Out of Hours Dental Services Needs Assessment: West Midlands

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Needs assessment of out of hours dental services in the West Midlands

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This needs assessment has been produced by NHS England and NHS Improvement West Midlands'[1] urgent dental care working group in conjunction with the local Managed Clinical Network (MCN) for urgent dental care and the Local Dental Network (LDN). The working group will also serve as the implementation group for the procurement of out of hours urgent dental care services by NHS Midlands. It will report to the Direct Commissioning Approvals and Assurance Forum (DCAAF) via Dental Strategy Group for NHS England West Midlands. The needs assessment demonstrates comprehensive public engagement has been undertaken, enabling NHS England to fulfil its legal duty stated in Section 13Q of the National Health Service Act 2006 (as amended by the Health and Social Care Act 2012). A quality impact assessment and an equality impact assessment will be undertaken within the procurement process.

[1] The West Midlands refers to the four Sustainability and Transformation Partnerships (STPs), namely Birmingham and Solihull, Coventry and Warwickshire, Black Country and Herefordshire and Worcestershire, which formed the previous NHS England West Midlands and have been part of NHS Midlands since 1 April 2019.

Contents

1. What is the health problem?

1.1 Oral health

Oral health is defined by the World Health Organization (WHO) as:

> *"a state of being free from chronic mouth and facial pain, oral and throat cancer, oral infection and sores, periodontal (gum) disease, tooth decay, tooth loss, and other diseases and disorders that limit an individual's capacity in biting, chewing, smiling, speaking, and psychosocial wellbeing."* [1]

When someone experiences a dental problem, their oral health becomes compromised. In such cases they should have access to dental care to restore their oral health. In many cases this care, although important, is not urgent. Yet in some instances dental care is required urgently, or even as an emergency. The distinction between dental conditions requiring routine, urgent and emergency care is based on their severity and a categorisation for the purpose of triage is shown in Table 1 [2]. It is of note that what a patient may perceive as an urgent dental condition or dental emergency may differ from that within the categorisation.

Routine Dental Problems
• Mild or moderate pain: that is, pain not associated with an Urgent Care condition and that responds to pain-relief measures • Minor dental trauma • Post-extraction bleeding that the patient is able to control using self-help measures • Loose or displaced crowns, bridges or veneers • Fractured or loose-fitting dentures and other appliances • Fractured posts • Fractured, loose or displaced fillings • Treatments normally associated with routine dental care • Bleeding gums

Urgent Dental Conditions
• Dental and soft-tissue infections without a systemic effect • Severe dental and facial pain: that is, pain that cannot be controlled by the patient following self-help advice • Fractured teeth or tooth with pulpal exposure

Dental Emergencies
• Trauma including facial/oral laceration and/or dentoalveolar injuries (e.g. avulsion of a permanent tooth) • Oro-facial swelling that is significant and worsening • Post-extraction bleeding that the patient is not able to control with local measures • Dental conditions that have resulted in acute systemic illness or raised temperature as a result of dental infection • Severe trismus • Oro-dental conditions that are likely to exacerbate systemic medical conditions (e.g. diabetes)

Table 1. Dental conditions requiring routine, urgent and emergency care [2]

The severity of the condition experienced determines the time frame within which care should be provided. The appropriate time scale for conditions in each triage category is in Table 2 below [2].

Triage Category	**Time Scale**
Routine Dental Problems	Provide self-help advice. Provide access to an appropriate service within 7 days if required. Advise patient to call back if their condition deteriorates
Urgent Dental Conditions	Provide self-help advice and treat patient within 24 hours. Advise patient to call back if their condition deteriorates
Dental Emergencies	Contact with a clinician within 60 minutes and subsequent treatment within a timescale that is appropriate to the severity of the condition

Table 2. Triage category and appropriate time scale of intervention [2]

Certain factors are more likely to predispose individuals to require urgent dental care as detailed below:

Homelessness: Those who are homeless experience higher levels of dental disease and difficulties accessing dental care [3]

Deprivation: Those who are deprived experience higher levels of dental disease and are more likely to be irregular dental attenders and experience higher levels of dental disease [3]

Age: Younger adults use urgent dental care services more than other age groups [3]

Ethnicity: Those from BAME (black, Asian and minority ethnic) backgrounds are more likely to be irregular dental attenders [4]

Being in care: Children in care are more likely to be irregular dental attenders [5]

Chronic physical or mental illness: Those with chronic physical or mental illness experience poorer oral health and an increased risk of dental morbidity [3], with medication often causing oral side effects such as dry mouth and caries

Disability: Those with a disability are more likely to experience problems accessing dental care [6]

Substance misuse: Substance misuse is commonly associated with self-neglect and irregular dental attendance. Methadone users experience higher levels of caries [7] [8]

Smoking: Smoking increases the risk of developing dry socket [9]

Alcohol: Those consuming excessive alcohol experience higher levels of dental disease and are more likely to be irregular dental attenders [8]

Custody and detention: Those in places of custody and detention experience higher levels of dental disease than the general population [3]

Refuge and asylum seeking: The oral health of refugees and asylum seekers is poorer than for the general population [3]

Itinerant lifestyle: Travellers and gypsies are more likely to be irregular dental attenders [10]

Living in a supported or care environment: People in supported accommodation, care homes, nursing homes and hospices are more likely to experience problems accessing dental care [11]

Living in a rural area: Those living in rural areas tend to delay accessing urgent dental care until their symptoms are worse [3]

Non-fluoridated water: Those living in areas without community water fluoridation experience higher levels of caries [12]

Language: Non-English speakers are more likely to experience problems accessing dental care [13]. It is of note that white ethnic group may include hidden minorities, such as Eastern European populations, who may not speak fluent English

Dental phobia: Those with dental phobia experience higher levels of dental disease and are more likely to be irregular dental attenders [3]

1.2 Aim and objectives

The aim is to assess oral health needs in relation to urgent dental care and the provision of services to meet those needs in order to inform the procurement of out of hours urgent dental care across the West Midlands.

The objectives are:

1. To review the current out of hours urgent dental care provision
2. To determine the current and future need for out of hours urgent dental care provision and to develop evidence-based recommendations to inform procurement decisions to align services to meet that need
3. To collate views about out of hours urgent dental care from a range of stakeholders including patients and the public in order to inform the commissioning process
4. To deliver evidence-based recommendations to facilitate quality improvement in out of hours urgent dental care

1.3 Audience for the needs assessment

1. Commissioners of out of hours urgent dental care (NHS England)
2. Out of hours urgent dental care providers including clinical providers of care and triage providers (111)
3. STPs, Integrated Care Systems (ICSs) and the wider health and care systems in the West Midlands with an interest in urgent dental care provision
4. Local authorities including Health Overview and Scrutiny Committees (HOSCs) and Health and Wellbeing Boards (HWBs)
5. Patients, the public and the organisations which represent them

NHS England have developed a communications strategy to ensure the needs assessment reaches its target audience. It will be available as part of a public consultation on potential options for the procurement of out of hours urgent dental care in the West Midlands. The public consultation will be marketed online and in GP surgeries, family centres, accident and emergency units, dental practices and libraries. The needs assessment will also be distributed to HOSCs in the West Midlands and members of the West Midlands' Urgent Dental Care Managed Clinical Network (MCN).

2. What is the size and nature of the problem in the population?

This chapter builds on chapter 1, looking in detail at the factors which are more likely to predispose individuals to require urgent dental care.

2.1 Population

The population of the NHS England West Midlands footprint is predicted to rise by 124, 842 people (2.89%) between 2020 and 2025. Predicted total population is displayed by upper tier local authority and STP area in Table 3 below. It is of note that due to differences in local authority and STP boundaries the STP figures are cautious estimates drawn from population predictions generated at local authority level.

	Year			% increase (2020-2025)
	2020	2023	2025	
Birmingham	1,164,429	1,186,980	1,201,880	3.22%
Solihull	216,384	219,967	222,261	2.72%
Birmingham and Solihull STP	1,380,813	1,406,947	1,424,141	3.14%
Coventry	377,380	391,689	401,031	6.27%
Warwickshire	567,568	574,614	579,095	2.03%
Coventry and Warwickshire STP	944,948	966,303	980,126	3.72%
Dudley	320,878	323,402	324,904	1.25%
Sandwell	332,634	339,287	343,360	3.22%
Wolverhampton	263,866	267,564	269,827	2.26%
Walsall	285,733	290,508	293,478	2.71%
Black Country STP	1,203,111	1,220,761	1,231,569	2.37%
Herefordshire	193,178	195,769	197,321	2.14%
Worcestershire	595,131	603,629	608,866	2.31%
Herefordshire and Worcestershire STP	788,309	799,398	806,187	2.27%
West Midlands	4,317,181	4,393,409	4,442,023	2.89%

Table 3. Predicted population growth for the West Midlands to 2025 using data from NOMIS

Deprivation, living in an area of high population density and being from a BAME group are all demographic factors which increase the risk of poor oral health [14] [15]. As the risk of poor oral health rises, the likelihood of needing urgent dental care also rises [15] [16]. Deprivation, population density and ethnicity data by upper tier local authority is presented in Table 4.

Local authority	**Deprivation score (IMD 2015)** [17]	**Population density (persons per hectare)** [18]	**White ethnic group %** [19]
Birmingham	37.8	40.1	57.9
Solihull	17.2	11.6	89.1
Coventry	28.1	32.1	73.8
Warwickshire	15.0	2.8	92.7
Dudley	23.0	31.9	90.0
Sandwell	34.6	36.0	69.9
Wolverhampton	33.2	35.9	68.0
Walsall	30.4	25.9	78.9
Herefordshire	19.7	0.8	98.2
Worcestershire	17.7	3.3	95.7
West Midlands	21.8	5.9	78.1

Table 4. Deprivation, population density and white ethnic group by upper tier local authority in the West Midlands. Population density and white ethnic group have been calculated using 2011 census data.

Below are maps coded for deprivation (IMD 2015), population density and ethnicity for each of the four West Midlands STPs, which may be used to identify areas where the need for urgent dental care is likely to be greatest.

2.2 Birmingham and Solihull STP population indicator maps

Those living in deprivation experience higher levels of dental disease. They are more likely to be irregular dental attenders, as are those from BAME backgrounds. These groups are therefore more likely to require urgent dental care and it is important to consider where they are located, in conjunction with overall population density, when assessing the need for urgent dental care within an STP.

Birmingham and Solihull STP by deprivation

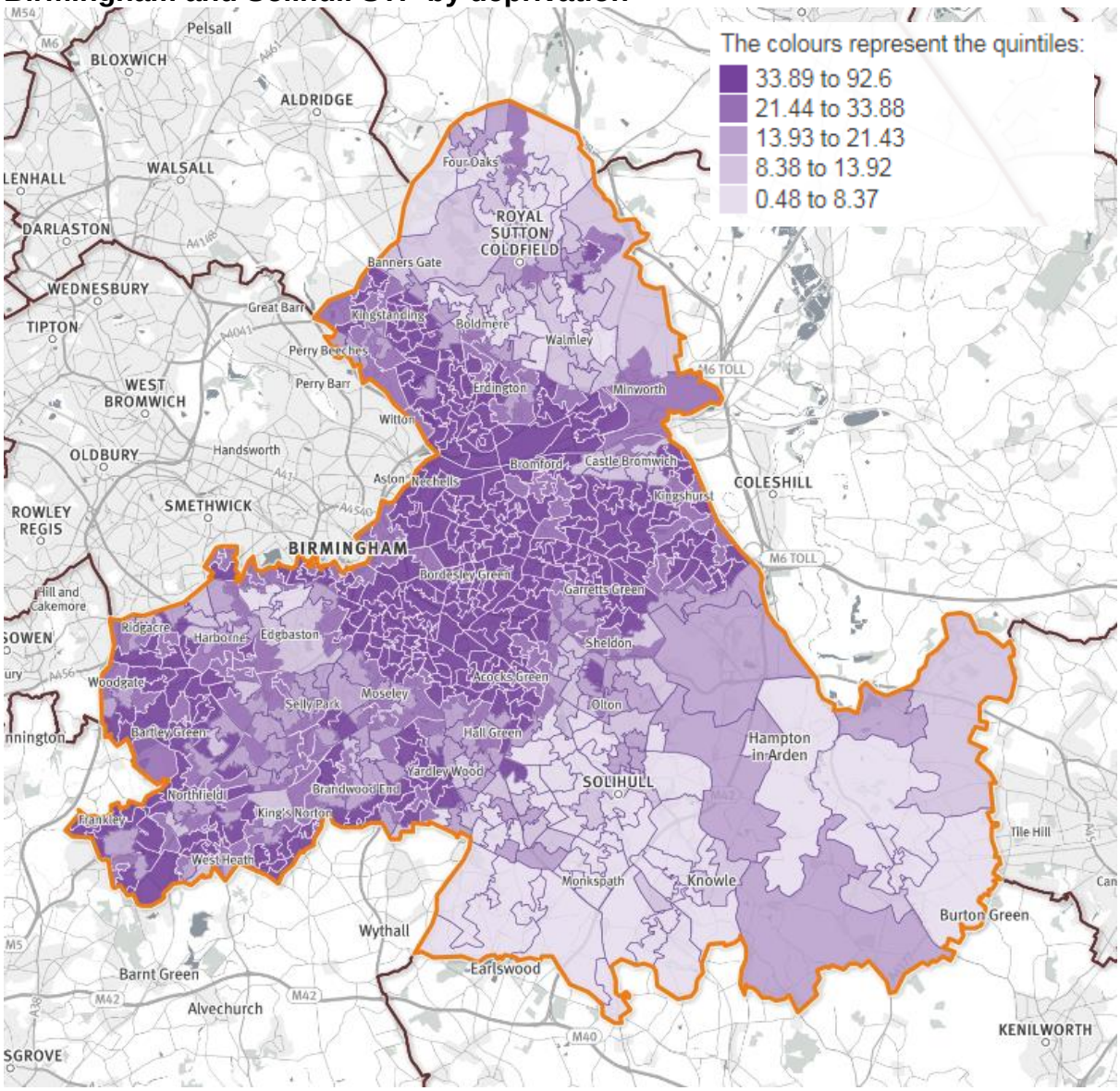


Figure 1. Deprivation in Birmingham and Solihull STP. The darker areas, which are concentrated around Birmingham, are those where deprivation is greatest and the need for urgent dental care is likely to be greatest.

