relation to lifestyle and behavioural factors such as alcohol and smoking, mental health, and sexually transmitted infections. People of working age may have needs in relation to employment, mental health, and lifestyle and behavioural risk factors, such as smoking and diet. Older people will tend to have more long-term conditions, and needs in relation to falls and hip fractures, dementia, and mental health including social isolation.

Because of the 30,000 "extra" people registered with Hull GPs, but residing in East Riding of Yorkshire, it services are delivered through Primary Care, account needs to be taken of these non-Hull residents on the lists of Hull General Practices.

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[13]: Office for National Statistics
[14]: General Practices in Hull
ETHNICITY

What’s the issue?

In order to improve health and reduce inequalities, it is important to understand the make-up of the local population. People from different Black and Minority Ethnic (BME) groups have different health needs as they may have an increased risk of specific diseases due to different genetic risk factors or have different prevalence of lifestyle and behavioural risk factors and varying problems with access and cultural issues.

What’s our situation?

From the 2011 Census [15, 16], Hull remained 94.1% White, with 89.7% of Hull residents White British, 0.2% White Irish and 0.1% White Gypsy or Irish Traveller. A further 1.3% were from Mixed BME groups, 2.4% were Asian or Asian British (including 0.8% Chinese), 1.2% were Black or Black British, 0.4% were Arabs and 0.4% were from other ethnic groups. Newland and Myton wards had the lowest proportion of White British residents at 66% and 69% respectively, while the largest percentage of White British residents were found in Sutton and Bransholme West wards (98% in each). 4.4% of Hull residents were Other White, largely Eastern Europeans, with the highest percentages in Newland and St Andrews wards (17% and 15% respectively). The largest non-White ethnicity was Asian or Asian British, making up 2.5% of Hull’s population, with the largest percentages in Newland, Myton and Avenue wards (9.5%, 7.5% and 6.0% respectively). Overall, 6.5% of the population spoke a language other than English as their main language in their home although this varied from 25.1% in Newland ward to 0.6% in Bransholme West ward. Overall, 2.0% spoke Polish, 1.7% spoke other European Union languages and 0.6% spoke Chinese. Hull’s BME population is diverse with relatively small numbers of people from a wide range of different BME groups.

In the 2001 Census [17], 97.7% classified themselves at White with 96.4% being White British. So whilst the percentage of BME population is still relatively low compared to many parts of England for 2011, there has been a threefold increase (an increase of 6.7 percentage points) between 2001 and 2011.

From the Child Health Profile 2017 [18], in 2016, 5,400 (17.3%) of school children in Hull were from minority ethnic groups (having increased from 9.1% in 2010 [19] and from 14.9% in 2014 [20]). In January 2017, English was not their first language for 2,897 (11.4%) primary and 1,439 (10.9%) secondary pupils [21] which represents a reduction from January 2016 when it was 13.8% and 10.4% for primary and secondary school pupils respectively [22].

For more detailed information, see the JSNA Toolkit: Demography and Demographics report.

What are the strategic needs?

The relatively large increase over the last decade or so and wide diversity in Hull’s BME population requires changes to ensure that the health needs of the population are taken in to consideration, and that there are no barriers to access to healthcare. There should also be work to identify the most vulnerable citizens and work with them to address their specific needs.
POPULATION PROJECTIONS

What’s the issue?

In order to improve health and reduce inequalities, it is important to understand the make-up of the present and future local population. People at different ages and stages of their lives have different health needs. Those in the oldest age groups have the greatest health need and it is these age groups where it is projected that the largest relative increases will occur in the population due to advances in health care and people living longer. Understanding the population is an essential tool in determining current and future health needs, and so planning to take account of changes.

What’s our situation?

Based on mid-2014 population projections, the Office for National Statistics (ONS) estimate the resident population of Hull was 257,600 in 2014 [23], and they project that this will increase to 263,000 by 2025 (an increase of 2.1%) and to 267,700 by 2035 (an increase of 3.9%) [24].

Over the shorter term to 2025, ONS project increases of 4.4% among the 0-19 year age group, decreases of 2.4% and 7.3% among those aged 20-39 years and 40-59 years respectively, and increases of 19.9% and 12.9% among those aged 60-79 years and 80+ years respectively. These mask relatively large individual changes within five year age groups such as an increases of 17.6%, 15.3% and 33.7% among those aged 10-14 years, 55-59 years and 70-74 years respectively, and decreases of 12.6% and 12.0% among those aged 20-24 years and 40-44 years respectively [24].

Over the longer term to 2035, ONS project increases of 1.3% among those aged 0-19 years, decreases of 2.9% and 7.5% among those aged 20-39 year and 40-59 year respectively, and increases of 25.8% and 59.4% among those aged 60-79 years and 80+ years respectively [24].

Among those aged 65+ years, it is projected that Hull’s population will increased by 17.4% by 2025 (from 38,000 in 2014 to 44,600 in 2025) and by 40.8% by 2035 (to 53,500). Among those aged 85+ years, it is projected that the population will increase by 21.3% from 4,700 in 2014 to 6,400 in 2025, and by 80.9% to 8,500 in 2035 [24].

For more detailed information, see the JSNA Toolkit: Demography and Demographics report.

What are the strategic needs?

Rising numbers of elderly and very elderly people will mean rising demand for a wide range of services which meet the needs of elderly people. Not only are people living longer on average, but elderly people are living with an increasing number of chronic diseases which have implications for their health and care needs. In the absence of other changes, the 40% increase in over 65s in Hull over the next 20 years will mean a similar 40% increase in service demand.
DEPRIVATION AND POVERTY

What’s the issue?

Poverty is not having enough money to get by on whereas deprivation refers to a more general lack of resources and opportunities. Unemployment, poor housing, lack of qualifications, debt, low income, fuel poverty, crime and many other social and environmental factors all indirectly affect the health of the population. Increased deprivation means that there is poorer health, but this is compounded as poor health also affects other measures such as employment and motivation to improve employment, education and the person’s environment such as housing. People in more deprived areas also tend to have lower health expectations and potentially fewer GPs per population so there are more likely to be delays in diagnosis and treatment which will influence survival. People living in more affluent areas tend to be among the first to initiate positive health changes whereas people living in more deprived areas find it more difficult to change due to the stress of poverty and increased pressures of life. Consequently, those who live in the most deprived areas are more likely to have individual risk factors for ill health such as smoking, poor diet and lack of exercise. There may also be more barriers in relation to access to health improvement services such as financial barriers, transport issues, access to local cheap good quality fresh fruit and vegetables, and safe access to parks.

What’s our situation?

Hull has high levels of both poverty and deprivation. In general, in relation to national averages, Hull has a higher unemployment rate, more poor housing, residents qualified to a lower level and higher levels of crime.

Based on the Index of Multiple Deprivation 2015 score [25], Hull is the 3rd most deprived local authority in England (out of 326) with 17 of Hull’s 23 wards amongst the most deprived 20% nationally (fifth), two in the second most deprived fifth and four in the middle fifth nationally. Hull has the third highest percentage of lower layer super output areas1 within the most deprived 10% within England.

Child poverty (children living in households where income is less than 60% the median household income before housing costs) is high in Hull. For 2014, 31.0% of dependent children aged 0-19 years lived in relative poverty compared to 19.9% across England [26, 27]. Although unsurprisingly the percentages differed substantially across the wards in Hull from 8.9% in King’s Park to 48.8% in Orchard Park and Greenwood [27]. In total, it is estimate that there are 18,455 (out of 59,455) dependent children living in poverty in Hull.

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1 The geographical areas on which the IMD is based. Hull has 166 LLSOAs. The boundaries of each LLSOA were created so that the LLSOAs are relatively uniform in terms of size (for statistical comparison reasons) with each LLSOA having a minimum population of 1,000 residents and an average of 1,500 residents.
Hull is ranked as having the 6th highest ‘severe and multiple disadvantage’ of upper tier or ‘social services’ local authorities [28]. The statistical profile examined the problems faced by adults involved in the homelessness, substance misuse and criminal justice systems. Mental ill-health was a common complicating factor and poverty was an almost universal complicating factor.

Overall, for 2014, it is estimated that 15,026 (13.2%) of households (out of total 113,998) spend 10% of more of their income on fuel (or would do so in order to achieve satisfactory heating requirements) [26, 27].

For more detailed information, see the JSNA Toolkit: Deprivation and Associated Measures report.

What are the strategic needs?

Increasing secure employment is a key strategic need, strongly identified in Hull’s City Plan [2], which aims to create 7,500 jobs for local people over the next 10 years sits at the heart of the developing ‘energy estuary’, making Hull the UK hub for renewable energy industries and investment due to its location. It is necessary to ensure that local residents have the health, skills, education and training required to take up these employment opportunities.

It is necessary to support the ‘Fuel, Food and Finance’ anti-poverty initiatives that help people minimise the health impact of welfare reform and cost of living rises (e.g. initiatives that enable people to prevent, manage or recover from debt), and support the Living Wage. Suitable affordable housing is also required.

Benefit can be obtained from projects in the community that raise resilience, confidence, self-worth and self-esteem to raise aspirations for life. Children, young people and adults should have the best life opportunities in terms of education, training and employment so that they have financial stability. This will improve health and wellbeing.

The most vulnerable citizens should be identified so that their specific needs can be addressed by working with them, and it needs to be acknowledgement that in order to help people improve their health and wellbeing, needs unrelated to health might need to be addressed prior to health needs as people generally need to be in a stable environment before they can change their lifestyle and behaviour and improve their health and wellbeing.
**HOUSING**

**What’s the issue?**

“The relationship between poor housing and ill health is a complicated one which involves many different factors. Evidence suggests that living in poor housing can lead to an increased risk of cardiovascular and respiratory disease as well as to anxiety and depression. Problems such as damp, mould, excess cold and structural defects which increase the risk of an accident also present hazards to health” [29].

**What’s our situation?**

From the 2011 Census [15, 16], there were 236 communal establishments such as children’s homes, mental health units, care homes and nursing homes where 3,658 residents lived. There were 112,596 households across Hull (most in Drypool (8,687; 7.7%) and least in Pickering (3,383; 3.0%)). Accommodation type varied dramatically across the wards. Overall, 7.1% of houses or bungalows were detached, 26.9% were semi-detached, 49.2% were terraces, 0.1% were households in a caravan or other mobile or temporary structure and the remaining households were flats, maisonettes or apartments in purpose built blocks (12.6%), in converted or shared houses (3.0%) or in a commercial building (1.2%). Almost half of households were owned outright (19.9%) or with a mortgage or loan (29.7%), with 0.4% shared ownership (part owned and part rented), 28.1% of households were socially rented (mainly from the Council; 21.2%), 20.4% were privately rented and 1.5% lived rent free. The majority of households had gas central heating (83.8%), but 3.9% had no central heating (but this was as high as 7.5% in Southcoates West ward), 6.9% had electric central heating which included storage heaters (and was as high as 26.3% in Myton ward), and 5.3% of households had oil, solid fuel, other or more than one type of heating.

On average, there were 2.28 Hull residents per household, and this was least in St Andrew’s ward (1.41) and most in Orchard Park and Greenwood ward (4.09) [15, 16]. Four percent of households needed one additional bedroom and a further 0.5% needed two or more bedrooms (based on the ages and relationship of household members to one another). King’s Park had the lowest overcrowding with 1.7% households requiring at least another bedroom and St Andrew’s ward (7.3%) and Newland (10.9%) had the highest levels of overcrowding with the latter probably influenced by students sharing rooms to save costs. Overall, 25.9% of households had two or more extra bedrooms, 29.4% had one extra and 30.2% had the minimum number (no excess) of bedrooms.

Just over one-third of households were one person households (35.3%) and in one-third of these lived a person aged 65+ years (11.6%) [15, 16]. The majority were one family households (57.6%) with 5.9% all aged 65+ years, 26.3% married (10.3% no children, 10.9% dependent children and 5.1% non-dependent children), 12.5% cohabiting couples (5.7% no children, 6.1% dependent children and 0.7% non-dependent children), and 12.9% lone parent families (9.1% dependent children and 3.8% non-dependent children). The remaining 7.1% of households were other types such as those with all full-time students.

*For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.*

**What are the strategic needs?**

There is a need to improve the quality and energy efficient status in homes across the city, promote the availability of affordable homes, ensure there is stability in the housing market so people are not forced to move frequently, and reduce overcrowding. Where appropriate, ensure provision of specialist and adapted housing that is fit for purpose.

The Neighbourhood and Housing Strategy [30] provides a framework for achieving the vision of housing which meets the needs and ambitions of current and future residents of the city. Whilst a key part of the Housing and Neighbourhood Renewal Strategy is to support the delivery of new and improved housing, there is always the need to prevent people becoming homeless and provide support and advice to meet individual needs. The five themes of the strategy are: (i) housing need; (ii) access to housing; (iii) housing quality; (iv) neighbourhood quality; and (v) neighbourhood renewal and growth.
Hull’s Tenancy Strategy [31] provides guidance to registered providers of social housing. It sets out what registered providers of social housing in its district should consider in preparing policies which relate to the kinds of tenancies they grant, the circumstances in which they will grant a tenancy of a particular kind, where they grant tenancies for a fixed term, the lengths or the term, and the circumstances in which they will grant a further tenancy when an existing tenancy is coming to an end.

Hull City Council also has a strategy for people who need care (older people and people with mental health, learning or physical disabilities) live a more independent life through extra care housing which provides self contained housing with support and care and onsite social care services [32].
HOMELESSNESS

What’s the issue?

There is a statutory duty to find accommodation for households deemed to be unintentionally homeless, eligible and in ‘priority need’ (1996 Housing Act and Homeless (Priority Need) Order 2002 criteria) with priority need including pregnant women, families and other specific vulnerable groups. There is no statutory requirement to house single people (who may be in a relationship and/or have children who are not currently living with them) or other ‘non statutory’ homeless people or households. The physical health problems and mental health needs as well as the prevalence of behavioural and lifestyle risk factors such as smoking, poor diet, use of drugs and alcohol of people who are homeless is much worse and higher than the general population [33-35], and they attend A&E much more frequently [34-36] and use four times as many acute hospital services [34] than the general population, with a high cost to the NHS and public services [34, 35, 37].

What’s our situation?

There were 399 statutory homeless households in priority need in 2015/16 (3.48 per 1,000 households). This has fallen over the last decade from between 600-1000 households to around 500 households between 2009/10 and 2012/13, and has been around 400 such households in the last three years [38]. The current rate for Hull at 3.48 homeless households per 1,000 households is higher than England (2.52).

Between 2010/11 and 2012/13, the rate of statutory homeless households not in priority need was twice as high in Hull as England (4.4-4.7 for Hull compared to 2.0-2.4 for England per 1,000 households), but decreased for 2013/14 (3.1), 2014/15 (3.6) and 2015/16 (1.4). In Hull, there are 164 statutory homeless households not in priority need out of 114,672 households. Despite the recent fall in Hull, the latest rate is still considerably higher than England at 0.9 per 1,000 households [26, 27].

There are only 31 households in Hull in temporary accommodation. The rate in Hull is much lower than England (0.27 versus 3.12 per 1,000 total households for 2015/16) and this has consistently been the case since at least 2010/11 [26, 27].

It was estimated that there were 15 rough sleepers in Hull in Autumn 2016 [39] representing a rate of 0.13 per 1,000 households (between 7 and 15 since 2010 although 23 in 2015). However, this does not include ‘hidden homeless’ groups, such as those who are squatting or staying in places which are inaccessible to outreach workers, or people in hostels or shelters. Based on local information, there are 40-60 people with severe and multiple disadvantages who are at risk of being homeless but who are reluctant to engage with services and are not eligible for re-housing. In 2017, there were nine establishments offering accommodation to the homeless providing 499 places in total [40]. During 2016/17, the local Centre for Assessment and Emergency Accommodation had 249 different users of which 202 completed an assessment, and 76% were male, 23% female and 1% transgender, 19% were under 25, 44% aged 25-39, 27% aged 40-49, 8% aged 50-59 years and 2% aged 60-69 years. More than half (55%) were verified rough sleepers, 46% had no, 30% had limited and 21% had regular contact with services (3% unknown), 95% were White British, 64% had mental health needs (only 44% with a formal diagnosis) and 45% had physical health needs.

For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.

What are the strategic needs?

Hull had a much higher rate of homelessness cases (52.5 per 1,000 households) that were prevented and relieved compared to England (10.1) for 2013/14 [41]. So this good work on early intervention and the prevention of homelessness, and not placing statutory homeless households in temporary accommodation should continue.

Hull City Council runs quarterly homelessness strategy focus group meetings which provide opportunities for discussions on how the local authority can work to prevent homelessness and develop appropriate services and support for people who are homeless. Organisations working with people who are homeless are invited to attend these quarterly meetings.
What’s the issue?

“Humans interact with the environment constantly. These interactions affect quality of life, years of healthy life lived, and health disparities. The World Health Organisation defines environment, as it relates to health, as “all the physical, chemical, and biological factors external to a person, and all the related behaviours” [42]. Environmental health consists of preventing or controlling disease, injury, and disability related to the interactions between people and their environment” [43].

What’s our situation?

Hull has some outstanding cultural and historic assets, many of national and international significance. Information on the use of land is available for 2005 from Neighbourhood Statistics [44]. Green space makes up around a third of land use (34.4%), followed by domestic gardens (20.6%), roads (13.0%), domestic buildings (8.6%), non-domestic buildings (6.4%), water (2.5%), paths (1.6%) and rail (0.6%), with the remaining 12.3% defined as other land uses. As Hull is a city, the percentages are very different to the region and England where green spaces makes up over 85% of land use, gardens make up less than 5%, domestic buildings 1%, and roads 2%. In March 2010 [44], it was estimated that 7,090 dwellings could be built on land that was unused and suitable for housing or from developing existing buildings. Hull is a total of 7,154 hectares.

From the national Natural England’s Monitor of Engagement with the Natural Environment Survey, around 14% of Hull’s residents were estimated to have used outdoor spaces for health or exercise reasons over the previous seven days (compared to 18% for England) [26, 27].

For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.

What are the strategic needs?

The ambitions of the Hull’s evolving City Plan [2] are to make Hull the leading hub for renewable energy industries (UK Energy City), make Hull a world-class visitor destination (Destination Hull) by capitalising on Hull’s role as UK City of Culture 2017 and the multi-million pound investment into the city’s cultural and tourism infrastructure, and making Hull a place of opportunity for all, building strong and resilient communities by focusing on safeguarding the most vulnerable, prevention and early intervention, and making money go further (Community and Opportunity) [2]. Significant progress has already been made in these areas, and it is necessary to ensure that this momentum is sustained beyond 2017 (see page 111 for more information).

It is necessary to work together to create an environment that promotes physical activity and active transport in everyday settings for all ages. There is also a need to work with partners to ensure the design of the build environment discourages crime and fear of crime. It is necessary to work with partners to seek assurance on emergency preparedness, response and recovery.

In January 2013, Hull City Council signed up to Investors in the Environment [45], an environmental management system operated by Yorkshire Energy Partnership. Hull City Council have committed to attaining the highest level ‘Green’. As part of this Hull City Council have agreed an environmental policy which sets out the council’s environmental principles. The policy identifies key areas of activity: (i) to implement actions to reduce, reuse and recycle waste within council operations; (ii) implement actions to minimise the environmental impact of the council’s fleet vehicles and staff journeys to and from work; (iii) improve quality and accessibility of parks and open spaces including enhancing biodiversity; (iv) implement design and management practices in council new builds, renovations and conversions; (v) undertake operations to minimise the release of hazardous materials and protect air and water quality; (vi) implement initiatives which seek to minimise the environmental impact of all council purchases of goods and services; (vii) to work with suppliers and contractors to minimise their environmental impacts; (viii) implement actions to achieve reductions in carbon dioxide and other greenhouse gas emissions from council operations; (ix) implement council actions to adapt to the impact of climate change; (x) educate, train and motivate staff to conduct their activities in an environmentally responsible manner; (xi) implement actions to reduce, reuse and recycle water within the council; and (xii) compliance with all environmental legal requirements to protect staff, customers and the environment [45].
AIR POLLUTION

What’s the issue?

There are a number of different air pollutants such as ozone, sulphur dioxide (SO$_2$), nitrogen dioxide (NO$_2$), mono-nitrogen oxide (NO), and mono-nitrogen oxide and nitrogen dioxide combined (NO$_x$). The summary measures of PM$_{10}$ and PM$_{2.5}$ provide a measure of the mass (in micrograms) per cubic metre of air of individual particles (particulate matter) with an aerodynamic diameter generally less than 10 and 2.5 micrometres respectively. The Air Pollution Index (API) is used to understand the daily air quality and if there are any health effects (within a few hours or days after breathing polluted air) that may concern the public [46, 47]. Bands 1-3 (low risk) is unlikely to be noted by individuals, bands 4-6 (moderate) may produce mild effects unlikely to require actions but may be noted amongst sensitive individuals, with band 7-9 (high) sensitive individuals may notice significant effects and may need to take action to avoid or reduce effects (e.g. people with respiratory or cardiovascular conditions avoiding exercise that day, asthmatics using their ‘reliever’ inhaler, etc), and band 10 (very high) could affect sensitive individuals even worse.

NHS Choices [48] have summarised some research on lung cancer [49] and heart failure [50] in relation to air pollution. For the lung cancer study, each 10μg/m$^3$ increase in PM$_{10}$ led to a corresponding increase in the hazard ratio of lung cancer incidence of 1.22 (95% confidence interval 1.03 to 1.45) with no association found between lung cancer incidence and PM$_{2.5}$, NO$_x$ or NO$_2$. The heart failure study found an increased risk of heart failure hospitalisation or death for increases in carbon monoxide (3.52% increase in risk per increase of one part per million of pollutant), SO$_2$ (2.36%), NO$_2$ (1.70%), PM$_{2.5}$ (2.12%) and PM$_{10}$ (1.63%). In both studies, some potential confounders were included in the model, but it is possible important confounders were not included (see glossary on page 111 for more information on confounding).

What’s our situation?

The Department for Environment, Food and Rural Affairs’ (DEFRA) measures air quality across England. Levels of NO$_2$ (nitrogen dioxide), NO$_x$ (mono-nitrogen oxide NO and NO$_2$), PM$_{10}$ and PM$_{2.5}$ (mass (in micrograms) per cubic metre of air of individual particles with an aerodynamic diameter generally less than 10 and 2.5 micrometres respectively) have been modelled for each one kilometre grid square across England for 2015 [51]. The highest pollution concentrations are along the south edge of Hull (A63), near the train/bus station, and near the industrial areas (up the centre of Hull from South to North approximately route of river and the A1033) and around the Docks (in South-East corner (Marfleet ward) of Hull), although only an area around the A63 exceeds the National Air Quality Objectives.

The Committee on the Medical Effects of Air Pollutants (COMEAP) estimated that if all man-made particulate pollution were removed, this would lead to an increase in life expectancy of around 6 months although the effect could be as small as one month and as large as a year [52]. To put this into context, the effect on life expectancy of continued smoking is seven years on average. Nevertheless, mortality attributable to particulate air pollution has been modelled for Hull for 2015 from DEFRA’s modelled pollution concentrations, the number of deaths to persons aged 30+ years and the relative risk of 6% increase in mortality per 10μg/m$^3$ PM$_{2.5}$ estimated by COMEAP. From this, it is estimated that 4.8% of deaths among those aged 30+ years are attributable to air pollution (compared to 4.7% for England) [26, 53].

For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.

What are the strategic needs?

There is a need to reduce levels of pollution across Hull and to raise awareness of the health and financial implications of poor air quality. This should encourage less polluting lifestyle choices.

In January 2013, Hull City Council signed up to Investors in the Environment, an environmental management system operated by Yorkshire Energy Partnership [45]. Hull City Council have committed to attaining the highest level 'Green'. Further information is given on page 15.
CLIMATE CHANGE

What’s the issue?

Climate Change is the greatest threat currently faced by humans. Climate change will affect the frequency and intensity of extreme weather events such as flooding, storms and heat waves. The warmest years since records began have all been in the period since 2000, and 2016 was the warmest in the UK.

Current scientific evidence published by the United Nations Intergovernmental Panel on Climate Change [54] show that the climate impacts we are experiencing are a result of only a 1°C Celsius rise in global temperatures and global climate agreements are aiming for an increase of no more than a 2°C Celsius increase.

There is therefore a need to undertake climate adaptation activity to prepare for the inevitable consequences of climate change. The emerging approach to adaptation is expressed in the National Adaptation Programme [55]. This contains a chapter on adaptation for health and well-being services.

What’s our situation?

The City of Hull has experienced several extreme weather events over the last ten years that have put increased pressure on public health services. The floods in 2007 affected significant parts of the City with some families not being able to return to their homes for up to two years. The tidal surge in December 2013 closed the A63 and the snow and ice winters in 2010 and 2011 affected roads with some impassable for weeks and increased the number of people suffering falls. Hull has yet to experience a heat wave which is likely to become more of an issue as we move through the century.

Recent work in 2014 by Joseph Rowntree Foundation and University of Manchester [56] has shown that residents that are already vulnerable due to age, long term life limiting illnesses and poverty are least able to be resilient to the impacts of climate change and are more adversely affected than the average resident.

The impacts of climate change will disproportionately affect the most vulnerable and therefore put increased pressure on public health and health services in Hull.

For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.

What are the strategic needs?

There is a need to better understand the extent of climate risk to public health and the wider health services in the City. The development of effective climate adaptation to services and facilities would ensure that they are more resilient to extreme weather events and therefore reduce the emergency impact on public health services.

The cost of extreme weather events to public health services is not well understood and there is a need to better understand the financial impacts so that this can support timely and effective climate adaptation investment.

In January 2013, Hull City Council signed up to Investors in the Environment, an environmental management system operated by Yorkshire Energy Partnership [45]. Hull City Council have committed to attaining the highest level ‘Green’. Further information is given on page 15.
CRIME AND DOMESTIC VIOLENCE

What’s the issue?

“The effect of local crime rates does affect the mental well-being of residents. Crime causes considerable mental distress of residents, and these effects are mainly driven by property crime. However, there is also an effect due to violent crime. Local crime creates more distress for females, and is mainly related to depression and anxiety.” [57].

What’s our situation?

Between the period February 2016 and January 2017, there were 31,102 reported crimes across Hull which has increased recently [58, 59]. The largest categories of crime were violent crimes (9,127), criminal damage and arson (4,969), shoplifting (3,600) and burglary (3,558). Some of these categories potentially overlapping as each crime could appear in more than one category. There were 8,051 incidents of anti-social behaviour. From the Public Health Outcomes Framework (PHOF) [26, 27], for 2015, there were 89 first time entrants into the youth justice system (receiving their first reprimand, warning or conviction) aged 11-17 years in Hull which was slightly higher than England (409 versus 369 per 100,000 population, and fallen from 754 per 100,000 population for Hull for 2012). For 2014, 1,201 re-offenders committed 4,338 re-offences out of the 3,833 offenders, and both the percentage re-offending (31.3% versus 25.4%) and the average number of offences committed per offender (1.13 versus 0.82) was higher in Hull compared to England, although both had decreased in Hull in the last year. The trends in the rate of hospital admissions due to violence have formed a reverse U-shape since 2001/02-2003/04 increasing from 98 per 100,000 population to a high of 158 per 100,000 population in 2005/06-2007/08 and then decreasing to 72 per 100,000 population for the most recent year 2012/13-2014/15 [26, 27]. The rate of domestic abuse incidents recorded by the police was not substantially higher than England (at 20.8 per 1,000 population in Hull compared to 20.4 per 1,000 population in England) for 2014/15 [26, 27]. Some of these PHOF indicators [26] differ from those presented in the local Joint Strategic Intelligence Assessment (JSIA) [60] due to differing definitions. Priority Families in Hull have been identified (following the launch of the National Troubled Families Programme in 2011 which intended to change the repeating generational patterns of poor parenting, abuse, violence, drug use, anti-social behaviour and crime in the most troubled families in the UK) and by November 2014, the majority of identified Priority Families in Hull had been ‘turned around’ [61].

For more detailed information, see the JSNA Toolkit: Deprivation and Associated Measures report.

What are the strategic needs?

As stated in the local JSIA [60], the primary focus for the community safety partnership (CSP) in order to control crime levels should be around working together to manage substance misuse, tackle re-offending and reduce violence. Methods should include reactive, pro-active and preventative measures in both the long and short terms, recognising that there is a complicated relationship between young people growing up in dysfunctional families, where substance misuse or criminality within a family is a factor, and the solutions are equally complex [60]. Within the local JSIA, priority neighbourhoods having been identified using the Vulnerable Localities Index [62], and work continues with Priority Families in Hull. The identified priorities for the CSP [61] are likely to remain much the same as last year [60], namely to: (i) reduce crime by tackling re-offending, substance misuse and violent behaviour; (ii) a focus on early intervention and priority families to tackle pre-cursors to anti-social behaviour and criminality; and (iii) supporting victims of crime.
SOCIAL CAPITAL AND ASSET-BASED APPROACH

What’s the issue?

Social capital examines feelings of safety when walking in the community, civic engagement, neighbourliness, social networks and social support. It is argued that improved social capital can have a positive influence on the mental health and well-being of the people living in the community. However, it should also be noted that there can sometimes be a negative effect with improved social capital such as social networks which, for example, lead to easier access to smuggled tobacco or drugs, peer-pressure to continue smoking or eating a poor diet. There are different types of social capital. Bonding social capital is narrow and more internal, and relates to immediate families, close friends and neighbours. Bridging social capital is wider and more external, and relates to looser ties, associated with more diverse relationships such as those with colleagues, acquaintances and other communities.

Traditional public health improvement has focused on providing services to help solve a problem and dealing with ill-health and its consequences, and success has not been as good as it was hoped. A new approach increasingly used is based around an Asset Approach improving health of residents by making health and wellbeing everybody’s responsibility, and working together with communities to listen to their concerns and develop interventions. This approach is based on strengths, abilities and capacities of the community rather than weaknesses and disability, and ‘active participant in solution’ approach rather than a ‘passive victim of problems’ approach which involves collaboration rather than silo provision. It is hoped that improving and maintaining high levels of positive social capital can help this approach.

What’s our situation?

From the local adult Health and Lifestyle Survey 2011-12 [63], the majority of people were ‘very satisfied’ (27%) or ‘fairly satisfied’ (49%) with their neighbourhood as a place to live, although satisfaction was much higher in 2009 (44% and 43% respectively). Fewer than half of survey responders (43%) said they were well informed about things affecting their area, but only 17% of men and 15% of women felt they could influence things that affect their area. Only one in twelve respondents had been involved in any local organisations over the past three years. Around one third of survey responders trusted most people in the neighbourhoods and an additional fifth trusted many people, and 61% of women and 56% of men felt that neighbours looked out for each other. The percentages who were informed about local decisions, ability to influence local decisions, who trusted and who felt neighbours looking out for each other increased with age and in areas with lower levels of deprivation.

It has been found in the local adult Health and Lifestyle Surveys that particular groups, such as Gypsy and Travellers and asylum seekers, can have high levels of bonding social capital, but have low bridging social capital [64]. This can make whole communities or groups feel isolated.

Local qualitative research work in Hull during 2014 [65] found successful community groups had a key central focus (based on either a geographical area or interest in particular topic), they were more likely to engage with ‘hard to reach’ groups, seen increasingly as filling ‘gaps’ as other (statutory) services became stretched, better able to understand community needs, and more offer affordable services at lower cost. The real value of groups is sometimes overlooked as savings are ‘hidden’ and it can take time for benefits to become apparent. There are many benefits from taking part in community groups. Volunteers are an absolutely central asset. Successful groups do not underestimate the associated demands of volunteering and have realistic expectations. Collaboration was often made with statutory services but not with other community groups (although there were exceptions). Professionals can play an important role in a supporting role especially in the initial set-up and could help with official procedures and regulations. There was a recognition that there needs to be the provision for comprehensive local information with regards to priorities and plans, but also with regard to events, funding opportunities, other community organisations and initiatives, and training opportunities. Community groups also need more assistance with identifying appropriate sources of funding. Funding for community initiatives is often time-limited and insecure,
and that successful groups and projects need time to both embed and develop to produce positive and substantive change.

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disabilities report.

What are the strategic needs?

The local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans (STP) [3] aims to move towards place-based provision of services which are good quality and safe as well as operationally and financially sustainable. The vision is to support everyone to manage their own care better, reduce dependence on hospitals and use resources more efficiently. The six priorities are to help people stay well, place-based care, creating the best hospital care, supporting people with mental health problems, helping people through cancer and strategic commissioning. To achieve the aims of the STP, it is necessary that communities and public and voluntary sector organisations work together (see page 111 for more information).

An asset-based approach can help this process by focusing on the positive assets available to people within themselves as well as assets within their families and their communities. Supporting people to manage their own care, reduces dependence on hospitals and reduces resources in line with the STP’s vision. Following financial restrictions and reductions in budgets, this approach represents a relatively recent shift from the provision of services to more integrated care using this asset-based approach to strengthen communities. This supports people to help themselves by providing more relevant solutions that are accessible to them, supporting them in this process with expert, relevant and timely help and advice. These types of approaches and initiatives aim to strengthen existing good work being undertaken in the community, and improve the social capital of the communities in a positive manner. Effective use of developing and maximising existing assets in our people, places and communities can build and improve self-esteem and resilience, reduce the prevalence of behavioural and lifestyle risk factors for poor health, improve health and reduce inequalities. Work is ongoing in Hull around the asset-based approach.

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change, and the asset-based approach can be used to inform and provide this support. Health care providers need to work together with different communities to use existing assets effectively to realise the benefit of positive life changes.

The aim is also to harness the wider public health workforce to deliver very brief advice to those people with whom they have contact in their day-to-day work (“make every contact count”). It should be recognised that different approaches and support are required for different people, and any specific problems or changes that are required should not be dealt with in isolation, but by considering the needs of each individual separately. The asset-based approach also aims to address this by providing more individualised support focused around the individual rather than the provision of separate services for each of their specific needs.

However, in order to improve overall social capital in individual communities throughout Hull, it is necessary to provide the support and infrastructure throughout the city, such as supporting ‘Fuel, Food and Finance’ anti-poverty initiatives. These help people to minimise the health impact of welfare reform and cost of living rises, encouraging a culture across organisations that celebrates diversity, encourages respect and has a zero tolerance on hate crime. A key focus is to support families promoting positive parenting skills and to support initiatives that create and provide access to quality sustainable jobs as well as improving the housing stock across the city. There is a drive to build connections between generations to tackle loneliness and support the continued development of an ‘age-friendly’ city, etc. Work needs to continue with vulnerable groups such as Priority Families (page 18), and young people at risk of becoming teenage parents (page 60) or not in education, employment or training (page 61).
SOCIAL ISOLATION AND SAFETY

What’s the issue?

Social isolation can influence anyone, but it perhaps affects the elderly more than younger age groups. People may feel isolated and not part of society for many reasons due to age, being a carer, poverty, unemployment, mobility problems, disability, ethnicity, religion, language barriers, poor literacy levels, etc. Certain groups, such as Gypsy and Travellers and asylum seekers, may have quite good social support within their group, but not outside their group so their whole community can feel isolated [64]. Social isolation and feelings of being unsafe in the community can have a large impact on wellbeing, but can also influence physical health.

What’s our situation?

From the local adult Prevalence Survey 2014 [66], a measure of social isolation was derived, and based on this, it was estimated that around 13.4% of Hull residents aged 65+ years might be socially isolated (but this ranges from 6% in University to 23% in Bricknell wards). If the 13.4% estimate is applied to Hull’s overall population aged 65+ years, it is estimate that just over 5,000 people aged 65+ years across Hull could be socially isolated. From the Public Health Outcomes Framework [26, 27], at baseline 2010/11, 43.5% of adult social care users had sufficient social contact in Hull and this increased slightly to 44.8% for 2014/15 and to 54.2% in 2015/16 with 257 out of 475 adult social care users surveyed feeling they had sufficient social contact (the percentage was higher than England at 45.4%). The rate among adult carers was lower with 38.5% (129 out of 335 surveyed) feeling they had sufficient social contact in Hull for 2014/15, although the figure was the same as England (38.5%).

From the local adult Health and Lifestyle Survey 2011-12 [63], one in six respondents had no close friends or family living within a 15-20 minute walk or 5-10 minute drive, increasing with age from 14% for those aged 16-24 years to 22% for those aged 75+ years. The majority (86%) had someone they could call upon for help if they were ill in bed, with the percentage slightly lower in the 75+ year age group (81% compared to 86%-88% for younger age groups). Around 5-6% stated they had no-one to ask except for women, those aged 16-24 years and those living in the least deprived areas where around 4% stated they had no-one to ask. Around 9% stated that “don’t know” or “it depends”, although the percentage was slightly higher among those aged 75+ years (13%) and people living in the most deprived fifth of areas of Hull (11%).

Feelings of safety among those aged 65+ years were considerably lower in Hull compared to England. For 2014/15, 97.6% of adults aged 65+ years felt ‘very safe’ or ‘fairly safe’ walking alone in their area during the daytime in England [67], compared to 89.1% for Hull from the local adult Prevalence Survey 2014 [66]. In England, 67.6% of people aged 65+ years felt safe when walking alone in their area after dark, and 94.3% felt safe when alone in their own home at night [67], but feelings of safety were considerably lower in Hull (46.8% and 87.2% respectively) [66].

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disabilities and JSNA Toolkit: Older People reports.

What are the strategic needs?

One of the aims of the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans (STP) [3] is to support everyone to manage their own care better through communities and public and voluntary sector organisations working together (see page 111 for more information). Work is ongoing in Hull around the asset-based approach which utilises assets within the community to support people and improve their health. Such approaches can be used to tackle the problems of isolation and loneliness (see page 19 for more information).

A loneliness strategy for the City will be developed working closely with the voluntary sector. It will include the promotion of activities that seek to build connections between generations to tackle loneliness, and encouragement of a culture across organisations that celebrates diversity, encourages respect and has zero tolerance on hate crime. A focus is also to work with partners to ensure the design of the build environment discourages crime and fear of crime.
SOCIAL CARE

What’s the issue?

“The Children Act 1989 places a general duty on all local authorities to ‘safeguard and promote the welfare of children within their area who are in need’. Local authorities are required to investigate the child’s circumstances and take any action to safeguard or promote the child’s welfare. They also have some responsibilities for young people over 18 years, for example, those with disabilities or who have been ‘looked after’” [68].

“The Care Act 2014 provides the legislation regarding the provision of care and support services to older and disabled people, and their carers, plus safeguarding vulnerable adults from abuse and neglect” [69]. “The Act begins by defining the primary responsibility of local authorities as the promotion of individual wellbeing. There is a shift from the duty to provide a service to meeting needs. A key part of the Act is a focus on preventing or delaying the need for support. Carers are also given significant new entitlements under the Act” [70].

