



Modernising our Hospitals and Health Services

Baseline IIA Report

August 2020

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Modernising our Hospitals and Health Services

Baseline IIA Report (final draft for review)

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1 Introduction

Mott MacDonald has been commissioned by Hampshire Hospitals NHS foundation Trust to undertake an Integrated Impact Assessment (IIA) to support their Modernising our Hospitals and Health Services programme. This forms the first output from this work which will support the Trust to understand which protected characteristic groups may be affected by any changes to the delivery of acute services, alongside the baseline travel and access position.

1.1 Modernising our Hospitals and Health Services

The Hampshire Together: Modernising our Hospitals and Health Services programme, led by Hampshire Hospitals NHS Foundation Trust, is working to improve healthcare sustainably. It is working to address three main challenges in the combined geography of the two CCG areas. These are:

- Clinical sustainability
- Providing healthcare from modern buildings
- Achieving financial sustainability.

The Transforming Care Services in North and Mid Hampshire: Interim Report states that six core major acute services may need to change so that people who are very unwell, or at risk of becoming very unwell, get the right support straight away from senior specialist staff.

1.2 What is an Integrated Impact Assessment (IIA)

An Integrated Impact Assessment (IIA) aims to (a) analyse the consequences of clinical service change and/or a reconfiguration option(s), and (b) produce evidence-based recommendations to maximise positive impacts, and minimise the negative impacts, of an option(s). The output is a series of full written reports.

It is important that those involved in making decisions about future health service delivery changes and configuration understand the full range of potential impacts that proposals could have on the local population. It is particularly important to understand the potential impacts on groups and communities who will be the most sensitive to changes.

The aim of an IIA is to be used by decision-makers to maximise the positive impacts and minimise any negative impacts resulting from any potential service changes. It is important to note that the purpose of impact assessments is not to determine the decision about which option might or might not be selected; rather they act to assist decision-makers by giving them better information on how they can promote and protect the well-being of the local communities they serve.

1.3 Scope of this report

This baseline analysis will help the Trust to understand which groups, particularly protected characteristic groups, are likely to have a greater need for acute services and are therefore more likely to be impacted by any changes in provision. It also provides a baseline analysis of travel times to existing services.

This report focuses on the following acute services, as specified to us by the Trust:

- Maternity and child health (including neo-natal)

- Cancer
- Critical care
- Trauma and orthopaedics
- Unscheduled care
- Frailty and elderly care
- Diagnostics

It should be noted that this report is a **high-level baseline** report and forms the first part of the integrated impact assessment (IIA) which will be undertaken. It outlines preliminary observations on which groups are considered to have a disproportionate or differential need for the hospital services under review based on desk top analysis. It should be noted that the conclusions of this report will be refined in subsequent iterations of the IIA should additional evidence emerge.

1.4 Methodology

1.4.1 Equality Analysis

The report considers each of the nine 'protected characteristic' groups as defined by the Equality Act 2010, as well as considering deprived communities and carers¹. The following groups have therefore been considered in this report:

- Age – specifically children (those aged 16 and under), young people (those aged 16-24) and older people (those aged 65 and over)
- Disability
- Gender reassignment
- Marriage and civil partnership
- Pregnancy and maternity
- Race and ethnicity (Black, Asian and Minority Ethnicity (BAME), White British, White other)
- Religion and belief
- Sex
- Sexual orientation
- Carers
- Deprivation

¹ Although not identified as protected characteristics in equality legislation, it is accepted best practice to include those from deprived communities and carers.

For each group, a summary table is presented identifying whether, and for which acute services under consideration², they have a disproportionate or differential need.

Definition of terms

- **Disproportionate need** refers to a need for the service/treatment over and above the general population.
- **Disproportionate use** refers to the higher use of services/treatments over and above the general population
- **Differential need** refers to a group that has different types of need for the service during delivery.

Please note: the disproportionate use of services/treatments and the disproportionate need of services/treatments can often be interdependent and it is not always possible to disaggregate one from the other.

The report considers each protected characteristic group through:

1. An **evidence review of available literature** which identifies protected characteristic groups who may have a disproportionate need for services. A range of documents have been reviewed including, academic papers, Programme reports and Joint Strategic Needs Assessments (JSNAs).
2. **Demographic analysis** which sets out the characteristics of the study area, and particularly the distribution of residents from different equality groups³.

This information has been used to 'scope in' groups who may have a particular need for the acute services under review. This is not to say that other groups will not need these services, rather it is to suggest that there does not presently exist a body of strong clinical evidence indicating a disproportionate or differential need.

1.4.2 Baseline travel analysis

Work has been undertaken to understand the baseline accessibility for the population travelling to each hospital site by public transport, and private car using AM travel times. This travel time has been used as it is likely to be the busiest time period. Other time periods will be provided in subsequent iterations of the IIA.

The central point of a LSOAs, a small area of between 1,000 and 3,000 residents,⁴ was used as the origin and the hospital sites as destinations to determine travel times across time periods and for all modes of transport. The analysis used 2011 census data, 2019 Index of Multiple Deprivation data and 2018 mid-year population estimates to determine the number of people from the overall study area population and protected characteristic groups who reside within each travel time band.

² Please note that this study explores the following acute service provisions: A&E, acute medicine, paediatrics, emergency general surgery and obstetrics. Intensive care has not been explored in its own right as admission to this unit is via admissions through emergency or elective medical and surgical services and so disproportionate need for this service will be covered in the discussion of other acute services.

³ We have undertaken a demographic analysis on the following; the population of children (under 16 years); the population of older people (65 and over); the population living with a long-term illness; the population of females (aged 16-44 years); the population from BAME background; indices of multiple deprivation; and the population by sex. This analysis has been based on available data and focused on those groups which are expected to experience a range of impacts across the majority of the acute service,

⁴ Office for National Statistics (2019) *Census geography*
<https://www.ons.gov.uk/methodology/geography/ukgeographies/censusgeography>

It is important to note that the analysis used historical observed speed data and public transport timetables⁵ and therefore does not represent all potential journeys, it is instead a snapshot of average journey time for each travel mode. Individuals may therefore experience different travel durations.

Travel times for the population have been used rather than the travel times for the current pattern of presenting admissions and attendances. This is considered to provide a more stable analysis. Focusing on travel times for patients presenting at hospital assumes that this pattern will remain the same in each future year and does not account for changes in the patient population.

1.5 Methodological assumptions and limitations:

It is important to set out the following principles on which this report is based:

- The purpose of the IIA is to inform rather than decide. The objective is not to determine the decision, but to assist decision makers by providing better information.
- It is not the purpose of the IIA to justify, defend, or challenge the rationale or principles behind potential changes to acute services within North and Mid Hampshire. The IIA is being undertaken based on the assumption that any emerging changes to services will be designed by the Trust with the objective of realising benefits for all people requiring the services under review, thereby helping to improve outcomes for patients overall.
- The purpose of this initial report is not to produce a set of firm conclusions; rather it is to highlight equality groups and their need for acute service. Though doing this, the report should act as a means of outlining which groups may experience potential impacts and highlighting issues that need to be further investigated.
- This initial scoping report is based on review and analysis of available secondary data such as publicly available reports, policies, and literature. The protected characteristics identified in this report as having a disproportionate need for the services under review are not considered to be an exhaustive or definitive list at this stage. Where other evidence emerges, particularly through further engagement with local equality and community representatives, clinical professionals and other patient groups, these preliminary findings may need to be updated.
- Socio-demographic analysis has been undertaken for the study area to provide an insight into the geographical distribution and concentration of certain key populations. This profiling concentrates on the population groups that have been identified as being sensitive to the proposed changes and those with a 'disproportionate need' or 'differential need' for the services under review, based on the evidence examined to date.
- The latest available census data has been used to complete the demographic analysis. In most cases this means that the 2018 mid-year population estimates have been used, except for demographic information pertaining to the black Asian minority ethnic (BAME) population and limiting-long term illness (which is used as a proxy for disability). In these instances, the 2011 census data has been used.

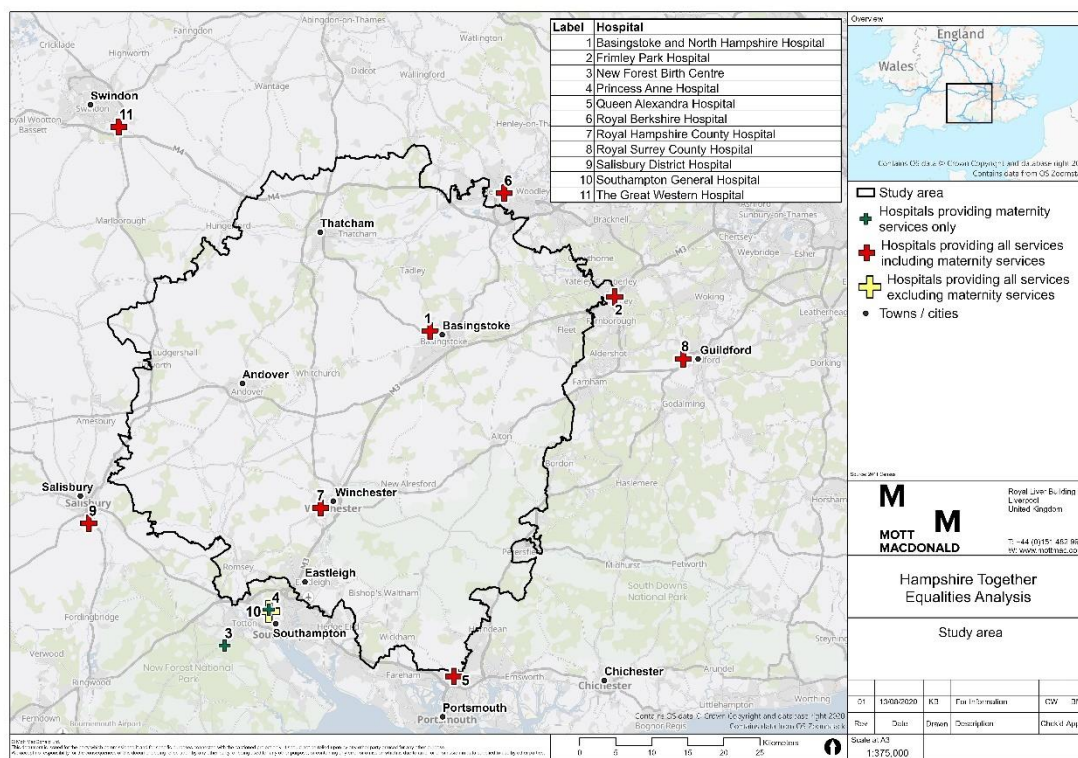
1.6 The study area

The agreed study area for this work spans the two CCGs, North Hampshire and West Hampshire CCG, in addition to Eastleigh and the postcodes of patients who are known to utilise

⁵ Real time data was not available for all public transport options but was reviewed where possible in order to verify results.

services provided by the Trust. As can be seen from the map below, existing acute sites are marked within the maps presented.

Map 1.1: Primary study area



Source: Mott MacDonald

The overall population and the density of population provide a baseline from which to break down the key socio-demographic trends in the study area.

1.6.1 Total population

The table below shows the total population for the agreed study area.

Table 1.1: Total population

Area	All usual residents
Study area	790,674
England	59,115,809

Source: LSOA population estimates 2018, ONS

It should also be noted that:

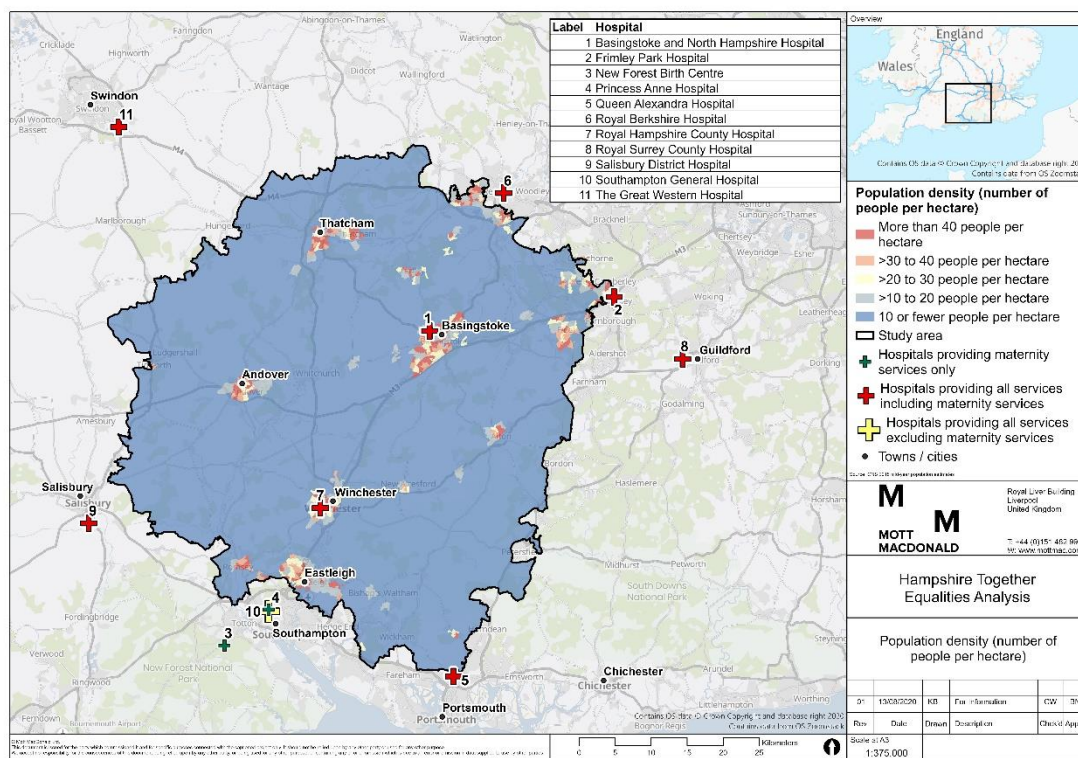
- Hampshire's population has been projected to increase by around 8.3% between 2018 and 2025. In particular, Hampshire is projected to see a notable growth in those aged 85 and over.⁶
- The most growth is forecast to occur in Eastleigh district where the population is expected to increase by 12.3% (a rise of 16,156 people) by 2025.

⁶ Ethnic group profile of Hampshire (2011 Census). Available at:
<https://documents.hants.gov.uk/population/EthnicGroupprofileofHampshire2011Census.pdf>

- It is also projected to see a growth in people from a Black, Asian and Minority Ethnic (BAME) background ⁷

1.6.2 Population density

Figure 1.1: Population density



Source: Mott MacDonald

The map above illustrates the overall population density for the study area. It shows that the highest densities of people live predominantly in the north and west of the area, around Hampshire. Areas located further from Hampshire show a lower population density. The difference in density between the areas is therefore largely linked to access to services in the Hampshire area.

1.7 Structure of the report

The remainder of the report is structured as follows:

- Chapter two** provides the baseline travel analysis
- Chapter three** provides the scoping review of the equality impacts
- Chapter four** outlines next steps for the IIA.

⁷ Ethnic group profile of Hampshire (2011 Census). Available at:
<https://documents.hants.gov.uk/population/EthnicGroupprofileofHampshire2011Census.pdf>

2 Baseline travel analysis

When accessing acute hospital services of interest, patients are likely to draw on a range of transport modes, including travelling via car or public transport (PT). The following therefore explores the likely impact on journey times on each of these modes of transport.

This report has explored travel midweek at AM peak times (07:00 – 10:00). In general, travellers are expected to experience the longest travel times during this period and it thus better reflects the likely impact on travel times. Analysis of additional time periods such as inter-peak (IP) times (10:00 – 16:00) will be undertaken as part of the Interim Report. The analysis used the following data sources: Car - 2020 Quarter 2 traffic speed data from HERE, accessed through ArcGIS and for PT analysis- Association of Train Operating Companies and TraveLine, Quarter 1, 2020 data.

Given the current location of services, maternity and child health services have also been analysed separately to the other in-scope acute services.

At the time of preparing this report, discussions are still ongoing about the options for the future. The report presents the current travel times for residents to existing services which form the baseline for the subsequent stage of options appraisal of the Programme.

Tables are used to summarise the key findings and maps to show the geographical areas most likely to be impacted.

2.1 Travelling by Car to Existing Services

Across the study area, 41% of residents are currently able to access existing services closest to where they live within 15 minutes by car during the AM peak period. Almost all residents (95%) are able to access these services within 30 minutes during the same time period.

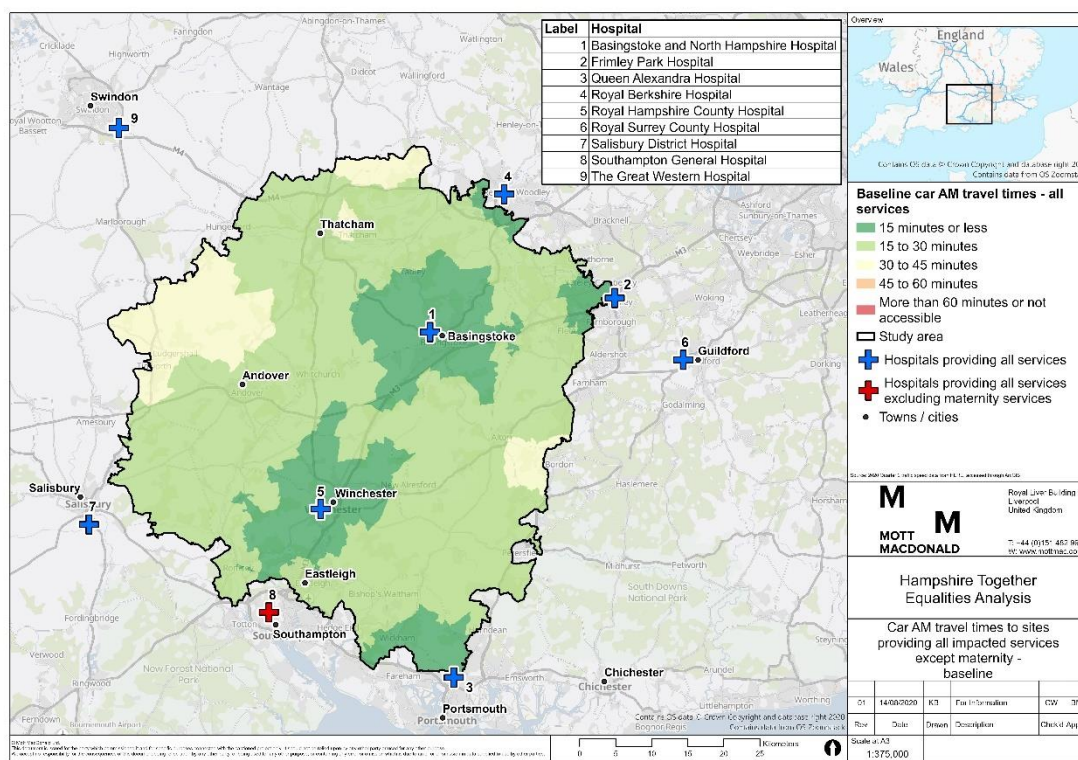
Table 2.1: Cumulative proportion of residents who can access all the services within 15-minute time bands: Car – AM – Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes
Total population	41.0%	94.9%	100%

Source: HERE data from ArcGIS, 2020 Q2

Those from near the western, northern and eastern periphery of the study area are more likely to experience longer journey times. At parts of these locations, journey times take on average 30-45 minutes (see Map 2.1).

