



Deprivation impact analysis

*As part of Merton, Sutton and Surrey
Downs CCGs Improving Healthcare
Together: 2020-2030 programme*

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An independent report prepared by:

cobic **nuffieldtrust** **PPL**

1 Executive summary

1.1 Aims and objectives of the deprivation impact analysis

The footprints of the three CCGs of Surrey Downs, Sutton and Merton, together known as the “combined geographies”, cover a population of approximately 720,000 residents and a number of health care providers. Across this combined geography there is a need to address long term issues of sustainability, particularly for acute hospital services.

Within the combined geography this is a particular challenge for Epsom & St Helier University Hospitals NHS Trust (“the Trust”), where there has been a long standing concern about the ability to provide care sustainably. The three CCGs, and the Trust, recognise that they need to address three main challenges relating to clinical quality, providing healthcare from modern buildings and achieving financial sustainability if they are to provide high quality healthcare into the future. They recognise that in addressing these challenges any solutions will have additional considerations, including understanding any impact on deprived communities.

To support understanding of this issue the three CCGs commissioned COBIC, the Nuffield Trust and PPL to undertake an independent analysis to assess the impact of any proposed changes to major acute services for deprived communities within the combined geographies.

The approach adopted has sought to review evidence of links between overall health and deprivation, drill into the specific aspects that relate to the local context and develop initial considerations in relation to emerging proposals for major acute services. We also consider the potential for addressing any impacts found and recommend further areas for the Improving Healthcare Together 2020-2030 programme (“the IHT Programme”) to consider as it develops proposals for consultation.

1.2 Improving Healthcare Together 2020-2030

Our work has been undertaken in the context of the Merton, Surrey Downs and Sutton CCGs’ ‘Improving Healthcare Together: 2020-2030 programme’, which aims to make informed decisions on how to resolve the long-standing healthcare challenges relating to major acute services at the Trust within the combined geographies.

This review is one strand contributing to the complex change programme which is considering a wider range of issues and impacts. Public engagement on the issues commenced during Summer 2018 and there will be a further period of review, engagement and consultation before any decisions are made on any service change next year.

An Integrated Impact Assessment (“IIA”) has been commissioned by the IHT Programme Board. The findings from this report and some areas of proposed further analysis are expected to inform the IIA, so we briefly explain the purpose of the IIA.

IAs are a key component of policy-making and help guide and appraise investment. They have long been identified as a mechanism by which potential effects on health outcomes and health inequalities can be identified and redressed prior to implementation. According to the World Health Organisation (WHO), impact assessments (including IAs) provide “*a combination of procedures, methods and tools by which a policy, programme or project may*

be judged as to its potential effects on the health of a population, and the distribution of those effects within the population”¹.

The aim of the IIA is to explore the positive and negative consequences of different proposals and produce a set of evidence-based, practical recommendations, which can then be used by decision-makers to maximise the positive impacts and minimise any negative impacts. It is important to note that the purpose of the impact assessment is not to determine the decision; rather they act to assist decision-makers by giving them better information on how best they can promote and protect the well-being of the local communities that they serve.

It is regarded as best practice to assess impacts for the whole population and highlight the sections of the population which will be differently or disproportionately affected by the impacts. These might be geographical communities or certain socio-economic or ‘equality’ groups.

A health impact assessment (HIA), a travel and access impact assessment, an equality impact assessment (EqIA) (in which the impacts of the proposals on protected characteristic groups and deprived communities are assessed) and a sustainability impact assessment will be conducted as part of the IIA.

1.3 Health needs of the combined geographies

An analysis of the health needs in each of the CCG areas is provided in Section 4 illustrating the specific characteristics in each area. Across the combined geography a number of common issues are apparent and relevant to this analysis, including:

- Populations across the combined geographies are ageing which is, and will continue to be, the single largest driver of health and care usage and costs;
- The main causes of premature death are cancer, circulatory disease, and respiratory disease;
- Prevalence rates across the most common long-term conditions (LTCs) in the combined geographies are lower, or comparable to those rates seen nationally, with the exception of heart failure in Surrey Downs, which is marginally higher;
- Prevalence rates of depression are lower in the combined geographies (11.7% in Merton, 14.1% in Surrey Downs, and 13.7% in Sutton) than the national average (15.0%). However, this is just one measure of mental health, and other measures such as adolescent mental health should be examined; and
- There tends to be a higher prevalence of LTCs in more deprived communities;
- Age is also a significant driver of LTCs, Surrey Downs typically has higher prevalence rates than Sutton and Merton, primarily due to its significant older population;
- Within the combined geographies, the proportion of those from Black, Asian, and Minority Ethnic (“BAME”) backgrounds is 30%, which is lower than in London (55%), but higher than the national average (20%). It is varied within the combined geographies: 52% of the Merton population are from BAME backgrounds, 29% in Sutton, and 16% in Surrey Downs.

¹ Source: World Health Organisation (2017): ‘*Health Impact Assessment*’.

1.4 Deprived communities and health factors

People in Sutton, Merton and, particularly, Surrey Downs are not significantly deprived when compared to the rest of England. However, there is local variation within the combined geography and areas which are more deprived (which we examine further in Section 5).

Grouping areas into quintiles according to the level of deprivation within a larger geography is a way of identifying localities that are in greater need of services. Deprivation covers a broad range of issues and refers to unmet needs caused by a lack of resources of all kinds, not just financial. The country is split into small geographical areas called Lower Super Output Areas (LSOAs) which are then ranked according to the Index of Multiple Deprivation – an overall measure of multiple deprivation experienced by people living in an area.

Ranked nationally, Merton ranks 160 out of 209 CCGs in the overall Index of Multiple Deprivation (“IMD”), Sutton ranks 167 and Surrey Downs ranks 207 where 1 is the most deprived and 209 is the least deprived. In Merton and Sutton it is the living environment and crime domains that are driving the overall ranking, while in Surrey Downs barriers to housing is the main issue. In relation to the health domain, Merton ranks 175, Sutton ranks 164 and Surrey Downs ranks 203 out of 209.

There is however significant local deprivation within the combined geographies, particularly within Merton and Sutton where there are larger concentrations in specific lower super output areas (LSOAs) within the wards shown in Table 1-1 identifying the eleven LSOAs (totalling 17,500 people) within the combined geographies which are in the top quintile of deprivation in the country, as measured by IMD.

Note: the England wide distribution of IMD is 0.48 to 92.6, where a higher IMD value indicates more deprivation. In England, the mean IMD value is 21.67, and the upper quintile is any area with an IMD of higher than 33.93. In the combined geographies, the average score is 11.94.

Of the 11 LSOAs in the top quintile, none are in Surrey Downs, four are in Merton, and seven are in Sutton. Sutton also has the LSOA with the most deprived population as measured by IMD, with a value of 51.26 (in Beddington South). In terms of health deprivation and disability, the LSOAs range from being in the most deprived decile, to the 5th most deprived decile. Individual domains within the IMD are examined in more detail in Section 5.

Table 1-1: LSOAs in the combined geographies in the most deprived quintile in England

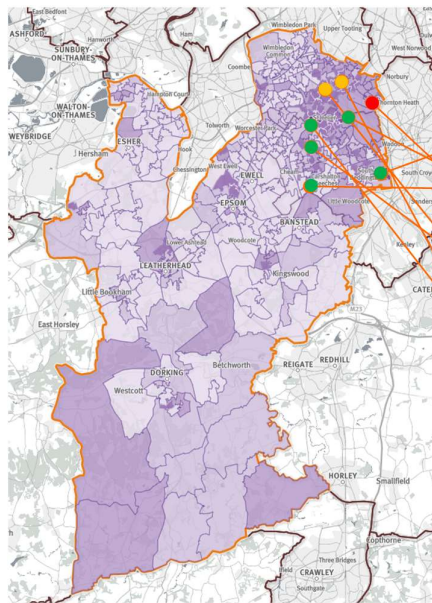
CCG	Ward	LSOA code	IMD score (higher = more deprived)	Health Deprivation and Disability decile (where 1 is most deprived 10%)
Sutton	Beddington South	019c	51.26	2
Sutton	Belmont	021a	42.3	1
Sutton	Wandle Valley	001d	41.83	3
Sutton	Beddington South	019a	40.49	3
Merton	Pollards Hill	019d	39.85	5
Sutton	Sutton Central	012b	39.7	1
Merton	Cricket Green	018a	36.42	3
Sutton	St Helier	002e	35.05	3
Merton	Cricket Green	012c	34.58	4
Sutton	Beddington South	019d	34.27	3
Merton	Figge's Marsh	018d	34.22	3

Source: DCLG, *English indices of deprivation 2015*

Note: DCLG guidance is that for the Health Deprivation and Disability domain, decile (or rank) is a better measure than score

Of the LSOAs in the most deprived IMD quintile, the seven Sutton LSOAs are all within the Trust catchment area (as shown in Figure 1-1 below, and defined in Section 2.5). Of the Merton LSOAs, Pollards Hill is not in the Trust's catchment area. Figge's Marsh and the two LSOAs in Cricket Green are on the border of the catchment area. It is noted that further work is being undertaken around the catchment of the Trust and this should be considered at a later stage.

Figure 1-1: LSOAs in most deprived quintile in the combined geographies and the Trust’s catchment area



Ward	LSOA	IMD
Beddington South	Sutton 019C	51.26
	Sutton 019A	40.49
	Sutton 019D	34.27
Belmont	Sutton 021A	42.3
Wandle Valley	Sutton 001D	41.83
Pollards Hill	Merton 019D	39.85
Sutton Central	Sutton 012B	39.7
Cricket Green	Merton 018A	36.42
	Merton 012C	34.58
St Helier	Sutton 002E	35.05
Figge's Marsh	Merton 018D	34.22



Source: Trust catchment area sourced from *Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "Issues Paper"*. LSOA IMD data from Table 1-1.

Whilst there are no LSOAs in Surrey Downs CCG in the top quintile for deprivation, the CCG has a significant GRT (Gypsy Roma Traveller) population, who typically have poorer health outcomes than those from non GRT communities.

There is a strong body of evidence about deprived communities having worse health outcomes. We tested a number of hypothesis to understand this further in relation to the major acute services relevant to the IHT Programme confirming:

- 1) People in deprived communities have increased acute healthcare need;
- 2) Acute health need is driven by age and other social factors, as well as deprivation, but these factors are linked;
- 3) Deprivation is correlated with poor mental health which can lead to difficulties in negotiating the welfare/health system, as well as impact negatively on physical LTCs;
- 4) People in deprived communities have increased acute healthcare usage;
- 5) Acute health usage is driven by age and other social factors, as well as deprivation, but these factors are linked;
- 6) Geographical factors are important – the closer to a hospital, the higher usage of acute hospital services by patients than those who live further away; and
- 7) Some of deprived communities' usage of acute hospital services could be dealt with in primary/community care.

1.5 Health care within deprived communities

National evidence suggests that an inverse care law can apply within deprived communities, where those who need most medical care, typically are often least likely to receive it. In particular:

- In elective care the high number of LTCs within deprived communities would suggest that there would be more elective procedures, whereas the data suggests this is not the case;
- Less access to primary care with lower levels of GP registration, greater difficulty in getting a GP appointment and poorer perception of the quality of primary care;
- Wealthier older people, despite being in better health, make more use of GPs, outpatient visits and dentists, and hospital admissions;
- There is evidence that more deprived communities have worse maternal outcomes, particularly in the fourth and fifth quintiles. Babies whose mothers live in poverty have a 57% higher risk of perinatal mortality; and
- Certain ethnic minorities have a higher requirement for certain condition specific services.

There is good access to hospitals within the combined geographies, particularly in Merton and Sutton. 49.3% of households within the combined geographies have access to hospitals within 30 minutes by public transport or walking, compared to an England wide average of 38.6%. In Merton the level is 64.4%, Sutton it is 56.5% and in Surrey Downs it is 33.8%.

1.6 Relevant considerations for emerging clinical models

The purpose of this report was not to assess potential solutions but to identify the issues and considerations that should be considered as the IHT Programme develops. For this report, and the IHT Programme, which are specifically looking at major acute services, the new model of care **should not materially disadvantage deprived communities in terms of access to major acute services**. This should be for both patients, and their families and friends:

- **Patient access for using major acute services** should be analysed through the travel times modelling through conveyance by ambulance to emergency departments. Expected response and conveyance times should fall within appropriately agreed local thresholds; and
- **Family and friend access to visiting patients using major acute services** should be analysed through travel times modelling through travel times by public transport or walking. Travel times should fall within an appropriately agreed local thresholds. This should include consideration of evening, weekend, and bank holiday services.

More generally, the accountable CCGs, and their local partners, may want to consider activities to tackle deprivation and health inequalities within the combined geographies. These actions were not specifically part of the scope of this work, which has focused on the major acute services covered by the IHT Programme, and measures are likely to include community and primary care services, as well as those of partner organisations, which appear to have greater scope for impacting outcomes. Much of this work may already be being considered as part of the CCGs' and Local Authorities' local plans to improve the overall model of care for their populations.

1.7 Conclusions and areas for further analysis

From the evidence reviewed, our conclusions are that:

- 1) There is a wealth of evidence that health outcomes decline with increasing deprivation;
- 2) However, there is less evidence linking deprivation with the need/usage of the specific major acute services being considered as part of the IHT Programme;
- 3) In addition, within the combined geographies, overall deprivation is comparatively limited when compared nationally. There are, however, individual LSOA areas within the most deprived quintile nationally which is a helpful indicator of the areas of greatest need;
- 4) These pockets of the most deprived LSOAs are dispersed in several locations, in Sutton and Merton;
- 5) The geographical area of Sutton and Merton, which contains the pockets of deprivation, is fairly concentrated resulting in a relative ease of access to major acute services (see Section 1.5). Initial proposals (see Section 3.5), for any changes to locations of major acute services are likely to have relatively marginal impact on access. However this report understands that the IHT Programme is open to other possible solutions on top of these initial proposals; and
- 6) Addressing health inequality is an important goal for those accountable for population health, but decisions about the major acute service locations within the combined geographies are likely to only have marginal impacts on this. A greater impact on health outcomes for deprived communities within the combined geographies would be more likely to come from concerted effort earlier in the health and care service pathways prior to need for major acute services. It is also likely to require involvement of wider partners on the wider social determinants of health.

Notwithstanding the points above, additional work could be carried out by the IHT programme to inform decision making about any changes of locations of major acute services.

These could be covered in the IIA which will consider the current (or baseline) situation and then assess positive and negative impacts of a shortlist of options when compared to the baseline. In relation to deprivation, the IIA could:

- Include an assessment of how the initial proposals resulting in possible changes to major acute services could potentially impact on people living in the LSOAs in the most deprived quintile considering:
 - health inequalities and deprivation as part of the Health and Equality Impact Assessments
 - health need through assessing potential links identified in national evidence; and
 - health usage through analysis of patient flows and catchments for hospitals.
- Undertake travel time analyses to assess the impact on travel times for different communities to and from different service locations, by different means of transport ('blue light', public transport and car), to understand if there are material and disproportionate changes to those in deprived communities as a result of any changes of locations to major acute services.

Health outcomes are worse for more deprived communities but mitigating the impact is more likely to come from interventions earlier in the health and care pathways than at the major acute service level. Outside of the IHT Programme, the individual responsible CCGs as part of their wider responsibilities for population health management may wish to consider, for people living in the LSOAs in the most deprived quintile:

- Further research into what works in relation to the needs of these people in relation to managing demand and improving health outcomes;
- Creating an evidence-based plan targeting the specific needs of these people; and
- Formative evaluation to understand and monitor health outcomes.

2 Introduction

2.1 Project overview

Within the footprint of Merton, Surrey Downs, and Sutton CCGs (an area known as the 'combined geographies') there is a particular challenge for the Trust with regard to a long standing concern about the ability to provide care sustainably.

The three CCGs and the Trust recognise that they need to address three main challenges relating to clinical quality, providing healthcare from modern buildings and achieving financial sustainability if they are to provide high quality healthcare into the future. They equally recognise that in addressing these challenges any solutions will have additional considerations, including understanding any impact on deprived communities.

To support understanding of this issue the three CCGs commissioned COBIC, the Nuffield Trust and PPL to undertake an independent analysis to assess the impact of any proposed changes to major acute services for deprived communities within the combined geographies.

2.2 Who we are

This independent review has been undertaken in partnership by three organisations:

- **COBIC** are the pioneers of Outcomes Based Incentivised Contracting in the UK. COBIC and PPL have been working together since 2012. COBIC were involved in the development of the very early outcomes-based contracts in Bedfordshire and Milton Keynes, and since then, have worked to support areas across the UK to successfully implement new approaches to commissioning and contracting.
- **The Nuffield Trust** is an independent health charity focused on health and social care policy and how service delivery models are adapting and changing and the workforce, technological and other factors. The Nuffield Trust provide evidence based research and policy analysis for informing and generating debate.
- **PPL** is a full-service consultancy specialising in supporting commissioners and providers of health and care services across the UK. Founded in 2007, PPL has a permanent team of 30 consultants based in South London, supported by our specialist advisory group, and have past and current programmes supporting transformation and change within the local health economy.

Working together, our three organisations bring together complementary skills and experience to provide a robust and thorough analysis of the deprivation impact any proposed acute clinical changes.

2.3 National context

With the 70th anniversary of the NHS there have been a number of reviews and reflections on its successes and pressures, with a clear recognition that health and social care are systems under serious strain (Darzi review).

In June 2018 the Government announced the NHS would receive an average 3.4 per cent a year real terms increase in funding over the next five years, supported by a new 10-year long term plan to help the NHS tackle waste and improve services. The priorities for this plan will include:

- Getting back on the path to delivering agreed performance standards – locking in and further building on the recent progress made in the safety and quality of care;
- Transforming cancer care so that patient outcomes move towards the very best in Europe
- Better access to mental health services, to help achieve the government’s commitment to parity of esteem between mental and physical health
- Better integration of health and social care, so that care does not suffer when patients are moved between systems
- Focusing on the prevention of ill-health, so people live longer, healthier lives

The increased investment will be set against five financial tests to put the NHS on a sustainable footing including improving productivity and efficiency, eliminating provider deficits, reducing unwarranted variation, getting better at managing demand effectively and making better use of capital investment.