With the ageing population, the need for social care will increase. Furthermore, people are living longer with increasingly complex health needs which place additional needs on scarce resources.

What’s our situation?

From the Child Health Profiles [18], there were 645 children aged under 18 years in care in Hull at the end of 2015/16 which gives a rate of 116 per 10,000 population which is almost twice as high as England (60).

From the Adult Social Care Survey 2015/16 [71, 72], the quality of life of service users in Hull (average score 19.6 out of 24) was higher than for England and the Yorkshire and Humber region (both 19.1). Eight in ten service users in Hull reported that they had control over their daily life, again higher than for England (76.6%) and the region (76.2%).

Most service users accessing long-term support in Hull received self-directed support (86.1%), slightly lower than England (86.9%) and the region (87.9%). Around one-third of Hull’s service users accessing long-term support received direct payments (33.4%) higher than England (28.1%) and the region (25.8%).

For 2015/16, hardly any of the service users aged 18-64 years with a learning disability were in paid employment in Hull (0.9%) which was lower than England (5.8%), the region (6.3%) and all comparators (range 1.7% to 13.2%). Around three-quarters lived in their own home or with their family (74.7%) which was quite similar to England (75.4%) and the region (78.6%). Among adults in contact with secondary mental health services, 6.8% were in paid employment in Hull which was similar to England (6.7%), but slightly lower than the regional average (8.2%). Almost three-quarters were living independently with or without support (73.4%) which was higher than England (58.6%) and the region (64.7%). Among all service users surveyed, 54.2% had as much social contact as they would like which was higher than England (45.4%), the region (46.0%) and second highest of 11 comparators (range 41.4% to 79.7%).

Long-term support needs were met by admission to residential and nursing care homes for 15.7 per 100,000 younger adults aged 18-64 years which was higher than England (13.3) and the region (13.9), and for 878 per 100,000 older adults aged 65+ years which was also higher than England (628) and the region (700). Nine in ten (90.8%) of the older people discharged into these services were still living at home 91 days after discharge from hospital which was higher than England (82.7%), the region (82.9%) and ten of the 11 comparator areas. Only 2.5% of people aged 65+ years received reablement / rehabilitation services following discharge from hospital which was lower than England (2.9%) and the region (3.1%). There were 8.5 delayed transfers of care from hospital per 100,000 population (lower then England at 12.1% and the region at 10.2%), and 3.6% of delays were attributable to social care (which was lower than England at 4.7% but slightly higher than the region at 3.4%). The number of new service users who had short-term support in the year who went on to have either no ongoing support or a lower level of support in Hull (56.1%) was much lower than England (75.8%), the region (73.1%) and all but one comparator area.
At 70.7%, the proportion of service users satisfied with the care and support they receive was statistically significantly higher than both England (64.4%) and the region (63.8%), and higher than all 11 comparator local authorities. Three-quarters (76.0%) of service users find it easy to find information about support which was higher than England (73.5%), the region (75.3%) and nine of 11 comparator areas. Seven in ten (69.5%) of services users felt safe which was similar to England and the region, and nine in ten (90.7%) of people who use services said that those services have made them feel safe and secure which was slightly higher than England (85.4%) and the region (85.9%).

For more detailed information, see the JSNA Toolkit: Housing, Environment and Social Care report.

What are the strategic needs?

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices. Collaboration with partners to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care will be a key feature. Another focus is to ensure, where appropriate, that the provision of specialist and adapted housing is fit for purpose. The new Care Act 2014 focuses around meeting needs and promoting wellbeing rather than simply the provision of services and on preventing, reducing or delaying the development of need. Therefore, individual needs should be assessed holistically within the context of their support network and each individual's circumstances considered to provide the most appropriate care, help and support for that individual.

One of the aims of the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans (STP) [3] is to support everyone to manage their own care better through communities and public and voluntary sector organisations working together which includes those providing social care (see page 111 for more information). Work is ongoing in Hull around the asset-based approach which utilises assets within the community to support people and improve their health. Such approaches can be used to tackle the problems within social care and help people feel better through the ability to help themselves and not so reliant on services. Furthermore, the asset-based approach focuses on the holistic approach rather than previous reliance of solving health needs through the provision of multiple different services for different conditions or problems (see page 19 for more information). Within the STP, there are processes being put in place around technology which can be used to transform health and care services, as well as developing a single electronic care record that can be shared and accessed by health and care professionals, meaning that people will tell their story only once.

The aim is to identify our most vulnerable citizens and work with them to address their specific needs, and support ‘Fuel, Food and Finance’ anti-poverty initiatives that help people minimise the health impact of welfare reform and cost of living rises (e.g. initiatives that enable people to prevent, manage or recover from debt).
CARERS AND CARING

What’s the issue?

“Whilst caring for an ill, elderly or disabled relative or friend can be rewarding, it can be a difficult experience without the right support” [73]. Some carers sacrifice their own way of life, lifestyles, and careers to become carers and the needs of other family and friends for the loved ones, and it can affect the carer’s physical and emotional health if the care needs are high or the carer does not have sufficient support. With the ageing population, it is often the case that elderly couples are caring for the other, with the carer also having significant health needs. The Care Act gives specific rights to all carers and places a responsibility on the local authority to assess and meet their needs.

What’s our situation?

From the local adult Health and Lifestyle Survey 2011-12 [63], 16% of respondents reported that they were responsible for the long-term care of someone, with the highest percentage caring for a sick or disabled partner (5.1%). From the local Young People Health and Lifestyle Survey 2012 [74], one-third of pupils stated they helped look after someone (disabled or ill mother / father / brother / sister, elderly grandparents or someone else). The predicted future numbers of people in Hull providing unpaid care to a partner, family member or other person among those aged 65+ years has been estimated [75]. For 2015, it was estimated that 5,118 carers are aged 65+ years (including 333 aged 85+ years) in Hull but that this will increase to 6,000 by 2025 (including 435 aged 85+ years). It is further estimated that 2,727 of these carers aged 65+ years are providing 50+ hours of care per week in 2015, increasing to 3,232 by 2025.

From the Adult Social Care Survey 2015/16 [71, 72], 38.8% of carers had as much social contact as they would like which was similar to England (38.5%) but slightly lower than the region (40.5%).

For more detailed information, see the JSNA Toolkit: General Health, Disabilities and Caring and JSNA Toolkit: Older People reports.

What are the strategic needs?

The Priority Families programme in Hull aims to change these repeating generational patterns of poor parenting, abuse, violence, drug use, anti-social behaviour and crime in the most troubled families in Hull (page 18) which will influence safeguarding and the number of children in care. The ‘Hull Early Help and Priority Families Strategy 2015 – 2020” gives further information on the four different ‘levels’ of early help: (i) universal response (no additional needs); (ii) early help response (additional needs); (iii) targeted early help response (complex needs); and (iv) statutory and specialist response (risk of significant harm) [76].

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices. Also working with partners to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care. Where appropriate, ensure provision of specialist and adapted housing that is fit for purpose. The new Care Act 2014 gives carers the right to receive services in their own right and focuses around promoting wellbeing and meeting needs rather than simple provision of services and on preventing, reducing or delaying the development of need, so individual needs should be assessed holistically within the context of the person’s support network and each individual’s circumstances considered, in order to provide the most appropriate care, help and support for that individual. When assessing the needs of an individual in need of care and support, the needs of the carer must also be considered, and carers can access services in their own right even if the person they care for does not, is not eligible or is a self funder.

One of the aims of the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans (STP) [3] is to support everyone to manage their own care better through communities and public and voluntary sector organisations working together which includes those providing care (see page 111 for more information). Work is ongoing in Hull around the asset-based approach which utilises assets within the community to support people and improve their health. This approach can be used to for carers as well as the people they care for (see page 19 for more information).
This section provides some general information about the general health and wellbeing status and disabilities among Hull’s population.

Information on life expectancy and mortality rates (from all causes) have been included in this section to give some overall context to the health status among the people of Hull, and to benchmark Hull’s overall health in relation to England, and compare health across the wards in Hull.

Some general information is also provided within this section on the use of healthcare services, secondary care and dental health.

Other information such as maternal health and vaccinations and immunisations are covered in the section on children and young people (commencing page 48), screening is covered in the section on adults (page 65), sexual health is included in the adults section (page 95), and palliative care is covered in the section on older and vulnerable people (page 110).

Information on learning disabilities, severe mental ill health and suicide and underdetermined injury are given in the section on vulnerable groups commencing on page 99.

Information on specific diseases and medical conditions is given in the section commencing on page 62 which covers adults, unless the condition is specific to children and young people such as accidents (page 49) or relates to older people such as osteoporosis (page 109) or hip fractures (page 108) or relates to vulnerable groups such as learning disabilities (page 100) or severe mental ill health (page 102).
LIFE EXPECTANCY

What’s the issue?

Life expectancy at birth is a commonly used method of assessing health, improvements in health over time, and differences in health between different groups (such as those defined on the basis of time, gender, geography and deprivation). A common misconception is that life expectancy at birth measures the expected duration of life for a newborn; it does not. It is a measure of life expectancy assuming that the current age-specific mortality rates continue throughout an entire lifetime. This is an unrealistic assumption and therefore life expectancy figures are an indication of current health status of a population rather than an expectation of the duration of life. However, it does not measure the quality of life. As a result, healthy life expectancy is the overarching indicator within the Public Health Outcomes Framework which is a statistically modelled measure of life expectancy based on living in ‘good health’.

Disability adjusted life years (DALYs) measures the years of life adjusting for disability. Medical conditions with high DALYs are conditions which impact on quality of life substantially for a long period of time (see page 111).

What’s our situation?

For 2013-15, life expectancy at birth for Hull men is 76.5 years and for Hull women it is 80.2 years having remained quite static for men over the last three years and decreased by 0.4 years for women over the last two years [26, 77, 78]. The absolute gap between Hull and England is –2.9 years for both men and women. There are considerable differences across the wards [79, 80]. Life expectancy estimates differ by over a decade across the wards for both men (13.4 years) and women (9.9 years) [77]. For 2012-14, it also differs across the deprivation deciles with life expectancy in Hull being 11.6 years higher in men and 9.1 years higher in women in the least deprived tenth of areas of Hull compared to the most deprived tenth of areas of Hull [26, 77, 79]. The differences between the most and least deprived tenths nationally is 9.2 years for men and 7.0 years for women [26]. In 1999-01, life expectancy at birth was 73.4 years for men and 79.3 years for women, so has increased 3.1 years for men and 0.9 years for women over the last 15 years [79, 80].

Life expectancy at age 65 years is two years or more higher in England compared to Hull for both males (18.7 versus 16.7 years) and females (21.1 versus 19.0 years) [26, 77-80]. The national inequalities gap widened over the last decade as has the local inequalities gap (difference between most and least deprived fifths). Men and women who live in the least deprived fifths of areas of Hull who are aged 65 years can expect to live around 4.4 years and 4.8 years longer than those living in the most deprived fifths of areas of Hull. The difference in life expectancy at age 65 years varies between 13.7 years and 20.4 years for men (a difference of 6.7 years) and between 16.1 years and 23.8 years for women (a difference of 7.7 years) [77, 79, 80].

For 2013-15, healthy life expectancy at birth was 56.3 years for men and 55.4 years for women in Hull compared to 63.4 and 64.1 years respectively for England having decreased by 1.6 years for men and by 1.4 years for women since 2009-11. Hull was ranked 148th lowest for both men and women out of 150 local authorities for healthy life expectancy [26, 79]. There was a strong association between life expectancy and deprivation. From this in Hull, it can be estimated that men spend approximately 26% of their lives in poor health, and women spend approximately 31% of their lives in poor health, compared to an average of 20% for men and 23% for women in England [79].

Nationally, lower back and neck pain, coronary heart disease, stroke, chronic obstructive pulmonary disease, lung cancer, Alzheimer’s disease, sense organ diseases, depressive disorders, falls and skin diseases are the top 10 causes of disability (highest DALYs) [81].

For more detailed information, see the JSNA Toolkit: Life Expectancy report.

What are the strategic needs?

Whilst increasing life expectancy is important, this needs to be achieved in conjunction with improvements in the quality of life. This is particularly so with the ageing population and the increased demand on scarce resources.
MORTALITY

What’s the issue?

Everybody must die, so it is common to examine and compare rates for premature mortality which is defined as mortality prior to the age of 75 years. It is also possible to examine mortality rates from deaths which are considered preventable such as deaths from suicide and accidents, liver disease from excessive alcohol, lung cancer deaths caused by smoking, etc. Mortality rates have generally been decreasing, but it is important to examine rates from specific causes and for specific groups to determine if rates are falling equally fast for all causes and different groups, and are falling to the same degree as England and comparator areas. However, in practice, it is necessary for the rate in Hull to fall at a faster rate than England to reduce the inequalities gap.

Years of life lost (YLL) measures the number of years of life lost for each person who dies prematurely (before the age of 75 years). It can be used to examine different causes in relation to the total YLL for all persons dying of that cause of death or the average YLL for each person who dies of that cause of death.

What’s our situation?

The main causes of death in Hull are cancer and coronary heart disease (CHD), and these two causes account for around half of all deaths under the age of 75 years (573 cancer and 257 CHD deaths among men, and 490 cancer and 89 CHD deaths among women) [77, 83]. The all age all cause mortality rate for Hull in 2013-2015 was 1,437 deaths per 100,000 men and 1,098 deaths per 100,000 women [83], and 1,422 and 1,070 per 100,000 men and women respectively in 2012-14 compared with 1,138 per 100,000 men and 838 per 100,000 women in England [78, 83]. Across Hull, the highest all age all cause mortality rates were seen in St Andrews and Southcoates West for men (over 2,000 per 100,000) and in St Andrews and Newington for women (over 1,500 per 100,000) with the lowest rates in Boothferry for men (911 per 100,000) and in Beverley for women (730 per 100,000) [77, 83]. For 2012-2014, the under 75 standardised mortality ratio (SMR) for Hull was 138 for men and 135 for women, which means the mortality rate, after adjusting for the difference in age and gender structure, is 38% higher among men and 35% higher among women, in Hull than in England [78, 83]. There was a strong association with deprivation, with the SMR among residents living in the most deprived fifth of areas of Hull 195, while among those in the least deprived fifth of areas it was 88 (12% lower than England) [77, 83]. The excess winter mortality index\(^2\) (August 2012 to July 2015) was 16.8 in Hull and there was considerably variability over time [26, 82, 83].

Over the 15 year period 2001-15, coronary heart disease (CHD), lung cancer, suicide and undetermined injury, infant death, cirrhosis, other accidents, stroke, chronic obstructive pulmonary disease (COPD) and breast cancer were the top 10 causes of death with the highest total YLL in Hull, although there were differences between men and women.

For men, over the 15 year period, there were 3,329 CHD deaths (5.73 YLL per person) with a total annual average YLL of 1,271 years. Suicide and undetermined injury had the second highest

\(^2\) Ratio of winter (December to March) to non-winter (April to July current year and August to November previous year) deaths, e.g. 275 winter and 230 non-winter monthly average deaths gives index of 19.6 (275÷230=1.196).
annual total of YLL at 729 years (340 deaths with 32.14 YLL per person) followed by lung cancer (1,756 deaths, 644 annual total YLL and 5.50 YLL per person). Cirrhosis (390 deaths, 537 annual total YLL and 20.26 YLL per person) and infant deaths (83 deaths, 415 annual total YLL and 74.99 YLL per person) were the next highest causes of YLL for men.

For women, over the 15 year period, the top five causes of death with the highest YLL were lung cancer (1,401 deaths, 196 annual total YLL and 5.31 YLL per person), breast cancer (687 deaths, 401 annual total YLL and 8.76 YLL per person), infant death (78 deaths, 390 annual total YLL and 74.99 YLL per person), CHD (2,547 deaths, 380 annual total YLL and 2.24 YLL per person) and stroke (1,809 deaths, 212 annual total YLL and 1.76 YLL per person).

*For more detailed information, see the JSNA Toolkit: Mortality report.*

**What are the strategic needs?**

There are focused approaches to prevention and early detection of ill health through the City Plan [2] and the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans [3] using assets approaches. It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes. It should be recognised that different approaches and support are required for different people, and any specific problems or changes that are required should not be dealt with in isolation, but by considering the needs of each individual separately.

A focus on preventing (or reducing) mortality prematurely from the main causes of death where years of life lost prior to the age of 75 years is the highest would increase life expectancy the most.
GENERAL HEALTH AND PHYSICAL DISABILITIES

What’s the issue?

“Better health is central to human happiness and well-being. It also makes an important contribution to economic progress, as healthy populations live longer, are more productive, and save more” [84]. Health and physical abilities generally deteriorate with age, and this creates a “challenge for society to adapt in order to maximise the health and functional capacity of older people as well as their social participation and security” [85]. Poverty and deprivation and many associated factors such as poor housing, crime, lack of qualifications and unemployment also indirectly influence health. People living in poor areas may have lower health expectations which can delay treatments and influence poor health, and they may also be more likely to have unhealthily lifestyles and behaviours which further influence health.

What’s our situation?

From the local adult Prevalence Survey 2014 [66], just over one quarter (27.7%) of adults in Hull reported having only fair or poor health, including one third or more of respondents in Bransholme West, Longhill, Newington and St Andrew’s wards. There was a clear association between deprivation and self-rated health status. From the 2011 Census [15, 16], 10% of people in Hull reported that their day to day activities were limited a lot by a long-term illness or disability (that had lasted or was expected to last longer than a year), with a further 9.6% having their activities affected a little which was higher than for England (8.3% and 9.3% respectively) but similar to comparator areas (10.2% and 10.0% respectively). For 2015/16, the gap in the employment rate for those with limiting long-term illnesses or disabilities and the overall employment rate was 16.3 percentage points which was higher than England (8.8) [26, 27], giving an employment rate of around 51.2% (as employment rate for general population is around 67.5% – see page 63).

From the local Young People Health and Lifestyle Survey 2016 [86], 60% of boys and 49% of girls reported their health as ‘excellent’ or ‘very good’. Slightly fewer boys (10.1%) than girls (13.1%) reported a long-term illness or disability that limited their activities.

The local Health and Lifestyle Surveys conducted among Veterans in 2009 [87] and Gypsy and Travellers in 2007 [64] and 2011 [88] illustrated their health was worse than the general population.

From PANSI [89] and POPPI [75], in 2015, it is estimated that the number of adults aged 18+ years in Hull with a moderate or severe hearing impairment is 21,950 (16,141 aged 65+ years), and 469 with a profound hearing impairment (419 aged 65+ years). They estimate that 107 people aged 18-64 years have a serious visual impairment, 3,365 people aged 65+ years have a moderate or severe visual impairment. POPPI estimate that 6,956 people aged 65+ years are unable to manage at least one mobility activity on their own (such as going out of doors and walking down the road; getting up and down stairs; getting around the house on the level; getting to the toilet; getting in and out of bed). These numbers are projected to increase considerably due the ageing population.

For more detailed information, see the JSNA Toolkit: General Health, Disabilities and Caring report.

What are the strategic needs?

There are inequalities in relation to health with people living in the more deprived areas having worse health earlier than those living in less deprived areas in Hull. It is necessary to target those living in the most deprived areas and other vulnerable groups, and work with them to help them improve their health and their lifestyle which may be affecting their health. People living in more deprived areas and those in vulnerable groups tend to have lower expectations in relation to their health, and may tend to be among the last to change behaviour to improve their health so encouraging people to come forward with their symptoms and seek medical help may be required, and informing people that they do not need to expect poor health and that changing their behaviours and lifestyle, such as quitting smoking, can have immediate effects on their health. The figures are also impacted by the fact that many people with disabilities or very poor health have impaired employment opportunities and are so more likely to live in relative poverty. Two of the six priorities within the local Humber, Coast and Vale Sustainability and Transformation Plans [3] is to help people stay well and supporting people with mental health problems (see page 111 for more information).
EMOTIONAL HEALTH AND WELLBEING

What’s the issue?

Poor mental health can have a detrimental effect on all aspects of life undermining self-esteem, confidence and enthusiasm for life. “A general low mood can include sadness, anxiety, worry, tiredness, low self-esteem, frustration and anger” [90]. People with poor mental health sometimes can deal with this by smoking more, eating excessively and unhealthy diets and not exercising. “Depression can involve continuous low mood, feelings of hopelessness and helplessness, low self-esteem, feeling tearful, feeling irritable and intolerant of others, having no motivation of interest in things, finding it difficult to make decisions, not getting any enjoyment out of life, having suicidal thoughts or thoughts of self-harming, and feeling anxious or worried” [90]. As a consequence, poor mental health influences all aspects of life, a person’s physical health, their family, their workplace and employment, and their involvement in their community. Nationally, depressive disorders has the eighth highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81]. Also see severe mental ill health on page 102.

What’s our situation?

From local surveys [63, 66, 91], mental health is worse for women, younger age groups and those living in the more deprived areas of Hull. The local adult Black and Minority Ethnic Health and Lifestyle Survey 2007 [92] indicated worse mental health for failed asylum seekers, almost one-third of whom stated that they were ‘so unhappy that life is not worthwhile’ compared to 13% of those whose asylum had been granted and less than 4% for all other groups. For 2015/16 from the GP disease registers [93], the percentage of patients aged 18+ years “with a record of unresolved depression since April 2006 in their medical notes” was 7.7% (18,001 on register) [94]. Numbers had increased by 39% (by almost 5,000 patients) since 2013/14 which was higher than England’s increase (30%) or that of comparator areas (26%), although some increase was expected as the register represents a cumulative count since April 2006. Despite this increase, the latest prevalence estimate in Hull is considerably lower than England (8.3%) and six of seven comparator areas. The prevalence was slightly higher among practices serving the most deprived patients in Hull [94].

For 2015/16, more people in Hull compared to England had a poor score (0-4 on a scale of 0-10) in relation to satisfaction with their life (6.7% versus 4.6%), feeling that the things they do in their life were worthwhile (6.3% versus 3.6%) and feeling happy yesterday (12.4% versus 8.8%), and had a high score (6-10 on a scale of 0-10) in relation to feeling anxious yesterday (22.9% versus 19.4%) [26, 95], although these percentages were even higher in the local adult Prevalence Survey 2014 [66] at 11.2%, 9.2%, 14.0% and 27.3% respectively.

From the local Young People Health and Lifestyle Survey 2016 [86], 80% of boys and 68% of girls reported being happy either all of the time or most of the time. Whilst there were differences between the school years, overall over half (61%) of girls felt sad at least some of the time (including 17% feeling sad all or most of the time), which was considerably higher than the boys with 37% feeling sad at least some of the time (including 10% feeling sad all or most of the time).

Furthermore, girls were more likely to feel lonely or isolated from others with 35% feeling this at least some of the time (including 15% feeling lonely or isolated from others all or most of the time) compared to boys with 21% feeling lonely or isolated at least some of the time (including 9% feeling this all or most of the time). Just under one in four pupils (37%) had been bullied previously with 11% bullied within the last month. One in eight pupils (12.1%) had previously bullied someone else with 3.8% bullied someone else in the last month. The top five concerns of 1,377 children and young people participating in the Young People Health and Emotional Wellbeing Survey [96] were bullying including cyber bullying (49%), exam stress (38%), body image (37%), drugs and alcohol (29%) and self-esteem and confidence (25%). Young people were asked what support, if any, they needed, and the two responses with the highest responses were one-to-one support (533; 39%) and classroom sessions (298; 22%). Young people would like to find out about emotional health through websites (34%), school assembly (29%), videos or YouTube (29%), newspapers or magazines (25%) and/or mobile phone apps (25%).

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disabilities report.
What are the strategic needs?

People with general mental health issues need to be identified early and encouraged to seek help early so that the consequences in terms of the effects on family and employment are minimised. This will reduce the number of issues which escalate and so reduce the levels of need for crisis and/or medical interventions. It should be recognised that specific groups of people may be more likely to have mental health issues due to their circumstances, such as poverty, asylum seekers, social isolation particularly among the elderly, etc. There is a need to improve and expand early help and targeted interventions to improve young people’s emotional health and wellbeing and build resilience to enable them to cope with challenging life events. Following extensive consultation with young people, parents and services a comprehensive delivery plan is being developed to deliver early help and targeted interventions to build resilience. In order to improve mental health, other non-medical approaches might be necessary such as talking therapies, helping solve practical problems that are causing stress and anxiety such as housing problems and debt, and improving social networks and support through community involvement, for example, befriending.

One of the six priorities within the local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans [3] is to support people with mental health problems, as well as helping people stay well (see page 111 for more information).
USE OF HEALTHCARE SERVICES

What’s the issue?

It is important to examine and assess the use of healthcare services. It can help determine the current health needs of the population, predict future health care needs, and determine if specific groups are using health care inappropriately such as attending A&E when they should be seeing their GP.

It is also useful to examine usage by different groups to determine if there is an inequalities gap, for instance, if the prevalence of a disease is 50% higher among people living in the most deprived fifth of areas of Hull compared to people living in the least deprived fifth of areas of Hull, then one might expect that hospital admissions would similarly be approximately higher, but if admissions were only 20% higher it could signify health inequality and/or problems with access to healthcare.

What’s our situation?

From the local adult Health and Lifestyle Survey 2011-12 [63], three-quarters of respondents reported their last dental visit was to an NHS dentist, 15% had seen a private dentist while 6% did not know whether their dentist was NHS or private, and 2.5% said they had never been to a dentist. From the local Young Persons Health and Lifestyle Survey 2012 [74], two thirds of boys and almost three-quarters of girls had seen their GP in the past year; 38% of boys and 33% of girls had attended A&E in the past year; 12% of boys and 10% of girls had had an inpatient hospital stay over the past year.

Over the period 2008/09 and 2010/11, Hull residents had an average of 74,800 hospital stays each year [97]. Over this three year period, annual age-standardised admission rates were 312 admissions per 1,000 residents in the most deprived fifth of areas of Hull compared to 229 admissions per 1,000 residents in the least deprived fifth of areas of Hull. Further information on hospital admission rates and emergency re-admission rates within 30 days of discharge is given on page 35.

For more detailed information, see the JSNA Toolkit: General Health, Disabilities and Caring report.

What are the strategic needs?

There is a need to work with partners to ensure that there is a shared understanding of people’s needs and that services are integrated, high quality and accessible in ways that offer people appropriate choices such as care organised locally. There is a need to work together to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care. The most vulnerable citizens should be identified so their specific needs are addressed in the way they wish. There is a need to work with individuals and communities to ensure they know where to go for medical help, and are not accessing A&E inappropriately.

The local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans (STP) [3] aims to move towards place-based provision of services which are good quality and safe as well as operationally and financially sustainable. The vision is to support everyone to manage their own care better, reduce dependence on hospitals and use resources more efficiently. The six priorities are to help people stay well, place-based care, creating the best hospital care, supporting people with mental health problems, helping people through cancer and strategic commissioning. To achieve the aims of the STP, it is necessary that communities and public and voluntary sector organisations work together. Processes are being put in place which involve finance, governance, workforce, the local estate, communication and engagement, and technology (see page 111 for more information).
DENTAL HEALTH

What’s the issue?

Dental caries is one of the most common health problems in the world, although the national adult survey conducted during 2009 showed that there has been a "continuation of improvement in younger age groups, first detected over 20 years ago, are now evident up to age 45. However, for those who do have decay or gum problems, disease can be extensive, whilst for many people in old age and older middle age, dental needs are very complex. Good health behaviours, such as regular brushing, are shown to be associated with better health and a greater proportion of dentate adults than ever before are engaging in these behaviours. The large majority of adults also indicate that they are attending the dentist at least once every two years, and do not have problems accessing the NHS dental service" [98]. Smoking increases the risk of gum disease, tooth loss and tooth discolouration [99].

“Poor oral health can affect confidence, diet and communication, and pain caused by dental caries can affect diet, sleep and lead to absence from work. Poor dental health does not just affect teeth, but is also linked to other serious problems with gum disease increasing the risk of stroke, diabetes, heart disease, and rheumatoid arthritis. It is thought the body over-reacts to the bacteria that is caused from plaque build-up, and that this enters the bloodstream and causes damage to blood vessels over a long time period” [100]. A dental check-up can also highlight other serious medical conditions and diseases such as oral cancer.

One factor that will make the biggest differences to people’s oral health is using appropriate levels of fluoride as it can strengthen tooth enamel making it more resistant to tooth decay and reduces the amount of acid that the bacteria on teeth produce. Fluoride occurs naturally in many foods and is present in water supplies (and is sometimes added to drinking water). It is also added to toothpaste and can be applied to teeth as varnishes or gels. Adding fluoride to water has shown to reduce tooth decay by 40-60% [101].

Looked after children and people with learning disabilities tend to have worse dental health, although there is no specific data on these groups.

What’s our situation?

For 2015/16, Hull has a relatively high number of dentists per population with 57 dentists per 100,000 population, and this increased by 13 dentists from 134 dentists in 2011/12 to 147 dentists in 2015/16 [102]. It is not known how many residents of neighbouring East Riding of Yorkshire use dental services in Hull, but it is likely that a sizeable proportion do so. Based on the local adult Health and Lifestyle Survey 2011-12 [63, 102], around 70% of men and 76% of women had seen a dentist within the last two years. From the local Young People Health and Lifestyle Survey 2016 [86], over four fifths of pupils had visited the dentist in the last 6 months, with 92% having been at some time in the past year (and 96% in the last two years) [102]. From the GP patient survey (January to March 2016) [103], 96.7% of patients who had tried to get an NHS dental appointment within the last year had been successful. The majority were satisfied with their overall experience of NHS dental services with 56% rating the service as ‘very good’ and a further 33% as ‘fairly good’. One in twenty rated their experience as ‘fairly poor’ (3%) or ‘very poor’ (2%). In the most recent dental survey among 5 year olds conducted during 2014/15 [104], Hull children have relatively high levels of tooth decay with 1.55 decayed, missing or filled teeth (0.84 for England and 1.01 for regional average) and 38% had at least one tooth that was decayed, missing or filled (England 25% and regional average 29%) [26, 82, 102].

For more detailed information, see the JSNA Toolkit: Dental Health report.

What are the strategic needs?

Partnership working between the local authority, NHS England, Hull CCG, Public Health England, the local authority’s recently established Oral Health Advisory Group, local dental providers and other key stakeholders should underpin development of dental commissioning and oral health improvement strategies to ensure that local people’s oral health needs are met. This should be based upon national evidence-based guidance.
Parents and carers should ensure they start good oral hygiene routines with their children as soon as their infants get their first teeth, and that these routines continue throughout childhood and into adulthood with regular dental check-ups. Ensure that parents and carers know the effects of leaving a baby with a bottle of milk or fruit juice, and the effects of sugary foods and drinks on tooth decay. Ensure that people have appropriate levels of fluoride (whether this is through toothpaste, tooth varnishes or gels, or fluoridation of the water). Ensure that everyone who needs it has access to good NHS dental services, and that residents understand the value of having regular check-ups. There should be support for prevention-orientated NHS dental services. It is necessary to explore equity of access and barriers to NHS dental services particularly for people from more vulnerable groups.
SECONDARY CARE

What’s the issue?
Secondary care is specialist care typically provided in a hospital setting or following referral from a primary or community health professional.

What’s our situation?
The main local provider of NHS acute hospital care in Hull (and East Riding of Yorkshire) is Hull and East Yorkshire Hospitals NHS Trust (HEY), which provides specialist acute surgical, medical and trauma services through the delivery of elective and non-elective care from two main hospital sites: Hull Royal Infirmary and Castle Hill Hospital.

Between 2008/09 and 2010/11 Hull residents had 224,410 hospital stays [97]. The average annual standardised admission rate exceeded 300 per 1,000 residents in four wards, with the highest rate seen in Orchard Park and Greenwood, St Andrew’s, Myton and Marfleet wards which was one-third higher than Avenue ward which had the lowest admission rate. The admission rate was 36% higher among those living in the most deprived fifth of areas of Hull compared to the least deprived fifth (312 versus 229 per 1,000 residents). Annual standardised non-elective admission rates varied from 75 in both Holderness and Bricknell to 148 in St Andrew’s, and the percentage of non-elective admissions out of the total (excluding maternity admissions) ranged from 32% in Holderness to 48% in St Andrew’s. These percentages varied from 28% to 46% across the General Practices (with two practices with special patient characteristics having higher rates at 51% and 70%) [97].

For 2011/12, the indirectly standardised emergency re-admission rate within 30 days of discharge was 12.1% in Hull which was similar to England (11.8%) and other comparator areas [67].

For 2013/14, the directly standardised emergency admissions rate for acute conditions that should not usually require hospital admission for Hull was 1,525 per 100,000 registered population, and this was considerably higher than England (1,181) [78].

The ‘friends and family test’ measures satisfaction (how likely the person would be to recommend the service), and is collected in a number of NHS care settings [105]. Whilst only 7.2% A&E attenders at HEY were surveyed, 97.6% were extremely likely or likely to recommend the service in February 2017 (which was significantly higher than England where 87.4% recommended the service with 12.7% of attenders surveyed). A significantly higher percentage of service users at HEY were likely to recommend outpatient services compared to England (98.0% versus 93.3%) although the response rate was again very low especially in Hull (4.2% versus 6.4%). One-quarter of inpatients were surveyed for both HEY and across England, and the percentage likely to recommend the service was significantly higher at HEY compared to England (99.5% versus 95.8%).

For more detailed information, see the JSNA Toolkit: Inpatient Admissions report.

What are the strategic needs?
There is a need to work with partners to ensure that there is a shared understanding of people’s needs and that services are integrated, high quality and accessible in ways that offer people appropriate choices such as care organised around care hubs. There is a need to work together to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care. The most vulnerable citizens should be identified so their specific needs are addressed in the way they wish. There is a need to work with individuals and communities to ensure they know where to go for medical help, and are not accessing A&E inappropriately. Tele-medicine and other technology can be used to provide monitoring and access to help and support when required, helping people improve their health and wellbeing.

The local Humber, Coast and Vale “Start Well, Live Well and Age Well” Sustainability and Transformation Plans [3] aims to move towards place-based provision of services which are good quality and safe as well as operationally and financially sustainable. The vision is to support everyone to manage their own care better, reduce dependence on hospitals and use resources more efficiently. The six priorities are to help people stay well, place-based care, creating the best
hospital care, supporting people with mental health problems, helping people through cancer and strategic commissioning. To achieve the aims of the STP, it is necessary that communities and public and voluntary sector organisations work together. Processes are being put in place which involve finance, governance, workforce, the local estate, communication and engagement, and technology.
Whilst general socio-economic, cultural and environmental conditions as shown on page 5 determine health and wellbeing, the way individuals choose to live their lives in terms of healthy or unhealthy lifestyles and behaviours can also have a dramatic effect on health and wellbeing.

This section focuses on the main lifestyle and behavioural risk factors for poor health: smoking, obesity, lack of physical activity, poor diet, alcohol consumption, and drug and substance misuse.

These factors are also discussed in some of the later topic areas within the section on adults dealing with specific diseases (commencing page 62) where there is a very strong association between the behavioural risk factor and a specific disease. For instance, smoking is discussed in the section on lung cancer and in the section on chronic obstructive pulmonary disease, and obesity is discussed in relation to the section on diabetes, and excessive alcohol consumption is discussed in relation to the section on liver disease.

The association between health and wellbeing, and these behavioural and lifestyle factors is complex. Whilst these behavioural and lifestyle factors influence health and wellbeing and increase the risk of numerous diseases and medical conditions, poor health and wellbeing can also increase the likelihood of having an unhealthy lifestyle. For example, it is well known that people with poor mental health are much more likely to smoke and have unhealthier lifestyles, which exacerbates their poor mental and physical health. Information on learning disabilities, severe mental ill health and suicide and undetermined injury are given in the section on vulnerable groups commencing on page 99.

Furthermore, mental health can also influence physical health, and physical health can also influence mental health. This can further influence behavioural and lifestyle factors as well as affecting other important areas of life such as employment, because of physical disabilities, stress, confidence, motivation, etc.
SMOKING

What’s the issue?

“Tobacco is a unique product. It is the only consumable that, when used in the intended way, kills half of its users” [106]. “This makes it one of the biggest causes of death and illness in the UK. Every year around 100,000 people die from smoking, with many more deaths caused by smoking-related illnesses. Smoking causes almost 90% of lung cancers, but can also cause cancer in many other parts of the body. Smoking also increases the risk of developing heart and circulation problems such as coronary heart disease, stroke, peripheral vascular disease and cerebrovascular disease. It also damages the lungs increasing the risk of bronchitis, emphysema and pneumonia, and other chronic obstructive pulmonary disease” [107]. Smoking can also cause or exacerbate numerous other health problems, and there are further risks caused by smoking in pregnancy and breathing in second hand smoke. Smokers who die prematurely lose on average about 10 years of life [108, 109]. Health benefits are immediate after quitting smoking [110], within 2-13 weeks circulation improves and lung function increases [111], within 1-9 months coughing and shortness of breath decreases and people start to regain lung function [111], after one year excess risk of coronary heart disease is half that of a continuing smoker’s [112], after 2-5 years stroke risk falls to that of a non-smoker’s [112, 113], after five years the risk of cancer of the mouth, throat, oesophagus and bladder are cut in half, and cervical cancer risk falls to that of a non-smoker [112, 113], after 10 years the risk of dying from lung cancer is about half that of a person who is still smoking, and risk of cancer of the larynx and pancreas decreases [111, 112] and after 15 years the risk of coronary heart disease is that of a non-smoker’s [113].

What’s our situation?

In 2014/15, 777 out of 3,677 women (21.1%) were known to be smokers at the time of delivery, compared with 10.6% for England [26, 95, 114]. The rate in Hull continues to fall (29.6% in 2005/06), although it is higher than 10 comparator areas.

The local Young People Health and Lifestyle Survey 2016 [86] found smoking rates had decreased slightly, although remaining high. Among 15 year olds, an estimated 6.8% of boys and 12.9% of girls smoked (9.5% overall). The prevalence among 15 year olds had decreased since the 2008 [115] and 2012 [74] surveys. In 2008, 11.3% of boys and 26.1% of girls smoked, and in 2012, 12.5% for boys and 18.0% for girls smoked. Rates of smoking were lower in the younger age groups. National estimates for Hull were slightly lower at 8.6% and comparable to England (8.2%) for 2014/15 [26, 95]. From the local survey [86], just under half of young people lived with someone who smoked (including around one third who lived with a smoker who smoked in the house) although this differed by deprivation (57% and 19% respectively for those in the most deprived fifth versus 29% and 6% respectively for those living in the least deprived fifth of areas of Hull). More boys (7.9%) used e-cigarettes compared to girls (5.9%). E-cigarette usage among boys was higher than tobacco use.