Map 2.1: Travel times for existing all services: Car – AM – Baseline



Source: Mott MacDonald

When looking at the current travel times for existing maternity and child health services, they show a similar pattern to the travel times for all the services, with almost all residents (95%) able to access services closest to where they live within 30 minutes during AM peak period.

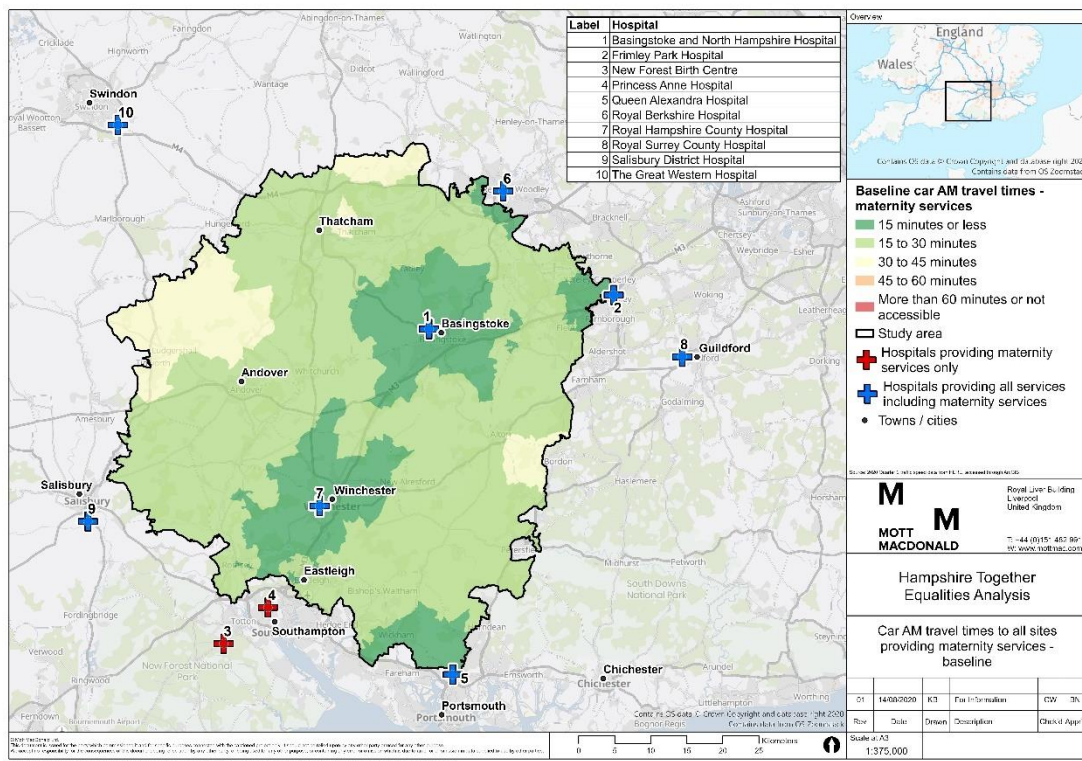
Table 2.2: Cumulative proportion of residents who can access maternity and child health services within 15-minute time bands: Car – AM – Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes
Total population	41.0%	94.9%	100%

Source: HERE data from ArcGIS, 2020 Q2

Likewise, the geographical characteristics of travel times for maternity and child health services as shown in Map 2.2: are similar to those of all the services except that those residents from near Eastleigh can access maternity services quicker due to the location of the hospital sites which provide these services.

Map 2.2: Travel times for existing maternity and child health services: Car – AM – Baseline



Source: Mott MacDonald

2.2 Travelling by PT to Existing Services

Across the study area, 28% of residents are currently able to access existing services nearest to where they live within 30 minutes by PT during the AM peak period. A majority of residents (74%) are able to access these services within 60 minutes during the same time period. However, 7.9% of the residents cannot access the services by PT during the AM peak period⁸.

Table 2.3: Cumulative proportion of residents who can access all the services within 15-minute time bands: PT – AM – Baseline

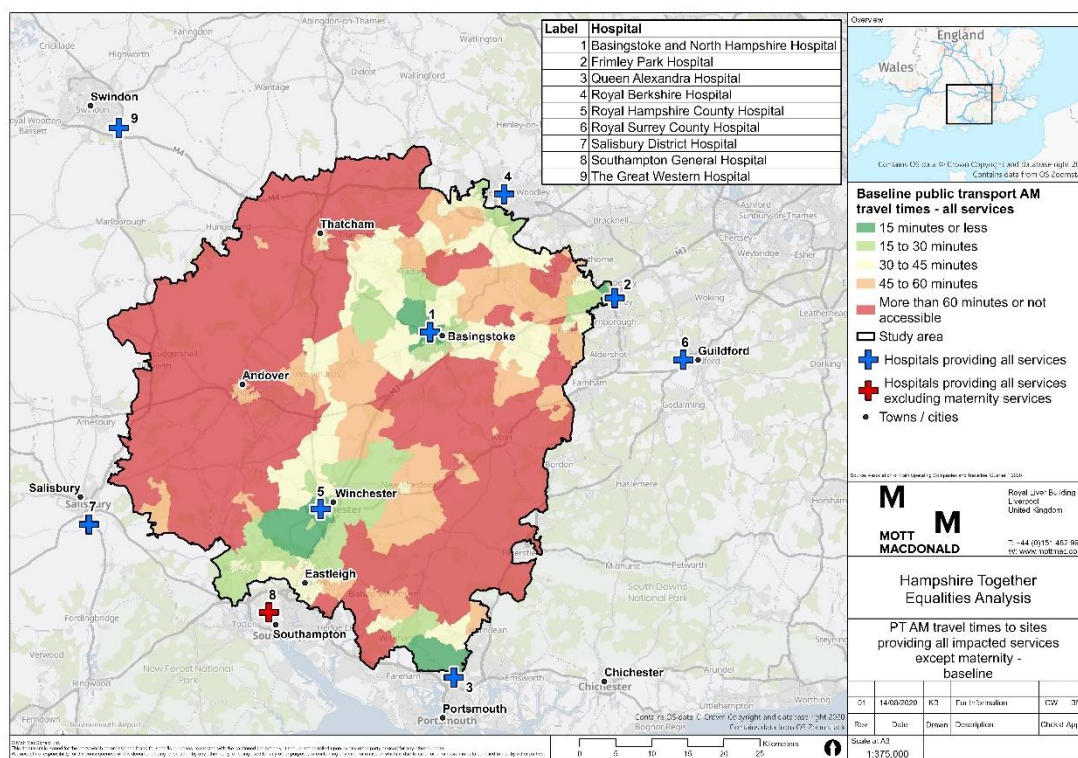
	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Total population	7.9%	27.8%	54.8%	74.2%	92.1%

Source: ATOC, 2020 Q1

Those from the west and southeast of the study area are more likely to experience longer journey times. At these locations, journey times take on average more than 60 minutes (see Map 2.3).

⁸ By definition, an LSOA is assessed as “not accessible” if from the LSOA centroid there is not a journey to the nearest service site that matches the criteria as follows: a) travel time between 7am and 10am, and b) people would walk a maximum of 800 metres to a PT stop.

Map 2.3: Travel times for existing all services: PT – AM – Baseline



Source: Mott MacDonald

When looking at the current travel times for existing maternity and child health services, they show a similar pattern to the travel times for all the services, with a majority of residents (74%) able to access these services within one hour by PT during AM peak period.

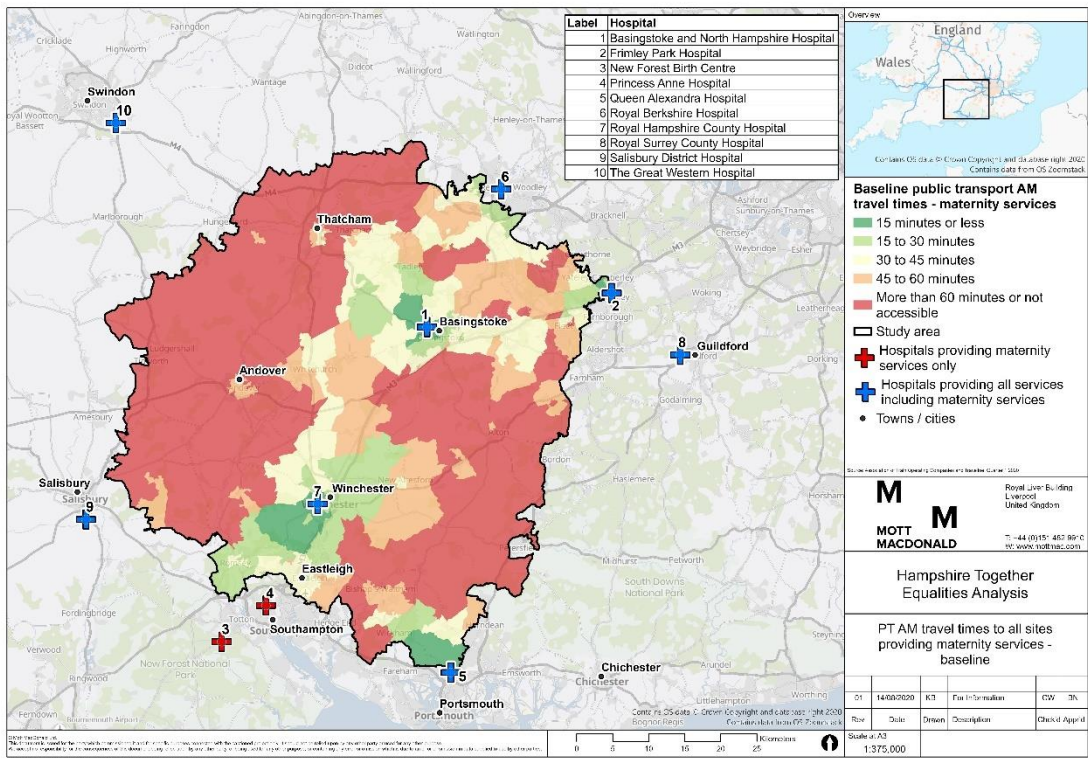
Table 2.4: Cumulative proportion of residents who can access maternity and child health services within 15-minute time bands: PT – AM – Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Total population	7.9%	28.1%	54.8%	74.4%	92.1%

Source: ATOC, 2020 Q1

Compared to Map 2.3, those from near Eastleigh can access maternity services within 45 minutes due to the location of the hospital sites which provide these services, compared to more than 60 minutes for all services (see Map 2.4:).

Map 2.4: Travel times for existing maternity and child health services: PT – AM – Baseline



Source: Mott MacDonald

3 Initial equalities analysis

For each protected characteristic groups, this chapter provides a demographic profile, outlines where there has been found to be a differential or disproportionate need across the acute services under review, and provides a commentary on their baseline travel and access, compared to that of the general population.

3.1 Age: Children (those aged 16 and under) and younger people (those aged 16-24)

3.1.1 Demographic profile of children (aged 16 and under)

The table below shows that within the primary study area (covering the two CCGs), the proportion of children aged under 16 (20%) is broadly in line with the national average (19%).

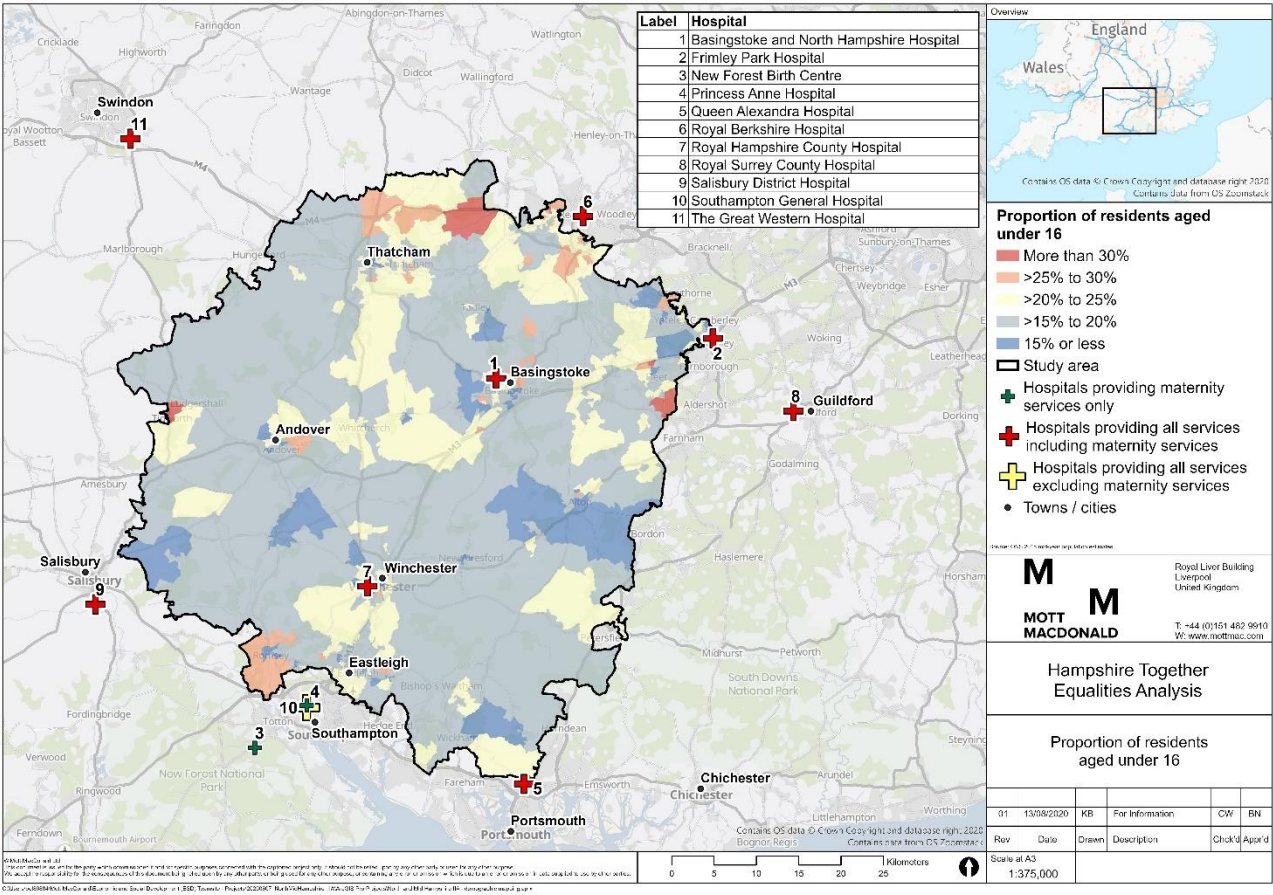
Table 3.1: Age – children (under 16)

Study area	Total population	Under 16	Under 16 %
Study area	871,169	173,354	19.9%
England & Wales	59,115,809	11,311,167	19.1%

Source: LSOA population estimates 2018, ONS

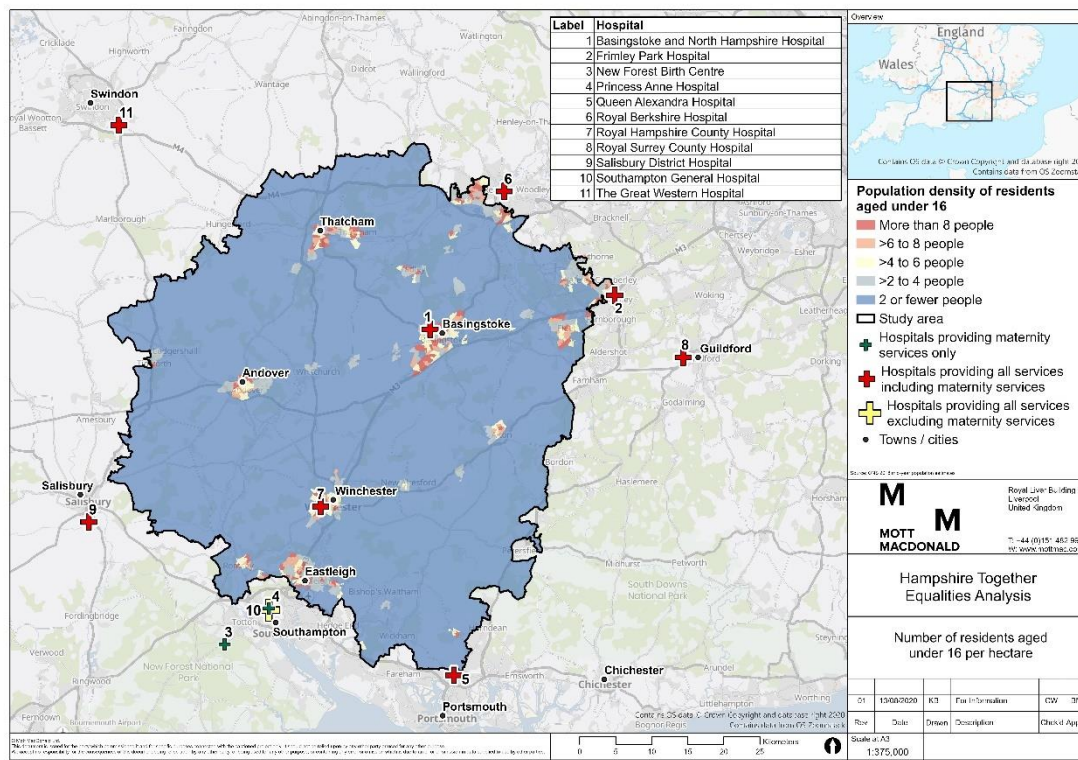
Figure 3.1 and Figure 3.2 below shows that most concentrated density of those aged under 16 are located within the Thatcham area. The majority of the study area has a low density of children under 16.