Underpinning the government agenda are drivers relating to:

- An increasing burden of healthcare demand resulting from an increasing population and in particular an increasingly old population, with pressures on funding as a result;
- Recognition that the status quo will not do as expectations increase and advances in standards of care mean that standing still is perceived as going backwards;
- A need for system wide reform with areas are looking at new models of care – care being delivered closer to home; being seen by the right person, first time;
- Difficulties in recruiting and retaining workforce (e.g. 45% of consultant posts in 2017 went unfilled due to lack of suitable applicants);²
- Evidence reinforcing the theory that populations who need healthcare the most tend not to get it (inverse care law) both in support and ability to demand or access care.

All of the above reinforce the need for any proposed solution to consider the specific needs, demands and outcomes for disadvantaged communities

2.4 Local context: Improving Healthcare Together 2020-2030 programme

Our work has been undertaken in the context of the Merton, Surrey Downs and Sutton CCGs’ (together “the combined geographies”) ‘Improving Healthcare Together: 2020-2030’ programme, which aims to resolve the long-standing healthcare challenges in the combined geographies.

This work feeds into the programme, which has a potential timeline as set out below.

² Source: Royal College of Physicians (2018), ‘Focus on physicians Census of consultant physicians and higher specialty trainees 2017–18’.

Figure 2-1: Potential timeline for any potential service change as part of the Improving Healthcare Together: 2020-2030 programme



Source: Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "Issues Paper".

More details on the programme and the local context is covered in more detail in Section 3.

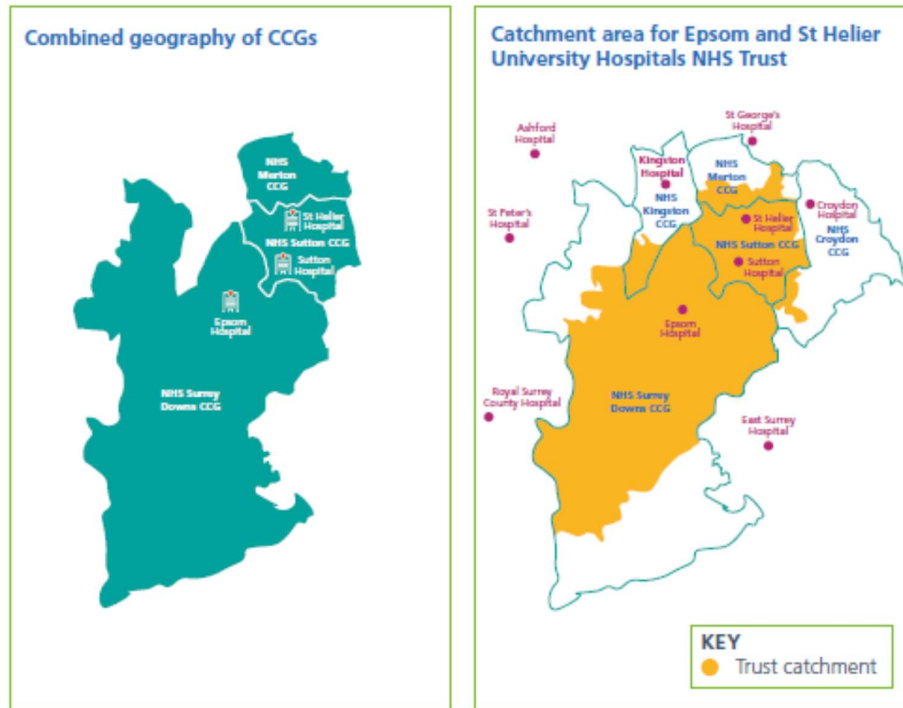
2.5 Key terms and definitions

For the purposes of this report, the following key terms will be used and their definitions are set out below.

Combined geographies – The combined geographies are made up of the three CCGs Merton, Sutton and Surrey Downs. There are approximately 720,000 residents in the combined geographies and the healthcare providers based there are shown in Figure 2-2.

Trust catchment area – The Trust catchment area is the area served by Epsom and St. Helier University Hospitals NHS Trust. Figure 2-2 shows this area.

Figure 2-2 – Combined geographies and Catchment area for Epsom and St. Helier University Hospitals NHS Trust



Source: *Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "Issues Paper"*.

Study area – The study area of this work focuses on the combined geographies. However, we still acknowledge that the Trust catchment area does not cover the entirety of the combined geographies, and that there are other hospitals relevant to the populations of the combined geographies – for example St George’s, just to the north of Merton and Croydon Hospital to the east.

Healthcare need – Health needs are deficiencies in health that require health care services, from promotion to palliation, as defined by the WHO.

Healthcare usage – Healthcare usage is the use of healthcare services. This is driven by both perceived health needs and professionally defined health needs and behaviour. Perceived health needs are the need for health services as experienced by the individual and which they are prepared to acknowledge and professionally defined health needs are the need for health services as recognised by health professionals from the point of view of the benefit obtainable from advice, preventive measures, management or specific therapy, as defined by the WHO.

Major acute services – There are six major acute services in the scope of this work. These are emergency departments, acute medicine, critical care, emergency surgery, obstetrician-led births and paediatrics. These services all depend on the use of intensive care services and specialist input for patients who are the highest risk and sickest.

Deprived communities – groups of people who are damaged as a result of lack of something. The seven domains of deprivation according to the widely used Index of Multiple Deprivation

(IMD) are: income, employment, education, skills, training, health, crime, barriers to housing, and living environment.

2.6 Evaluation questions

We have been asked to respond to the following research questions:

- 1) What are the **main health needs** of the people who live in the combined geographies? This is covered in Section 4.
- 2) Based on evidence published to date, do **deprived communities** have an increased need and usage for acute hospital services? This is covered in Section 5.
- 3) Do **geographical factors** influence deprived communities in their uptake of both acute and out of hospital facilities? This is covered in Section 5.
- 4) Of the services provided by the Trust, and referencing the needs of local populations evidenced by the Joint Strategic Needs Assessments (“JSNAs”), which services are therefore critical to maintain on a very local basis and for which specific populations? This is covered in Section 6.
- 5) In the proposed **clinical model options** (as they emerge), do the services which will be retained in local hospitals, align with the services which are critical to remain locally as identified in the analysis specified above? This is covered in Section 7.
- 6) If there are areas in the proposed clinical model options which mean that some services which are critical to retain locally might move further away, is there a mitigation within the wider strategy of the relevant CCG or a way that other services could be adapted to address the potential gap? This is covered in Section 7.
- 7) If there are areas in the proposed clinical model options which mean that some services that are critical to remain locally might move further away, are there **balancing considerations** in terms of improved quality and outcomes from services operating at greater scale? This is covered in Section 7.
- 8) Are there areas **where further analysis and work should be undertaken** potentially as part of a wider future equalities impact assessment? This is covered in Section 8.

2.7 Evaluation approach

The key principle underpinning our evaluation is to **provide an independent analysis underpinned by facts and evidence**.

Our approach followed broadly the following steps:

- **Research and review of evidence base relevant to the research questions.** We have considered a range of sources including medical journals, academic papers, independent research institutes, and public data sources. This enables us to demonstrate what the prevailing evidence says about the key issues facing the combined geographies.
- **Interviews with key local stakeholders to understand local context, and the issues which are important to local people.** This piece of work is not a comprehensive public engagement, but we spoke with representatives from CCGs and Local Government for each of Merton, Surrey Downs, and Sutton, many of whom are aware of the needs and concerns of local populations, and the history of proposed acute clinical changes in the combined geographies. Those we spoke with are listed in Appendix 2

- **Test national evidence, and key themes at the local level.** Where data allows, we have tested some of the theories and hypotheses from the first two stages, with local data
- **Playing back findings with local stakeholders.** We ran a workshop with representatives from Merton, Surrey Downs and Sutton CCGs and local authorities, and the Trust to test emerging findings and ensure there was appropriate challenge from local viewpoints
- **Draft final report.** Final report summarising our findings and recommendations
- **Further work:** It is natural that as you move from the national level to the local level and to specific services, there will be less evidence on the links between deprivation and health outcomes. There are a number of areas where we propose more detailed testing at the local level, in order to further validate some of the findings. There were also some areas needing further testing which were brought out during the interviews and workshop with local stakeholders.

Key themes which emerged during our conversations with local stakeholders were:

- The move to community/primary care away from acute should be the direction of travel;
- Services shouldn't be built around acute services for young people and adults, they should be focusing on wrapping care around the frailest people so they don't need hospitalisation which will improve health outcomes;
- Key consideration for Surrey Downs is how their ageing population (and their carers) can access services;
- Public opinion stated access to health services is a key issue (for both deprived, and non-deprived areas);
- Important to contextualise distance from hospitals in terms of how close other areas are;
- In any proposed site change, it is very important for the NHS to take responsibility for accessibility of local sites;
- Want to test the argument that hospitals are needed to deal with young families
- There is a need to commission to reflect inequalities (for example high levels of deprivation in East Merton);
- Need to consider travel times to different hospital sites;
- Is there evidence on young people (16-24) using disproportionately more health services?;
- There is a perception that high usage of emergency departments by deprived communities is a good thing. Need to differentiate what usage is by department, and therefore what could be delivered in the community;
- Want to understand the requirements of the local populations in terms of health needs
- Need to understand how to best support the most deprived communities access to good health outcomes. This is likely to be by being able to access local care, close to home, with access to Emergency Departments ("ED") if really necessary; and

- Need to understand objectively how deprivation leads to service need, and what that need is.

We have considered these key themes when pursuing key lines of enquiry within this research. It is important to reiterate that our recommendations are based upon evidence and that stakeholder views were useful in framing areas to explore.

2.8 Aims and scope of this report

The aim of this report is to:

- Independently answer the research questions set out in Section 2.6;
- Provide recommendations to the Improving Healthcare Together: 2020-2030 programme, which focuses on possible changes to six major acute services (defined in Section 2.5). However, we acknowledge these cannot be considered in isolation, so where appropriate, we provide recommendations to other parts of the health system (e.g. primary and community care). For example for other relevant programmes which are being taken forward independently within the combined geographies e.g. Integrated Care System development programmes in Sutton;
- Inform and help guide the IIA which is being undertaken subsequent to this report;
- Inform Merton, Surrey Downs and Sutton CCGs' evaluation of potential solutions; and
- Contribute to the development of a Pre-Consultation Business Case.

This report **does not**:

- **assess specific acute clinical models proposed in the combined geographies.** Rather, it provides a set of tests and frameworks which should be considered when making a decision about whether a clinical model is suitable for the populations of the combined geographies;
- **aim to provide comprehensive public/stakeholder engagement.** It has relied on a smaller number of interviews and engagement to gain local context, and to test emerging findings with. Additional consultation will be required, which is expected as part of the Improving Healthcare Together: 2020-2030 programme; and
- **repeat the analysis done within the high level case for change.** It does not challenge the need, within the combined geographies, to make changes to certain major acute services in order to: 1) deliver clinical quality; 2) provide healthcare from modern buildings; and 3) achieve financial sustainability.

3 Improving Healthcare Together: 2020 – 2030 programme

3.1 Overview

It is important to position this work in some local context in terms of some of the potential changes being discussed, and why they are being suggested. However, as set out in Section 2.8, this report does not repeat the analysis done within the high level case for change to make changes to certain major acute services.

The 'Improving Healthcare Together: 2020-2030' programme is an initiative led by Merton, Surrey Downs, and Sutton CCGS, which aims to resolve the long-standing healthcare challenges in the combined geographies. It focuses on how healthcare needs to be delivered in the 2020s and beyond, with the 'burning platform' of if current issues are not resolved, it will not be possible to maintain all the services which are currently being provided locally and which populations need.³ This programme focuses on potential changes to major acute services.

3.2 Case for change

The current situation is not a viable one, with three key issues affecting the need for change:⁴

- 1) **Improving clinical quality:** Clear clinical standards defined by the three commissioners in line with national best practice in 2017 for six acute services set out, amongst other things, expected senior staffing levels. All local providers of acute patient care in the said they believed they could meet these quality standards, with the exception of the Trust. Based on the agreed standards, there is a shortage of consultants in emergency departments, acute medicine and intensive care. The Trust is not meeting the Royal College of Emergency Medicine guidance for consultant cover and this is something recently identified by the Care Quality Commission (CQC) the regulator of services, when it inspected acute services. Additionally, there is also a shortage of middle grade doctors and nursing staff;
- 2) **Providing healthcare from modern buildings** Many of the Trust's buildings were built before the NHS was founded and are rapidly ageing. They are not designed for modern healthcare, an issue repeatedly highlighted by the CQC, including in its latest report (May 2018). The Trust has a very significant and critical backlog of maintenance and the deterioration of the estate is affecting the day-to-day running of clinical services and patients' experience; and
- 3) **Achieving financial sustainability:** The Trust has an underlying financial deficit which is getting worse each year. In 2013/14 it was around £7million and in 2017/18 it has increased to around £37m. This growing deficit is driven by unavoidable increases in costs for clinical workforce including temporary staff, increasing costs for estates maintenance and decreasing opportunities for changing ways of working. The financial position will continue to worsen unless changes are made.

³ Source: Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "*Issues Paper*".

⁴ Source: Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "*Issues Paper*".

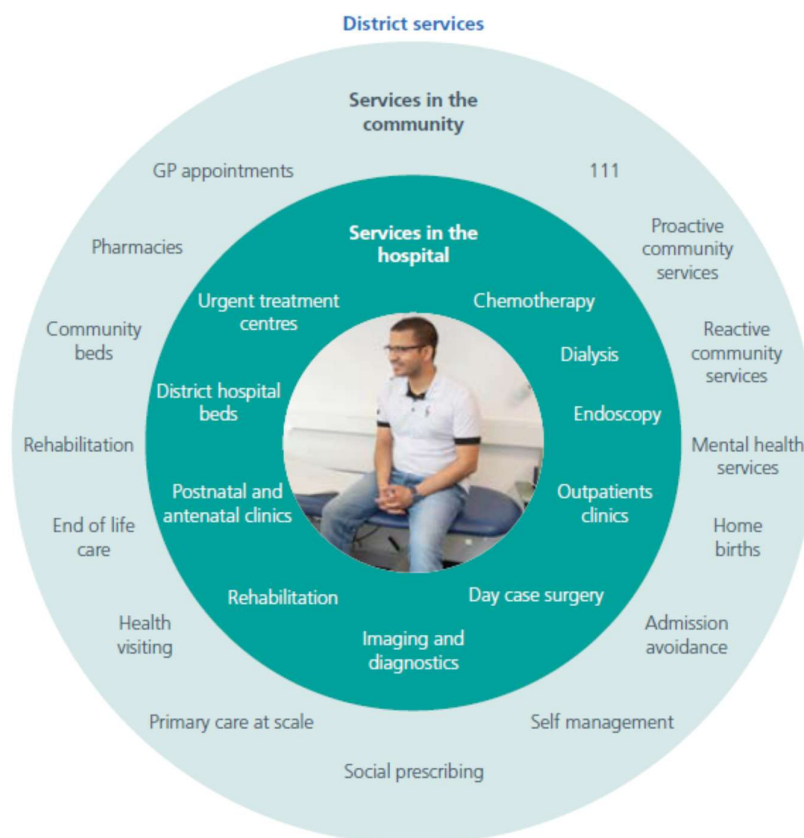
3.3 What needs to change

In the context of the national move towards moving appropriate care closer to people’s homes, whilst still having properly staffed, accessible emergency care available. Local issues mentioned in Section 3.2 show that the current situation in the combined geographies is unsustainable, and there needs to be changes. The three CCGs believe that it is major acute services which may need to change. Namely: emergency department; acute medicine; critical care; emergency surgery; births; and paediatric ED and inpatient paediatrics.

3.4 What will not change

Most health services will not change as a result of Improving Healthcare Together: 2020-2030. Primary, community, and district acute services (including urgent treatment services, outpatients day case surgery, low-risk antenatal and postnatal care, imaging and diagnostics, and district beds) can continue to be developed through local strategies, which includes looking at delivering care in a more integrated way. District services, and how they relate to other services are shown in the Figure 3-1 below.

Figure 3-1: District services and how they relate to other services



Source: *Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "Issues Paper"*.

3.5 Proposed setting of care locations

The current potential solutions from the provisional shortlist developed by the Programme are:⁵

- 1) Locating major acute services (as defined in Section 2.5) at Epsom Hospital, and continuing to provide all district services (as set out in Figure 3-1) at both Epsom and St Helier Hospitals.
- 2) Locating major acute services at St Helier Hospital, and continuing to provide all district hospital services at both Epsom and St Helier Hospitals.
- 3) Locating major acute services at Sutton Hospital, and continuing to provide all district services at both Epsom and St Helier Hospitals.

However this report understands these three proposed locations are merely the initial proposals, and that the Programme is open to other possible solutions for major acute service locations.

3.6 What happens next – Integrated Impact Assessment

This review is one strand contributing to a complex change programme which is considering a wider range of issues and impacts. Public engagement on the issues commenced during Summer 2018 and there will be a further period of review, engagement and consultation before any decisions are made on any service change next year.

An IIA has been commissioned by the Programme Board. The findings from this report and some areas of proposed further analysis are expected to feed into this IIA, so we briefly explain the purpose of the IIA. IIAs are a key component of policy-making and help guide and appraise investment.⁶ They have long been identified as a mechanism by which potential effects on health outcomes and health inequalities can be identified and redressed prior to implementation. According to the World Health Organisation (WHO), impact assessments (including IIAs) provide “a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population”.⁷

The aim is to explore the positive and negative consequences of different proposals and produce a set of evidence-based, practical recommendations, which can then be used by decision-makers to maximise the positive impacts and minimise any negative impacts.⁸ It is important to note that the purpose of impact assessments is not to determine the decision about which option would be selected; rather they act to assist decision-makers by giving them better information on how best they can promote and protect the well-being of the local communities that they serve. This is the purpose of the IIA process.

