JSNA Chapter - JSNA Evidence Summary

Topic information	
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Executive summary

Introduction

This Evidence Summary presents an overview of the health and wellbeing needs in Nottingham City using the key findings from Nottingham City's Joint Strategic Needs Assessment (JSNA).

JSNAs are local assessments of current and future health and social care needs. The aim of a JSNA is to improve the health and wellbeing of the local community and reduce inequalities for all ages through ensuring commissioned services reflect need. It is used to help determine what actions local authorities, the NHS and other partners need to take to meet health and social care needs and to address the wider determinants that impact on health and wellbeing.

Nottingham City's JSNA chapters each consider a particular health and social care issue or the health and social care needs of specific groups. The full JSNA can be accessed at www.nottinghaminsight.org.uk. It is only possible to present a brief overview of this information in this Evidence Summary and so it should be used in conjunction with the full JSNA.

All supporting data and information for this Evidence Summary, including references, can be found in individual chapters.

Pregnancy

In 2016 there were 4,315 live births in Nottingham, an increase from the 2008 figure of 3,540, but lower than the peak of 4,477 in 2010. The wards with the highest number of births per 1000 women were Dales, Aspley, Bulwell and Leen Valley. Higher pregnancy rates mirror the geographic distribution of teenage pregnancy and are associated with areas of disadvantage.

During 2016 and 2017 there were 41 stillbirths in Nottingham, a rate of 4.8 per 1000 births. This was higher than the England average of 4.4 per 1000 births. Associated risk factors for stillbirth are maternal age (women aged under 20 or over 40), smoking in pregnancy, maternal obesity, deprivation, multiple births and influenza.

Improvements in socio-economic conditions and obstetric care have made significant contributions to reducing infant and maternal mortality. However, not all population groups have the same outcomes. Women with complex social factors are less likely to seek antenatal care early in pregnancy or stay in contact with maternity services.

Local data shows the number of women in Nottingham who present with complex social factors during pregnancy. There were significantly more women who presented with mental ill health than presented with other complex social factors, followed by: those who had difficulty speaking English; mothers aged under 20; recent migrants. This is in line with the national picture and is attributed to Nottingham's demographics.

The number of pregnancies to women in Nottingham with complex social factors 2017/18

Complex social factor	Number of pregnancies during 2017/18
Mental health issues	1,224
Those who have difficulty reading or speaking English	475
Aged under 20 years	306
Recent migrant	245
Misuse substances (drugs or alcohol)	134
Asylum seekers or refugees	20
Experiencing domestic abuse	19

Source: NUH Medway Maternity data 2017/18

There is an underestimation of alcohol consumption among pregnant women due to poor estimation, poor recollection and social stigma. It is estimated that 25.8% of Nottingham women of child bearing age are binge drinkers. Given that half of pregnancies in the UK are unplanned, this potentially poses significant risks to infant outcomes if women continue to drink alcohol during pregnancy.

Although there were 19 recorded cases of domestic abuse among pregnant women in 2017/18, local intelligence suggests that this is not a true reflection of the issue and that many cases go unreported. In 2017/18 the wards with the highest number of domestic abuse related calls to police were Aspley, followed by Bulwell and Basford.

In addition to complex social factors, there are other factors that make a pregnancy high risk. Nottingham has a high prevalence of maternal obesity; in 2017/18, 1,550 pregnant women were recorded as having a BMI of over 30, which equates to 21% of all pregnancies. This was significantly higher than the England average of 15.6%. There is a significant correlation between deprivation and maternal obesity. In 2017/18, 17.2% of Nottingham women were reported to be smokers at the time of delivery, significantly higher than the England average of 10.8%. In Nottingham in 2017/18, 85 women were treated for FGM; out of 85 attendances at NHS clinics, 80 involved pregnancies.