Figure 3.1: Population density of residents aged under 16 years



Source: Mott MacDonald

Figure 3.2: Population density of residents aged under 16 years – higher density areas



Source: LSOA population estimates 2016, ONS

3.1.2 Demographic profile of young people (16 to 24 years)

The table below shows that within the primary study area (covering the two CCGs), the proportion of young people aged between 16 to 24 (9.6%) is consistent across the two CCGs but is below the national average (11%).

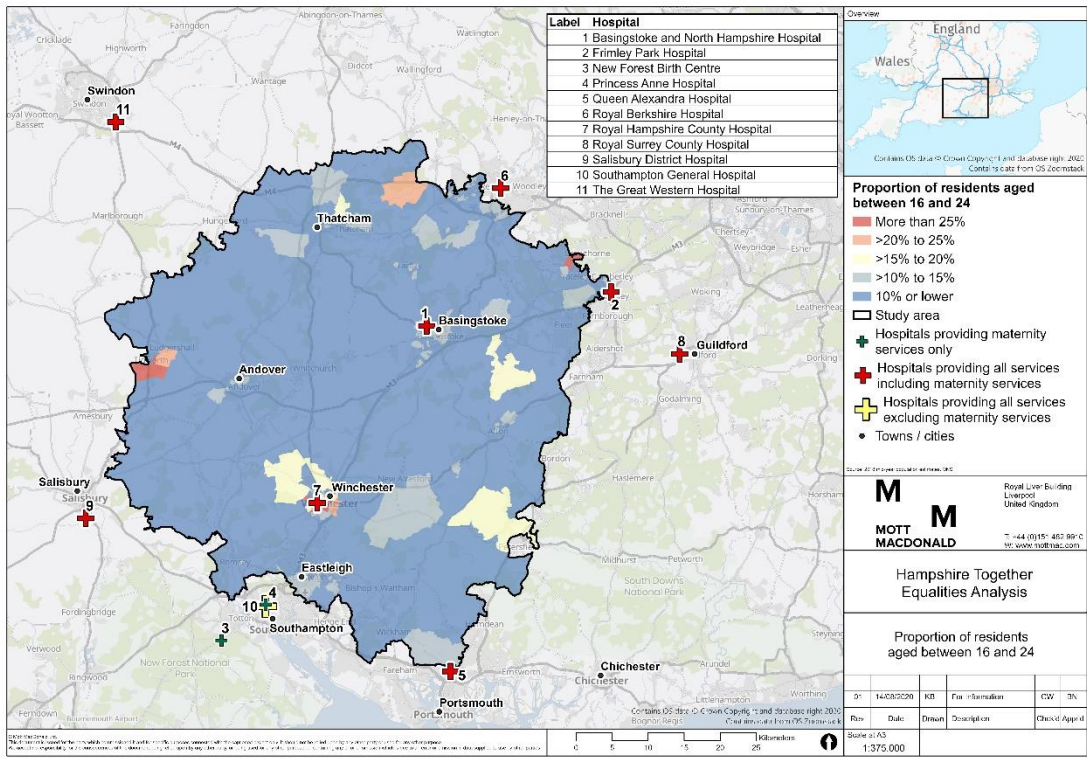
Table 3.2: Age – 16 to 24

Study area	Total population	16- 24	16-24 %
Study area	871,169	83,239	9.6%
England & Wales	59,115,809	6,352,120	11%

Source: LSOA population estimates 2018, ONS

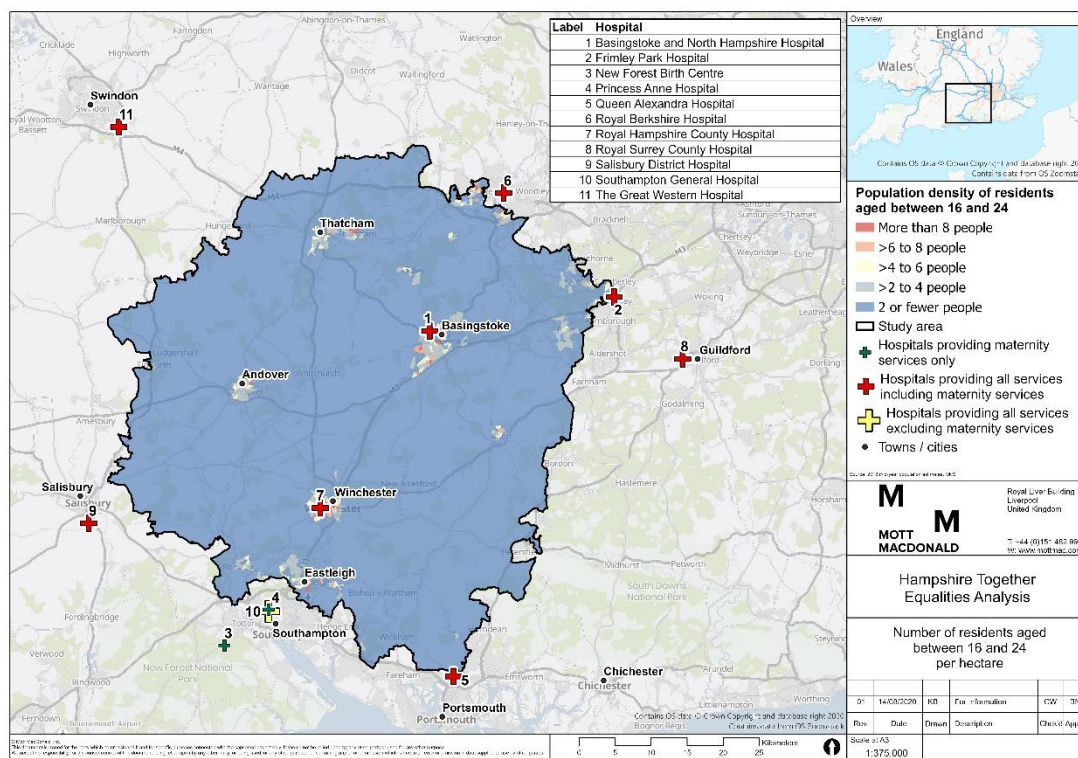
As with the population density for under 16s, Figure 3.3 and Figure 3.4 below show the largest concentrations of 16 to 24 year olds are within the North of Thatcham area. The majority of the study area has a low density of young people.

Figure 3.3: Population density of residents aged 16 to 24 years



Source: Mott MacDonald

Figure 3.4: Population density of residents aged 16 to 24 years – higher density areas



Source: Mott MacDonald

3.1.3 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.3: Scoped in services – Children (those aged 16 and under) and younger people (those aged 16-24)

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health	✓	
Cancer		✓
Trauma & orthopaedics		
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.1.3.1 Unscheduled care

There is a disproportionate use of A&E services by children (under 16) indicating that there may also be a disproportionate need for these services. Hospital accident and emergency activity data shows that children comprise of around 21% of attendances at A&E in England while this group represents 19% of the English population.⁹ In addition, estimations of the proportion of emergency department attendances which are unnecessary and potentially avoidable vary from 15% to 40%. Within these estimates the largest subgroup is children presenting with symptoms of minor illness.¹⁰

Moreover, young children make up a disproportionate number of A&E attendances with approximately 10% of A&E attendees in England are aged four or younger. This is higher than the percentage of 0-4-year olds as a proportion of the whole population (8%).¹¹

3.1.3.2 Maternity and child health

Research indicates that adolescent mothers (aged 10 to 19 years) face higher risks of eclampsia, puerperal endometritis, and systemic infections than women aged 20 to 24 years, and babies born to adolescent mothers face higher risks of low birthweight, preterm delivery, and severe neonatal conditions than those born to women aged 20 to 24 years.¹² As such, teenage mothers are more likely to have a disproportionate need for obstetric services.

Pregnant teenagers and young fathers are less likely than older people to access maternity care early in pregnancy (the average gestational booking is 16 weeks while NICE recommends that women be seen by 10 weeks¹³) and are less likely to keep appointments. As such, teenage mothers are more likely to have a disproportionate need for maternity services in their pregnancies and post-natal maternity periods.

Research has suggested that this may be attributable to a number of interlocking factors. For example, it has been suggested that young women may:

- not realise they are pregnant
- take time to come to terms with the pregnancy
- actively seek to conceal the pregnancy for as long as possible, because of fears about the reaction of her family or peers
- prioritise other crisis issues such as housing and income over healthcare
- have a chaotic lifestyle
- lack a stable address
- not be able to afford or find transport to a hospital or clinic, especially in rural areas.¹⁴

Whilst the number of teenage pregnancies is decreasing (in the last 18 years there has been a 60% reduction in the under-18 conception rate), in 2016 just over half of these conceptions led

⁹ NHS (2017) 'Hospital Accident and Emergency Activity, 2015-16'. Available at: <https://files.digital.nhs.uk/publicationimport/pub23xxx/pub23070/acci-emer-atte-eng-2015-16-rep.pdf>

¹⁰ Royal College of Paediatrics and Child Health (2015) 'Facing the Future: together for Child Health'. Available at: https://www.rcpch.ac.uk/sites/default/files/Facing_the_Future_Together_for_Child_Health.pdf

¹¹ NHS (2017) 'Hospital Accident and Emergency Activity, 2015-16'. Available at: <https://files.digital.nhs.uk/publicationimport/pub23xxx/pub23070/acci-emer-atte-eng-2015-16-rep.pdf>

¹² Ganchimeg T, et al. (2014) 'Pregnancy and childbirth outcomes among adolescent mothers: a World Health Organization multicountry study'. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/24641534>

¹³ NICE (updated 2017) 'Antenatal care for uncomplicated pregnancies: clinical guidance'. Available at: <https://www.nice.org.uk/guidance/cg62/chapter/appendix-d-antenatal-appointments-schedule-and-content>

¹⁴ Department for Children, Schools and Families, Department of Health, Royal College of Midwives (2008) 'Teenage parents: who cares? A guide to commissioning and delivering maternity services for young parents'. Available at: <http://webarchive.nationalarchives.gov.uk/20130321053758/https://www.education.gov.uk/publications/eOrderingDownload/Teenage%20parents.pdf>

to an abortion (51%)¹⁵. There is also evidence that almost 40% of girls who give birth between the ages of 14 -16 years will give birth again aged 17-19.¹⁶

3.1.3.3 Cancer

The types of cancer affecting children are quite different from the cancers that affect teenagers and young adults, and these are different again from the types of cancer that typically affect adults aged 25 and over.

Whilst childhood cancer is rare, in children aged under 5 years, the most common cancers include embryonal tumours (such as neuroblastoma, retinoblastoma and Wilms' tumour) and acute lymphoblastic leukaemia (ALL). Other cancers, such as bone tumours, are very rare in younger children, increasing in incidence with age and peaking in adolescence.¹⁷ Taking the example of ALL, this is related to age with the highest incidence rates in children, teenagers and young adults. In the UK in 2014-2016, 60% of cases were diagnosed in children aged under 19, with 45% of cases occurring in children under the age of 10. The age group with the highest incidence is young children aged 0-4.¹⁸

It is recognised that specialist cancer care services for children and young people may already be provided from hospitals outside of the study area.

3.1.4 Baseline travel

Neither children (those aged 16 and under) nor younger people (those aged 16-24) are disproportionately disadvantaged when accessing the services, compared to the wider community.

Table 3.4: Cumulative proportion of population aged under 16 who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Population aged under 16, by car	41.3%	94.5%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Population aged under 16, by PT	7.7%	28.3%	54.9%	73.8%	92.6%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

¹⁵ ONS (2016) 'Conceptions in England and Wales: 2016'. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/conceptionandfertilityrates/bulletins/conceptionstatistics/2016>

¹⁶ Department for Education (2013) 'Reducing risky behaviour through the provision of information: Research report'. Available at: <https://pdfs.semanticscholar.org/ea41/6669dc5b822b5ac3e42b6a18d9678d6ed14e.pdf>

¹⁷ Children with Cancer UK. Childhood Cancer Facts and Figures. Available at: <https://www.childrenwithcancer.org.uk/childhood-cancer-info/childhood-cancer-facts-figures/>

¹⁸ Cancer Research UK (2016) 'Acute lymphoblastic leukaemia (ALL) incidence statistics'. Available at: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/leukaemia-all/incidence#heading-One>

Table 3.5: Cumulative proportion of population aged 16-24 who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Population aged 16-24, by car	43.8%	93%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Population aged 16-24, by PT	11.7%	32.1%	56.5%	74.4%	92.0%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.2 Age: Older people (those aged 65 and over)

3.2.1 Demographic profile of older people (those aged 65 and over)

The table below shows that within the two CCGs covered by Hampshire Together, the proportion of those aged 65 and over (18.8%) is slightly higher than the national average (18.3%).

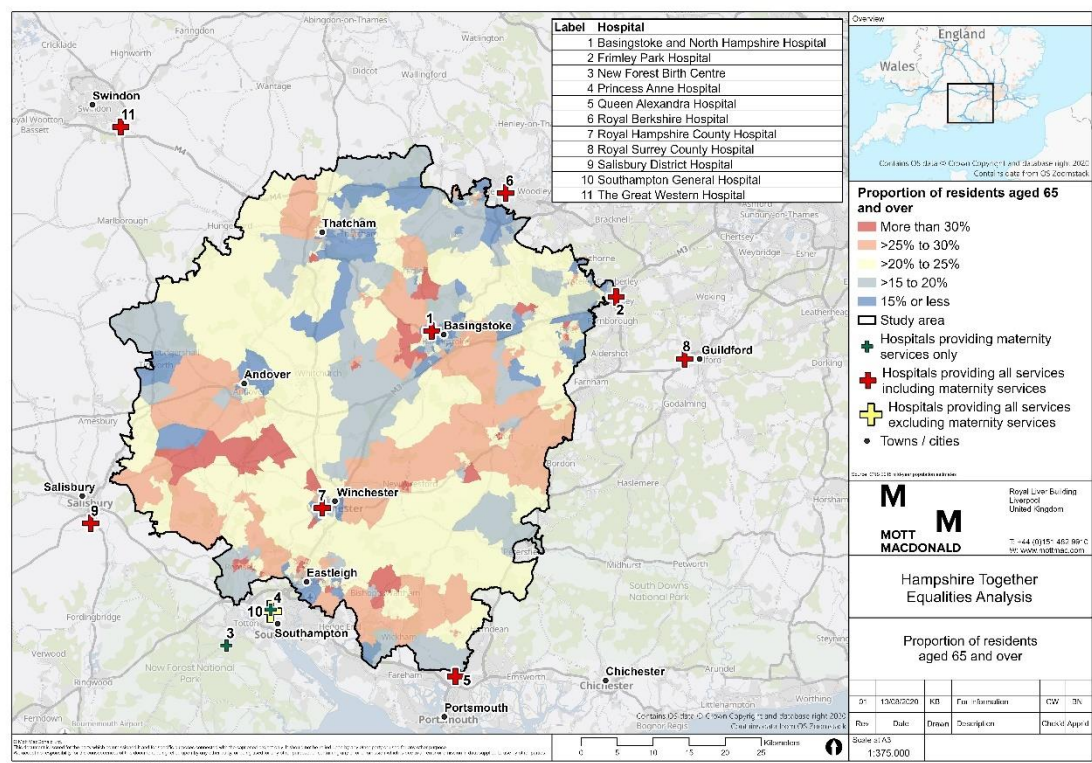
Table 3.6: Older people (those aged 65 and over)

Study area	Total population	Over 65	Over 65 %
Study area	871,169	163,834	18.8%
England & Wales	59,115,809	10,831,246	18.3%

Source: LSOA population estimates 2018, ONS

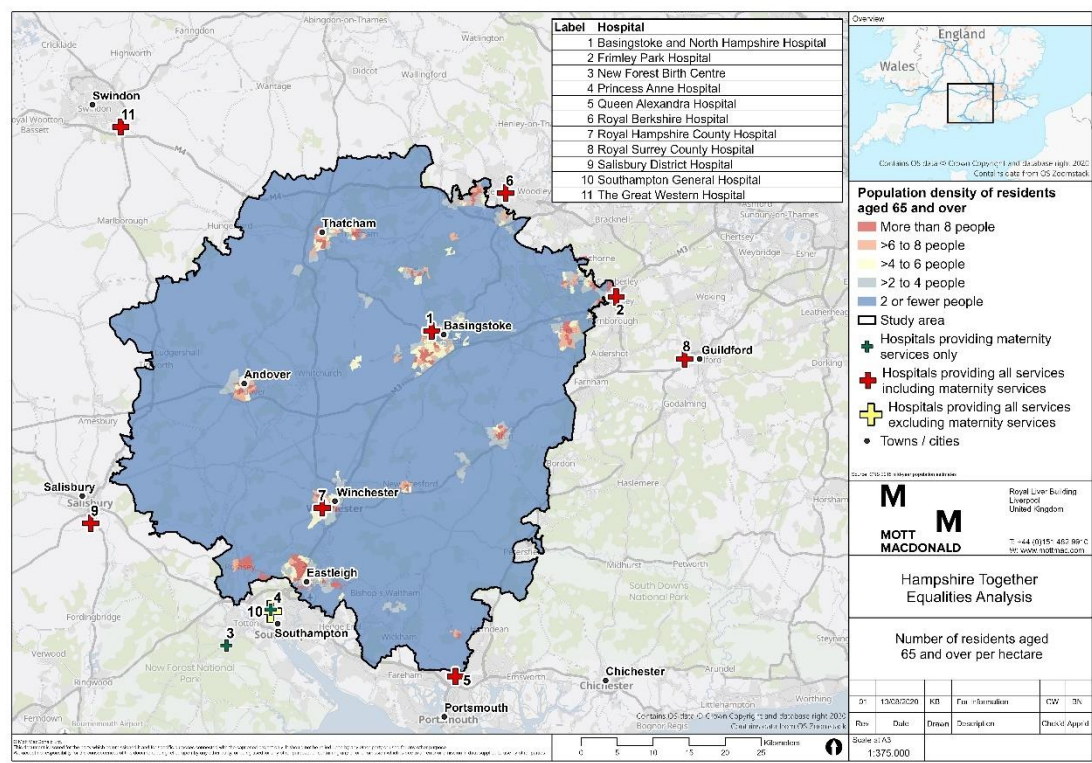
Figure 3.5 and Figure 3.6 below indicates that the highest densities of those aged 65 and largely clustered around urban areas of Eastleigh. The majority of the primary study area has relatively low densities of people aged 65 and over.