The prevalence of smoking among adults in Hull is high [114]. From the local adult Prevalence Survey 2014 [66], smoking prevalence among survey respondents was 30.7% (32.4% for men and 29.3% for women). Although the local prevalence had decreased from 34.0% in 2011-12, it still is nevertheless around 50% higher than England. It is estimated that there are 63,500 smokers in Hull, half of which live in the eight most deprived wards in Hull (which have a prevalence of 37.4% to 48.4% compared to 31.6% in the next highest ward and 14.3% in Beverley ward which had the lowest prevalence). Overall, 8.4% used e-cigarettes (3.7% every day) and virtually all were current or former tobacco / cigarette smokers. The majority were using e-cigarettes to quit or cut down their tobacco usage.

From the Local Tobacco Control Profiles [116], in 2014/15, there were 2,787 smoking-related hospital admissions per 100,000 residents aged 35+ years (67% higher than England), lung cancer registrations for 2012-14 were 130 per 100,000 population (63% higher than England), emergency hospital admissions for COPD for 2014/15 was 755 per 100,000 population (82% higher than England), and smoking-attributable mortality for 2012-14 was 434 per 100,000 population (58% higher than England) with 1,546 deaths attributable to smoking [117]. Using a slightly different
method of calculation, the number of deaths attributable to smoking was calculated, and in 2013-15, one in five deaths in Hull was attributable to smoking (1,505 out of 7,384 over the three years) meaning that there were over 40 deaths every month directly attributable to smoking [77, 118]. This rises to 23.6% of premature deaths before the age of 75 years with a total of 643 premature deaths out of 2,730 over the three year period. The total cost of smoking each year in Hull is estimated to be £62 million (economic loss of productivity costs of £45 million, NHS costs of £10 million and additional social care costs of £7 million) [119-121]. This does not include the cost of tobacco purchased by residents who smoke which could be around £118 million per annum [116, 119, 121, 122].

Social marketing research completed in Hull during September 2009 to assess general public knowledge and perception of chronic obstructive pulmonary disease found a perceived health danger relating to quitting smoking – “quit and you’ll die!” together with a denial “it’s not related to me” attitude [9]. Further local qualitative work revealed an attitude with a lack of immediate consequences in relation to health and a lack of concern over the future: “It doesn’t really affect you when you are young but it might catch up with you later” [123].

*For more detailed information, see the JSNA Toolkit: Smoking report.*

**What are the strategic needs?**

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes. Not smoking should be seen as the norm, with the aim of creating a smoke free generation. It should be recognised that different approaches and support are required for different people, and any specific problems or changes that are required should not be dealt with in isolation, but by considering the needs of each individual separately. The aims of the stop smoking services are to actively promote a smoke-free Hull, harness the wider public health workforce to deliver very brief advice to those people with whom they have contact in their day-to-day work (“make every contact count”), effect a reduction in the number of adult residents and pregnant women who smoke, and increase the number of people who remain smoke-free. It can help if people know that stopping smoking has immediate health effects improving circulation and lung function within weeks, shortness of breath within months and that the risk of heart disease and stroke are substantially reduced within 1-5 years and the risk of most cancers are substantially reduced within 5-10 years.

The current adult Smokefree Hull Service has a priority focus on people living in the most deprived wards (where smoking prevalence is the highest), pregnant women, and people with chronic obstructive pulmonary disease and coronary heart disease, with a separate smoking cessation service for young people.

Helping users quit through the provision of a cost effective, targeted smoking cessation service is just one strand of Hull’s revised Tobacco Control Plan. The Hull Alliance on Tobacco (HALT) Plan recognises the need to deal with other aspects of tobacco use if smoking prevalence rates are to be reduced. This broader approach is supported by national guidance and through bodies such as the World Health Organisation, National Institute of Health and Clinical Excellence (NICE) and the Regional Tobacco Control Group. In practice this means that in addition to helping people quit, the availability of tobacco has to be controlled through effective regulation, making tobacco less affordable and limiting its promotion in communities. People also have to be protected from the harmful effects of second hand cigarette smoke which is proven to have a harmful effect on health. There needs to be effective communication across all of the different strands of the tobacco control plan. There is a need to support people to make healthy lifestyle choices, to educate young people about the risks of starting smoking, to motivate users to quit, to provide information of how best to quit, to encourage communities to not see smoking as the norm and to promote compliance with tobacco control legislation which is aimed at protecting people from the harm caused by smoking.
OVERWEIGHT AND OBESITY

What’s the issue?

“Obesity can reduce life expectancy by between three and ten years, depending on the severity of the obesity” [124]. Excess weight increases the risk of numerous daily problems and health conditions, and is the leading cause of type 2 diabetes, heart disease and cancer, and alongside the ill health issues, it can reduce people’s prospects in life, affecting their ability to get and hold down work, their self-esteem and their underlying mental health. There are also increased complications in pregnancy such as gestational diabetes and pre-eclampsia” [124].

The cost of being overweight and obese to society and the economy was estimated to be almost £16 billion in 2007 (over 1% of the gross domestic product) [125]. The cost could increase to just under £50 billion in 2050 if obesity rates continue to rise [126]. It is predicted that there will be 11 million more obese adults in the UK by 2030, with combined medical costs for treatment of associated diseases estimated to increase by up to £2 billion per year [127].

Overweight is defined as having a body mass index (BMI)\(^3\) between 25 and 30kg/m\(^2\), and obesity is defined as having a BMI of 30kg/m\(^2\) (morbidly obese as 40kg/m\(^2\) or more).

What’s our situation?

One in eight (12.5%) of reception year children (aged 4-5 years) were obese in 2015/16 school year with a further 15.4% overweight [26, 95, 128]. The rate had fallen in Hull from 26.8% in 2006/07 to 22.8% in 2012/13, but has increased since for four years running, and is currently at its highest. Among Year 6 children (aged 10-11 years), 23.6% were obese and a further 13.9% were overweight. The rate has increased for the last three years from 34.6% in 2013/14. The latest rates of excess weight for both Reception and Year 6 children are significantly higher than England (22.1% and 34.1% respectively). Out of 3,474 Year R children measured, 535 were overweight and 433 were obese, and out of the 2,866 Year 6 children measured, 397 were overweight and 675 were obese in Hull in 2015/16.

In the local adult Prevalence Survey 2014 [66], 63.6% of the survey responders were overweight (37.1%) or obese (26.5%). Prevalence was higher amongst male and older survey responders (but falling slightly in the oldest 75+ year age group). It is estimated that 132,496 adults (16+) in Hull are overweight or obese, with 55,246 of them being obese. From local surveys, between 2003 and 2014 [63, 66, 129-131], the prevalence of overweight decreased by 0.39 percentages points per year, but the prevalence of obese, and overweight and obese combined increased by 0.59 and 0.20 percentage points per year respectively. If the current trend continues in Hull, then by 2020 the prevalence of obesity is projected to be 31.1% (and overweight and obesity to be 65.6%).

Local qualitative work revealed a difference between clinical definitions and perceptions of obesity differed as “You don’t see loads of fat people wandering around” [123].

For more detailed information, see the JSNA Toolkit: Overweight and Obesity report.

What are the strategic needs?

It is necessary to work together to create an environment that promotes physical activity and active transport in everyday settings for all ages, and ensure people understand the benefit of positive life choices and realise that obesity is a problem. People need to know how to access information and seek early support to change. In order to do this effectively, everybody needs to work together with different communities to use existing assets to realise the benefit of positive life changes. People need to have the knowledge and confidence to cook cheap, healthy meals, and further education or training may be necessary to help with this. It is also important to help improve access to good quality fresh fruit and vegetables, particularly for people who shop within their local area and/or rely on public transport.

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\(^3\) BMI is calculated as height (in metres) divided by the square of weight (in kilograms).
Locally, an obesity life course whole systems approach is used which views actions and behaviours of individuals in the context of the continuum of their lives from pre-natal through to older ages, and the transition through various life stages and transition points. These life stages and transition points can make individuals more susceptible to negative health outcomes, and can also present opportunities for intervention, for example, pregnancy as a key trigger point and a new mum’s approach to the diet and activity levels of herself and her new baby can have a lasting impact on the future diet and activity levels of the family overall. The case for intervening in the very early years is very strongly evidenced. However, the life course approach also recognises that there are other very significant transition points, such as attending school, young adults moving into higher education, employment, marriage, parenthood, etc, middle years possibly starting to develop disease or having friends and colleagues with adverse health events, independent children and possibly having more time to become physically active and cook healthy meals, and older people in retirement. This life course approach involves a comprehensive and integrated range of interventions and activities such as those around food and nutrition, “Active Hull”, Maternity Healthy Lifestyles programme, a Healthy Lifestyles programme, etc, supported by national programmes such as “Change 4 Life” to help people “Eat Less, Move More and Live Longer”.
PHYSICAL ACTIVITY

What’s the issue?

“Whatever a person’s age, there is good scientific evidence that being physically active can help them lead a healthier and happier life” [132]. Lack of physical activity may increase the risk of obesity and its associated health risks, but there is increasing evidence that lack of physical activity and inactivity is a major risk factor in its own right “increasing the risk of circulatory disease, diabetes, dementia, Alzheimer’s disease, stroke, and some cancers. There is also strong evidence that physical activity promotes mental wellbeing, boosting self-esteem, mood, sleep quality, and energy, as well as easing stress and anxiety” [132]. Prior to 2012, it was recommended that adults undertook moderate or vigorous physical activity for at least 30 minutes on at least five occasions per week. In 2012, the guidelines changed slightly to ‘bouts’ of moderate physical activity lasting 10 (rather than 30) minutes or more but still totalling 2.5 hours weekly (or 1.25 hours of vigorous physical activity weekly). It was recommended that muscle-strengthening physical activity was also undertaken at least twice weekly. Young people should be active for at least one hour daily.

What’s our situation?

From the Active People Survey 2015, 54.9% of Hull adults were physically active (fulfilling national guidelines of 150 minutes or more of moderate physical activity per week) compared to 57.0% for England (compared with 43.8% in 2012 for Hull), and a further 33.8% of Hull adults were physically inactive (fewer than 30 minutes of moderate physical activity per week) compared to 28.7% for England (compared to 36.1% in 2012 for Hull) [26, 95]. It is possible that the results are biased for Hull as only 536 people were surveyed in Hull. From the local adult Prevalence Survey 2014 [66], far fewer people fulfilled the national physical activity guidelines (41.4%) and this was lower for women (36.5%) compared to men (47.2%). This means that around 122,100 people (aged 16+) across Hull are not fulfilling the national physical activity guidelines.

In the local Young People Health and Lifestyle Survey 2016 [86], 44% of male and 24% of female secondary school pupils in Hull engaged in sufficient physical activity to fulfil national guidelines (at least one hour daily).

For more detailed information, see the JSNA Toolkit: Exercise report.

What are the strategic needs?

It is necessary to work together to create an environment that promotes physical activity and active transport in everyday settings for all ages, and ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. It should be recognised that different approaches and support are required for different people, and any specific problems or changes that are required should not be dealt with in isolation, but by considering the needs of each individual separately. The life course whole systems approach (page 40) aims to make physical activity the norm with support across all ages but focusing on life’s transition points and the early years to promote physical activity and embed good habits. Hull’s local strategy “Active Hull” [133] has a number of priority themes: (i) children, young people and families; (ii) active travel; (iii) not just sport – active living; (iv) reaching communities; (v) places and spaces; and (vi) Hull as a sporting destination. “Active Hull” has four cross cutting themes: (a) working together; (b) skills and employability; (c) communications and marketing; and (d) research, quality assurance, monitoring and evaluation.

The way services are commissioned and delivered, and the way in which neighbourhoods are designed and change can influence health and wellbeing, as well as changing health inequalities. The impact on health should be considered as part of the process of commissioning and planning. For example, the provision of green spaces and parks, and increasing and improving cycle routes throughout the city.
**DIET**

**What’s the issue?**

“A poor diet high in saturated fat, salt and sugar, low in essential nutrients and too high in calories can raise cholesterol and blood pressure, cause dental decay, and increase the risk of obesity, heart disease, stroke, diabetes, and some cancers such as colorectal cancer” [134]. “Around one in three people admitted to hospital or care homes in the UK are found to be under-malnourished or at risk of under-malnourishment, which can be caused by an inadequate diet or a health problem because the body cannot absorb nutrients from the food. Reduced mobility, a long-term health condition and low income are also factors that can influence diet” [135]. Furthermore, in more deprived areas, access to good quality fruit and vegetables, reliance of public transport, cost issues and lack of cookery knowledge are further barriers to healthy eating.

**What’s our situation?**

From the local adult Prevalence Survey 2014 [66], 68.9% stated that they ate a healthy diet, 23.9% stated they did not and 7.2% reported lack of knowledge about what constituted a healthy diet. Fewer than one in five (19.2%) ate five or more portions of fruit/vegetables per day (15.7% among those living in the most deprived fifth of areas of Hull versus 22.7% in the least deprived fifth). National estimates are much higher for Hull at around 50% [26, 95]. In the local adult Prevalence Survey 2009 [131], 79.3% ate a healthy diet and 27.5% ate 5-A-DAY, so reported diets have become worse. From the local Young People Health and Lifestyle Survey 2016 [86], it was estimated that 50% of year 7 boys and 59% of girls (aged 11-12 years) in Hull ate five or more portions of fruit/vegetables daily, but the percentage fell with age to 26% for both boys and girls in year 11 (aged 15-16 years). National estimates for Hull for 15 year olds are considerably higher at 44% for 2014/15 compared to 52% for England [26, 95]. One in twenty year 7 children never had breakfast on a school day, but this increased to 15% for boys and 28% for girls by year 11 [86].

Within local qualitative projects, participants always mentioned the preponderance of takeaways in their local area. “I was terrible for it, takeaways everywhere. Temptation. I mean, I live across the road from a takeaway and it’s lovely and I wish it wasn’t there. I’m glad it’s there, but I wish it wasn’t there. It’s a kebab, pizza, Turkish takeaway. And within ten minutes walk, there’s four of that type, a couple of chicken places, two Chinese, an Indian, three chip shops, these are all in less than ten minute walk and I live in a council estate near the University” [10].

For more detailed information, see the JSNA Toolkit: Diet report.

**What are the strategic needs?**

It is necessary to work together to improve access to healthy and affordable food, and ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. Furthermore, the family or household environment can have a strong influence on poor diet, so approaches to improving diet involving the entire family is preferable. People need to have the knowledge and confidence to cook cheap, healthy meals, and further education or training may be necessary. There is also a need to support ‘Fuel, Food and Finance’ anti-poverty initiatives that help people minimise the health impact of welfare reform and cost of living rises. Improving diet should be tackled using a life course whole system approach (page 40) looking at a combination of strategies and settings. This includes giving nutritional advice to pregnant women, encouraging healthy weaning practices, making affordable food available, healthy cooking sessions on a budget for families, and changing the food culture approach to food and nutrition across a variety of settings such as schools, workplace canteens and hospitals, etc. The way services are commissioned and delivered, and the way in which neighbourhoods are designed and change can influence health and wellbeing, and health inequalities. The impact on health should be considered as part of the process of commissioning and planning. For example, the number and location of takeaways already in the area should be considered when there are new takeaway applications.
ALCOHOL CONSUMPTION

What’s the issue?

“Drinking alcohol is a freedom that many enjoy, however this must be balanced with the need to avoid harm and improve health outcomes” [136]. “Alcohol consumption is the world’s third largest risk factor for disease and disability. Alcohol is a causal factor in 60 types of diseases and injuries, and a component cause in 200 others” [137]. “Liver problems, reduced fertility, high blood pressure, increased risk of various cancers and heart attack are some of the numerous harmful effects of regularly drinking more than the recommended levels. Excessive alcohol consumption can also lead to fatigue, depression, weight gain, poor sleep and sexual problems” [138]. Modelled estimates suggest that over one million admissions attributable to alcohol occurred in England during 2012/13 [139]. In 2013/14, the total annual cost to society of alcohol-related harm was estimated to be £21 billion (£3.5 billion for NHS) [140]. There are also significant effects on families and communities, with an increased risk of vandalism, violent crime, domestic abuse, road casualties and sickness absence from work.

It was recommended that men and women do not exceed 21 and 14 alcohol units per week (1995 national guidelines in place until December 2015), or regularly drink 3-4 and 2-3 units in a single day respectively. Regular binge drinking is classified as drinking more than double the daily limits at least once a week (≥8 units for men and ≥6 units for women). In the new guidelines published January 2016, the fundamental change to the recommendations is that there is no safe level of drinking alcohol, and the weekly maximum for men has changed to 14 units [141].

See page 111 for information on definitions relating to alcohol-related admissions to hospital.

What’s our situation?

From the local adult Prevalence Survey 2014 [66], whilst 24% never drank alcohol, 28% had exceeded the 1995 national alcohol guidelines the previous week and/or usually undertook binge drinking weekly (35% of men and 22% of women) having increased from 22% in 2011-12. Following the 2016 update to the national guidelines, the percentage who had exceeded the weekly limits and/or usually undertook binge drinking weekly increased to 30% (38% of men and 22% of women), and would have been 25% in 2011-12 [63]. The increase in prevalence was mainly due to changes in the middle and older age groups and among those living in the least deprived areas.

From the local Young People Health and Lifestyle Survey 2016 [86], 5.3% of boys and 3.4% of girls drank alcohol every week (11.2% of boys and 8.5% of girls in year 11 (aged 15-16 years)), and 2.9% of boys and 2.1% of girls in Hull had exceeded the weekly units of alcohol which apply to adults (more than 14 units), with 7.7% of boys and 5.0% of girls having done so in year 11 (compared to 11.0% and 14.0% respectively in 2012 [74]).

From the Alcohol Profiles [142], in 2014/15, there were 541 admissions specifically due to alcohol per 100,000 population which was much higher than England (364) as was the modelled number of admissions for alcohol-related admissions (3,140 versus 2,139 per 100,000 population). There were also 43.5 alcohol-specific admissions among under 18s per 100,000 population between 2012/13 and 2014/15 which was higher than England (36.6).

From the Alcohol Profiles [142], in 2015, it was estimated that there 14.3 deaths per 100,000 population for alcohol-specific conditions compared to 11.5 for England. Overall, it was estimated that there were 54.1 deaths per 100,000 population for alcohol-related conditions compared to 46.1 for England for 2015 with 685 years of life lost due to alcohol-related conditions in Hull compared to 552 for England.

During 2015, 181 of 499 alcohol users in treatment (36.3%) successfully completed their treatment and did not re-present within six months, which was slightly lower than England (38.4%) [26, 95].

Local qualitative work revealed lack of understanding over what constituted binge drinking among women “Binge drinking is when you open a second bottle”, but particularly among men “Binge drinking is an all day session” and “Drinking all day and night and not going home” [123]. There was also a general lack of understanding of alcohol units “I find the words unit very confusing” [10].
Government guidelines were seen as ‘made up’, and most agreed that they did not understand them: “I haven’t got a clue” [10], although some did have an understanding.

*For more detailed information, see the JSNA Toolkit: Alcohol Consumption report.*

**What are the strategic needs?**

It is necessary that public health, health providers, schools and those working with young people and families, community workers, and communities and the police work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change.

Professionals who have contact with the public need to undertake screening and deliver brief interventions with their clients, referring to specialist treatment services as appropriate. There is a need for effective integrated alcohol treatment pathways developed between primary and secondary care to support a reduction in A&E attendance and hospital admissions.

There is a lack of knowledge in relation to alcohol units and the calorie content of alcoholic drinks, and there is a need to increase awareness.
DRUG AND SUBSTANCE ABUSE

What’s the issue?

Different drugs have different effects on physical and mental health, and some are highly addictive. From NHS Choices [143], the health risks include “death from an overdose, lung disease from smoking drugs, HIV or viral hepatitis, serious infections in the body and bloodstream, fertility problems, damage to veins and body tissue through injecting drugs, overheating and dehydration, kidney problems, schizophrenia, hallucinatory states, insomnia, fits, agitation, aggression, confusion, paranoia, psychosis, memory problems, depression, anxiety and lack of concentration. It can also be dangerous to drive after taking drugs, increasing the risk of an accident.” Drug and substance misuse has a serious impact not just on the individual, but also their family and friends who may require considerable support. There also can be a detrimental effect on the entire community.

What’s our situation?

Estimates available from the National Treatment Agency for Substance Misuse give the number of problematic drug users in Hull between April 2011 and March 2012 as 3,229 [144]. This equates to a prevalence of 18.4 per 1,000 population aged 15-64 years. During 2015, 98 of the 1,723 opiate clients (5.7%) and 117 of the 388 of non-opiate clients (30.2%) successfully completed and did not re-present for treatment within six months, which was lower than England (6.7% and 37.3% respectively) [26, 95].

From the local Young People Health and Lifestyle Survey 2016 [86], around one in 10 pupils reported they had been offered or encouraged to try drugs in the last three months over all school years (just over one in six among year 11 (aged 15-16 years) pupils). Similar percentages reported that they had ever used or tried drugs. The age-adjusted percentage of year 9 to 11 pupils using drugs was small (<2%) for most specific drugs except for new psychoactive substances4 (3.8% of boys and 3.0% of girls) and cannabis (10.4% of boys and 15.4% of girls).

From the Child Health Profiles [18], there were 60 hospital admissions due to substance misuse among those aged 15-24 years during 2012/13 to 2014/15 considerably higher than England (155 versus 95 per 100,000 population).

Across all ages, the number of deaths due to psychoactive substance abuse in Hull has significantly decreased over the last few years from a total of 47 deaths over the three year period 2001-03 (16 deaths per year) to a total of 13 deaths over the last three years (2013-2015) [77, 145]. In 2001-03, 83% of these deaths were due to drugs (rather than alcohol), but the percentage due to drugs has fallen over time, and in 2013-15 virtually all the deaths were due to alcohol [77]. The mortality rate for 2013-15 at 3.9 deaths per 100,000 population in Hull is identical to that for England [26, 95].

For more detailed information, see the JSNA Toolkit: Drug and Substance Abuse report.

What are the strategic needs?

The Government’s 2010 Drug Strategy has two overarching aims to reduce illicit and other harmful drug use, and to increase the numbers recovering from their dependence, structured around three key themes of reducing demand, restricting supply and building recovery in communities. There is a fundamental shift from harm reduction toward recovery and prevention, and designing local services for local people. This recognises that each person should be treated as an individual, and that health care providers and the police need to work together with different communities to use existing assets to prevent people from starting to take drugs and help those recover from drug dependence and harmful use. There includes a need to identify the most vulnerable children, young people and families, helping and supporting them so that poor health choices do not lead to drug taking.

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4 The term ‘legal high’ was used on the questionnaire as at the time they were generally called this, however, they are no longer legal and are correctly termed New Psychoactive Substances.
MULTIPLE BEHAVIOURAL AND LIFESTYLE RISK FACTORS

What’s the issue?

The individual behavioural and lifestyle risk factors have been discussed earlier, but there can be additional risks from combining risk factors. For example, “smoking and drinking alcohol together greatly increases the risk of developing throat and mouth cancer than doing either on their own, because drinking alcohol makes it easier for the mouth and throat to absorb the chemicals in tobacco that cause cancer” [146]. Furthermore, people who have a specific behaviour or lifestyle risk factor may be more likely to have another specific risk factor. For example, in the local 2007 Attitudes to Health Survey, an association between risk factors was found, in particular a relationship between alcohol and smoking, and between lack of physical activity, diet and obesity. For all of these risk factors, gender, age and deprivation are confounders (see page 111 for information on confounding).

What’s our situation?

From the local adult Prevalence Survey 2014 [66], the prevalence of the combination of five risk factors was examined. The risk factors considered were smoking, excessive alcohol consumption (either in a single day (binge drinking) or total units over the previous week based on 2016 national guidelines), insufficient physical activity (<2.5 hours of moderate activity based on 2012 national guidelines), obesity and not eating 5-A-DAY. In Hull, 1.1% had all five of these risk factors, 8.3% had four, 25.4% had three, 34.9% had two, 24.3% had one and 6.0% had none of these five risk factors. There were relatively small differences between men and women, although men were slightly more likely to have three or more risk factors (37.1% versus 32.7%). Examining the number of risk factors for each five year age band, people aged 45-64 years tended to have the most risk factors with 41-42% having three or more risk factors, followed by those aged 35-44 years (37%), people aged 65+ (31-36%) and people aged 16-34 years (25-31%). People living in the most deprived fifth of areas of Hull were more likely to have more risk factors with 45% having three or more risk factors compared to 26% among those living in the least deprived fifth of areas.

From the local Young People Health and Lifestyle Survey 2016 [86], the prevalence of multiple risk factors (smoker, exceeded 14 units of alcohol previous week, failed to undertake one hour of exercise daily previous week, did not eat 5-A-DAY previous day, and previously tried drugs) differed among different year groups. There was a gradual decrease in the percentage of boys and girls having none of the risk factors from 26% in year 7 (aged 11-12 years) to 7% in year 11 (aged 15-16 years), while the percentage having three or more of the five risk factors increased with school year from 0.6% in year 7 to 17.5% in year 11. There were relatively small differences between boys and girls, although girls were less likely to have none of the risk factors and more likely to have more of the risk factors, and none of the girls had all five risk factors whereas 0.4% of year 9 and year 10 boys and 1.2% of year 11 boys did (only four boys in total though over these three year groups).

For more detailed information, see any one of the JSNA Toolkit reports on lifestyle and behavioural risk factors, such as Smoking, Diet or Exercise, etc.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, all relevant service providers need to work together with different communities to use existing assets to realise the benefit of positive life changes. It should be recognised that different approaches and support are required for different people, and any specific problems or changes that are required should not be dealt with in isolation, but by considering the needs of each individual separately. It may also be necessary to ‘prioritise problems’ as dealing with or changing too many factors together may not be as successful as dealing with one problem or issue at a time. Alternatively, some people may prefer having a ‘clean sweep’ and dealing with a number of issues at the same time.

1. The best start in life;
2. Healthier, longer, happy lives; and
3. Safe and independent lives.

“What happens in early years has a lifelong impact. Giving every child the best start is crucial to reducing health inequalities across the life course. Healthy and informed parents who have control over their own wellbeing will have healthier babies and raise healthier children.

Children who are ready for school will be able to get the most out of their education and fulfil their potential. Building emotional resilience will help children handle the pressures of growing up and give them the right knowledge and skills to overcome challenges.

Families who make healthy lifestyle choices will thrive” [1].

This section includes topics which generally relate to maternal health, children and young people, although there is information relating to children and young people in other sections, such as population, ethnicity and population projections (commencing page 5), health, wellbeing and use of health services including dental services (commencing page 25), behavioural and lifestyle risk factors (commencing page 37), new-born screening checks is covered in the screening topic (page 65), some diseases relevant to children such as asthma (page 88), diabetes (page 84) and epilepsy (page 91) are covered in the adult section as this covers most of the disease and medical condition topics (commencing page 62), sexual health is covered on page 95 although teenage pregnancy is covered within this section on children and young people (page 60), and learning disabilities is covered within the vulnerable group section (commencing page 99).
ACCIDENTS TO CHILDREN AND YOUNG PEOPLE

What’s the issue?

“More than one million children under the age of 15 experience accidents in and around the home every year in the UK, for which they are taken to A&E. Many more are treated by GPs, parents and carers” [147]. “In the UK, accidental injuries are the most common cause of death in children over one year of age. Children under five are most at risk from an injury in the home, with boys more likely to be injured than girls. Burns and scalds, swallowing of foreign objects and suspected poisoning are common in younger children whereas older children are more likely to experience fractures. Many accidents and deaths that occur in the home are avoidable. Young children are unable to assess the risks that things pose, and are particularly at risk if distracted, under poor supervision, being in a hurry or unfamiliar with surroundings. Their perception of the environment around them is often limited and their lack of experience and development, such as poor coordination and balance, can result in them being injured. Poor housing and overcrowded conditions also increase risk, with childhood accidents closely linked to social deprivation” [148].

What’s our situation?

In 2015/16 the hospital admission rate due to unintentional and deliberate injuries in children aged 0-14 years in Hull was 134 per 100,000 (a total of 637 admissions) and 151 per 100,000 (271 admissions) among those aged 0-4 years [26, 95, 149]. Both rates have increased over time, and are currently higher than England (104 and 130 respectively). The national inequalities gap has also widened over time, and there is a much higher admission rate among the most deprived fifth compared to least deprived fifth of Hull (35% higher for 0-14s and 23% higher for 0-4s) with huge differences across the wards (admissions of 66 in Avenue and 155 in Newland per 100,000 population for 0-14s).

For 2015/16, among those aged 15-24 years, there were 555 admissions giving an admission rate of 145 per 100,000 population which was 8% higher than England [26, 95, 149]. Rates were over 200 admissions per 100,000 population 15 years ago, so have decreased over time. Nevertheless, there are huge local inequalities (220 versus 107 admissions per 100,000 population for most and least deprived fifths in Hull) and across the wards (admissions of 63 and 279 per 100,000 population in Boothferry and St Andrew’s wards respectively).

For more detailed information, see the JSNA Toolkit: Accidents report.

What are the strategic needs?

Parents and carers of young children should be aware of the dangers to young children in the home, and should be given help and support to reduce these dangers. These risks and dangers are generally discussed during pregnancy and post-natal care, and Children’s Centres do a great deal to raise this awareness, including undertaking home visits, risk assessments and referral into the Home Safety Scheme (free fitting of home safety equipment for most vulnerable families). Kid Alert is an annual initiative involving around 2,000 Year 6 (aged 10-11 years) children who go through a series of scenarios looking at different areas of safety. Work is also underway to develop an initiative on child safety for the under 5s. There is a Hull and East Riding Safe Sleeping Group which promotes safe sleeping habits for babies. There is also an Accident Prevention Work stream, and other regular promotion events in relation to home safety such as the National Play Day event and the Christmas Child Safety Campaign.
EARLY YEARS

What’s the issue?

Every child deserves the best possible start in life and the support that enables them to fulfil their potential. Children develop quickly in the early years and a child’s experiences between birth and age five have a major impact on their future life chances. A secure and happy childhood is important in its own right. Good parenting and high quality early learning together provide the foundation children need to make the most of their abilities and talents as they grow up.

Marmot in his strategic review of health inequalities in England post-2010 [150] stated that “Parents are the most important ‘educators’ of their children for both cognitive and non-cognitive skills. Parental involvement in their child’s reading has been found to be the most important determinant of language and emergent literacy [151]. Parenting style also makes a difference. Recent analysis of data from the Millennium Cohort Study suggests that parents who combine high levels of parental warmth with high levels of supervision are more likely to have children at age five who are more confident, autonomous and empathic. On the other hand, a ‘disengaged’ parenting style is associated with poorer outcomes for children [152].”

What’s our situation?

Due to the increased levels of deprivation in Hull, the majority of children are at an increased risk of not fulfilling their potential and having worse health than England as a whole. A higher percentage of children in Hull live in poverty (page 10) and many children have an immediate disadvantage in life due to their circumstances. Compared to England, there is a higher rate of emergency admission for accidents (page 49), and fewer children in Hull are ready for school and achieve five or more GCSEs at A-C level and there are more children with special educational needs (page 58). Children living in more deprived areas are more likely to grow up thinking that poverty, poor housing, and unemployment are the norm, which could result in cyclic behaviours with these children behaving as their parents do as they reach adulthood. Compared to England, babies are less likely to be breastfed (page 54) and children more likely to have unhealthy lifestyle behaviours (commencing page 37) such as poor diets and low levels of physical activity. Children living in the most deprived areas are also more likely to be exposed to second-hand smoke and become smokers themselves. Children and young people living in the most deprived areas are more likely to have learning disabilities (page 100), poorer physical health (page 29), poorer emotional health (page 30) and poorer dental health (page 33). From the local Young People Health and Lifestyle Survey 2016 [86], 9% of pupils had no books and 26% had very few books (1-10 books) in their home, with a further 31% having one shelf of books (11-50 books) in their home. This differed by deprivation with 42% of pupils living in the most deprived fifth of areas of Hull having no or very few books compared to 27% of pupils living in the least deprived fifth of areas of the city.

In 2016, 1,410 of the city’s two year old children benefitted from funded early education. This equated to 72% of the city’s two year old population and represented a higher rate than that seen across the Yorkshire and Humber region overall (71%), and nationally (68%).

Across England, in October 2015, the responsibility for public health services for the under 5s commissioning moved from the NHS to the local authority.

For more detailed information, see the JSNA Toolkit: Children and Young People report.

What are the strategic needs?

It is important that there should be early help for the children and young people, and their families who need additional support, and that the support is timely, accessible and appropriate for their circumstances. There should be a focus of resources on identifying risks and intervening early to improve maternal health and wellbeing, promoting positive parenting skills, and creating an environment for children and young people that builds self-esteem and resilience.

Everybody should have the opportunity to improve their life choices through increased early learning and education, training and knowledge. Everybody should have access to the information and help
they need to support themselves and their families to have a healthy lifestyle; to stop smoking, eat a healthy balanced diet, undertake regular physical activity, and maintain a healthy weight.

Hull has had significant investment as part of the National Health Visitor implementation plan with additional health visitors all of whom will be focusing on the first 1001 days and the six high impact areas of health: (i) transition to parenthood and the early weeks; (ii) maternal (perinatal) mental health; (iii) breastfeeding; (iv) healthy weight (healthy diet and being active); (v) managing minor illness and reducing accidents; and (vi) health, wellbeing and development at two years and support to be ‘ready for school’. The aim of the First 1001 Days The All Party Parliamentary Group [153] is to create children who at the end of their first 1001 days (conception to age 2 years) have the social and emotional resources that form a strong foundation for good citizenship. They state that without intervention, there will be in the future, as in the past, high intergenerational transmission of disadvantage, inequality, dysfunction and child maltreatment. These self-perpetuating cycles create untold and recurring costs for society. The economic value of breaking these cycles will be enormous. The Priority Families programme in Hull aims to change these repeating generational patterns of poor parenting, abuse, violence, drug use, anti-social behaviour and crime in the most troubled families in Hull (page 18). The ‘Hull Early Help and Priority Families Strategy 2015 – 2020” gives further information on the four different ‘levels’ of early help: (i) universal response (no additional needs); (ii) early help response (additional needs); (iii) targeted early help response (complex needs); and (iv) statutory and specialist response (risk of significant harm) [76].

The Two Year Old Early Education Entitlement for eligible children and families is activity promoted and ways to increase uptake is constantly under review. Work with health visitors is being used to pilot best practice in the implementation of the Integrated Two Year review and to support eligible families to access their early education entitlement.
MATERNAL HEALTH

Also see page 54 for breastfeeding and page 50 for early years.

What’s the issue?

“Maternity services cover care for the women from when they become pregnant and access care until they are signed off by the midwife (around 10 days after the birth) and care formally handed over to health visitors” [154]. Good antenatal care and support can identify potential problems early, and provide information to aid informed choice. Poor care during the birth, as well as increasing the risk to mother and child, can have other implications such as post-natal depression. “Good maternity services should respond to the physical, psychological, emotional and social needs of women and their family in a structured and systematic way” [154].

Women who lack social support have been found to be at increased risk of antenatal and postnatal depression, and having a poor relationship with a partner is also a risk factor for postnatal depression [155]. Infant mortality rates are higher among babies that are sole registered than for other registration types [156].

There is a higher risk of adverse events in pregnancy and during the birth for women who are teenagers, who are older, and who have unhealthier lifestyles. This increase in the proportion of ‘higher risk’ women, as well as the increasing number of births in recent years, has placed additional pressure on already stretched maternity services nationally.

There are a number of screening programmes in place in the UK relating to antenatal and newborn. “Tests in pregnancy and in the newborn after birth are designed to help make the pregnancy safer, check and assess the development and wellbeing of the women and her baby, and screen for particular conditions” [157-159]. Further information is given on page 65.

What's our situation?

During the three year period 2013-15, there were 74 stillbirths in Hull giving a rate of 6.8 per 1,000 births which was higher than England (4.6) and whilst it had been higher in 2012-14 (5.8 v 4.7) it had been lower in Hull in 2011-13 (4.7 v 4.9) and 2012-14 (4.3 v 5.1) [26, 78, 82, 83, 160]. There were also 44 infant deaths (<1 year) giving a rate of 4.1 per 1,000 live births in Hull which was higher than England (3.9), although it had been lower in Hull for 2012-14 (3.9 versus 4.0) [26, 78, 82, 83, 160]. During the financial year 2016/17, at the time of their initial antenatal (booking) appointment, 1,153 (28%) were overweight (body mass index (BMI)5 25-29.9 kg/m²), 617 (15%) had a BMI 30-34.9 kg/m², 313 (8%) had a BMI 35-39.9 kg/m² and 184 (4.5%) had a BMI 40+ kg/m² (so 2,267 women out of 4,063 (56%) were overweight which included 27% who were obese and 4.5% who were morbidly obese) [161]. In 2016/17, 878 out of 3,834 women (22.9%) were known to be smokers at the time of delivery, compared with 10.5% for England [26, 95, 114]. Whilst the rate in Hull has fallen since 2005/06 when it was 29.6%, it has increased from 2014/15 when it was 20.9% due to the introduction of carbon monoxide (CO) testing at antenatal booking appointment (and at subsequent antenatal appointments if positive). The rate in Hull is currently second highest among the 209 CCGs. One in four babies born in Hull were delivered through a caesarean section in 2014/15, and the percentage was slightly lower than England (25.8% versus 24.4%) [160]. A lower percentage of births were multiple births in Hull (49 out of 3,553, 13.8%) compared to England (16.0%) in 2015, and there were a much lower percentage of births to mothers aged 35+ years in 2014/15 (10.2% versus 20.4%) [160]. Overall, 109 out of 3,306 babies (3.3%) were born to term (37+ weeks) and were of low birth weight (<2.5kg) in Hull for 2015 which was higher than England (2.8%) although it has been lower than England for five of the last six years [26, 128, 160]. In 2013/14, it is estimated (using national prevalence data), that 10 women will have post partum psychosis, 10 chronic serious mental illness, 105 severe depressive illness, between 345 and 515 mild or moderate depressive illness or anxiety, 30 post traumatic stress disorder, and between 150 and 300 adjustment disorders and distress [162].

5 BMI is calculated as height (in metres) divided by the square of weight (in kilograms).
For more detailed information, see the JSNA Toolkit: Children and Young People, and Demography and Demographics reports.

**What are the strategic needs?**

With increasing numbers of older women having children and the high prevalence of smoking and obesity, there is a need to provide help and advice prior to pregnancy to attempt to reduce these risks (although recognising that not all pregnancies are planned). Identifying risks and intervening early to improve maternal health and wellbeing, improving birth preparation, promoting positive parenting skills, and creating an environment for children and young people that builds self-esteem and resilience, with good emotional health. Early help and intervention for all families should be timely, accessible and appropriate for their circumstances (page 50).