There are a number of unmet needs and services gaps related to pregnancy. Women with complex social factors are a key concern given Nottingham's diverse population. It is recommended that a Health Equity Audit of timely access to maternity services is conducted and strategies developed for increasing early access amongst women identified as least likely to access early. It is important to ensure adequate provision of interpreting and translation services, preferably face-to-face. Multi-lingual leaflets and materials should be available as standard. Nottingham currently has an FGM clinic and specialist midwife, but it is unclear as to the long term succession arrangements and so it is important to work to ensure continuity of service for FGM survivors. It is recommended that maternity staff are trained in how to respond to domestic abuse in a way that makes it easier to disclose and that opportunities are sought to see pregnant women alone to give them the opportunity to disclose. The current perinatal mental health pathway may not be meeting the needs of pregnant women with low level mental health needs. It is recommended that an overarching perinatal mental health pathway that reflects NICE guidance be implemented. Options for increasing smoking cessation rates among pregnant women should be explored and clear and consistent messages around alcohol use in pregnancy developed and promoted. IT systems require improvement across the maternity pathway to ensure safe and effective data sharing with services including GPs, health visiting and Improving Access to Psychological Therapies (IAPT) services.

Full JSNA for Pregnancy

Air quality and health

Air pollution – both outdoor and indoor – damages human health from before birth to older age and, in the UK, it is ranked as the fourth greatest threat to public health after cancer, heart disease and obesity. It is linked as a contributory factor to asthma, stroke, heart disease, diabetes, dementia and to some types of cancer. Long-term exposure to air pollution causes respiratory and cardiovascular disease and lung cancer, whilst sort-term exposure to elevated levels leads to a worsening of symptoms for those with existing asthma, respiratory or cardiovascular diseases and, in vulnerable adults, can trigger acute events such as asthma and heart attacks. In children, air pollution reduces lung development and function and can lead to the development of asthma.

Emissions from road traffic are one of the largest contributors to ambient air pollution in urban areas. It is estimated that between 28,000 and 36,000 deaths a year are attributable to exposure to outdoor air pollution in the UK. In Nottingham in 2016, it is estimated that 181 adult deaths (6.3% of all adult mortality) were brought forward due to the health impacts of air pollution (comprising PM10, PM2.5, NO2 and other pollutant species).

Indicator	Period	England	East Midlands region	Derby	Derbyshire	Leicester	Leicestershire	Lincolnshire	Northamptonshire	Nottingham	Nottinghamshire	Rutland
3.01 - Fraction of mortality attributable to particulate air pollution	2016	5.3	5.7	6.4	5.2	6.4	5.9	5.2	5.5	6.3	5.7	5.4

Public Health Outcomes Framework (PHOF) indicator 3.01: East Midland Authorities, including Nottingham City

Although limitations in the health and air quality data prevent further detailed analysis of the distribution of air pollution-related health impacts, it is reported that the most deprived 20% of neighbourhoods in England have higher air pollution levels than the least deprived neighbourhoods. However, those communities that are subject to the most pollution, generally emit the least. Nottingham scores highly on the scale of multiple deprivation (ranked 6th in England in 2015) and many of its most deprived areas include roads with higher levels of pollution.

Action to improve air quality can reasonably be expected to reduce premature mortality from cardiovascular and respiratory disease over time and action to reduce vehicle emissions will also contribute to sustainability. Nottingham City Council has already introduced and implemented a range of strategies, policies and measures that reduce emissions and exposure to air pollution around: active travel; public transport; workplace parking levy; ultra-low emission vehicle infrastructure; low emission taxi strategy; anti-idling enforcement; low emission zones; and behaviour change programme. However, despite meeting the National Air Quality Objective for PM10, concentrations of particulate matter (PM10 and PM2.5) currently exceed, and are likely to continue to exceed, the World Health Organization's guidelines.

Despite the many years of local authority activity, there are still gaps in organisational and public consciousness and understanding of the range and sources of air pollution and its effects on health. It is therefore recommended that an action plan to raise awareness continues to be included in the Health and Wellbeing Strategy, together with a summary of the actions that citizens and businesses can take to reduce emissions and personal exposure. This should be supported by the development and roll-out of a communication strategy and awareness-raising events to provide key messages on both outdoor and indoor air pollution. Additional resources to promote awareness are likely to deliver air quality improvements and benefits in other PHOF indicators more quickly. Furthermore, the effectiveness of those activities already undertaken, such as Nottingham's participation in National Clean Air days and campaigns to encourage active travel and the use of public transport, require evaluation to determine what more is needed and can practicably be done. Periodic reviews of the existing and emerging wider evidence base would also help to establish the effectiveness, impact and cost-benefit of specific interventions, in order to prioritise these for local action. The recommendation is therefore to support the development and use of comprehensive cost-benefit analysis tools to better quantify the impact of air pollution and mitigation measures on health and healthcare costs in Nottingham and Nottinghamshire.