Figure 3.5: Population aged 65 and over



Source: Mott MacDonald

Figure 3.6: Population aged 65 and over – higher density areas



Source: Mott MacDonald

3.2.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.7: Scoped in services – older people (those aged 65 and over)

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health		
Cancer	✓	
Trauma & orthopaedics	✓	
Elderly care	✓	

Source: Mott MacDonald, 2020

As part of the patient pathway, patients who require access to **critical care** and **diagnostic** services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.2.2.1 Unscheduled care

There is a disproportionate use of A&E services by older people. Data on hospital accident and emergency activity has shown that 42% of all A&E attendances in England are from older people while this group represents 18% of the English population. Further, approximately 10% of A&E attendees in England are aged 80 or over, while this group represents 5% of the English population.¹⁹

The population of Hampshire is older than the national average and ageing faster. Based on ONS mid-year population estimate data from 2018, the median age of the population across Hampshire County is 44.3 years, compared to the average age nationally of 40.1 years.²⁰ These increases are likely to place greater pressure on A&E services as well as the other scoped-in services for this group.

Older people may also experience a differential need for A&E services as they are more likely to have complex needs that take longer to resolve. The likelihood of A&E attendees having multiple long-term conditions increases dramatically with age and it was found that people aged 75 years and older spend an average of 213 minutes in A&E compared to 149 minutes for those aged under 75 years.²¹

Research in England has shown that 21% of urgent and emergency care attendees are aged 65 and over, while only 16% of the English population are aged 65 and over.²² The number of patients presenting as an emergency with a general surgical condition also increases with age,

¹⁹ NHS (2017) 'Hospital Accident and Emergency Activity, 2015-16'. Available at: <https://files.digital.nhs.uk/publicationimport/pub23xxx/pub23070/acce-emer-atte-eng-2015-16-rep.pdf>

²⁰ JSNA Hants 2019: <https://documents.hants.gov.uk/public-health/JSNA-demography-chapter-2019-12-13.pdf>

²¹ QualityWatch (2014): 'Focus on: A&E attendances. Why are patients waiting longer?'. Available at: https://www.health.org.uk/sites/health/files/QualityWatch_FocusOnA&EAttendances.pdf

²² NHS Digital (2017) 'Hospital Accident and Emergency Activity' Source: ONS Population estimates taken from Nomis. Available at: <https://www.nomisweb.co.uk>

these conditions include hip fractures, acute pancreatitis, ruptured abdominal aortic aneurysms or conditions that require emergency laparotomy.²³

Stomach diseases can result in emergency gastrointestinal surgery and incidence also increase sharply with age. Specifically, diverticular disease (related digestive conditions that affect the large intestine) is much more prevalent in older people; with evidence suggesting that by the time people reach 80 years old, they will have some diverticula.²⁴

3.2.2.2 Cancer

The greatest risk factor for cancer is age, the UK's ageing population have a significant impact on cancer services. Research consistently indicates that older people with cancer in the UK are more likely to present as an emergency and less likely to have surgery, radiotherapy or chemotherapy than younger people.²⁵

Older people are more likely to have needs that extend beyond the cancer and its treatment, such as comorbidities, more complex social situations and an increased need for personal, as well as health care, support.²⁶

For example, there is a strong correlation with the prevalence of head and neck cancer and old age. In the UK from 2014-2016 42% of cases were diagnosed in people aged 65 and over. The peak age of diagnosis is 70–74 years.²⁷ Evidence suggests that more than half (54%) of prostate cancer cases in the UK each year are diagnosed in males aged 70 years and over.²⁸ In addition to this more than half of all new cases are diagnosed in people aged 75 years and over.²⁹

3.2.2.3 Trauma and orthopaedics

Hip, elbow and arm injuries can result from falling and are likely to require the support of trauma unit services. Older people are more vulnerable and likely to fall - around one in three adults over 65 who live at home will have at least one fall a year, and about half of these will have more frequent falls.³⁰

Conditions which require orthopaedic services are more likely to occur in older people than younger people. For example, osteoporosis affects around 50% of people over the age of 75.³¹ After the age of 50, one in two women and one in five men will break a bone as a result of poor bone health arising from osteoporosis.³²

Evidence surrounding specialised orthopaedic services in adults also points towards older people having a disproportionate need for revision joint procedures in later life, thereby

²³ K.F. Desserud, et al. (2015): 'Emergency general surgery in the geriatric patient'. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/26620724>

²⁴ NHS Choices (no date): 'Diverticular disease and diverticulitis'. Available at: <https://www.nhs.uk/conditions/diverticular-disease-and-diverticulitis/>

²⁵ Macmillan UK (no date). Available at: <https://www.macmillan.org.uk/assets/workforce-report.pdf>

²⁶ Macmillan UK (no date). Available at: <https://www.macmillan.org.uk/assets/workforce-report.pdf>

²⁷ Cancer research UK (2016) 'Head and neck cancer incidence rates'. Available at: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/head-and-neck-cancers/incidence#heading-One>

²⁸ Cancer Research UK (2018) 'A study of prostate cancer in men aged 70 years and older (POCAMOS)'. Available at: <https://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-prostate-cancer-men-aged-70-years-older-pocamos>

²⁹ NHS Choices (2016) 'Bladder cancer'. Available at: <https://www.nhs.uk/conditions/bladder-cancer/>

³⁰ NHS Choices (2018) 'Falls'. Available at: <https://www.nhs.uk/conditions/falls/>

³¹ Age UK (2019): 'Osteoporosis: Could you be at risk?'. Available at: <https://www.ageuk.org.uk/information-advice/health-wellbeing/conditions-illnesses/osteoporosis/>

³² Age UK (2019): 'Osteoporosis: Could you be at risk?'. Available at: <https://www.ageuk.org.uk/information-advice/health-wellbeing/conditions-illnesses/osteoporosis/>

increasing the demand for elective orthopaedic care with older people.³³ This is because the average age for arthroplasty procedures is falling, and so people are likely to need revision procedures as they are having initial surgery younger. The NHS website also reports that most people who have a total knee replacement are over 65 years old, with the most common reason for knee surgery being osteoarthritis.³⁴

Furthermore, cases of rheumatoid arthritis in the UK (the most common inflammatory joint disorder) are most frequent among those who are 75 years and over, followed by those who are aged between 64-74 years.

3.2.2.4 Elderly care

Frailty is a specific state of health that is more prevalent as people age. Whereas only 5% of people aged 60-69 live with frailty, this figure rises to 65% in people aged over 90.³⁵

It is estimated that there are 1.8 million people aged over 60 living with frailty in England, of whom almost half are people aged over 80.³⁶

In Hampshire, and nationally, the population is aging and this has contributed to an increase in emergency hospital admissions. Nationally, the number of older people being admitted to hospital as an emergency has grown rapidly in the last five years. In addition, older people living with frailty may need planned admissions both to treat symptoms directly related to their frailty and to treat conditions unrelated to it. It is estimated that people over 85 account for 25% of total bed days in hospital.³⁷

3.2.3 Baseline travel

Older people (those aged 16 and under) are disproportionately disadvantaged when accessing the services, compared to the wider community. For example, the proportions of older people who can access these services within 15 minutes by car (38.2%) and within 30 minutes by PT (27.8%) are both lower than the overall population by around 3 percentage points.

Table 3.8: Cumulative proportion of population aged 65 and over who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Population aged 65 and over, by car	38.2%	96.0%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Population aged 65 and over, by PT	6.4%	24.9%	52.9%	73.9%	90.7%

³³ NHS England (2016) 'Elective Care – summary of some actions CCGs can take'. Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/01/elective-care-summary-actions-ccgs.pdf>

³⁴ NHS choices (2019) 'Knee replacement'. Available at: <https://www.nhs.uk/conditions/knee-replacement/>

³⁵ National Institute for health research NIHR research on older people living with frailty in hospitals Available at: <https://www.bgs.org.uk/sites/default/files/content/resources/files/2018-11-23/Comprehensive-Care-final.pdf>

³⁶ NHS England (2016). Older People living with frailty. <https://www.england.nhs.uk/ourwork/lrc-op-eolc/older-people/frailty>

³⁷ NHS England (2013). Bed availability and occupancy. <https://www.england.nhs.uk/statistics/statistical-work-areas/bedavailability-and-occupancy/>

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.3 Disabled people

3.3.1 Demographic profile of people living with a disability

The table below shows that within the two CCGs covered within North and West Hampshire, the proportion of people with a disability is (13%), while in line with Hampshire as a whole, is lower than the national average (17%).

National data, such as that produced by the GP Patient Survey³⁸, does not indicate variation with the national average for those with a mental health condition or with a learning disability. However, local JSNA information suggests that there has been under recording of these conditions across the CCGs.

Table 3.9: People living with an Limiting Long-Term Health Disability Illness (LLHD).

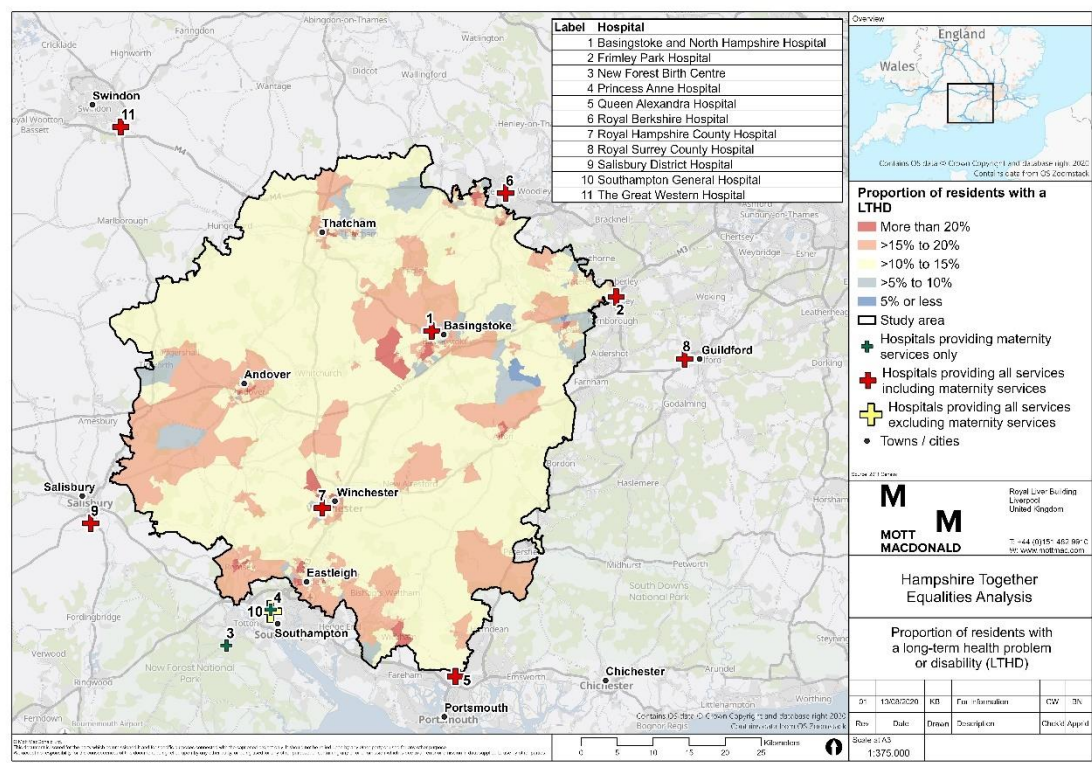
Study area	Total population	LLTI	LLTI %
Study area	871,169	114,940	13.2%
England & Wales	59,115,809	10,048,441	17.0%

Source: Census 2011, ONS

Figure 3.7 and Figure 3.8 below shows that the highest densities of people living with a disability are largely clustered around North and Hampshire CCG (Basingstoke and Andover areas) and Eastleigh area.

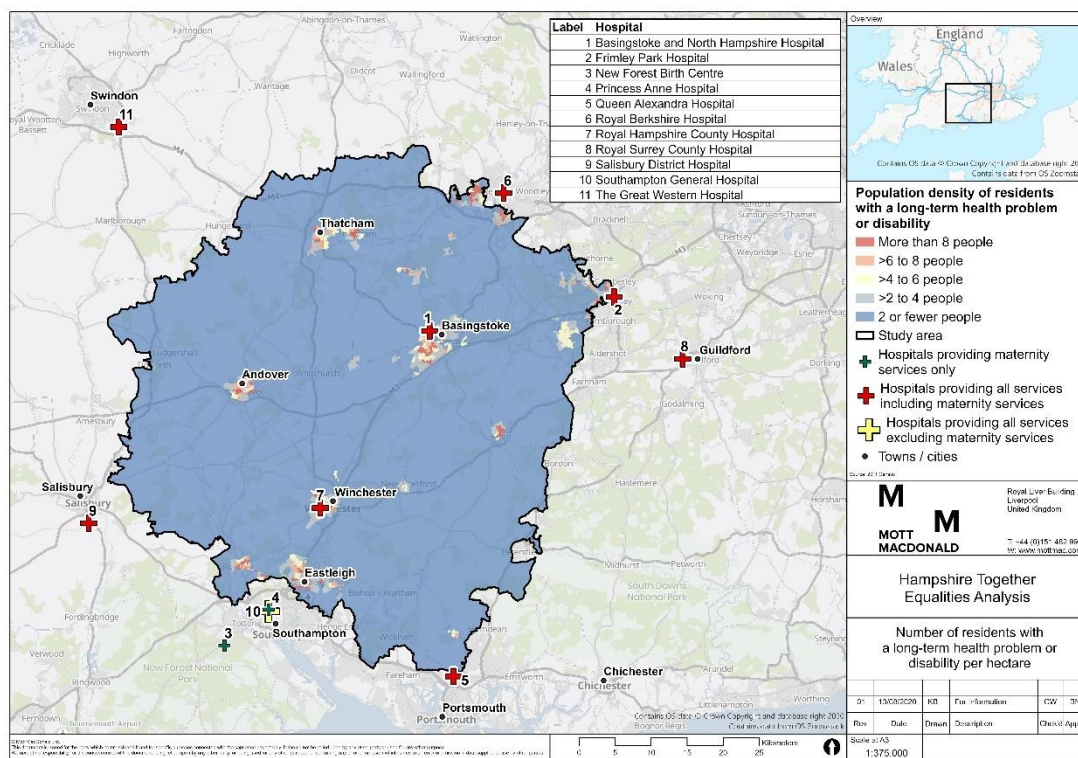
³⁸ GP Patient Survey. Available at: <https://www.gp-patient.co.uk/>

Figure 3.7: People living with a LLHD



Source: Mott MacDonald

Figure 3.8: People living with an LLHD – higher density areas



Source: Census 2011, ONS

3.3.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.10: Scoped in services – people living with a disability

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health	✓	
Cancer		
Trauma & orthopaedics	✓	
Elderly care		✓

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.3.2.1 Unscheduled care

People living with some types of disability tend to have a disproportionate need for A&E services. People with Down's syndrome are a particular high-risk group, because they have a predisposition to lung abnormalities, a poor immune system and a tendency to breathe through their mouth.³⁹ Indeed many of the conditions identified as ambulatory care sensitive conditions (ACSCs), for example convulsions and epilepsy, and respiratory diseases, are more common among people with learning disabilities which can put this group at risk of requiring emergency care.⁴⁰

Research undertaken by St George's hospital has shown that adults with intellectual disabilities are likely to disproportionately use acute medicine services, experiencing twice as many emergency hospital admissions overall compared to the general population.⁴¹ The research found that of those with intellectual disabilities, 23% had an emergency admission compared to 12% of those in the control group. The overall annual rate for emergency hospitalisations in adults with intellectual disabilities was 182 per 1,000 adults, nearly three times higher than the comparable group when adjusted for comorbidities, smoking and deprivation.

People with other types of disability tend to disproportionately use A&E services. For example, users of mental health services are more than twice as likely to have attended A&E than non-users.⁴² Research suggests that increased A&E service use among people with mental health problems is due to unmet health-related needs and an increased vulnerability to accidents and self-harm.⁴³

Other long-term disabilities, for example Alzheimer's, can also result in higher levels of emergency admissions, and subsequently a disproportionate use and need for emergency care. In particular, these patients are more likely to suffer from falls and other accidents. In 2012/13, 73% of hospital admissions for Alzheimer's sufferers were emergency admissions.⁴⁴

A study into the effect of mental health conditions on unplanned admissions also concluded that patients with a mental health disorder were more likely than patients without a mental health disorder to have unplanned admissions (10.8% compared to 4.5%) or potentially preventable unplanned admissions (2.1% compared to 0.8%).⁴⁵

3.3.2.2 Maternity & child health

Maternity and neonatal care

³⁹ Royal College of Nursing (2013): 'Meeting the health needs of people with learning disabilities'. Available at: http://www.complexneeds.org.uk/modules/Module-4.1-Working-with-other-professionals/All/downloads/m13p040b/meeting_health_needs_people_with_ld.pdf

⁴⁰ Royal College of Nursing (2011): 'Learning from the past – setting out the future: developing learning disability nursing in the UK'. Available at: <https://www.rcn.org.uk/professional-development/publications/pub-003871>

⁴¹ SGUoL (2017) 'Potentially preventable hospital admissions for patients with intellectual disabilities revealed'. Available at: <https://www.squ.ac.uk/news/news-archive/potentially-preventable-hospital-admissions-for-patients-with-intellectual-disabilities-revealed>

⁴² NHS Digital, (2013). 'Focus on Accident & Emergency'. Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/focus-on/focus-on-accident-emergency-december-2013>

⁴³ Keene, J. and Rodriguez, J. (2006). 'Are mental health problems associated with use of Accident and Emergency and health-related harm?'. Available at: <https://academic.oup.com/eurpub/article/17/4/387/500754>

⁴⁴ Alzheimer's Society (2009): 'Counting the costs: Caring for people with dementia on hospital wards'. Available at: https://www.ahsw.org.uk/userfiles/Arts%20&%20Dementia%20files/Counting_the_cost_report.pdf

⁴⁵ Payne R. et al., (2013): 'The effect of physical multi-morbidity, mental health conditions and socioeconomic deprivation on unplanned admission to hospital: a retrospective cohort study'. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3602270/>

The state of a woman's health before pregnancy can impact on her wellbeing throughout the pregnancy as well as the health of her baby. Data suggests that service use is higher for women with long term limiting illness or disability⁴⁶.