Birmingham and Solihull STP by population density

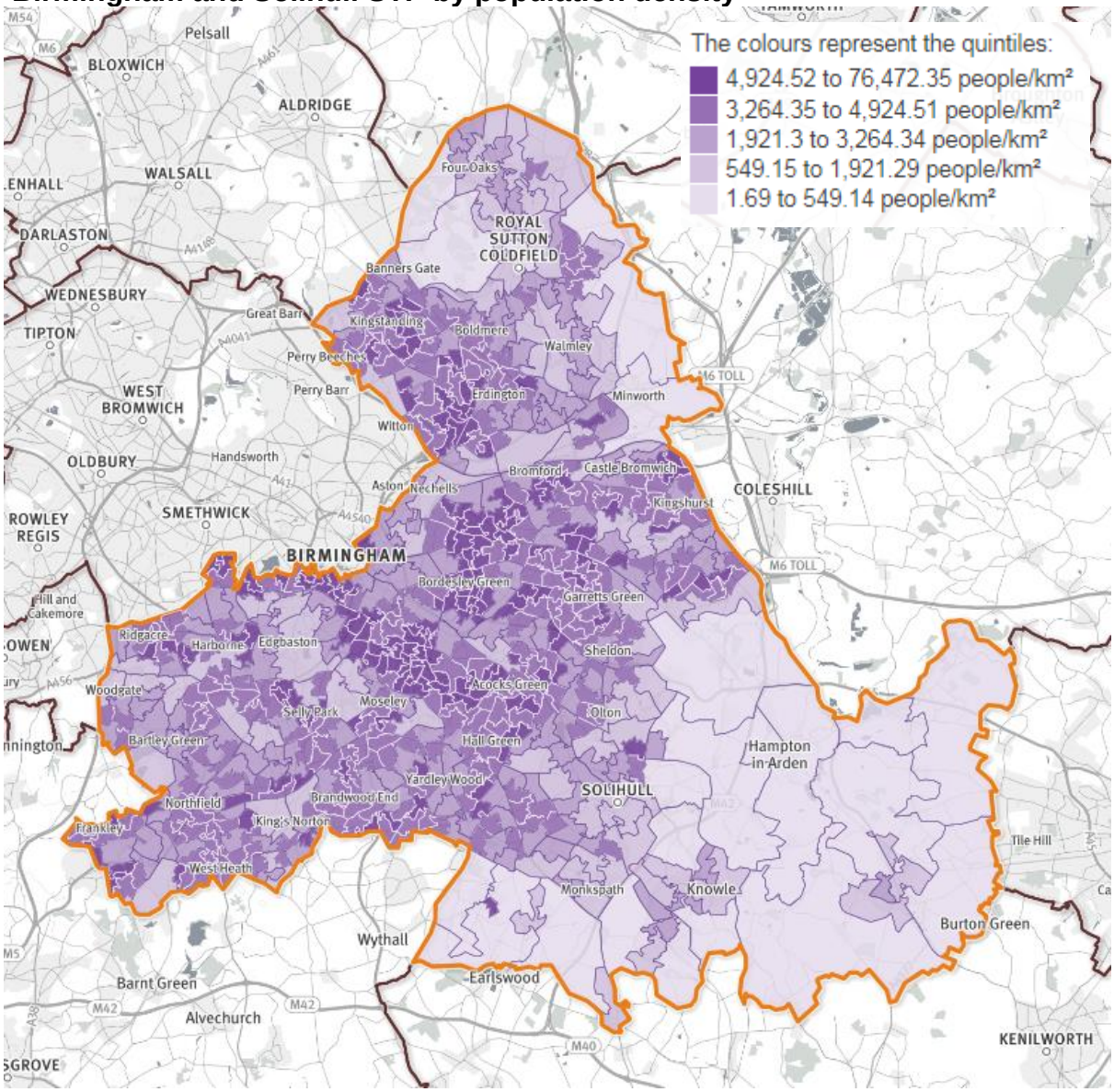


Figure 2. Population density in Birmingham and Solihull STP. The darker areas, which are concentrated around Birmingham, are those where population density is greatest and the need for urgent dental care is likely to be greatest.

Birmingham and Solihull STP by ethnicity

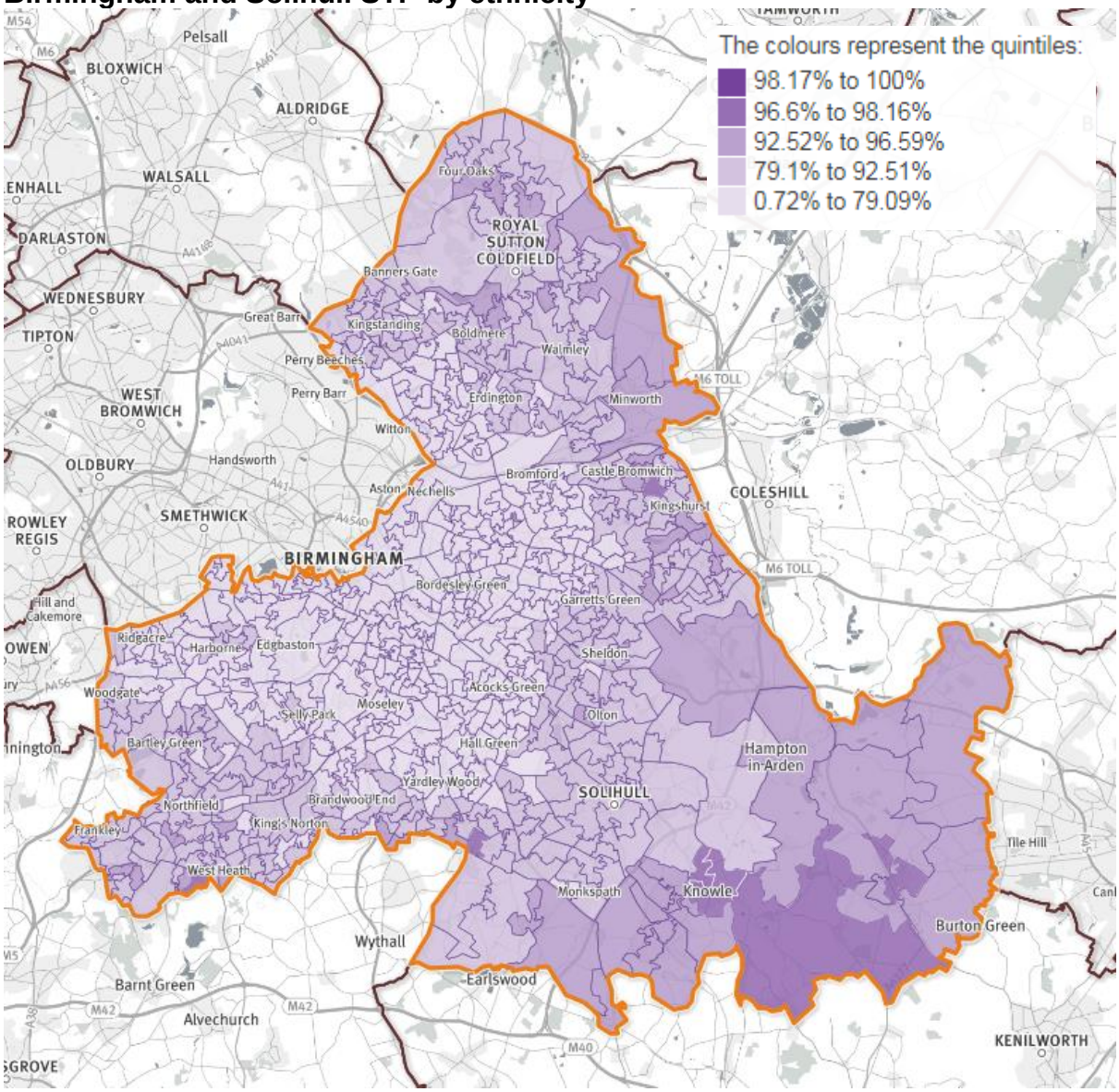


Figure 3. White ethnic group in Birmingham and Solihull STP**.** The lighter areas are where the proportion of the population from BAME groups is greatest and these are concentrated around Birmingham. It is in these areas that the need for urgent dental care is likely to be greatest.

2.3 Coventry and Warwickshire STP population indicator maps

Those living in deprivation experience higher levels of dental disease. They are more likely to be irregular dental attenders, as are those from BAME backgrounds. These groups are therefore more likely to require urgent dental care and it is important to consider where they are located, in conjunction with overall population density, when assessing the need for urgent dental care within an STP.

Coventry and Warwickshire STP by deprivation

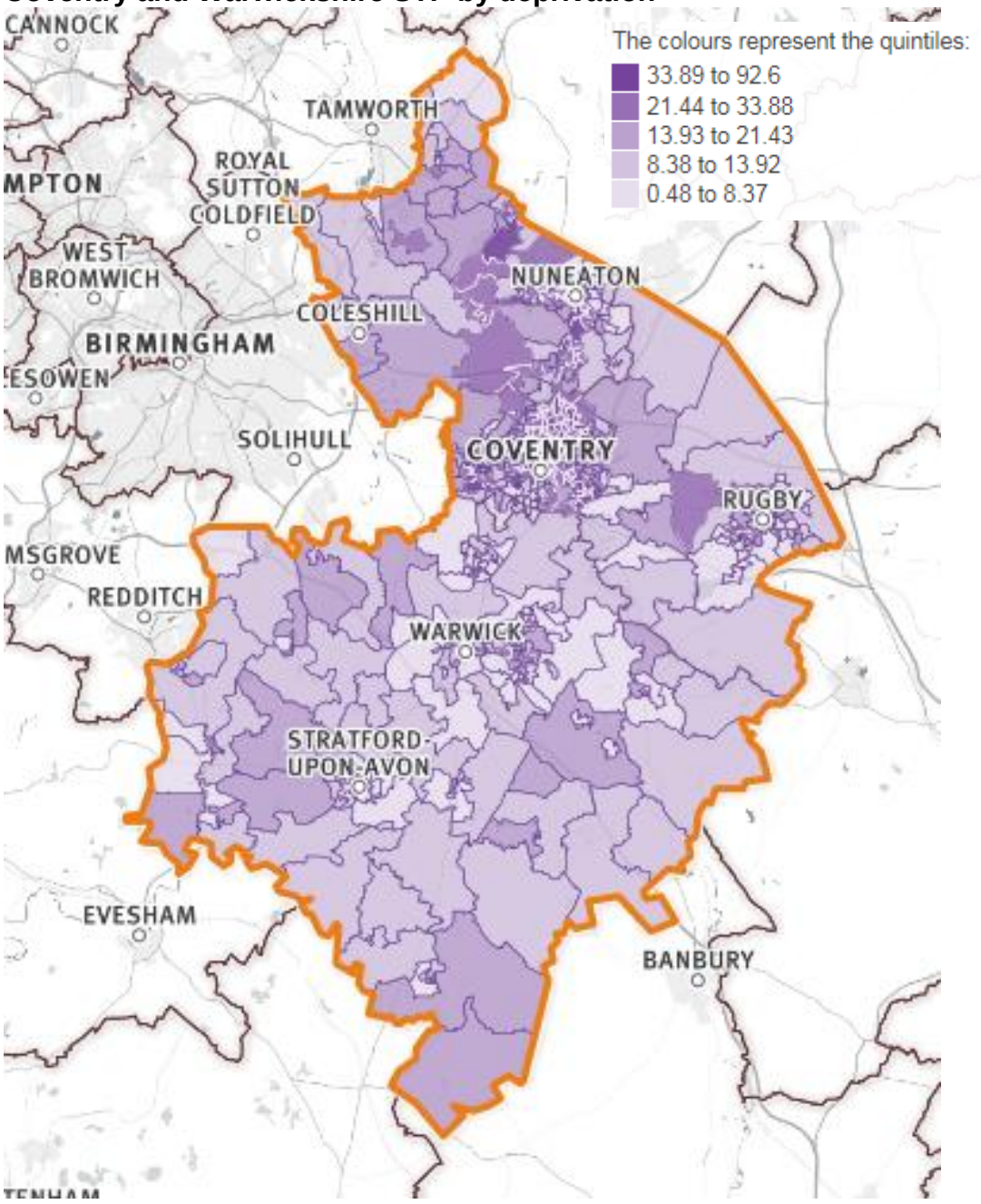


Figure 4. Deprivation in Coventry and Warwickshire STP. The darker areas, which are concentrated mainly in the north of the STP around Coventry and Nuneaton, are those where deprivation is greatest and the need for urgent dental care is likely to be greatest. Deprivation in the north of the STP can be seen in more detail on the enlarged map which follows.

Coventry and Warwickshire STP (north area) by deprivation

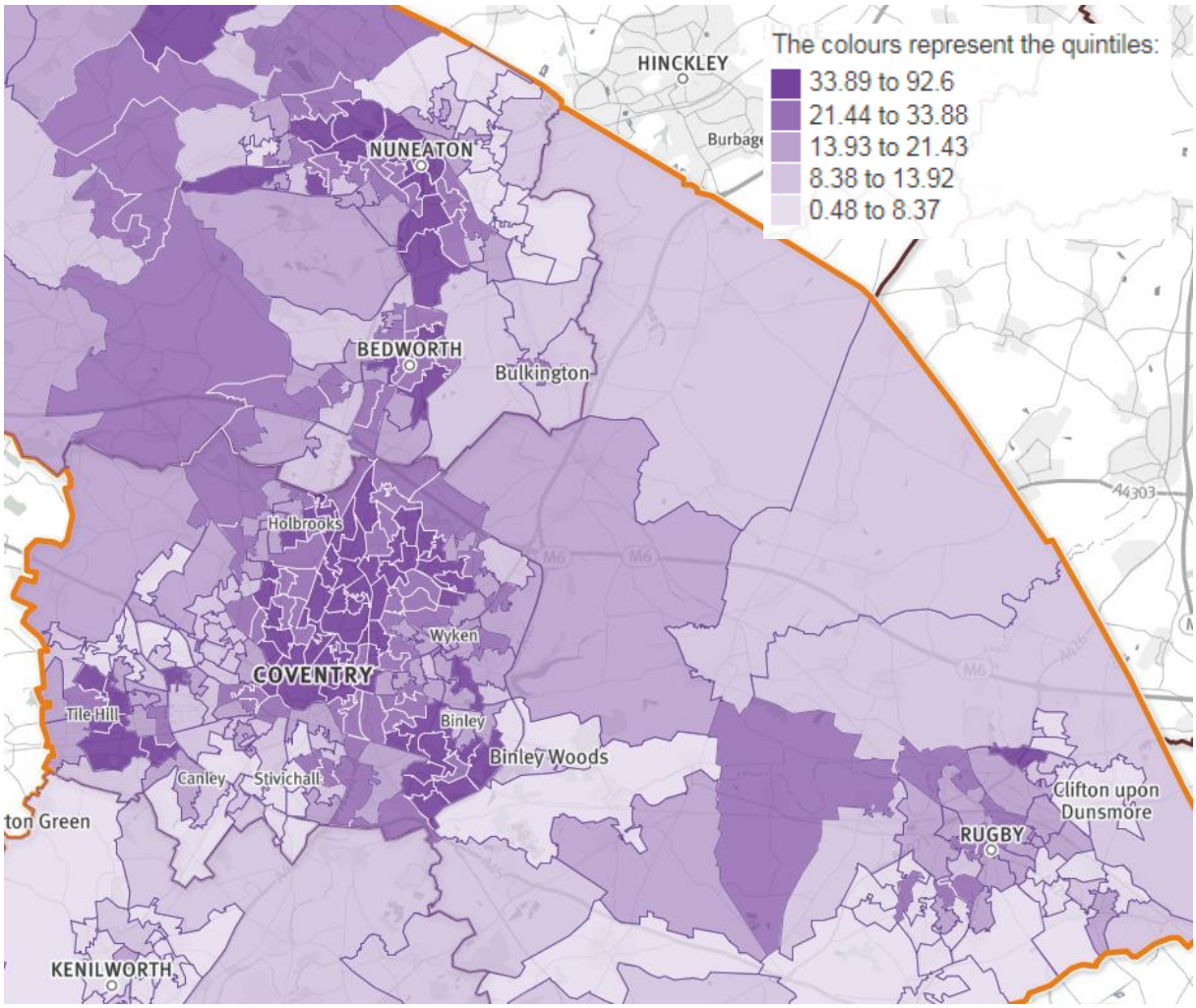


Figure 4a. Deprivation in Coventry and Warwickshire STP (north area enlarged). The areas of deprivation around Coventry and Nuneaton can be seen in detail on this enlarged map.