A further knowledge gap lies within Nottingham's limited air pollution monitoring, which prevents detailed pollution concentration/health impact analysis and evaluation of measures and schemes to reduce emissions. It is therefore recommended that the collection of air pollution/health impact geo-spatial data for Nottingham is supported to inform local and national air pollution/health studies.

Full JSNA for Air Quality and Health

Demography

The latest estimate of the City's resident population is 329,200, having risen by 4,400 since 2016. The population is projected to rise to 342,000 in 2026 and to 363,700 in 2041. International migration (recently from Eastern Europe) and natural change (the excess of births over deaths) are the main reasons for the population growth recently. The number of births has decreased in the last few years, but is higher than the start of the 2000s.

29% of the population are aged 18 to 29. Full-time university students comprise about 1 in 8 of the population. The percentages in other age-groups are lower than the average for England, with the proportions of those between 65 and 79 being particularly low. Compared to some other Local Authority areas, Nottingham is unlikely to show much ageing or population growth in the short term to 2026.

The City gains young adults due to migration, both international and within Britain, whilst losing all other age groups - this includes losing families with children as they move to the surrounding districts. There is a high turnover of population - 21% of people living in the City changed their address in the year before the 2011 Census.

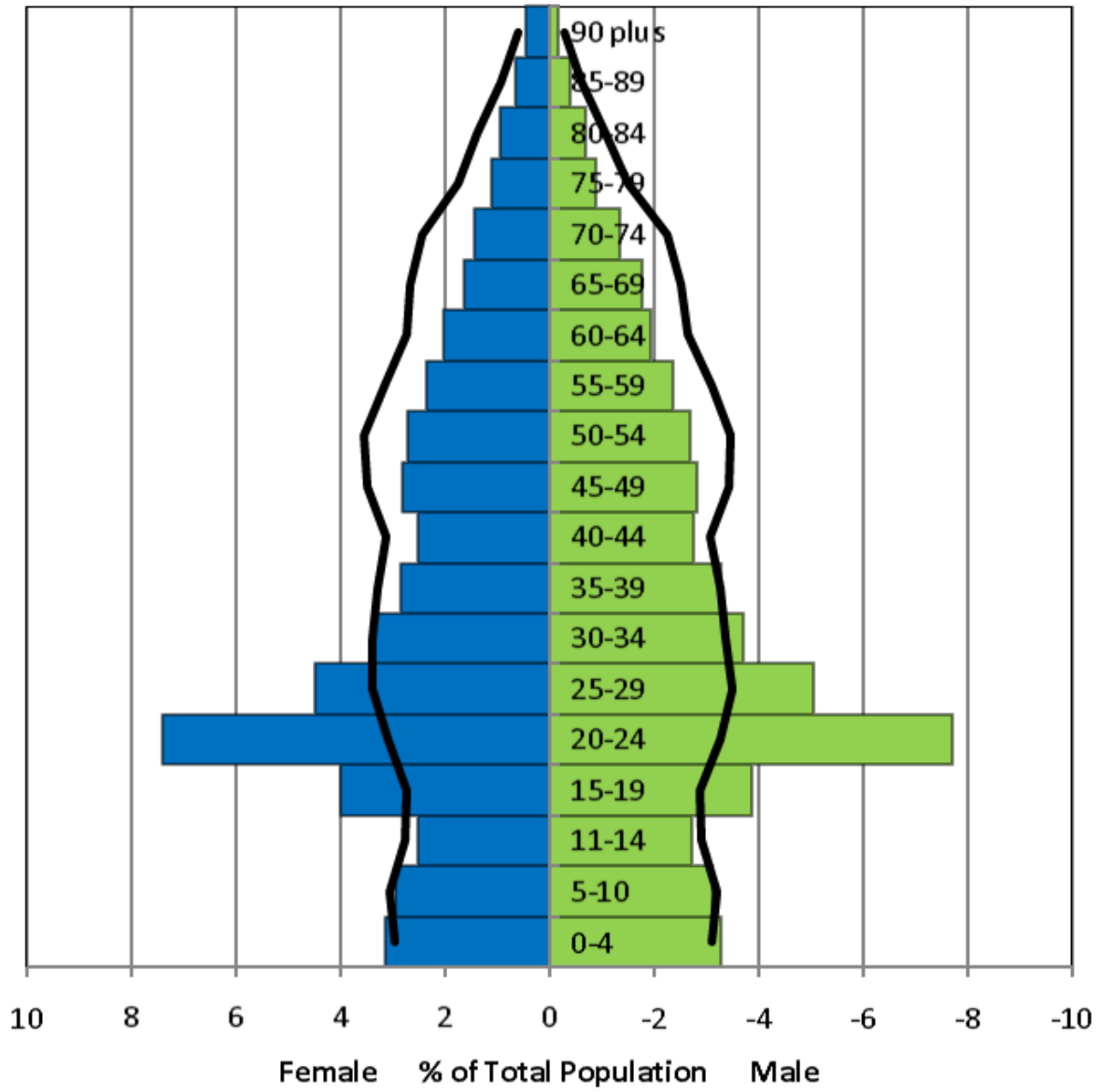
The 2011 Census shows 35% of the population as being from Black and Minority Ethnic (BME) groups. This is an increase from 19% in 2001.