It has been estimated that 9.4% of women giving birth in the UK have one or more limiting longstanding illness or disability which may adversely impact their pregnancy, birth and early parenting.⁴⁷ Evidence exploring the use of maternity services by women with disability⁴⁸ has suggested that disabled women were at higher risk for adverse pregnancy outcomes, for instance they were more likely to deliver early and have low-birth-weight babies. For women with a less easily identified disability, such as having mental health problems, further difficulties may arise in receiving appropriate care, increasing the probability of health complications which may arise. Disabled women can therefore, often need more intensive prenatal and postnatal care treatments, meaning that they generally spend more time in hospitals, or need more support throughout the pregnancy and parenting process.

Women with long term conditions may have a disproportionate need for obstetric services as they are at a higher risk of developing complications during pregnancy. Women with type 1 diabetes can develop problems with their eyes (diabetic retinopathy) and their kidneys (diabetic nephropathy) or find that existing problems get worse. Women with pre-existing type 1 or type 2 diabetes are also at higher risk of having babies who: do not develop normally/have congenital abnormalities; are stillborn or die soon after birth; have health problems shortly after birth, such as heart and breathing problems which require hospital care. Furthermore, drugs taken to treat the pre-existing condition might have to be altered during pregnancy which can cause complications for the mother.⁴⁹

Babies born to women with some chronic illnesses, such as rheumatoid arthritis, and mental health conditions, such as schizophrenia are also more likely to have a low birthweight in comparison to babies born to other women.⁵⁰

Barriers in access to healthcare providers and facilities have been reported for many women with physical disabilities and mental health conditions, resulting in higher rates of abortion, miscarriage, caesarean section and low usage of contraception.

Child health

Children and young people with disabilities are more likely than other children and young people to experience health conditions such as asthma, diabetes, muscular skeletal and cardiovascular conditions which may bring them in contact with paediatrics services.⁵¹ For example, children with neurological disabilities have more frequent hospital admission episodes and an increased length of inpatient stay across medicine, specialities and surgery.⁵²

⁴⁶ Malouf, R et al (2017) 'Access and quality of maternity care for disabled women during pregnancy, birth and the postnatal period in England: data from a national survey'. Available at: <https://bmjopen.bmj.com/content/7/7/e016757.info>

⁴⁷ Redshaw, M et al (2013) 'Women with disability: the experience of maternity care during pregnancy, labour and birth and the postnatal period'. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/24034425>

⁴⁸ Redshaw, M et al (2013) 'Women with disability: the experience of maternity care during pregnancy, labour and birth and the postnatal period'. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/24034425>

⁴⁹ NHS Choices (2015), 'Diabetes and pregnancy'. Available at: <https://www.nhs.uk/conditions/pregnancy-and-baby/diabetes-pregnant/>

⁵⁰ Jomeen, J et al (2013) 'Assessing women's perinatal psychological health: exploring the experiences of health visitors'. Available at: <https://www.tandfonline.com/doi/abs/10.1080/02646838.2013.835038>

⁵¹ Taylor, N, Stoddart, L and Kurup, B (2016) 'Obesity in children and young people with learning disability'. Available at: https://adc.bmj.com/content/101/Suppl_1/A67

⁵² Yuan, Jin-Xi (2017) 'Do children with neurological disabilities use more inpatient resources: an observational study'. Available at: <https://ete-online.biomedcentral.com/articles/10.1186/s12982-017-0059-1>

Disabled children are likely to have poorer overall health and less access to adequate healthcare in comparison to children without a disability.⁵³ The needs of disabled children, young people, and their families are unique to them, they include issues to do with stamina, breathing, fatigue, social and behavioural impairments. These require multi-disciplinary response across paediatrics. There is also evidence to suggest that disabled children are likely to have multiple complex needs, for example, it is estimated that up to 40% of hearing impaired children have an additional disability or that 10% of patients with paediatric congenital heart disease have some form of learning disability.^{54 55}

3.3.2.3 Trauma & orthopaedics

Injuries and falls are a serious problem for people with learning disabilities; they are twice as likely to experience an injury, compared to the general population.⁵⁶

People with learning disabilities have increased risk factors associated with osteoporosis. They are likely to have a disproportionate need for elective orthopaedic services, due to the increased prevalence of low bone mineral density among this group.⁵⁷ Factors contributing to osteoporosis include: lack of weight-bearing exercise and immobility, delayed puberty, poor nutrition, being underweight, use of anti-epilepsy medication, diagnosis of Down's syndrome and for women, entering menopause earlier than average.⁵⁸

Studies have also shown that people who take epilepsy medicine for long periods of time are at higher risk of thinning and breaking bones than those who do not take epilepsy medicines (although there is little research that explores whether newer types of epilepsy medicines can also cause bone problems).⁵⁹

Orthopaedic surgery may also be necessary for people with cerebral palsy to correct problems with bones and joints.⁶⁰

There is also evidence to suggest that people with HIV may have a disproportionate need for elective orthopaedic surgery. This is because low bone mineral density is more prevalent in people with HIV.⁶¹

3.3.3 Elderly care

People with learning disabilities have a similar risk of falls throughout their lives as older people in the general population. Around one-third of falls by people with learning disabilities result in injury and the rate of fractures is higher than in the rest of the population. This may be due to

⁵³ Contact a family (2015) 'Health services for disabled children and young professionals: Information for health professionals'. Available at: https://contact.org.uk/media/625497/health_services_for_disabled_children_and_young_people.pdf

⁵⁴ NdcS (2012) 'Deaf children with additional needs'. Available at: https://www.google.co.uk/url?sa=t&rc=1&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0ahUKEwi4kLfxwo_bAhXJ2aQKHAFyAekOFqgnMAA&url=http%3A%2F%2Fwww.ndcs.org.uk%2Fdocument.rm%3Fid%3D2613&usq=AOvVaw2yCT6Waeo_tNzuqYC4ecx2

⁵⁵ NHS England (2016) 'Paediatric Congenital Heart Disease Specification'. Available at: <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2016/03/paed-spec-2016.pdf>

⁵⁶ Glasgow Caledonian University (GCU) (2016) 'Injury and fall prevention for people with learning disabilities'. Available at: <https://agile.csp.org.uk/system/files/injury-and-fall-prevention-for-people-with-learning-disabilities-resource-guide.pdf>

⁵⁷ NHS (2019) 'Osteoporosis'. Available at: <https://www.nhs.uk/conditions/osteoporosis/>

⁵⁸ Simpson, J. (2015) 'Supporting individuals with intellectual disabilities and mental illness: Common physical concerns'. Available at: <https://opentextbc.ca/caregivers/chapter/chapter-four-common-physical-concerns/>

⁵⁹ NHS (2019) 'Osteoporosis'. Available at: <https://www.nhs.uk/conditions/osteoporosis/>

⁶⁰ Cerebral Palsy Group (2019) 'Cerebral Palsy Surgery Options'. Available at: <https://cerebralspasygroup.com/treatment/surgery/>

⁶¹ Matovu, F. et al (2016) 'Bone health and HIV in resource-limited settings: a scoping review'. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5578733/>

increased risk of osteoporosis. Falls and injuries are avoidable causes of frailty and reduced wellbeing.

There is evidence that people with learning disabilities are at increased risk of osteoporosis compared to the general population and this may contribute to the incidence of fractures resulting from falls ⁶²

3.3.4 Baseline travel

Population with a long-term health problem or disability are not disproportionately disadvantaged in terms of accessing the services, compared to the wider community.

Table 3.11: Cumulative proportion of population with a long-term health problem or disability (LTHD) who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
LTHD, by car	41.4%	95.8%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
LTHD, by PT	7.2%	29.1%	56.9%	75.8%	92.8%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.4 Gender re-assignment

3.4.1 Demographic profile – gender reassignment

Census information on the geographical distribution of the trans community is not available. This also means that it has not been possible to analyse baseline travel for this group.

At present, there is no official estimate of the trans population. The Gender Identify Research and Identity Society (GIREs) in their Home Office funded study in 2009, estimated that the number of trans people in the UK to be between 300,000 - 500,000.⁶³ Most recent estimates are that in the UK, around 650,000 people, 1% of the population, are estimated to experience some degree of gender non-conformity (GIREs).⁶⁴

3.4.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

⁶² Gov.uk (2019) *preventing falls in people with learning disabilities/preventing falls in people with learning disabilities making reasonable adjustments*. Available at: <https://www.gov.uk/government/publications/preventing-falls-in-people-with-learning-disabilities/preventing-falls-in-people-with-learning-disabilities-making-reasonable-adjustments>

⁶³ Reed, B., et al. (2009) *'Prevalence, incidence, growth and geographic distribution'*. Available at: <http://worldaa1.miniserver.com/~qires/assets/Medpro-Assets/GenderVarianceUK-report.pdf>

⁶⁴ *ibid*

Table 3.12: Scoped in services – gender re-assignment

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health		
Cancer		
Trauma & orthopaedics	✓	
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.4.2.1 Unscheduled care

There is evidence to suggest that transgender people have a disproportionate need for emergency care. The UK's largest survey of transgender people revealed that 34% of transgender people have attempted suicide.⁶⁵ The increased likelihood of attempting suicide could lead to a greater proportion of trans people presenting at A&E departments for emergency intervention.

Research which grouped lesbian, gay, bisexual and transgender (LGB&T) people, found that they are also less likely to access some health services in favour of using A&E departments compared to the general public.⁶⁶

3.4.2.2 Trauma & orthopaedics

Trans men (female-to-male) and trans women (male-to-female) are at risk of developing osteoporosis because of the need to take hormones that alter the balance of oestrogen and testosterone in the body.⁶⁷ After gender re-assignment surgery, the level of hormones may decrease, and this may also affect bone density increasing the risk of osteoporosis. Replacement sex hormones (testosterone for trans men and oestrogen for trans women) are needed to maintain bone strength.⁶⁸

Some trans men who are not able to take testosterone use Depo-Provera to stop their periods from occurring. Evidence suggests that using Depo-Provera can lower bone density leading to a greater need for elective orthopaedics.⁶⁹

⁶⁵ Nodin, N., et al (2015): 'LGB&T mental health, risk and resilience explored'. Available at: http://www.queerfutures.co.uk/wp-content/uploads/2015/04/RARE_Research_Report_PACE_2015.pdf

⁶⁶ Hudson-Sharp, N. and Metcalf, H. (2016): 'Inequality among lesbian, gay bisexual and transgender groups in the UK: a review of evidence'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/539682/160719_REPORT_LGBT_evidence_review_NIESR_FINALPDF.pdf

⁶⁷ National Osteoporosis Society (2019) 'Risk factor: Medications for transgender people'. Available at: <https://theros.org.uk/information-and-support/understanding-osteoporosis/causes-of-osteoporosis-and-broken-bones/medications-for-transgender-people/>

⁶⁸ National Osteoporosis Society (2019) 'Risk factor: Medications for transgender people'. Available at: <https://theros.org.uk/information-and-support/understanding-osteoporosis/causes-of-osteoporosis-and-broken-bones/medications-for-transgender-people/>

⁶⁹ National Osteoporosis Society (2018) 'Risk factor: Depo provera'. Available at: <https://theros.org.uk/information-and-support/understanding-osteoporosis/causes-of-osteoporosis-and-broken-bones/depo-provera/>

3.5 Marriage and civil partnership

The evidence review does not indicate any disproportionate or differential need for this protected characteristic group.

3.6 Pregnancy and maternity

3.6.1 Demographic profile – pregnancy and maternity

To analyse levels of pregnancy and maternity in the study areas data have been used on the number of women aged 16-44 within the population. The table below shows that within the study area, the number of women aged 16-44 (17.1%) is slightly lower with the national average (18.3%).

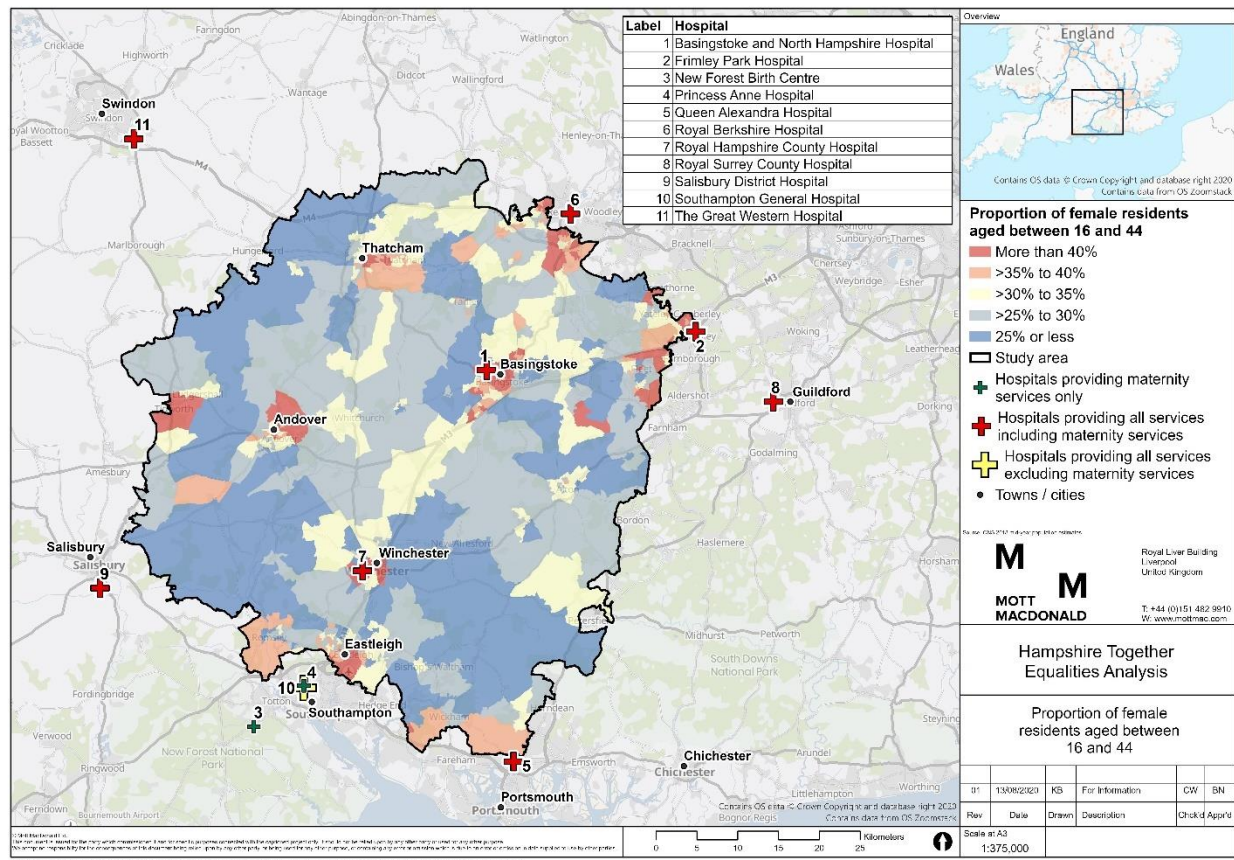
Table 3.13: Population of females aged 16-44

Study area	Total population	Females aged 16-44	Females aged 16-44 %
Study area	871,169	148,943	17.1%
England & Wales	59,115,809	10,813,139	18.3%

Source: LSOA population estimates 2018, ONS

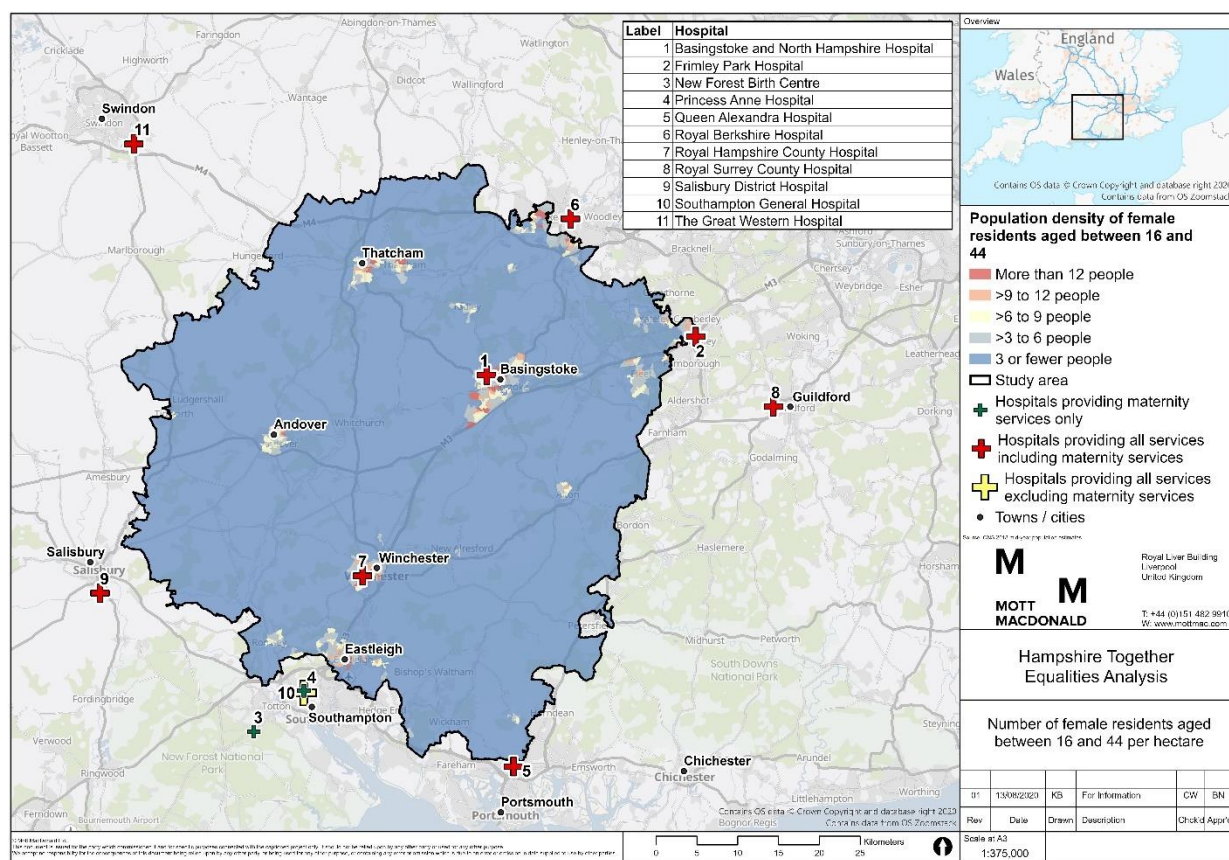
Figure 3.9 and Figure 3.10 below shows that high densities of females aged 16-44 West Hampshire CCG areas with the highest density clustered around Basingstoke and Andover hospitals.