Hull’s Maternity Commissioning Strategy [163] has five key outcomes: an improvement in maternal health (including early access to midwifery, maternal obesity and smoking); reductions in maternal and stillbirths/infant mortality, and infant morbidity; and an improvement in maternity services experience. Improving mental health is also an important area of work.
**BREASTFEEDING**

**What’s the issue?**

“Breastfeeding is the healthiest way to feed a baby, and it is recommended that exclusive breastfeeding is undertaken for the first six months, although any breastfeeding has a positive effect, with longer breastfeeding leading to greater benefits. Babies who are breastfeed have less chance of diarrhoea and vomiting (and having to go to hospital as a result), fewer chest and ear infections (and fewer visits to hospital as a result), less chance of being constipated, less chance of developing eczema, and less chance of becoming obese. Breast milk also adapts to the babies’ changing needs. Mother’s who breastfeed lower their risk of getting breast and ovarian cancer, build up a strong bond between mother and baby, and breastfeeding can help with weight loss as producing the milk uses up around 500 calories. It is also cheaper as it avoids buying infant formula milk” [164].

Nationally, if all babies were breastfed, it is estimated that £35 million each year could be saved by the NHS due to treating gastroenteritis alone. Even if breastfeeding prevalence at 6 months was increased by 10%, it is estimated that the NHS could save at least £5.6 million over 4-5 years due to the prevention of cases of otitis media, gastroenteritis and asthma. The cost savings in Hull from these three conditions is estimated to be £33,945 per year (although not all savings will be realised in the first year) [165].

**What’s our situation?**

For 2014/15, the breastfeeding initiation rate in Hull was 61.5% having increased since 2010/11 (57.2%), but remains significantly lower than England (74.3%) and slightly lower than the average of the 10 comparators (64.5%) [26, 160]. The prevalence of (partially or totally) breastfeeding at 6-8 weeks for 2015/16 was 30.1% which was considerably lower than England (43.2%). The percentage had been increasing in Hull, but due to differences in data collection methods the current rate cannot be compared with historical data [26, 160, 166]. Local analysis of breastfeeding rates at 6-8 weeks revealed the strong influence of deprivation and ethnicity [128].

Full UNICEF accreditation for the community was achieved in 2013 (and more recently renewed in December 2015) which involved training all children’s centre staff, Health Visitors and a range of local authority teams. A re-assessment will be completed in 2018. Part of the accreditation is to engage local businesses to promote breastfeeding in premises locally. Work is ongoing to increase the confidence of Hull mothers to breastfeed in a culture which is predominantly to formula feed. Hull and East Yorkshire Women and Children’s Hospital achieved full accreditation last year and will be re-accredited next year [167].

For more detailed information, see the JSNA Toolkit: Children and Young People report.

**What are the strategic needs?**

Encourage as many women to breastfeed their babies as possible by explaining the advantages, and by offering advice and support, both prenatally and post-natal. This involves providing quality information, implementing a structured programme of activity using the UNICEF Baby Friendly Initiative as a minimum, training healthcare and support staff to be confident and competent to support breastfeeding mothers, and supporting all mothers and increasing their confidence to breastfeed [165].

As the largest decrease in breastfeeding occurs within the first ten days and the first Health Visitor contact is at ten days, local Health Visitors are working to promote the peer supporter service locally to help mothers to continue to breastfeed prior to the first Health Visitor appointment.

Support and advice should be given on feeding with bottles for women who are not able to breastfeed or women who would like to express milk.
VACCINATIONS AND IMMUNISATIONS

What’s the issue?

Specific vaccines are offered to children, young people, pregnant women, older people and other adults with specific long-term health conditions. All children are offered vaccines against key diseases to prevent them getting serious diseases that can kill or cause long-term health consequences. A small number of vaccines are just offered to a selected group of children and adults who are at risk owing to their personal circumstances. Older people and other at risk groups are offered the seasonal influenza vaccination to reduce the likelihood of influenza. There is also a vaccine for shingles offered to specific older age groups. NHS Choices provides a full list of vaccines routinely offered [168].

What’s our situation?

From the Public Health Outcomes Framework dataset [26], during 2014/15, among one-year olds in Hull, just under half (11 out of 22) of those eligible had received their Hepatitis B vaccination, and during 2015/16, 96% had received their diphtheria, tetanus and pertussis (DTP) / inactivated polio vaccine (IPV) / haemophilus influenza type b (Hib) vaccinations, 98% had had their meningococcal C (MenC) vaccination and 96% had received the pneumococcal conjugate vaccine (PCV).

Immunisation rates among two year olds in Hull in 2015/16 for DTP/IPV/Hib, measles, mumps and rubella (MMR), Hib/MenC booster and PCV booster were 98%, 95%, 95%, 95% respectively.

Immunisation rates among five year olds for 2015/16, for Hib/MenC (booster), MMR 1st dose, MMR 2nd dose were 94%, 97% and 93% respectively. All uptake rates were higher than England and the average of 10 comparator areas. The human papillomavirus (HPV) types 16 and 18 uptake rate for young girls in Hull in 2015/16 was 79% for one dose and 73% for two doses (considerably lower than England at 87% and 85% respectively). From the Child Health Profile 2017 [18], in 2016, 87% of children in care were up-to-date with their immunisations which was the same as England. Previous local analysis also showed relatively large variations at ward and GP practice level among the uptake rates for different childhood immunisations [169].

From the Public Health Outcomes Framework dataset [26], during 2015/16, vaccination rates against influenza in Hull was 71% among those aged 65+ years (England 71%) and 43% among at-risk groups (England 45%). For 2015/16, among at-risk groups in Hull 76% on coronary heart disease registers, 72% on stroke and transient ischaemic attack registers, 73% on diabetes registers and 75% on chronic obstructive pulmonary disease registers had received the influenza vaccine including ‘exceptions’ (see QOF on page 111) [93]. The vaccination uptake rates against influenza among 2-4 year olds was 33% in Hull only just lower than England (34%) [26]. The pneumococcal polysaccharide vaccine (PPV) uptake rate in Hull among those aged 65+ years in 2015/16 was 72%, higher than England (70%) [26].

The uptake rate for the vaccine against shingles given to 70 year olds was slightly lower in Hull (52%) compared to England (55%) for 2015/16 [26].

For more detailed information, see the JSNA Toolkit: Vaccinations and Immunisations report.

What are the strategic needs?

It is necessary to have a relatively high uptake rate particularly for contagious diseases that are easily passed from one person to another, particularly for children who socialise much more closely and are more likely to pass the disease to another child or a parent.

Whilst rates are relatively high and generally higher than the national average among children, there are relatively large variations in uptake rates within primary care practices, perhaps associated with the characteristics of the patients within those practices. Furthermore, the rates in Hull are lower than the national average of young girls offered the HPV, at risk populations who are offered the influenza vaccine and among those aged 65+ years. It may be useful to work with practices with relatively low uptake rates to improve their rates, and undertake some local work to improve the rates among teenagers, at risk populations and older people.
**SCHOOL AGE CHILDREN**

**What’s the issue?**

As mentioned on page 50, a good start in life is essential as children develop quickly in the early years and a child’s experiences between birth and age five have a major impact on their future life chances. Children need this foundation, through good parenting and high quality early learning, so that they can successfully progress through school and make the most of their abilities and talents.

“Good education improves career prospects, raises aspirations, and gives people more financial control over their lives. Poor education and training, and low educational attainment can affect confidence, aspirations, and increase the risk of lifelong unemployment, benefit dependency or low paid employment” [170]. These factors have a strong influence on health and wellbeing. Children (and adults) with low confidence and aspirations, and with low educational attainment are more likely to make poor choices in their lives which put them at risk, and increase their likelihood of poor health. Ensuring children are ready for school and can achieve good levels of education is essential for them to achieve well-paid satisfying regular employment, increase resilience, and improve health and wellbeing.

As mentioned on page 50, Marmot stated that parents are the most important ‘educators’ of their children for both cognitive and non-cognitive skills. High levels of parent warmth and supervision with parental involvement in their child’s reading has been instrumental in raising a more confident, autonomous and empathic child with good language skills and emergent literacy.

Following the Children and Families Act 2014, children (under the age of 25 years so covers early years, school age children and beyond) who have special educational needs will have an Education, Health and Care (EHC) plan, developed by all professionals and the family working together, to address all needs that a child or young person has within education, health and care. Prior to the Act, children were on School Action, School Action Plus or have SEN statements (three classifications in order of severity of additional need requirements). Within the Act, SEN Support replaces School Action and School Action Plus (in schools) and Early Years Action and Early Years Action Plus (in early years). Children with a learning disability assessment should have their EHC plan by September 2016 and children with statements should have their EHC by April 2018.

**What’s our situation?**

Due to the increased levels of deprivation in Hull, the majority of children are at an increased risk of not fulfilling their potential and having worse health than England as a whole. A higher percentage of children in Hull live in poverty (page 10) and many children have an immediate disadvantage in life due to their circumstances. Compared to England, there is a higher rate of emergency admission for accidents (page 49), and fewer children in Hull are ready for school and achieve five or more GCSEs at A-C level (page 58). Children living in more deprived areas, are more likely to grow up thinking that poverty, poor housing, and unemployment are the norm, which could result in cyclic behaviours with these children behaving as their parents do as they reach adulthood. Compared to England, children more likely to have unhealthy lifestyle behaviours (commencing page 37) such as poor diets and low levels of physical activity. Children living in the most deprived areas are also more likely to be exposed to second-hand smoke and become smokers themselves. Children and young people living in the most deprived areas are more likely to have learning disabilities (page 100), poorer physical health (page 29), poorer emotional health (page 30) and poorer dental health (page 33). The percentage of pupils requiring special educational needs (SEN) support or Education, Health and Care (EHC) plans is higher than England (page 58). Whilst under 18 conception rates have fallen greatly in Hull over the last decade, they are much higher than England (page 60).

*For more detailed information, see the JSNA Toolkit: Children and Young People report.*

**What are the strategic needs?**

As a good education is very important for future health and wellbeing, it is essential that children are ready for school, and children and young people are able to maximise their achievements whilst at school, college and university, so that they can have good employment prospects. It is important
that there should be early help for the children and young people, and their families who need additional support, and that the support is timely, accessible and appropriate for their circumstances. There should be a focus of resources on identifying risks and intervening early to improve maternal health and wellbeing, promoting positive parenting skills, and creating an environment for children and young people that builds self-esteem and resilience. More information on Hull’s Early Help and Priority Families Strategy 2015–2020 [76] is given on page 50.

There should also be promotion of physical and mental wellbeing across all educational settings. Hull was one of the places awarded funds from the Big Lottery Fund for HeadStart project. This programme aims to enable children and young people to have positive mental health and wellbeing, thrive in their ‘communities’, and be able to ‘bounce back’ from life’s challenges. The programme is running in a number of schools in Hull.
SCHOOLS AND EDUCATIONAL ATTAINMENT

What’s the issue?

“Literacy is the combination of reading, writing, speaking and listening skills we all need to fulfil our potential. These life skills are essential to the happiness, health and wealth of individuals and society” [171]. In England, 15% of working-age adults struggle with literacy with their literacy below levels expected of an eleven year old, but this is 26% among people living in most deprived 25% of areas nationally (and only 5% among those living in least deprived 25% of areas) [172]. “Concerns over staff literacy are widespread. Of employers who rate the competency of their low-skilled staff as poor or satisfactory, over half report problems with literacy [173]. Men and women with poor literacy are less likely to be in full-time employment at the age of thirty, and poor literacy skills can also be a serious barrier to progressing once in employment with 63% of men and 75% of women with very low literacy skills having never received a promotion [174]. There are too many adults who lack basic literacy skills” [171]. “Whilst 92% of the British public say literacy is vital to the economy, and essential for getting a good job [175], a quarter of children and young people do not recognise a link between reading and success [176]” [171]. Fourteen percent of children and young people in lower income homes rarely or never read their books for pleasure [177]. One in five parents easily find the opportunity to read to their children, with the rest struggling to read to their children due to fatigue and busy lifestyles [171]. Marmot in his strategic review of health inequalities in England post-2010 [150] stated that "Parental involvement in their child’s reading has been found to be the most important determinant of language and emergent literacy [151]."

A high percentage of the working-age population in England have poor numeracy. Overall, 49% have numeracy skills below the expected levels of an eleven year old, but this is 35% among those with an Index of Multiple Deprivation (IMD; page 10) of 0-9 (least deprived 25% of areas) and 62% and 72% among those with an IMD score 30-39 and 40+ (combined most deprived 25%) [172].

Among working-age adults who live in areas with an IMD score of 50+ (most deprived 7% of areas of England), 64%, 53% and 62% are at Level 26 or below in relation to word processing, email and spreadsheets respectively (compared to 28%, 20% and 28% among those with a IMD score of 1-9) [172].

As mentioned on page 56, “Good education improves career prospects, raises aspirations, and gives people more financial control over their lives. Poor education and training, and low educational attainment can affect confidence, aspirations, and increase the risk of lifelong unemployment, benefit dependency or low paid employment” [170]. These factors have a strong influence on health and wellbeing. Children (and adults) with low confidence and aspirations, and with low educational attainment are more likely to make poor choices in their lives, are less likely to achieve well-paid satisfying regular employment, have poor resilience, and increase the likelihood of poor health and wellbeing. See page 56 for more information on special educational needs and Education, Health and Care plans.

What’s our situation?

For 2015/16, 65% of children in Hull (59% of boys and 72% of girls) achieved good development at the end of reception year compared to 69% for England, although among children eligible for free school meals the percentages in Hull were higher than England (58% versus 54%) [26]. From analysis of local data for 2014/15 [27], the percentages varied from 51% in Myton ward to 76% in Beverley ward. There was a strong association with deprivation, and with ethnicity (even after the effect of deprivation had been taking into account). In 2015/16, among the 38,503 children attending Hull mainstream state-maintained primary or secondary schools, 1,337 (3.5%) had Special Educational Needs (SEN) Statements or a Education, Health and Care (EHC) plan (3.2% for England), and a further 5,454 (14.2%) required SEN support (11.5% for England) [21]. There are a further 598 pupils attending special schools in Hull, although not all of these pupils will live in

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6 Level 2 refers to being able to use Information and Communications Technology to “communicate, as well as enter and edit small amounts of information in ways that are fit for purpose and audience”.

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Hull. For 4,336 (11.3%) of pupils, English was not their first language and 36.2% of pupils had been eligible for free school meals at some point in the last six years (England 23.9%). For 2015/16, the percentage of half-days missed (authorised and unauthorised absence) by primary (4.3%), secondary (5.4%) and special school pupils (8.2%) was higher than England for primary and secondary but not for special schools (4.0%, 5.2% and 9.1% respectively) with 9.8%, 14.7% and 25.8% of pupils from primary, secondary and special schools respectively persistently absent (missing 10% or more of all half-day sessions) which was also higher than England for primary and secondary schools, but not for special schools (8.2%, 13.1% and 26.9% respectively) [21]. For 2015/16, 46.3% of students in Hull achieved five or more GCSEs at grades A-C which included English and mathematics, and just over half achieved GCSEs at grades A-C in both English and mathematics (51.1%), but these percentages were 59.3% and 53.5% respectively for maintained schools in England [21].

From the 2011 Census [15, 16], almost twice as many adults (27.4%) in England were qualified to degree level or higher compared to Hull (15.2%), and half as many again people in Hull (31.7%) had no qualifications compared to England (22.5%). From the local adult Health and Lifestyle Survey 2011-12 [63], large differences in the highest educational attainment were evident across the wards in Hull.

For more detailed information, see the JSNA Toolkit: Deprivation and Associated Measures report.

What are the strategic needs?

As a good education is very important for future health and wellbeing, it is essential that children are ready for school, and children and young people are able to maximise their achievements whilst at school, college and university, so that they can have good employment prospects.

It is important that there should be early help for the children and young people, and their families who need additional support, and that the support is timely, accessible and appropriate for their circumstances. There should be a focus of resources on identifying risks and intervening early to improve maternal health and wellbeing, promoting positive parenting skills, and creating an environment for children and young people that builds self-esteem and resilience. See page 50 for more information on Hull’s Early Help and Priority Families Strategy 2015–2020 [76].

There should be promotion of physical and mental wellbeing across all settings including schools and workplaces.

Everybody should have the opportunity to improve their employment and life choices through increased education, training and knowledge.
UNDER 18 CONCEPTIONS

What’s the issue?

Teenage pregnancy is a complex social issue with a number of contributing risk factors including living in poverty, low educational attainment, absenteeism, not being in education, employment or training (NEET), involvement of social care, low self esteem, early sexual activity and poor contraception use. There are also disproportionately poor outcomes for those who do become teenage parents. At age 30, teenage mothers are 22% more likely to be living in poverty and 20% more likely to have no qualifications than mothers giving birth aged 24 or over and are much less likely to be employed or living with a partner [178, 179]. There is a growing recognition that socio-economic disadvantage can be both a cause and a consequence of teenage parenthood [180].

What’s our situation?

Between 1998 and 2015, there has been a 55% reduction in the under 18 conception rate from 84.6 to 38.4 per 1,000 women aged 15-17 years (from 381 to 150 conceptions), which is similar to decreases elsewhere [26, 95, 160]. The current under 18 conception rate is considerably higher than England (20.8) and the average of the 10 comparators areas (29.6). The reduction in Hull occurred across both births and terminations with births reducing from 57.3 to 21.8 and terminations from 27.3 to 16.6 per 1,000 women aged 15-17 years [181]. As well as a reduction in the overall numbers in Hull, the young people who do become pregnant do so later in their teens. In 2015, 43.3% of conceptions led to a termination in Hull compared to 51.2% for England [160]. In 2015, there were 150 pregnancies among the 3,904 women aged 15-17 years in Hull [26, 160], resulting in 85 under 18s giving birth [160]. The percentage of births to under 18s in Hull has reduced from 2.8% of all births (102 out of 3,661) in 2010/11 to 1.3% (43 out of 3,432) in 2015/16 [160].

Between 2009 and 2014, there has been a 28% reduction in the under 16 conception rate from 12.6 to 9.1 per 1,000 women aged 13-15 years, which is smaller than the reduction in England (40%) [26, 95, 160]. For 2015, the conception rate among the under 16s in Hull is more than double that of England (4.4) and higher than the average of 10 comparators (6.4). The termination rate was slightly higher in the under 16s in Hull (67% for 2015) compared to England (60%) and had increased considerably in Hull since 2009 when it was 50% [181]. In 2015, there were 34 pregnancies among the 3,742 women aged 13-15 years in Hull [26, 95, 160].

For more detailed information, see the JSNA Toolkit: Sexual Health report.

What are the strategic needs?

To have sustained reductions in the under 18 conception rate, work needs to continue with the momentum maintained (“any complacency now and we will see a knock-on effect in years to come” [182]). Research and evidence based practice has shown that this issue cannot be addressed through a single intervention or service as the majority of pregnancies are unplanned [179, 180, 183-185]. Instead it requires a consistent and co-ordinated partnership approach at a strategic and operational level across a range of services and providers (including schools, health workers, youth workers, social care and voluntary sector services) to address several key issues including sex and relationship education (SRE), workforce development, improved access to contraception, work with boys and young men as well as young women, and support for parents on discussing sex and relationships. The dual message of delaying early sexual activity while providing accurate information about contraception and safer sex is most effective in supporting young people [184]. There should be consistency of SRE delivery across schools, and this represents a challenge with the increasing focus on academic achievements and the ongoing pressures on the curriculum to cover a wide range of issues under the Personal, Social and Health Education banner despite its lack of statutory status.

An early intervention/early help and prevention approach across the partnership which aims to reduce risks and build resilience, along with effective use of local data and performance management is vital to maximise the impact of provision and ensure children and young people receive consistent information and advice. In addition such an approach will ensure that areas with the highest rates/groups of young people most at risk are targeted and their needs met.
TRANSITION INTO ADULTHOOD

What’s the issue?

The transition between education and employment can be difficult for many young people, but especially so for young people who lack good working role models, have poor literacy and/or numeracy skills, do not feel confident about themselves and lack resilience to cope with changing circumstances. It is even more difficult for vulnerable groups such as those with learning disabilities or young people who have been in care and/or young people who do not have family support networks available to them. Young people with poor educational attainment are more likely to be not in education, employment or training (NEET) and more likely to become teenage parents. The teenage years are generally the time when young people experiment with unhealthy lifestyle behaviours such as smoking, alcohol consumption and using drugs, and this behaviour is more likely to be tried or sustained among vulnerable young people and those finding the transition into adulthood difficult.

There may be a change in services available to young people who are ill or have long-term medical conditions and diseases such as diabetes, learning disabilities (page 100) or mental health. Continuity of care is important in order to facilitate a smooth transition into adulthood.

What’s our situation?

Due to the increased levels of deprivation in Hull, the majority of children are at an increased risk of not fulfilling their potential and having worse health than England as a whole. A higher percentage of children in Hull live in poverty (page 10) and many young people have an immediate disadvantage in life due to their circumstances. Compared to England, there is a higher rate of emergency admission for accidents (page 49), and fewer children in Hull are ready for school and achieve five or more GCSEs at A-C level (page 58). Children living in more deprived areas, are more likely to grow up thinking that poverty, poor housing, and unemployment are the norm, which could result in cyclic behaviours with these children behaving as their parents do as they reach adulthood. Compared to England, children more likely to have unhealthy lifestyle behaviours (commencing page 37) such as poor diets and low levels of physical activity. Children living in the most deprived areas are also more likely to be exposed to second-hand smoke and become smokers themselves. Children and young people living in the most deprived areas are more likely to have learning disabilities (page 100), poorer physical health (page 29), poorer emotional health (page 30) and poorer dental health (page 33). Whilst under 18 conception rates have fallen greatly in Hull over the last decade, they are still higher than England (page 60). The percentage of people in Hull aged 16-18 years were NEETs was just over 10% in 2011 (November 2011 to January 2012) and 2012, and has almost halved to 5.7% in both 2013 and 2014 and had slightly risen to 6.2% for 2015 (England 4.2%) [26]. There are 570 16-18 year old NEETs in Hull in 2015.

For more detailed information, see the JSNA Toolkit: Children and Young People report.

What are the strategic needs?

It should be recognised that the transition between education and employment is difficult particularly for young people from vulnerable groups. The young people and their families should be given the support they need when they need it, to ensure that the young people can fulfil their potential, and have sustained well-paid regular employment. Successful coordinated approaches have been used in Hull in relation to changing repeating generational patterns of poor parenting, abuse, violence, drug use, anti-social behaviour and crime in the most troubled families (page 18), reducing the under 18 conception rate (page 60) and reducing the percentage of NEETs, and these need to be continued in order to maintain the momentum.

An early intervention/early help and prevention approach across the partnership which aims to reduce risks and build resilience, along with effective use of local data and performance management is vital to maximise the impact of provision and ensure children and young people receive consistent information and advice. In addition such an approach will ensure that areas with the highest rates/groups of young people most at risk are targeted and their needs met.
HEALTHIER, LONGER, HAPPY LIVES (WORKING-AGE ADULTS)


1. The best start in life;
2. Healthier, longer, happy lives; and
3. Safe and independent lives.

“Everyone should have the same opportunity to have the same life expectancy no matter where they live. People with long-term conditions can live a full life. Mental health is as important as physical health and mental illness should not mean worse physical health or reduced life expectancy. The key to a healthier life comes from feeling in control, being involved in the community, being able to make choices, to access secure employment, being socially connected and feeling fulfilled. People who are involved in decision-making about their lives tend to feel healthier and happier” [1].

This section includes topics which generally relate to working-age adults, although there is information relating to working-age adults in other sections, such as population, ethnicity and population projections (commencing page 5), health, wellbeing and use of health services including dental services (commencing page 25), behavioural and lifestyle risk factors (commencing page 37), educational attainment and qualifications (page 58), vaccinations and immunisations among those at risk (page 55) and learning disabilities, serious mental ill health and suicide and undetermined injury (commencing page 99).

This section provides some general information on the labour market and benefit claimants (although information on young people not in education, employment or training is given on page 61), and on screening of diseases, but mainly provides information on specific diseases and medical condition, the majority of which will also apply to older people and vulnerable groups (commencing page 99) and may also apply to children and young people (commencing page 48).
LABOUR MARKET AND BENEFIT CLAIMANTS

What’s the issue?

Long-term unemployment can have a very high negative influence on both physical and mental health. People who are long-term unemployed or are in short-term or low paid jobs with little stability including those on zero-hour contracts, have increased stress levels, lower self-esteem, and have a much higher risk of benefit dependence. This not only affects the individuals, their families and communities, but influences the local economy of Hull.

Entrenched worklessness affects the entire family, and children living in families where parents are not working are more likely to live in poverty, leave school with none or low levels of qualifications, and be unemployed themselves or have low paid employment. This can become a vicious circle where children and young people imitate parents’ behaviours, and do not value education and employment, and find it difficult to find regular well-paid employment particularly so if they have lower educational attainment.

What’s our situation?

From the official labour market statistics [186], in the year October 2015 to September 2016, 63,600 Hull men (72.5%) were in employment, compared to 77.0% for the region and 78.8% for GB, and 53,300 women (62.3%) compared to 67.9% for the region and 69.0% for GB, with an employment rate of 67.5% for Hull males and females combined. The unemployment rate in Hull was 9.0% among men (compared to 5.9% for the region and 5.1% for GB) and 8.5% among women (compared to 5.2% for the region and 4.8% for GB) with 6,300 men and 5,000 unemployed in Hull. Of the 43,900 Hull people aged 16-64 years who were economically inactive, 27.0% were students, 31.8% were looking after the home or family, 25.3% were long-term sick or disabled, 6.4% were retired, 6.4% had other reasons for not working, with the remaining 3.1% either temporarily sick or disabled or discouraged. Of these 43,900 people, 15,000 (34.2%) wanted a job. One in twenty Hull people in employment are mangers, directors and senior officials (5.6%), 17.5% have professional occupations, 10.5% have associate professional and technical occupations, 9.7% work in administrative or secretarial occupations, 13.2% have skilled trades occupations, 10.3% working in caring, leisure and other service occupations, 11.6% work in sales and customer service occupations, 8.0% are process plant and machine operatives, and 12.4% have elementary occupations. The percentages for these nine occupational groupings for GB are 10.5%, 20.2%, 14.3%, 10.4%, 10.4%, 9.1%, 7.6%, 6.4% and 10.7% respectively. Earnings were also lower with a full-time worker in Hull earning 8.7% less than a full-time worker in the region. The gap between residence-based and workplace-based figures, indicate that people who come into Hull to work earn more than the people who live and work in Hull. Since 2013, the unemployment rate has decreased considerably in Hull from a high of 16%. Since July 2014 to June 2015, there has also been an upward shift in the occupational groupings with 34% in the highest three occupational groups compared to 28%, although over the same period, among those who are economically inactive, a higher percentage want a job (up from 23.6% to 34.2%).

There has been a recent focus on a new “entrenched worklessness” indicator, which is high for Hull. For Hull over the period April 2014 to March 2015, it was estimated that there were 132,000 people aged 22-59 years of whom 13,780 (10.4%) were claiming Job Seeker's Allowance (JSA), in either the Assessment Phase or the Work Related Activity Group of Employment and Support Allowance, or a lone parent in receipt of Income Support on the 31st March 2015, and that 8,590 (62.3%) of them had been claiming benefits for at least three out of the last four years (“entrenched worklessness”). This is up from the previous year when it was 60.5% [187].

As at August 2016, there were 30,810 working-age benefit claimants in Hull, which represents around 18.3% of the working-age population. This is considerably higher than the region (12.8%) and England (10.9%) [186], although has decreased in Hull from May 2015 when it was 19.8% [188]. St Andrew’s (30.6%, Orchard Park and Greenwood (30.1%) and Branshome West (29.5%) have the highest claimant rates, substantially higher than King’s Park (6.7%) and Beverley and Holderness (both 8.0%) [59, 189]. Almost one in ten (9.5%) working-age people are claiming Incapacity Benefit, Severe Disablement Allowance or Employment Support Allowance in Hull with...
16,075 claimants [189]. The highest claimant rate was in Myton (15.7% overall and 9.0% for mental health reasons out of the working-age population) and St Andrew’s (17.5% overall and 9.4% for mental health reasons). The type of accommodation such as supported housing and hostels is likely to be influential for these wards.

See page 61 for information on the percentage of young people aged 16-18 year who are not in education, employment or training (NEET).

See page 58 for information on qualifications.

The influence of unemployment on health and wellbeing was mentioned among participants living in the most deprived areas of Hull when taking part in a local qualitative research project, summed up by the following quote: “I think that’s the worst thing is the high unemployment. I think if you can get people into work it’s good for their minds and it’s good for their bodies as well. Motivation, everything, I think it goes hands in hand really. You know, they can feel much better about themselves, give themselves more confidence. A better lifestyle as well, financially of course” [10].

For more detailed information, see the JSNA Toolkit: Deprivation and Associated Measures report.

What are the strategic needs?

Adults who are long-term unemployed should be given good, appropriate, timely advice, help and support, and additional training to improve their reliance, wellbeing and confidence so that they can achieve good future employment, and improve their health and wellbeing. Everybody should have the opportunity to improve their employment and life choices through increased education, training and knowledge.

A ‘health first’ approach should be used to tackle worklessness by promoting opportunities for people to be fit for work and fit in work. There also needs to be support for initiatives that create and provide access to quality sustainable jobs.

There is a need to improve the availability of affordable child care in order to maximise parental choice.

Hull’s City Plan [2], which aims to create 7,500 jobs for local people over the next 10 years sits at the heart of the developing ‘energy estuary’, making Hull the UK hub for renewable energy industries and investment due to its location. The City Plan also aims to make Hull a world-class visitor destination with visitor numbers trebling, boosted by the City of Culture 2017. The intention is to sustain these increased numbers beyond 2017.

It is necessary to ensure that local residents have the good health, fitness, skills, education and training required to take up these renewable energy and tourism employment opportunities.

Further information on the Priority Families programme in Hull is given within the ‘Hull Early Help and Priority Families Strategy 2015 – 2020” [76] discussed on page 18. The programme aims to change repeating generational patterns of poor parenting, abuse, violence, drug use, anti-social behaviour and crime in the most troubled families in Hull. This should improve the employment prospects of the people living in these families.
SCREENING

What’s the issue?

There are a number of screening programmes in place in the UK relating to antenatal and newborn, and abdominal aortic aneurysm (AAA), diabetic retinopathy, breast cancer, cervical and bowel cancer in adults [190]. “Tests in pregnancy and in the newborn after birth are designed to help make the pregnancy safer, check and assess the development and wellbeing of the woman and her baby, and screen for particular conditions” [157-159]. Most of the screening programmes in adults can detect the condition before the person experiences symptoms, and thus can be treated earlier to prevent the disease developing or increase survival (further information on page 111). There is also the NHS Health Check programme which “aims to help prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia. Everyone between the ages of 40 and 74, who has not already been diagnosed with one of these conditions or have certain risk factors, will be invited (once every five years) to have a check to assess their risk of these conditions, and will be given support and advice to help them reduce or manage that risk” [191].

What’s our situation?

From the Public Health Outcomes Framework [26, 95], 69.8% of eligible women in Hull aged 53-70 years were screened for breast cancer in the three years up to 31st March 2016. This was lower than the percentage screened in England (75.5%), and marginally below the target of 70%. The percentage of women aged 25 to 64 years attending cervical screening within the last three years (aged 25-49) or five years (aged 50-64) as at 31st March 2016 for Hull was 73.9%. Whilst this was slightly higher than England (72.7%), it had fallen slightly since 2010 from 75.8% and is below the target of 80%. For bowel cancer, the percentage of eligible men and women aged 60-74 years screened in the last 2½ years in Hull was 55.0% compared to 57.9% for England for 2015/16. The low uptake rate is recognised nationally [192, 193]. The percentage of men offered AAA screening within the year of their 65th birthday was relatively high in Hull for 2015/16 (82.4%) being higher than England (79.9%) and second highest of 12 comparator areas, although it had fallen since 2013/14 when it was 89.0% [26, 95]. For 2015/16, the uptake rate for the newborn bloodspot screening was 97.0% in Hull which was higher than the national average of 95.6%. Almost all of newborn infants had their hearing screening test in Hull (99.7%) which was slightly higher than England (98.7%). For 2012/13, under three-quarters (73.9%) of Hull residents aged 12+ years with diabetes attended diabetic retinopathy screening. This was lower than for England (79.1%), the region (79.2%) and all ten comparator areas (range 74.3% to 83.5%). The rate in Hull had been 77% in the previous two years so has fallen for the most recent year [67]. More recent data is not available by local authority. For the NHS Health Check [26, 95], up to 2015/16, 59.5% of those who were eligible were offered a check (slightly higher than England at 56.4%). However, uptake rates in Hull were far lower (34.1%) than England (48.6%) which meant that only 20.3% of those eligible for the NHS Health Check had had their check compared to 27.4% in England. Information on screening uptake is not available on all medical conditions.

For more detailed information, see the JSNA Toolkit: Screening report.

What are the strategic needs?

There are relatively large variations in screening uptake rates within primary care practices, perhaps associated with the patients within those practices (for example, people living in more deprived areas), and it may be useful to work with practices with relatively low uptake rates to improve their rates. Where uptake rates are low, further work may be required to assess why this is the case. Furthermore, from anecdotal evidence, it is possible that some women who attend screening and have abnormal results are not attending follow-up appointments, and this should be investigated.
ALL CARDIOVASCULAR DISEASES

What’s the issue?

“Cardiovascular disease (CVD) is a common condition caused by atherosclerosis (furring or stiffening of the walls of arteries). Although CVD may manifest itself differently in individual patients, CVD in practice represents a single family of diseases and conditions linked by common risk factors and the direct effect they have on CVD mortality and morbidity. These include coronary heart disease, stroke, hypertension, hypercholesterolemia, diabetes, chronic kidney disease, peripheral arterial disease and vascular dementia. Many people who have one CVD condition commonly suffer from another and yet opportunities to identify and manage these are often missed” [194]. Cardiovascular disease (CVD) affects the lives of millions of people and is one of the largest causes of death and disability in England. Significant improvements have been made in the prevention and treatment of CVD in the past ten to fifteen years following the publication of the National Service Frameworks for coronary heart disease, diabetes and renal services, and the National Stroke Strategy, with mortality rates in under 75 year olds falling by 40% [194]. In Hull for 2012-14, it is estimated that mortality from CVD is responsible for nearly one-quarter of the life expectancy gap between Hull and England (28.7% for men and 23.3% for women). Over the three year period, there would be 222 fewer male and 214 fewer female deaths and life expectancy would increase by 0.77 and 0.55 years for males and females respectively if Hull experienced the same CVD mortality rates as England [195].

“In some people, a high cholesterol concentration in the blood is caused by an inherited genetic defect known as familial hypercholesterolaemia (FH). Siblings and children of a person with FH have a 50% risk of inheriting the condition, and those with heterozygous (defective gene from one parent only) FH have a 50% risk of coronary heart disease (CHD) in men by the age of 50 years and at least 30% in women by the age of 60 years. The prevalence of heterozygous FH is estimated to be 1 in 500. Homozygous (defective gene from both parents) FH is rare with around one case per million, but symptoms appear in childhood and is associated with early death from CHD” [196]. FH also increases the risk of other CVD [196].

What’s our situation?

Between 2008/09 and 2010/11 there were 8,296 admissions into hospital for cardiovascular diseases among Hull men, and 6,498 among Hull women, that is 2,765 men and 2,166 women per year or 7.5 men and almost 6 women per day. The admissions rate was highest among those living in the most deprived fifth of areas of the city (199 per 100,000 residents), lowest amongst those living in the least deprived fifth of areas (134 per 100,000 residents) [197]. In 2013-15, the under 75 directly standardised mortality rate (DSR) for all cardiovascular diseases was 151 per 100,000 men and 66 per 100,000 women, having decreased by 46% since 2001-03. There were 1,980 deaths in Hull from cardiovascular disease over the three year period 2013-15 [83], of which 603 occurred prior to the age of 75 years [83], and 398 of these premature deaths were considered preventable [26, 77, 82]. The DSR for cardiovascular diseases that were considered preventable was 71 per 100,000 population (104 for men and 40 for women per 100,000 population).

The change over time (from 2001-03 to 2013-15) was very similar for both premature and preventable mortality among both males and females (40% reduction). However, whilst the national and local inequalities gap had reduced, mortality rates in Hull compared to England were 44% higher for premature mortality for both men and women, and 43% higher for men and 58% higher for women for preventable mortality [26, 77, 78, 82]. The national inequalities gap had reduced more for men than for women, but the reverse was true for the local inequalities gap.

For more detailed information, see the JSNA Toolkit: All Circulatory Disease report.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. People need to know that stopping smoking has immediate health effects [110, 111] with substantial reductions in the risk of heart disease and stroke occurring within 1-5 years [112, 113].
People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend, and those who have already been diagnosed with a cardiovascular disease should attend their annual reviews so that they get the best on-going treatment for their condition in order to minimise the likelihood of a further cardiovascular event.

The local NHS Hull Clinical Commissioning Group’s Cardiovascular Disease Outcomes Strategy details local on-going programmes and work areas to reduce CVD and its effects in relation to integrated care, prevention and risk management, improving acute care, improving and enhancing case finding in primary care, better identification of very high risk families and individuals, and better early management and secondary prevention in the community [194]. Testing children by age 10 is recommended for those with parents with confirmed FH, and a cascade approach is recommended to detect FH among first- and second- and, where possible, third-degree biological relatives of confirmed index FH individuals [196].
CORONARY HEART DISEASE

What’s the issue?

“Coronary heart disease (CHD) is the term that describes what happens when your heart’s blood supply is blocked or interrupted by a build-up of fatty substances in the coronary arteries. The main causes are smoking, high cholesterol, high blood pressure and diabetes” [198]. “CHD is the leading cause of death both in the UK and worldwide. It’s responsible for more than 73,000 deaths in the UK each year. About one in six men and one in ten women die from CHD. In the UK, there are an estimated 2.3 million people living with CHD. CHD generally affects more men than women, although from the age of 50 the chances of developing the condition are similar for both sexes. As well as angina (chest pain), the main symptoms of CHD are heart attacks and heart failure. However, not everyone has the same symptoms and some people may not have any symptoms before CHD is diagnosed” [198]. Nationally, CHD has the second highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81].

What’s our situation?