Coventry and Warwickshire STP by population density

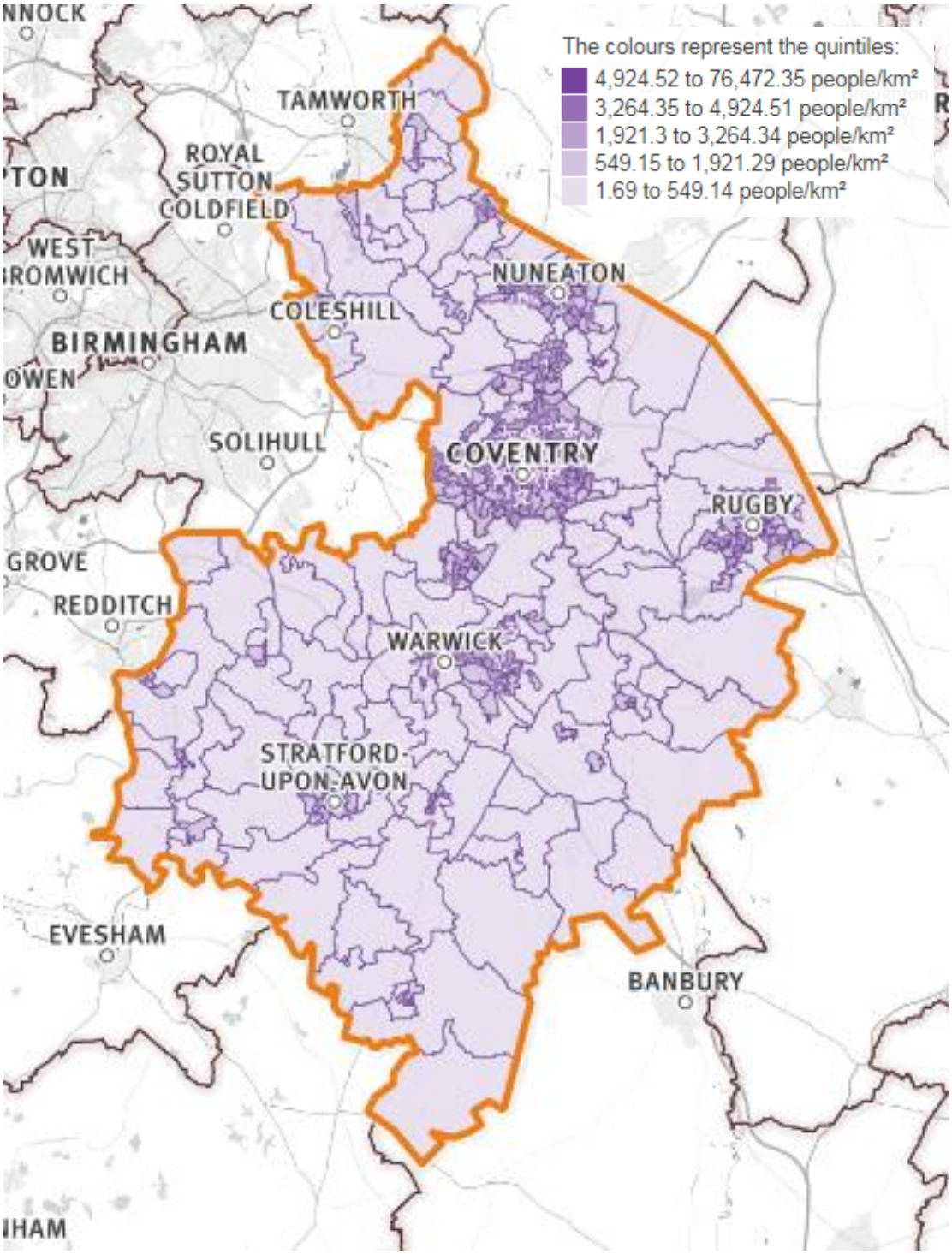


Figure 5. Population density in Coventry and Warwickshire STP. The darker areas, which are concentrated in the north of the STP around Coventry, are those where population density is greatest and the need for urgent dental care is likely to be greatest. Population density in the north of the STP can be seen in more detail on the enlarged map which follows.

Coventry and Warwickshire STP (north area) by population density

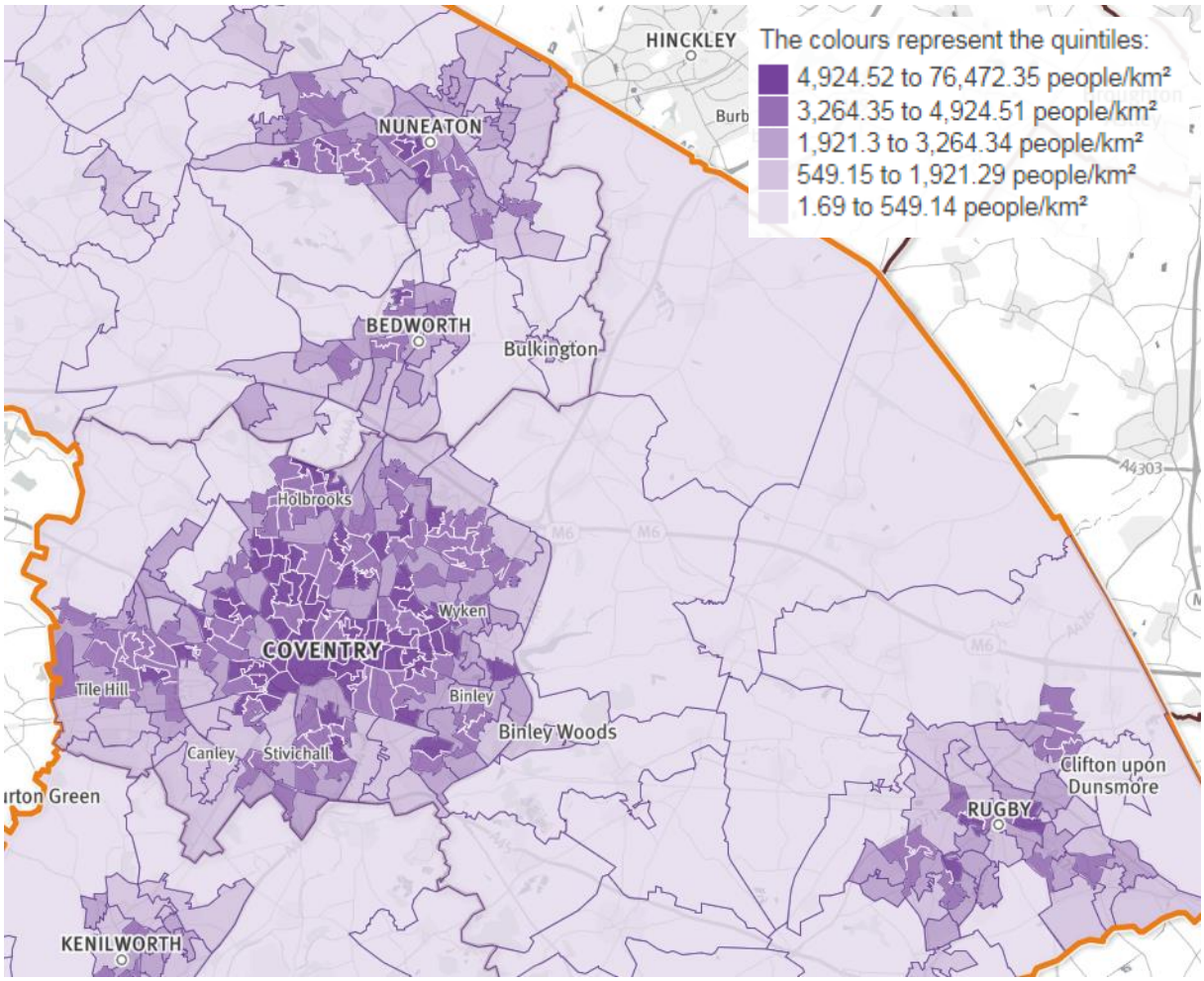


Figure 5a. Population density in Coventry and Warwickshire STP (north area enlarged). The areas of population density, centred mainly around Coventry, can be seen in detail on this enlarged map.

Coventry and Warwickshire STP by ethnicity

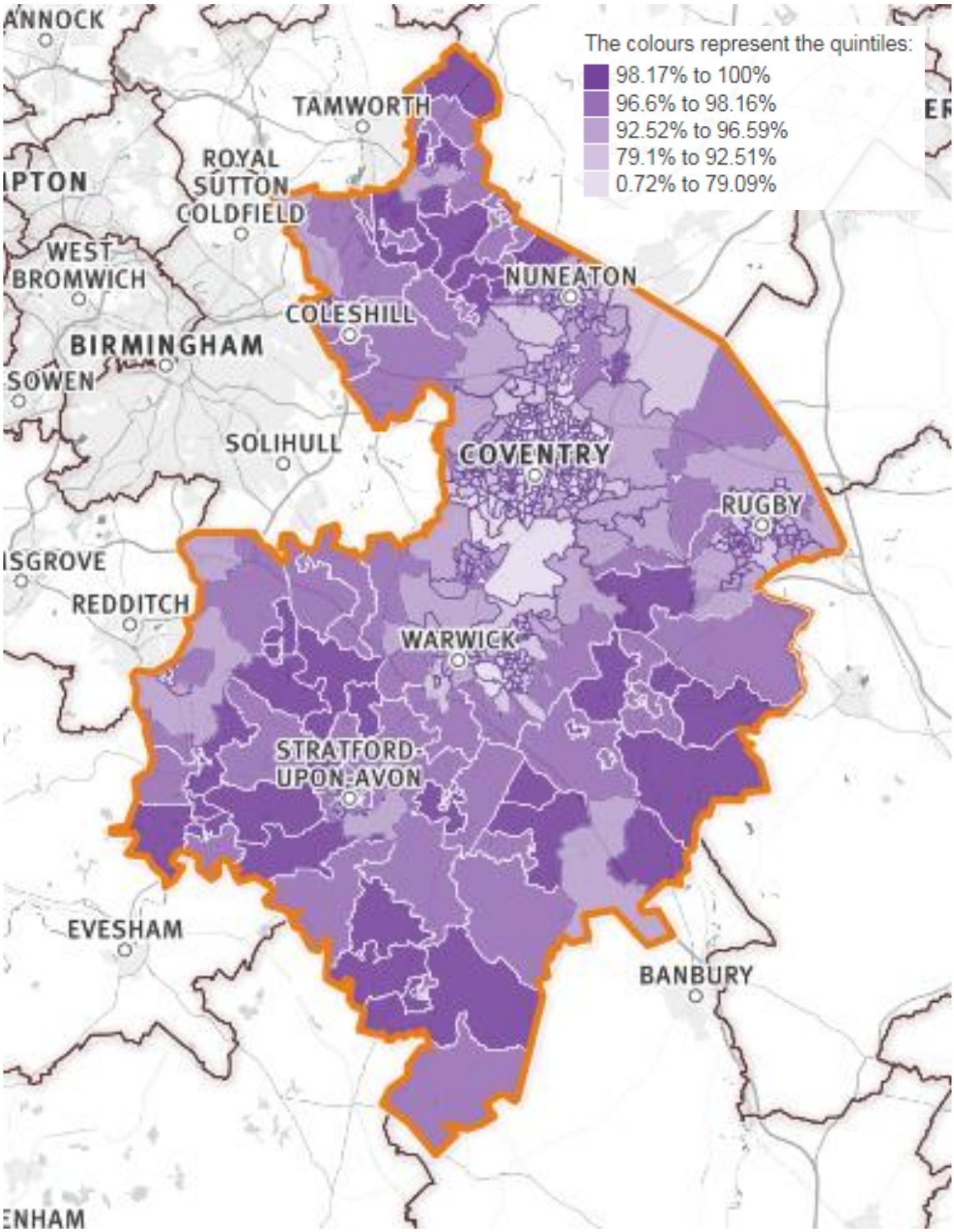


Figure 6. White ethnic group in Coventry and Warwickshire STP. The lighter areas are where the proportion of the population from BAME groups is greatest and these are concentrated around Coventry and Rugby. It is in these areas that the need for urgent dental care is likely to be greatest. Ethnicity in the north of the STP can be seen in more detail on the enlarged map which follows.

Coventry and Warwickshire STP (north area) by ethnicity

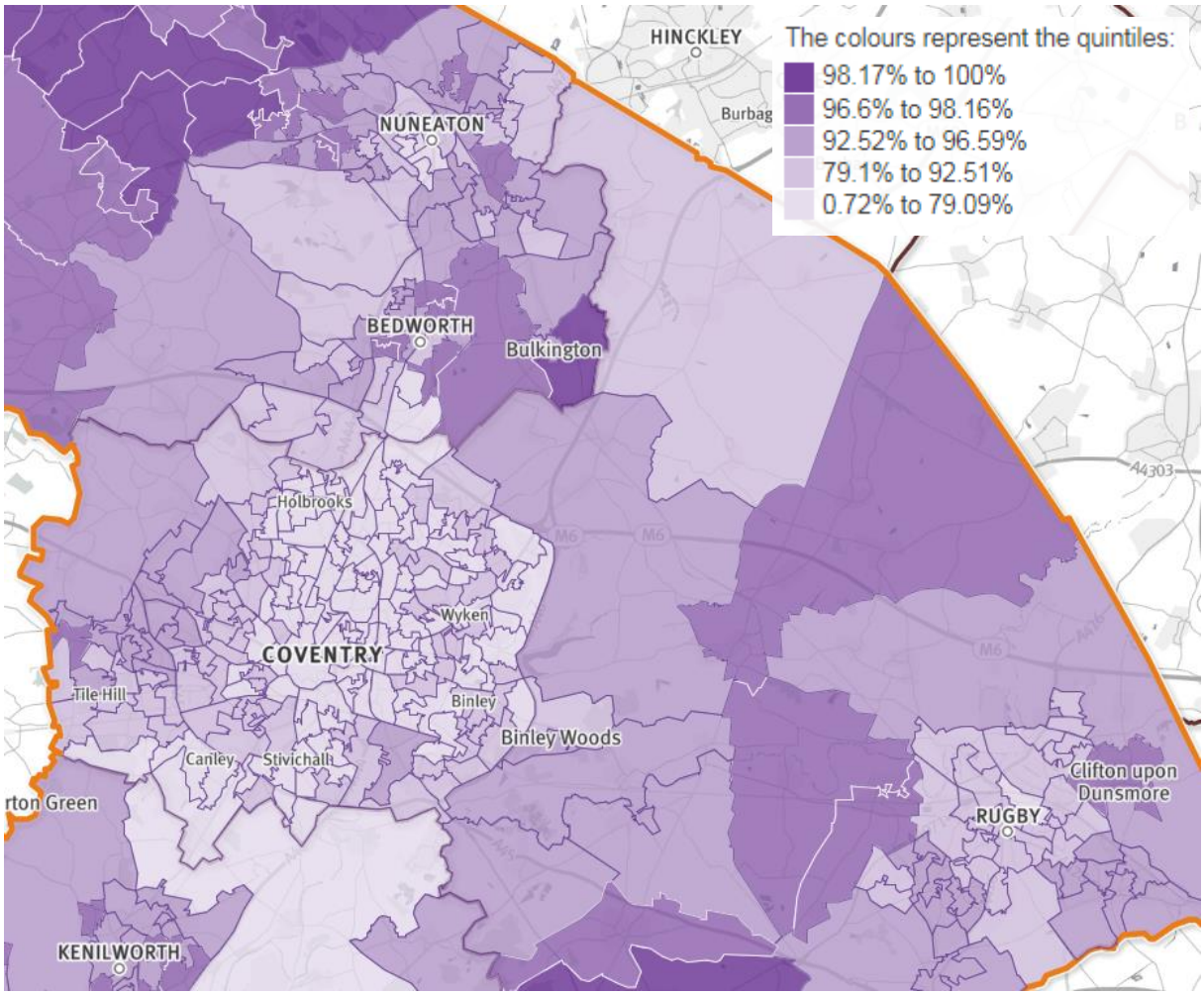


Figure 6a. White ethnic group in Coventry and Warwickshire STP (north area enlarged). The areas where the proportion of the population from BAME groups is greatest, in Coventry and Rugby, can be seen in detail on this enlarged map.

2.4 Black Country STP population indicator maps

Those living in deprivation experience higher levels of dental disease. They are more likely to be irregular dental attenders, as are those from BAME backgrounds. These groups are therefore more likely to require urgent dental care and it is important to consider where they are located, in conjunction with overall population density, when assessing the need for urgent dental care within an STP.