Figure 3.9: Population of females aged 16-44



Source: Mott MacDonald

Figure 3.10: Population of females aged 16-44- higher density areas



Source: LSOA population estimates 2018, ONS

3.6.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.14: Scoped in services – pregnancy and maternity

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care		
Maternity & child health	✓	
Cancer		
Trauma & orthopaedics		
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.6.2.1 Unscheduled care

There is evidence that women who are in the early stages of pregnancy are more at risk of developing heart disease than women who are not pregnant. Heart disease is the biggest single cause of maternal deaths in the UK as there is a 50% increase in how much the heart has to do by the end of the first trimester, which needs to be sustained for six months.⁷⁰ *However, given that this is rare, the pregnancy and maternity protected characteristic group has not been scoped in for this service.*

3.6.2.2 Maternity and child health

By the very nature of this service area, women who are pregnant, new mothers, or breastfeeding will experience disproportionate need for this type of care - in 2016 85% of births in England were in an obstetric unit.⁷¹

There is evidence to suggest that Hampshire mothers are getting older, in 1991, 35% of births were to women aged over 30, by 2017 this had increased to 57.7%⁷² Increasing average maternal age and greater obesity rates, tend to result in women requiring greater levels of care when giving birth.

There is evidence to suggest that women over the age of 40 are at a higher risk of complications. These complication risks are:

1. The association between later pregnancy and specific pregnancy difficulties like hypertension
2. Being more likely to have general age-related health conditions. This includes being more likely to have conditions like diabetes, obesity, and decreased cardiovascular reserve
3. The increased chance that the birth itself will have more complications if you're older. If you're over 40, you are likely to be offered additional monitoring and consultant-led care, as well as being offered induction of labour earlier.⁷³

3.6.2.3 Trauma & orthopaedics

Pregnancy associated osteoporosis is a rare condition that causes a woman's bones to fracture easily during pregnancy or in the weeks after giving birth⁷⁴, which could perhaps lead to increased use of this service. *However, given that this is rare, the pregnancy and maternity protected characteristic group has not been scoped in for this service.*

3.6.3 Baseline travel

The female population aged 16 to 44 are not in a disadvantaged position when accessing the maternity and child health services either by car or PT, compared to the overall population.

⁷⁰ British Heart Foundation (date unknown) 'Pregnancy and heart disease'. Available at: <https://www.bhf.org.uk/heart-matters-magazine/medical/women/pregnancy-and-heart-disease>

⁷¹ National Maternity Review (2016) 'Better births: Improving outcomes of maternity services in England' Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/02/national-maternity-review-report.pdf>

⁷² JSNA Hants 2019- <https://documents.hants.gov.uk/public-health/JSNA-demography-chapter-2019-12-13.pdf>

⁷³ National Children Birth Trust (2018) *Pregnancy and birth for women over 35* Available at: <https://www.nct.org.uk/pregnancy/tests-scans-and-antenatal-checks/pregnancy-and-birth-for-women-over-35>

⁷⁴ National Osteoporosis Society (2019) 'Pregnancy Associated Osteoporosis'. Available at: <https://theros.org.uk/information-and-support/understanding-osteoporosis/pregnancy-associated-osteoporosis/>

Table 3.15: Cumulative proportion of female population aged 16-44 who can access maternity and child health services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Female population aged 16-44, by car	43.8%	94.9%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Female population aged 16-44, by PT	10.1%	31.4%	58.0%	76.1%	93.6%
Total population, by PT	7.9%	28.1%	54.8%	74.4%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

As for travel times for other services within the scope of this report, whilst it is evidenced that people of this protected characteristic group have disproportionate need or use for unscheduled care, these needs are considered rare and are therefore not scoped in for the travel analysis.

3.7 Race and ethnicity

3.7.1 Demographic profile – race and ethnicity

The table below shows that within the study area, the proportion of those from BAME backgrounds is 10%) this is significantly lower than the national average (18.5%).

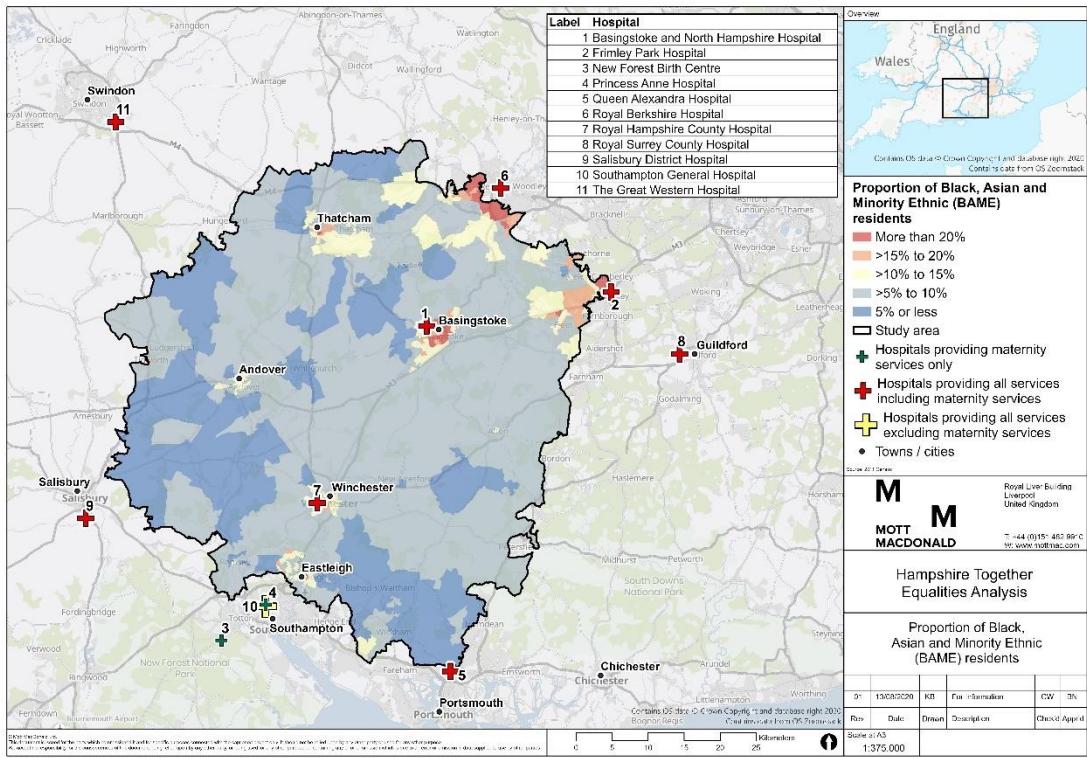
Table 3.16: Population of people from BAME backgrounds

Study area	Total population	BAME	BAME %
Study area	871,169	89,094	10.2%
England & Wales	59,115,809	10,941,226	18.5%

Source: Census 2011, ONS

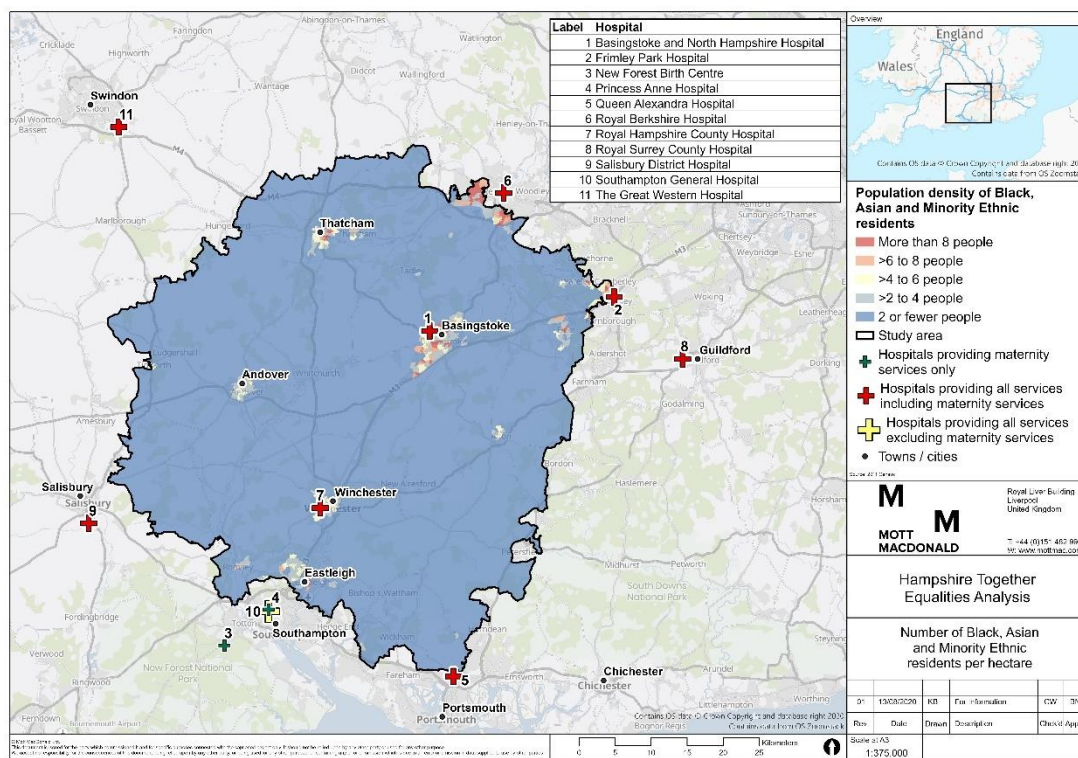
Figure 3.11 and Figure 3.12 below shows that the high density of people from BAME backgrounds is in the Basingstoke and the Woodley area. Although overall, the study area has relatively low densities of people from BAME backgrounds.

Figure 3.11: Population of people from BAME backgrounds



Source: Mott MacDonald

Figure 3.12: Population of people from BAME backgrounds – higher density areas



Source: Census 2011, ONS

3.7.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.17: Scoped in services – race and ethnicity

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health		
Cancer	✓	
Trauma & orthopaedics	✓	
Elderly care		

Source: Mott MacDonald, 2020

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.7.2.1 Unscheduled care

There is emerging evidence that some population groups have an increased risk of adverse outcomes from COVID-19 including some ethnic groups, those with certain pre-existing conditions such as obesity, those in deprived communities, and older people. This may exacerbate existing health inequalities in the population.

Evidence indicates that people from a BAME background are at greater risk of becoming very sick with COVID-19 than the white population in the UK. In particular, black men and women are nearly twice as likely as white people to die from COVID-19.⁷⁵ This may increase their likelihood of requiring hospital care, and particularly critical care.

Evidence indicates that people from a BAME background have a disproportionate need for unscheduled hospital care. For example:

- People of South Asian background are three times more likely to require an emergency hospital admission for asthma, while people from an African Caribbean background are twice as likely to require emergency admission.⁷⁶ One reason attributed to south Asian men having a higher risk of respiratory disease is linked to a higher propensity to smoke compared to members of other minority ethnic backgrounds.⁷⁷
- People of South Asian background also 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.⁷⁸

There is also evidence that people of minority ethnic groups are more likely to present at A&E in comparison with those who are not part of a minority ethnic group.⁷⁹ People from ethnic minority groups also experience or perceive barriers in accessing primary care services⁸⁰, which may mean that other urgent or unscheduled care services are accessed when conditions deteriorate. This is corroborated by lower GP registration rates among this group.⁸¹

Recognising that prevalence for different conditions varies across different ethnicity groups, White British, White Irish and Other White population groups have higher risk ratios for appendicitis.⁸² In 2014-15, 97% of hospital admissions for appendicitis were emergency admissions.⁸³

⁷⁵ National Institute of Health Research (2020) 'COVID-19 research in Black, Asian and minority ethnic communities'. Available at: <https://bepartofresearch.nihr.ac.uk/COVID-19-Research/COVID-19-for-BAME-communities>

⁷⁶ Department of Health (2011) 'An Outcomes Strategy for Chronic Obstructive Pulmonary Disease (COPD) and Asthma in England'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/216139/dh_128428.pdf

⁷⁷ NHS Choices (2016) 'South Asian Health issues'. Available at: <https://www.nhs.uk/live-well/>

⁷⁸ British Heart Foundation (date unknown) 'Your ethnicity and heart disease'. Available at: <https://www.bhf.org.uk/heart-health/preventing-heart-disease/your-ethnicity-and-heart-disease> and British Lung Foundation (2013): 'Pneumonia'. Available at: <https://www.blf.org.uk/support-for-you/pneumonia>

⁷⁹ Gibin, P. et al. (2011): 'Names-based classification of accident and emergency department users'. Available at: <https://pdfs.semanticscholar.org/7c53/2d61afaddf9c5140531528eadfdf8885fc8a.pdf>

⁸⁰ Gibin, P. et al. (2011): 'Names-based classification of accident and emergency department users'. Available at: <https://pdfs.semanticscholar.org/7c53/2d61afaddf9c5140531528eadfdf8885fc8a.pdf>

⁸¹ *ibid*

⁸² Bhopal RS, et al (2014) 'Ethnic variations in five lower gastrointestinal diseases: Scottish Health and Ethnicity Linkage Study'. Available at: <http://bmjopen.bmj.com/content/4/10/e006120>

⁸³ This percentage has been calculated using the statistics from HES Admitted Patient Care, England 2014-15. Of 44,653 recorded admissions, 43,120 were emergency admissions. For the data set please see: <http://content.digital.nhs.uk/searchcatalogue?productid=19420&q=title%3a%22Hospital+Episode+Statistics%2c+Admitted+patient+care+--+England%22&sort=Relevance&size=10&page=1#top>

3.7.2.2 Maternity and child health

Those from a BAME background are likely to have a disproportionate need for obstetric services and use of obstetric services. The percentage of live births in England and Wales to mothers born outside the UK has increased every year since 1990 (when it was 11.6%) reaching 28% in 2016. It has been suggested that this trend in higher proportions of births to women born outside the UK, has in part been linked to better fertility levels among foreign-born women⁸⁴ Other research suggests that certain sections of the UK's South Asian population – most notably Pakistani and Bangladeshi communities – are more likely to have large families, and therefore high fertility and birth rates are common.⁸⁵ Numerous population studies have revealed this trend.

The most recent data analysed by the Maternal, Newborn and Infant Clinical Outcome Review Programme found that women from a minority ethnic background continue to have an increased risk of maternal death compared to White women.⁸⁶ Evidence suggested that this is linked to health seeking behaviour and quality of care. This is often further linked to issues around accessing health services for reasons such as language barriers.⁸⁷

Research also suggests that babies from minority ethnic background are more likely to require care in a neonatal or specialist care baby unit as they are at higher risk of infant mortality and lower birth weights: in 2014-15, 9.5% of babies from an Asian background were recorded as having a low birth weight (under 2.5kg). Compared to 8.4% for Black babies and 6.2% for those from a White background.⁸⁸ The incidence of patients from black and minority ethnic (BME) communities with paediatric congenital heart disease is greater than the general population.⁸⁹

Other evidence also suggests that babies are twice as likely to die before the age of one if the mother was born in Pakistan or the Caribbean, compared to mothers born in the UK. This indicates that babies of migrants from Pakistan or the Caribbean are likely to be high users of paediatric services.⁹⁰

3.7.3 Cancer Services

Older people from BAME backgrounds have less evidence and research regarding the use of cancer services as they do not always know when and how to seek help. They have cultural, religious and language barriers which may prevent them from accessing health care services.

There is evidence to suggest a correlation with ethnicity and cancer of the mouth. Research conducted by Macmillan found that Asian women are significantly much more likely to get

⁸⁴ ONS (2016) 'Births by parents' country of birth, England and Wales: 2016'. Available at: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/parentscountryofbirthenglandandwales/2016>

⁸⁵ Coleman, D. A and Dubuc S (2010): 'The fertility of ethnic minorities in the UK, 1960s-2006'. Available at: https://www.jstor.org/stable/40646398?seq=1#page_scan_tab_contents

⁸⁶ Maternity, Newborn and Infant Clinical Outcome Review Programme (2017): 'Savings Lives, Improving Mothers' Care - Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2013-15'. Available at: <https://www.npeu.ox.ac.uk/downloads/files/mbrace-uk/reports/MBRRACE-UK%20Maternal%20Report%202017%20-%20Web.pdf>

⁸⁷ Anawo Ameh, C. and van den Broek, N. (2008) 'Clinical governance Increased risk of maternal death among ethnic minority women in the UK.' Available at: <https://obgyn.onlinelibrary.wiley.com/doi/pdf/10.1576/toag.10.3.177.27421>

⁸⁸ NHS Digital (2015) 'NHS Maternity Statistics – England, 2014-15'. Available at: <https://digital.nhs.uk/data-and-information/publications/statistical/nhs-maternity-statistics/2014-15>

⁸⁹ NHS England (2016) 'Paediatric Congenital Heart Disease Specification'. Available at: <https://www.england.nhs.uk/commissioning/wp-content/uploads/sites/12/2016/03/paed-spec-2016.pdf>

⁹⁰ Best Beginnings (date unknown): 'About health inequalities'. Available at: <https://www.bestbeginnings.org.uk/health-inequalities>

cancer of the mouth than White or Black women.⁹¹ The excess of oral cancers in this protected characteristic gives weight to the association with dietary intake.⁹²

3.7.4 Baseline travel

The Black, Asian and Minority Ethnic (BAME) population are not disproportionately disadvantaged in terms of accessing the services, compared to the wider community. In fact, population of this protected characteristic group have significantly better access to the services either by car or PT. For example, the proportions of BAME population who can access these services within 15 minutes by car (54%) and within 30 minutes by PT (41%) are both higher than the overall population by around 13 percentage points.