For 2015/16, CHD prevalence was higher for Hull (3.75%) compared to England (3.20%) with 11,111 people in Hull diagnosed with CHD [93]. There was no statistically significant association between deprivation and prevalence across the general practices in Hull. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship, and could be influenced by the higher mortality rate among those living in the most deprived areas. Based on modelling in 2011, it is estimated that 15,676 (5.50%) registered patients have CHD in Hull so over 4,000 patients with undiagnosed CHD (it has not been possible to update the model). There were a total of 3,329 and 1,919 admissions for CHD for men and women respectively over the three year period 2008/09 to 2010/11 [199]. The directly standardised admission rate was higher among men (81) compared to women (40) per 10,000 population. Just under half of these admissions (48.1%) were elective. CHD accounts for around one in eight of all premature deaths in Hull, and over the three year period 2013-15 there were a total of 936 deaths from CHD of which 346 occurred prior to the age of 75 years [77, 83, 199]. For 2012-14, the age specific mortality rates among those aged 35-64 years in Hull were almost 50% higher compared to England, 40% and 71% higher for men and women respectively among those aged 65-74 years, and 16% and 26% higher for men and women respectively among those aged 75+ years. The premature standardised mortality ratio in Hull was 145 for men and 162 for women, so 45% and 62% higher than England respectively [78]. Whilst the prevalence of CHD in the least deprived quintile was the same as the most deprived quintile, the hospital admission rate was 42% lower, angiography (diagnostic test) rates were 37% lower, revascularisation (treatment) rates were 32% lower and the premature mortality rate was 68% lower [199]. This suggests that there is inequality present, but it is complex and there are many potential reasons for the differences observed.

For more detailed information, see the JSNA Toolkit: Coronary Heart Disease report.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. People need to know that stopping smoking has immediate health benefits [110], with heart rate and blood pressure dropping within 20 minutes [200], excess risk of coronary heart disease reducing to half that of a continuing smoker’s after one year [112], and risk of coronary heart disease reducing to that of a non-smoker’s after 15 years [113].

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend, and those who have already been diagnosed with CHD should attend their annual reviews so that they get the best on-going treatment for their condition. People at risk of familial hypercholesterolaemia should be identified so that they can commence treatment and/or be referred for specialist care [196].
“Cardiac rehabilitation is a structured set of services that enables people with CHD to have the best possible help (physical, psychological and social) to preserve or resume their optimal functioning in society” [201]. Cardiac rehabilitation also supports patients’ return to work, improves their functional capacity and physical activity status, perceived quality of life and supports the development of self-management skills. It is proven to be cost effective, with a lower cost per QALY (Quality Adjusted Life Years), compared with all other cardiology treatments. The benefits of a menu driven approach, with a choice of setting and individually identified patient goals are increasingly recognised [201]. This service should be available to all, and all people who would benefit should be encouraged to participate in a cardiac rehabilitation programme.
STROKE

What’s the issue?

“A stroke is a serious, life-threatening medical condition that occurs when the blood supply to part of the brain is cut off. Strokes are a medical emergency and urgent treatment is essential because the sooner a person receives treatment for a stroke, the less damage is likely to happen” [202]. “A transient ischaemic attack (TIA) is caused by a temporary disruption in the blood supply to part of the brain, causing sudden symptoms similar to those of a stroke. However, a TIA does not last as long as a stroke. The effects often only last for a few minutes or hours and fully resolve within 24 hours” [203]. A TIA can be a precursor to a stroke. The two major types of strokes are ischaemic strokes resulting from a blood clot reducing the blood supply to the brain (85%) and haemorrhagic strokes resulting from a bleed on the brain (15%) [202, 204].

Strokes can cause lasting damage, affecting mobility, cognition, sight, movement of the upper limb or communication. Thus strokes can have a major impact upon individual lives and their families, and is the one of the largest causes of adult disability in the UK [205]. Nationally, stroke has the third highest disability adjusted life years (DALY – see page 111) [81]. There is also a high social and economic cost to the community. Stroke is often preventable and there are more treatment options than ever before. After stroke individual recovery can be enhanced through specialist therapy and wider social support.

One survey, by examining the population attributable risk (PAR), found that history of hypertension (PAR 35%), current smoking (19%), waist-to-hip ratio (27%), diet risk score (19%), regular physical activity (29%), diabetes (5%), alcohol intake (4%), psychosocial stress (7%), depression (5%), cardiac causes (7%) and the ratio of apolipoproteins B to A17 (25%) collectively accounted for 88% of the PAR for all stroke [206].

What’s our situation?

For 2015/16, stroke and transient ischaemic attack prevalence is lower for Hull (1.56%) compared to England (1.74%) and six of seven comparator areas (range 1.68% to 2.23% except Leicester 1.19%) with 4,623 patients on the disease register [93]. There was no statistically significant association between deprivation and prevalence across the general practices in Hull [207]. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship, and could be influenced by the higher general mortality rate among those living in the most deprived areas. Based on modelling on the GP population as at October 2016, it is estimated that there are 5,317 (1.81%) registered patients who have had a previous stroke, so around 700 patients with undiagnosed stroke or TIA [207]. There were 792 and 777 admissions for stroke for men and women respectively over the three year period 2008/09 to 2010/11 giving an annual average of 523 admissions per year [207]. The directly standardised admission rate was higher among men (183) compared to women (131) per 100,000 population [207]. For 2011/12, there were 408 emergency hospital admissions for stroke giving an indirectly age-standardised rate of 179 per 100,000 persons. Around 11% were re-admitted to hospital within 28 days of their discharge from hospital following an emergency admission for stroke, which was similar to comparator areas. For 2012-14, the age specific mortality rates for men and women were higher than England particularly so for both men and women aged 35-64 years and men aged 65-74 years (all 46-47% higher) [78]. The premature standardised mortality ratio in Hull was 144 for men and 135 for women, so 44% and 35% higher than England respectively. The SMR has decreased from 245 in 2001-03 (almost 2½ times higher than England for both men and women), although for men the current rate is significantly higher than England, and for women the SMR had decreased to 135, 114, 121 and 109 in 2008-10, 2009-11, 2010-12 and 2011-13, so has increased for the latest year [77, 78, 83, 207]. Over the three year period 2013-15, there were 517 deaths in Hull from stroke, of which 106 occurred prior to the age of 75 years [77, 78, 83, 207]. There was no statistically significant association between diagnosed prevalence or premature

7 Apolipoprotein B is the main apolipoprotein of chylomicrons and low density lipoproteins (LDL) “bad cholesterol” and apolipoprotein A1 is the major protein component of high density lipoproteins (HDL) “good cholesterol”.

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mortality and deprivation fifths, but there was for hospital admissions [207]. This suggests that there is inequality present, but it is complex and there are many potential reasons for the differences observed.

Social marketing research, completed in Hull during September 2009, to assess general public knowledge and perception of stroke revealed a relatively high awareness of the risk factors for stroke (lack of physical activity, poor diet, alcohol and smoking) and the most commonly named symptoms were drooping mouth, facial weakness, tingling down one side, paralysis down one side with most knowing that ‘time’ was important in terms of reaction time from the national “Stroke ACT FAST” advertisement campaigns. Although no-one knew what a TIA was, after an explanation one or two knew that a ‘mini-stroke’ could be a warning for a more serious stroke in the near future. Some people might behave differently if they were the ones – rather than someone else – having the symptoms “I think you treat yourself differently. You get up and carry on” [9].

For more detailed information, see the JSNA Toolkit: Stroke report.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. People need to know that stopping smoking has immediate health effects [110], with heart rate and blood pressure dropping within 20 minutes [200], and stroke risk falls to that of a non-smokers after 2-5 years [112, 113]. Work should continue to ensure that people realise that stroke is a medical emergency, and people with symptoms of a stroke or a TIA seek medical help immediately.

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend, and those who have already had a stroke or TIA should attend their annual reviews so that they get the best on-going treatment for their condition.

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices. Also working with partners to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care.

The intention is to reduce mortality and levels of dependency following an acute stroke, reduce length of stay of stroke patients in bed-based services, reduce re-admission rates, facilitate earlier hospital discharge home to usual place of residence with the necessary support or into stroke community rehabilitation units, to increase numbers of patients supported to maximise their ability and independence in their own home, improve stroke survivor experience, improve detection and management of psychological issues in stroke survivors and ensure routine use of assessment tools to systematically assess patients at six months. National clinical guidelines for stroke are available [208, 209] which detail how to achieve these outcomes.

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8 FAST – Face: “has their face fallen on one side?” – Arms: “can they raise both arms and keep them there?” – Speech: “is their speech slurred?” – Time: “time to call 999 if you see any single one of these signs”.

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HEART FAILURE

What’s the issue?

Heart failure occurs when the heart is unable to pump blood at a rate sufficient for metabolic requirements. It is caused by structural or functional abnormalities of the heart. The most common causes of heart failure in the UK are coronary artery disease and hypertension. It has a poor prognosis with 30-40% of patients diagnosed with heart failure dying within a year; thereafter mortality is less than 10% per year [210].

What’s our situation?

For 2015/16, there were 1,976 (0.67%) registered patients diagnosed with heart failure which was lower than England (0.76%) and seven comparator areas (range 0.67% to 1.01%) [93]. There was no statistically significant association between deprivation and prevalence across the general practices in Hull [211]. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship, and could be influenced by the higher mortality rate among those living in the most deprived areas. Based on modelling (October 2016), it is estimated that there are 4,033 (1.4%) patients with heart failure in Hull. It is not known if the model provides a reasonable estimate for Hull, but if it does it suggests that there are slightly more registered patients with undiagnosed heart failure than there is with diagnosed heart failure [211].

There were 1,000 inpatient admissions over the three year period 2008/09 to 2010/11 for heart failure giving annual average directly standardised admission rates of 111 per 100,000 men and 67 per 100,000 women [211]. There was an association between hospital admissions and deprivation with increased admissions among people living in the most deprived areas, and as there was no significant association between diagnosed disease prevalence and deprivation, this suggests that there may be inequities present with higher rates of undiagnosed disease or admission rates among those living in the most deprived areas.

There were only 7 deaths from heart failure in Hull residents aged under 75 years, but 56 deaths (21 men and 35 women) occurring for ages 75+ years registered during 2013-15 [77, 211].

For more detailed information, see the JSNA Toolkit: Other Circulatory Diseases report.

What are the strategic needs?

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend, and those who have already have diagnosed heart failure should attend their annual reviews so that they get the best on-going treatment for their condition.

Testing for Brain Natriuretic Peptide (BNP and NT Pro-BNP; see page 111) can act as a cost effective pre-screening tool to ensure only those patients deemed at higher risk are referred on for specialist assessment with echocardiography. Practices have access to BNP testing for patients with suspected heart failure, and across the region could help save over £200,000 and means valuable resources are used effectively [212].

A diuretic is a medicine which increases the amount of water that passes out of the kidneys. Whilst they are often used to treat heart failure, they are also used to treat other conditions such as certain liver and kidney disorders, and sometimes hypertension. Patients without heart failure who are taking loop diuretics (one type of diuretics) should be assessed to ensure they do not have heart failure through BNP testing.

Patients with heart failure require specialist heart failure assessment followed by systematic care with medication and rehabilitation once their condition is stable [210]. Hull CCG commissions a tele-health service which include tele-monitoring provision for patients with heart failure. Rehabilitation should include education, lifestyle advice, physical activity and self-management advice [212]. Cardiac rehabilitation should be available to all people with heart failure who would benefit, and people who would benefit should be encouraged to participate.
ATRIAL FIBRILLATION

What’s the issue?

“Atrial fibrillation is a heart condition that causes an irregular and often abnormally fast heart rate. A normal heart rate should be between 60 and 100 beats a minute when resting, and is regular. In atrial fibrillation, the heart rate may be over 140 beats a minute, although it can be any speed” [213].

“If left untreated atrial fibrillation is a significant risk factor for stroke and other morbidities. Men are more commonly affected than women and the prevalence increases with age” [214]. The increase with age is relatively marked; the prevalence is estimated to be less than 2% for men aged under 65 years and around 1% or lower for women aged 65 years, but is estimated to be around 5% for men and 3% for women aged 65-74 years, then doubling to around 9% for men and 7% for women aged 75-84 years and 11% for men and women aged 85+ years [215, 216].

What’s our situation?

For 2015/16, there were 4,052 (1.37%) registered patients diagnosed with atrial fibrillation which is lower than England (1.71%) and six of seven comparator areas (range 1.57% to 2.03% except Leicester 0.94%) [93]. This suggests that Hull has a relatively high rate of undiagnosed atrial fibrillation. Indeed, using a model to estimate the number of people with atrial fibrillation (October 2016) produced an estimate of 6,392 patients. If the model is reasonably accurate this suggests there are over 2,000 patients with undiagnosed atrial fibrillation. There was a statistically significant increasing trend in the prevalence with reduced levels of deprivation, although the prevalence did not increase successively over the five deprivation fifths [211]. For every 10 point change in the Index of Multiple Deprivation (IMD) score (see page 111) it was estimated that the prevalence of atrial fibrillation was 0.17 percentage points lower. Thus it was estimate that the practice with the lowest mean IMD score had a prevalence of 1.75 and the practice with the highest mean IMD score (most deprived) had a prevalence of 0.93. This could simply reflect increased undiagnosed disease among those living in the more deprived areas, and could be influenced by the higher general mortality rate among those living in the most deprived areas.

There were 1,056 inpatient admissions over the three year period 2008/09 to 2010/11 for atrial fibrillation and flutter giving annual average directly standardised admission rates of 131 per 100,000 men and 88 per 100,000 women [211].

For 2013-15, there were a total of 82 deaths over the three year period from atrial fibrillation and flutter which included 12 deaths among those who died prior to the age of 75 years. A further 21 males and 49 females died from atrial fibrillation and flutter who were aged 75+ years [211].

For more detailed information, see the JSNA Toolkit: Other Circulatory Diseases report.

What are the strategic needs?

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend and the check should include a pulse check to identify people who may have undiagnosed atrial fibrillation. Those who have diagnosed atrial fibrillation should attend their annual reviews so that they get the best on-going treatment for their condition.

Opportunities should be taken to identify people with undiagnosed atrial fibrillation through pulse checking and/or use of blood pressure monitors which can detect irregular pulse.

Appropriate treatment should be given, for example, anti-coagulation, for patients newly diagnosed with atrial fibrillation.
HYPERTENSION (HIGH BLOOD PRESSURE)

What’s the issue?

Blood pressure is measured in millimetres of mercury (mmHg) and is recorded as two numbers: the first is systolic pressure (pressure of the blood when the heart beats to pump blood out) and the second is diastolic pressure (pressure when heart rests between beats). High blood pressure (hypertension) is said to occur if readings on separate occasions consistently show blood pressure to be 140/90mmHg or higher (normal is 130/80mmHg or lower) [217]. “It rarely has noticeable symptoms. Around 30% of people in England have high blood pressure but many don't know it. If left untreated, high blood pressure increases the risk of a heart attack or stroke. It is often referred to as a “silent killer”. The only way of knowing there is a problem is to have blood pressure measured. All adults should have their blood pressure checked at least every five years” [217]. As well as having trained staff who have periodic review of their performance, and properly validated and calibrated equipment, guidelines recommend that hypertension should be diagnosed using (24 hour) ambulatory blood pressure monitoring [218]. The chances of having high blood pressure increase with age. Whilst there is often no clear cause, the following increase the risk of high blood pressure: obesity; family history; smoking; African or Caribbean descent; eating too much salt; not eating enough fruit and vegetables; lack of physical activity; drinking too much coffee or caffeine-based drinks; and drinking too much alcohol [217]. Just a 2mmHg increase in systolic blood pressure increases the risk of cardiac death by 7% and stroke by 10% [218]. Given the high prevalence of risk factors for hypertension in Hull, this puts a large proportion of Hull patients at an avoidable risk of stroke, other serious cardiac events, diabetes and chronic kidney disease.

What’s our situation?

For 2015/16, there were 41,993 (14.2%) patients diagnosed with hypertension (high blood pressure) on the GP disease registers [219], which was comparable to other similar geographical areas. Based on modelling (October 2016), it is estimated that there around 68,000 patients with hypertension in Hull [211]. It is not known if the model provides a reasonable estimate or not, but if it does, it suggests that there are at least 25,000 patients with undiagnosed hypertension in Hull. For 2013/14, among the 135,732 registered patients aged 40+ years, 122,491 (90.2%) had had their blood pressure measured within the last five years (which was similar to England and comparator areas) [219]. The data for 2013/14 was a one-off and this indicator has not been included in 2014/15. The local Hypertension Equity Audit 2011 found that diagnoses of hypertension and management of hypertension in primary care appeared to be equitable with respect to deprivation and age. There was no statistically significant association between deprivation and prevalence across the general practices in Hull, nor was there an association between deprivation and the percentage who had their blood pressure measured within the last five years [211]. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship.

For more detailed information, see the JSNA Toolkit: Other Circulatory Diseases report.

What are the strategic needs?

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend and all adults should have their blood pressure measured every five years. People already diagnosed with high blood pressure or other cardiovascular disease should attend their annual reviews so that they get the best on-going treatment for their condition. The use of 24 hour blood pressure monitoring devices should be used to detect undiagnosed hypertension.

There is a need to increase the number of patients achieving blood pressure targets. Achieving blood pressure targets for patients, particularly those with diabetes and hypertension, shows that serious events such as fatal and non-fatal strokes are significantly reduced [218]. This further reduces unplanned hospital admissions, reducing NHS costs. Patients who are not achieving the nationally recognised blood pressure target should be referred to the correct healthcare professional for review and treatment [218].
People who have hypertension and who are at risk of familial hypercholesterolaemia should be identified so that they can commence treatment and/or be referred for specialist care for FH as their risk of coronary heart disease will be high [196].
ABDOMINAL AORTIC ANEURYSM

What’s the issue?

“An abdominal aortic aneurysm (AAA) is a swelling (aneurysm) of the aorta – the main blood vessel that leads away from the heart, down through the abdomen to the rest of the body. The abdominal aorta is usually around 2cm wide but can swell to over 5.5cm. Large aneurysms are rare, but can be very serious. If a large aneurysm bursts, it causes huge internal bleeding and is usually fatal (with 8 in 10 dying before they reach hospital or do not survive the surgery). Although what causes this weakness (and subsequent bulging) of the aortic wall is unclear, smoking and high blood pressure are thought to increase the risk of an aneurysm. AAAs are most common in men aged over 65. This is why all men are invited for AAA screening when they turn 65. A rupture accounts for more than 1 in 50 of all deaths in this group and a total of 6,000 deaths in England and Wales each year” [220]. The prevalence of AAA in men aged 65-74 years is approximately 1.7% [221]. Research has shown that this ultrasound screening of men in their 65th year could reduce the rate of premature death from ruptured AAA by up to 50% [222, 223]. “Men whose results are normal at screening (abdominal aorta diameter is less than 3cm), will not be invited back for another scan as an AAA grows slowly, and the chance of developing one after the age of 65 are very small” [224].

The NHS AAA Screening Programme was set up in England in 2009 and has been offered throughout the UK since the end of 2013 (for more information on screening see page 65). Women are not offered AAA screening, because the detection rate is considerably lower than men. Due to the higher probability of rupture among women, the mortality rates are only slightly lower than men despite the much lower underlying prevalence of AAA.

What’s our situation?

The Office for National Statistics estimate there are 10,088 men living in Hull aged 65-74 years [225], and with a prevalence of 1.7% [221] this would mean around 171 men in Hull within this age range have an AAA.

The percentage of men offered AAA screening within the year of their 65th birthday was 82.4% in 2015/16 in Hull which was higher than England (79.9%) and the average of 10 comparators (75.9%) [26, 95]. Overall, 1,036 men had attended screening out of the 1,258 men invited in 2015/16. The rate had also increased in Hull from 77.5% in 2013/14.

Over the three year period 2013-15, there were 18 deaths (mainly men) from AAA in Hull residents aged under 75 years [77, 211]. There were a further 55 deaths (27 men and 28 women) among those aged 75+ years. The total number of deaths over the three year period was 73 giving an average of 24 per year. Whilst the numbers of deaths among those aged under 75 years has reduced by 40% since 2001-2003 (when there were 30 deaths in this age group reducing to 18 in 2013-15), there has been relatively little change among those aged 75+ years.

For more detailed information, see the JSNA Toolkit: Other Circulatory Diseases and JSNA Toolkit: Screening reports.

What are the strategic needs?

Among men aged 65 years, screening is an effective way of detecting an AAA early and reducing the risk of dying from an AAA by about a half. Men invited to attend AAA screening should be encouraged to attend.
PERIPHERAL ARTERIAL DISEASE

What’s the issue?

“Peripheral arterial disease (PAD) is a common condition, in which a build-up of fatty deposits in the arteries (a process called atherosclerosis) restricts blood supply to leg muscles. It is also known as peripheral vascular disease (PVD). Many people with PAD have no symptoms. However, some develop a painful ache in their legs when they walk, which usually disappears after a few minutes’ rest. The medical term for this is "intermittent claudication". The risk of developing PAD increases with age. It is estimated that around one in every five people over the age of 60 are affected by the condition to some degree. Men tend to develop the condition more often than women. Smoking is the most significant risk factor for PAD as well as diabetes, high blood pressure and high cholesterol. Exercising regularly and stopping smoking can ease the symptoms of PAD and reduce the chances of the condition getting worse. If applicable, treating the underlying conditions of high blood pressure, high cholesterol and diabetes and surgery can improve blood flow in the legs. Whilst not immediately life-threatening, the process of atherosclerosis can lead to serious and potentially fatal problems such as heart attack and stroke. There is also the risk that leg tissue will begin to die (gangrene) and in severe cases this can lead to amputation of the lower leg” [226].

Within a systematic review examining global prevalence estimates and risk factors for peripheral arterial disease [227], it states that “about 10–20% of people with peripheral artery disease have intermittent claudication [228, 229], another 50% have atypical leg symptoms [229], and those without exertional leg pain have poor mobility compared with individuals without peripheral artery disease [230]. Patients with and without leg ischaemic symptoms have roughly a three-fold increase in risk of mortality and major cardiovascular events (heart attack and stroke) compared with those without peripheral artery disease [231-233].”

What’s our situation?

For 2015/16, there were 1,723 (0.58%) registered patients diagnosed with peripheral arterial disease which was similar to England (0.61%), but lower than six of seven comparator areas (range 0.62% to 1.04% except Leicester 0.34%) [93]. There was a statistically significant increasing trend in the prevalence with increasing deprivation [211]. The 11 practices with the highest mean patient deprivation scores serving the most deprived fifth of Hull’s population had a prevalence of 0.60% compared to 0.49% among the 11 practices with the lowest mean patient deprived scores.

Based on modelling, it is estimated that there are almost 14,000 (4.7%) patients with peripheral arterial disease in Hull (October 2016) [211]. If this is an accurate model, this suggests that there are high levels of undiagnosed peripheral arterial disease in Hull patients with around 12,000 having peripheral arterial disease, and potentially between 1,400 and 2,800 patients having intermittent claudication and a further 7,000 have atypical leg symptoms in Hull [211, 227, 234].

For more detailed information, see the JSNA Toolkit: Other Circulatory Diseases report.

What are the strategic needs?

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend. People already diagnosed with peripheral arterial disease should attend their annual reviews so that they get the best on-going treatment for their condition.

Practices should be supported in terms of case finding with regard to cardiovascular diseases. Where a patient has one cardiovascular condition, clinicians should proactively seek to assess the risk and diagnose other cardiovascular conditions such as peripheral arterial disease with a standard cardiovascular assessment undertaken to examine the existence of and/or risk of hypertension, familial hypercholesterolaemia, coronary heart disease, stroke, type 2 diabetes, and kidney disease. People at risk of familial hypercholesterolaemia should be identified so that they can commence treatment and/or be referred for specialist care [196].
ALL CANCERS

What’s the issue?

“Cancer is a condition where cells in a specific part of the body grow and reproduce uncontrollably destroying healthy tissue including organs and can spread to other parts of the body (metastasis). There are over 200 different types of cancer, each with its own methods of diagnosis and treatment. Cancer is very common. In 2011, over 330,000 people were diagnosed with cancer, and one in three people will develop some form of cancer in their lifetime. In the UK, breast cancer, lung cancer, prostate cancer and bowel cancer account for just over half (53%) of all new cases” [235]. “Treatment is often simpler and more likely to be effective when cancer is diagnosed at an early stage, so finding cancer early can make a real difference” [236]. “There are two major components of early detection of cancer: education to promote early diagnosis, and screening” [237]. With the ageing population, it is likely that the incidence and prevalence of cancer will increase [238, 239].

In Hull for 2012-14, it is estimated that mortality from cancer is responsible for just under one-third of the life expectancy gap between Hull and England (28.9% for men and 32.4% for women). Over the three year period, there would be 229 fewer male and 207 fewer female deaths and life expectancy would increase by 0.78 and 0.82 years for males and females respectively if Hull experienced the same cancer mortality rates as England [240].

“Healthy eating, taking regular exercise and not smoking helps lower the risk of developing cancer” [235]. Changing lifestyle behaviours can have a dramatic effect. For instance, the health benefits from quitting smoking reduces cancer risk within 5-10 years [110], specifically after five years, the risk of cancer of the mouth, throat, oesophagus and bladder are cut in half, and the cervical cancer risk falls to that of a non-smoker [112, 113], and after 10 years, the risk of dying from lung cancer is about half that of a person who is still smoking, and risk of cancer of the larynx and pancreas decreases [111, 112].

Screening programmes are in place for cancers of the breast, cervical and bowel (see page 65).

What’s our situation?

All-age cancer incidence in 2012-2014 for all cancers excluding non-melanoma skin cancer was 15% higher among men in Hull than in England, 9% higher among women (compared to 17% and 11% respectively for 2011-13). Among men, the incidence of stomach cancer was 75% higher in Hull than in England, lung cancer 56% higher, oesophageal cancer 34% higher, bladder cancer 24% higher, colorectal cancer 14% higher, with prostate cancer incidence 9% lower in Hull. Among women, the incidence of lung cancer 69% was higher in Hull than in England, cervical cancer 39% higher, bladder cancer 30% higher, oesophageal cancer 16% higher and colorectal cancer 2% higher, although incidence from breast cancer was 11% lower than England. The incidence of malignant melanoma in Hull was 35% and 41% lower than England for men and women respectively [241].

Between 2008/09 and 2010/11 there were 10,026 admissions with a primary diagnosis of cancer (3,342 per year or 9 per day) [241]. Lung cancer accounted for the highest proportion of clinician episodes (13%), followed by breast cancer (12%), colorectal and bladder cancer (10% each).

For 2012-14, the age-specific mortality rates in Hull compared to England were around 30% higher for men aged 35-64 and 65-74 years, around 20% higher for men aged 75+ years and women aged 65-74 and 75+ years, and 44% higher for women aged 35-64 years [78, 241]. The under 75 standardised mortality ratio (SMR) for cancer was 132 for Hull men and 133 for Hull women, (so 32% and 33% higher than England), and high relative to comparator areas. There were 2,084 deaths (1,104 men and 980 women) over the three year period representing 28% of all deaths [83]. Cancer accounted for 39% of all premature deaths (573 men and 490 women) [83]. Of these 1,063 premature deaths, 687 of these were considered preventable through public health interventions (354 men and 333 women) [26, 77, 82, 83].

For more detailed information, see the JSNA Toolkit: All Cancers report.
**What are the strategic needs?**

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care organisations need to work together with different communities to use existing assets to realise the benefit of positive life changes, and treating people as individuals.

Everybody should know the importance of early diagnosis, and should be encouraged to seek medical help early if they experience symptoms, and undertake screening for cancer when eligible. People need to know that stopping smoking has immediate health effects and substantially reduces the risk of most cancers within 5-10 years.
LUNG CANCER

What’s the issue?

The majority of lung cancer cases are preventable as it is estimated that 81% of all cases of lung cancer are directly attributable to smoking [99]. Changing lifestyle behaviours can have a dramatic effect with the risk of dying from lung cancer falling after 10 years to about half that of a person who is still smoking, and risk of cancer of the larynx after 10 years also decreases [111, 112]. Nationally, lung cancer has the fifth highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81].

What’s our situation?

The age-standardised all age incidence of lung cancer among men in Hull in 2012-2014 (147 per 100,000) was 56% higher than for England (94 per 100,000); among women lung cancer incidence in Hull (113 per 100,000) was 72% higher than for England (66 per 100,000) [241]. During 2008/09-2010/11 there were 1,416 admissions in men and 1,158 in women due to lung cancer. The standardised admission rate (using the 1976 European Standard Population) for lung cancer was twice as high among men in the most deprived fifth of areas of Hull compared with men in the least deprived fifth of areas (473 versus 231 admissions per 100,000 men) and three times as high among women (526 versus 165 admissions per 100,000 women) [242]. For 2012-14, the age-specific mortality rates were around 50% higher in Hull compared to England for both men and women aged 75+ years and men aged 35-64 and 75+ years, more than 70% higher for both men and women aged 65-74 years, and among women aged 35-64 years the rate in Hull was more than double that of England (24.2 versus 54.5 deaths per 100,000 population) [78]. Directly standardised mortality rates (DSR) among women in Hull (84 deaths per 100,000 women) were 75% higher than England (48 deaths per 100,000 women), and for men the mortality rate was more than half as much again as England (117 versus 74 per 100,000 men) [78]. The under 75 lung cancer DSR was strongly associated with deprivation (88 per 100,000 persons in most and second least deprived fifth of areas of Hull compared to 27 per 100,000 persons in the least deprived fifth of areas of Hull) [242]. There were 622 deaths over the three year period 2013-15 representing 8% of all deaths, of which 282 occurred prematurely representing 12% of all premature deaths [77, 83, 242]. There was approximately the same number of deaths for men and women (180 male and 160 female deaths prior to 75 years, and 141 deaths each for men and women among those aged 75+ years) [83].

One-year survival rates from lung cancer are low, at 35% among people in Hull diagnosed during 2014 (having increased by 42% since 1999), but remain slightly below the England figure of 37%. Five-year survival from lung cancer remains much lower, at 9% among people diagnosed during 2008-2010 in the Humber, Coast and Vale Cancer Alliance area (not published at local authority or /CCG level), which is a little lower than the 9% in England [242].

Social marketing research completed in Hull during September 2009 to assess general public knowledge and perception of chronic obstructive pulmonary disease (COPD) found a perceived health danger relating to quitting smoking – “quit and you’ll die!” with a denial “it’s not related to me” attitude [9]. Whilst this work was around COPD, the findings were very relevant to lung cancer.

For more detailed information, see the JSNA Toolkit: Lung Cancer report.

What are the strategic needs?

Survival rates from most lung cancers are relatively low so prevention is extremely important. Not smoking should be seen as the norm, with the aim of creating a smoke free generation. It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. Health care providers need to work together within communities to realise the benefit of positive life changes. People need to know that stopping smoking has immediate health effects and substantially reduces the risk of lung cancer within 5-10 years, and that coughing up blood, pain when coughing, and persistent chest infections, breathlessness and a cough can be a sign of lung cancer [243].
What’s the issue?

“Bowel cancer is a general term for cancer that begins in the large bowel. Depending on where the cancer starts, bowel cancer is sometimes called colon or rectal cancer. Bowel cancer is one of the most common types of cancer diagnosed in the UK, with around 40,000 new cases diagnosed every year. About one in every 20 people in the UK will develop bowel cancer during their lifetime. There is an increased risk of bowel cancer among those aged 60+ years, who eat a diet high in red or processed meats and low in fibre, who are overweight or obese, physical inactive or smokers, have a high alcohol intake, have a family history of bowel cancer, or have another medical conditions such as severe ulcerative colitis or Crohn’s disease” [244].

A national screening programme is in place for bowel cancer (page 81).

What’s our situation?

The age-standardised all age colorectal cancer incidence in Hull in 2012-2014 was 103 per 100,000 men which was 14% higher than England (90 per 100,000), and was 61 per 100,000 women (similar to England at 60 per 100,000) [241]. During 2008/09-2010/11 there were 1,397 admissions among women in Hull due to colorectal cancer. The standardised admission rate (using the 1976 European Standard Population) for colorectal cancer was twice as high among men in the most deprived fifth of areas of Hull compared with men in the least deprived fifth of areas (475 versus 243 admissions per 100,000 men), while among women admission rates were lower among those in the most deprived fifth of areas compared to those in the least deprived areas (103 versus 176 admissions per 100,000 women) but highest for those in the second most deprived fifth of areas (250 admissions per 100,000 women) [245]. For 2012-14, premature age-standardised colorectal cancer mortality rates in Hull (20.7 per 100,000 men and 12.4 per 100,000 women) were slightly higher than those for England (16.1 and 10.2 per 100,000 men and women respectively) [78]. Premature colorectal cancer mortality is associated with deprivation with 18.3 and 11.6 deaths per 100,000 population in the most and least deprived fifth of areas of Hull respectively [77, 245]. There were 195 deaths over the three year period (108 men and 87 women), 83 of which occurred under the age of 75 years (50 men and 33 women) [77, 83, 245]. One-year survival rates from colorectal cancer are 74% among people in Hull diagnosed during 2014 (having increased by 16% since 1999), but remain lower than for England (77%). Five-year survival from colorectal cancer has increased since 1985-1989 by one third in Hull, reaching 49% among patients diagnosed during 2001-2005. Despite this it remains lower than for both the Humber and Yorkshire Coast Cancer Network (52%) and England (53%), although the differences were not statistically significant. More recent survival data are based only on cancers of the colon, and are presented for the Humber Coast and Vale Cancer Alliance area (not published at local authority or CCG level), not these show five-year survival of 54% among those diagnosed during 2008-10, slightly below the 56% seen for England [245].

For more detailed information, see the JSNA Toolkit: Colorectal Cancer report.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes, and treating people as individuals. In relation to poor diet, the family or household environment can have a strong influence, so any approach to improving diet which involves the entire family is more likely to have a better degree of success than dealing with just the individuals. People need to have the knowledge and confidence to cook cheap, healthy meals, and further education or training may be necessary to help with this. People need to be able to access good quality fresh fruit and vegetables. Maintaining a healthy weight and improving diet should be tackled using a life course whole system approach (page 40) looking at a combination of strategies and settings.
PROSTATE CANCER

What’s the issue?

“Prostate cancer is the most common cancer in men in the UK, with over 40,000 new cases diagnosed every year. Prostate cancer usually develops slowly, and some men can have it for many years without knowing. Symptoms often only become apparent when the prostate is large enough to affect the urethra. The causes of prostate cancer are largely unknown. However, certain things can increase the risk of developing the condition such as age (most cases among those aged 50+ years), ethnicity (more common in men of African-Caribbean or African descent, and less common in men of Asian descent) and men who have a first degree male relative (such as a father or brother) affected by prostate cancer are also at slightly increased risk” [246].

Many men die with prostate cancer, not because of it: “Many men with prostate cancer are older and may not die from their cancer, but from other illnesses, such as heart disease. Prostate cancer can be slow to develop. So, many men with early stage prostate cancer will eventually die of something else not related to their prostate cancer” [247]. Nevertheless, there were 9,133 deaths in England during 2012 from prostate cancer giving a crude rate of 34.7 deaths per 100,000 population.

What’s our situation?

The age-standardised incidence of prostate cancer in Hull in 2012-2014 (165 per 100,000 men) which was 9% lower than for England (182 per 100,000 men) [241]. During 2008/09-2010/11, there were 450 hospital admissions among men due to prostate cancer [248]. For 2012-14, mortality rates from prostate cancer in Hull were similar to those for England, with age-standardised rates of 44.8 per 100,000 men in Hull and 49.5 per 100,000 men in England [78]. There were 104 deaths over the three year period, 27 of which occurred under the age of 75 years [77, 83, 248]. One-year survival rates from prostate cancer are high, at 97%, similar to both England and the Humber and Yorkshire Coast Cancer Network (HYCCN). Five-year survival rates have almost doubled between 1985-1989 and 2001-2005, reaching 78% in Hull, although lower than for HYCCN (83%) statistically significantly lower than for England (84%). More recent survival data published for the Humber, Coast and Vale Cancer Alliance area (not published by local authority or CCG) showed 5-year survival at 82%, similar to England at 81% [248].

The Cancer Reform Strategy in 2007 [249] suggested considering alternatives to hospital based follow-up (including nurse-led and proactive case management e.g. in a community setting or by telephone), and this has been undertaken locally for patients with stable prostate cancer.

For more detailed information, see the JSNA Toolkit: Prostate Cancer report.

What are the strategic needs?

Men who are of African-Caribbean or African descent and men who have first degree male relatives affected by prostate cancer should be aware that they are at a slightly higher risk of developing prostate cancer. Men should also be aware of “the symptoms, such as an increased need to urinate, straining while urinating and a feeling that the bladder has not fully emptied, should be investigated, but that such symptoms could be a sign of benign prostatic hyperplasia or prostate enlargement rather than cancer” [246]. Support should be given to men living with prostate cancer as, whilst they “can live for decades without symptoms or needing treatment, it still can have an effect on their lives causing physical problems such as erectile dysfunction and urinary incontinence, as well causing anxiety and worry” [246].
**BREAST CANCER**

What’s the issue?

“Breast cancer is the most common type of cancer in the UK. In 2011, just under 50,000 women were diagnosed with invasive breast cancer. About one in eight women are diagnosed with breast cancer during their lifetime. Most women who get it are over 50, but younger women, and in rare cases, men, can also get breast cancer. If it’s treated early enough, breast cancer can be prevented from spreading to other parts of the body” [250]. There were 58 deaths among men and 9,698 deaths among women during 2012 in England from breast cancer giving a crude rate of 35.7 deaths per 100,000 population for women [251].

“As the causes of breast cancer aren't fully understood, it's not possible to know if it can be prevented altogether. Studies have looked at the link between breast cancer and diet and, although there are no definite conclusions, there are benefits for women who maintain a healthy weight, exercise regularly and who have a low intake of saturated fat and alcohol. It's been suggested that regular exercise can reduce your risk of breast cancer by as much as a third. Being overweight or obese, particularly after the menopause, causes more oestrogen to be produced, which can increase the risk of breast cancer” [250]. Family history is also an important risk factor for breast cancer. The risk of getting breast cancer by the age of 70 if you have BRCA1 or BRCA2 breast cancer gene faults is between 45 and 65% [252].

Screening for breast cancer is the single biggest factor that allows early diagnosis, and there is a national screening programme in place for breast cancer (discussed on page 65).

What’s our situation?