The Asian/Asian British group is the largest BME group in Nottingham, making up 13% of the total population; Black/African/Caribbean/Black British, mixed or multiple ethnicity and White (not White British) groups each account for 6 – 7% of the total population.

Despite its young age structure, Nottingham has a higher than average rate of people with a limiting long-term illness or disability.

White ethnic groups have higher rates of long term health problems or disability overall, although this varies with age, with some BME groups having higher rates in the older age groups.

Figure 1: Age structure of Nottingham (bars) and England (lines), 2017



Source: ONS Mid-Year Estimates, 2017

Demography: Social and Environment Context

Nottingham is ranked 11th most deprived out of 317 districts in England in the 2019 Index of Multiple Deprivation (IMD). 3 in 10 super output areas in the City are in the worst 10% nationally. 34% of children and 25% of people aged 60 and over live in areas affected by income deprivation. There are high levels of child poverty in the City. In 2016/17, 41,700 children and young people lived in workless or low income households.

10% of people aged 16-64 have no qualifications, higher than the national average of 8%. The difference is most evident in the 50-64 age group where some 18% have no qualifications, compared to 11% nationally. 31% of 16 to 64-year-olds have qualifications at NVQ4 level – degree level or above – compared with 39% in England.

The employment rate for the City was 62% in 2018, compared with 75% for England. This figure is deflated by the presence of so many university students, but even if they are excluded the rate is still low (74% compared with 80% nationally). 8% of the population aged 16-64 were claiming Employment and Support Allowance, Incapacity Benefit or Severe Disablement Allowance in August 2018, compared with 5% nationally. 4% were unemployed (claiming Job Seekers Allowance or Universal Credit claimants not in employment) in November 2018, compared with 3% nationally.

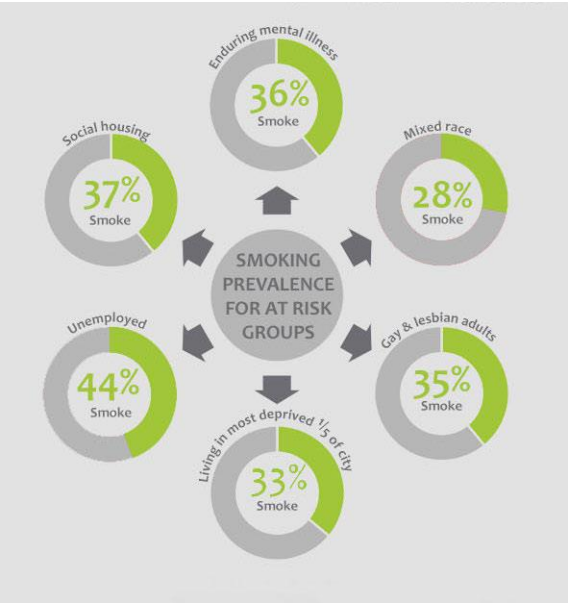
Full JSNA for Demography

Smoking and tobacco control

Smoking and tobacco usage varies from the more traditional smoking tobacco, to shisha, smokeless tobacco and the increasingly popular e-cigarette. Smoking remains the single largest preventable cause of early death in the UK, causing the deaths of 79,000 people a year in England; this is more than the next six causes combined. Half of all lifelong smokers will die prematurely, usually about ten years younger than non-smokers. Furthermore, for every smoking-related death, another ten smokers will be living with a smoking-related disease. A third of all cancers and over 90% of lung cancers are directly caused by smoking.