It is regarded as best practice to assess impacts for the whole population and highlight the sections of the population which will be differently or disproportionately affected by the

⁵ Source: Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), “Issues Paper”.

⁶ Source: HM Government (2011) ‘Impact Assessment Overview’

⁷ Source: World Health Organisation (2017): ‘Health Impact Assessment. Available at: http://www.who.int/topics/health_impact_assessment/en/

⁸ Source: Herriott, N, and Williams, C (2010) ‘Health Impact Assessment of Government Policy’ .

impacts. These might be geographical communities or certain socio-economic or 'equality' groups.

A health impact assessment (HIA), a travel and access impact assessment, an equality impact assessment (EqIA) (in which the impacts of the proposals on protected characteristic groups and deprived communities are assessed) and a sustainability impact assessment will be conducted as part of the IIA.

3.7 Recommendations

- For the IHT Programme:
 - Any communications and engagement should position the IHT Programme in the context of the wider health agenda in the area around new models of care, which is likely to include the strengthening of community and primary care, asset based approaches, social prescribing, and support for self-care. Otherwise, there is a risk that that changes are being made in isolation (e.g. major acute services only)

4 Health needs of the combined geographies

4.1 Overview

The combined geographies have many health needs similar to the rest of the country, but have key local variations which are important to consider.

4.2 Merton summary

4.2.1 Population profile

Merton has 209,421 residents (2018), projected to rise to over 252,000 by 2030. As with the rest of the UK, the population is expected to age. As shown in Tables 4-1 and 4-2 below, the number of people over the age of 65 is expected to increase by 28.1% and the number of people over the age of 85 expected to increase by 33.3%.

Table 4-1: Merton over 65 age profile

Area	Current population	Current >65	Projected >65 (2030)	% change
Merton	209,421	26,000	33,300	+28.1%

Source: ONS custom age tool

Table 4-2: Merton over 85 age profile

Area	Current population	Current >85	Projected >85 (2030)	% change
Merton	209,421	3,600	4,800	+33.3%

Source: ONS custom age tool

4.2.2 Health profile

The average life expectancy for residents in Merton is 80.4 years for males and 84.2 years for females. This is higher than the national average but as shown in Table 4-3, there is variation within Merton, with life the expectancy in East Merton being lower than the national average and West Merton being higher than the national average.

Table 4-3: Merton Life Expectancy

Area	Life Expectancy	
	Male	Female
England	79.3	83
Merton	80.4	84.2
West Merton	81.9	85.1
East Merton	78.9	83.3

Source: London Borough of Merton (2018), 'The Merton Story 2018'

Merton has an avoidable mortality rate of 194.9 per 100,000 population which is higher than the rate in England of 178.4 per 100,000 population, as shown in Table 4-4 below. The main causes of premature death in Merton, as shown in Table 4-5 below, are cancer, circulatory disease and respiratory disease which matches the pattern across the country.

Table 4-4: Mortality rates from causes considered avoidable

Area	Mortality rate from causes considered avoidable (per 100,000 population)
England	178.4
Merton	194.9

Source: ONS (2018), Avoidable mortality by Clinical Commissioning Groups in England and Health Boards in Wales, 2016.

Note: Deaths that are classified as avoidable are those from causes that are considered avoidable in the presence of timely and effective healthcare or public health interventions.

Table 4-5: Main causes of premature deaths per 100,000

Condition	Merton
Circulatory disease	70.7
Cancer	124.1
Respiratory disease	26.3

Source: PHE Fingertips (2014-2016)

Table 4-6 below shows the prevalence of common conditions in Merton compared to the prevalence nationally. Merton has lower prevalence rates for all the LTCs shown in the table below.

Table 4-6: Prevalence of common conditions

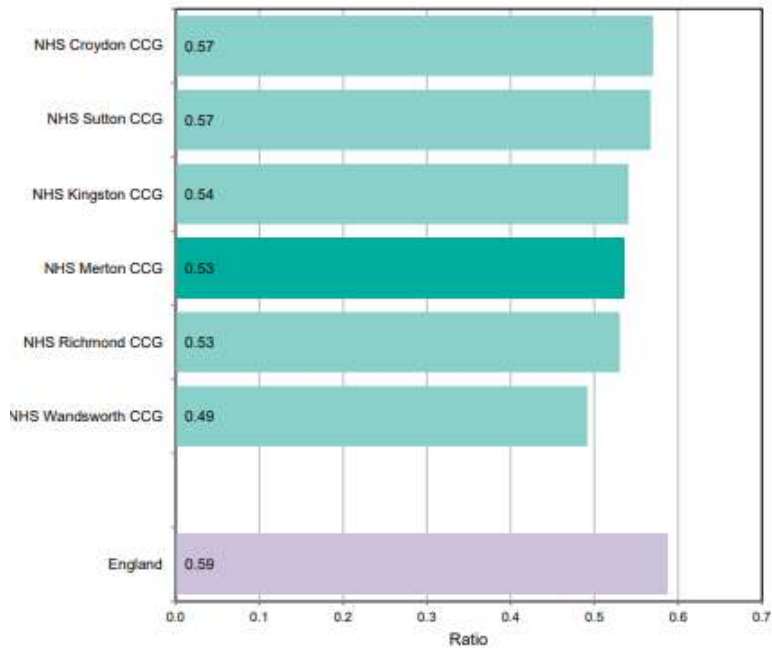
Indicator (estimated prevalence 2015)	Merton rate	Merton total number	England rate
Hypertension	17.7%	39,898	20.8%
Depression	11.7%	26,286	15.0%
CHD	7.4%	16,582	7.9%
Stroke	3.4%	7,723	3.7%
Peripheral arterial disease (PAD)	0.9%	2,009	1.2%
Heart Failure	1.0%	2,205	1.4%
COPD	1.5%	3,308	3.0%
Cancer	1.1%	2,541	2.6%

Source: The Merton rate is calculated as a weighted average prevalence for all Merton GP practices (Source: PHE Fingertips). The Merton total number is calculated as applying the weighted average prevalence to the total number registered to Merton GP practices (in 2015 this was 225,219, source NHS Business Services Authority) The England rate was taken from PHE Fingertips

As shown in Table 4-5, Circulatory disease is a major cause of premature death in Merton. Hypertension is a major risk factor for circulatory disease and as shown in Table 4-6, Merton has almost 40,000 individuals estimated to have hypertension.

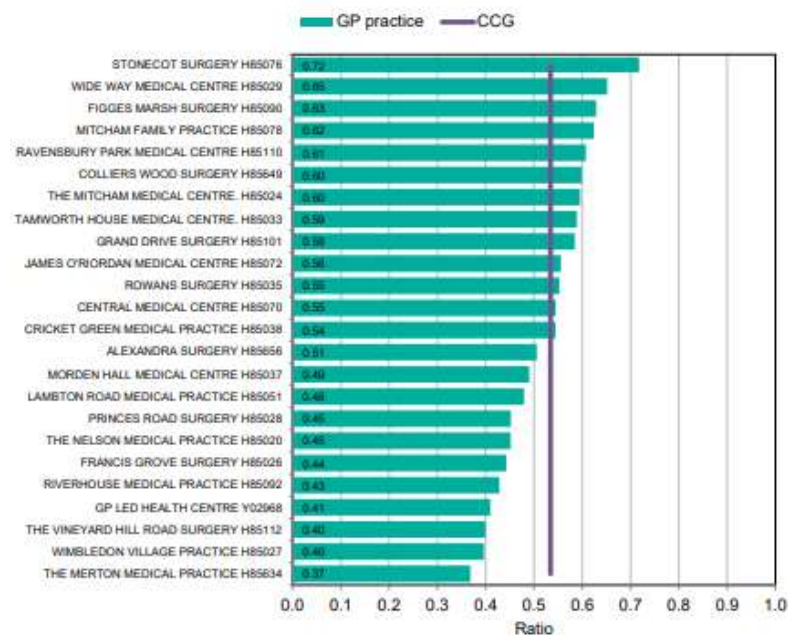
As shown in Figure 4-1, the ratio of those diagnosed with hypertension versus those expected to have hypertension is 0.53. This suggests that only 53% of the people with hypertension in Merton have been diagnosed. In addition to this, there is significant local variation, as shown in Figure 4-2, with the GP practice ratio of observed to expected hypertension prevalence range from 0.37 to 0.72.

Figure 4-1: Hypertension observed prevalence compared with expected prevalence by CCG, comparison with CCGs in the STP.



Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Merton CCG, June 2017

Figure 4-2: Hypertension observed prevalence compared with expected prevalence by GP practice.

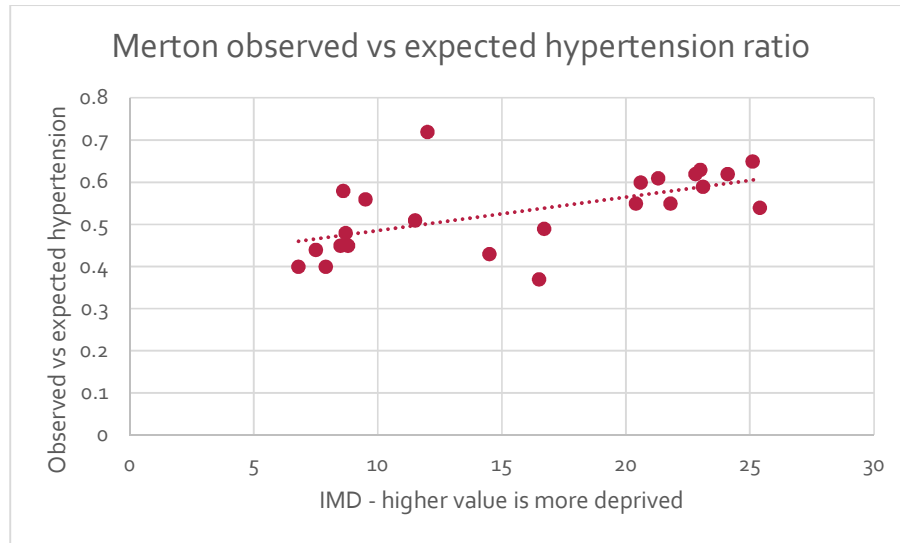


Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Merton CCG, June 2017

It can be helpful to assess how deprivation affects diagnosis rates. In Merton, as shown in Figure 4-3 below, there are higher rates of diagnosis of hypertension for GP practices in more deprived

communities. This broadly indicates that health needs are being identified in more deprived communities.

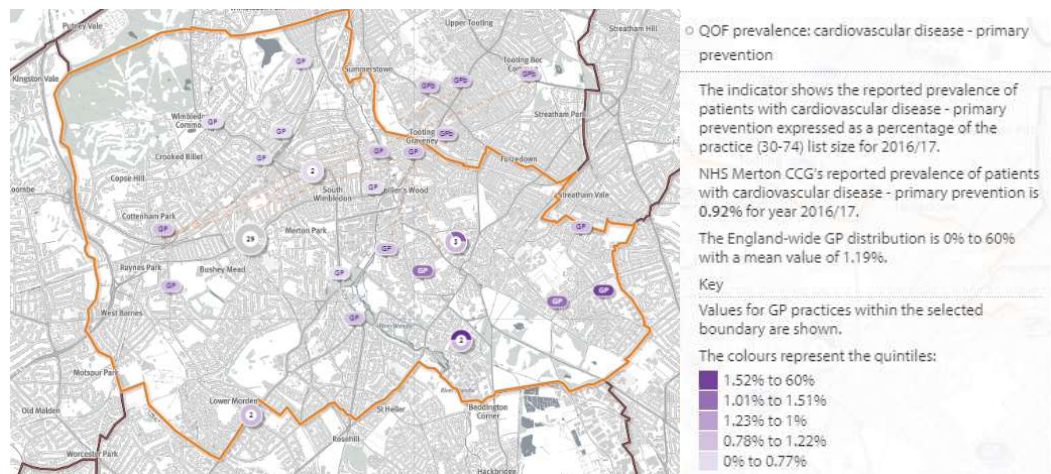
Figure 4-3: Merton observed vs expected hypertension ratio by deprivation of GP population



Source: Data on observed vs expected hypertension taken from: Public Health England Primary Care Intelligence Packs (CVD) – NHS Merton CCG, June 2017; data on IMD by GP practice taken from DCLG English indices of deprivation 2015

As the map in Figure 4-4 below shows, there is a higher prevalence of CVD in the GP practices in East Merton when compared to West Merton, further indicating local variation. This broadly supports the theory that there are higher LTC prevalence rates in areas of higher deprivation (see map of deprivation by LSOA for Merton, in Section 5).

Figure 4-4: CVD prevalence by GP practice – Merton



Source: Public Health England SHAPE tool – CVD prevalence by quintile by GP practice

Merton ranks 160 out of 209 CCGs in overall IMD deprivation (where 1 is the most deprived and 209 is the least deprived). More on deprivation in Merton will be covered in Section 5.2.1.

4.3 Surrey Downs summary

4.3.1 Population profile

Surrey Downs has 300,967 residents (2015), projected to rise to over 314,000 by 2030. As with the rest of the UK, the population is expected to age. As shown in Tables 4-7 and 4-8 below, the number of people over the age of 65 is expected to increase by 31.2% and the number of people over the age of 85 expected to increase by 42.8%.

Table 4-7: Surrey Downs over 65 age profile

Area	Current population	Current >65	Projected >65 (2030)	% change
Surrey Downs	300,967	59,600	78,249	+31.2%

Source: Surrey-i

Table 4-8: Surrey Downs over 85 age profile

Area	Current population	Current >85	Projected >85 (2030)	% change
Surrey Downs	300,967	7,123	13,000	+42.8%

Source: Surrey-i

4.3.2 Health profile

The average life expectancy for residents in Surrey Downs is 81.8 years for males and 85.1 years for females which is higher than the national average.

Table 4-9: Surrey Downs Life Expectancy

Area	Life Expectancy	
	Male	Female
England	79.3	83
Surrey Downs	81.8	85.1

Source: Surrey Downs CCG Health Profile 2015

Surrey Downs has an avoidable mortality rate of 165.1 per 100,000 population which is lower than the rate in England of 178.4 per 100,000 population, as shown in Table 4-10. The main causes of premature death in Surrey Downs, as shown in Table 4-11, are cancer, circulatory disease and respiratory disease which matches the pattern across the country.

Table 4-10: Mortality rates from causes considered avoidable

Area	Mortality rate from causes considered avoidable (per 100,000 population)
England	178.4
Surrey Downs	165.1

Source: ONS (2018), Avoidable mortality by Clinical Commissioning Groups in England and Health Boards in Wales, 2016.

Note: Deaths that are classified as avoidable are those from causes that are considered avoidable in the presence of timely and effective healthcare or public health interventions.

Table 4-11: Main causes of premature deaths per 100,000

Condition	Surrey Downs
Circulatory disease	60.5
Cancer	106.1
Respiratory disease	20.3

Source: Surrey Downs: NHS Digital (CCG OIS Indicator 1.6 2009-2015)

Table 4-12 below shows the prevalence of common conditions in Surrey Downs compared to the prevalence nationally. Surrey Downs has lower prevalence rates for all the conditions listed below compared to the rest of the country, with the exception of heart failure.

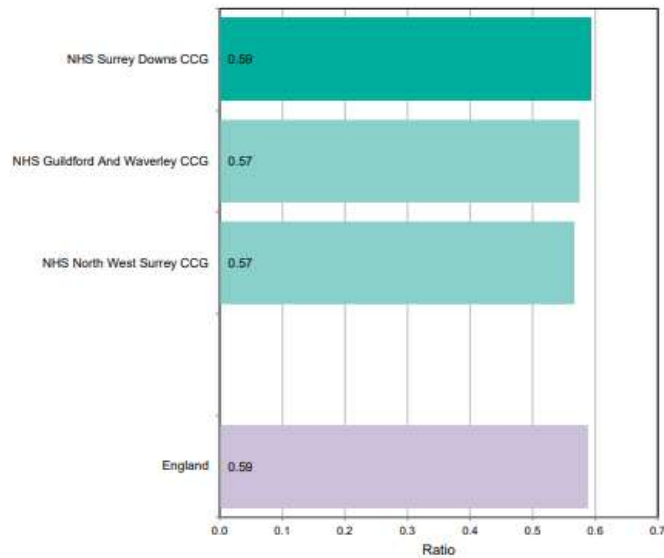
Table 4-12: Prevalence of common conditions

Indicator (estimated prevalence 2015)	Surrey Downs rate	Surrey Downs total number	England rate
Hypertension	20.4%	62,698	20.8%
Depression	14.1%	43,148	15.0%
CHD	6.8%	20,758	7.9%
Stroke	3.6%	10,941	3.7%
Peripheral arterial disease (PAD)	0.9%	2,828	1.2%
Heart Failure	1.5%	4,714	1.4%
COPD	1.9%	5,889	3.0%
Cancer	1.6%	4,888	2.6%

Source: The Surrey Downs rate is calculated as a weighted average prevalence for all Surrey Downs GP practices (Source: PHE Fingertips). The Surrey Downs total number is calculated as applying the weighted average prevalence to the total number registered to Surrey Downs GP practices (in 2015 this was 306,691, source NHS Business Services Authority) The England rate was taken from PHE Fingertips

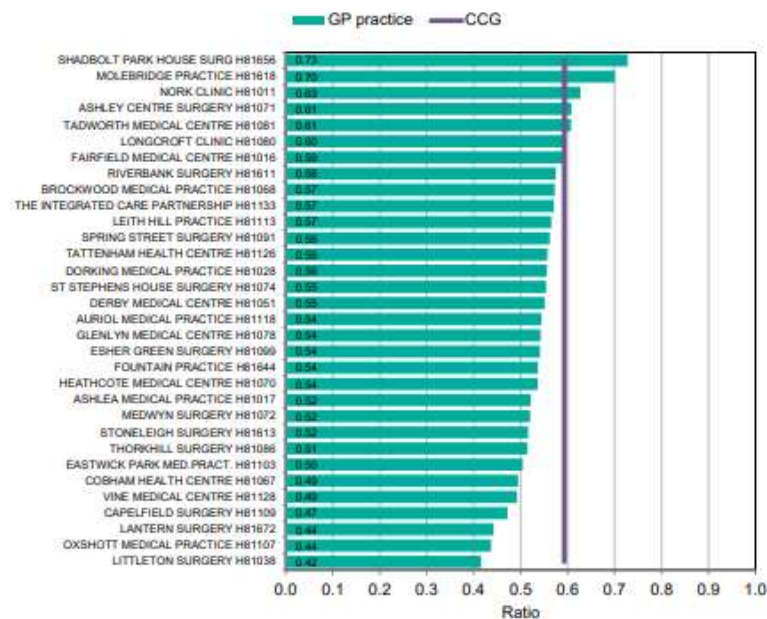
As shown in Table 4-11, circulatory disease is a major cause of premature death in Surrey Downs. Hypertension is a major risk factor for circulatory disease and as shown in Table 4-12, Surrey Downs has a prevalence rate of 20.4%. As shown in Figure 4-5, the ratio of those diagnosed with hypertension versus those expected to have hypertension is 0.59. This suggests that 59% of the people with hypertension in Surrey Downs have been diagnosed. In addition to this, there is significant local variation, as shown in Figure 4-6, with the GP practice ratio of observed to expected hypertension prevalence range from 0.37 to 0.72.