Black Country STP by deprivation

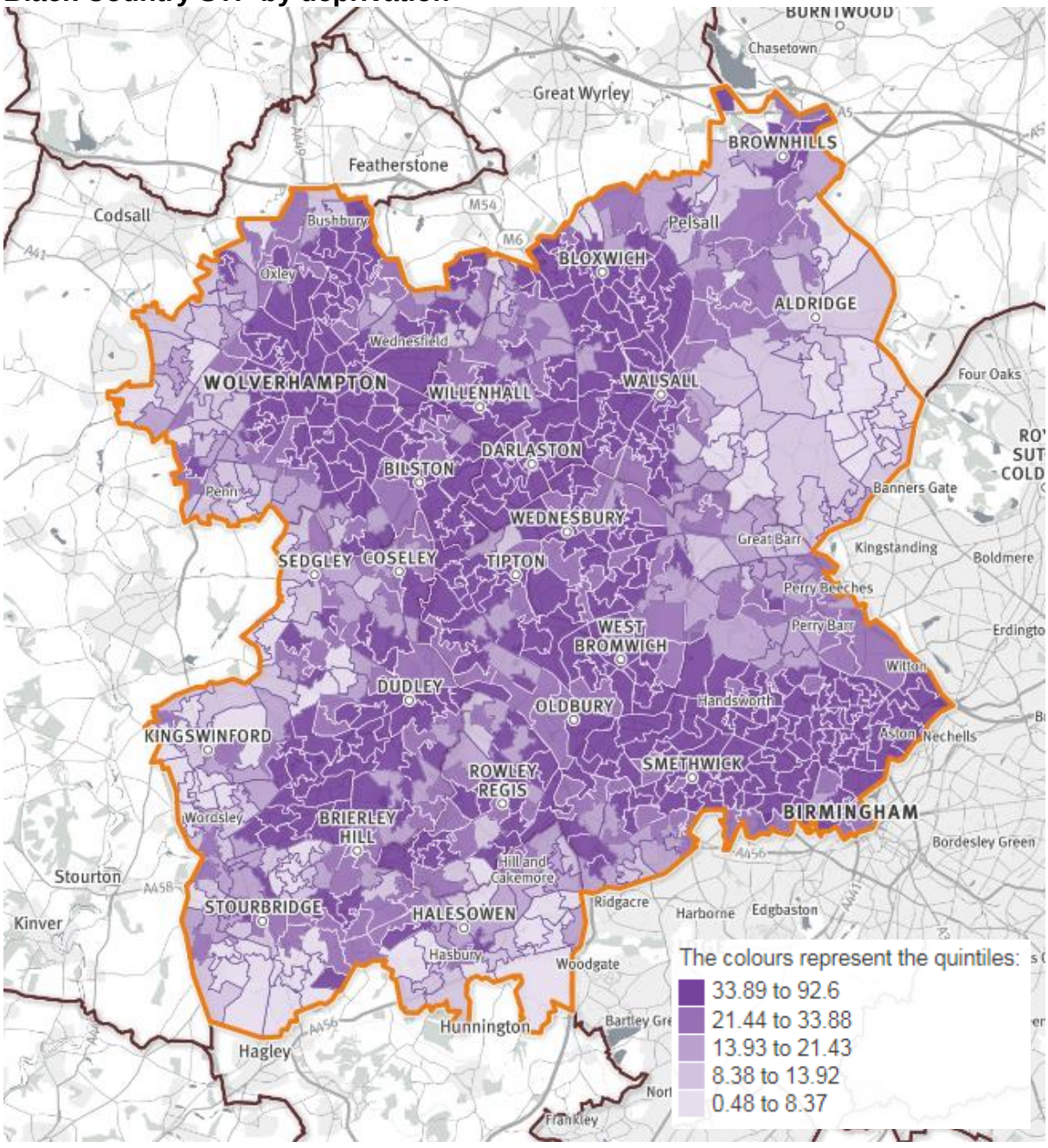


Figure 7. Deprivation in Black Country STP. The darker areas are those where deprivation is greatest and the need for urgent dental care is likely to be greatest. With the exception of the east, north east and some smaller areas along the western and southern aspect of the STP boundary, deprivation is widespread with approximately half of the STP falling within the most deprived quintile.

Black Country STP by population density

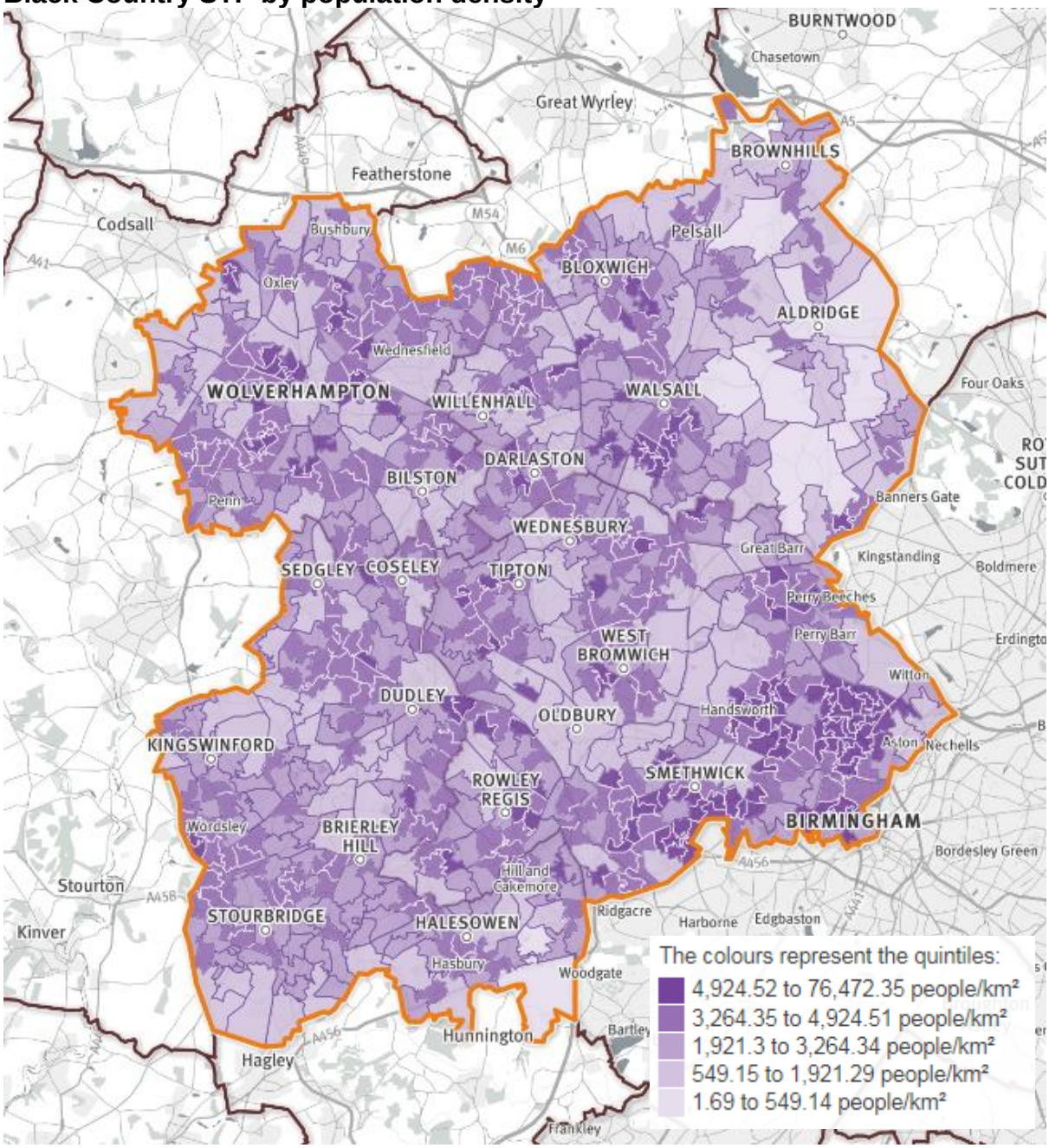


Figure 8. Population density in Black Country STP. The darker areas, which are present mainly in the south east of the STP and in the Wolverhampton and Walsall areas, are those where population density is greatest and the need for urgent dental care is likely to be greatest.

Black Country STP by ethnicity

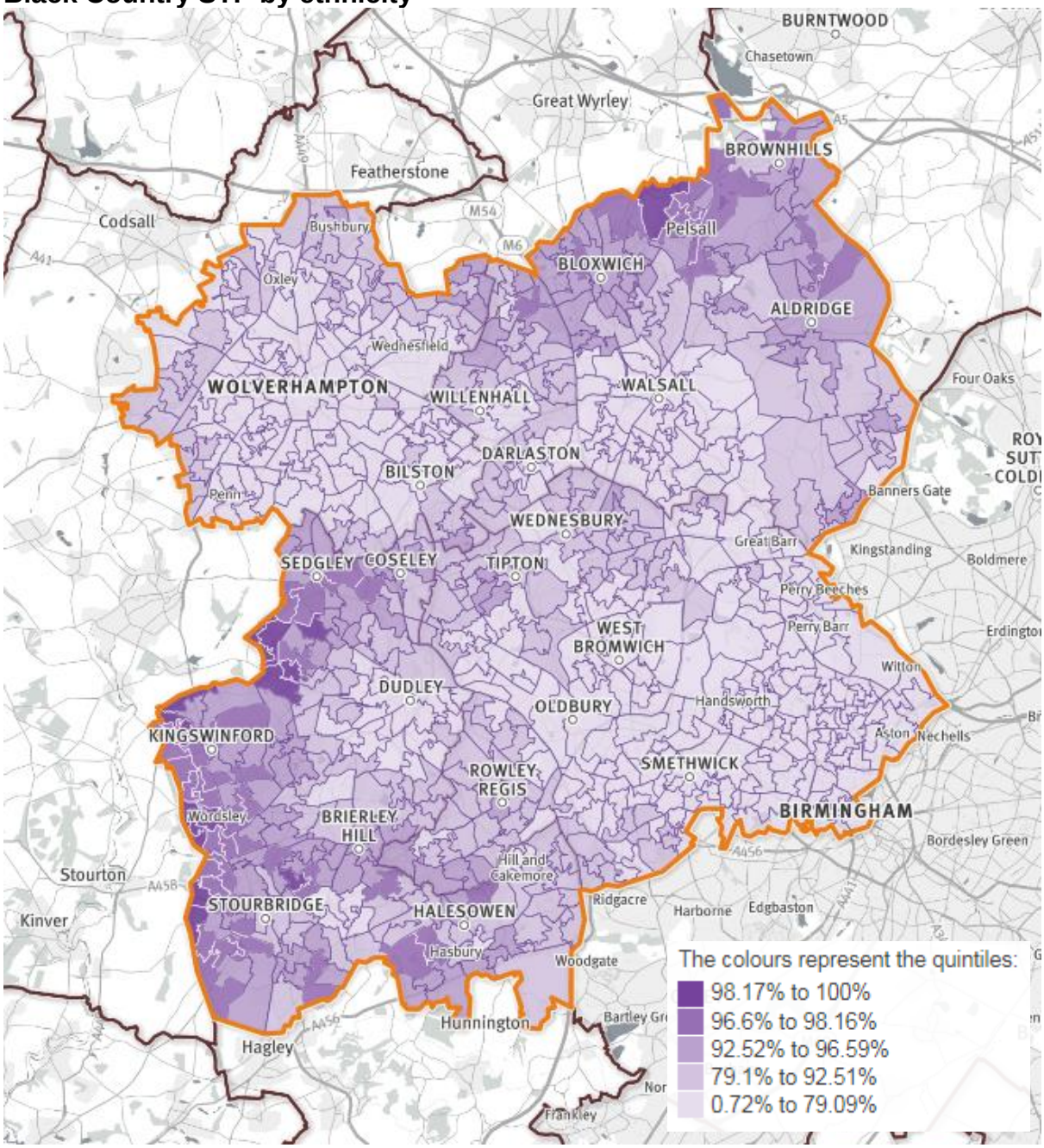


Figure 9. White ethnic group in Black Country STP. The lighter areas are where the proportion of the population from BAME groups is greatest and it can be seen that these dominate the SPT, with the exception of the areas north east and south west close to the STP boundary. Given the proportion and distribution of the population from BAME groups, the need for urgent dental care is likely to be high throughout most of the STP.

2.5 Herefordshire and Worcestershire STP population indicator maps

Those living in deprivation experience higher levels of dental disease. They are more likely to be irregular dental attenders, as are those from BAME backgrounds. These groups are therefore more likely to require urgent dental care and it is important to consider where they are located, in conjunction with overall population density, when assessing the need for urgent dental care within an STP.

Herefordshire and Worcestershire STP by deprivation

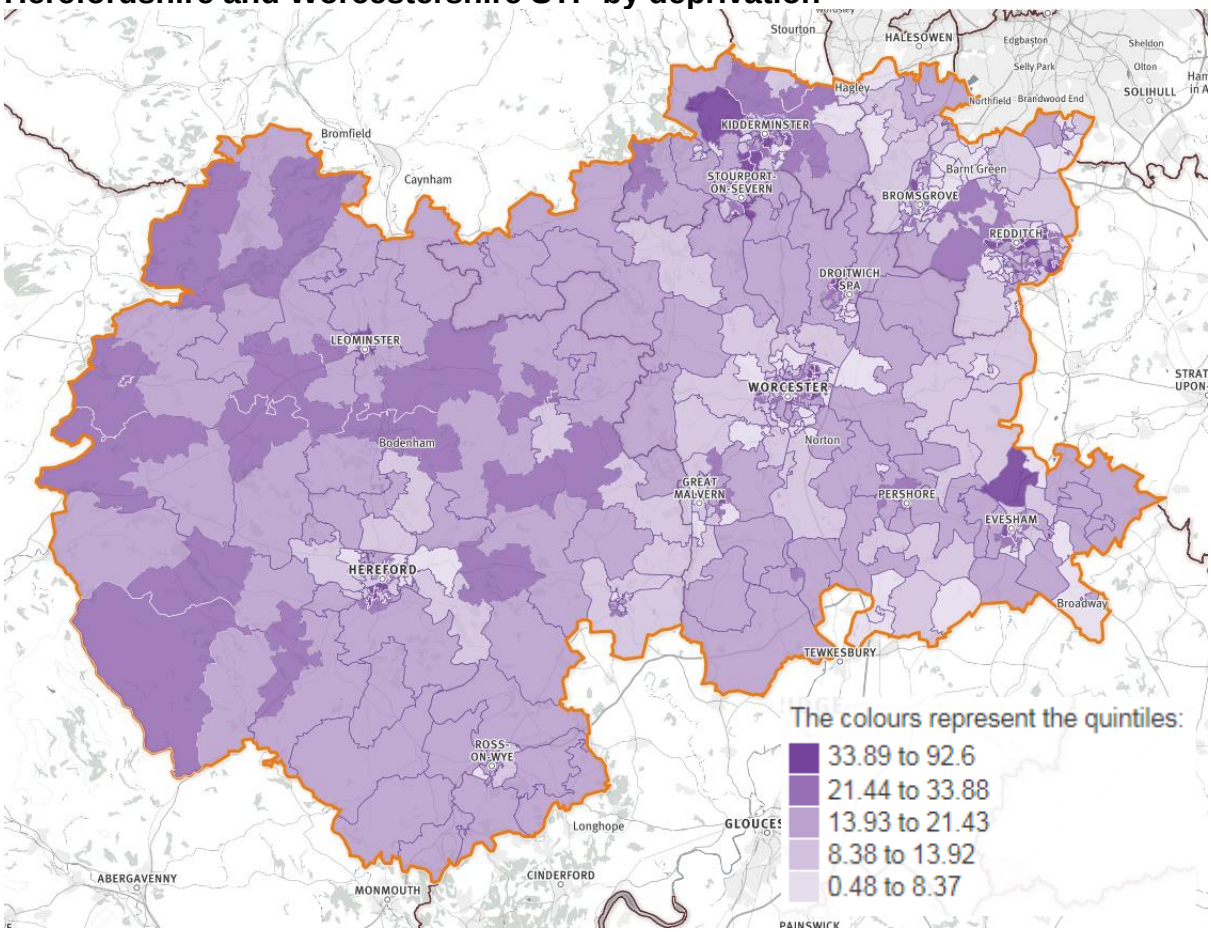


Figure 10. Deprivation in Herefordshire and Worcestershire STP. The darker areas, located throughout Herefordshire and in Kidderminster, Redditch and Worcester, are those where deprivation is greatest and the need for urgent dental care is likely to be greatest. Deprivation in Worcestershire can be seen in more detail on the enlarged map which follows.