The age-standardised all age breast cancer incidence among women in Hull in 2012-2014 (152 per 100,000) was statistically significantly lower than England (170 per 100,000) [241]. During 2008/09-2010/11 there were 2,647 admissions among women in Hull due to breast cancer. The standardised admission rate (using the 1976 European Standard Population) for breast cancer was two thirds higher among women in the least deprived fifth of areas of Hull compared with women in the most deprived fifth of areas (793 versus 476 admissions per 100,000 women) [253]. For 2012-14, premature age-standardised breast cancer mortality rates in Hull (21.4 per 100,000 women) were similar to England (21.9 per 100,000 women) [78, 253]. There were 142 deaths over the three year period, 84 of which occurred in women under the age of 75 years [77, 83, 253]. One-year survival rates from breast cancer are high, at 96% among women in Hull diagnosed during 2014, similar to, but slightly lower, than that for England (97%), although the differences are not statistically significant. Five-year survival from breast cancer has been increasing in most years since 1985-1989, being 24% higher in relative terms in 2001-2005 than in 1985-1989, although at 81% it remains lower than both England (84%) and the Humber and Yorkshire Coast Cancer Network (83%), although the differences were not statistically significant. More recent data on 5-year survival were available for the Humber, Coast and Vale Cancer Alliance area (not published by local authority or CCG), which showed 5-year survival amongst those diagnosed during 2008-10 of 82%, similar to, but very slightly better than, the 81% seen for England [253].

For more detailed information, see the JSNA Toolkit: Breast Cancer report.

What are the strategic needs?

As survival rates are high for most types of breast cancer provided it is detected in its early stages, it is vital that women check their breasts regularly for any changes and always get any changes examined by their GP. They should also attend screening when invited as this is the best available method of detecting an early breast lesion [250]. Healthcare providers and women need to be aware that family history of breast cancer is an important risk factor, and that the National Institute for Health and Clinical Excellence have produced guidelines in relation to breast cancer screening for women with a family history of breast cancer [254].
**DIABETES**

**What’s the issue?**

“Diabetes is a lifelong condition that causes a person's blood sugar level to become too high. There are two main types of diabetes – type 1 diabetes and type 2 diabetes. The charity Diabetes UK estimates that around 850,000 people in England have diabetes but haven't been diagnosed. Many more people have blood sugar levels above the normal range, but not high enough to be diagnosed as having diabetes. This is sometimes known as pre-diabetes. If blood sugar level is above the normal range, the risk of developing full-blown diabetes is increased. It's very important for diabetes to be diagnosed as early as possible because it will get progressively worse if left untreated. In type 1 diabetes, the body's immune system attacks and destroys the cells that produce insulin. As no insulin is produced, your glucose levels increase, which can seriously damage the body's organs. Type 1 diabetes is often known as insulin-dependent diabetes. It's also sometimes known as juvenile diabetes or early-onset diabetes because it usually develops before the age of 40, often during the teenage years. Type 2 diabetes is where the body doesn't produce enough insulin, or the body’s cells don't react to insulin. This is known as insulin resistance. In the UK, around 90% of all adults with diabetes have type 2 diabetes. Control of symptoms may be managed through healthy eating, exercising regularly, and monitoring your blood glucose levels, although eventually medication may be required. During pregnancy, some women develop gestational diabetes (affecting up to 18% of women during pregnancy)" [255]. People with pre-diabetes have an increased risk of developing type 2 diabetes [256, 257].

Obesity, family history, ethnicity, high blood pressure, poor diet and lack of physical activity are the main key risk factors for type 2 diabetes [258]. For women, having had gestational diabetes in pregnancy also increases the risk of type 2 diabetes (to about 30% versus 10% for the general population [255]). The effects of diabetes can be made worse by smoking [99].

With the aging population and the increasing trends in the prevalence of obesity, it is anticipated that the number of people with diabetes will increase.

**What’s our situation?**

For 2015/16, there were 15,817 patients aged 17+ years registered with Hull GPs who were diagnosed with (type 1 or 2) diabetes representing 6.7% of the population aged 17+ years which was similar to England (6.6%) but lower than the average of seven comparator areas (7.5%) [93].

There was a statistically significant increasing trend in the prevalence with increasing deprivation. The 11 practices with the highest mean patient deprivation scores serving the most deprived fifth of Hull’s population had a prevalence of 7.5% compared to 5.9% among the 11 practices with the lowest mean patient deprived scores [259]. Using modelling [259, 260], it is estimated that 19,377 (8.2%) of registered patients aged 16+ years have diagnosed or undiagnosed diabetes (increasing to 21,000 by 2025). So it is estimated that there are currently around 3,500 patients with undiagnosed diabetes. The same modelling estimates that there are 16,610 residents aged 16+ with diabetes (increasing to 18,000 by 2025).

It is further modelled that 20,882 (10.0%) residents of Hull, and 23,933 (10.2%) patients registered with Hull GPs who are aged 16+ years have non-diabetic hyperglycaemia (pre-diabetes) using 2015 data [261].

There were a total of 1,021 hospital admissions over the three year period 2008/09 to 2010/11 with a primary diagnosis of diabetes, giving an annual average of 340 per year [259]. There were statistically significant differences in the diabetes admission rates across the wards for both men and women, and across deprivation quintiles. The rate of lower limb amputations in diabetic patients is almost twice that of England and statistically significantly higher for 2011/12 (with a standardised admission rate of 21.8 per 100,000 population compared to 11.6 for England) with 51 lower limb amputations compared to an expected number of 24 based on the age and gender structure of Hull's population [78, 259]. The rate of emergency hospital admissions for diabetic ketoacidosis and coma is also significantly higher than England (51.3 versus 29.7 per 100,000...
population for 2012/13) with 135 admissions compared to an expected number of 70 admissions [78, 259].

For 2013-15, there were a total of 38 men and 35 women in Hull who died of diabetes (14 men and 9 women prior to 75 years) [77, 78, 83, 259]. The all age standardised mortality ratio for 2012-14 for Hull was 137 (95% CI 99 to 188) for men and 117 (95% CI 82 to 163) for women so 37% higher than England for men and 17% higher for women in Hull compared to England [78, 259]. However, due to the wide confidence intervals, there were no statistically significant differences in the rates between Hull and England.

Inequality was suggested within both the Diabetes Health Equity Audit and subsequent analysis [259, 262]. Among people living in the least deprived fifth of areas of Hull, the prevalence was 21% lower than the most deprived fifth, but the hospital admission rate was 56% lower and the premature mortality was 44% lower. This suggests that relative to diagnosed diabetes prevalence levels, hospital admissions and premature mortality are both higher in the most deprived group compared to the least deprived group.

For more detailed information, see the JSNA Toolkit: Diabetes report.

What are the strategic needs?

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend. People already diagnosed with diabetes should attend their annual reviews so that they get the best on-going treatment for their condition.

Pre-diabetes is poorly understood across the medical profession, therefore education amongst health professionals is an essential focus. The screening, treatment and appropriate management of pre-diabetes is essential for the prevention of diabetes in later life.

Diabetes management is challenging as it fits within a wide spectrum of long term conditions care. The overarching need is to ensure that diabetes care is managed in an integrated fashion, adequately resourced, with appropriate governance and staff who have the necessary competencies to deliver care.

People who have diabetes and who are at risk of familial hypercholesterolaemia should be identified so that they can commence treatment and/or be referred for specialist care for FH as their risk of coronary heart disease will be high [196].
CHRONIC KIDNEY DISEASE

What’s the issue?

Chronic kidney disease (CKD) is a long-term condition where the kidneys do not work effectively, which does not usually cause symptoms until it reaches an advanced stage. Symptoms include tiredness, swollen ankles, feet or hands, shortness of breath, nausea and blood in the urine. It is usually detected at earlier stages by blood and urine tests [263]. The evidence indicates that high blood pressure (hypertension) causes just over a quarter of all cases of kidney failure. Diabetes has been established as the cause of around a quarter of all cases [264]. Age and ethnicity are the other main risk factors for CKD.

Different stages of severity of kidney disease have been defined on the basis of how quickly the kidneys are cleaning the blood and is reported in millilitres per minute (mL/min). Normal glomerular filtration rate (GFR) is 90mL/min or more. The original stages were defined by the US National Kidney Foundation Kidney Disease Outcomes Quality Initiative in 2002. Patients with stage 1 had kidney damage with normal or high GFR of 90mL/min or more, patients with stage 2 CKD had kidney damage and a mild decrease in GFR of 60-89mL/min, patients with stage 3 CKD had a moderate decrease in GFR of 30-59mL/min, patients with stage 4 CKD had a severe decrease in GFR of 15-29mL/min, and patients with stage 5 CKD had established renal failure with a GFR of less than 15mL/min or are on dialysis [265]. An updated guideline in 2008 suggested sub-dividing stage 3 into 3a (GFR 45-59mL/min/1.73m²) and 3b (GFR 30-44 mL/min/1.73m²) [266]. An updated guideline [267] also recommends classifying CKD using a combination of GFR and albumin creatinine ratio (ACR). For 2015/16, the GP disease registers use stages G3a-G5 to classify a patient as having CKD [93, 266], but for previous years the register used stages 3-5 [268].

What’s our situation?

For 2015/16, the prevalence of diagnosed CKD (stages G3a-G5 of the disease) was 3.85% among registered patients aged 18+ years in Hull with a total of 8,978 patients diagnosed [93]. The prevalence was lower than England (4.1%) but similar to the average of seven comparator areas (3.82%).

There was no statistically significant association between deprivation and prevalence across the general practices in Hull. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship, and could be influenced by the higher mortality rate among those living in the most deprived areas [269].

Modelling (October 2016) suggests that almost 19,000 of the registered patients aged 18+ years have CKD (stage 3-5 of the disease), so only around half of patients are diagnosed [269].

Over the three year period 2013-15, there were 24 deaths (12 men and 12 women) from CKD in Hull, and five of these deaths occurred prior to the age of 75 years [77, 269].

For more detailed information, see the JSNA Toolkit: Chronic Kidney Disease report.

What are the strategic needs?

Whilst a minority of people with high blood pressure suffer symptoms such as persistent headache, blurred vision or double vision, nosebleeds or shortness of breath, most people with high blood pressure have no symptoms. As high blood pressure is a strong risk factor for CKD, it is therefore important that people have their blood pressure measured at least once every five years [270].

People aged 40-79 years who are eligible for the NHS Health Check should be encouraged to attend. People already diagnosed with diabetes, high blood pressure or CKD should attend their annual reviews so that they get the best on-going treatment for their condition, and other medical conditions such as CKD are picked up quickly.
RESPIRATORY DISEASE

What’s the issue?

The main respiratory diseases and conditions are respiratory infections, asthma, influenza and pneumonia, pneumonitis (inflammation of the lung tissue which is not a specific disease but a sign of an underlying condition), bronchitis and emphysema, and other chronic obstructive pulmonary diseases (COPD).

Around 80% of lung cancer [page 80] and COPD cases are directly attributable to smoking [99], and other lung conditions such as the common cold, asthma and influenza are made worse by smoking [99]. However, the health benefits are immediate after quitting smoking [110], with carbon monoxide levels in the blood drop to normal within 12 hours [271], circulation improves and lung function increases within 2-13 weeks [111], and coughing and shortness of breath decreases and start to regain lung function after 1-9 months [111].

In Hull for 2012-14, it is estimated that mortality from respiratory disease is responsible for around one-fifth of the life expectancy gap between Hull and England (19.6% for men and 29.0% for women). Over the three year period, there would be 169 fewer male and 234 fewer female deaths and life expectancy would increase by 0.53 and 0.73 years for males and females respectively if Hull experienced the same respiratory disease mortality rates as England [240].

What’s our situation?

There were 7,496 and 7,329 admissions for respiratory diseases for men and women respectively over the three year period 2008/09 to 2010/11 giving an annual average of 2,499 admissions of men and 2,443 admissions of women per year. The directly standardised admission rate was higher among men (188) compared to women (166) per 10,000 population [272].

In 2012-14 the under 75 directly standardised mortality rate (DSR) for all respiratory diseases was 65.7 per 100,000 men and 57.1 per 100,000 women, which was similar to the rate in 2001-03 (decrease of 6.3% for men and an increase of 6.4% for women). So there has been little change overall in the premature mortality rate over the last decade [82, 272]. Over the three year period, there were a total of 1,228 deaths (562 men and 666 women) in Hull due to respiratory disease, of which 341 (175 men and 166 women) were among those aged under 75 years [272], and 224 (110 men and 114 women) out of these 341 deaths were considered preventable [26, 77, 82, 272]. The under 75 DSR for respiratory disease considered preventable was more than twice as high in Hull as England for both men (42.1 versus 20.3 per 100,000 population) and women (41.7 versus 16.1 per 100,000 population). Since 2001-03, the premature preventable mortality rate had increased by 17% for men and by 49% for women in Hull compared to reductions of 16% and 6% for men and women in England respectively [26, 82, 272]. Given the prevalence of smoking in Hull, it is not surprising that the premature mortality rate for respiratory diseases is so much higher than for England, with almost half of respiratory disease deaths directly attributable to smoking, including almost 80% of COPD deaths [99].

For more detailed information, see the JSNA Toolkit: All Respiratory Disease report.

What are the strategic needs?

People should be aware that smoking can cause respiratory conditions such as COPD and make other respiratory conditions such as asthma worse. People should also be aware that stopping smoking has immediate health effects within lung function improving within a year. Not smoking should be seen as the norm, with the aim of creating a smoke free generation.

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes, and treating people as individuals.

People should attend their annual reviews (generally within primary care) for asthma and COPD so that they get the best on-going treatment for their condition.
ASTHMA

What’s the issue?

“Asthma is a common long-term condition that can cause coughing, wheezing, chest tightness and breathlessness. The severity of these symptoms varies from person to person. Whilst there is no cure, asthma can be controlled well in most people most of the time to lead a normal active life, although some people may have more persistent problems. Control can be achieved through the tailored use of medication (usually inhalers) and to some extent by avoiding things that the individual knows will make their symptoms worse (triggers)” [273]. One potential trigger is cigarette smoke [99]. “Occasionally, asthma symptoms can get gradually or suddenly worse (“asthma attack” or “exacerbation”). Severe attacks may require hospital treatment and can be life threatening, although this is unusual. In the UK, 5.4 million people have asthma (1 in 12 adults and 1 in 11 children)” [273]. In England, there were 1,037 deaths (284 aged under 75 years) in 2013 [78], 65% of which are said to be preventable [274]. There are wide variations in outcomes for people living with asthma [275]. Nationally a five-fold difference has been demonstrated between some areas in hospital admissions for adults with acute exacerbation of their asthma and as much as a six-fold difference for children.

What’s our situation?

For 2015/16, there are 18,200 (6.2%) registered patients (adults and children) on the asthma GP disease registers which higher than England (5.9%) and the average of seven comparators (5.8%) [93, 276]. There was no statistically significant association between deprivation and prevalence across the general practices in Hull. This could simply reflect increased undiagnosed disease among those living in the more deprived areas rather than a lack of a true underlying relationship [276].

Modelling (October 2016) gave an estimate of 26,790 patients with asthma, which suggests that around 8,500 patients with asthma are undiagnosed assuming the model is accurate [276].

Over the three year period 2008/09 to 2010/11, there were an average estimate of 372 admissions per year (170 for men and 203 among women). There was a statistically significant difference in the directly standardised admission rate among Hull’s seven Areas for both men and women. There was also a relatively strong association between the inpatient admission rate and deprivation, with more admissions for residents in more deprived areas [276].

In Hull, there were 29 (11 men and 18 women) asthma deaths over the three year period 2013-15, 21 (72%) of which occurred at age 75+ years [77, 78, 83, 276].

For more detailed information, see the JSNA Toolkit: Asthma report.

What are the strategic needs?

Asthma prevalence can be reduced over the long-term by reducing air pollution and cigarette smoking, and by increasing breastfeeding rates. In order to treat effectively, diagnoses need to be made in Primary Care. Asthma symptoms can be better controlled by having an asthma review once a year. Self-management of symptoms can be improved by the use of asthma action plans and better education, which have been shown to reduce admissions by more than half. The 2012 National Paediatric Asthma Audit demonstrated that only 45% of children admitted were given an action plan at discharge and 43% of children didn’t have their inhaler technique checked before discharge [277]. For the 2012 National Adult Asthma Audit, 20% of newly-diagnosed asthmatics and 30% of known asthmatics were not commenced on inhaled corticosteroid therapy at discharge. Nine percent of patients were non-adherent to their asthma treatment. Just under half (49%) had their inhaler technique reviewed, but 26% of patients were found to have poor technique. A clinic review appointment was scheduled in 67% of patients within four weeks of discharge, and 43% had a written record of advice to see their GP within a week of discharge [278].
CHRONIC OBSTRUCTIVE PULMONARY DISEASE

What’s the issue?

“Chronic obstructive pulmonary disease (COPD) is the name for a collection of lung diseases including chronic bronchitis, emphysema and chronic obstructive airways disease. People with COPD have difficulties breathing, and often have a persistent cough with phlegm and frequent chest infections” [279].

“Some cases of COPD are caused by fumes, dust, air pollution and genetic disorders, but these are rarer” [279]. The most common cause is smoking, and it is estimated that 78% of all COPD deaths directly attributable to smoking [99].

“COPD is one of the most common respiratory diseases in the UK. It usually only starts to affect people over the age of 35, although most people are not diagnosed until they are in their 50s. It is thought there are more than 3 million people living with the disease in the UK, of which only about 900,000 have been diagnosed. There are around 25,000 deaths each year in the UK from COPD” [279]. Nationally, COPD has the fourth highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81].

Health benefits are immediate after quitting smoking [110]. Within 12 hours, carbon monoxide levels in the blood drop to normal levels [271]. Within 2-13 weeks, circulation improves and lung function increases [111]. After 1-9 months, coughing and shortness of breath decreases, and people start to retain lung function [111].

What’s our situation?

The prevalence of smoking in Hull (31%) [66] – around 50% higher than England – results in high levels of COPD in Hull. From the local adult Prevalence Survey 2014 [66], the smoking prevalence was twice as high as the rate in England among Hull residents living in the most deprived fifth of areas (44%) compared to a rate similar to England among those living in the least deprived areas of Hull (17%). For 2015/16, the prevalence of diagnosed COPD is higher for Hull (2.65%) than England (1.85%) and the average of seven comparator areas (2.39%) [93, 280]. There were 7,849 patients on the COPD disease register. There was a statistically significant increasing trend in the prevalence with increasing deprivation. The 11 practices with the highest mean patient deprivation scores serving the most deprived fifth of Hull’s population had a prevalence of 3.3% compared to 2.1% among the 11 practices with the lowest mean patient deprived scores [280]. Based on modelling (October 2016) it is estimated that there are 12,875 (4.4%) registered patients who have COPD [280]. If the model gives a reasonable estimate then there are over 5,000 patients with undiagnosed COPD.

During the three year period 2008/09 to 2010/11, there were almost 3,500 admissions for COPD for Hull residents (annual average of 1,165 admissions) giving annual average admission rates of 386 and 363 per 100,000 men and women respectively. The rates in the wards differed from 61 to 727 per 100,000 residents. This was strongly influenced by the association between deprivation, smoking and COPD as the admission rates varied from 160 to 633 per 100,000 persons in the least deprived fifth compared to the most deprived fifth [280].

Around one in every 12 people who died in Hull died of COPD [83]. The under 75 standardised mortality rate (SMR) for COPD for 2012-14 for Hull was 226 so the premature mortality rate was more than twice that of England (193 for males and 266 for females), and substantially higher than the average of comparator areas [78]. Premature mortality was more than five times higher in the most deprived fifth of areas compared to the least deprived fifth of areas of Hull (directly standardised mortality rates (DSR) 73.0 versus 14.1 per 100,000 population) [77]. Over the three year period, there were a total of 582 deaths (279 men and 303 women) of which 225 (109 men and 114 women) occurred among people aged under 75 years [83, 93, 280]. All age DSRs were 140 per 100,000 men and 79 per 100,000 women in Hull for 1995-97, and fell to a low of 91 per 100,000 men in 2005-07 and to a low of 59 per 100,000 women in 2002-04, but has since increased slightly for men to 107 per 100,000 men and has since increased considerably for women to 90 per 100,000 women in 2012-14 [77, 78, 280].
Whilst the prevalence in the least deprived quintile is 62% that of the most deprived quintile (or 38% lower), the hospital admission rate is 75% lower and the mortality rate is 88% lower. This suggests that there is inequality present as those residents in the least deprived areas having fewer hospital admissions and fewer deaths in relation to the prevalence, but it is complex and there are many potential reasons for the differences observed [280, 281].

Social marketing research completed in Hull during September 2009 to assess general public knowledge and perception of COPD found a perceived health danger relating to quitting smoking – “quit and you’ll die!” together with a “prove it” attitude with a lack of trust in the link between COPD and smoking and a denial “it’s not related to me” attitude. In general, there was a low awareness of COPD and barriers relating to a “what’s the point” attitude [9].

For more detailed information, see the JSNA Toolkit: Chronic Obstructive Pulmonary Disease report.

What are the strategic needs?

Although the damage that has already occurred to the lungs cannot be reversed, the progression of the disease can be slowed, and stopping smoking is particularly effective at doing this [279]. Symptoms can be relieved with medication such as using an inhaler to make breathing easier, and pulmonary rehabilitation may also help [279]. As COPD cannot be cured, prevention is very important. Not smoking should be seen as the norm, with the aim of creating a smoke free generation.

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes, and treating people as individuals.

People need to know that stopping smoking has immediate health effects with lung function improving within a year.

People already diagnosed with COPD should attend their annual reviews (generally within primary care) so that they get the best on-going treatment for their condition.
MUSCULOSKELETAL DISORDERS

What’s the issue?

Musculoskeletal disorders (MSD) covers any injury, damage or disorder of the joints, ligaments, muscles, nerves, tendons or other tissues in the limbs or back [282]. There are numerous specific MSD, but information has not been given below on all possible conditions (and not even the most common or more severe ones).

Back pain is common, and often it is non-specific back pain where no specific problem or cause is diagnosed [283], although sometimes it can be due to an injury such as a sprain or strain, and occasionally the cause is a specific medical condition such as a slipped or prolapsed disc, or sciatica. In general, back pain can be reduced by staying as active as possible and trying to continue daily activities, as resting for long periods is likely to make the pain worse. Exercises and stretches for back pain, swimming, walking, yoga and pilates may also be helpful. Anti-inflammatory painkillers and hot or cold compression packs can be used to ease the pain [283]. Specialist treatment can help in specific cases [283]. Joint pain is also a common condition and can be caused by an injury or arthritis. In older people, joint pain that gets steadily worse is usually a sign of osteoarthritis [284]. Other injuries such as tennis elbow [285] and repetitive strain injury [286] can be caused by repetitive actions. Tennis elbow can be caused by tennis, decorating or playing the violin. RSI is often work-related, and can result from jobs such as working on an assembly line, at a supermarket checkout or typing at a computer [286]. Each year in the UK, about five in every 1,000 people go to see their GP about tennis elbow [285]. For these types of injuries it is necessary to stop the repetitive activity for improvement. Sometimes MSD can take a long time to improve, for instance, frozen shoulders usually takes at least 1½ to two years to get better, and can sometimes take up to five years [287]. It is estimated that 5% of people are affected by a frozen shoulder in the UK at some point in their lives [288].

Nationally, lower back and neck pain has the highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81].

What’s our situation?

Whilst lower back and neck pain have the highest DALYs in England, information relating to prevalence and levels of disability are relatively limited, although some information is available through benefit claimants. Almost one in ten (9.5%) working-age people are claiming Incapacity Benefit, Severe Disablement Allowance or Employment Support Allowance in Hull with 16,075 claimants [189]. Overall, 2,130 of these claimants were claiming these benefits due to musculoskeletal conditions (1.3% of working-age population). The highest claimant rates for musculoskeletal conditions were in Orchard Park and Greenwood and St Andrew’s wards (both 2.2%) followed by Bransholme East, Bransholme West and Longhill (all 1.9%). The lowest claimant rate for musculoskeletal conditions were in King’s Park and Holderness wards (both 0.5%), and Beverley and Bricknell wards (both 0.6%).

For more detailed information, see the JSNA Toolkit: General Health, Disabilities and Caring report.

What are the strategic needs?

Often there is relatively little GPs can do to relieve symptoms and pain from MSD. In general, staying active and exercising reduce pain and improves recovery time, although this depends on the specific cause or problem. Therefore, it is important that people suffering with MSD get the right treatment and are aware of the best way to deal with their MSD. People need to be aware that there are risks in taking anti-inflammatory painkillers over a long period or time, or taking too many within specific time frames. People should also be aware of the ways to reduce risk of MSD through regular exercises and stretching, staying physically active, avoiding sitting too long at work or driving, taking care when lifting objects, maintaining good posture, avoiding repetitive actions, ensuring the mattress on the bed gives sufficient support, and maintaining a healthy weight [283].
EPILEPSY

What’s the issue?

“Epilepsy is a condition that affects the brain and causes repeated seizures, which were sometimes previously referred to as "fits". Epilepsy is estimated to affect more than 500,000 people in the UK (around 1% of the population). The severity of seizures can differ from person to person. Some people simply experience an odd feeling with no loss of awareness, or may have a "trance-like" state for a few seconds or minutes, while others lose consciousness and have convulsions (uncontrollable shaking of the body). Epilepsy can start at any age, but it most often begins in childhood. It’s often not possible to identify a reason why someone develops the condition, although in some cases it can be associated with damage to the brain from strokes, brain tumours or severe head injuries. For most people, anti-epileptic drugs are effective in controlling seizures (although it can take time to find the right type and correct dose of medication). It is important to stay healthy through regular exercise, getting enough sleep, eating a balanced diet and avoiding excessive drinking. People may also need to think about their epilepsy before undertaking things such as driving, using contraception and planning a pregnancy” [289].

What’s our situation?

For 2015/16, there were 2,528 (1.08%) patients aged 18+ years who were on the epilepsy GP disease registers [93]. This was much higher than England (0.80%) and among the highest of comparator areas (range 0.94% to 1.08%).

There was a statistically significant increasing trend in the prevalence with increasing deprivation. The 11 practices with the highest mean patient deprivation scores serving the most deprived fifth of Hull’s population had a prevalence of 1.29% compared to 0.77% among the 11 practices with the lowest mean patient deprived scores [290].

For 2014/15, emergency admissions for epilepsy in Hull (262 per 100,000 population) were the highest among all 211 CCGs, and the percentage of patients remaining seizure-free in the previous year was second highest for Hull (46.5%) [268]. There was a five-fold and two-fold difference in these measures for 2012/13 and 2014/15 respectively [291]. So considerable difference among the CCGs.

During 2013-15, there were a total of 19 deaths virtually all occurring prior to the age of 75 years and the deaths occurred mainly to men [77], but this had been 30+ deaths the previous three years, and had ranged between 19 and 36 deaths over the last 12 years. For 2012-14, the under 75 standardised mortality ratio was 283 for men and 219 for women in Hull denoting mortality rates that were almost three times and almost twice as high as England respectively after adjusting for the age structure of Hull’s population. The under 75 SMR was ranked 3rd and 19th highest among 325 local authorities for men and women respectively (although not statistically significantly higher for women due to small number of deaths) [78, 290]. Over the period 2001-14, there was a statistically significant association between the percentage of deaths from epilepsy and deprivation [77, 290] with 76 epilepsy deaths over the 14 year period (representing 0.46% of all deaths) among people living in the most deprived two-fifths of areas of Hull compared to 25 (0.23%) among people living in the least deprived two-fifths of Hull, although the trend was not over all five deprived fifths with the second most deprived fifth having a higher rate compared to the most deprived fifth, and the least deprived fifth having a higher rate compared to the second least deprived fifth.

For more detailed information, see the JSNA Toolkit: Epilepsy report.

What are the strategic needs?

“A person should have regular reviews of their epilepsy and treatment, usually carried out by their GP, but sometimes by their neurologist and their team. The reviews should be at least annually, and more frequently if the epilepsy is not well controlled. It is also useful for people suffering with epilepsy to keep diaries to note what they had been doing beforehand which may help them work out if they have anything that triggers their seizures” [292].
INFECTIONOUS DISEASES

What’s the issue?

“Infectious diseases are caused by pathogenic microorganisms, such as bacteria, viruses, parasites or fungi; the diseases can be spread, directly or indirectly, from one person to another. Zoonotic diseases are infectious diseases of animals that can cause disease when transmitted to humans” [293]. “Infectious agents can enter the body through skin contact or injuries, inhalation of airborne germs, ingestion of contaminated food or water, tick or mosquito bites, and sexual contact” [294]. There are many such infectious diseases, however, mortality is low within England with the exception of pneumonia and septicaemia. Some vaccines available which are generally given within the first five years of birth, for example, for vaccines for diphtheria, polio, measles, etc.

Tuberculosis (TB) is one infectious disease which is a serious condition, but can be cured with proper treatment. It usually only spreads after prolonged exposure to someone with the illness. Some people can have latent TB where the bacteria is in the body but does not spread or cause symptoms, but this can develop into an active TB infection at a later date. Before antibiotics were introduced, TB was a major health problem in the UK. Nowadays, the condition is much less common. However, in the last 20 years TB cases have gradually increased, particularly among ethnic minority communities who are originally from places where TB is more common. In 2013 around 8,000 cases of TB were reported in the UK (over 5,000 among those born outside the UK). It is estimated around one-third of the world’s population is infected with latent TB. Of these, up to 10% will become active at some point. With antibiotics, TB can usually be cured, but some forms of TB are resistant to certain drugs (then treatment can take up to two years). In the UK, the Bacille de Calmette et Guérin (BCG) vaccine provides effective protection against TB in up to 80% of people who are given it. The vaccine is only offered to people at a higher risk of developing TB” [295].

What’s our situation?

The incidence of TB was around half that of England for 2013-15 with 50 new cases diagnosed in Hull (6.5 and 12.0 per 100,000 population for Hull and England respectively). Nine in ten (21 out of 23 cases; 91.3%) of drug-susceptible TB cases reported in Hull in 2012 completed treatment within 12 months, which was higher than England (83.3%). The data for 2013 or 2014 are not available for Hull as the numbers are too small [26, 53].

In 2013-2015 the all age directly standardised mortality rate (DSR) for communicable diseases (infectious and parasitic disease, and influenza) was 12.9 per 100,000 population in Hull which was higher than England (11.5) [26, 77, 82]. There were 76 deaths in total. The DSR for people living in the most deprived fifth of areas of Hull was around double that of those in the least deprived fifth of areas [82, 296]. There were 75 deaths from certain infectious and parasitic diseases (30 prior to the age of 75 years), and 335 deaths from influenza and pneumonia (57 prior to the age of 75 years) [83]. For 2012-14, the under 75s pneumonia standardised mortality ratio was 136 for men and 128 for women denoting a mortality rate around 30% higher for Hull compared to England, but it was not significantly higher than England [78, 296]. In 2012-2014 the all age DSR for infectious and parasitic diseases was 17.1 per 100,000 men and 9.7 per 100,000 women which was statistically significantly higher than England for men (11.0) but not for women (9.1) [78].

For more detailed information, see the JSNA Toolkit: Infectious Diseases report.

What are the strategic needs?

People can reduce their risk of getting an infection and spreading any infection to other people by washing hands, avoiding touching your eyes, nose or mouth with their hands, getting vaccinated, staying at home if signs and symptoms of infectious diseases such as vomiting or fever are present, preparing food safely, practicing safe sex, not sharing personal items such as toothbrushes or drinking glasses, and travelling wisely by getting special vaccinations” [294]. Identify those at risk of TB and protect them with the BCG vaccine, and ensure those who are receiving treatment for TB continue to take their medication.
LIVER DISEASE

What’s the issue?

“There are more than 100 different types of liver disease, which together affect at least 2 million people in the UK. The liver is the second largest organ in the body. It works hard, performing hundreds of complex functions, including: fighting infections and illness; removing toxins, such as alcohol, from the body; controlling cholesterol levels; helping blood to clot; and releasing bile, a liquid that breaks down fats and aids digestion. Liver disease doesn’t usually cause any obvious signs or symptoms until it’s fairly advanced and the liver is damaged. The most common liver diseases are alcohol-related liver disease which can lead to cirrhosis (scarring of the liver), non-alcoholic fatty liver disease (build-up of fat within liver cells usually in people who are overweight or obese), and hepatitis (inflammation of the liver caused by a viral infection or exposure to harmful substances such as alcohol). In the UK, liver disease is on the increase, and represents a significant health problem. Three of the main causes of liver disease are obesity, an undiagnosed hepatitis infection and alcohol misuse” [297].

What’s our situation?

There were 133 deaths (90 men and 43 women) from premature liver disease over the three year period 2013-15 of which 114 (78 men and 36 women) were considered preventable [26, 77, 82]. Whilst the directly standardised mortality rate for premature liver disease in Hull (22.1 deaths per 100,000 population) was higher than England (18.0), it was lower than most comparator areas (ranked third lowest of 12 comparator areas). This was also true for males (30.0 versus 23.7, ranked 3rd) and women (14.3 versus 12.5, ranked 2nd). It was also the case for premature liver deaths that were considered preventable for men (25.9 versus 21.4, ranked 2nd), women (12.1 versus 10.6, ranked 2nd) and persons overall (18.9 versus 15.9, ranked 2nd) [26, 77, 82].

Since the beginning of this century, the mortality rates have increased by around 30% for both men and women in Hull for both premature liver disease and premature preventable liver disease, whereas the increase had been around half that (13-15%) for England. For men the increase had occurred between 2001-03 and 2005-07, with relatively small changes since 2005-07. For women, there was an increased variability in the number of deaths and mortality rates due to small numbers, and there was no real pattern over time in relation to the increase [26, 77, 82].

For more detailed information, see the JSNA Toolkit: Digestive Diseases report.

What are the strategic needs?

It is necessary to ensure people understand the benefit of positive life choices and realise that excessive alcohol consumption and obesity are problems. People need to know how to access information and seek early support to change. In order to do this effectively, health care providers and others such as the police and schools need to work together with different communities to use existing assets to realise the benefit of positive life changes. Family or household environment can have a strong influence of poor diet and lack of physical activity, so any weight reduction programme that involves the entire family is more likely to succeed. People need to have the knowledge and confidence to cook cheap, healthy meals. People may need information about alcohol units and the calorie content of alcoholic drinks. Further information is available in the section on behavioural and lifestyle risk factors on page 37 which relate to diet, physical activity, obesity, and alcohol consumption.

People at risk of hepatitis A and hepatitis B should get vaccinated. This includes some healthcare workers, those who are travelling abroad to specific countries, and drug users. The risk of hepatitis can be reduced by not having unprotected sex, not sharing needles when injecting drugs, and avoiding blood-to-blood contact [298].
SEXUAL HEALTH

Information on sexually transmitted infections is given on page 96, and information on under 18 conceptions is given on page 60.

What’s the issue?

“Sexual health is a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled” [299].

What’s our situation?

In 2014, there were 3,537 live births to females aged 11-49 years in Hull giving a birth rate of 65.3 per 1,000 female population aged 15-44 years (compared to 62.2 for England). The distribution of the births differed between Hull and England with higher percentage of births at younger ages in Hull in particular among those aged under 20 years (6.2% versus 3.7%) and 20-24 years (25.7% versus 16.0%), and a lower percentage in Hull among those aged 35-39 years (9.5% versus 16.7%) and 40+ years (1.8% versus 4.2%). There was little difference in the percentage of births among those aged 11-15 years for Hull (0.3% of all births) and England (0.2%). As the distribution in age differs so much between Hull and England, it is not possible to compare the overall fertility rate in terms of the crude birth rate as this will differ depending on the age distribution of the populations. In order to compare the fertility rates it is possible to use the total period fertility rate (TPFR; see page 111 for an explanation). The TPFR was 1.82 (95% confidence interval 1.76 to 1.88) in Hull for 2014 which was virtually the same as England (1.83, 95% confidence interval 1.83 to 1.84), and had decreased slightly in Hull from 1.90 in 2014 [78, 300].

There were 832 terminations among women during 2014 in Hull giving a rate of 15.4 per 100,000 females aged 11-49 years, which was statistically significantly lower than England (16.6) even though it had increased in Hull since 2013 (13.6). With the exception of under 20s, the termination rate per 100,000 women was lower in Hull compared to England in all age groups (under 18s, 18-19, 20-24, 25-29, 30-34 and 35+ years). For both under 18s and those aged 18-19 years, the rate was only slightly higher than England and not statistically significantly so (13.7 versus 11.2 for under 18s and 24.5 versus 23.5 per 100,000 population for 18-19 year olds). There were 57 terminations among Hull women aged under 18s and 75 terminations among Hull women aged 18-19 years during 2014. Over all ages, there was no statistically significant difference in the percentages of terminations that occurred after 12 weeks gestation in Hull as England (6.4% versus 8.2%), but a statistically significantly higher percentage occurred at 10-12 weeks in Hull (13.7% versus 11.3%). The total period termination rate (TPTR; see page 111 for explanation) was 0.43 (95% confidence interval 0.40 to 0.46) which was significantly lower than England (0.49, 95% confidence interval 0.49 to 0.50). So the total period termination rate as a percentage of the potential fertility rate (TPTR divided by TPTR and TPFR combined) was lower in Hull at 19.1% compared to England (21.1%), although had increased in Hull from 17.0% in 2013 [78, 300].

For more detailed information, see the JSNA Toolkit: Sexual Health report.

What are the strategic needs?

Locally, there are programmes in place to educate and change behaviour, and not just treat sexually transmitted infections, but allowing people to make positive proactive choices about contraception.
SEXUALLY TRANSMITTED INFECTIONS

What’s the issue?

“Sexually transmitted infections (STIs) are passed from one person to another through unprotected sex or genital contact. Chlamydia is one of the most common STIs, and most people do not experience any symptoms. Gonorrhoea is a bacterial STI and around 50% of women and 10% of men do not experience any symptoms. Chlamydia and gonorrhoea can both be easily treated with antibiotics, but can lead to serious long-term health problems if left untreated including infertility. Syphilis is a bacterial infection that in the early stages causes a painless but highly infectious sores lasting up to six weeks. Secondary symptoms such as a rash, ‘flu-like illness or patchy hair loss may then develop, followed by a symptom-free period. The late stage of syphilis usually occurs after many years and can cause serious conditions, such as heart problems, paralysis, and blindness. It can be treated with antibiotics, and when treated properly the later stages can be prevented. Human immunodeficiency virus (HIV) attacks and weakens the immune symptoms making it less able to fight infections and disease. There is no cure, but treatments allow most people to live a long and otherwise healthy life. Acquired immunodeficiency syndrome (AIDS) is the final stage of an HIV infection when the body can no longer fight life-threatening infections” [301]. Other STIs include genital warts, genital herpes, trichomonas vaginalis, pubic lice, and scabies [301].

What’s our situation?