In England, smoking prevalence has continued to fall – down from 15.5% of adults in 2016, to 14.9% in 2017, the lowest level since records began. Similarly, in Nottingham, there has been a steady decline since 2013, although at 19.4% in 2017, it remains significantly higher than the national average. Nationally, men are more likely to smoke than women (17% compared to 13%) and Nottingham reflects this trend (although the difference between the sexes has narrowed, with more women smoking than they did historically - 24% of men; 22% of women). The highest proportion of regular smokers in Nottingham are within the 45-64 age bracket, with 25.7% of this age group smoking daily; the smallest proportion (10.5%) falls in the 16-24 age group. The largest proportion of **ex**-smokers occurs in the over-65s. However, there is a lack of robust data for smoking rates in the under-16s, as well as a dearth of information on the harms of social smoking in the 16-24 age group.

A number of groups of people are more likely to smoke compared to the general population and, in Nottingham, many of these high-risk groups have more than double the rates of smoking compared to the national average of 14.9%.



Smoking prevalence among high-risk groups in Nottingham
Source: Nottingham Citizens Survey 2016-18

Deprivation is a significant risk factor, evidenced by the most deprived in Nottingham having smoking rates of 33.2% compared to the least deprived at 16%, thereby widening the inequalities gap. The highest smoking rates are in the Aspley, St Ann's and Bulwell wards, corresponding to Aspley and Bulwell being the most deprived wards in Nottingham. ASH (Action on Smoking and Health) has estimated that 28% of UK families currently in poverty could be lifted out if they stopped smoking. Thus, effective help for smoking cessation in low-income families is essential for overall public health and well-being.

The local, community-based stop smoking service, New Leaf, was decommissioned in 2018. Although *Stub It!* – a new stop smoking service – was commissioned and launched by Nottingham City Council Public Health in March 2019, this delivers targeted smoking cessation support for specific groups only, namely pregnant and postnatal women and household members; and adults with mental health problems or substance misuse problems or long-term conditions or who were recently discharged from secondary care. There is no provision for children who might need support to stop smoking. Additionally, not only is the service fairly new and dealing with a back-log of clients, it is also currently delivered from city centre locations only, thereby excluding some with a disability or mobility problems. It is therefore recommended that this lack of accessibility be considered by commissioners.

Other unmet needs and service and knowledge gaps exist around smoking and tobacco control. For example, second-hand smoke remains a concern, as a quarter of deprived households allow smoking in their homes and there is currently no targeted work in this area to tackle children's exposure. However, it is not known the exact proportion of *all* Nottingham homes which allow smoking inside and how this compares to the national average. Thus, it is recommended that a question to assess this and children's exposure to second-hand smoke be included in the Citizen's Survey.

Since the previous JSNA, smokefree hospital policies (as covered in NICE Guidance PH48) have been introduced in all secondary care and mental health settings in Nottingham. However, more stringent implementation is needed to address the continuing problem of people smoking at entrances to the QMC and City hospitals. Nottingham University Hospitals NHS Trust (NUH) has ward-based, stop smoking advisers to whom patients may be referred, and all smokers are seen by an adviser on admission unless they opt out. Although this supports smokers to temporarily abstain, reports suggest that follow-up by community-based services is sporadic and inconsistent, thereby resulting in many smokers relapsing. A recommendation is therefore made to provide fast-tracking to community smoking cessation services for smokers who quit in hospital. This is in addition to ensuring that all hospital staff receive training in delivering *Very Brief Advice* and 'Making Every Contact Count' in GP practice, dentistry, opticians etc using *Very Brief Advice*.