Table 3.18: Cumulative proportion of Black, Asian and Minority Ethnic (BAME) population and over who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
BAME, by car	54.1%	96.3%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
BAME, by PT	11.5%	41.4%	69.0%	82.2%	95.5%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.8 Religion and belief

The evidence review does not indicate any disproportionate or differential need for this protected characteristic group.

3.9 Sex

3.9.1 Demographic profile – sex

The table below shows that the number of men and women living within the primary study area is the same as the national average (49.4% and 50.6% respectively).

Table 3.19: Sex

Study area	Total population	Males	Males %	Females	Females %
Study area	871,169	429,931	49.4%	441,238	50.6%
England & Wales	59,115,809	29,215,251	49.4%	29,900,558	50.6%

⁹¹ Macmillan (2017) 'The Rich Picture, People with Head and neck Cancer'. Available at: <http://be.macmillan.org.uk/Downloads/CancerInformation/RichPicture/MAC1384517--The-Rich-Picture-on-people-living-with-head-and-neck-cancer.pdf>

⁹² Gupta, N., et al (2016) 'Changing Trends in oral cancer - a global scenario'. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5506386/>

Source: LSOA population estimates 2018, ONS

3.9.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.20: Scoped in services – sex

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care		✓
Maternity & child health	✓	
Cancer		✓
Trauma & orthopaedics		✓
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.9.2.1 Unscheduled care

Men and women have differential needs for A&E services as they are likely to suffer from different conditions which require access to these services. Gender differences in A&E attendance also vary by age group:

- Boys aged 0-14, are more likely to attend A&E
- Women aged 15-34, are more likely to attend A&E overall - although there are specific incidents and cases where men are more likely to present at A&E
- Men aged 35 upwards, are more likely to attend A&E overall. ⁹³

As well as differences by age, men and women suffer from different health issues which are more likely to bring them into contact with A&E. For example:

- Men are six times more likely to have an abdominal aortic aneurysm than women
- Men are also at higher risk of certain injuries than women. For example, men are more likely to be involved in road traffic accidents (RTAs) than women (RTAs make up 1.2%⁹⁴ of total attendances at A&E).⁹⁵ Research conducted by Brake, a road safety charity, found that men are more likely to hold a range of attitudes that are linked with dangerous or risk-taking behaviours⁹⁶, and therefore more likely to be involved in RTAs than women

⁹³ House of commons (2017) 'Accident and Emergency Statistics: Demand, Performance and Pressure'. Available at: <http://researchbriefings.files.parliament.uk/documents/SN06964/SN06964.pdf> and NHS Digital (2017) 'Hospital Accident and Emergency Activity'. Available at: http://webarchive.nationalarchives.gov.uk/20180328130852tf_/http://content.digital.nhs.uk/catalogue/PUB23070/acci-emer-atte-eng-2015-16-rep.pdf/

⁹⁴ House of commons (2017) 'Accident and Emergency Statistics: Demand, Performance and Pressure'. Available at: <http://researchbriefings.files.parliament.uk/documents/SN06964/SN06964.pdf>.

⁹⁵ NHS Digital (2017) 'Hospital Accident and Emergency Activity'. Available at: http://webarchive.nationalarchives.gov.uk/20180328130852tf_/http://content.digital.nhs.uk/catalogue/PUB23070/acci-emer-atte-eng-2015-16-rep.pdf/

⁹⁶ Brake (date unknown): 'Driver gender'. Available at: <http://www.brake.org.uk/facts-resources/1593-driver-gender>

- In comparison to men, women are four times more likely to suffer from hip fractures which is one of the likely risk factors of osteoporosis.⁹⁷

Men and women also have differential needs for emergency surgery. For example:

- Men are at higher risk of certain injuries than women (for example, as described above, men are more likely to be involved in RTAs than women). Injuries such as these may require emergency surgery.⁹⁸
- Gallstone related diseases account for around a third of emergency general surgery admissions and referrals.⁹⁹ Women are more likely to develop gallstones, particularly if they have had children, are taking the combined pill or are undergoing high-dose oestrogen therapy.¹⁰⁰

Evidence also suggests that men consult with their GP less than women and prolonged avoidance increases the risk that illness will require acute treatment.¹⁰¹ Further, research shows that, compared to women, men are:

- 28% more likely to be hospitalised for congestive heart failure
- 32% more likely to be hospitalised for long-term complications of diabetes
- 24% more likely to be hospitalised for pneumonia.¹⁰²

3.9.2.2 Maternity & child health

By the very nature of these service areas, women of childbearing age (16-44 years old) will experience a disproportionate need for maternity services.

3.9.2.3 Cancer

There is evidence that there is significant difference in the types of cancer for both men and women.

There is evidence that childhood cancer occurs more commonly in boys than girls. This varies by tumour type; the most striking excess is in lymphomas, which boys are more than twice as likely to develop. In the UK between 2015-2017, 54% of children's cancer cases in the UK are boys, compared to 46% for girls.¹⁰³

Evidence of the most common cancer in women are relating to a women's reproductive system called gynaecological cancer; this includes cervical cancer¹⁰⁴. By the very nature of these service areas, women will experience a disproportionate need for gynae-oncology services. More than half of the cervical cases in the UK each year are diagnosed in women under the age

⁹⁷ Arthritis Research UK (date unknown) 'Who gets it?'. Available at: <https://www.arthritisresearchuk.org/arthritis-information/conditions/arthritis/who-gets-it.aspx>

⁹⁸ Brake (date unknown): 'Driver gender'. Available at: <http://www.brake.org.uk/facts-resources/1593-driver-gender>

⁹⁹ Augis (2015) 'Pathway for the Management of Acute Gallstone Diseases'. Available at: <http://www.augis.org/wp-content/uploads/2014/05/Acute-Gallstones-Pathway-Final-Sept-2015.pdf>

¹⁰⁰ NHS Choices (2015) 'Gallstones'. Available at: <https://www.nhs.uk/conditions/gallstones/symptoms/>

¹⁰¹ Wang Y., et al (2013) 'Do men consult less than women? An analysis of routinely collected UK general practice data'. Available at: <http://bmjopen.bmj.com/content/3/8/e003320>

¹⁰² Jenna L. Davis (2016) 'The "Superman Syndrome": Why Men Are Reluctant to Pursue Preventive Care'. Available at: <http://www.primaryissues.org/2011/06/mens-health/>

¹⁰³ Children with Cancer UK. Childhood Cancer Facts and Figures. Available at: <https://www.childrenwithcancer.org.uk/childhood-cancer-info/childhood-cancer-facts-figures/>

¹⁰⁴ Cancer research UK (date unknown) 'Women's cancers (gynaecological cancer)'. Available at: <https://www.cancerresearchuk.org/about-cancer/womens-cancer>

of 45.¹⁰⁵ The main cause of cervical cancer is a persistent infection of certain types of the human papilloma virus (HPV).

The most common cancer in men is prostate cancer. Evidence suggests that more than half (54%) of prostate cancer cases in the UK each year are diagnosed in males aged 70 and over.¹⁰⁶ Thus showing the disproportionate need for older males to require urological cancer services.

3.9.2.4 Trauma & orthopaedics

Men are more likely to have accidents (including dislocations, sprains and strains and bone fractures) at work than women, which may result in a need for trauma care. Within the EU-28, the construction, transportation and storage, manufacturing and agriculture, forestry and fishing sectors accounted for 50% of non-fatal accidents at work in 2014, which are the sectors men are more likely to work in than women.¹⁰⁷

Men and women are likely to require orthopaedic services for different reasons. For example, men are more likely to develop gout than women.¹⁰⁸ Gout affects the joints by causing inflammatory arthritis, intermittent swelling, redness, heat, pain, and stiffness in the joints.¹⁰⁹

However, as women tend to have smaller bones than men, and around the time of menopause the amount of oestrogen (the hormone that protects bones) decreases sharply, women are more likely to develop osteoporosis than men.¹¹⁰ Women also tend to live longer than men, with age leading to an increased likelihood of developing osteoporosis.¹¹¹

In addition to this, rheumatoid arthritis is the most common inflammatory arthritis, with prevalence being greater in women (1.16%) than men (0.44%).¹¹²

3.9.3 Baseline travel

Neither male nor female population are disproportionately disadvantaged when accessing the services, compared to the wider community.

Table 3.21: Cumulative proportion of male population who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Male, by car	40.9%	94.6%	100%	100%	100%

¹⁰⁵ Cancer research UK (date unknown) 'About cervical cancer'. Available at: <https://www.cancerresearchuk.org/about-cancer/cervical-cancer>

¹⁰⁶ Cancer Research UK (date unknown) 'Prostate cancer incidence statistics'. Available at: <https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/prostate-cancer/incidence>

¹⁰⁷ Eurostat statistics explained (2016) 'Accidents at work statistics'. Available at: https://ec.europa.eu/eurostat/statistics-explained/index.php/Accidents_at_work_statistics

¹⁰⁸ National Institute of Arthritis and Musculoskeletal and Skin Diseases (2016) 'Gout'. Available at: <https://www.niams.nih.gov/health-topics/gout>

¹⁰⁹ National Institute of Arthritis and Musculoskeletal and Skin Diseases (2016) 'Gout'. Available at: <https://www.niams.nih.gov/health-topics/gout>

¹¹⁰ National Osteoporosis Foundation (2017) 'What Women Need to Know'. Available at: <https://www.nof.org/preventing-fractures/general-facts/what-women-need-to-know/>

¹¹¹ Age UK (date unknown) 'Osteoporosis: Could you be at risk?'. Available at: <https://www.ageuk.org.uk/information-advice/health-wellbeing/conditions-illnesses/osteoporosis/>

¹¹² College of Occupational Therapists (2015) 'Hand and wrist orthoses for adults with rheumatological conditions'. Available at: https://www.arthritis.org.uk/assets/000/001/185/Hand-and-wrist-orthoses_original.pdf

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Total population, by car	41.0%	94.9%	100%	100%	100%
Male, by PT	7.9%	27.8%	54.5%	73.9%	92.1%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

Table 3.22: Cumulative proportion of female population who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Female, by car	41.1%	95.2%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Female, by PT	7.9%	27.9%	55.0%	74.4%	92.2%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.10 Sexual orientation

3.10.1 Demographic profile – sexual orientation

Census information on the geographical distribution of people on the basis of their sexual orientation is not available. This also means that it has not been possible to analyse baseline travel for this group.

3.10.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.23: Scoped in services – sexual orientation

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health		
Cancer		
Trauma & orthopaedics		
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the

unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.10.2.1 Unscheduled care

There is evidence to suggest that lesbian, gay and bisexual (LGB) people have a disproportionate need for emergency care. One study concluded that LGB people were less likely to access some key health services (76 per cent used GP surgeries, compared with 90 per cent of the general population), but were more likely to have used accident and emergency services and minor injuries clinics (18 per cent and 12 per cent respectively) in comparison to the general population.¹¹³

Self-harm and thoughts of suicide are also more common among people who are lesbian, gay and bisexual compared to those who are heterosexual,¹¹⁴ which may result in a need for emergency care.

3.10.3 Baseline travel

The baseline travel analysis has not been completed due to the lack of data available for this group.

3.11 Deprivation

3.11.1 Demographic profile – deprivation

The table below shows that the proportion of people residing in the most deprived quintile in the study area (1.9%) is below the national average (20%).

This is aligned to the local joint strategic needs assessment which highlighted that Hampshire is among the least deprived authorities in England according to the Index of Multiple Deprivation 2019, although there are pockets within Hampshire that fall within the most deprived areas in the country.¹¹⁵

Table 3.24: Deprivation quintiles

CCG	Most deprived quintile	%	Second most deprived quintile	%	Third most deprived quintile	%	Fourth most deprived quintile	%	Least deprived quintile	%
Study area	16,474	1.9%	90,393	10.4%	130,409	15.0%	220,849	25.4%	413,044	47.4%
England ¹¹⁶	11,207,619	20.0%	11,515,351	20.6%	11,355,766	20.3%	11,052,437	19.7%	10,846,005	19.4%

Source: MHCLG 2019

¹¹³ Hudson-Sharp, N. and Metcalf, H. (2016). 'Inequality among lesbian, gay bisexual and transgender groups in the UK: a review of evidence'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/539682/160719_REPORT_LGBT_evidence_review_NIESR_FINALPDF.pdf

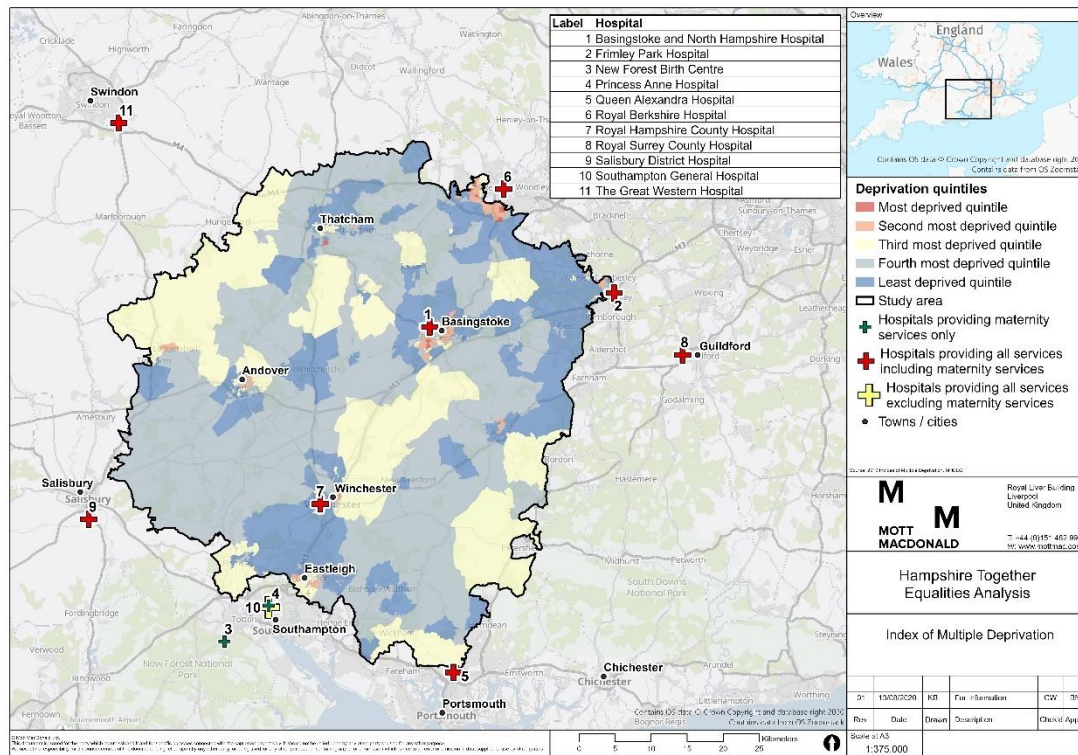
¹¹⁴ The National LGB&T Partnership (2015) 'The Adult Social Care Outcomes Framework: lesbian, gay, Bisexual and Trans Companion Document'. Available at: <https://nationallgbtpartnershipdotorg.files.wordpress.com/2015/08/ascof-companion-piece.pdf>

¹¹⁵ JSNA Hants 2019- <https://documents.hants.gov.uk/public-health/JSNA-demography-chapter-2019-12-13.pdf>

¹¹⁶ Although in theory, each quintile should have exactly the same number of population, it is difficult to achieve it over the whole country as the data were summed up from LSOA level as opposed to individual level.

Figure 3.13 below shows the distribution of the deprivation quintiles across the study area. The most deprived areas tend to be grouped in clusters in the Basingstoke, Eastleigh and Woodley areas.

Figure 3.13: Overall deprivation quintiles for the study areas



Source: Mott MacDonald

3.11.2 Evidence of disproportionate need

The table below outlines those services for where evidence of disproportionate or differential need has been identified.

Table 3.25: Scoped in services – deprivation

Service Area	Evidence of disproportionate need or use	Evidence of differential need
Unscheduled care	✓	
Maternity & child health	✓	
Cancer	✓	
Trauma & orthopaedics	✓	
Elderly care		

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

3.11.2.1 Unscheduled care

People who live in deprived areas have higher COVID-19 diagnosis rates and death rates than those living in less deprived areas. The mortality rates from COVID-19 in the most deprived areas were more than double the least deprived areas, for both males and females.¹¹⁷

High diagnosis rates may be due to geographic proximity to infections or a high proportion of workers in occupations that are more likely to be exposed. Poor outcomes from COVID-19 infection in deprived areas remain after adjusting for age, sex, region and ethnicity, but the role of comorbidities requires further investigation. Evidence that shows that deprived communities have greater acute healthcare need is well established, and was particularly highlighted in the Marmot Review of 2010.

A similar association has been recognised between unscheduled hospital care and deprivation, with one study concluding that more deprived areas had more emergency inpatient admissions per head than less deprived areas (Decile 10 had more than twice as many admissions as decile 1, across all age and all sex groups).¹¹⁸ Children and young people from the most deprived areas also experience higher A&E attendance rates per 1,000 population than those in the least deprived areas.¹¹⁹ A further study of unscheduled hospital admissions concluded that those living in the most socio-economically deprived quintile are more likely than those in the least deprived quintile to have an unplanned admission to hospital (8.2% v.4.1%), or a potentially preventable unplanned admission to hospital (1.7%v. 0.6%).¹²⁰

A recent detailed deprivation study¹²¹ which considered the evidence between acute health need and deprivation highlighted the role that multi-morbidity has. Age is an important driver of multi-morbidity, but the study also presented evidence that 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. This also recognised that the population burden of multi-morbidity is the strongest predictor of ED attendance, which is independently associated with social deprivation.¹²² Age and social deprivation are therefore 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.¹²³

¹¹⁷ Public Health England, 'Disparities in the risk and outcomes of COVID-19, Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/908434/Disparities_in_the_risk_and_outcomes_of_COVID_August_2020_update.pdf

¹¹⁸ B McCormick, P Hill, E Poteliakhoff (2012), 'Are hospital services used differently in deprived areas? Evidence to identify commissioning challenges', Centre for Health Service Economics & Organisation. Available at <https://www.chseo.org.uk/downloads/wp2-hospital-services-deprived-areas.pdf>

¹¹⁹ L Kossarova, R Cheung, D Hargreaves, E Keeble (2017), 'Admissions of inequality: emergency hospital use for children and young people', The Nuffield Trust. Available at <https://www.nuffieldtrust.org.uk/files/2017-12/nt-admissions-of-inequality-web.pdf>

¹²⁰ Payne R et al. (2013) *The effect of physical multi-morbidity, mental health conditions and socioeconomic deprivation on unplanned admissions to hospital: a retrospective cohort study*. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3602270/>

¹²¹ Cobic, Nuffield Trust and PPL (2018) Deprivation impact analysis: As part of Merton, Sutton and Surrey Downs CCGs Improving Healthcare Together: 2020-2030 programme. Available at: <https://improvinghealthcaretogether.org.uk/wp-content/uploads/2018/10/Deprivation-impact-analysis-report-2018.pdf>

¹²² 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. Available at <https://doi.org/10.3399/bjgp18X694397>

¹²³ PD Gray, T Chenore et al (2017), What is the relationship between age and deprivation in influencing emergency hospital admissions? A model using data from a defined, comprehensive, all-age cohort in East Devon, UK, BMJ Open, Available at: <https://doi:10.1136/bmjopen-2016-014045>

Working age adults from a deprived background are at greater risk of poorer health, low mental wellbeing, and respiratory problems, including asthma and breathlessness,¹²⁴ which may result in a need for emergency care.