Figure 4-5: Hypertension observed prevalence compared with expected prevalence by CCG, comparison with CCGs in the STP.



Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Surrey Downs CCG, June 2017

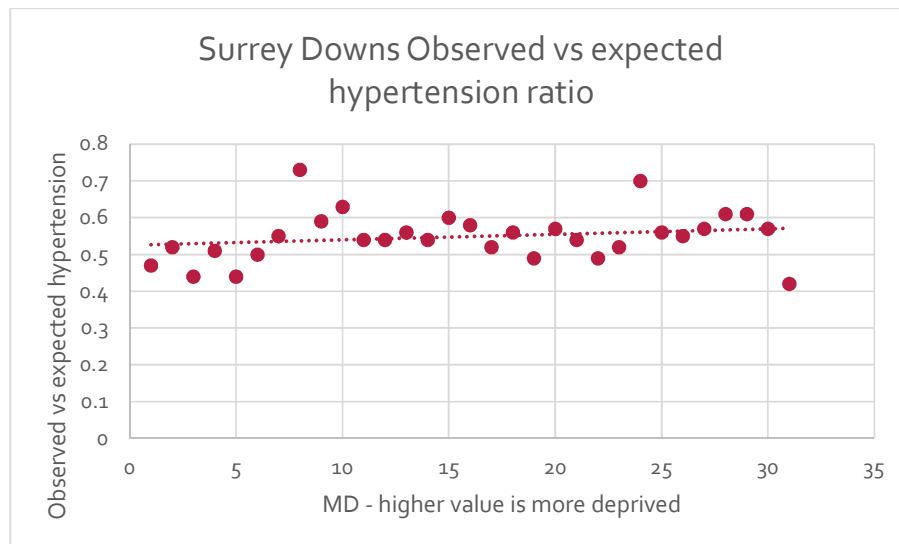
Figure 4-6: Hypertension observed prevalence compared with expected prevalence by GP practice.



Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Surrey Downs CCG, June 2017

It can be helpful to assess how deprivation affects diagnosis rates. In Surrey Downs, as shown in Figure 4-7 below, there is relatively little difference in rates of diagnosis for hypertension between GP practices looking after less versus more deprived populations.

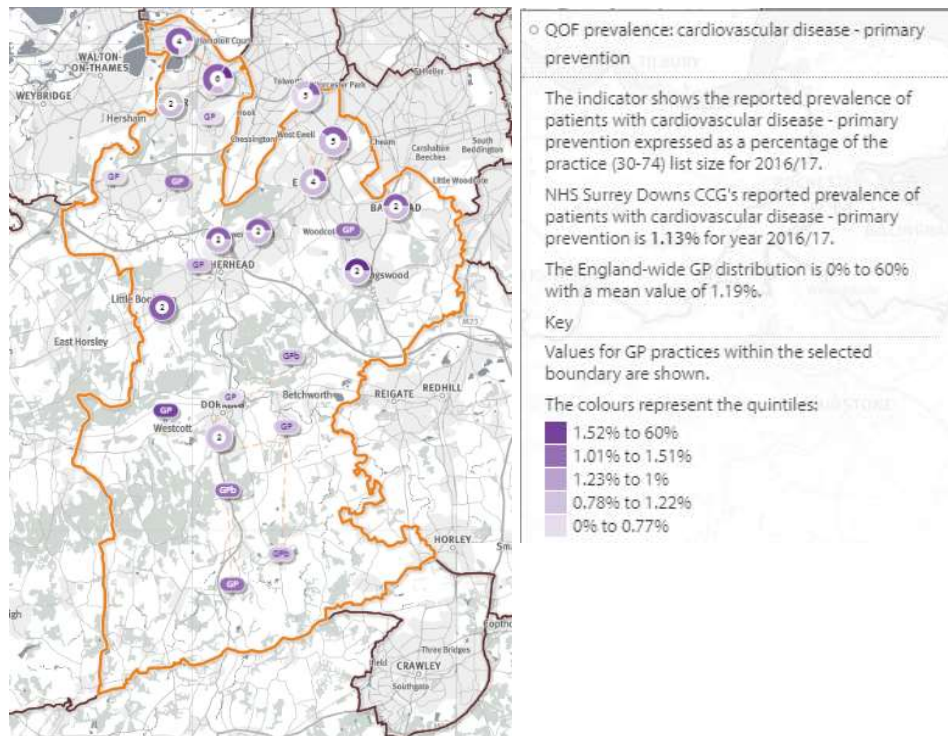
Figure 4-7: Surrey Downs observed vs expected hypertension ratio by deprivation of GP population



Source: Data on observed vs expected hypertension taken from: Public Health England Primary Care Intelligence Packs (CVD) – NHS Surrey Downs CCG, June 2017; data on IMD by GP practice taken from DCLG English indices of deprivation 2015

As the map in Figure 4-8 below shows, there is not a clear pattern between prevalence rates of CVD in GP practices in Surrey Downs.

Figure 4-8: CVD prevalence by GP practice – Surrey Downs



Source: Public Health England SHAPE tool – CVD prevalence by quintile by GP practice

Surrey Downs ranks 207 out of 209 CCGs in overall IMD deprivation (where 1 is the most deprived and 209 is the least deprived). More on deprivation in Surrey Downs will be covered in Section 5.2.2.

4.4 Sutton summary

4.4.1 Population profile

Sutton has 201,900 residents (2015), projected to rise to 225,800 by 2030. As with the rest of the UK, the population is expected to age. As shown in Tables 4-13 and 4-14 below, the number of people over the age of 65 is expected to increase by 28.4% and the number of people over the age of 85 expected to increase by 34.8%.

Table 4-13: Sutton over 65 age profile

Area	Current population	Current >65	Projected >65 (2030)	% change
Sutton	201,900	31,300	40,200	+28.4%

Source: ONS Custom age tool

Table 4-14: Sutton over 85 age profile

Area	Current population	Current >85	Projected >85 (2030)	% change
Sutton	201,900	4,600	6,200	+34.8%

Source: ONS Custom age tool

4.4.2 Health profile

The average life expectancy for residents in Sutton is 80.5 years for males and 84 years for females which is higher than the national average.

Table 4-15: Sutton Life Expectancy

Area	Life Expectancy	
	Male	Female
England	79.3	83
Sutton	80.5	84

Source: Sutton JSNA

Sutton has an avoidable mortality rate of 169.4 per 100,000 population which is lower than the rate in England of 178.4 per 100,000 population, as shown in Table 4-16. The main causes of premature death in Sutton, as shown in Table 5, are cancer, circulatory disease and respiratory disease which matches the pattern across the country.

Table 4-16: Mortality rates from causes considered avoidable

Area	Mortality rate from causes considered avoidable (per 100,000 population)
England	178.4
Sutton	169.4

Source: ONS (2018), *Avoidable mortality by Clinical Commissioning Groups in England and Health Boards in Wales, 2016*.

Note: Deaths that are classified as avoidable are those from causes that are considered avoidable in the presence of timely and effective healthcare or public health interventions.

Table 4-17: Main causes of premature deaths per 100,000

Condition	Sutton
Circulatory disease	63.6
Cancer	198.8
Respiratory disease	32.9

Source: PHE *Fingertips (2014-2016)*

Table 4-18 shows the prevalence of common conditions in Sutton compared to the prevalence nationally. Sutton has lower prevalence rates for all the conditions listed below compared to the rest of the country.

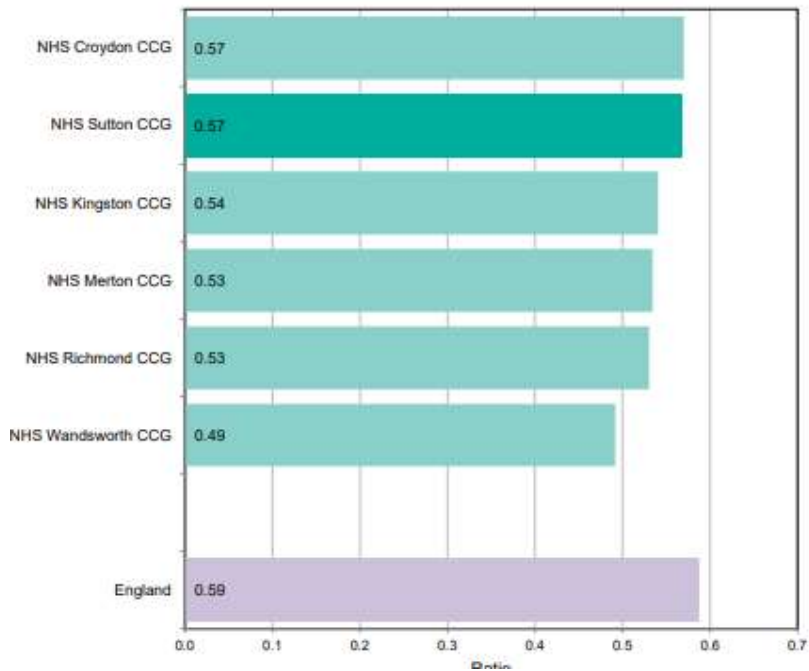
Table 4-18: Prevalence of common conditions

Indicator (estimated prevalence 2015)	Sutton rate	Sutton total number	England rate
Hypertension	11.6%	22,566	20.8%
Depression	13.7%	26,680	15.0%
CHD	7.3%	14,167	7.9%
Stroke	3.5%	6,847	3.7%
Peripheral arterial disease (PAD)	1.0%	1,880	1.2%
Heart Failure	1.2%	2,461	1.4%
COPD	1.9%	3,516	3.0%
Cancer	1.4%	2,634	2.6%

Source: The Sutton rate is calculated as a weighted average prevalence for all Sutton GP practices (Source: PHE Fingertips). The Sutton total number is calculated as applying the weighted average prevalence to the total number registered to Sutton GP practices (in 2015 this was 194,305, source NHS Business Services Authority) The England rate was taken from PHE Fingertips

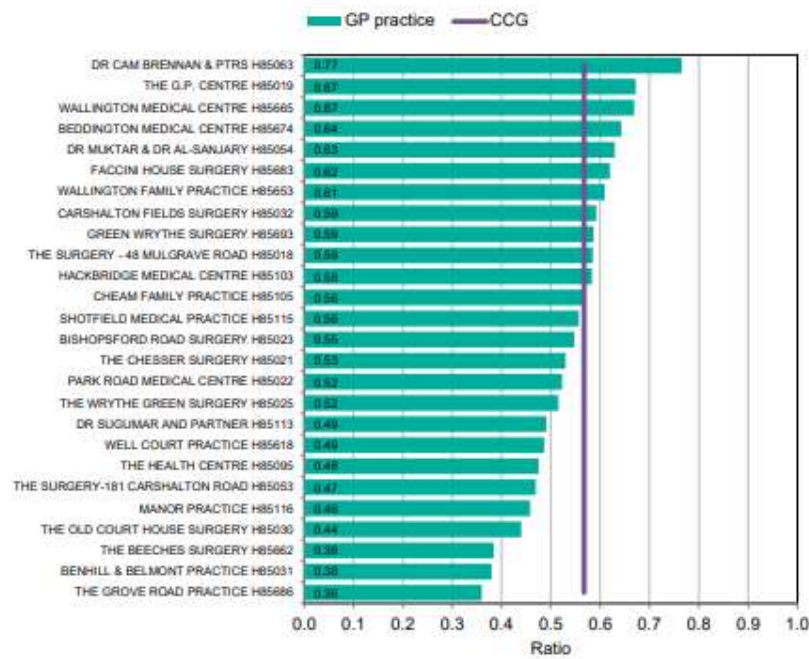
As shown in Table 4-17, Circulatory disease is a major cause of premature death in Sutton. Hypertension is a major risk factor for circulatory disease and as shown in Table 4-18, Sutton has a prevalence rate of 12.3%. As shown in Figure 4-9, the ratio of those diagnosed with hypertension versus those expected to have hypertension is 0.57. This suggests that 57% of the people with hypertension in Sutton have been diagnosed. In addition to this, there is significant local variation, as shown in Figure 4-10, with the GP practice ratio of observed to expected hypertension prevalence range from 0.33 to 0.77.

Figure 4-9: Hypertension observed prevalence compared with expected prevalence by CCG, comparison with CCGs in the STP.



Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Sutton CCG, June 2017

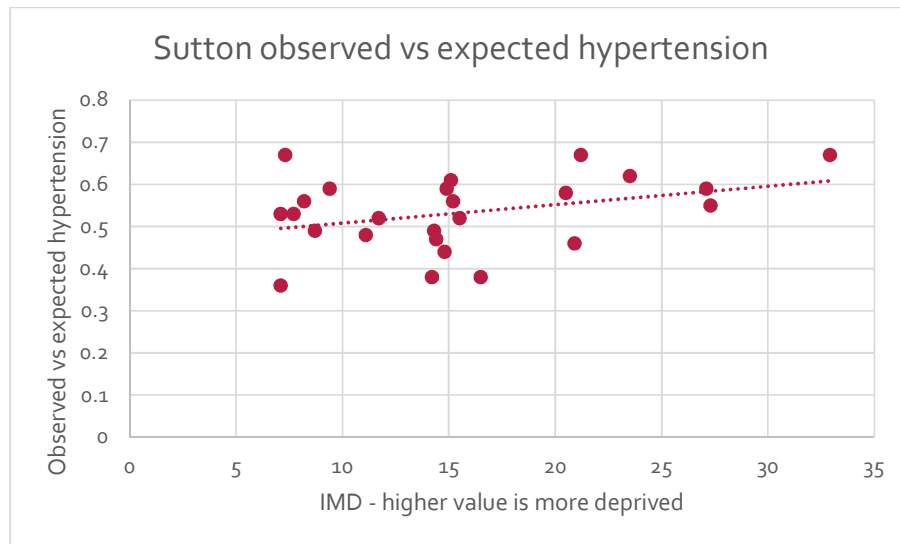
Figure 4-10: Hypertension observed prevalence compared with expected prevalence by GP practice.



Source: Public Health England Primary Care Intelligence Packs (CVD) – NHS Sutton CCG, June 2017

It can be helpful to assess how deprivation affects diagnosis rates. In Sutton, as shown in Figure 4-11 below, there are higher rates of diagnosis of hypertension for GP practices in more deprived communities

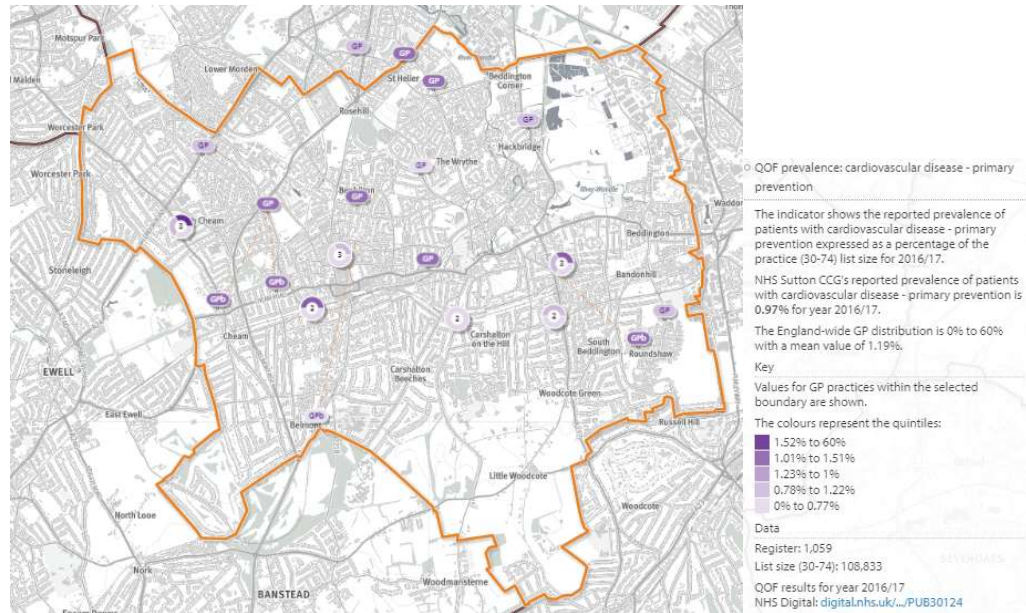
Figure 4-11: Sutton observed vs expected hypertension ratio by deprivation of GP population size



Source: Data on observed vs expected hypertension taken from: Public Health England Primary Care Intelligence Packs (CVD) – NHS Sutton CCG, June 2017; data on IMD by GP practice taken from DCLG English indices of deprivation 2015

As the map in Figure 4-12 below shows, there is generally higher prevalence of CVD in the GP practices in north and west. To some extent, this matches the areas of higher deprivation in Sutton (shown in more detail in Section 5).