Herefordshire and Worcestershire STP (Worcestershire) by deprivation

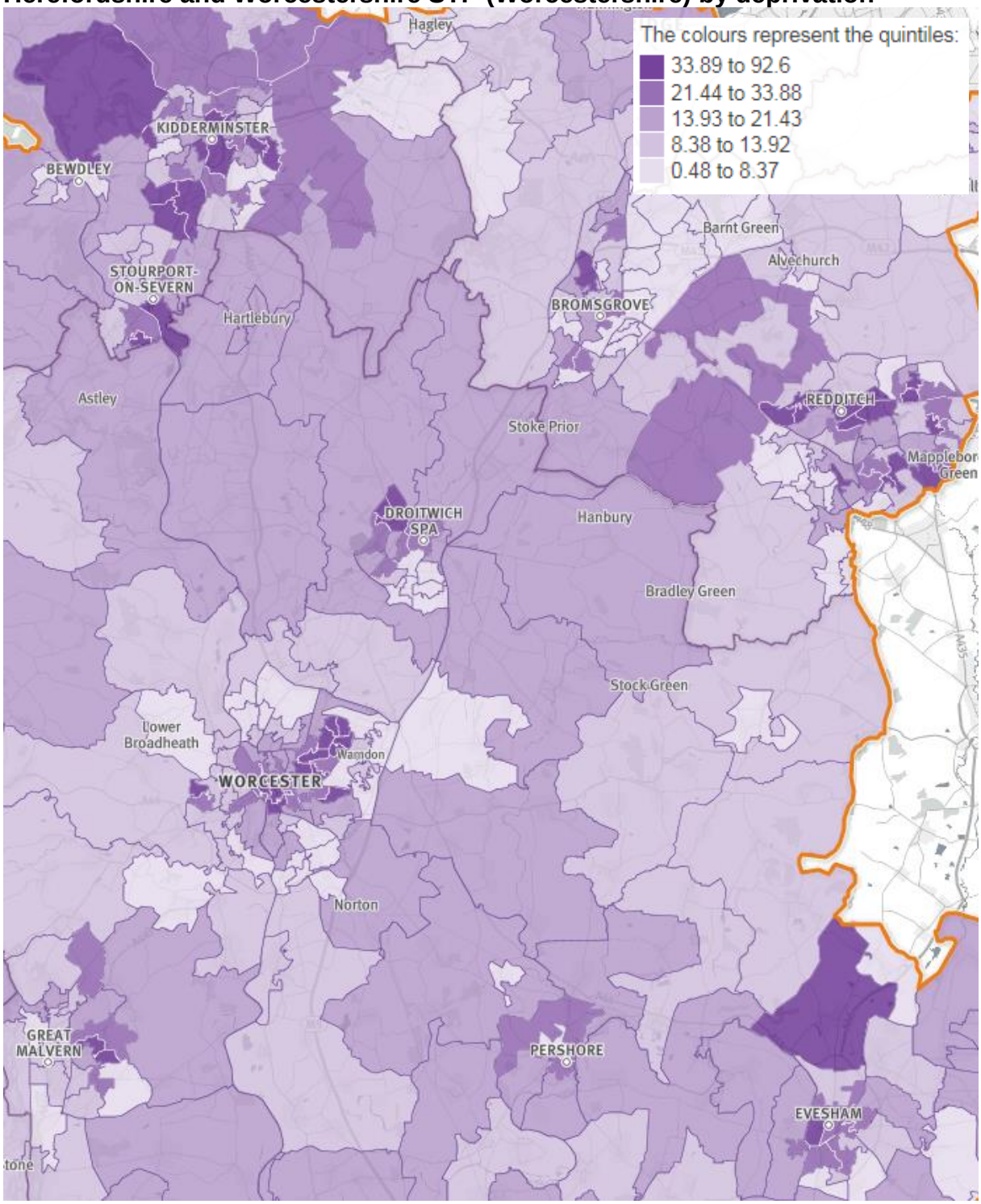


Figure 10a. Deprivation in Herefordshire and Worcestershire STP (Worcestershire enlarged). It can be seen that deprivation is centred mainly on the urban areas, being most extensive in Kidderminster, Redditch and Worcester. It is worth noting that the area north of Evesham which is in the most deprived quintile is sparsely populated.

Herefordshire and Worcestershire STP by population density

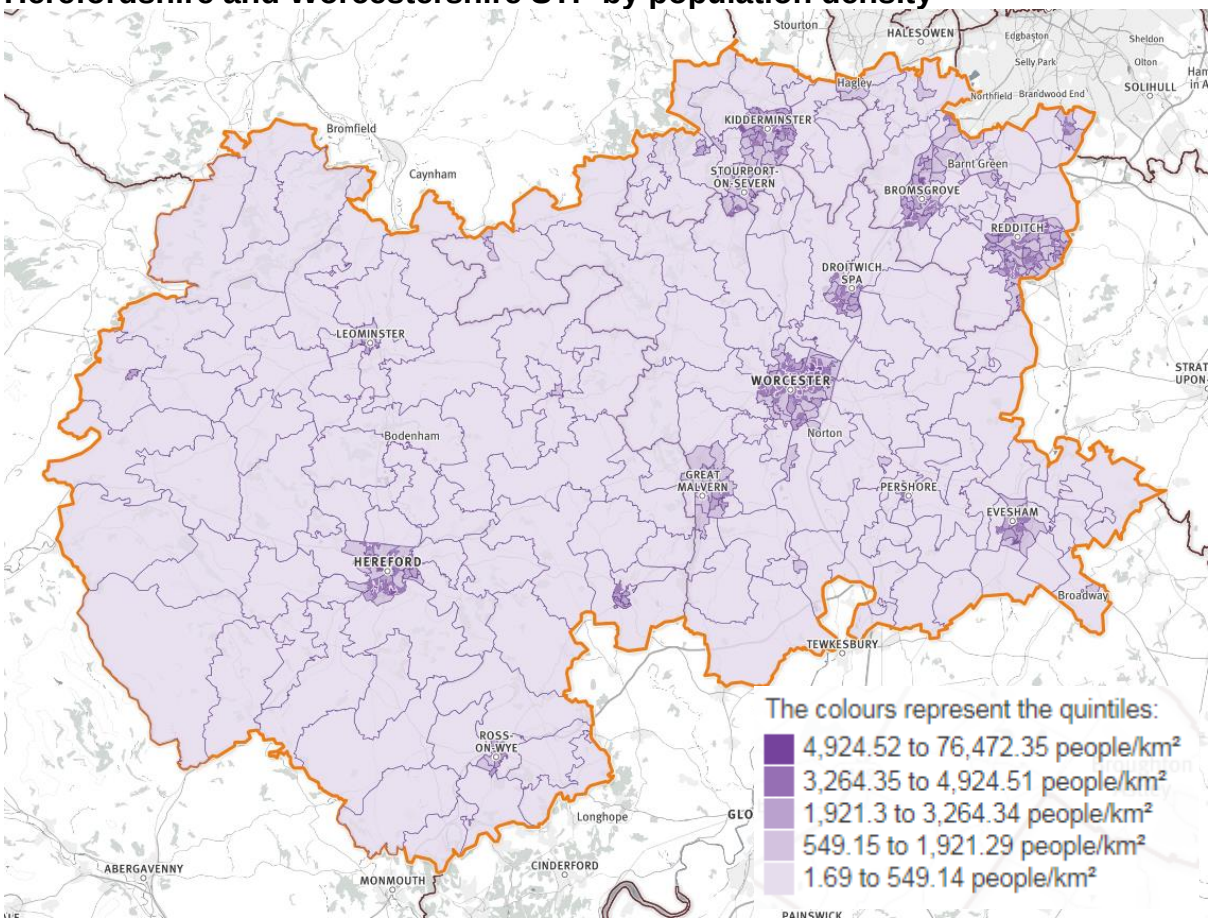


Figure 11. Population density in in Herefordshire and Worcestershire STP. The darker areas, namely Hereford, Worcester, Kidderminster, Bromsgrove and Redditch, are those where population density is greatest and the need for urgent dental care is likely to be greatest. Population density in Worcestershire can be seen in more detail on the enlarged map which follows.

Herefordshire and Worcestershire STP (Worcestershire) by population density

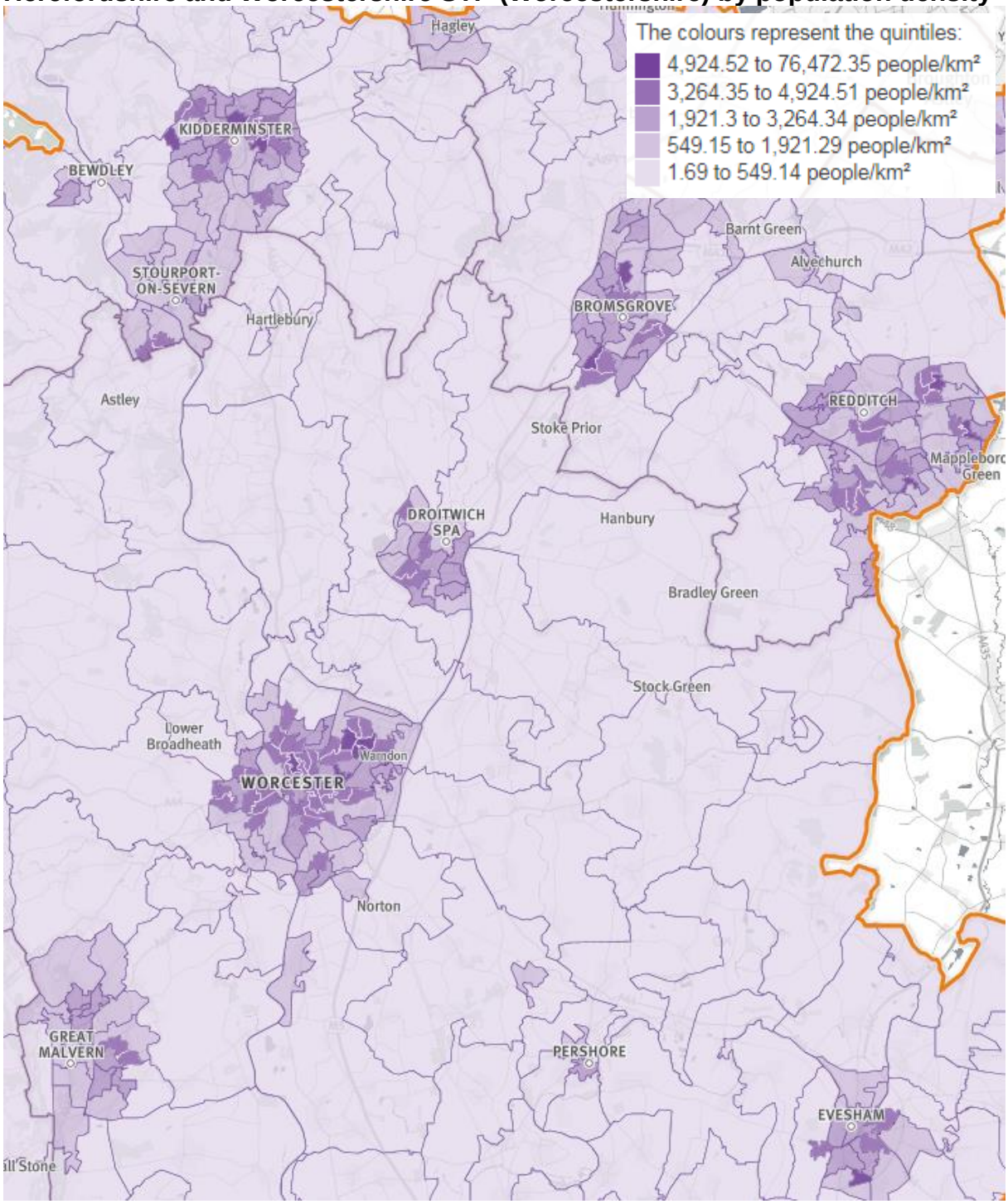


Figure 11a. Population density in Herefordshire and Worcestershire STP (Worcestershire enlarged). The areas of population density, located mainly in Worcester, Kidderminster, Bromsgrove and Redditch, can be seen in detail on this enlarged map as the darkest areas.

Herefordshire and Worcestershire STP by ethnicity

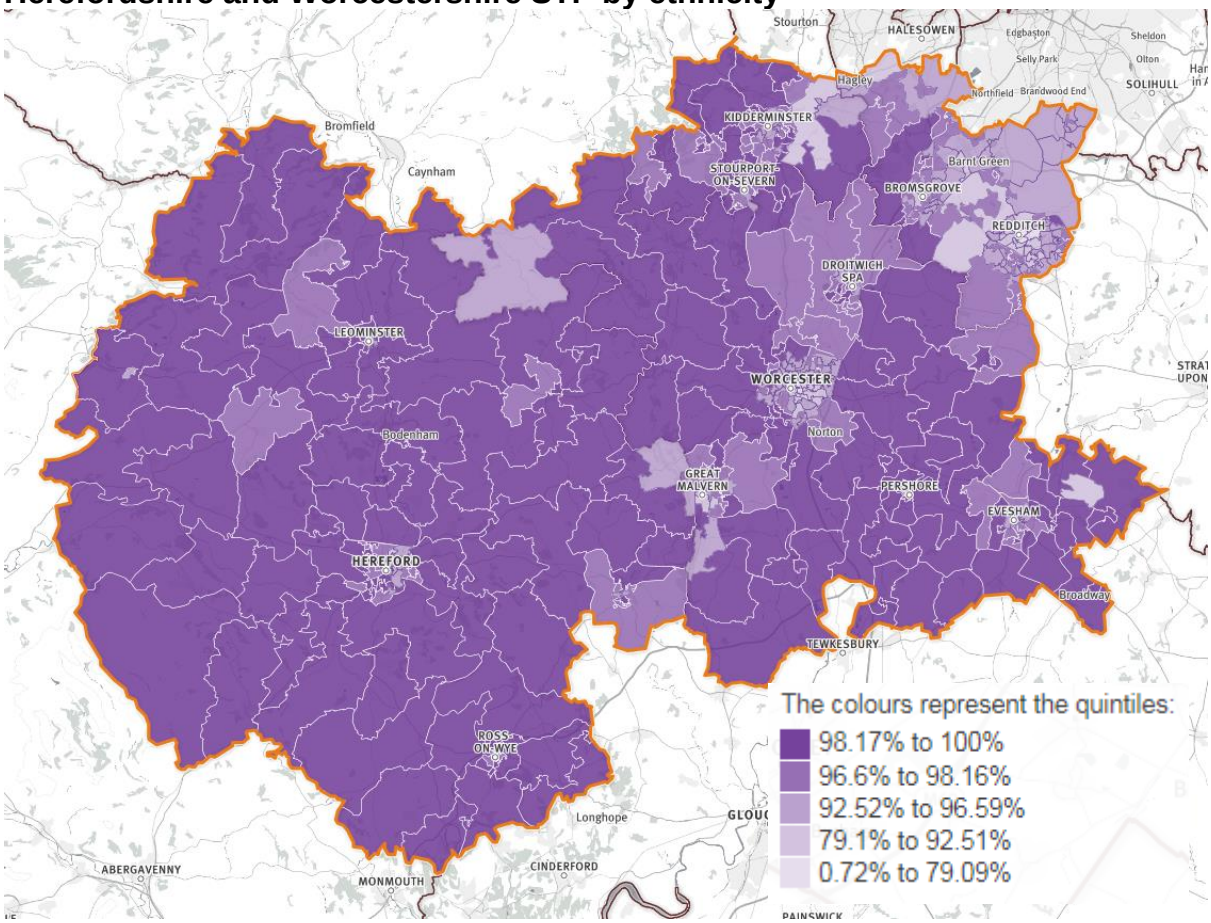


Figure 12. White ethnic group in Herefordshire and Worcestershire STP. The lighter areas are where the proportion of the population from BAME groups is greatest and these are concentrated in the north east of Worcestershire. It is in these areas that the need for urgent dental care is likely to be greatest. Ethnicity in Worcestershire can be seen in more detail on the enlarged map which follows.