Nottingham City Council's Smokefree Team has led, and continues to work with partners, on the successful implementation of a number of smokefree outdoor spaces initiatives and it is recommended that these be continued and expanded. However, shisha lounges remain prevalent in Nottingham City, despite smokefree legislation, and it is recommended that commissioners not only continue to review the compliance to the legislation and issue notices accordingly, but also improve education in schools and higher-education settings around the harms of shisha smoking. It is also recommended that those trading in illicit tobacco continue to be targeted, since illicit tobacco prevalence remains high in deprived areas of the city, undercutting the effects of tobacco control legislation and contributing to crime.

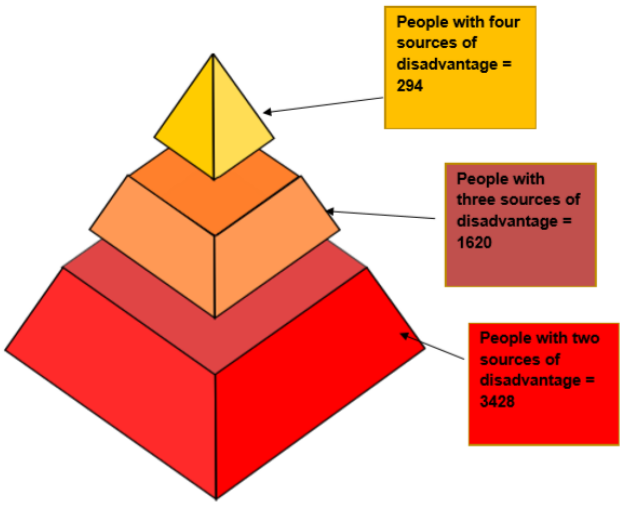
Current evidence suggests that e-cigarettes (ECs) are far less harmful than smoking and should be used as part of harm reduction or helping smokers to quit. However, public perception of ECs has not kept up with the evidence and it is recommended that an awareness campaign to encourage smokers to switch to ECs should be considered, together with the promotion of e-cigarettes as the treatment of choice for smoking cessation.

Full JSNA for Smoking and Tobacco Control

Severe multiple disadvantage

Severe Multiple Disadvantage (SMD) is generally considered to be a simultaneous experience of two or more of the following sources of disadvantage: mental health issues; homelessness; offending; substance misuse. SMD mainly originates in adverse childhood experiences: approximately 85% of people facing SMD have experienced early life trauma. Those experiencing SMD are also more likely than the general population to have other needs, such as long-term health conditions or disability; or be subject to domestic or sexual abuse (particularly women); or to suffer community isolation (particularly Black, Asian and Minority Ethnic [BAME] people).

Nottingham has the 8th highest prevalence of SMD in England – a prevalence more than twice the national average – with current estimates suggesting that over 5,000 Nottingham citizens experience SMD. This includes just under 3,500 people with two sources of disadvantage (SMD2) and nearly 2,000 people with three or four sources of disadvantage (SMD3/4).



Estimated current annual SMD population in Nottingham (data based on Hard Edges*, Bramley et.al. [2015])*

Currently, most services are arranged to provide treatment or support for each individual disadvantage issue, rather than through a collaborative or holistic approach. Evidence suggests that this single issue-focussed approach is not only ineffective for individual service users but has serious economic and social costs to wider society. Research in 2015 conservatively estimated the economic cost of severe multiple disadvantage to be £10.1b per year across the SMD 1/2/3 populations in England. Whilst Nottingham citizens facing the most acute SMD can benefit from specialist support from a dedicated SMD service – *Opportunity Nottingham* – this will cease in 2022.

There are a number of unmet needs and service gaps related to SMD. Research has found that there is hidden need amongst women and people from BAME groups, since they are less likely to fit the SMD definition or don't engage with mainstream services. It is recommended that there should be gender and culturally-specific SMD services and that flexible approaches to working, through gender and cultural responsiveness, should be promoted more widely.