Figure 4-12: CVD prevalence by GP practice – Sutton



Source: Public Health England SHAPE tool – CVD prevalence by quintile by GP practice

Sutton ranks 167 out of 209 CCGs in overall IMD deprivation (where 1 is the most deprived and 209 is the least deprived). More on deprivation in Sutton will be covered in Section 5.2.3.

4.5 What are the key distinctive features (and main variations from national) of the combined geographies

From the evidence shown in Section 4:

- People in Sutton, Merton and Surrey Downs are generally less deprived than the rest of England, however there is significant local variation (which we examine further in Section 5);
- Populations across the combined geographies are ageing which is, and will continue to be, the single largest driver of health and care usage and costs (see Figure 4-13 below);
- The main causes of premature death are cancer, circulatory disease, and respiratory disease (see Figure 4-14 below);
- Prevalence rates across the most common LTCs in the combined geographies are lower, or comparable to those rates seen nationally, with the exception of heart failure in Surrey Downs, which is marginally higher (see Figure 4-15 below)
- There tends to be a higher prevalence of LTCs in more deprived communities;
- Age is also a significant driver of LTCs – Surrey Downs typically has higher prevalence rates than Sutton and Merton, primarily due to its significant older population;
- Prevalence rates of depression are lower in the combined geographies (11.7% in Merton, 14.1% in Surrey Downs, and 13.7% in Sutton) than the national average

(15.0%). However this is just one measure of mental health, and other measures such as adolescent mental health should be examined; and

- Diagnosis rates of hypertension are higher in more deprived areas, than less deprived areas.
- Within the combined geographies, the proportion of those from Black, Asian, and Minority Ethnic (“BAME”) backgrounds is 30%, which is lower than in London (55%), but higher than the national average (20%). It is varied within the combined geographies: 52% of the Merton population are from BAME backgrounds, 29% in Sutton, and 16% in Surrey Downs.⁹

Figure 4-13: Summary population profile of the combined geographies

	Merton	Surrey Downs	Sutton	England
Current population	209,421	300,967	201,900	55,268,100
Current >65	26,000	59,600	31,300	9,882,800
Projected >65 (2030)	33,300	78,249	40,200	12,897,300
% change	+28.1%	+31.2%	+28.4%	+30.5%
Current >85	3,600	7,123	4,600	1,328,000
Projected >85 (2030)	4,800	13,000	6,200	1,930,300
% change	+33.3%	+42.8%	+34.8%	+45.4%
Life expectancy (male)	80.2	81.8	80.5	79.3
Life expectancy (female)	84	85.1	84	83

Source: Sections 4.2 – 4.4; 2016-based population projections, ONS

Figure 4-14: Main causes of premature death per 100.000 in the combined geographies

	Merton	Surrey Downs	Sutton
Circulatory disease	70.7	60.5	63.6
Cancer	124.1	106.1	198.8
Respiratory disease	26.3	20.3	32.9

Source: Sections 4.2 – 4.4.

Figure 4-15: Prevalence rates in combined geographies

	Merton	Surrey Downs	Sutton	England
Hypertension	17.7%	20.4%	11.6%	20.8%
Depression	11.7%	14.1%	13.7%	15.0%
CHD	7.4%	6.8%	7.3%	7.9%
Stroke	3.4%	3.6%	3.5%	3.7%
Peripheral arterial disease (PAD)	0.9%	0.9%	1.0%	1.2%
Heart Failure	1.0%	1.5%	1.2%	1.4%
COPD	1.5%	1.9%	1.9%	3.0%
Cancer	1.1%	1.6%	1.4%	2.6%

Source: Sections 4.2 – 4.4.

⁹ Source: ONS, 2011 Census.

4.7 Recommendations

- For the IIA:
 - The local population characteristics described in this section, and summarised in Section 4.5 should be considered (for example ethnicity), and investigated further where more granular information is needed (for example at the LSOA level for the most deprived communities) to assess the impacts of any service changes on health needs. This will be included in the Equality Impact Assessment.
- Outside of the IHT Programme, the individual responsible CCGs as part of their wider responsibilities for population health management may wish to consider – for people living in the LSOAs in the most deprived quintile – further research into what works in relation to the needs of these people in relation to managing demand and improving health outcomes

5 Deprived communities and health outcomes

5.1 Overview

We have tested a number of hypothesis in this area:

- 1) *People in deprived communities have increased acute healthcare need*
- 2) *Acute health need is driven by age and other social factors, as well as deprivation, but these factors are linked*
- 3) *Deprivation is correlated with poor mental health which can lead to difficulties in negotiating the welfare/health system, as well as impact negatively on physical LTCs*
- 4) *People in deprived communities have increased acute healthcare usage*
- 5) *Acute health usage is driven by age and other social factors, as well as deprivation, but these factors are linked*
- 6) *Geographical factors are important – the closer to a hospital, the higher usage of acute hospital services by patients than those who live further away*
- 7) *Some of deprived communities' usage of acute hospital services could be dealt with in primary/community care*

Before presenting the evidence testing each of these hypothesis, we first review the levels of deprivation in each of Merton, Surrey Downs, and Sutton CCGs. Generally speaking, people in Merton, Sutton, and (in particular) Surrey Downs, are less deprived than the rest of England. Nevertheless there is significant local deprivation, particularly in Merton and Sutton.

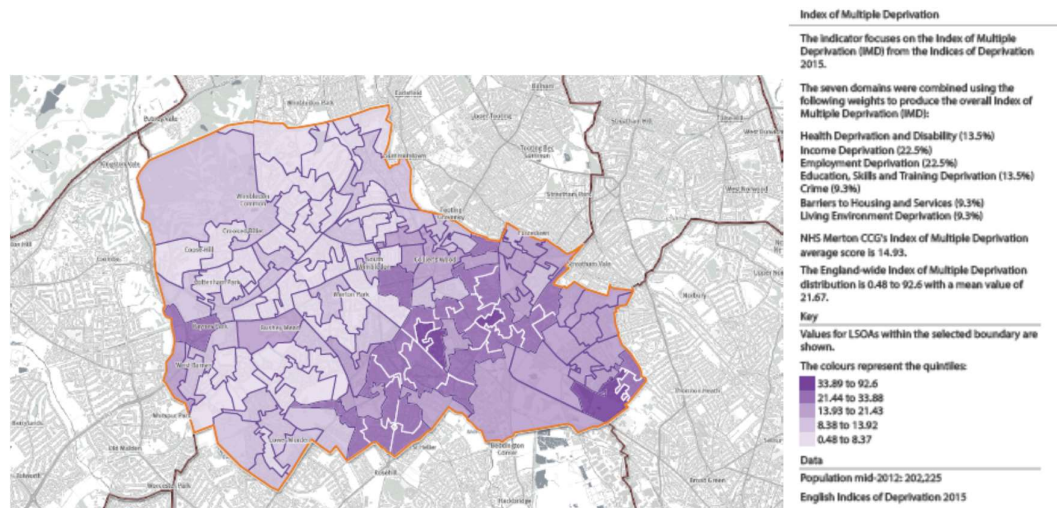
As set out in the scope of this report (Section 2.8), the focus is on possible changes to six major acute services (defined in Section 2.5). Therefore we primarily examine need and usage for these services. However, we acknowledge these cannot (and should not) be considered in isolation, so where appropriate, we mention other parts of the health system.

5.2 Deprivation in the combined geographies

5.2.1 Merton

Merton ranks 160 out of 209 CCGs in overall IMD deprivation, where 1 is the most deprived and 209 is the least deprived. Whilst this ranking indicates that Merton as a whole is in the least deprived quartile of the country, there is local variation, as show in Figure 5-1 below.

Figure 5-1: Merton CCG IMD by quintile



Source: Public Health England SHAPE tool – IMD by quintile

When the IMD deprivation breakdown is explored (see Table 5-1 below), variation can be seen again, within the domains of deprivation, with the living environment and crime being particularly notable.

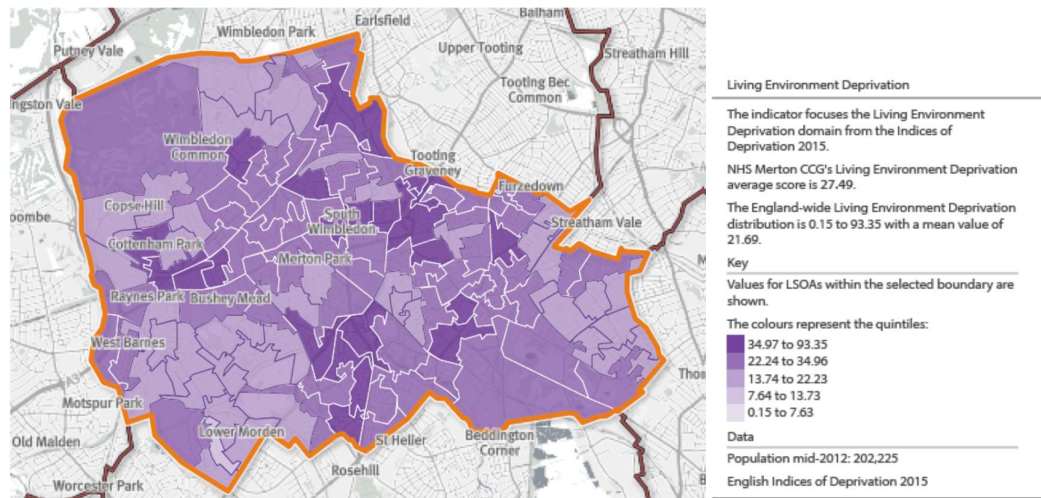
Table 5-1: IMD breakdown of Merton by rank

IMD Domain	Merton rank (out of 209, where 1 is most deprived, 209 is least deprived)
IMD	160
Income	140
Employment	178
Education, skills, training	190
Health	175
Crime	69
Barriers to housing	123
Living environment	44

Source: DCLG, English indices of deprivation 2015

When the living environment is looked at closely, as shown in Figure 5-2 below, variation across Merton can be seen.

Figure 5-2: Living environment deprivation in Merton

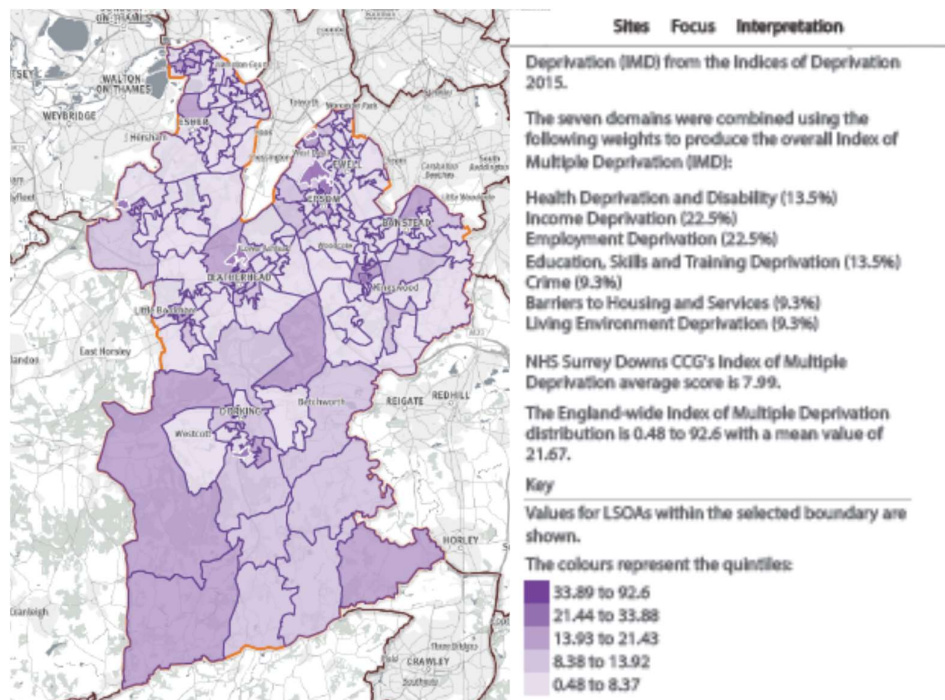


Source: Public Health England SHAPE tool – Living environment deprivation by quintile

5.2.2 Surrey Downs

Surrey Downs ranks 207 out of 209 in overall IMD deprivation, where 209 is the least deprived. As shown in Figure 5-3 below, there is some variation across the CCG but not a significant amount.

Figure 5-3: Surrey Downs CCG IMD by quintile



Source: Public Health England SHAPE tool – IMD by quintile

When the IMD deprivation breakdown is explored (see Table 5-2 below), there is again little variation, with the exception of barriers to housing.

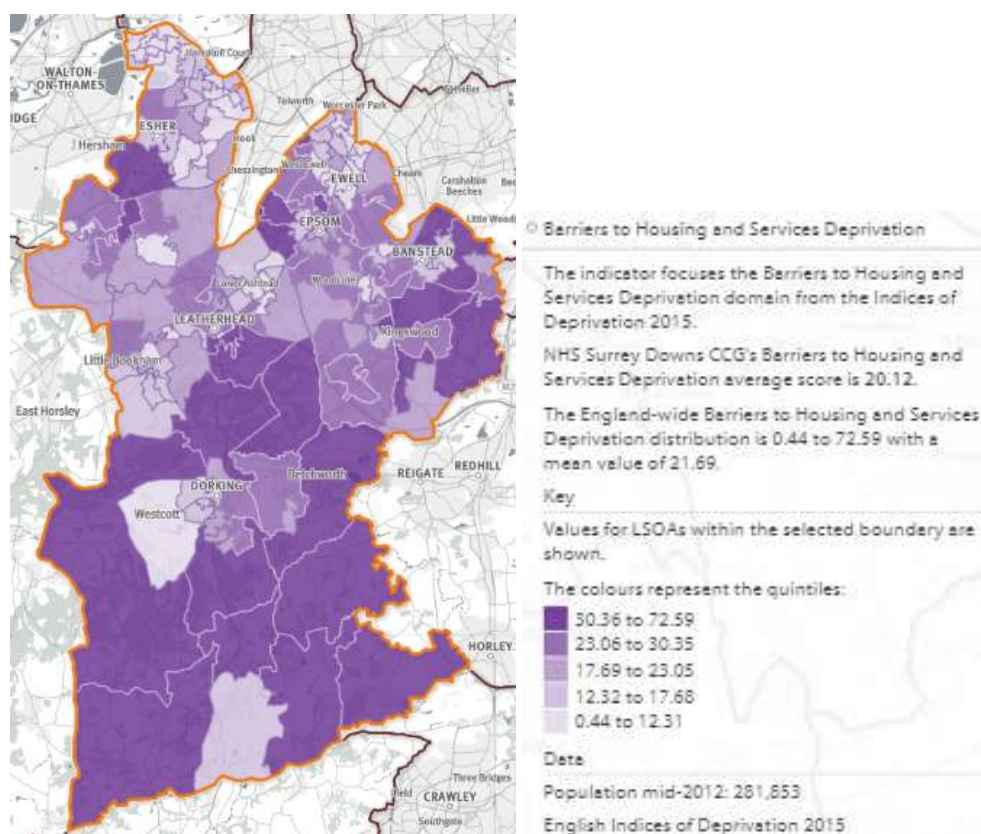
Table 5-2: IMD breakdown of Surrey Downs by rank

IMD Domain	Surrey Downs Rank(out of 209, where 1 is most deprived, 209 is least deprived)
IMD	207
Income	208
Employment	208
Education, skills, training	203
Health	203
Crime	189
Barriers to housing	121
Living environment	154

Source: DCLG, English indices of deprivation 2015

When the barriers to housing domain is looked at more closely, there is significant variation in the area, as shown in Figure 5-4 below.

Figure 5-4: Barriers to housing and services deprivation in Surrey Downs



Source: Public Health England SHAPE tool – Barriers to housing and services deprivation by quintile

In addition to the deprivation profile described above, Surrey Downs has a significant GRT (Gypsy Roma Traveller) population. The exact GRT population is unknown, but, for example, the ONS count of traveller caravans¹⁰ shows that rates of traveller caravans are more than twice as high in the Elmbridge Local Authority within Surrey Downs CCG when compared to the national

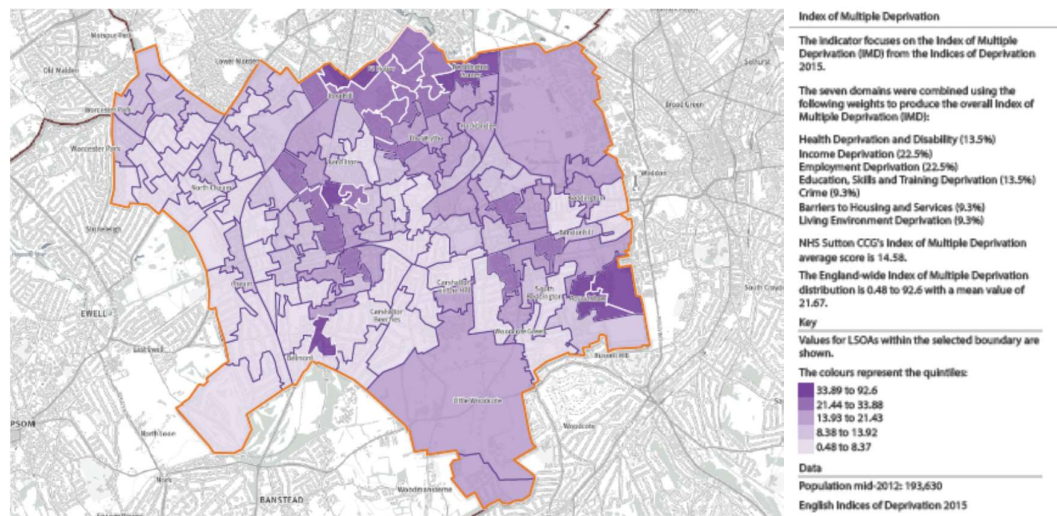
¹⁰ Source: Department for Communities and Local Government (2015), Traveller caravan count, July 2015. Count applied to ONS population projections (2018) by Local Authority.

average. National research has shown that GRT populations perform on average worse than nationally across a range of health outcomes (including life expectancy, mental ill-health, and vaccination rates) and other outcomes including education and attainment, and social inequalities.¹¹

5.2.3 Sutton

Sutton ranks 167 out of 209 in overall IMD deprivation, where 209 is the least deprived. As shown in Figure 5-5 below there is some variation across the CCG.