Herefordshire and Worcestershire STP (Worcestershire) by ethnicity

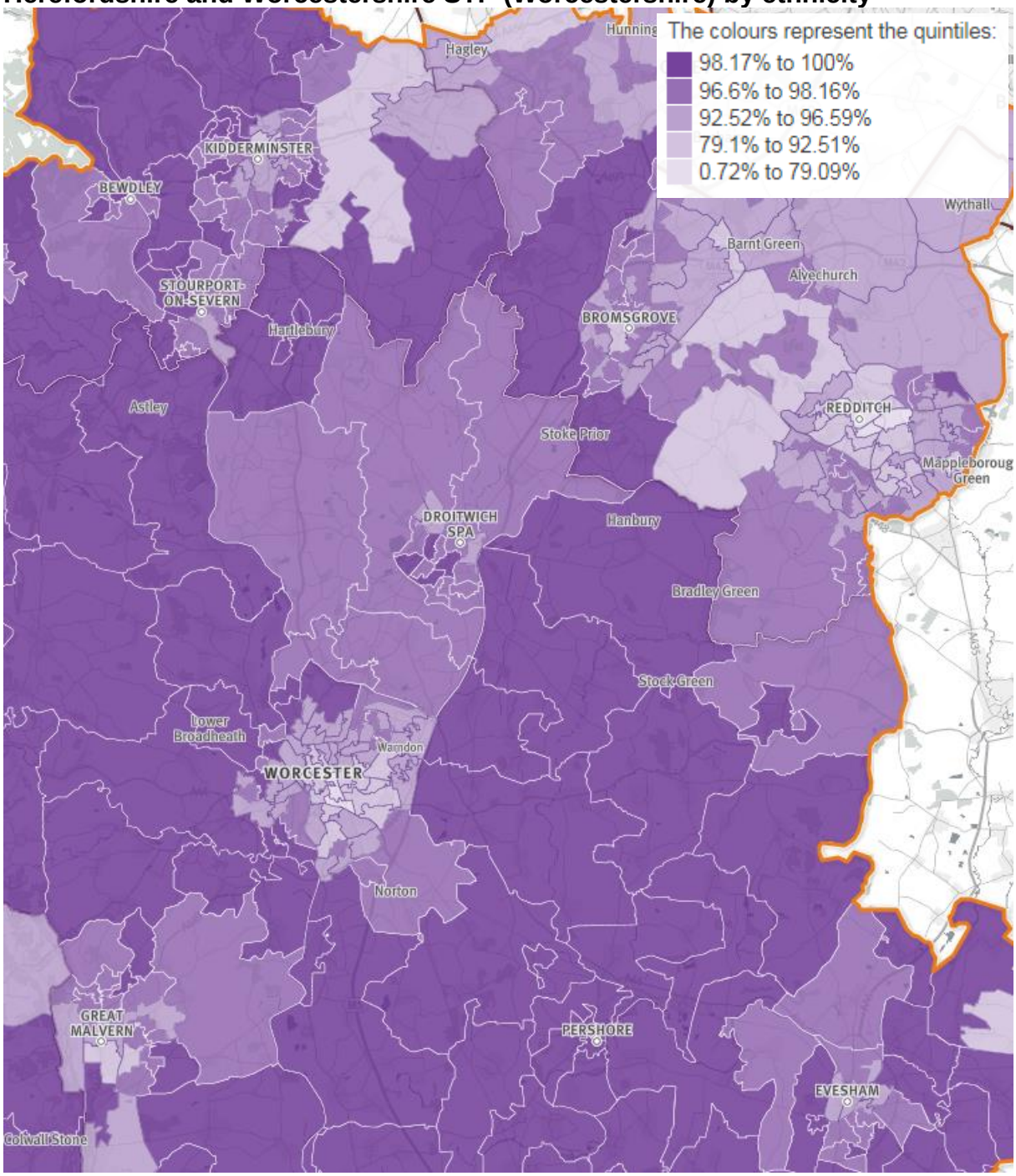


Figure 12a. White ethnic group in Herefordshire and Worcestershire STP (Worcestershire enlarged). The areas where the proportion of the population from BAME groups is greatest, in the Worcester and Redditch areas, can be seen in detail on this enlarged map.

2.6 Language

Language can pose a barrier to accessing dental treatment, not just in the clinical setting but also in finding information about dental services available locally and in contacting a provider. In the West Midlands 7% of people do not have English or Welsh[2] as their main language [20], meaning dental providers should have access to professional translation services for the benefit of this group. Eastern European populations may not speak fluent English, yet they are a hidden minority as they fall within the white ethnic group on the population indicator maps shown previously.

2.7 Disability

Those who are disabled are more likely to have difficulties accessing dental services. There is variation in the proportion of the population whose day-to-day activities are limited by disability across the upper tier local authorities in the West Midlands as shown in Table 5. There are four local authorities in the West Midlands where the percentage of population for whom day-to-day activities are limited either a little or a lot exceeds 20%; all of these are in the Black Country.

Local authority	Day-to-day activities limited a lot	Day-to-day activities limited a little	Day-to-day activities limited either a lot or a little
Birmingham	9.15%	9.29%	18.44%
Solihull	8.15%	9.71%	17.87%
Coventry	8.70%	9.04%	17.75%
Warwickshire	7.69%	9.39%	17.08%
Dudley	9.77%	10.50%	20.27%
Sandwell	10.79%	10.11%	20.91%
Wolverhampton	10.19%	10.36%	20.55%
Walsall	10.42%	10.34%	20.76%
Herefordshire	8.38%	10.35%	18.73%
Worcestershire	8.10%	9.83%	17.93%

Table 5. Percentage of population for whom day-to-day activities are limited by upper tier local authority (NOMIS)

[2] English and Welsh are grouped together in the Office for National Statistics classification, however it is recognised that the vast majority of those who fall within this category in West Midlands have English as their main language.

2.8 Water fluoridation

Water fluoridation is a safe and effective measure for reducing the proportion of a population developing dental caries [21]. It also reduces differences in dental health between those of differing levels of deprivation [21]. The West Midlands, with the exception of Herefordshire and west Worcestershire, benefits from fluoridated water as shown in the maps below.

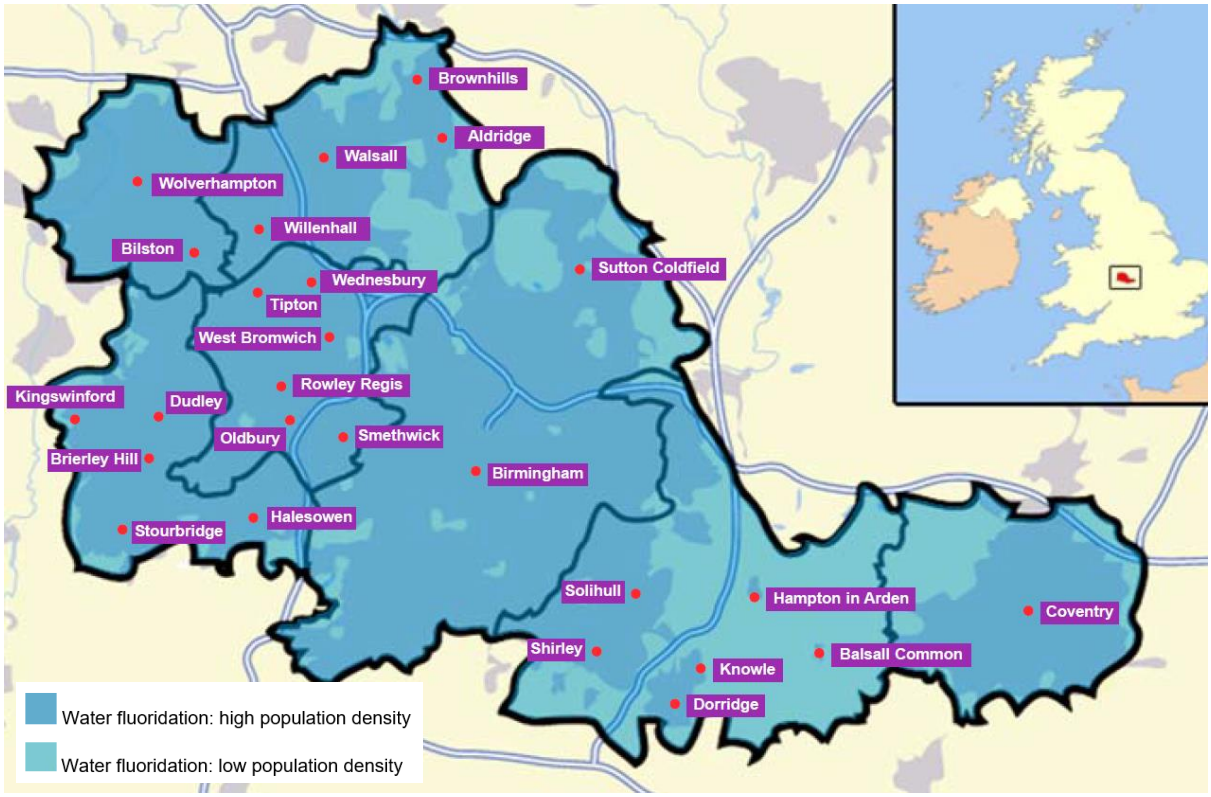


Figure 13. Water fluoridation coverage in the Black Country, Birmingham, Solihull, Coventry [22]. The solid black line indicates the boundary of the area for which water fluoridation status is presented on the map and not the geographical extent of water fluoridation.

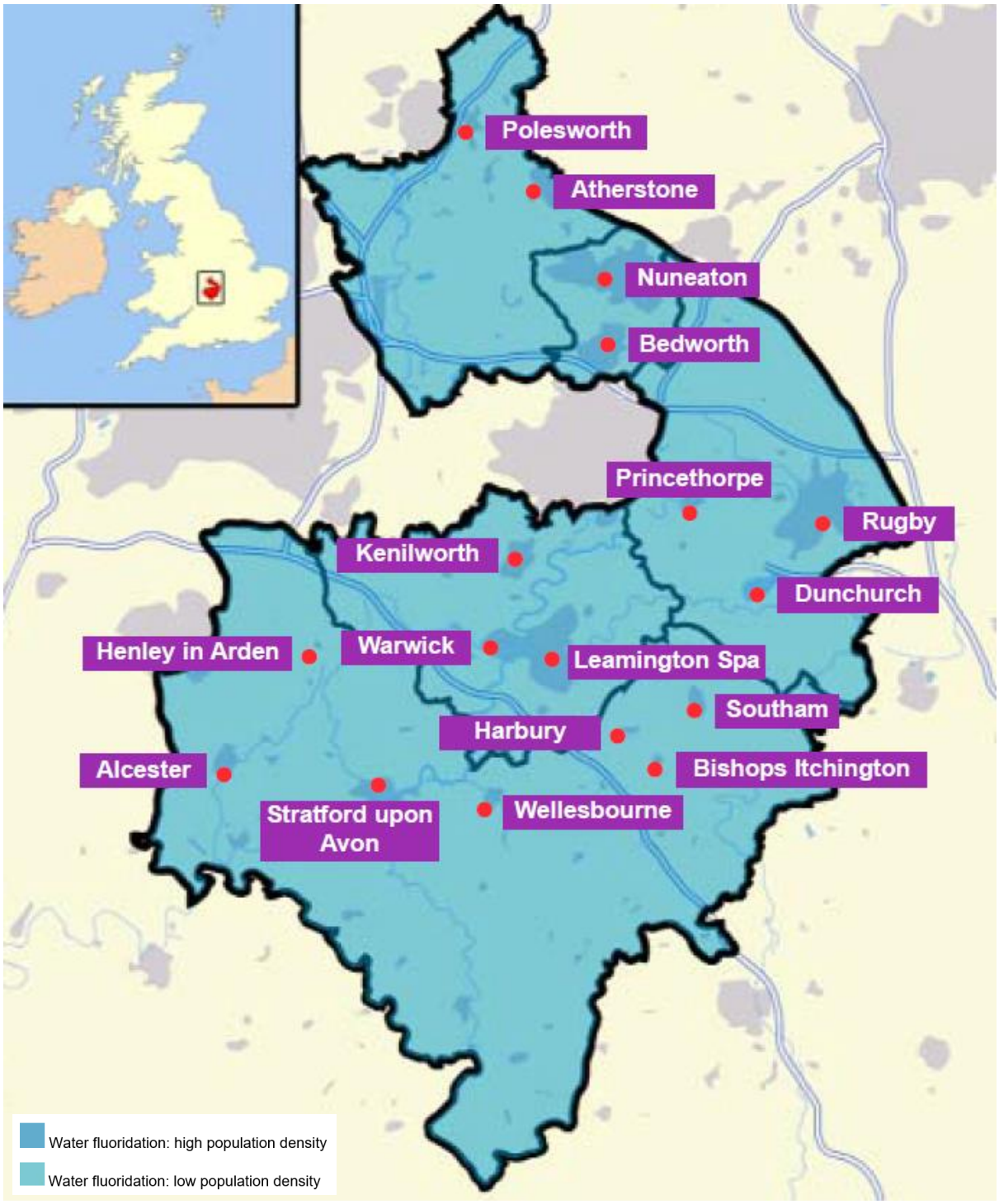


Figure 14. Water fluoridation coverage in Warwickshire [22]. The solid black line indicates the boundary of the area for which water fluoridation status is presented on the map and not the geographical extent of water fluoridation.

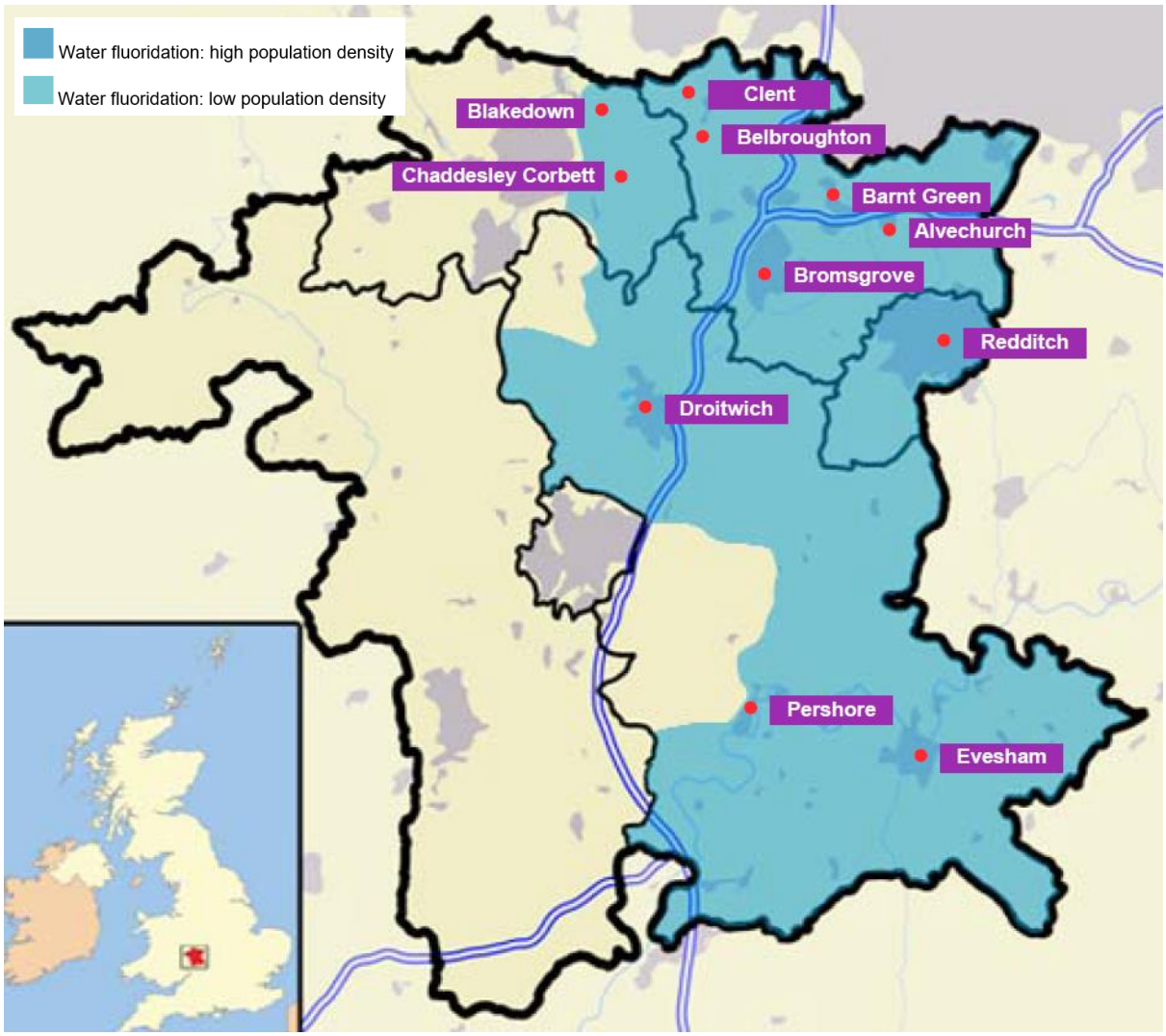


Figure 15. Water fluoridation coverage in Worcestershire [22]. The solid black line indicates the boundary of the area for which water fluoridation status is presented on the map and not the geographical extent of water fluoridation.

2.9 Dental disease burden and trends: Children

The Public Health England (PHE) Dental Public Health Intelligence Programme supports the collection, analysis and dissemination of information on the oral health of local populations [23]. Data from the oral health survey of five-year-old children 2016–17 can be seen in Table 6 below. It shows there is considerable variation in dental disease burden, and consequently inequalities, among five-year-old children between local authority areas in the West Midlands [15]. Herefordshire has the highest average d3mft and highest average d3mft in those with decay experience, while Solihull has the lowest average d3mft and the lowest % with decay experience, among five-year-old children. In local authorities where the average d3mft, % with decay experience or average d3mft in those with decay experience is highest, the likelihood of urgent dental care being required is also likely to be highest.