There is insufficient cross-sector collaboration and coordination between the different services, from the ground-level up to the strategic and commissioning levels. This can result in "silo working" and a lack of data-sharing, causing those with SMD to have to keep repeating their story ad nauseam, which contributes to their alienation from services. Whilst *Opportunity Nottingham* has pursued a system change agenda and sought to encourage collaboration between services for those with the most acute SMD, this function will cease in 2022. It is therefore recommended that the legacy of *Opportunity Nottingham* be built upon, through consideration of the development of a jointly-commissioned SMD service and of a strategic Board to oversee service provision and continued system change (involving mental health, homelessness, substance misuse and criminal justice sectors, as well as others such as the DWP and social care). This "system working as one" would encourage both data-sharing between service providers, as well as a "no wrong door" approach for the benefit of service users. Additionally, "through the gate support" (ie meeting prisoners at the point of discharge) is seen as an essential component of any coordinated support network for people facing SMD.

As severe multiple disadvantage is primarily a consequence of trauma, understanding the centrality of addressing mental health issues is essential in enabling people to move away from SMD. Evidence points to lack of access to mental health services (particularly for rough sleepers) being the biggest problem in relation to those facing SMD and consideration needs to be given of how to address this. This would need to be underpinned by the provision of psychologically-informed environments and the development of trauma-informed practice across all services, which would require monitoring at commissioning level.

Where SMD results in homelessness, appropriate housing solutions are often not available and hostel provision has been shown to have limited success, especially for those with the most acute SMD needs. The Housing First initiative (a client-centred approach that is not conditional on first addressing problematic behaviours) has a good evidence base as an alternative but, as there is insufficient provision, it is recommended that the number of Housing First units in Nottingham be increased to 200.

Prevention is a key element of any strategy for tackling SMD, meaning early intervention is needed through better services supporting children and young people. Furthermore, involving people with lived experience of multiple needs, in the design and delivery of services, should be seen as essential. Their participation should be meaningful and supported with time and resources. Adopting a strengths-based approach to support the long-term wellbeing and independence of service users is recommended, which would both challenge stigma as well as build on their skills and positive networks.

Full JSNA for Severe Multiple Disadvantage (Multiple Needs)

Housing with excess winter deaths and cold related harm

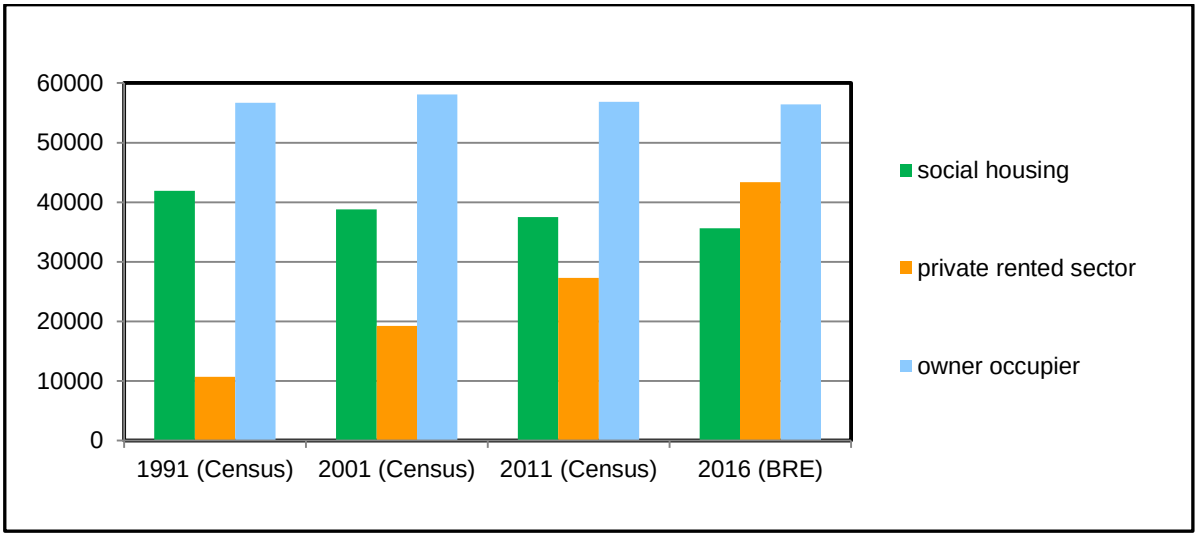
Housing is a key determinant of health and unsuitable homes can directly affect people's physical and mental wellbeing. Those who are already vulnerable through disability, ill-health, age or low income are most at risk. Cold and damp homes are a risk factor for Excess Winter Deaths (EWDs). In Nottingham, an average of 3,000 people died per year

between 2007/8 and 2017/18. Of those, an average of 158 were EWDs. Nottingham has a higher than average rate of EWDs.