Figure 5-5: Sutton CCG IMD by quintile



Source: Public Health England SHAPE tool – IMD by quintile

When the IMD deprivation breakdown is explored (see Table 5-3 below), variation can be seen within the domains, with crime and living environment being particularly notable.

Table 5-3: IMD breakdown of Sutton by rank

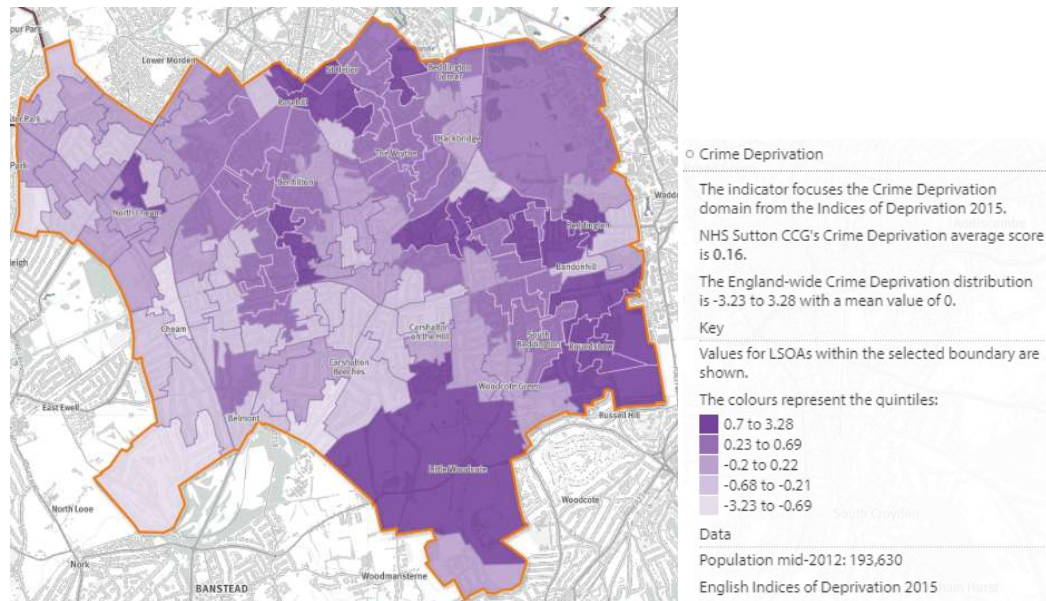
IMD Domain	Sutton Rank(out of 209, where 1 is most deprived, 209 is least deprived)
IMD	167
Income	151
Employment	169
Education, skills, training	183
Health	164
Crime	77
Barriers to housing	114
Living environment	99

Source: DCLG, English indices of deprivation 2015

¹¹ Source: Surrey County Council (2013): Needs analysis for Surrey's Gypsy Roma and Traveller children and young people 2013.

When the crime domain is looked at more closely, there is significant variation in the Sutton area, as shown in Figure 5-6 below.

Figure 5-6: Crime deprivation domain in Sutton



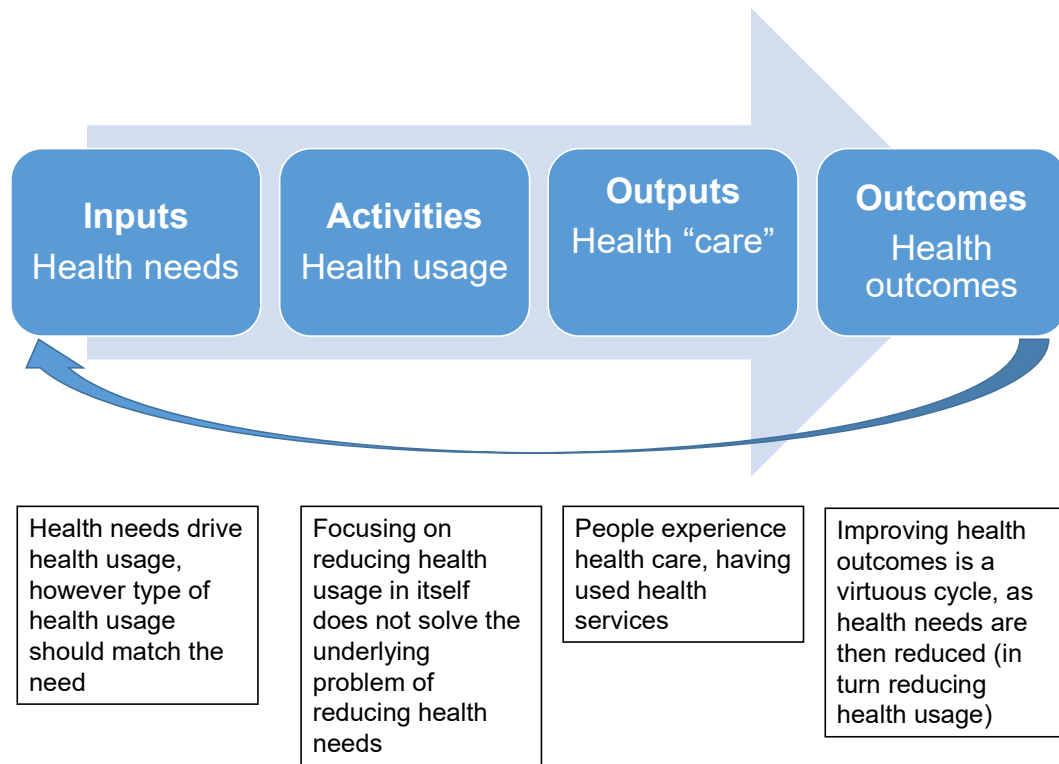
Source: Public Health England SHAPE tool – Crime deprivation by quintile

5.3 Health need, usage, and outcomes

We have been asked to assess how deprivation impacts on healthcare need and health usage (which the remainder of Section 5 examines). It is key to distinguish between need and usage. These are both defined in Section 2.5. Thinking about the two in terms of a logic model, where inputs lead to activities, outputs, and outcomes (see Figure 5-7 below), health needs are the inputs, which drive health usage.

However it is important to have the correct health usage to meet the need, or health outcomes can suffer. For example, turning up at a local GP in the middle of a heart attack is not an appropriate usage of health services. The overarching aim from any change should be to improve health outcomes, as this reduces health needs, and in turn, health usage. Focusing on reducing health usage in itself does not solve the underlying problem of reducing health needs.

Figure 5-7: Logic model of health needs, usage, care and outcomes



In the sections that follow, we test various hypotheses around deprivation and its links to health needs (Section 5.4), health usage (Section 5.5), and the matching of health needs and usage (Section 5.6).

5.4 Drivers of health needs

5.4.1 Hypothesis 1

People in deprived communities have increased acute healthcare need

5.4.2 Evidence

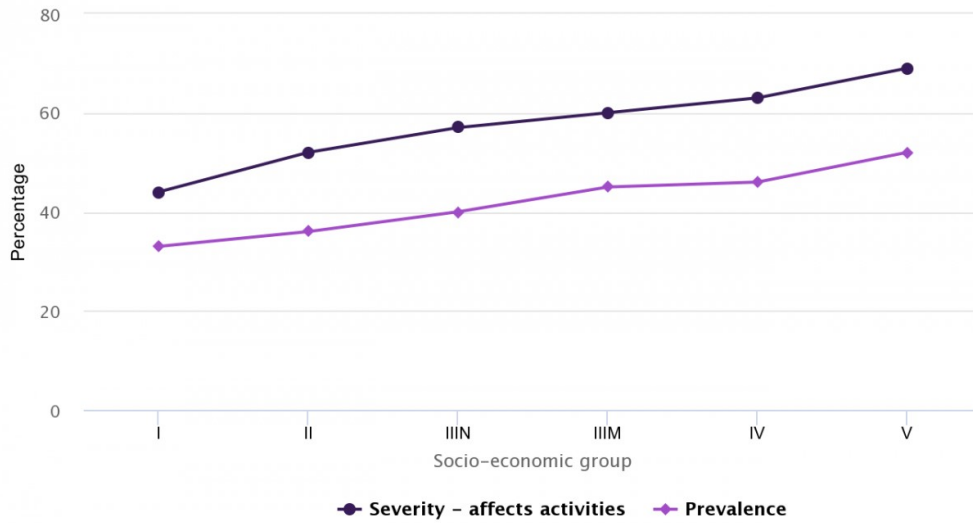
There is a large body of long standing evidence that shows that deprived communities have greater acute healthcare need, for example in the Marmot Review, 2010.

Key driver of acute healthcare need is illness requiring acute intervention, for which strong proxies are the number of long-term conditions (LTCs) and the standardised mortality rates. For example:

- Multi-morbidity is more common among deprived populations and there is evidence that the number of conditions can be a greater determinant of a patient's use of health service resources than the specific diseases. (Barnett K et al, 2012)
- "The population burden of multi-morbidity is the strongest predictor of ED attendance, which is independently associated with social deprivation." (Hull et al, 2018)

Figure 5-8 below shows that there are higher numbers of LTCs for individuals in lower socio-economic groups. Prevalence of LTCs is over 50% for those in the lowest socio-economic group, and approximately 34% for those in the highest socio-economic group.

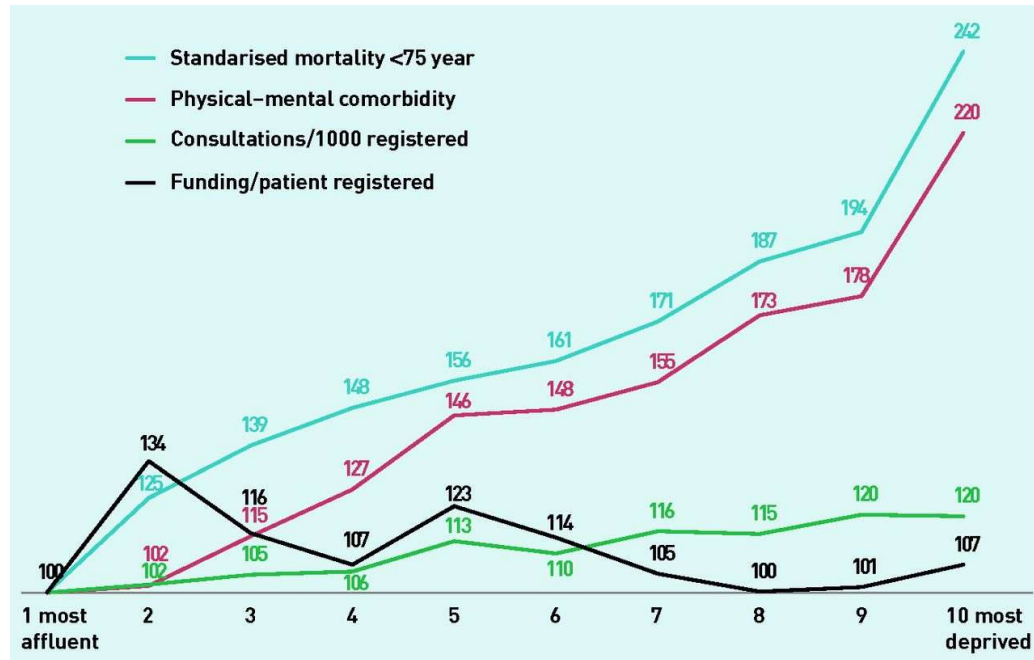
Figure 5-8: Link between socio-economic group and long term conditions prevalence and severity



Source: Department of Health (2006) in *The King's Fund (2012/2013)*

Standardised mortality ratios are significantly higher in more deprived areas, as shown in Figure 5-9 below. If standardised mortality for those under 75 years are benchmarked at 100 in the most affluent areas, they increase steadily as individuals are more deprived, rising to 262 for the most deprived decile.

Figure 5-9: Standardised mortality by deprivation decile



Source: G McLean, B Guthrie, S Mercer, G Watt (2015) 'General practice funding underpins the persistence of the inverse care law: cross-sectional study in Scotland', *British Journal of General Practice*

5.4.3 Hypothesis 2

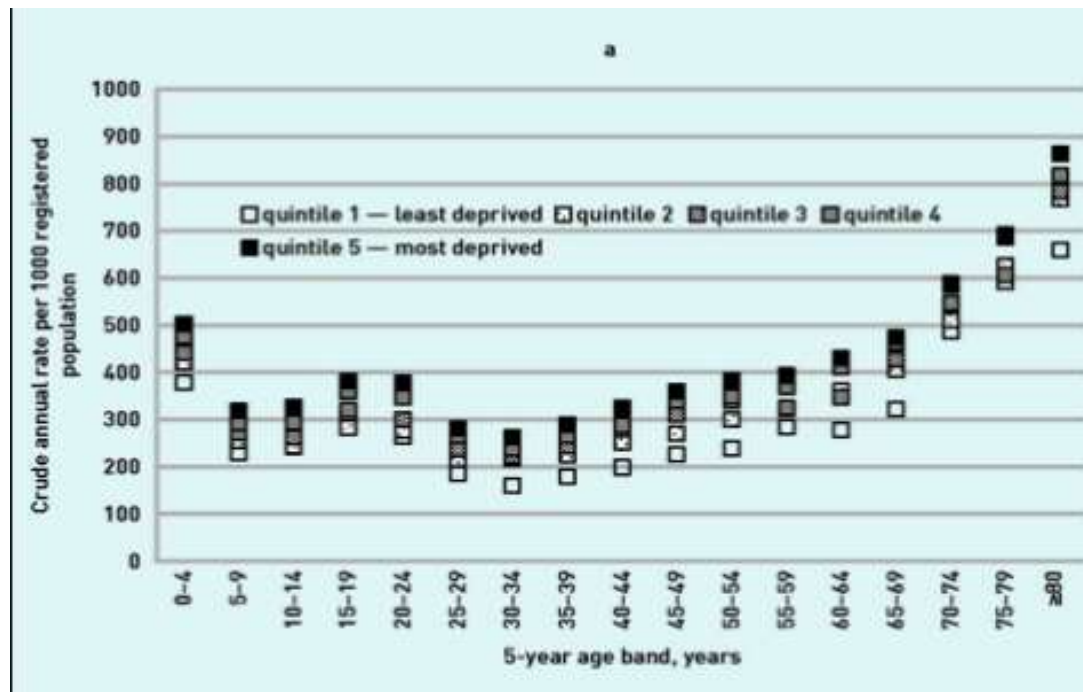
Acute health need is driven by age and other social factors, as well as deprivation, but these factors are linked

5.4.4 Evidence

Acute health need is driven by a range of factors, but primarily by number of long term conditions, or multi-morbidity, which in turn are typically driven by age: For example:

- "The population burden of multi-morbidity is the strongest predictor of ED attendance, explaining much of the association with social deprivation." (Hull et al, 2018)
- Age and social deprivation are significantly associated with emergency admission to hospital. For patients under 65, age and social deprivation have similar risks for emergency admission; in patients over 65, age has a much greater effect on the risk of admissions than social deprivation (BMJ, Gray et al, 2017)
- Multi-morbidity (and by extension acute health usage) is driven by both age and deprivation, but compared to deprivation, age appears to be the larger driver of ED attendance, in particular after the age of 65. It is the least deprived communities which see the largest impact in terms of fewest ED attendances (British Journal of General Practice, 2018 – Figure 5-10 below).

Figure 5-10: Age profile of ED attendance rates per 1000 population stratified by internal IMD 2015 quintiles



Source: S Hull, K Homer, K Boomla, J Robson, M Ashworth, (2018), 'Population and patient factors affecting emergency department attendance in London: retrospective cohort analysis of linked primary and secondary care records', *British Journal of General Practice*

5.4.5 Hypothesis 3

Deprivation is correlated with poor mental health which can lead to difficulties in negotiating the welfare/health system, as well as impact negatively on physical LTCs

5.4.6 Evidence

A large body of research has consistently shown that mental health problems are more common in areas of deprivation and poor mental health is consistently associated with unemployment, less education and low income or material standard of living, in addition to poor physical health. (Melzer et al, 2004, Jenkins et al, 2008, Butterworth et al, 2009)

Socio-economic deprivation also exacerbates the relationship between having multiple long-term conditions and experiencing psychological distress:

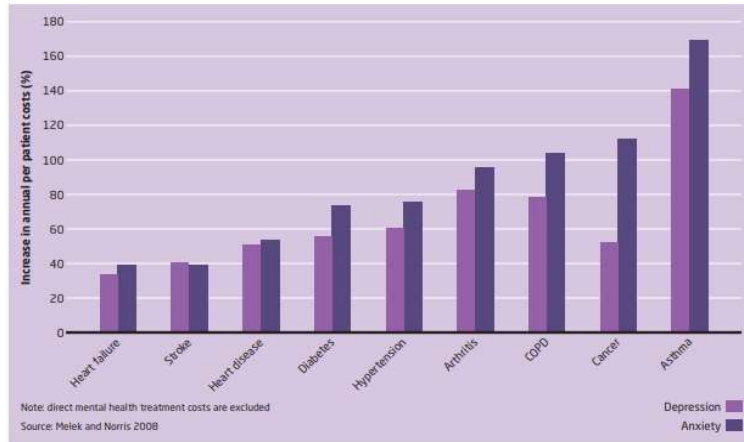
- A larger proportion of people in deprived areas have multiple long term conditions
- The effect of multiple morbidity on mental health is stronger when deprivation is present (Mercer and Watt, 2007)

The impacts of physical and mental co-morbidity for the person include significantly poorer clinical outcomes and prognosis, adverse health behaviors, poorer self-care, including difficulty in navigating the health system, decreased adherence to rehabilitation regimes and reduced quality of life.