Local authority	Average d3mft[3]	% with decay experience	Average d3mft in those with decay experience
Birmingham	0.8	26.1	3.0
Solihull	0.5	16.3	2.8
Coventry	1.0	30.7	3.4
Warwickshire	0.5	21.6	2.5
Dudley	0.6	22.6	2.5
Sandwell	0.7	25.4	2.9
Wolverhampton	1.0	28.4	3.5
Walsall	0.8	23.4	3.3
Herefordshire	1.1	30.5	3.6
Worcestershire	0.6	21.8	2.9
West Midlands	0.8	25.7	3.2
England	0.8	23.3	3.4

Table 6. Data extracted from the oral health survey of five-year-old children 2016–17 [15]

The restorative index is a measure of treated disease burden. It is derived from epidemiological data and is the proportion of decayed and filled teeth which have been filled [24]. There are three main caveats with its use:

1. Many teeth are restored due to caries not visible in dental surveys
2. Clinical practice varies and some restored teeth may alternatively be treated more conservatively such as with sealant or fluoride
3. It is not a measure of treatment quality

The restorative index for the West Midlands for 5-year-olds using data from the 2016-2017 survey was 12.5%. This indicates that 87.5% of the decayed teeth identified in the survey had not been treated, posing an increased risk of urgent dental care being required.

[3] d3mft (decayed into dentine, missing and filled teeth) is an index which provides a measure of dental disease burden

2.10 Dental disease burden and trends: Adults

The adult dental health survey 2009 is the most recent national dental health survey of adults in England. It reported dental data at regional level and its key findings relevant to urgent dental care are summarised in Table 7 below.

	% of adult population	
Finding	**West Midlands**	**England**
PUFA[4]	7	7
Experienced dental pain fairly or very often	7	8
Pain at the time of examination	9	9
One or more urgent conditions	22	22

Table 7. Data extracted from the adult dental health survey 2009 [25]

Across the categories shown, dental health in the West Midlands was similar to the England average. It is of note that the likelihood of having an urgent condition increased with age and was more common in those from lower socio-economic groups, those with dental anxiety and those with plaque present.

In 2015-2016 an epidemiological survey was undertaken of adults aged 65 and over with mild dependency who live in extra care housing [26]. This was a pilot which gave an insight into the oral health of this population group for the first time. It reported 2.8% of those examined in the West Midlands were in urgent need of treatment, while the England mean was 3.2%.

[4] PUFA (pulp involvement, ulceration, fistula, abscess) is an index which provides a measure of badly diseased and broken-down teeth which are in need of prompt attention [16]

2.11 Dental access and activity

Those not accessing routine dental care are more likely to require urgent dental care. Table 8 shows the % of children and adults who accessed an NHS dental provider between January 2018 and January 2019 by lower tier local authority. This includes urgent as well as routine dental care so is best used as an indicator of overall, rather than purely routine, access. Access for children is better than for adults across the West Midlands as a whole, and in 16 of 19 lower tier local authorities. However, adults are more likely than children to receive private dental treatment which may account somewhat for the disparity between groups. Those routinely receiving private treatment may be less likely to seek out of hours urgent dental care from an NHS provider.

Lower tier local authority	Children who accessed NHS dental care between January 2018 and January 2019 as a % of total child population	Adults who accessed NHS dental care between January 2017 and January 2019 as a % of total adult population
Birmingham	53.7	50.4
Solihull	52.3	44.5
Coventry	58.8	52.7
North Warwickshire	42.8	44.5
Nuneaton and Bedworth	71.2	64.7
Rugby	49.8	47.5
Stratford-upon-Avon	61.8	47.5
Warwick	76.0	64.0
Dudley	52.5	55.4
Sandwell	57.4	59.9
Wolverhampton	56.4	52.3
Walsall	54.7	47.7
Herefordshire	58.7	48.6
Bromsgrove	54.3	36.7
Malvern Hills	57.6	47.3
Redditch	65.0	63.6
Worcester	70.5	60.4
Wychavon	47.6	41.9
Wyre Forest	63.0	46.5
West Midlands	58.7	51.9
England	59.0	50.7

Table 8. Children and adults who accessed NHS dental care over 12 months as a % of total child and adult population by lower tier local authority (NHS England)

Difficulties in accessing routine dental services are more likely to occur in a variety of situations. Services may have fulfilled their NHS contract, leaving no scope for them to see further NHS patients in that financial year. Conversely services may have been unable to recruit the workforce necessary to fulfil their NHS contract. Some

services may only accept children for NHS care, while others may prioritise private patients over those seeking NHS care, restricting access for the latter group. In such cases the demand for urgent dental care is likely to increase. The maps which follow show the location of NHS dental providers and their contract delivery status for the 2017-18 financial year. As the degree of contractual underperformance is not stated, they are best used to draw broad comparisons between areas in the context of Table 8, rather than to quantify variation.

NHS dental providers in Birmingham and Solihull STP by contract delivery status

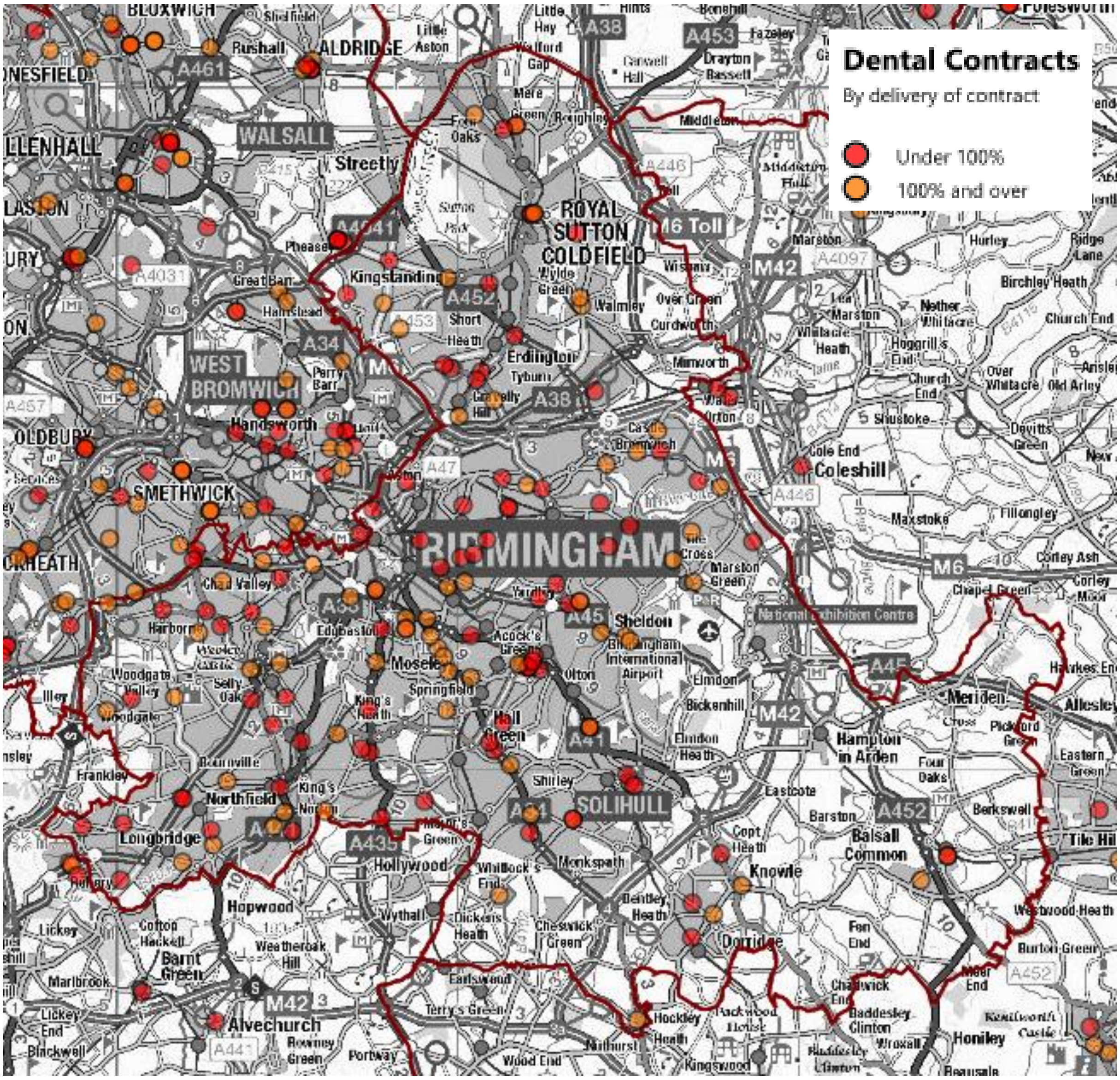


Figure 16. Location of NHS dental providers in Birmingham and Solihull STP and their contract delivery status for the 2017-18 financial year (HealthGIS)

NHS dental providers in Coventry and Warwickshire STP by contract delivery status

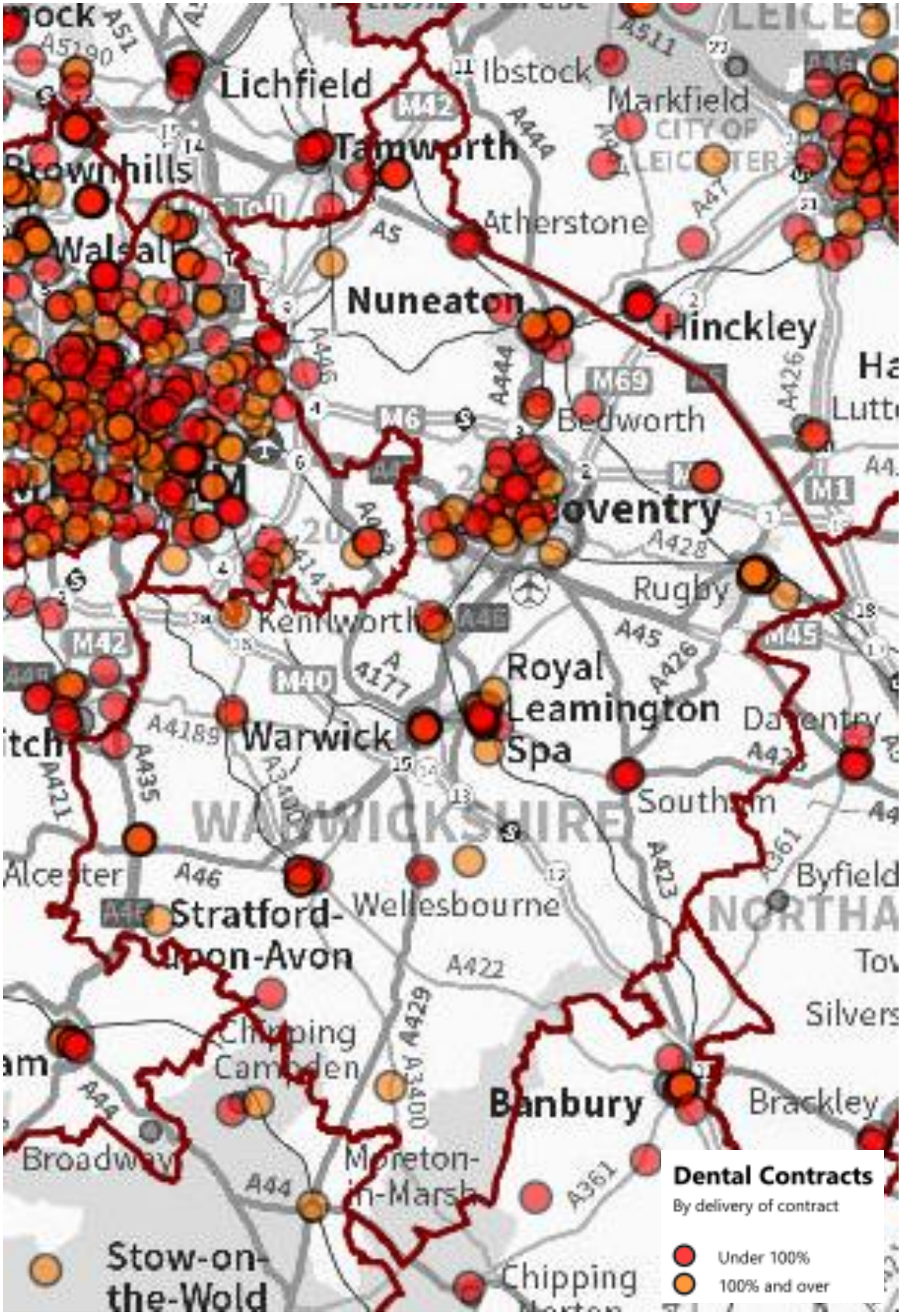


Figure 17. Location of NHS dental providers in Coventry and Warwickshire STP and their contract delivery status for the 2017-18 financial year (HealthGIS)

NHS dental providers in Black Country STP by contract delivery status

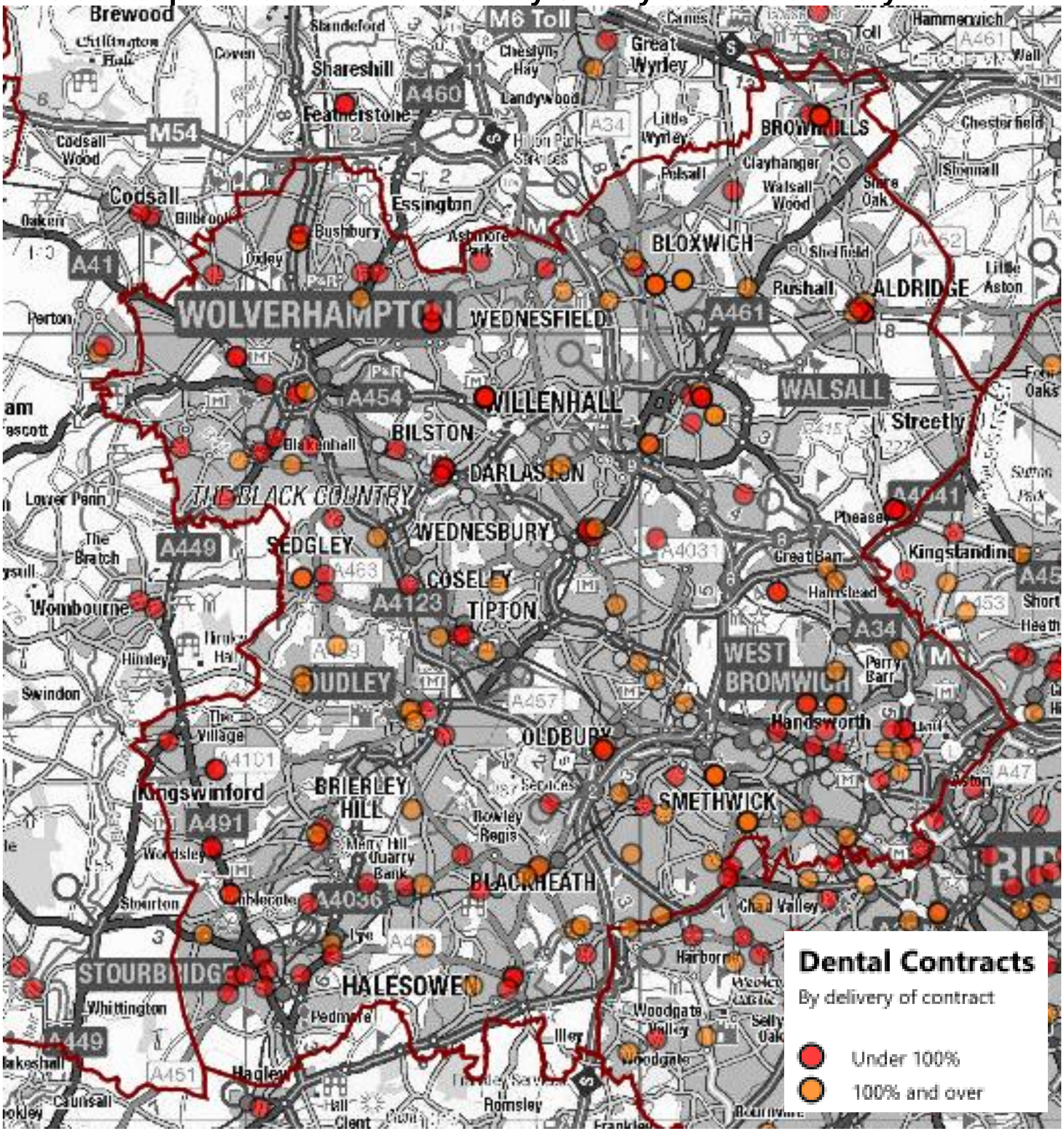


Figure 18. Location of NHS dental providers in Black Country STP and their contract delivery status for the 2017-18 financial year (HealthGIS)