37,800 people in Nottingham (11.5% of the city's population) are aged 65 and over. One third of this group report that their activities are greatly limited by a long-term condition or disability. A further 10,600 (28%) are limited a little. Approximately 14,830 people aged 18-64 are predicted to have a moderate physical disability, with a further 4,020 having a serious one. In 2019, Nottingham was ranked 11th most deprived local authority in England out of 326.

Nottingham is the 36th most densely populated local authority in England and Wales. This can make the delivery of additional housing and meeting housing needs challenging, due to lack of sites and land. Nottingham's household population is forecast to increase by 6,100 households between 2016 and 2028, when it will reach 134,642.

The greatest overlap of financial vulnerability and poor housing conditions is seen in the private rented sector. This sector has seen the largest growth over the past decade and now comprises over one third of Nottingham's housing offer. The growth of this sector is due to a lack of access to owner-occupation and a lack of availability of social housing, as well as demand for flexibility from younger households and asset liquidity from older households.



Nottingham tenure share change 2001 to 2016 (Census, 2011 and BRE, 2016)

In 2016, the Building Research Establishment produced a dwelling stock model for Nottingham City Council. It found that 21% of properties in the private rented sector contained category 1 Health and Housing Safety Rating System (HHSRS) hazards. Nottingham's private rented sector has more properties with a HHSRS hazard, in disrepair or households in fuel poverty than housing overall in Nottingham, and the private rented sector, on average, across the East Midlands and England.

It is estimated that fuel poverty causes nearly half of excess winter deaths (EWDs). The 2015 English Housing Survey found that the highest concentrations of fuel poverty were in wards, such as Dales and Berridge, with older, period housing stock and a mix of private renting households and owner-occupiers.

There are a number of unmet needs and gaps relating to housing, EWDs and cold-related harm. There is a shortage of quality and affordable housing and insufficient turnover in the

housing market to enable or encourage households to move as their needs change. The link between poor housing and health is still lacking in robust enough datasets to justify housing interventions based on health outcomes. The greatest coincidence of poor housing conditions and low income is in the private rented sector; however there is a lack of joined up working between organisations and a lack of coordination of other interventions to improve conditions and outcomes in private sector housing. EWDs index analysis data showed comparably worse outcomes in Bulwell and Sherwood, and Bestwood and Top Valley. Immunisation rates for influenza for over-65s and at-risk individuals are lower in Nottingham City than nationally. Smoking-related long-term conditions continue to be a key contributory factor to EWDs, especially when combined with poorly insulated housing. There are too few referrals to energy efficiency services of vulnerable householders from frontline health and social care staff and a lack of data to determine whether practitioners are adequately equipped to make every contact count.

There are a number of recommendations for consideration by commissioners. The Health and Wellbeing Strategy should retain a focus on housing as a means of improving health outcomes. It is also recommended that the Health and Housing Memorandum of Understanding is refreshed and reshaped. It is advised that there be more robust monitoring of the health impact of direct interventions on housing conditions and of the home as a cause of ill health, with the resulting data being used to target assistance to the most vulnerable households. Commissioners need to consider advice or signposting on housing conditions as a form of social prescription for patients. All health and social care staff should be equipped with the skills and knowledge to refer vulnerable householders to services. Partnership working within the City Signposting Scheme should be maximised to establish an effective single point of contact for health and housing advice, advocacy and referrals. Areas identified as having high or multiple levels of need should be targeted with coordinated actions to reduce poverty, improve energy efficiency and signpost to other services. Impact could be maximised by targeting resources towards the privately renting, in communities where multiple deprivation could be addressed via the home. It is advised that the Integrated Care Partnership include a private sector housing projects group. Commissioners are advised to reinvest in health and safety improvement services that are delivered via the home. The Fuel Poverty Strategy needs to be endorsed by the Health and Wellbeing Board and included as a separate chapter in the JSNA. Efforts should be made to ensure uptake of the influenza vaccine by engaging in Public Health England and NHS England vaccination campaigns.

Full JSNA for Housing with excess winter deaths and cold-related harm