There are also significant increases in costs of healthcare for individuals having either depression or anxiety, as well as a LTC. This can range from a 30% to 160% increase in per

patient healthcare costs, according to a study reviewed which looked at US claims data – see Figure 5-11 below.

Figure 5-11: Proportionate increase in per patient medical costs associated with depression and anxiety relative to people without a mental health problem



Source: C Naylor et al, (2012), “Long-term conditions and mental health: the cost of co-morbidities”, The King’s Fund.

For the health and social care system, the impacts include increased service use (such as hospital admissions and readmissions, and GP consultations) and higher health service costs, such as outpatient clinic attendance, pharmaceutical use and inpatient stays. (The King’s Fund, 2012)

5.5 Drivers of health usage

5.5.1 Hypothesis 4

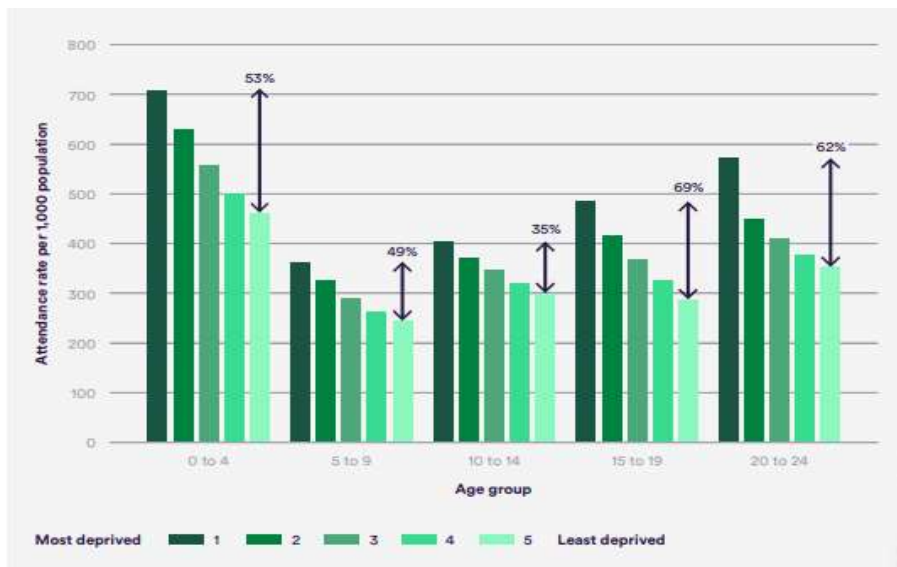
People in deprived communities have increased acute healthcare usage

5.5.2 Evidence

There is a large body of long standing, well documented evidence that shows that deprived communities have greater health usage. Evidence includes:

- More deprived areas had more emergency inpatient admissions per head than less deprived areas – Decile 10 had more than twice as many as decile 1, across all age and all sex groups. (McCormick, 2012)
- Children and young people from the most deprived areas experienced higher A&E attendance rates per 1,000 population than those in the least deprived areas. (Nuffield Trust, 2017)
- Social deprivation - 52% increase in crude attendance rates when comparing the most deprived population quintile to the least deprived (British Journal of General Practice, 2018)
- However putting into context, age and illness are more significant drivers of acute service usage than deprivation, although both are exacerbated by deprivation (see Section 5.4.4)

Figure 5-12: Crude A&E attendance rate per 1,000 population in 2015/16 by age band and deprivation quintile, with percentage difference between most and least deprived



Source: L Kossarova, R Cheung, D Hargreaves, E Keeble (2017), *Admissions of inequality: emergency hospital use for children and young people (CYP)*, Nuffield Trust.

5.5.3 Hypothesis 5

Acute health usage is driven by age and other social factors, as well as deprivation, but these factors are linked

5.5.4 Evidence

There is more limited evidence on the drivers of **increased acute health usage** by deprived communities, but indications that these are a combination of health, social, and other factors. For example, a 2008 study in the *Journal of Public Health*, suggested:

- casualty use was higher for individuals living in rented accommodation or without car access, lower income groups, unskilled manual workers, current smokers and for individuals with limiting illness)

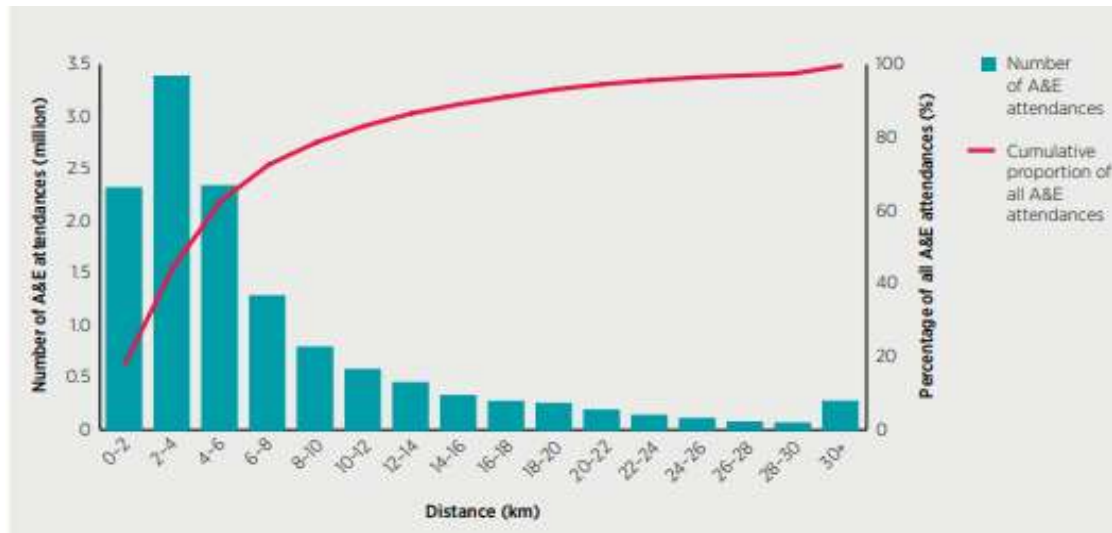
5.5.5 Hypothesis 6

Geographical factors are important – the closer to a hospital, the higher usage of acute hospital services by patients than those who live further away

5.5.6 Evidence

Existing literature demonstrates that patients show a strong preference for shorter distances (Beckert et al, 2012). Hospitals' A&E attendances are much more likely to come from individuals who live nearby. A study by the Nuffield Trust and the Health Foundation showed that approximately 70% of A&E attendances are from individuals living within 6km from the hospital (see Figure 5-13 below).

Figure 5-13: Distribution of distances between a person’s home and the A&E department that they attended between April 2011 and March 2012



Source: A Roberts, I Blunt, M Bardsley (2014), *Focus On: Distance from home to emergency care*, The Health Foundation, Nuffield Trust.

The same study finds the mean distance between a person’s home and the A&E department that they attended was 7.2 km, with a median of 4.2 km.

5.6 The link between acute health need and usage – how people access care

5.6.1 Hypothesis 7

Some of deprived communities’ usage of acute hospital services could be dealt with in primary/community care

5.6.2 Evidence

Disease prevalence in deprived areas explains part but not all of the extra emergency care usage. Instead, the need for admission may also reflect inadequate community management of illness – factors which have their roots in both the quality and accessibility of services. For example:

- A tendency to access hospital care via emergency channels is implied by the finding that patients in deprived areas are more likely to present at A&E with symptoms more appropriate for a GP consultation. (McCormick, 2012)
- There are 2.2 times as many emergency ACSC (ambulatory care sensitive conditions – for which hospital admission could be prevented by interventions in primary care) episodes in decile 10 (most deprived) than in decile 1 (McCormick, 2012)

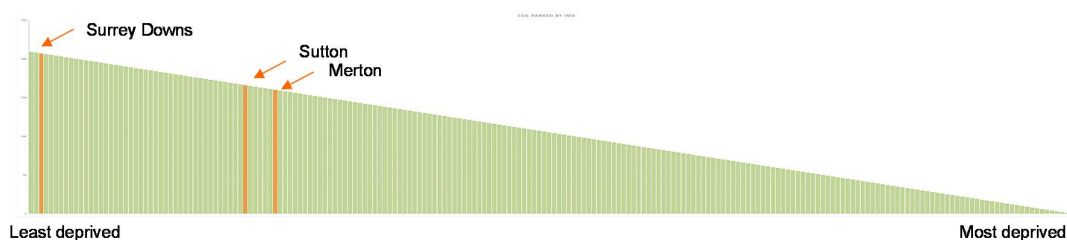
5.7 Key deprivation characteristics of the combined geographies

From the evidence shown in Section 5:

- People in Sutton, Merton and, particularly, Surrey Downs are not significantly deprived in relation to the rest of England. Merton ranks 160 out of 209 CCGs in overall IMD deprivation, Sutton ranks 167 and Surrey Downs ranks 207, where 1 is the most deprived and 209 is the least deprived (see Figure 5-14 below).

- In Merton and Sutton it is the living environment and crime domains that are driving the overall ranking, while in Surrey Downs barriers to housing are the main issue (see Table 5-4 below). In relation to the health domain, Merton ranks 175, Sutton ranks 164 and Surrey Downs ranks 203 out of 209 (where 209 is least deprived).
- There is however, variation within each CCG, with some pockets of deprivation, dispersed in several locations in Sutton and Merton. Of the 11 Lower Super Output Areas (LSOAs) in the top quintile for deprivation in the combined geographies, none are in Surrey Downs, four are in Merton, and seven are in Sutton (see Figure 5-15 below).
- Of the aforementioned LSOAs in the most deprived IMD quintile, the seven Sutton LSOAs are all within the Trust catchment area (as shown in Figure 5-15 below)
- Of the Merton LSOAs, Pollards Hill is not in the Trust’s catchment area. Figge’s Marsh and the two LSOAs in Cricket Green are on the border of the catchment area
- Whilst there are no LSOAs in Surrey Downs CCG in the top quintile for deprivation, the CCG has a significant population from the GRT community, who are proven to encounter worse health outcomes than those from non GRT communities.

Figure 5-14: CCGs in England ranked by Index of Multiple Deprivation



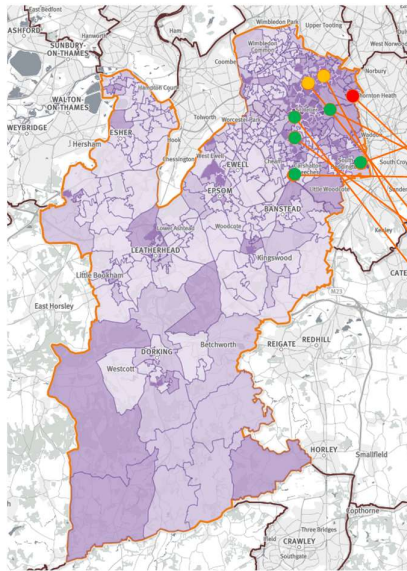
Source: DCLG, English indices of deprivation 2015

Table 5-4: Deprivation rank for combined geographies: 1 is most deprived, 209 is least deprived

IMD Domain	Merton rank	Sutton Rank	Surrey Downs rank
IMD	160	167	207
Income	140	151	208
Employment	178	169	208
Education, skills, training	190	183	203
Health	175	164	203
Crime	69	77	189
Barriers to housing	123	114	121
Living environment	44	99	154

Source: DCLG, English indices of deprivation 2015

Figure 5-15: LSOAs in most deprived quintile in the combined geographies and the Trust's catchment area



Ward	LSOA	IMD
Beddington South	Sutton 019C	51.26
	Sutton 019A	40.49
	Sutton 019D	34.27
Belmont	Sutton 021A	42.3
Wandle Valley	Sutton 001D	41.83
Pollards Hill	Merton 019D	39.85
Sutton Central	Sutton 012B	39.7
Cricket Green	Merton 018A	36.42
	Merton 012C	34.58
St Helier	Sutton 002E	35.05
Figge's Marsh	Merton 018D	34.22



Source: Trust catchment area sourced from *Improving Healthcare Together 2020-2030: NHS Surrey Downs, Sutton and Merton clinical commissioning groups (June 2018), "Issues Paper"*. LSOA IMD data from Table 1-1.

5.8 Recommendations

- For the IIA:
 - Assess how the initial proposals resulting in possible changes to major acute services could potentially impact on the health usage of people living in the LSOAs in the most deprived quintile, through analysis of patient flows and catchments for hospitals:
- For the IHT Programme:
 - If there is to be a move in major acute service location, this may impact on certain populations' distance to a major acute centre. However these distances should be considered in the context of how far others in the country are from a major acute centre (given the relative proximity of all options).
- For the wider health leadership:
 - With evidence showing age is the largest contributor to acute health need, any future model of care needs to consider the older population as a key component (as well as deprivation).
 - With evidence showing strong links between mental health problems, deprivation, impact of physical LTCs, and ease of accessing the health system, any future model of care may wish to consider overcoming barriers to accessing the relevant healthcare support.
 - Deprivation and its impact on acute health services needs to be tackled not solely by the acute healthcare system but as part of a system response to also address causes, drivers and access to primary care.
 - Further work to be done to test national trends at the local level in order to better understand where local initiatives can be most effective:
 - investigate what evidence there is of higher standard mortality rates (SMRs) in more deprived areas in the combined geographies.
 - investigate what evidence there is around the breakdown of mental health condition prevalence for the combined geographies.
 - investigate what local evidence there is around the extent to which major acute usage could be dealt with in other care settings. Furthermore, the extent to which this changes relative to deprivation levels.
- For the wider system
 - Deprivation and its impact on acute health services need to be tackled not solely by the healthcare system, but by the wider system, including the living environment, housing, education, transport etc.

6 Major acute health services needed within deprived communities

6.1 Overview

We have tested a number of hypotheses in relation to the major acute health services:

- 1) *It is important to provide for the health needs of deprived communities, as the inverse care law says that those who need medical care are least likely to receive it*
- 2) *Major emergency departments do not need to be located right next to the people who use them, compared with primary, community, and some district services*
- 3) *Maternity services: evidence that deprived areas have higher rates of maternal obesity, which is linked to a greater need and use of obstetrics*
- 4) *Certain ethnic minorities have higher requirement for certain condition specific services*

In these areas detailed non-identifiable patient level data is required to assess the local application of the findings and we have suggested this is considered as further work.

The evidence suggests that deprived communities can find it more difficult to medical care but that proximity is not the key factor.

6.2 Inverse care law

6.2.1 Hypothesis

It is important to provide for the health needs of deprived communities, as the inverse care law says that those who need medical care are least likely to receive it

6.2.2 Evidence

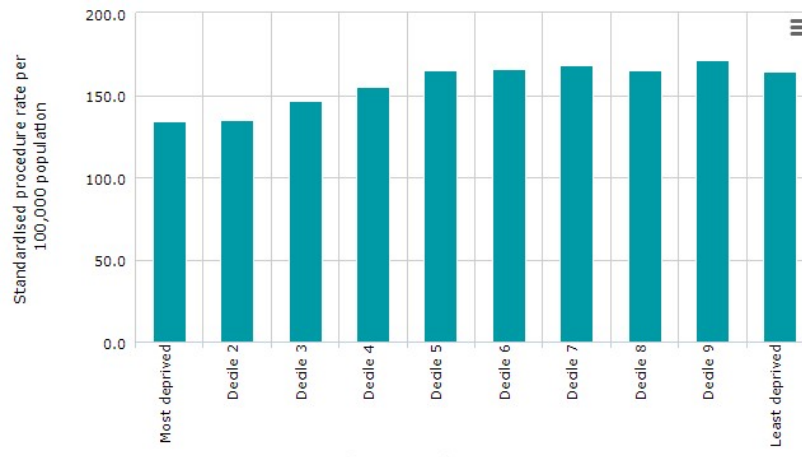
The inverse care law, first hypothesised nearly fifty years ago by Julian Tudor Hart, describes an inverse relationship between the need for health care and its actual utilisation – “*the availability of good medical care tends to vary inversely with the need for it in the population served*”.¹² There are various sources of evidence which point to the truth of this law at a national level. For example

- This appears particularly true for elective care. Due to higher number of LTCs for deprived communities, one might expect them to have more elective procedures, however the evidence supports the opposite in a number of cases: for example with hip replacements, as shown in Figure 6-1 below.
- Deprived populations are less likely to access primary care. For instance deprivation has been associated with lower level of GP registration, greater difficulty in getting a GP appointment and poorer perception of the quality of primary care (Nuffield Trust, 2017)
- Despite being in better health (in terms of the number of health problems, self-reported health status, and activity limitations), wealthier older people are significantly more likely to see a doctor, have an outpatient visit and see a dentist,

¹² Source: J Tudor Hart (1971), ‘*The Inverse Care Law*’, *The Lancet*, Volume 297 Issue 7696.

with a similar although non-significant trend seen in hospital admission (LSE Health, 2006)

Figure 6-1: NHS hip replacement operations by deprivation decile



Source: Quality Watch, *Deprivation and access to planned surgery*, The Health Foundation, Nuffield Trust

6.3 Major acute services

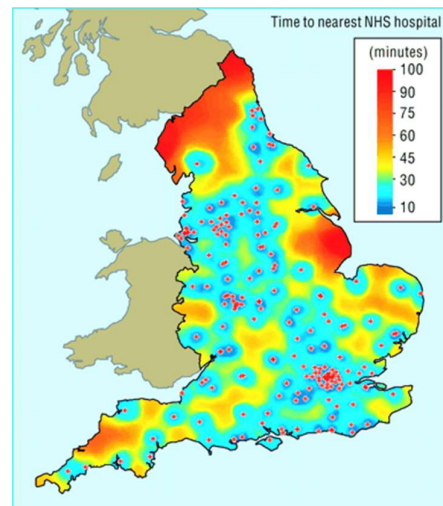
6.3.1 Hypothesis 1

Major emergency departments do not need to be located right next to the people who use them, compared with primary, community, and some district services

6.3.2 Evidence

The accessibility of hospital emergency services is often seen by the public as a critical marker of the level of investment in healthcare. There has been limited research into this issue. A review in 2005 found:

- For most areas of England, an acute NHS trust was accessible within 100 minutes' travel time
- For large parts of the country a NHS trust was accessible within 30 minutes.
- Overall, 25% of the population had one hospital within 15 minutes' travel time and 41% had up to two hospitals.
- Fifteen per cent had no hospital within 30 minutes' travel time, but 98% had one hospital and 92% had two hospitals within 60 minutes' travel time.