There were 1,449 new diagnoses of Chlamydia in Hull for 2016 (three-quarters of which were among those aged 15-24 years – which is not surprising given the lack of symptoms and the screening programme available for this age group) [26, 67, 302]. For 2016, this equated to a rate of 2,727 per 100,000 people aged 15-24 years [26]. This was higher than England (1,882) and the region, and higher than each of the 11 comparator areas, although the rate depends on the programmes in place and does not necessarily reflect the underlying disease prevalence. There were 19, 13 and 6 new diagnoses of HIV in 2013, 2014 and 2015 giving a new diagnosis rate of 9.0, 6.2 and 2.8 per 100,000 population (lower than England at around) [302]. Around two thirds of Hull residents (22 out of 37; 59%) diagnosed with HIV in 2013-15 presented at a late stage (higher than England at 40%) [26]. In 2015, the HIV diagnosed prevalence among those aged 15-59 years was 1.2 per 100,000 population with 186 cases (lower than England at 2.3) [302]. The number of reported cases of other STIs have increased substantially between 2009 and 2013 (although there had been a local reporting error to the national data set which was not resolved until 2013 which might explain why initial figures were relatively low). In Hull, the number of cases of gonorrhoea increased from 40 in 2009 to 126 in 2013, remaining at 122 in 2016 (a diagnosis rate of 47.1 per 100,000 population), cases of herpes increased from 129 in 2009 to 207 in 2015 and 195 in 2016 (rates 50.4, 79.9 and 75.2 per 100,000 population respectively), cases of syphilis increased from 12 in 2009 and 2010 combined to 24 in 2013 but has since fallen to between 7 and 11 per year (11 in 2016, rate 4.2 per 100,000 population) and cases of warts has remained reasonably consistent at around 400 cases per year except for 2012 when it was 199 cases with 382 cases in 2016 (rate 147 per 100,000 population) [302]. For 2016, the rates per 100,000 population for England were 64.9 for gonorrhoea, 57.2 for herpes, 10.6 for syphilis and 113 for warts, so rates higher in Hull for herpes and warts, but considerably lower in Hull for syphilis and gonorrhoea. In 2016, there were 1,648 new diagnoses of STIs (excluding Chlamydia among the under 25s) giving a rate of 950 per 100,000 population (higher than England at 795) having increased from a rate of 567 per 100,000 population in 2012 [302].

For more detailed information, see the JSNA Toolkit: Sexual Health report.

What are the strategic needs?

It is necessary to work together to ensure that people know that there is an increasing problem with STIs, and that the risk can be reduced by not having unprotected sex. People need to be aware that symptoms are not always present, and that if they think they might have been exposed or have an STI should be encouraged to seek medical help. Locally, there are programmes in place to educate and change behaviour, and not just treat STIs.
ROAD TRAFFIC ACCIDENTS

What’s the issue?

“The UK has one of the best road safety records in the world, but more can be done to prevent deaths and serious injuries” [303]. The cost of road traffic accidents is high both to individuals affected and insurance companies (and ultimately the drivers), as well as to public services including emergency and health services, and the community and economy in terms of traffic congestion [303]. Nationally, “the number of cyclists seriously injured has increased in recent years, faster than the increase in cyclists out on the roads, and motorcyclists account for 19% of all road user deaths despite representing only 1% of vehicle traffic” [304]. Children and young persons are at increased risk of being involved as pedestrians or cyclists due to their lack of experience at being able to assess risk and vehicle speed, and are more likely to be distracted.

What’s our situation?

In 2015, 105 Hull residents were killed or seriously injured (KSI) in road traffic accidents, including 18 children. Most of these KSI casualties involved cyclists (35; 33%), motorcyclists (23; 22%) or pedestrians (33; 31%) and there was one fatality. For 2015, there was a KSI casualty rate of 133 per billion miles, three-quarters higher than England (76), more than half higher than the region (84), and higher than each of the 10 comparator areas. Hull, as any city, will tend to have a high concentration of pedestrians, cyclists, motorcyclists and drivers, so it is not especially surprising that the KSI rate is higher than England. Hull is relatively flat and there are a relatively high number of cyclists in Hull. Between 2013-15, there were 343 residents KSI on the roads giving a rate of 44.3 per 100,000 residents which was higher than England (38.5) [26].

For more detailed information, see the JSNA Toolkit: Accidents report.

What are the strategic needs?

The risk of road traffic accidents can be reduced through reducing the number of drivers on the road that should not be driving (those drinking alcohol and taking prescribed and illegal drugs, disqualified drivers, drivers without licences, and uninsured drivers), ensuring drivers and their passengers are as safe as possible in their cars by keeping to speed limits and not using mobile phones when driving, and ensuring seatbelts and proper child restraints are used. Ensuring pedestrians, cyclists and motorcyclists are as visible as possible with their clothing, lights and protective helmets and clothing where appropriate, and increasing training for all road users.

Nationally, the Department for Transport (DfT) are working to reduce road traffic accidents through new drug driving legislation and more sophisticated road side testing devices [303], revising and reissuing speed limit guidance to help local councils improve safety on their roads [305] as well as providing a speed limit appraisal tool, a computer-based database to help councils assess the full costs and benefits of any proposed speed limit changes [303], reviewing the motorcycle test [303], extending Transport for London’s THINK! Cycling ‘Tips’ to other cities [304], and promoting THINK! education resources and other road safety campaigns [303]. The DfT are also looking at ways to reduce the number of uninsured and unlicensed drivers on the roads, looking at driving and riding tests and standards, and adding case studies to the theory test to improve attitudes to driving, and offering more support to new drivers [303].

Locally, a number of interventions have been used to reduce road accidents, including regular free car seat clinics (80% seats were unsafe), resources for any nursery or primary school to play out traffic intervention scenarios, pedestrian skills available to every primary school in Hull (classroom resources and independent assessment of each child), Bikeability program for any Year 5/6 child (ages 9-11) to build confidence on the road (free cycle helmet), transition to secondary training (an hour long session encouraging children to pre-plan their commutes to their new secondary school), “Rusty Rider” cycling programme for adults, and young and old driver assessments (through Institute of Advanced Motorists at a discounted rate focusing on speed and judging situations for young and age reactions and medication interactions for older drivers).
RHEUMATOID ARTHRITIS

What’s the issue?

“Rheumatoid arthritis is a long-term condition that causes pain, swelling and stiffness in the joints. The hands, feet and wrists are commonly affected, but it can also cause problems in other parts of the body. There may be periods where your symptoms become worse, known as a flare-up or flare. A flare can be difficult to predict, but with treatment it is possible to decrease the number of flares and minimise or prevent long-term damage to the joints. Diagnosing rheumatoid arthritis quickly is important because early treatment can help stop the condition getting worse and reduce the risk of further problems such as joint damage. Rheumatoid arthritis is an autoimmune disease. This means that your immune system – which usually fights infection – attacks the cells that line your joints by mistake, making them swollen, stiff and painful. Over time, this can damage the joint itself, the cartilage and nearby bone. It’s not clear what triggers this problem with the immune system, although you are at an increased risk if you are a woman, you have a family history of rheumatoid arthritis, or you smoke. Rheumatoid arthritis affects around 400,000 people in the UK. It can affect adults at any age, but most commonly starts between the ages of 40 and 50. About three times as many women as men are affected. Whilst there is no cure, medication can relieve symptoms, supportive treatments such as physiotherapy and occupational therapy can keep people mobile and help people find ways around any problems with daily activities, and surgery can correct any joint problems that may develop. Having rheumatoid arthritis can lead to several other conditions that may cause additional symptoms and can sometimes be life-threatening. Possible complications include carpal tunnel syndrome, inflammation of other areas of the body (such as the lungs, heart and eyes), and an increased risk of heart attacks and strokes” [306].

What’s our situation?

For 2015/16, the prevalence of diagnosed rheumatoid arthritis was 0.86% among those aged 16+ years which was the second highest among comparator areas (which ranged from 0.63% to 0.85% except for Wolverhampton at 1.00%) [93]. A total of 2,067 patients aged 16+ years were on the GP disease register. There was no association between the diagnosed prevalence and deprivation. Rheumatoid arthritis is a relatively new measure included on the GP disease registers, so it is possible that the numbers will increase as registers are updated over time.

For more detailed information, see the JSNA Toolkit: General Health, Disabilities and Caring report.

What are the strategic needs?

People already diagnosed with rheumatoid arthritis should attend their annual reviews so that they get the best on-going treatment for their condition.

People should be aware that symptoms can be relieved by medication, and supportive treatments are available to help lead full lives and continue regular employment (if applicable). Furthermore, people should be aware that there can be complications of rheumatoid arthritis, so should be encouraged to visit their doctor if they have symptoms of rheumatoid arthritis.
SAFE AND INDEPENDENT LIVES (OLDER PEOPLE AND VULNERABLE GROUPS)


1. The best start in life;
2. Healthier, longer, happy lives; and
3. Safe and independent lives.

“Everyone should have the same opportunity to feel safe and fulfilled no matter what his or her circumstances. Many people of all ages are living with conditions or situations that mean they need extra support to get the most out of life.

There is good evidence that people who have control over their care and support are better able to live safely and independently in their community. This then reduces the burden of ill health for individuals, their families/carers and the health service and enables people to live full and satisfying lives” [1].

This section includes topics which generally relate to vulnerable groups which includes older people.

There is information relating to older people in other sections, such as population and population projections (commencing page 5), health, wellbeing and use of health services including dental services (commencing page 25), behavioural and lifestyle risk factors (commencing page 37), and screening of diseases (page 65).

The majority of the information on specific diseases and medical conditions are covered in the section on adults and many of these conditions will apply to older people and vulnerable groups as well as the adults (commencing page 62).

Information relating to vulnerable groups is also mentioned within other sections, such as safety and social isolation (page 5), health and wellbeing (page 25), and behavioural and lifestyle risk factors (commencing page 37).

The majority of the vaccinations and immunisations relate to children and young people so are included in that section on page 65, but include information on the influenza vaccine and pneumococcal polysaccharide vaccine given to people aged 65+ years and at risk groups is also included on that page.
LEARNING DISABILITIES

What’s the issue?

“A learning disability (LD) affects the way a person understands information and how they communicate. Around 1.5m people in the UK have one. This means they can have difficulty: understanding new or complex information; learning new skills; and/or coping independently. It is thought that up to 350,000 people have a severe LD. This figure is increasing” [307]. There are systems in place to identify children with a LD in school, and approach to their education can be modified to maximise educational attainment. There are varying degrees LD and definitions used, so different data sources and models often produce quite different estimates.

Following the Children and Families Act 2014, children (under the age of 25 years so covers early years, school age children and beyond) who have special educational needs will have an Education, Health and Care (EHC) plan, developed by all professionals and the family working together, to address all needs that a child or young person has within education, health and care. Prior to the Act, children were on School Action, School Action Plus or have SEN statements (three classifications in order of severity of additional need requirements). Within the Act, SEN Support replaces School Action and School Action Plus (in schools), and children with a learning disability assessment should have their EHC plan by September 2016 and children with statements should have their EHC by April 2018 (see page 56 and page 58 for more information on SEN / EHC among school age children).

What’s our situation?

Practices in more deprived areas had significantly higher levels of LD in their practice populations. The 11 practices serving the patients living in the most deprived areas had a prevalence of 0.50% compared to 0.32% among the 11 practices serving the least deprived practices. Models from PANSI [308] and POPPI [309] estimate that for 2015 there are 4,847 residents (rather than registered patients) aged 18+ years with LD in Hull (including 248 with severe LD and 1,029 with moderate or severe LD), and 104 residents with Down’s syndrome, 74 with challenging behaviour, and 2,037 residents with Autistic Spectrum Disorder (ASD). From the Learning Disability Profiles 2016 [310], for 2014/15 there are 645 adults aged 18-64 years with LD who are getting long-term support from their local authority giving a rate of 3.9 per 1,000 population, which is similar to England (3.7). However the rate of LD in adults recorded by General Practices (1,457 (0.49%) patients for 2015/16 [93]) is lower than England (0.46%) and six of seven comparator areas (range 0.53% to 0.64% and 0.44% for Salford), with modelled estimates confirming that there may be much undiagnosed/unrecorded LD [94].

Using statistical modelling [94, 310, 311], it is estimated that there are around 84 pupils aged 7-15 years in Hull with severe LD, 29 with profound and multiple LD, 1,404 with moderate LD and 246 with ASD, although another model suggests the numbers with ASD might be more than double this at 563 [94]. From the Learning Disability Profiles 2016 [310], out of 38,784 school pupils, 810 pupils were known to have moderate LD (20.9 and 28.6 per 1,000 population for Hull and England respectively), 291 severe LD (rates 7.50 and 3.80), 30 profound and multiple LD (rates 0.77 and 1.29), 353 autism (rates 9.10 and 10.8), and 1,131 LD overall (rates 29.2 and 33.7).

In 2015/16, 490 (74.7%) of the 656 working-age learning disabled clients were living in stable and appropriate accommodation in Hull which was similar to England (75.4%), and slightly lower among women (201 out of 277; 72.6%) than men (289 out of 379; 76.3%). The rate had increased since 2011/12 for both Hull (from 66.4%) and England (from 70.0%) but at a faster rate in Hull [26, 27]. The inequalities gap in the percentage of the working-age population who were in employment for learning disabled clients compared to the general population in Hull was 66.0 percentage points which was similar to England (68.0) [26, 27]. As the employment rate of the general population was 66.9% in Hull and 73.9% in England (page 63), this means that the employment rate of learning disabled clients was as low as 1% in Hull but around 7% for England.

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disabilities report.
What are the strategic needs?

It is necessary to work with schools to identify children who need additional support so that the children are identified early and obtain the most appropriate help and support for their specific circumstances. The period of transition for young people who have a learning disability into adulthood is known to be a time of considerable change and often uncertainty. There needs to be a clear transition pathway identified with partners across adult social care, children’s services, education and health in order to facilitate a smooth transition into adulthood.

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices, and improving their health and wellbeing. Also working with partners to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care, and where appropriate, ensure provision of specialist and adapted housing that is fit for purpose. Within Hull’s 2020 Programme, there is a Frailty and Isolation work stream, which aims to ensure “a range of services are provided across Hull to meet the needs of some of the most vulnerable in society, including those with learning disabilities” [312].

There is also a need to explore meaningful employment opportunities for people with a learning disability as the figures for Hull are considerably lower than the national and regional averages. Given the link between employment and wellbeing and between unemployment, poverty and impaired health, we could expect positive health and wellbeing outcomes to arise from improved employment opportunities.

Progress has been made across the health and care system to transform care for people with learning disabilities and/or autism who have a mental illness or whose behaviour challenges services, but it is recognised that much more needs to be done. Sir Stephen Bubb’s report commissioned by NHS England describes how to accelerate this transformation of care. “The work to be taken forward through this programme will be wide-ranging, and will be co-designed and co-produced in partnership with people with learning disabilities and/or autism, their families, clinicians, commissioners, providers, and other national organisations in the health and care system” [313].
SEVERE MENTAL ILL HEALTH

What’s the issue?

“Severe mental illness affects about 1% of the population. There are many types of mental illness but most of them can be classified as either psychotic or neurotic. Neurotic conditions are related to ‘normal’ emotions but are more extreme, and are the most common types of mental illness. Being clinically depressed is a far deeper experience than ‘feeling depressed’, and has a marked effect on life, preventing the patient from looking after themselves or being able to work, and in extreme cases can lead to suicide. Other examples of neurotic illnesses are phobias, obsessive compulsive disorder and anxiety. Psychotic conditions are unrelated to normal emotions, and the word psychosis is used to describe symptoms or experiences that happen together. These symptoms cause the patient to not experience reality like most people. Symptoms may include hallucinations, delusions, thought disorder, lack of insight and not recognising that they are unwell, and appearing unusually excited or withdrawn and avoiding contact with other people. Examples include schizophrenia, bipolar disorder (manic depression) and psychotic depression” [314]. Serious mental illness obviously has a huge effect on mental wellbeing, but can also influence physical health. People with serious mental health are more likely to have poor physical health, and people with poor physical health are more likely to have poor mental health [315]. People with serious mental illness are also more likely to have unhealthily lifestyles further affecting health and wellbeing. For example, around one-third of people with mental health problems and two-thirds of people in psychiatric units smoke [316]. Also see emotional health and wellbeing on page 30.

What’s our situation?

For 2015/16, a similar prevalence of diagnosed serious mental ill health (all ages) on the GP disease registers was noted for Hull (0.87%; n=2,575 as England (0.90%), but a lower prevalence in relation to average of seven comparator areas (0.96%; range 0.84% to 1.04%) [93]. Given Hull’s levels of deprivation, this suggests that there is undiagnosed disease in Hull [93, 94].

There was a statistically significant increasing trend in the prevalence with increasing deprivation. The 11 practices with the highest mean patient deprivation scores serving the most deprived fifth of Hull’s population had a prevalence of 1.09% compared to 0.58% among the 11 practices with the lowest mean patient deprived scores [94].

Almost one in ten (9.5%) working-age people are claiming Incapacity Benefit, Severe Disablement Allowance or Employment Support Allowance in Hull with 16,075 claimants [189]. Almost half of claimants were claiming due to mental health reasons with the highest prevalence in St Andrew’s (9.4% of working-age population), Myton (9.0%), Bransholme West (6.6%), Orchard Park and Greenwood (6.5%) and Longhill (6.3%), and lowest in King’s Park (1.3%). The high rates could be influenced by the relatively high number of supported housing and hostels available.

During the three year period 2008/09 to 2010/11 [94], there were 266,244 daycase and inpatient clinician episodes of which 3,526 (1.3%) had a primary diagnosis of mental and behavioural disorders. Almost half of all clinician episodes for mental and behavioural disorders were for mental and behavioural disorders due to psychoactive substance abuse with a further 12% for schizophrenia, schizotypal and delusional disorders, 11% for neurotic, stress-related and somatoform disorders, 10% for mood disorders and 9% for dementia [94].

From the Child Health Profiles 2017 [18], during 2015/16, there were 43 hospital admissions for mental health conditions among under 18s which is lower than England (77.3 versus 85.9 per 100,000 population) and has been consistently lower than England over the last three years [20, 317, 318]. There were 153 hospital admissions as a result of self-harm among those aged 10-24 years during 2015/16 which was considerably lower than England (291 versus 431 per 100,000 population). The rate in Hull has been consistently decreasing in Hull. The rates per 100,000 population were 427 in 2012/13 (246 admissions) which was higher than England (346) [20], and 552 in 2013/14 (304 admissions) also higher than England (412) [317], and 400 in 2014/15 (210 admissions) which was the same as England (399) [318].
The percentage of people in contact with secondary mental health services in Hull is quoted as being more than twice as high in Hull compared to England (12.5% versus 5.3% in 2013/14 and 13.0% versus 5.4% in 2014/15) [26]. The rate in Hull was second and fourth highest in 2013/14 and 2014/15 respectively among 150 upper-tier local authorities (highest around 14.5%) [26]. It is possible that the numbers in Hull counts people in contact with secondary mental health services for a longer period (than the single financial year) or includes other contacts such as those in the community. It is possible that this figure is used for other indicators [26] which might mean that these indicators are not correct. In 2015/16, 73.4% of adults aged 18 to 69 years who are in contact with secondary mental health services live in stable and appropriate accommodation which is considerably slightly higher than England (58.6%) [26, 27]. The gap in the employment rate for those in contact with secondary mental health services and the overall employment rate was 60.1 percentage points which was slightly lower than England (67.2) [26, 27]. As the employment rate of the general population was 66.9% in Hull and 73.9% in England (page 63), this means that the employment rate of people in contact with secondary mental health services is around 7% in Hull which is similar to England. The excess under 75 mortality rate in adults aged 18-74 years with serious mental health is around 2.5 to three times higher than the general population [26, 82]. For the last two years, it has been lower than England and comparator areas. It would be anticipated that this might be higher given Hull’s deprivation. The fact that it is not could mean that there is a problem with this indicator.

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disabilities report.

What are the strategic needs?

People with mental illness need to be identified early and encouraged to seek help early so that the consequences in terms of the effects on family and employment are minimised. This will reduce the number of issues which escalate and so reduce the levels of need for crisis and/or medical interventions. For both children, young people and adults, help and support should be provided on an individual basis taking into account the person’s circumstances. This early help should be timely, appropriate and build in resilience to help people cope with life challenges. A culture across Hull that celebrates diversity, gives respect and has a zero tolerance on hate crime should be encouraged, so that people feel able to come forward and are not stigmatised by seeking help.

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices. People need to be seen quickly and there is a real need to reduce waiting times.

Within Hull’s 2020 Programme, there is a Frailty and Isolation work stream, which aims to ensure “a range of services are provided across Hull to meet the needs of some of the most vulnerable in society, specifically this includes those such as dementia patients, elderly people, those with mental health and learning disabilities” [312].

Mental illness is very common, and is generally more debilitating than most chronic physical conditions, yet only a quarter of those with mental illness such as depression are in treatment. NHS England has established a Parity of Esteem Programme in order to focus effort and resources on improving clinical services and health outcomes so that “if I become unwell I use services which assess and treat mental health disorders or conditions on a par with physical health illnesses” [315]. There are three initial priorities for urgent focus: (i) improving access to psychological therapies; (ii) improving diagnosis and support for people with dementia; and (iii) improving awareness and focus on the duties within the Mental Capacity Act.

The Mental Health Crisis Care Concordat is a national agreement between services and agencies involved in the care and support of people in crisis. It sets out how organisations will work together better to make sure that people get the help they need when they are having a mental health crisis. Help is available for organisations and their partners to create and submit a mental health crisis declaration statement and an action plan to make the principles of the Crisis Care Concordat a reality in the local area [319].
**SUICIDE AND UNDETERMINED INJURY**

**What’s the issue?**

Most people who commit suicide do not intend to die, but it is often a cry for help. “A suicidal person may not ask for help, but that doesn’t mean that help isn’t wanted. Most people who commit suicide don’t want to die – they just want to stop hurting. Suicide prevention starts with recognising the warning signs and taking them seriously” [320]. However, recognising these signs is difficult. “Even mental health professionals find it hard to know when a person is particularly at risk. "Once a person has decided to take their life, they can go to great lengths to cover up their plans," says Professor Keith Hawton from the Centre for Suicide Research, University of Oxford” [321].

Mortality rates increase with age for most diseases and conditions, but for suicide whilst the rates are highest among those aged 35-64 years (13.3 deaths per 100,000 for 2011-13 for England), rates are relatively uniform across other age groups (15-34 years: 7.9 deaths; 65-74 years: 7.2 deaths and 75+ years: 8.4 deaths per 100,000 population) [78]. So it affects people at younger ages compared to the majority of other medical conditions.

There are also huge effects on family and friends. “The loss of someone you’ve been close to, whatever the cause of their death, can bring intense feelings of grief. But losing someone through suicide can cause reactions and emotions that are different to those felt after death from illness, an accident or natural causes. The fact that a person’s death involved an element of choice raises painful questions. Shock, social isolation, feelings of intense guilt, self-blame and self-questioning can be greater when bereavement is caused by suicide than when it's caused by other types of death. ”The grieving process is characterised by questioning and a search for an explanation,” says Hawton. He goes on to state that "Suicide is still a stigmatised topic, which can reinforce feelings of shame and stigma in the bereaved, and make the person feel worse and more isolated”” [321].

**What’s our situation?**

Over the period 2012-14, there were 83 deaths from suicide and undetermined injury in Hull. There is considerably year-on-year variability in the mortality rate from suicide and undetermined injury due to the relatively small number of deaths. Over the last 12 years (from 2001-03), the rate in Hull (range 10.2 1 to 13.0 deaths per 100,000 population) has been consistently higher than England (range 8.2 to 9.2 deaths per 100,000 population). The rate in Hull has decreased from over 14 deaths per 100,000 population during the period 1997-99 to 2007-09 (with exception of 2001-03 (13.2) and 2006-08 (13.3)) to fewer than 13 deaths per 100,000 population between 2008-10 and 2012-14 with the exception of 2011-13 at 13.9 deaths per 100,000 population [26, 77, 78, 82, 94].

*For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disability report.*

**What are the strategic needs?**

Reducing suicide involves a multi-factorial approach as the causes and reasons why people consider taking their own lives are complex. There is an increased risk with deprivation and poverty, and among those who have already presented for mental health issues. Unemployment, debt, problems with relationships, drug and alcohol abuse, child abuse, and a wide range of other factors could have an influence. There is a need to identify the most vulnerable citizens and work with them to address their specific needs. Strategies to reduce poverty and unemployment, improve educational attainment, reduce crime levels, increase resilience and improve health and reduce health inequalities should have an influence on suicide.

People should be encouraged to seek help and support if they are considering taking their own life, and help should be given to families and friends so that they recognise the signs and have the support they need to help family members or friends who are having suicidal thoughts.

The All Party Parliamentary Group on Suicide and Self-Harm Prevention in 2012 supported development of the strategy “Preventing suicide in England” [322] and in 2013 issued a report following a review of local suicide prevention strategies and made recommendations for the future which included a requirement for all local authorities to develop and implement a local plan which should include provision for bereaved families [323]. The suicide prevention strategy included six
key areas: (i) reducing the risk of suicide in key high-risk groups; (ii) tailor approaches to improve mental health in specific groups; (iii) reduce access to the means to suicide; (iv) provide better information and support to those bereaved or affected by suicide; (v) support the media in delivering sensitive approaches to suicide and suicidal behaviour; and (vi) support research, data collection and monitoring [322].
DEMENTIA AND ALZHEIMER’S DISEASE

What’s the issue?

“Dementia is a common condition that affects about 800,000 people in the UK. The risk of developing dementia increases with age, and usually occurs in people aged 65+ years. Dementia is a syndrome (a group of related symptoms) associated with an ongoing decline of the brain and its abilities. This includes problems with memory loss, thinking speed, mental agility, language, understanding and judgement. People with dementia can become apathetic or uninterested in their usual activities, and have problems controlling their emotions. They may also find social situations challenging, lose interest in socialising, and aspects of their personality may change. They may lose empathy (understanding and compassion), may have hallucinations (see or hear things that other people do not), or may make false claims or statements. As dementia affects a person’s mental abilities, they may find planning and organising difficult. Maintaining their independence may also become a problem. A person with dementia will therefore usually need help from friends or relatives, including help with decision making. Most types of dementia can't be cured, but if it is detected early there are ways you can slow it down and maintain mental function” [324].

With the ageing population, the numbers of people with dementia will increase. It is predicted that the numbers of people aged 65+ years with dementia in England will increase from an estimated 679,000 in 2015 to 1,073,500 by 2030, an increase of 58% [309].

Nationally, Alzheimer’s disease has the sixth highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81] as well as substantially affecting the lives of carers.

What’s our situation?

For 2015/16, the percentage diagnosed with dementia (on the GP disease registers) was second lowest out of seven comparator areas at 0.68% for Hull (range 0.79% to 0.89% for other six comparators and 0.60% for Leicester) [93]. There was no association between the diagnosed prevalence and deprivation. A total of 2,002 patients were on the dementia disease register in Hull (having increased from 1,529 from 2013/14). Based on modelling (October 2016), it is estimated that there are 2,740 practice patients with dementia. If the model is reasonably correct, then it suggests around 700 people in Hull have undiagnosed dementia. The diagnosis rate is estimated to be around 63% for Hull compared to 59% in England for 2014/15 [82, 94]. The same model estimates that around 2,611 people living in Hull aged 65+ years have dementia (excluding East Riding of Yorkshire residents registered with Hull GPs and Hull patients aged under 65 years), but this is projected to increase to 3,704 by 2030 [75].

During the three year period 2008/09 to 2010/11, there were 266,244 daycase and inpatient clinician episodes of which 306 (0.1%) had a primary diagnosis of dementia [94].

There were 496 dementia deaths (479 aged 75+ years) over the three year period 2012-14 giving a directly standardised mortality rate of 76.6 per 100,000 population having increased from a rate of 89.2 per 100,000 population for 2011-13 (with 441 deaths) [325]. There was a strong association between mortality and deprivation with mortality rates much higher in the more deprived fifth of areas of Hull (129 deaths per 100,000 population) compared to the least deprived fifth of areas of Hull (48 deaths per 100,000 population) [93, 325]. Given a lack of an association between deprivation and prevalence on the GP disease registers, this could mean that there is inequity present and/or a higher prevalence of undiagnosed dementia among those living in the most deprived areas. Although there are nursing homes in the more deprived areas of Hull, and this could partly explain the differences in the mortality rates among the most and least deprived areas.

For more detailed information, see the JSNA Toolkit: Mental Health and Learning Disability, and Older People reports.

What are the strategic needs?

Many of the disabling effects of dementia can be combated using the social model of disability, and Hull is seeking to become a Dementia Friendly City by providing advice and training to people...
providing universal services, such as bank and shop staff so that people with dementia can use local services independently, increasing their wellbeing and reducing their reliance on carers and on paid support. Making them feel empowered to have aspirations and feel confident, knowing they can contribute and participate in activities that are meaningful to them. There are four broad work streams: (i) stimulate demand and awareness; (ii) invest in early detection; (iii) access to treatment; and (iv) support to carers.

There is a need to work with partners to ensure that there is a shared understanding of people’s needs and that services are integrated, high quality and accessible in ways that offer people appropriate choices such as care organised around care hubs. There is a need to work together to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care. The most vulnerable citizens should be identified so their specific needs are addressed in the way they wish. The new Care Act 2014 focuses around meeting needs and promoting wellbeing rather than simply the provision of services and on preventing, reducing or delaying the development of need, so individual needs should be assessed holistically within the context of their support network and each individual’s circumstances considered to provide the most appropriate care, help and support for that individual. These individual needs will need to consider the caring arrangements, and how carers need to be supported in their role, and that their health needs do not suffer.

People (supported by their carers where necessary) should be encouraged to attend their NHS Health Check if they are eligible, and people already diagnosed with dementia should attend their annual reviews (generally within primary care) so that they get the best on-going treatment for their condition.
FALLS AND HIP FRACTURES

What’s the issue?

“Anyone can have a fall, but older people are more vulnerable than others. This is mainly because long-term health conditions increase the chances of a fall. Falls are a common but often overlooked cause of injury, and sometimes death. Around one in three adults over 65 who live at home will have at least one fall a year, and about half of these will have more frequent falls. Most falls do not result in serious injury, but there is a risk of problems such as broken bones. Falls can also have an adverse psychological impact on elderly people. For example, after having a fall some people can lose confidence, become withdrawn and may feel as if they have lost their independence” [326]. With the ageing population, it is predicted that the number of people in England aged 65+ years admitted to hospital as a result of a fall will increase from around 200,000 in 2015 to almost 300,000 by 2030 [309]. Hip fractures (fractured neck of femurs) can be very serious in older people. “Some people find it hard to recover after a hip fracture, up to one in three people die within 12 months (although most deaths aren't caused by the fall itself but by pre-existing illnesses)” [327]. “Over 70,000 hip fractures occur in the UK each year. The annual cost for all hip fractures in the UK, including medical and social care, is about £2 billion” [327].

Osteoporosis (page 109), a risk factor for falls and hip fractures, can be made worse by smoking [99]. “There are usually no warnings you’ve developed osteoporosis and it’s often only diagnosed when a bone is fractured after even minor falls” [328].

Nationally, falls results in the ninth highest disability adjusted life years (DALY – see page 111) and thus has a substantial impact on the quality of people’s lives [81].

What’s our situation?

Over the financial year 2015/16, there were 991 emergency hospital admissions for injuries related to falls among those aged 65+ years (directly age standardised rate 2,681 per 100,000 population) [26]. The rate had previously increased substantially between 2010/11 and 2013/14, before decreasing in 2014/15 (2,408, 2,915 and 2,657 admissions per 100,000 population), so a small increase on the previous year. The gap between Hull and England had widened between 2010/11 and 2015/16 (from 282 to 511 admissions per 100,000 population). Admission rates in 2015/16 in Hull were higher among women than men (3,138 versus 2,030 per 100,000 population) and higher among those aged 80+ years compared to those aged 65-79 years (6,732 versus 1,284 per 100,000 population with 644 and 347 admissions respectively). In 2012/13, among those aged 65+ years, rates were highest in Myton, Newington and Southcoates West which were more than double those of Holderness, Pickering and Beverley [95, 325]. With regard to emergency hospital admissions from hip fractures, during 2014/15, there were 290 admissions among those aged 65+ years (75 men and 215 women), giving an age standardised rate of 783 per 100,000 population). The number of admissions were highest among older people (157 for women and 44 for men aged 80+ years, and 58 for women and 31 for men aged 65-79 years) [26]. In 2012/13, rates were highest in Bransholme East and King’s Park which were more than three times higher than those of Pickering, Marfleet and Bricknell [82, 325].

For more detailed information, see the JSNA Toolkit: Accidents, and Older People reports.

What are the strategic needs?

Exercise and physical activity can improve strength and balance and reduce the likelihood of falls. People who have a higher risk of falls and people already diagnosed with osteoporosis can reduce their chances of having a fall by removing hazards from the home, and having regular sight tests and hearing tests [328]. Steps could include using walking sticks and other walking aids, using non-slip mats in the bathroom, mopping up spills to avoid wet floors, getting help lifting and moving items, removing clutter from the home, ensuring the home is properly lit, etc. People at risk of a fall can request a home hazard assessment. Age UK also offer advice about adapting the home so older people can remain independent and safe in their own home [329]. The National Institute for Health and Care Excellence recommend a co-ordinated programme of care for people who have fractured a hip [330].
OSTEOPOROSIS

What’s the issue?

“Osteoporosis is a condition that weakens bones, making them fragile and more likely to break. It’s a fairly common condition that affects around three million people in the UK. More than 300,000 people receive hospital treatment for fragility fractures (fractures that occur from falls from standing height or less) every year as a result of osteoporosis. Wrist fractures, hip fractures (page 108) and fractures of the vertebrae are the most common type of breaks that affect people with osteoporosis. However, they can also occur in other bones, such as in the arm, ribs or pelvis. There are usually no warnings you’ve developed osteoporosis and it’s often only diagnosed when a bone is fractured after even minor falls. Losing bone density starts from about 35 years of age and women lose bone density rapidly in the first few years after the menopause. People with specific inflammatory conditions, conditions that affect the hormone-producing glands, a family history, malabsorption problems, and heavy drinking and smoking can increase the risk of developing osteoporosis” [328]. Osteoporosis can also be made worse by smoking [99]. Treatment for osteoporosis is based on treating and preventing fractures and using medication to strengthen bones [328]. Taking regular exercise, healthy eating including foods rich in calcium and vitamin D, giving up smoking and reducing alcohol intake can help reduce the risk of developing osteoporosis [328].

With the aging population, the numbers of people diagnosed with osteoporosis and admitted to hospital as a result of fragility fractures are likely to increase.

What’s our situation?

For 2015/16, the prevalence of diagnosed osteoporosis was 0.22% among those aged 50+ years which was lower than England (0.31%) and lower than the average of seven comparator areas with only Leicester having a lower rate (0.17%) with the other six comparators ranging from 0.26% to 0.36% [93]. A total of 222 patients aged 50+ years were on the GP disease register (aged 50-74 years with a diagnosis of osteoporosis confirmed by a DXA scan or aged 75+ years with a fragility fracture on or after 1st April 2014) which was an increase since 2014/15 when only 162 were diagnosed. There was no statistically significant difference in the prevalence between practices serving the most deprived patients and practices serving the least deprived patients in Hull.

For more detailed information, see the JSNA Toolkit: Older People report.

What are the strategic needs?

It is necessary to work together to ensure people understand the benefit of positive life choices and know how to access information and seek early support to change. In order to do this effectively, health care providers need to work together with different communities to use existing assets to realise the benefit of positive life changes, and treating people as individuals. People need to be aware that their diets need to include foods rich in calcium and vitamin D. People who smoke and drink excessively should be given the help and support they need to change their behaviours, and the benefits of exercise should be realised both as a factor in reducing the risk of osteoporosis and as a factor for increasing strength, balance and coordination which can reduce the likelihood of a fall.

People who have a higher risk of osteoporosis, perhaps through their diet or smoking habits, and people already diagnosed with osteoporosis can reduce their chances of having a fall by removing hazards from the home, and having regular sight tests and hearing tests [328]. Further help and advice relating to remaining safe in the home is available from Age UK [329], and by requesting a home hazard assessment.

People already diagnosed with osteoporosis should attend their annual reviews so that they get the best on-going treatment for their condition.
PALLIATIVE CARE

What’s the issue?

The aim of palliative care services is to enable patients with advancing progressive life limiting illness to be cared for and to die in their preferred place of care with optimal pain and symptom management, supported by skilled staff.

What’s our situation?

The palliative care disease register was introduced in 2006/07 and Hull practices had 268 (0.09%) of registered patients on the register, and this has steadily increased to 741 (0.25%) for 2015/16, but is lower than England (0.34%) and among the lowest of seven comparator areas (range 0.25% to 0.56%) [93]. There was no statistically significant association between deprivation and prevalence across the general practices in Hull [331]. Modelling suggests that three times as many patients require palliative care than are on the palliative care registers, and if the model is accurate then there are a high proportion of patients who are not receiving the care they need [331].

Analysis from a specific project undertaken to compare place of deaths across four local areas [77, 332] showed that the majority of deaths in 2010 occurred at NHS locations (i.e. hospitals), with the higher percentages in Hull (62%) and East Riding of Yorkshire (58%) compared to North Lincolnshire (53%) and North East Lincolnshire (50%). Approximately one-quarter of deaths occurred at non-NHS locations (i.e. hospices and nursing residential care homes) with the exception of Hull which had a lower percentage (16%, 23%, 27% and 24% for Hull, East Riding of Yorkshire, North Lincolnshire and North East Lincolnshire respectively). The percentages of deaths occurring at home were 20%, 18%, 19% and 23% respectively, with around 2% of deaths in each Primary Care Trust area occurring elsewhere.

Just over half of deaths among Hull residents (50.7%) registered during 2013-2015 occurred in hospital, but one in five (22.4%) occurred at home, and since 2008-2010 the percentage of deaths in hospital has decreased by 18% (from 61.6%) and the percentage of deaths at home has increased by 15% (from 19.5%) [77].

For more detailed information, see the JSNA Toolkit: Palliative Care report.

What are the strategic needs?

There is a need to work with partners to ensure that services are integrated, high quality and accessible in ways that offer people appropriate choices. There is a need to work with partners to promote self-care, reablement or mutual support in community settings so this is viewed as the norm and reduce reliance on residential or home care. There is a need to reduce unnecessary hospital admissions where appropriate and to ensure robust and effective “wrap around care” covering 24 hours. Respecting individual needs and allowing for people’s cultural and religious preferences and ensuring people have advanced care plans, improved quality of end of life and that people die in their preferred place of care. Some staff training may be necessary to improve the quality of end of life care.
FURTHER INFORMATION

This section provides information on abbreviations and terminology used, as well as further additional information on relevant topic such as Clinical Commissioning Groups, Joint Strategic Needs Assessment, local surveys completed, comparator areas, the Public Health Outcomes Framework, screening programmes, etc.