Lifestyle factors such as smoking and obesity are identified as being particularly important in contributing to the need for emergency surgical services, and have well established links to deprivation.¹²⁵ These factors all lead to the development of conditions that require the need to use emergency general surgery for example diverticular disease, many cancers, vascular diseases, and many oesophageal and gastrointestinal conditions.

A number of studies have also identified a link between socioeconomic status and outcomes with regards to critical care. For example, a Scottish study identified that a higher proportion of patients from the most deprived quintile of the Scottish population were admitted to intensive care, in contrast to those from the least deprived quintile. Following adjustment for confounders, socioeconomic status was also associated with both 28 day mortality and 4 year mortality.¹²⁶

3.11.2.2 Maternity & child health

Mothers from more deprived backgrounds have a higher risk of perinatal mortality (foetal deaths after 24 weeks of gestation and death before seven completed days), maternal deaths, cardiac disease, miscarriage or premature births, preeclampsia, gestational diabetes and infections among other conditions.^{127 128} Babies living in the most deprived areas also have a higher rate of congenital abnormalities, including neonatal mortality associated with congenital abnormalities.¹²⁹

In addition, 38.1% of women living in the most deprived decile in England were overweight or obese at their booking appointment, in comparison with 29% of women in the least deprived areas.¹³⁰ Obesity in the first-time pregnancies is associated with an increased risk of negative pregnancy outcome such as pre-eclampsia and preterm birth¹³¹.

There is evidence of a correlation between maternal obesity and socioeconomic deprivation. A large body of evidence links maternal obesity to adverse pregnancy outcomes, these include perinatal mortality (foetal deaths after 24 weeks of gestation and death before seven completed days), maternal death, cardiac disease, miscarriage or premature births, preeclampsia, gestational diabetes, and infections among other conditions.^{132 133} Maternal obesity is therefore likely to lead to a disproportionate need for obstetrics.

¹²⁴ NatCen (2013) 'People living in bad housing – numbers and health impacts'. Available at: https://england.shelter.org.uk/_data/assets/pdf_file/0010/726166/People_living_in_bad_housing.pdf

¹²⁵ NHS Wales (date unknown) 'Emergency General Surgery Review: Review of the Evidence for the Case for Change'. Available at: http://www.wales.nhs.uk/sitesplus/documents/861/eqss_case_10111.pdf

¹²⁶ Lone NI, Rowan KM, Walsh TS, Wild SH and Murray GD (2011) The effect of socioeconomic status on mortality in the critically ill: A national data linkage study. *J Epidemiol Community Health* 2011

¹²⁷ NHS England (2016): 'Saving Babies Lives: A care bundle for reducing stillbirth'. Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/03/saving-babies-lives-car-bundl.pdf>

¹²⁸ MBRRACE-UK (2017) 'Saving Lives, Improving Mothers' Care Lessons learned to inform maternity care from the UK and Ireland Confidential Enquiries into Maternal Deaths and Morbidity 2013–15'. Available at: <https://www.npeu.ox.ac.uk/mbrrace-uk/reports>

¹²⁹ Smith LK, Budd J, Field D, Draper E. (2011) 'Socioeconomic inequalities in outcome of pregnancy and neonatal mortality associated with congenital anomalies: population based study'. Available at: www.bmj.com/content/343/bmj.d4306

¹³⁰ Public Health England (2018) 'Health of women before and during pregnancy: health behaviours, risk factors and inequalities'. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727735/Health_of_women_before_and_during_pregnancy_national_analysis_of_the_MSDS_booking_data.pdf

¹³¹ NHS (2009) 'Obesity is risk in pregnancy'. Available at: <https://www.nhs.uk/news/obesity/obesity-is-risk-in-pregnancy/>

¹³² NHS England (2016): 'Saving Babies; Lives: A care bundle for reducing stillbirth' Available at: <https://www.england.nhs.uk/wp-content/uploads/2016/03/saving-babies-lives-car-bundl.pdf>

¹³³ Heslehurst N et al (2010): 'A nationally representative study of maternal obesity in England'. Available at: <https://www.ncbi.nlm.nih.gov/pubmed/20029373>

There is also evidence to suggest that poverty and low income is a factor in driving poor health in children.¹³⁴ Children from deprived communities are more likely to have poor nutrition and live in poor-quality housing. They are therefore more likely to suffer from poorer general health. Alongside this, there is evidence of disproportionate need in children from deprived communities for treatment for conditions such as speech problems, Attention Deficit Hyperactivity Disorder (ADHD), diabetes, asthma, sleep apnoea and cardiovascular diseases.¹³⁵

There is also a strong correlation between teenage pregnancy and social deprivation. The rate of teenage pregnancy in girls under the age of 18 is almost five times higher in the most deprived areas compared to the least deprived.¹³⁶ Babies of teenage mothers are at increased risk of some poor outcomes compared with babies of older mothers:

- 45% risk of infant death
- 30% less likely to breastfeed
- 30% higher risk of stillbirth
 - 20% higher risk of premature birth if a first baby
 - 90% higher risk of premature birth if a second baby
- 15% higher risk of low birthweight.¹³⁷

3.11.3 Cancer services

The research indicates that people in deprived communities are more likely to be diagnosed with advanced cancers. It also suggests that people from deprived communities with some cancers are less likely to receive surgery than those from the least deprived communities. This could be partly due to low awareness of symptoms, negative beliefs and delayed help seeking.

Cancer Research highlighted that there is a strong link between cervical cancer incidence and deprivation in England. Incidence rates are 72% higher for females living in the most deprived areas in England compared with the least deprived. 11.9 per 100,000 females were diagnosed with cervical cancer in the most deprived quintile in comparison to 6.9 per 100,000 in the least deprived quintile.¹³⁸

Cancer Research has also highlighted that there is a link between the incidence of some urological cancers and deprivation in England.

- For bladder cancer incidence rates are 43% higher for females living in the most deprived areas compared with the least deprived, and 27% higher for males.
- For kidney cancer rates are 33% higher for females living in the most deprived areas compared with the least deprived, and 19% higher for males.¹³⁹

¹³⁴ Wickham, S. et al. (2016) 'Poverty and child health in the UK: using evidence for action'

¹³⁵ The Children's Society (2013): 'A good childhood for every child? Child poverty in the UK'. Available at: https://www.childrensociety.org.uk/sites/default/files/tcs/2013_child_poverty_briefing_1.pdf

¹³⁶ Glinianaia, S. V., et al (2013) 'No improvement in socioeconomic inequalities in birthweight and preterm birth over four decades: a population-based cohort study'. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3651338/>

¹³⁷ Royal College of Nursing, Public Health England and Department of Health (2015) 'Getting maternity services right for pregnant teenagers and young fathers'. Available at: <https://www.rcn.org.uk/sites/default/files/Getting%20maternity%20services%20right%20for%20pregnant%20teenagers%20and%20young%20fathers%20pdf.pdf>

¹³⁸ Cancer Research UK and National Cancer Intelligence Network (2014) 'Cancer by deprivation in England: Incidence, 1996-2010, Mortality, 1997-2011'. Available at <https://www.cancerresearchuk.org/health-professional/cancer-statistics/incidence/deprivation-gradient>

¹³⁹ Cancer Research UK and National Cancer Intelligence Network (2014) 'Cancer by deprivation in England: Incidence, 1996-2010, Mortality, 1997-2011'. Available at <https://www.cancerresearchuk.org/health-professional/cancer-statistics/incidence/deprivation-gradient>

The association between socio-economic deprivation and behavioural lifestyle choices, including those which are a risk factors for certain cancers, are well established. For example, around 60% of mouth and throat cancers in the UK are caused by smoking.¹⁴⁰ People in deprived communities are more likely to smoke than those who are not. The Office of National Statistics (ONS) state that men and women in the most deprived communities are more than twice as likely to smoke (33%) compared with men and women in the least deprived quintile (14%).¹⁴¹

3.11.3.1 Trauma & orthopaedics

Deprivation is associated with greater need for orthopaedic services including:

- Total hip and knee replacement surgery¹⁴²
- Treatment for arthritis - people from lower socioeconomic backgrounds tend to have a more severe form and have suffered arthritis for longer by the time they undergo surgery¹⁴³
- Treatment for knee osteoarthritis - factors associated with deprivation such as obesity increases the risk of damaged joints^{144 145}
- Treatment for Ankylosing Spondylitis (AS)¹⁴⁶ -socially deprived areas have the greatest need for AS care due to greater disease severity and poorer psychological health¹⁴⁷ and
- Treatment for osteomyelitis, a bone infection - factors associated with deprivation such as malnutrition and pre-existing conditions, such as diabetes, increase the risk of developing this condition, as a weakened immune system which makes it more likely for infections to spread to the bones.¹⁴⁸

Socioeconomic deprivation is associated with an increased incidence of fractures in both adults and children, but little is known about the epidemiology of paediatric fractures. A correlation was found between increasing deprivation and the incidence of fractures.¹⁴⁹ The most deprived children were more likely to suffer a fracture as a result of a fall, blunt trauma or a road traffic accident than the least deprived.¹⁵⁰

3.11.4 Baseline travel

There is a mixed picture for populations from the most deprived quintile when accessing the services. Travel access by the most deprived population by car is better than the wider community under most circumstances. However, none of this population group can access services within

¹⁴⁰ Cancer research UK (2014) 'Risks and causes'. Available at: <https://about-cancer.cancerresearchuk.org/about-cancer/laryngeal-cancer/risks-causes>

¹⁴¹ ONS (2016) 'Adult smoking habits in the UK: 2016'. Available at: <https://www.ons.gov.uk/releases/adultsmokinghabitsingreatbritain2016>

¹⁴² Judge, A. et al., (2010) 'Equity in access to total joint replacement of the hip and knee in England: cross sectional study'. Available at: <https://www.bmj.com/content/341/bmj.c4092>

¹⁴³ Based on data on 117,736 patients, all of whom underwent hip or knee replacement surgery in England in 2009-10. Arthritis Research UK (2012) 'Socio-demographic factors influence timing of joint replacement surgery'.

¹⁴⁴ Public Health England (2014) 'Adult obesity and type 2 diabetes'. Available at: <https://www.gov.uk/government/publications/adult-obesity-and-type-2-diabetes>

¹⁴⁵ Arthritis UK (2013) 'Arthritis Research campaign'. Available at: <https://www.versusarthritis.org/>

¹⁴⁶ Ankylosing Spondylitis is a long-term rheumatological condition where the spine and other areas of the body become inflamed

¹⁴⁷ Healey, E. L., Haywood, Kirstie L., Jordan, Kelvin, Garratt, Andrew M. and Packham, J. C. (2010) 'Disease severity in ankylosing spondylitis: variation by region and local area deprivation'. Available at: https://www.researchgate.net/publication/41173825_Disease_Severity_in_Ankylosing_Spondylitis_Variation_by_Region_and_Local_Area_Deprivation

¹⁴⁸ NHS (2017) 'Osteomyelitis'. Available at: <https://www.nhs.uk/conditions/Osteomyelitis/>

¹⁴⁹ The Bone and Joint Journal (2015) 'Social deprivation as a risk factor for fractures in childhood'. Available at: https://www.researchgate.net/publication/271599082_Social_deprivation_as_a_risk_factor_for_fractures_in_childhood

¹⁵⁰ The Bone and Joint Journal (2015) 'Social deprivation as a risk factor for fractures in childhood'. Available at: https://www.researchgate.net/publication/271599082_Social_deprivation_as_a_risk_factor_for_fractures_in_childhood

15 minutes by PT during AM period, which is 8 percentage points lower than the overall population. Although travel access by PT within 30 and 45 minutes is better than the overall population in the study area.

Table 3.26: Cumulative proportion of population from the most deprived quintile who can access all the services within 15-minute time bands: Car & PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Most deprived quintile, by car	54.1%	100%	100%	100%	100%
Total population, by car	41.0%	94.9%	100%	100%	100%
Most deprived quintile, by PT	0.0%	45.0%	91.3%	91.3%	100%
Total population, by PT	7.9%	27.8%	54.8%	74.2%	92.1%

Source: HERE data from ArcGIS, 2020 Q2 for car; ATOC, 2020 Q1 for PT

3.12 Carers

It is commonly accepted that documenting the number of carers is difficult as many carers are unidentifiable. The evidence review does not indicate any disproportionate or differential clinical need for this group. However, carers are important within the study area and there are increased risks associated with being a carer such as the risk of back injuries, higher blood pressure and increased risk of stroke.

3.13 Summary

There is evidence to suggest that the protected characteristic groups outlined in Table 3.27 below have a disproportionate and differential need/use for the services under review.

It is important to note that the report is not suggesting that other groups will not need the services which are under review, rather it is to suggest that there does not presently exist a body of evidence indicating a disproportionate or differential need/use.

Table 3.27: Scoped in equality groups according to services area

	Unscheduled care	Maternity & child health	Cancer	Trauma & orthopaedics	Elderly care
Age – Children (those aged 16 and under) and younger people (those aged 16-24)	✓	✓	✓		
Age – Older people (65 and over)	✓		✓	✓	✓
People with a disability	✓	✓		✓	✓
Gender re-assignment	✓			✓	
Marriage and civil partnership					
Pregnancy and maternity	✓	✓			
Race and ethnicity	✓	✓	✓	✓	
Religion and belief					
Sex	✓	✓	✓	✓	
Sexual orientation	✓				

	Unscheduled care	Maternity & child health	Cancer	Trauma & orthopaedics	Elderly care
Carers					
Deprivation	✓	✓	✓	✓	

As part of the patient pathway, patients who require access to critical care and diagnostic services are likely to present to one of the wider service areas described above, through the unscheduled care pathway for example. Therefore, we do not specifically consider evidence for these service areas, but it could be reasonably concluded that groups with a disproportionate need for these services, will have been identified through this analysis.

The travel baseline and access impact assessment conclude that different protected characteristic groups are experiencing different travel times patterns. This is evidenced by the moderate variation in the cumulative proportion of residents who are able to access the services within certain time bands. For travel by car, older people (those aged 65 and over) tend to experience longer travel times compared to the wider community. Public transport travel times for older people are greater than in comparison with the overall population and the most deprived populations are unable to access services within 15 minutes by public transport compared to 8% of the general study population.

Table 3.28: Cumulative proportion of disadvantaged residents (by protected characteristic group) who can access all the services within 15-minute time bands: Car – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes
Population aged under 16	41.3%	94.5%	100%
Population aged between 16 and 24	43.8%	93%	100%
Population aged 65 and over	38.2%	96.0%	100%
Population with a long-term health problem or disability (LTHD)	41.4%	95.8%	100%
Black, Asian and Minority Ethnic (BAME) population	54.1%	96.3%	100%
Male Population	40.9%	94.6%	100%
Female population	41.1%	95.2%	100%
Population from the most deprived quintile	54.1%	100%	100%
Total population	41.0%	94.9%	100%

Table 3.29: Cumulative proportion of disadvantaged residents (by protected characteristic group) who can access all the services within 15-minute time bands: PT – AM - Baseline

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
Population aged under 16	7.7%	28.3%	54.9%	73.8%	92.6%
Population aged between 16 and 24	11.7%	32.1%	56.5%	74.4%	92%
Population aged 65 and over	6.4%	24.9%	52.9%	73.9%	90.7%
Population with a long-term health	7.2%	29.1%	56.9%	75.8%	92.8%

	Within 15 minutes	Within 30 minutes	Within 45 minutes	Within 60 minutes	More than 60 minutes
problem or disability (LTHD)					
Black, Asian and Minority Ethnic (BAME) population	11.5%	41.4%	69.0%	82.2%	95.5%
Male Population	7.9%	27.8%	54.5%	73.9%	92.1%
Female population	7.9%	27.9%	55.0%	74.4%	92.2%
Population from the most deprived quintile	0.0%	45.0%	91.3%	91.3%	100%
Total population	7.9%	27.8%	54.8%	74.2%	92.1%

4 Next steps

This baseline report represents the first stage of the IIA. More evidence will be gathered in the next phases of the assessment to verify and substantiate initial conclusions, to identify further positive and negative impacts and, where necessary, identify mitigation measures and opportunities for option improvement.

The remaining steps required to ensure that the IIA is both robust and comprehensive are:

- To undertake strategic engagement with stakeholders including equality leads, public health leads and clinical leads. This will inform an interim IIA report and an initial high-level assessment of potential impacts.
- Undertake a detailed travel and access assessment building on this baseline and modelling the implications of the shortlisted options. This will also inform the interim IIA report.
- Prior to the public consultation, undertake a series of focus groups with people from the protected characteristic groups scoped in within this report. These focus groups will be facilitated to understand peoples' views on the potential positive and negative impacts of the short listed proposals, alongside their suggestions for mitigating actions. The interim IIA will be updated with these findings.
- A thorough review of the responses to the public consultation will be undertaken; findings will be considered and incorporated into the IIA where necessary. This will inform the final IIA report to be made available after the public consultation.
- As part of the interim report, mitigating actions that look to maximise the positive impacts and mitigate any potential adverse effects will be documented. This will be refreshed within the final IIA report.