Source: M Damiani, C Propper, J Dixon (2005), 'Mapping Choice in the NHS: cross sectional study of routinely collected data', *British Medical Journal*

A more recent review in 2014 by Quality Watch considered the distance people travelled to received emergency care and how this had changed over ten years. They found:¹³

- An estimated reduction of 8 in major A&E sites, to around 200 in England, since 2001/02;
- A mean distance between a person's home and the A&E department that they attended of 7.2 kilometres and median of 4.2km based on analysis of 13 million attendances in 2011/12. 84% of attendances being from people living within 12km;
- The mean distance from hospital to home for an emergency admission was 8.7km with a median of 5.5km, based on 5 million emergency admissions in 2011/12, with 70% being within 10km
- A slight but not statistically significant increase in the distance travelled for emergency admission in the 10-year period between 2001/02 and 2011/12 from 8.3km to 8.7km, with the biggest increase due to distance travelled for emergency admissions following a stroke (from 7.9km to 8.9km).

Locally, for the combined geographies, there is good access to hospitals particularly in Merton and Sutton:¹⁴

- **49.3% of households within the combined geographies have access to hospitals within 30 minutes by public transport or walking, compared to an England wide average of 38.6%;**
- In Merton the level is 64.4%, Sutton it is 56.5% and in Surrey Downs it is below the average at 33.8%;
- In the most deprived quintile LSOAs within the combined geography, 100% of households within Merton and Sutton are within 45 minutes (the England average is 71.9%), and 100% within 60 minutes (the England average is 87.6%).

6.3.3 Hypothesis 2

Maternity services: evidence that deprived areas have higher rates of maternal obesity, which is linked to a greater need and use of obstetrics

6.3.4 Evidence

The national review of maternity services, Better Births,¹⁵ found that the quality of maternity services has been improving but not all are provided to a consistent, high level of quality. There is significant variation in safety, effectiveness and outcomes between providers that cannot be explained on the basis of differences in demography, deprivation or clinical complexity.

There is evidence which links maternal obesity to adverse pregnancy outcomes (Heslehurst et al, 2010). Maternal obesity is therefore likely to lead to a great need and use of obstetrics. There is evidence that more deprived communities have worse maternal outcomes, particularly in the

¹³ Source: A Roberts, I Blunt, M Bardsley (2014), 'Focus On: Distance from home to emergency care, Quality Watch', The Health Foundation, The Nuffield Trust,

¹⁴ Source: analysis using Public Health England's SHAPE tool travel time function.

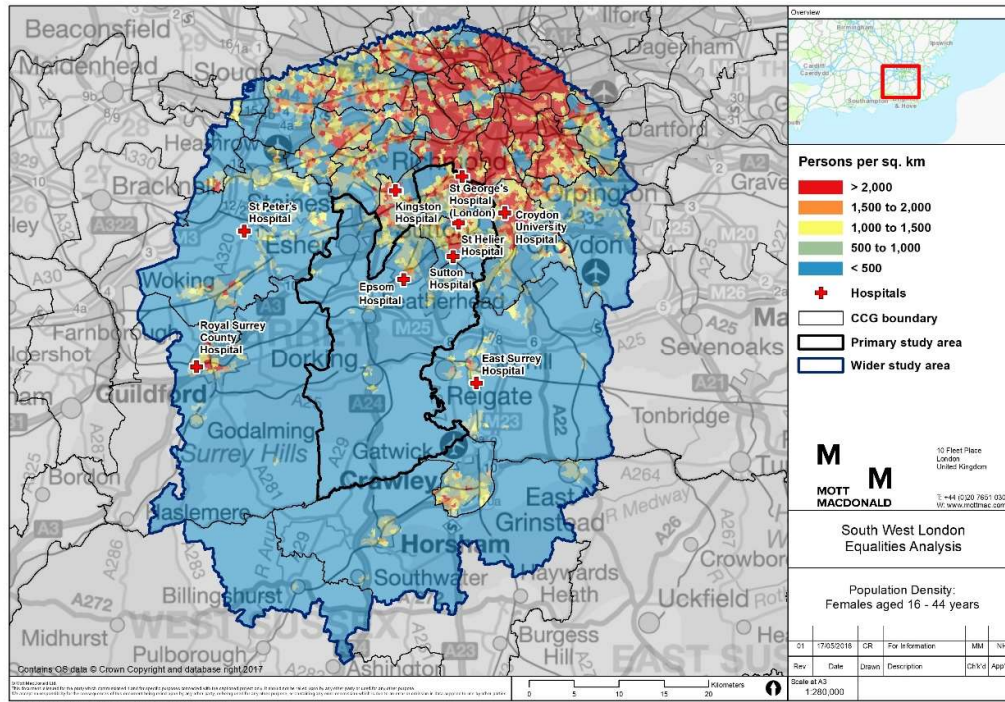
¹⁵ Source: NHS England (2016), 'National Maternity Review: Better Births – Improving outcomes of maternity services in England, A Five Year Forward View for maternity care'

fourth and fifth quintiles¹⁶. For example, babies whose mothers live in poverty have a 57% higher risk of perinatal mortality¹⁷.

Number of women aged 16-44 provides an indication of the levels of pregnancy and maternity in the combined geographies. Within the study area, the number of women aged 16-44 (19%) is in line with the national average (19%)¹⁸

Figure 6-2 below shows that the highest density of females aged 16-44 in the combined geographies is clustered in Merton, nearest to St George's hospital

Figure 6-2: Population of females aged 16-44



Source: LSOA population estimates 2016, ONS – in Mott MacDonald (2018) 'Improving Healthcare Together 2020-2030: Initial equalities analysis of major acute services', (Figure 11)

At present, there is no strong evidence on the impact of distance/travel time to maternity services on birth outcomes (Public Health Wales Observatory, 2015)

6.3.5 Hypothesis 3

Certain ethnic minorities have higher requirement for certain condition specific services

6.3.6 Evidence

There is evidence showing that certain ethnic minorities have a higher requirement for certain condition specific services. For example:

¹⁶ Source: MBRRACE UK (June 2018), *Perinatal Mortality Surveillance Report for 2016*

¹⁷ Source: NHS England (2016), *National Maternity Review: Better Births – Improving outcomes of maternity services in England, A Five Year Forward View for maternity care*

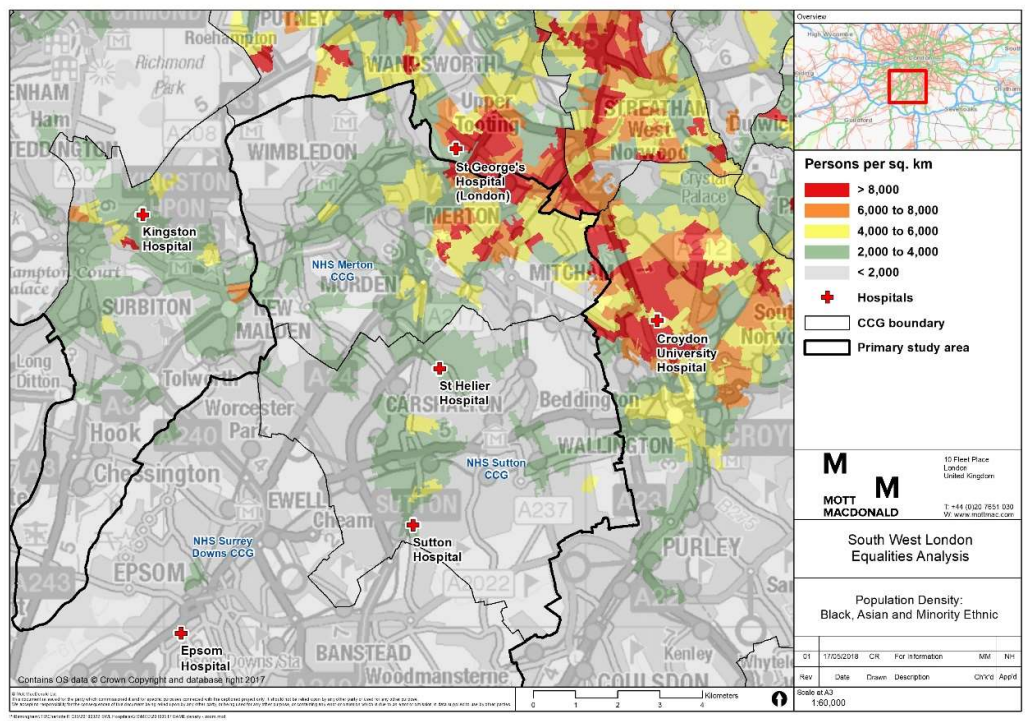
¹⁸ Source: LSOA population estimates 2016, ONS – in Mott MacDonald report (Table 11)

- People of South Asian background have the highest rate of coronary heart disease; people from an African Caribbean background have a higher risk of developing high blood pressure; and the prevalence of type-2 diabetes (which may cause complications to acute medical care) for both people of African Caribbean and South Asian ethnicity is much higher than in the rest of the population; (British Heart Foundation)

It is likely that some of these requirements could be better served in outpatient appointments, and new models of specialist support to general practice rather than inpatient care, however further work is required to test this.

Figure 6-3 below shows the population of people from BAME backgrounds. There are low densities throughout Surrey Downs, and Sutton, but with a couple of higher density areas in Merton.

Figure 6-3: Population of people from BAME backgrounds – higher density areas



Source: Census 2011, ONS –in Mott MacDonald (2018) 'Improving Healthcare Together 2020-2030: Initial equalities analysis of major acute services', (Figure 14)

6.4 Recommendations

- For the IIA:
 - Undertake travel time analyses to assess the impact on travel times for different communities to and from different service locations, by different means of transport ('blue light', public transport and car), to understand if there are material and disproportionate changes to those in deprived communities as a result of any changes of locations to major acute services.
 - Assess how the initial proposals resulting in possible changes to major acute services could potentially impact on the health usage of people living in the LSOAs in the most deprived quintile, through analysis of patient flows and catchments for hospitals:
- For the IHT Programme:
 - There is no strong evidence on the impact of distance/travel time to maternity services on birth outcomes, implying that major acute obstetric services do not need to be provided particularly close to those accessing it.
- Outside of the IHT Programme, the individual responsible CCGs as part of their wider responsibilities for population health management may wish to consider – for people living in the LSOAs in the most deprived quintile – further research into what works in relation to the needs of these people in relation to managing demand and improving health outcomes

7 Relevant considerations for emerging clinical models

7.1 Summary

The purpose of this report was not to assess potential solutions but to identify the issues and considerations that should be considered as the programme develops.

For this report, and the Programme, which are specifically looking at major acute services:

- Any future model of care **should not materially disadvantage deprived communities in terms of access to major acute services**. This should be for both patients, and their families and friends.

Whilst not specifically part of the scope of this work, if the wider health leadership and wider partners are keen to **reduce health inequalities**, then this cannot be done in major acute services alone, and any future model of care should ensure the elements of the health and care pathway prior to major acute services (including but not limited to: primary care, community care and living environment) are tailored to their local communities, reflecting their characteristics.

7.2 Continuation of access to major acute services

Any future model of care should ensure continuation of access to major acute services. The new model of care **should not materially disadvantage deprived communities in terms of access to major acute services**. This should be for both patients, and their families and friends:

- **Patient access for using major acute services** should be analysed through the travel times modelling through conveyance by ambulance to emergency departments. Expected response and conveyance times should fall within appropriately agreed local thresholds; and
- **Family and friend access to visiting patients using major acute services** should be analysed through travel times modelling through travel times by public transport or walking. Travel times should fall within an appropriately agreed local thresholds. This should include consideration of evening, weekend, and bank holiday services.

The evidence suggests that the combined geographies are relatively well served in terms of access to major acute services. As described in Section 6.3: **49.3% of households within the combined geographies have access to hospitals within 30 minutes by public transport or walking, compared to an England wide average of 38.6%, and within the most deprived quintile LSOAs within the combined geography, 100% of households within Merton and Sutton are within 45 minutes (the England average is 71.9%), and 100% within 60 minutes (the England average is 87.6%).**

However, if necessary to ensure any future models of care continue to meet standards:

- **Around access to major acute services for patients**, the Improving Healthcare Together: 2020-2030 Programme could consider options around ambulance station locations; and
- **Around access to major acute services for families and friends**, wider community and partner services (such as TfL) could be engaged around local transport improvements

7.3 Reducing health inequalities

The evidence set out in this report has set out some of the specific health needs of the populations of the combined geographies. Any future model of care should ensure deprived communities have access to services which are tailored to their characteristics. In cases where the appropriate service is major acute services, then patient access for using major acute services will be primarily assessed through standards relating to travel times (see Section 7.2).

For services outside of major acute services, then the wider health system and other partners should work together to help reduce health inequalities. This may in turn lead to a **collaborative neighbourhood action plan** which could include:

- **Targeted health services in the community** which may include virtual clinics for diagnostic and assessment tests, proactive community services, social prescribing etc.
- **Targeted community and partner services**, focused on addressing the wider determinants of deprivation, in particular living environment and crime
- **Population health management** which could involve gathering and analysing patient data across multiple health information technology resources, with the aim of improving both clinical and financial outcomes

Much of this work may already be being considered as part of the CCGs' and Local Authorities' local plans to improve the model of care for their populations.

7.4 Recommendations

- For the IIA:
 - Undertake travel time analyses to assess the impact on travel times for different communities to and from different service locations, by different means of transport ('blue light', public transport and car), to understand if there are material and disproportionate changes to those in deprived communities as a result of any changes of locations to major acute services.

8 Conclusions and areas for further analysis

8.1 Summary

From the evidence reviewed, our conclusions are that:

- 1) There is a wealth of evidence that health outcomes decline with increasing deprivation;
- 2) However, there is less evidence linking deprivation with the need/usage of the specific major acute services being considered as part of the IHT Programme;
- 3) In addition, within the combined geographies, overall deprivation is comparatively limited when compared nationally. There are, however, individual LSOA areas within the most deprived quintile nationally which is a helpful indicator of the areas of greatest need;
- 4) These pockets of the most deprived LSOAs are dispersed in several locations, in Sutton and Merton;
- 5) The geographical area of Sutton and Merton containing the pockets of deprivation is fairly concentrated resulting in a relative ease of access to major acute services (see Section 1.5). Initial proposals (see Section 3.5), for any changes to locations of major acute services are likely to have relatively marginal impact on access. However this report understands that the IHT Programme is open to other possible solutions on top of these initial proposals; and
- 6) Addressing health inequality is an important goal for those accountable for population health, but decisions about the major acute service locations within the combined geographies are likely to only have marginal impacts on this. A greater impact on health outcomes for deprived communities within the combined geographies would be more likely to come from concerted effort earlier in the health and care service pathways prior to need for major acute services. It is also likely to require involvement of wider partners on the wider social determinants of health.

Notwithstanding the points above, additional work could be carried out by the IHT programme to inform decision making about any changes of locations of major acute services.

These could be covered in the IIA which will consider the current (or baseline) situation and then assess positive and negative impacts of a shortlist of options when compared to the baseline. In relation to deprivation, the IIA could:

- Include an assessment of how the initial proposals resulting in possible changes to major acute services could potentially impact on people living in the LSOAs in the most deprived quintile considering:
 - health inequalities and deprivation as part of the Health and Equality Impact Assessments
 - health need through assessing potential links identified in national evidence; and
 - health usage through analysis of patient flows and catchments for hospitals.
- Undertake travel time analyses to assess the impact on travel times for different communities to and from different service locations, by different means of transport ('blue light', public transport and car), to understand if there are material and

disproportionate changes to those in deprived communities as a result of any changes of locations to major acute services.

Health outcomes are worse for more deprived communities but mitigating the impact is more likely to come from interventions earlier in the health and care pathways than at the major acute service level. Outside of the IHT Programme, the individual responsible CCGs as part of their wider responsibilities for population health management may wish to consider, for people living in the LSOAs in the most deprived quintile:

- Further research into what works in relation to the needs of these people in relation to managing demand and improving health outcomes;
- Creating an evidence-based plan targeting the specific needs of these people; and
- Formative evaluation to understand and monitor health outcomes.

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Appendix 2: Stakeholder engagement

Table A2-1 below sets out the stakeholders we spoke with as part of our review.

Table A2-1: Stakeholders engaged with

Organisation	Role	Name
Epsom and St Helier University Hospitals NHS Trust	Chief Executive	Daniel Elkeles
Epsom and St Helier University Hospitals NHS Trust	Director of Communications and Patient Experience	Lisa Thomson
Epsom and St Helier University Hospitals NHS Trust	Equality, Diversity and Inclusion Manager	Shabir Abdul
Improving Healthcare Together: 2020-2030 programme	Communications and Engagement Advisor	Rory Hegarty
Merton CCG	Director of Commissioning	Josh Potter
Merton CCG and Wandsworth CCG	Managing Director	James Blythe
Merton Local Authority	Director of Community and Housing	Hannah Doody
Merton Local Authority	Chief Executive	Ged Curran
Merton Local Authority	Director of Public Health	Dagmar Zeuner
South West London Alliance (Kingston, Merton, Richmond, Sutton and Wandsworth CCGs)	Accountable Officer	Sarah Blow
Surrey County Council	Strategic Director of Adult Social Care and Public Health	Helen Atkinson
Surrey County Council	Deputy Director of Public Health	Ruth Hutchinson
Surrey Downs CCG	Managing Director	Colin Thompson
Surrey Downs CCG	GP & Clinical Director of Urgent Care and Integration	Simon Williams
Surrey Heartlands CCGs	Joint Accountable Officer	Matthew Tait
Sutton CCG	Managing Director	Lucie Waters
Sutton Local Authority	Director of Public Health	Imran Choudhury