The abbreviations / glossary section is then followed by a full list of references.

ABBREVIATIONS / GLOSSARY

A full list of abbreviations and complete glossary is also available at www.hullpublichealth.org/jsnatoolkit.html

AAA – Abdominal Aortic Aneurysm.

Alcohol-attributable fractions (for hospital admissions and mortality) – Each hospital admission or death is assigned an ‘alcohol attributable fraction’ (AAF) which has been determined through research and analysis of hospital admission and death data nationally. It is not based on ‘real’ data (with the exception of alcohol-specific conditions), and only represents a modelled estimate of the numbers and rates of alcohol-related admissions and deaths. The AAF are based on quite rigorous research, so are probably quite accurate, but the estimated number and percentages of alcohol-related admissions and deaths can differ substantially depending on whether all secondary diagnoses codes are used in calculating the AAF for a specific admission or death, or just some secondary diagnoses codes such as those relating to external sources. The AAF values differ depending on whether admissions or deaths are being considered, and the following text refers to admissions only for simplicity, but the same methodology and calculations apply to deaths. Different AAF values are assigned on the basis of the diagnosis codes for different age groups, and the value of the AAF often differ between males and females. It is relatively easy (and accurate) to assign an AAF to conditions that are entirely due to alcohol such as alcoholic liver disease and ethanol poisoning (assigned a value of 1). Some conditions will be assigned a value of zero as there is no current evidence that they are alcohol-related. Virtually all non-alcohol-specific admissions among children and young people are assigned a value of zero. Other specific conditions where there is evidence that alcohol is (sometimes) involved or is a contributing factor will be assigned an AAF value between zero and one. For instance, the AAF value of 0.19 has been assigned to colorectal cancer admissions among men aged 45-54 years denoting that around 19% of the disease is estimated to be attributable to alcohol, and admissions for road or pedestrian traffic accidents have an AAF value of 0.31 for men aged 25-34 years denoting that around 31% of these admission are attributable to alcohol. Admissions have a primary diagnosis code and can have numerous secondary diagnoses codes. Each admission is assigned an AAF which is the maximum AAF of the AAF for the primary diagnosis and the AAFs for some or all of the secondary diagnoses. For many admissions, the maximum AAF of the primary and secondary diagnoses will be zero. All these individual AAFs can be summed over all admissions over a specific period of time, to estimate the total number of admissions that are alcohol-related. For instance, in the three examples above with AAF values of 1, 0.19 and 0.31, there would be three admissions in total and 1.5 alcohol-related admissions. The Alcohol Profiles [333] use these AAFs to estimate the number of hospital admissions (and deaths) for each local authority that are alcohol-related. There are three main methods of assigning the AAFs within the Alcohol Profiles: (i) alcohol-specific admissions where any
of the primary diagnosis or secondary diagnosis codes relate to an alcohol-specific condition (where AF is one), i.e. where primary diagnosis or any of secondary diagnoses are alcohol-specific conditions, such as alcoholic liver disease or ethanol poisoning; (ii) alcohol-related admissions “narrow measure” where individual admissions are assigned an AAF based on the primary diagnosis code and only secondary diagnoses codes that are due to an external cause such as a road traffic accident, intentional self-harm, fire, assault, fall, etc; and (iii) alcohol-related admissions “broad measure” where individual admissions are assigned an AAF based on the primary diagnosis code and all secondary diagnosis codes. The alcohol consumption section of this report (see page 44) uses the alcohol-specific and narrow alcohol-related measures.

AIDS – Acquired immunodeficiency syndrome.

Asset-based approach – see page 19.

BCG – Bacille de Calmette et Guérin (BCG vaccine for tuberculosis).

BNP – Brain natriuretic peptide. Both BNP and NT Pro BNP (see below) levels in the blood are used for screening, diagnosis of acute congestive heart failure and may be useful to establish prognosis in heart failure, as both markers are typically higher in patients with worse outcome.

CCG – NHS Hull Clinical Commissioning Group. NHS Hull CCG has responsibility for the commissioning of health services to meet the health needs of the people of Hull.

CHD – Coronary Heart Disease (also called ischaemic heart disease).

CI – Confidence Interval. A confidence interval (CI), calculated using statistical methods, gives a range of likely values for the parameter of interest (e.g. average, percentage or mortality rate). There is usually random variation present, such as variation in the number of deaths each year, and it is useful to have a range for the parameter of interest as well as a single value to get an idea of the range of the likely values and the degree of variability. The usual CI calculated is the 95% CI, in which we are 95% confident that the interval obtained (from the sample) will contain the true underlying measure of interest (of your population of interest). The interval also takes into consideration the number of people on which the estimate is based, so that if there are many people surveyed the interval tends to be narrower (and therefore more useful). If the CI is wide then there is a high degree of uncertainty around the parameter of interest, and caution should be used when interpreting the findings.

City of Culture 2017 – In November 2013, Hull was announced the winner of the UK City of Culture 2017. “The award is given every four years to a city that demonstrates the belief that the transformational power of culture. Hull City Council set up Hull UK City of Culture 2017 as an independent company and charitable trust. The arts and cultural programme for 2017 celebrates the unique character of the city, its people, history and geography. Each of the four seasons of the programme has “something distinctive and intriguing, created to challenge and thrill”. The team are working with artists of Hull to celebrate the culture of the city and its place in the wider cultural offer of the North making Hull a cultural destination for must-see events. Young people are at the heart of the programme, and thousands of volunteers are helping deliver the cultural programme in 2017. Working with businesses and organisations, the aim is to make Hull a better place for the people who live and work in Hull. Multi-million pound investments have revitalised and transformed the city centre” [8]. “The team behind Hull’s tenure as UK City of Culture 2017 have revealed plans to ensure the year-long celebration leaves a lasting legacy. Since Hull was confirmed as the host of next year’s initiative back in 2013, investments of more than £1bn have flowed into the city, creating thousands of jobs. These include the completion of plans by Siemens to build a £310m offshore wind manufacturing plant at Alexandra Dock, the £200m Energy Works development opened by Spencer Group, RB’s £100m investment in a research and development centre and the University of Hull putting £90m towards new facilities. Now, a ten-year Cultural Strategy 2016-2026 has been launched in a bid to sustain the economic boom. The strategy will “put culture and the arts at the heart of Hull's regeneration and development” with a view to establishing a sustainable visitor economy in the city. A new partnership will be established and tasked with developing plans to capitalise on the city's maritime and international connectivity. It will also shape an "ambitious, distinctive artistic and cultural programme" for 2018 and beyond. The partnership's priorities will
include making Hull Old Town a UNESCO World Heritage site and securing a £30m funding bid for projects which will allow the Hull to exploit its historic role as Yorkshire's maritime city. Further infrastructure projects would include £50m investment to build a cruise terminal and the delivery of the £194m Highways England scheme to improve the A63. With a £2.6m legacy fund already established by Hull City Council and the Hull 2017 Company, work to develop Hull's 2018 programme has begun” [334]. Legacy has been embedded in every stage of the UK City of Culture journey and has been the topic of the 2016 Director of Public Health Annual report [6]. “Projects and initiatives set to be in place for Hull UK City of Culture include improved facilities at the Ferens Art Gallery and Hull New Theatre, the new 3,500-seat Hull Venue, a transformed public realm, a revitalised Fruit Market and waterfront, and the preservation and enhancement of some of the city's most important historic sites and buildings” [334].

City Plan – Hull’s evolving City Plan [2] “aims to bring the whole community together to make Hull a place that is brimming with culture, enterprise and opportunity; a place where people want to live, work, play, study and do business; a city where those in the greatest need are valued and supported; a place that people will be proud to call home. Launched in the summer of 2013, the City Plan aims to create 7,500 jobs for local people through projects and investment that will drive the delivery of a clear set of ambitions. Achieving these ambitions will help Hull seize the once-in-a-generation opportunity it now has to reassert its role as the gateway to Europe and part of the Northern Powerhouse of cities that will help rebalance the economic, social and cultural fabric of the UK. The ambitions cover the themes of: (1) UK Energy City – As the city at the heart of the UK’s biggest port complex and home to Europe’s biggest wind turbine manufacturing plant. Hull is on its way to becoming the leading hub for renewable energy industries. (2) Destination Hull – The city’s proud heritage, its role as UK City of Culture 2017 and the multi-million pound investment now being delivered in our cultural and tourism infrastructure, are major steps towards realising Hull’s long-term ambition to become a world-class visitor destination. (3) Community and Opportunity – Hull aims to be a place of opportunity for all, as highlighted by three City Plan ambitions designed to build strong, resilient communities by focusing on: safeguarding the most vulnerable; prevention and early intervention; and making money go future” [2].

COMEAP – Committee on the Medical Effects of Air Pollutants.

Comparator areas – As Hull is much more deprived than the national average, the majority of indicators associated with employment, housing, crime, educational attainment, prevalence of risk factors, health status, mortality rates, etc will generally be worse in Hull than England. Therefore, it is difficult to assess the degree to which the indicator might be worse than England given Hull's deprivation, and as a result it is often useful to compare indicators with geographical areas that have similar characteristics as Hull. However, no two geographical areas are extremely similar in terms of population size, age structure of population, deprivation, ethnicity, housing, the economy and labour market, etc. In practice, different people and organisations have grouped different geographical areas together in order to try to assess similarity of different geographical areas, and in doing so have generally used slightly different measures to assess similarity. As a result, there are a number of different 'sets' of geographical areas that are quoted as being similar to Hull. In the local Joint Strategic Needs Assessment (JSNA) Toolkit reports (Release 4 and Release 5), a consistent set of comparator areas have been used, although a subset has been used when examining NHS data (e.g. disease prevalence information from the Quality and Outcomes Framework) as the Clinical Commissioning Group (CCG) boundaries do not necessary match historical boundaries of Primary Care Trusts. The comparators areas used here have also been used in local analyses of the Public Health Outcomes Framework data. The comparator areas used in this report are Coventry, Derby, Leicester, Middlesbrough, North East Lincolnshire, Plymouth, Salford, Sandwell, Stoke-on-Trent, Sunderland and Wolverhampton. For NHS comparisons, Leicester, North East Lincolnshire, Salford, South Tees, Stoke-on-Trent, Sunderland and Wolverhampton have been used. The boundaries of Middlesbrough local authority and Redcar and Cleveland local authority form South Tees CCG (Redcar and Cleveland is not one of the comparator areas used in the JSNA, but it is similar to Hull and has been included in 'sets' of comparators for Hull by others). These 11 comparator areas are not the same as those often used within Hull City
Council as the criteria and aims are different, e.g. local authority comparators take into account information less relevant to health such as local authority financial information.

**Confounders** – Confounding occurs when another factor (or factors) influences the association of interest. This occurs when this other factor is associated with both the risk factor of interest and the outcome of interest. For example, if examining the association between alcohol consumption and lung cancer mortality, it might be that an association is found. However, smoking is a confounder. There is an association between smoking and alcohol consumption as people who tend to smoke also tend to drink more alcohol. There is also an association between smoking and lung cancer mortality, therefore, it is possible that there is no real association between alcohol consumption and lung cancer mortality and smoking is acting as a confounder. Failure to take into account or consider smoking when examining this association can lead to biased results – known as confounding bias. Age, gender and deprivation are frequently related to the prevalence of behavioural risk factors, and poor health and mortality are also associated with age, gender and deprivation. Therefore, any of these factors can act as confounders when examining the relationship between risk factors and poor health. Therefore, examining the relationship between two factors is not straightforward, and can be further complicated by effect modification and interaction (see effect modification and interaction below for more information on these topics).

**COPD** – Chronic Obstructive Pulmonary Disease.

**CVD** – Cardiovascular Disease (also called Circulatory Disease).

**DALY** – Disability Adjusted Life Years. This measures the years of life lost (YLL) for each person who dies prematurely (before the age of 75 years). It can be used to examine different causes in relation to the total YLL for all persons dying of that cause of death or the average YLL for each person who dies of that cause of death. For instance, if 1,000 people die from a particular medical condition, 10 of them prematurely at an average age of 67 years (eight years prior to age 75 years) then the average YLL per person would be eight years, and the total YLL over all persons would be 80. Deaths with the greatest overall YLL will tend to have a high YLL per person (infant deaths, suicide and underdetermined injury, alcohol or drug related deaths, etc) or a relatively low YLL per person but a high number of overall deaths (coronary heart disease, lung cancer, etc). Also see years of life lost (YLL) below.

**DEFRA** – Department for Environment, Food and Rural Affairs’.

**Deprivation** – See Index of Multiple Deprivation (IMD) below.

**DSR** – Directly Standardised Rate. A rate where standardisation has been used so that two rates for two different populations can be compared. Standardisation is used so that the rates take into consideration the differences in the age and gender structure between the different populations. Otherwise any difference in the two rates could simply be a consequence of differences in the age or gender structures of the population rather than a real difference between the rates. A DSR can be used to produce a standardised rate in relation to other measures such as hospital admissions, but is generally used to examine mortality. Thus a directly standardised mortality rate is produced. The use of standardisation means that the (mortality) rates can be compared on a like-for-like basis. The DSR uses a direct method for standardisation which involves applying the rates of disease observed in the study or local population to a “standard” population, i.e. calculating the number of deaths that would have occurred in the standard population if the age-specific (mortality) rates of the local population were applied to the standard population. The DSR is generally standardised to the European Standard Population (the most recent version is the ESP 2013), and is generally given as the number of deaths per 100,000 population.

**DTP** – Diphtheria, Tetanus and Pertussis (whooping cough) vaccine given to one and two year old children.

**Effect modification** – It is possible that one factor modifies the effect of one factor on another (effect modification). For example, it could be that there is a strong association between two factors at younger ages, but at older ages the association could disappear. Age is modifying the association between the two factors of interest. Therefore, examining the relationship between two
factors is not straightforward, and can be further complicated by confounding and interaction (see confounding above and interaction below for more information on these topics).

**ESP** – European Standard Population. This is a fictitious population used in the calculation of directly standardised mortality rates (see DSR above). The DSR is a mortality rate which has been standardised to take into account differences in the age (and gender) structure of the population. If the age (and gender) structure of the populations are not taken into consideration, then any differences in the mortality rates between the two populations could be potentially explained by differences in the age (and gender) structures of the populations. This 'standardisation' allows two mortality rates to be compared on a like-for-like basis. The standard population for comparison of DSRs is usually the ESP. The ESP was updated in 2013, and the majority of analyses present DSRs standardised to the ESP 2013. However, some reported analyses use the previous ESP produced in 1976. A higher proportion of older people occur in the fictitious ESP 2013 compared to the ESP 1976 to reflect the aging population. This greatly affects the resulting DSRs, and can have a dramatic effect as illustrated in local analyses [332]. Thus DSRs can only be compared if the same ESP has been used.

**FH** – Familial hypercholesterolaemia. An inherited condition which results in a high cholesterol concentration in the blood which increases the risk of coronary heart disease and other cardiovascular events.

**Health and Wellbeing Board** – “The Health and Social Care Act 2012 establishes health and wellbeing boards as a forum where key leaders from the health and care system work together to improve the health and wellbeing of their local population and reduce health inequalities. Health and wellbeing board members will collaborate to understand their local community’s needs, agree priorities and encourage commissioners to work in a more joined-up way. As a result, patients and the public should experience more joined-up services from the NHS and local councils in the future. Each top tier and unitary Local Authority has established its own health and wellbeing board in shadow form from April 2012. Boards will take on their statutory functions from April 2013. The Health and Social Care Bill mandates a minimum membership of: a local elected council member, the director of public health for the local authority and representatives of the local Healthwatch organisation, local clinical commissioning group, director for adult social services, director for children’s services and director of public health” [335]. Also see Joint Health and Wellbeing Strategy (JHWS) below.

**Hib** – Haemophilus Influenza type b vaccine given to one and two year old children.

**HIV** – Human immunodeficiency virus.

**HPV** – Human Papillomavirus (types 16 and 18) vaccine given to young girls.

**IHD** – Ischaemic Heart Disease (also called coronary heart disease).

**IMD** – Index of Multiple Deprivation. The IMD 2015 [25] score is a measure of deprivation produced nationally and derived for each lower layer super output area (LLSOA; geographical area which is described in more detail below) in England. The IMD 2015 index is based on seven domains which are weighted according to their relative importance in relation to the overall score (weights in brackets): (i) income deprivation (22.5%); (ii) employment deprivation (22.5%); (iii) health deprivation and disability (13.5%); (iv) education, skills and training deprivation (13.5%); (v) barriers to housing and services (9.3%); (vi) living environment deprivation (9.3%); and (vii) crime (9.3%). The IMD 2015 score measures deprivation, but is not such a good measure of affluence. As it is applied to a geographical area, it relates to average levels of deprivation within an area. Therefore, there may be some residents of the area who are very much more deprived or very much better-off relative to the average. A high score denotes more deprivation. Hull has a high IMD 2015 score and is ranked as the 3rd most deprived local authority out of 326 across England. The scores are often classified into groups, and different deprivation groups are then compared in relation to different indicators and measures. The deprivation scores are frequently divided into five or ten groups. These groups can be determined at a national or local level. For instance, 87 (52%) of Hull’s 166 LLSOAs fall within the bottom or most deprived 20% (fifth) of England’s LLSOAs, and there is only one (0.6%) of Hull’s LLSOAs in the least deprived fifth of areas of England. As so few
of Hull’s LLSOAs fall within the least deprived areas nationally, it is not sensible to examine deprivation in relation to the national groupings. As a result, deprivation is generally examined within this JSNA and the JSNA Toolkit reports in relation to locally deprived fifths. Thus the 166 LLSOAs are grouped based on their deprivation scores into five groups from the most deprived fifth locally to the least deprived fifth locally.

Interation – Interaction between two different factors can occur which influence the relationship with another factor. For example, there could be twice the risk of developing a disease for a smoker compared to a non-smoker, and twice the risk of developing the same disease if the person is overweight compared to someone who is within the ‘desirable’ weight category, but for an overweight smoker the risk of developing the disease may be ten times greater than a person who is a non-smoker and not overweight. This type of effect occurs for oral cancers, where the risk among smokers who drink alcohol is much higher than either one alone. Therefore, examining the relationship between two factors is not straightforward, and can be further complicated by confounding and effect modification (see confounding and effect modification above for more information on these topics).

IPV – Inactivated Polio Vaccine given to one and two year old children.

JHWS – Joint Health and Wellbeing Strategy. “The Health and Wellbeing Board has a responsibility for producing a JHWS. Priority areas identified from the Joint Strategic Needs Assessment are key for the development of joint strategies which in turn feed into commissioning plans. As part of the prioritisation process, Health and Wellbeing Boards will also need to look at which areas need de-prioritisation and de-commissioning” [335]. Hull’s Health and Wellbeing Board Strategy has recently been updated, and the new 2014-2020 strategy [1] is now available. This new strategy has strong links with the City Plan [2] and Hull’s 2020 Vision [312, 336]. There are three broad overarching outcomes outlined in the strategy: (1) the best start in life; (2) healthier, longer, happy lives; and (3) safe and independent lives. Within the strategy it is acknowledged that “This strategy cannot be delivered without the commitment of everyone who lives or works in Hull and cares about its future. The strategy sets out how WE can work together to reduce health inequalities and improve people’s health. It describes where we want to get to and how we will do it.” [1].

JSIA – Joint Strategic Intelligence Assessment. “In 2006, a review of the Crime and Disorder Act 1998 [337] lead to a requirement to produce a detailed Crime and Disorder audit; consult with key agencies and the wider community; use the findings to identify strategic priorities and set targets and performance measures. The legislation requires partnerships to include the following components in a Strategic Assessment: analysis of the levels and patterns of crime, disorder and substance misuse; changes in the levels and patterns of crime, disorder and substance misuse since the last strategic assessment; analysis of why these changes have occurred; and assessment of the extent to which last year’s plan was implemented. The purpose of the JSIA is to provide knowledge and understanding of community safety problems that will inform and enable the partners to: understand the patterns, trends and shifts relating to crime, disorder and substance misuse; set priorities for their partnership; develop activity that is driven by reliable intelligence and meets the needs of the local community; and deploy resources effectively and present value for money” [338].

JSNA – Joint Strategic Needs Assessment. “The Health and Wellbeing Board has a responsibility for producing a JSNA which provides local policy-makers and commissioners with a profile of the health and well-being needs of the local population. The aim of JSNAs is to improve commissioning and reduce health inequalities by identifying current and future health trends within a local population” [335].

KSI – Killed or seriously injured (in the context of KSI on the roads).

LLSOA – Lower Layer Super Output Areas. The geographical areas on which the Index of Multiple Deprivation is based. Hull has 166 LLSOAs. The boundaries of each LLSOA were created so that the LLSOAs are relatively uniform in terms of size (for statistical comparison reasons) with each LLSOA having a minimum population of 1,000 residents and an average of 1,500 residents. They were first derived nationally following the 2001 Census when there were 163 LLSOAs in Hull, but
they were updated following the 2011 Census and changes to the population between 2001 and 2011.

Local Health and Lifestyle Surveys and Social Capital Surveys – A number of local surveys (and qualitative research projects) have been undertaken in Hull in the last decade or so. Adult Health and Lifestyle Surveys have been completed in Hull during 2003, 2007 and 2011-12, and mini adult Health and Lifestyle Surveys (“Prevalence Surveys”) have been completed in 2009 and 2014. Adult Black and Minority Ethnic (BME) Health and Lifestyle Surveys, and Gypsy and Traveller Health and Lifestyle Surveys have both been completed in 2007 and 2011-12. A Veteran’s Health and Lifestyle Survey was completed in 2009. Adult Social Capital Surveys have been completed in 2004 and 2009, although the 2007, 2011-12 and 2014 Health and Lifestyle Surveys also included some questions on social capital. Children and Young People Health and Lifestyle Surveys have been completed in 2002, 2008, 2012 and 2016. Further details on these surveys including the questionnaire and final reports can be found at [www.hullpublichealth.org](http://www.hullpublichealth.org).

**MenC** – Meningococcal C vaccine given to one and two year old children.

**MMR** – Measles, Mumps and Rubella vaccine given to two and five year old children.

**NICE** – National Institute for Health and Clinical Excellence. NICE provide guidance, advice, quality standards and information services for health, public health and social care in order to improve health and social care.

**NO₂** – Nitrogen Dioxide. One of the measures of air pollution.

**NOₓ** – Mono-nitrogen Oxide (NO) and Nitrogen Dioxide (NO₂). One of the measures of air pollution.

**NT Pro BNP** – N-terminal of the prohormone brain natriuretic peptide. Both BNP (see above) and NT Pro BNP levels in the blood are used for screening, diagnosis of acute congestive heart failure and may be useful to establish prognosis in heart failure, as both markers are typically higher in patients with worse outcome.

**ONS** – Office for National Statistics ([www.ons.gov.uk](http://www.ons.gov.uk)).

**PANSI** – Projecting Adult Needs and Service Information System ([www.pansi.org.uk](http://www.pansi.org.uk)).

**PCV** – Pneumococcal Conjugate Vaccine given to one and two year old children.

**PHOF** – Public Health Outcomes Framework. From the Introduction to the Public Health Outcomes Framework (PHOF) 2013 to 2016 [339] produced in January 2012, “The responsibility to improve and protect our health lies with us all – government, local communities and with ourselves as individuals. There are many factors that influence public health over the course of a lifetime. They all need to be understood and acted upon. Integrating public health into local government will allow that to happen – services will be planned and delivered in the context of the broader social determinants of health, like poverty, education, housing, employment, crime and pollution. The NHS, social care, the voluntary sector and communities will all work together to make this happen. The new Public Health Outcomes Framework that has been published is in three parts. Part 1 introduces the overarching vision for public health, the outcomes we want to achieve and the indicators that will help us understand how well we are improving and protecting health [340, 341]. Part 2 specifies all the technical details we can currently supply for each public health indicator and indicates where we will conduct further work to fully specify all indicators [340, 341]. Part 3 consists of the impact assessment and equalities impact assessment. The vision for the PHOF is "to improve and protect the nation's health and wellbeing, and improve the health of the poorest fastest". There are two overarching outcomes to "increase healthy life expectancy and to reduce differences in life expectancy and healthy life expectancy between communities." There are also four domains: (1) Improving the wider determinants of health (improvements against wider factors that affect health and wellbeing, and health inequalities); (2) Health improvement (people are helped to live healthier lifestyles, make healthy choices and reduce health inequalities); (3) Health protection (the population's health is protected from major incidents and other threats, while reducing health inequalities); and (4) Healthcare public health and preventing premature mortality (reduced numbers of people living with preventable ill health and people dying prematurely, while reducing the gap
between communities). National data is available on the majority of the PHOF indicators from the PHOF data tool [26]. Local analysis has been undertaken on these indicators with information for each indicator summarised concisely on a single page, examining the indicator for Hull in relation to comparator areas, trends over time, national inequalities gap, local inequalities gap and at ward level, although not all information is available locally to examine the local inequalities gap or at ward level for the overarching indicators [80] and all the indicators in each of the four domains separately [342-346]. A summary document has also been produced which examines some key measures with each indicator summarised in a single line of a table [347]. These documents are all available on www.hullpublichealth.org.

**PM$_{2.5}$** – A measure of air pollution. It is the mass (in micrograms) per cubic metre of air of individual particles with an aerodynamic diameter generally less than 2.5 micrometres.

**PM$_{10}$** – A measure of air pollution. It is the mass (in micrograms) per cubic metre of air of individual particles with an aerodynamic diameter generally less than 10 micrometres.

**POPPI** – Projecting Older People Population Information system (www.poppi.org.uk).

**PPV** – Pneumococcal Polysaccharide Vaccine given to those aged 65+ years.

**QALY** – Quality Adjusted Life Years. A QALY is often used to compare different health interventions and treatments. A QALY is based on the how long a person having an intervention would live, but it also takes into account the quality of that life. Each year in perfect health is assigned a value of one (with death assigned a value of zero). If the person does not have perfect quality of life a value between zero and one is assigned for each year. The cost effectiveness of treatments can be compared using the cost of the intervention and the QALY of that intervention. Interventions with a lower cost to QALY ratio are better than those with a high cost to QALY ratio.

**QOF** – Quality and Outcomes Framework. As part of the General Medical Services contract implemented in April 2004, the Quality Outcomes and Framework was set out as a means for practices to measure achievement against a set of clinical and other indicators that reflected the quality of care provided to their patients. GP practices have been submitting QOF data since this time. A national system has been established to support the calculation of GP practice payments according to the achievements against QOF. Some of the indicators or measures included in the QOF relate to establishing a register of patients diagnosed with a specific disease or medical condition. From this information, an estimate of the diagnosed prevalence of these specific diseases can be calculated for each GP practice. The Excel data tables can be downloaded from NHS Digital [93]. Further information is available relating to the quality of care received by patients on the specific disease registers. For instance, the number of people on the diabetes register who have had retinal screening during the previous 15 months, the number of people on the coronary heart disease register in whom the last blood pressure reading (measured in the last 15 months) was 150/90 or less, the number of patients on a specific medication, the percentage of patients with coronary heart disease who have had their influenza vaccination, etc. Patients can be counted as ‘exceptions’ if there is a medical reason for them not to have that specific treatment or intervention. There are a number of reasons why patients can be made an ‘exception’ from specific quality of care measures. These include medical associated reasons such as experiencing side-effects of specific medications, or on other medications more suited to that patient due to multiple medications taken, but patients can also be made an ‘exception’ when they are invited to three review or annual check appointments and fail to attend. These ‘exceptions’ are allowed so that practices are not penalised financially on not achieving set levels for the quality of care measures due to influences outside their control. Practice targets relate to achieving a specific percentage of patients who have had the intervention or care measure after ‘exclusions’ have been removed. However, in terms of examining coverage, it is often useful to report on the percentage of patients having the intervention out of the entire patient population diagnosed with the condition. In this document, where the percentage of patients who have had their influenza vaccination for patients diagnosed with coronary heart disease, stroke, diabetes or chronic obstructive pulmonary disease (‘at risk’ patients), the percentages are reported as the percentages out of those diagnosed.
**Screening programmes** – There are a number of screening programmes in place in the UK relating to antenatal and newborn, and abdominal aortic aneurysm (AAA), diabetic retinopathy, breast cancer, cervical and bowel cancer in adults [190]. “Tests in pregnancy and in the newborn after birth are designed to help make the pregnancy safer, check and assess the development and wellbeing of the women and her baby, and screen for particular conditions” [157-159]. Most of the screening programmes in adults can detect the condition prior to symptoms being present, and thus can be treated earlier to prevent the disease or increase survival. “In England, there are 1,280 new cases of blindness caused by diabetic retinopathy each year, and annual screening among those aged 12+ years who have diabetes can prevent this” [348]. “Men are offered screening for AAA during the year they turn 65 years of age, and this can reduce the number of deaths from ruptured AAA by up to 50%” [349]. “All women aged 50 to 70 are invited for breast screening every three years (although there are trials running in some geographical areas among women aged 47 to 49 and 71 to 73 years to assess whether it is worthwhile to extend the breast screening age range). Breast cancer is detected in around one women in every 100 screened, and lives are saved because cancers are diagnosed and treated earlier” [350]. “Cervical screening is offered to all women aged between 25 and 64 years (every three years to age 49 then every five years). Early detection and treatment can prevent around 75% of cancers developing with up to 4,500 lives saved each year in England” [351]. “Bowel cancer screening is offered to all men and women aged 60-69 years every two years (currently being extended to age 74 years). In the UK, 5% will develop bowel cancer in their lifetime, and over 16,000 die from it each year. Regular bowel cancer screening has shown to reduce the risk from dying from bowel cancer by 16%” [352]. “The NHS Health Check programme aims to help prevent heart disease, stroke, diabetes, kidney disease and certain types of dementia. Everyone between the ages of 40 and 74, who has not already been diagnosed with one of these conditions or have certain risk factors, will be invited (once every five years) to have a check to assess their risk of these conditions, and will be given support and advice to help them reduce or manage that risk” [191].

**SMR** – Standardised Mortality Ratio. A ratio calculated from two mortality rates used to compare the mortality rates of two different populations. Standardisation is used so that the rates take into consideration the differences in the age (and sometimes gender) structure between the different populations. Otherwise any difference in the rates or ratio could simply be a consequence of differences in the age structures of the population rather than a real difference between the (mortality) rates. A standardised ratio can be used to produce a ratio in relation to other measures such as hospital admissions, but is generally used to examine mortality. The use of standardisation means that the (mortality) rates can be compared on a like-for-like basis. The SMR uses an indirect method for standardisation which involves applying the rates of disease in a ‘standard’ population to the study group of people, i.e. calculating the number of deaths that would have been expected in the local population if it experienced the age-specific (mortality) rates of the standard population. This is then compared with the observed number of events (deaths) in the local population to produce a ratio. The SMR generally uses England as the comparison or standard population, and is generally multiplied by 100 so that an SMR of 100 denotes that the mortality rate of a local area is the same as England (after adjusting for the age and gender structure of the local population). The SMR is more than 100 if the local mortality rate is higher than England. For instance, an SMR of 130 denotes that the mortality rate of the local area is 30% higher than England (after adjusting for the population structure), and an SMR of 89 denotes that the local mortality rate is 11% lower than England (after adjusting for the population structure).

**STP** – Sustainability and Transformation Plans. STPs [11] have been produced for all 44 STP areas in England. Hull is included within the Humber, Coast and Vale STP [3, 12], which also includes NHS East Riding of Yorkshire CCG, NHS North Lincolnshire CCG, NHS North East Lincolnshire CCG, NHS Scarborough and Ryedale CCG, and NHS Vale of York CCG. STPs were announced in NHS planning guidance published in December 2015. NHS organisations and local authorities in different parts of England have come together to develop five-year ‘place-based plans’ for the future of health and care services in their area covering all aspects of NHS spending in England as well as focusing on better integration with social care and other local authority services. The scope of the STPs are broad with initial guidance setting around 60 questions to be covered in
local plans under three headline issues of improving quality and developing new models of care, improving health and wellbeing, and improving efficiency of services. The local Humber, Coast and Vale “Start Well, Live Well and Age Well” STP [3] “is a blueprint for an ambitious approach to prevention and public health that puts your needs at the centre of service redesign. The plan describes how we will move towards place-based provision of care and services. It focuses on the wider determinants of health in our footprint and how public services will work together to support everyone to take more responsibility for their own health. Our proposals aim to design a healthcare system that by 2021 helps people to start well, live well and age well, that improves the quality of care and services that you receive and ensures that the system is financially sustainable for the long-term so that we can continue to deliver the services that you need. We will deliver our ideas by concentrating on three things in our footprint. These are our ‘triple aim’s: achieving our desired outcomes (‘will the service by good?’); maintaining quality services (‘will the service by safe and operational sustainable?’); and closing our financial gap (‘will the service by financially sustainable?’). Our vision for 2021 is a system that supports everyone to manage their own care better, reduces dependence on hospitals and uses our resources more efficiently. We have put six priorities that at the heart of the change we want to achieve. These are:

i. helping people stay well (We want to focus on prevention – in other words help people to help themselves to stay well);

ii. place-based care (People want to receive excellent care, close to their home, at times that work with their lifestyle. They are frustrated that they need to give the same information to different professionals often on the same day);

iii. creating the best hospital care (People who work in our hospitals tell us that they want to collaborate, innovate and challenge the way services are currently delivered. We know that we have a population that is getting older and this is leading to an increase in demand for hospital services);

iv. supporting people with mental health problems (We know that we have a lot to do to improve mental health services. More services need to be provided close to home rather than in hospital and children, young people and adults need better access to mental health support services);

v. helping people through cancer (A focus on improving cancer services is important as Humber Coast and Vale has higher than national average incidence and mortality rates for all cancers); and

vi. strategic commissioning (Currently, patients may receive a different type of treatment or a different level of care depending on where they access services. Similarly, too many organisations are commissioning services. We aim to strike a balance between planning some services at scale so that we can get the best value from them and planning other services on a local level so that they can be built around the needs of individual communities).

Improving our health and care system in the way we describe will not happen overnight. We are trying to resolve challenges that our communities and public and voluntary sector organisations have been dealing with for a long time. It will also require a significant change in the way we work as organisations. We are putting in place some processes to help us make this happen. These processes involve finance (We have developed a plan that will support us in closing the ‘do nothing’ £420m funding gap by 2021. Big changes in the way we will work involve us delivering a system control total. This will involve planning and monitoring our services based on what people in the communities think is important rather than the number of times we see patients.), governance (Our Strategic Partnership Board and our Strategic Executive Group support is in making the right decisions. Our Clinical Advisory Group will make sure clinical views are at the heart of what we do, but we know we have to do more to support clinicians in this role. We have begun to recruit into our programme team and our governance and resources model will continue to strengthen as we move to implementation.), workforce (Our Local Workforce Action Board has planned two initiatives to help us to deliver our strategy. These initiatives involve developing both support staff and advanced practice staff at scale. Both of these initiatives will significantly help us to fill the gaps we have in our workforce.), our estate (Implementing this plan means we will have different estate needs across Humber Coast and Value public sector partners. As demand changes we will need to use our estate flexibly to support delivery of our strategy.), communication and engagement (We have
challenging proposals for Humber Coast and Vale and are working on a comprehensive communications and engagement plan that has citizens and patients, staff and partners at its heart. We will not make any decisions without consulting our population and our staff on the changes we believe are needed.), and technology (We have a single plan across Humber Coast and Vale for using technology to transform our health and care services. This includes developing a single electronic care record that can be shared and accessed by health and care professionals, meaning that people will tell their story only once.)” [3].

TB – Tuberculosis.

TIA – Transient ischaemic attack (mini stroke).

TPFR/TPTR – Total Period Fertility/Termination Rate. Since there are differences in the number of births amongst women of different ages, one measure of fertility is the number of births per 1,000 women for a specific age-group. For example, 203 births per 1,000 women aged 25-29 years. However, this method results in different fertility estimates for each age group, and the overall fertility rate among different geographical areas cannot be easily compared. This is particularly the case, if there are differences in the age women tend to have their children among different geographical areas or countries. The TPFR is a convenient summary measure of the fertility. It is a hypothetical estimate of completed fertility. It indicates how many births a woman would have by the end of her reproductive life, if, for all of her childbearing years, she was to experience the age-specific birth rates for a given year (e.g. current fertility rates). It takes into account the differences in the fertility rates within different reproductive age groups, and enables comparisons to be made between different geographical areas and between different time periods, because it is not affected by the age distribution of the women in the reproductive age-groups. The TPTR is a similar measure of terminations rather than births over all age groups. These rates are not predictions of fertility as the measures use the current rates.

Vision 2020 – This was NHS Hull Clinical Commissioning Group’s vision and strategic plan for Hull [312, 336] for 2014/15 to 2019/20. It has been superseded by the Sustainability and Transformation Plans (STP) – see STP above. The vision 2020 was undertaken in conjunction with eight other partner organisations: Hull City Council, Healthwatch, Hull and East Yorkshire Hospitals NHS Trust, City Health Care Partnership, Yorkshire Ambulance Service, Humber NHS Foundation Trust, Humberside Fire and Rescue Services, and Humberside Police. Some of the same aims of “working together better to enable the people of Hull to improve their own health and wellbeing and to achieve their aspirations for the future” [312, 336] have been retained within the local Humber, Coast and Vale “Start Well, Live Well and Age Well” STP [3]. Vision 2020 also incorporated plans for greater collaboration across public services as well as private, voluntary and charitable sectors within Hull. It recognised that significant change was essential in order to ensure that sustainable, high quality services were available to meet the needs of the population. The defined outcomes of the Hull 2020 programme were: (i) clearly defined, equitable and quality seven day services available on the basis of need; (ii) people are aware of the services available to them, and confident that they can access what they need when they need it; (iii) information is shared across public services to speed up and coordinate care and support and reduce duplication; (iv) a single system that removes traditional organisational boundaries – enabled by integrated governance and partnership; (v) making the best use of the available money in Hull public services, to meet the needs of the local people; and (vi) a workforce that is fit for the future to meet the needs of the population [312, 336].

YLL – Years of Life Lost. This measures the number of years of life lost for each person who dies prematurely (before the age of 75 years). It can be used to examine different causes in relation to the total YLL for all persons dying of that cause of death or the average YLL for each person who dies of that cause of death. For instance, if 1,000 people die from a particular medical condition, 10 of them prematurely at an average age of 67 years (eight years prior to age 75 years) then the average YLL per person would be eight years, and the total YLL over all persons would be 80. Deaths with the greatest overall YLL will tend to have a high YLL per person (infant deaths, suicide and underdetermined injury, alcohol or drug related deaths, etc) or a relatively low YLL per person.
but a high number of overall deaths (coronary heart disease, lung cancer, etc). Also see disability adjusted life years (DALYs) above.
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