NHS dental providers in Herefordshire and Worcestershire STP by contract delivery status

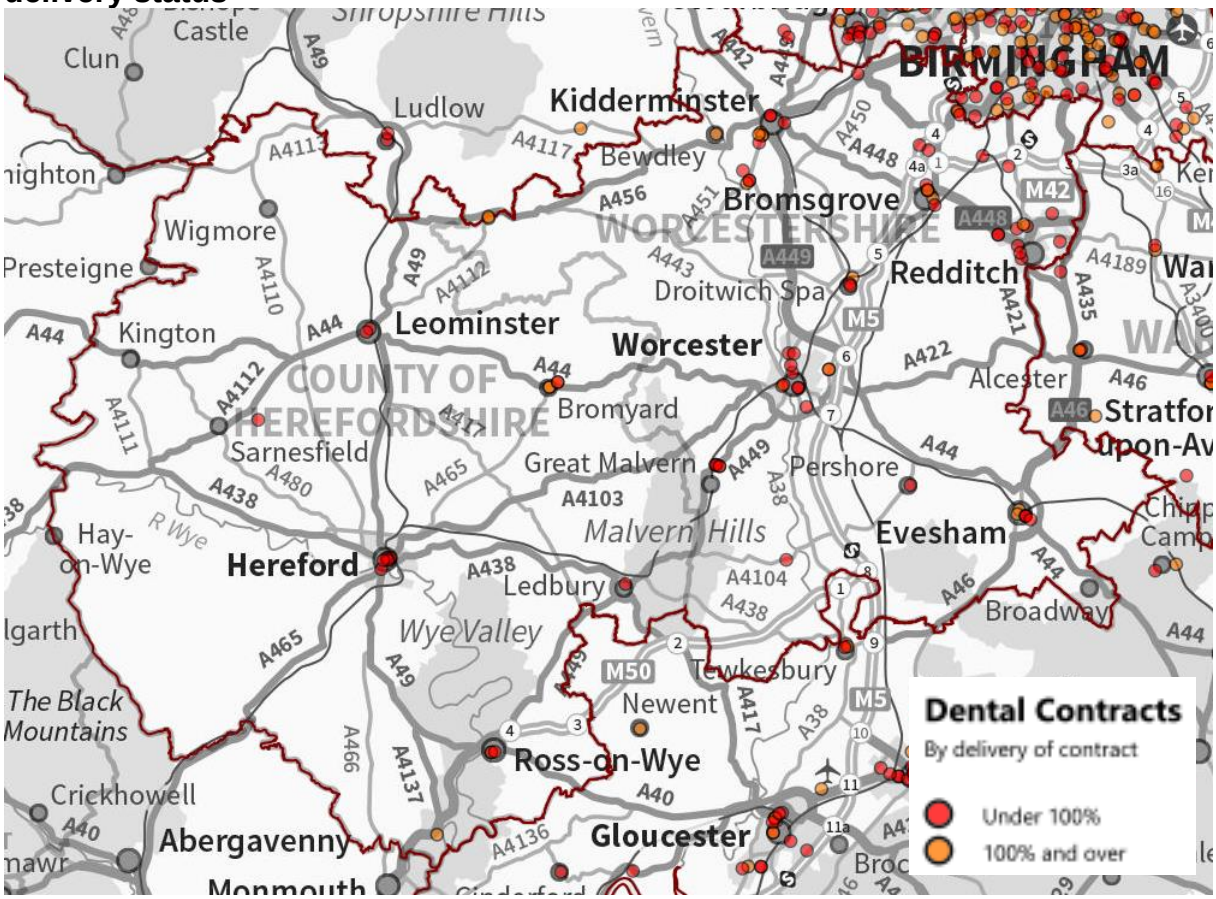


Figure 19. Location of NHS dental providers in Herefordshire and Worcestershire STP and their contract delivery status for the 2017-18 financial year (HealthGIS). It is of note that the number of providers is relative to the population and should be considered in conjunction with data on population and population density.

The number of courses of urgent dental treatment delivered can be used to indicate the expressed need for urgent dental treatment in an area. Table 9 shows urgent courses of dental treatment delivered in the year ending 30 September 2018 as a % of all courses of dental treatment and total population by upper tier local authority. This facilitates a comparison of the demand for in hours and out of hours urgent dental care, yet it does not account for those patients who have sought care beyond NHS dental services. It is important to note that activity is likely to be related to service availability as well as clinical need. Those requiring urgent dental care are likely to travel further than those requiring routine dental care, meaning they could access it in another local authority area. In areas where the capacity for routine dental care is limited the demand for urgent dental care is likely to rise; conversely providers may commence a routine course of treatment on a patient with an urgent dental condition where capacity allows. It is also worth considering that the availability of walk-in services, such as those operating in Herefordshire and Worcestershire, may promote urgent dental care as an alternative to routine dental care.

Upper tier local authority	Urgent courses of dental treatment delivered	Total courses of dental treatment delivered	Urgent courses of dental treatment as a % of total courses of dental treatment*	Urgent courses of dental treatment as a % of total population**
Birmingham	14,031	184,250	7.6	1.2
Solihull	2,780	33,144	8.4	1.3
Coventry	2,750	58,037	4.7	0.8
Warwickshire	6,569	111,721	5.9	1.7
Dudley	4,533	58,666	7.7	1.4
Sandwell	5,539	58,385	9.5	1.7
Wolverhampton	3,583	44,996	8.0	1.4
Walsall	3,295	42,169	7.8	1.2
Herefordshire	4,768	31,062	15.3	2.5
Worcestershire	7,750	101,519	7.6	1.3
West Midlands	55,598	723,949	7.7	1.3

Table 9. Urgent courses of dental treatment delivered in the year ending 30 September 2018 as a % of all courses of dental treatment and total population by upper tier local authority using data from NHS Digital and NOMIS. *This has been included to give an absolute comparison between upper tier local authorities **Population estimates are based on 2017 data

2.12 Non-dental care providers

It is well known that a proportion of those with urgent dental conditions seek treatment from a non-dental care provider such as a general practitioner, accident and emergency unit or pharmacist, although there is no quantitative available on this. Reasons for this may include difficulties accessing dental services, cost and dental phobia. Any change to the configuration of urgent dental care services could therefore draw patients towards or away from using non-dental care providers.

3. What are the current services?

3.1 Current services

The current out of hours urgent dental care services are detailed in Table 10. Each service has been allocated a number which will be used to identify it throughout the needs assessment.

Number	Postcode	Provider	Upper tier local authority
Birmingham and Solihull STP			
1	B15 1LZ	Birmingham Community Healthcare NHS Foundation Trust (BCHC)	Birmingham
2	B91 2AQ	Heart of England NHS Foundation Trust (HEFT)	Solihull
Coventry and Warwickshire STP			
3	CV12 8NW	Mr. A.S. Deol	Warwickshire
4	CV37 6HT	Mr. A.J. Browne	Warwickshire
Black Country STP			
5	WV10 8BN	Mr. K.S. Aulak	Wolverhampton
6	B42 1TG	Mr. P. Tangri*	Sandwell
7	B70 7AW	Birmingham Community Healthcare NHS Foundation Trust	Sandwell
8	DY1 1QE	Mr. B.S. Bhandal	Dudley
9	WS3 1LZ	Birmingham Community Healthcare NHS Foundation Trust	Walsall
Herefordshire and Worcestershire STP			
10	WR1 2RS	Worcestershire Health and Care NHS Trust	Worcestershire
11	DY10 2DH		Worcestershire
12	WR11 1JT		Worcestershire
13	HR1 2HU	Wye Valley NHS Trust**	Herefordshire

Table 10. Current out of hours urgent dental care services. *This provider holds an extended opening hours (rather than out of hours) contract but has been included because they undertake out of hours urgent dental care. **This provider holds an extended opening hours contract for weekdays and an out of hours contract for Saturday, Sunday and bank holidays

3.2 Location of current services

The locations of current out of hours urgent dental care services are mapped against population density by STP below.

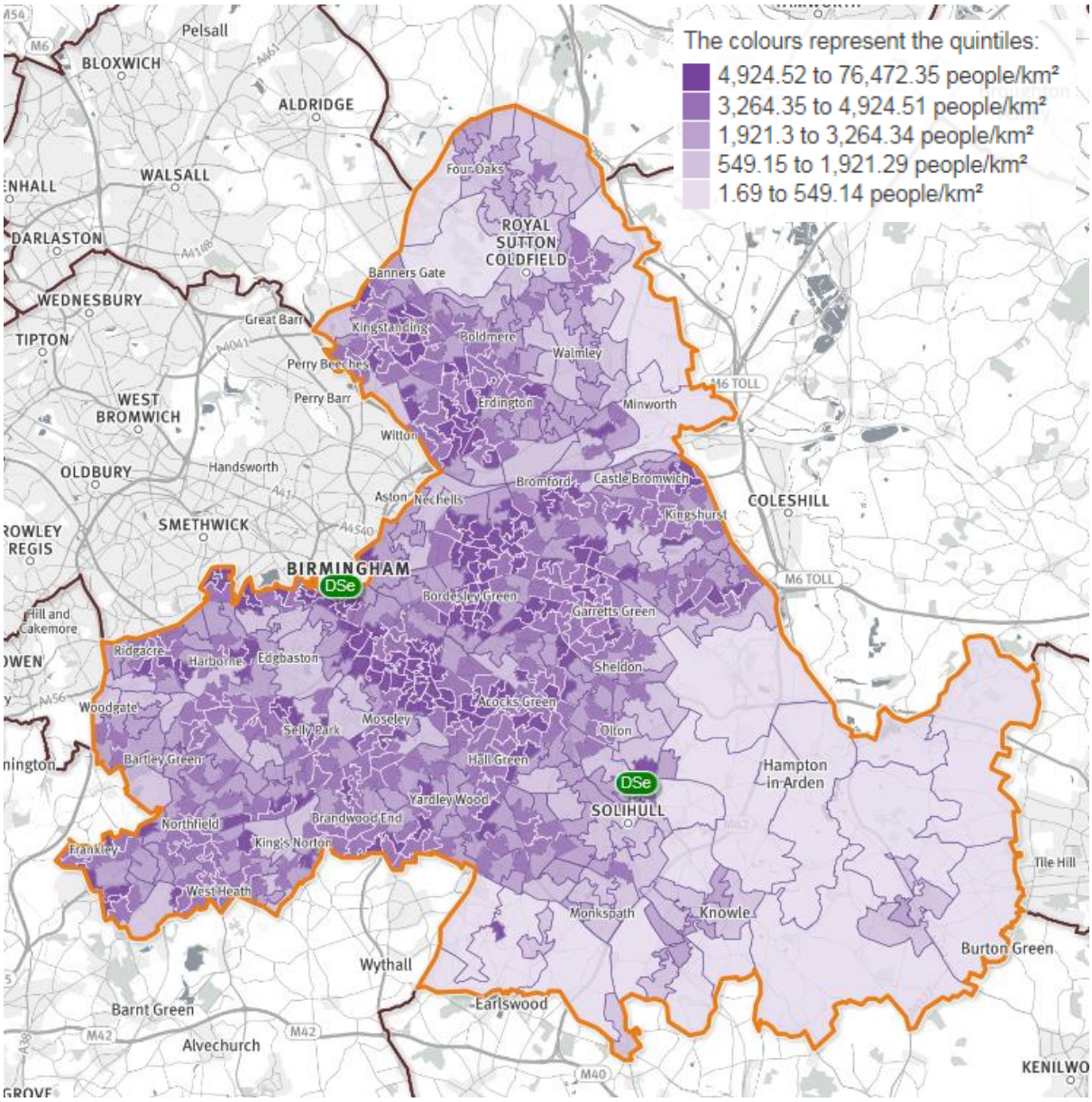


Figure 20. Current out of hours urgent dental care services in Birmingham and Solihull STP against population density

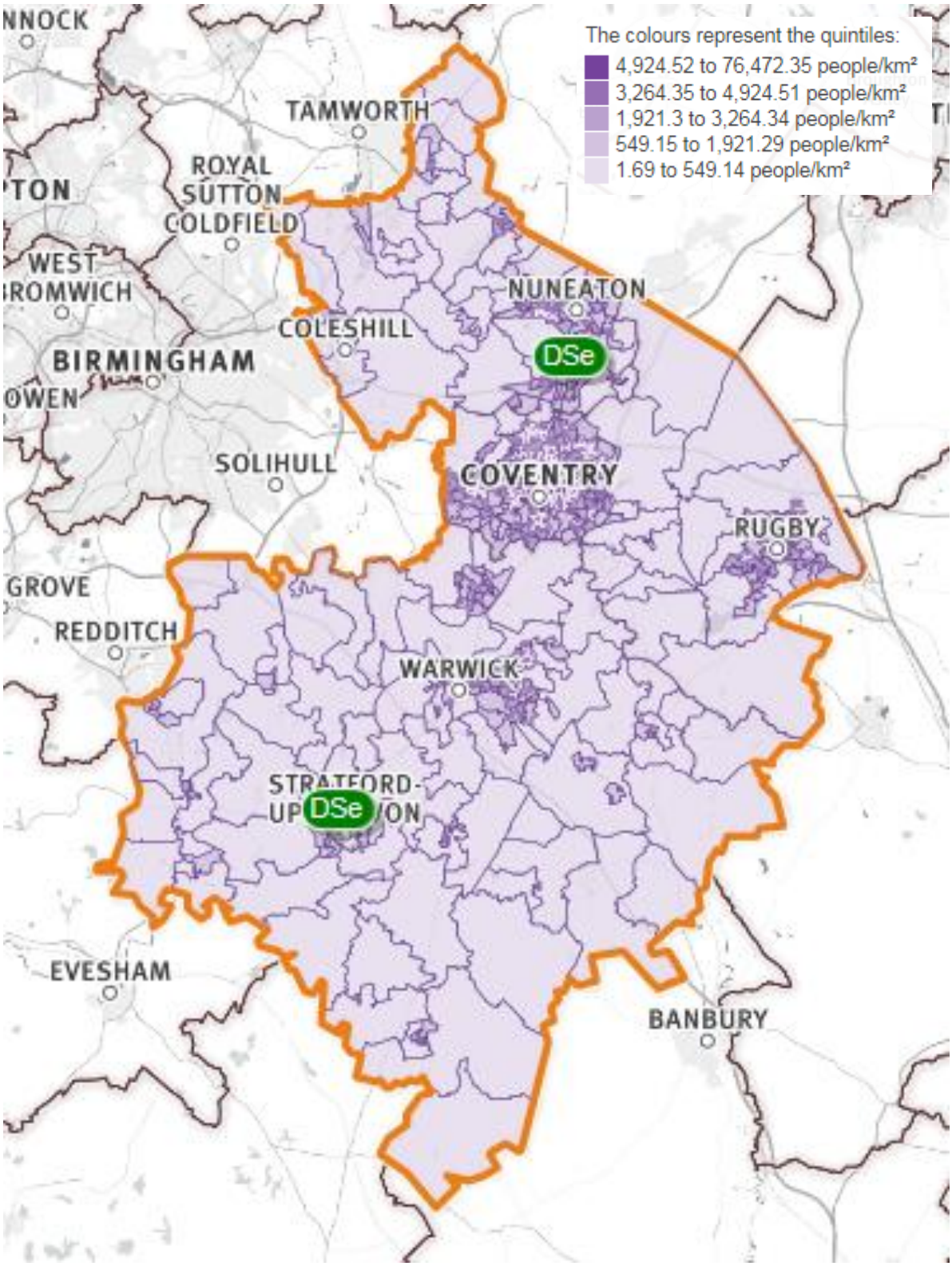


Figure 21. Current out of hours urgent dental care services in Coventry and Warwickshire STP against population density

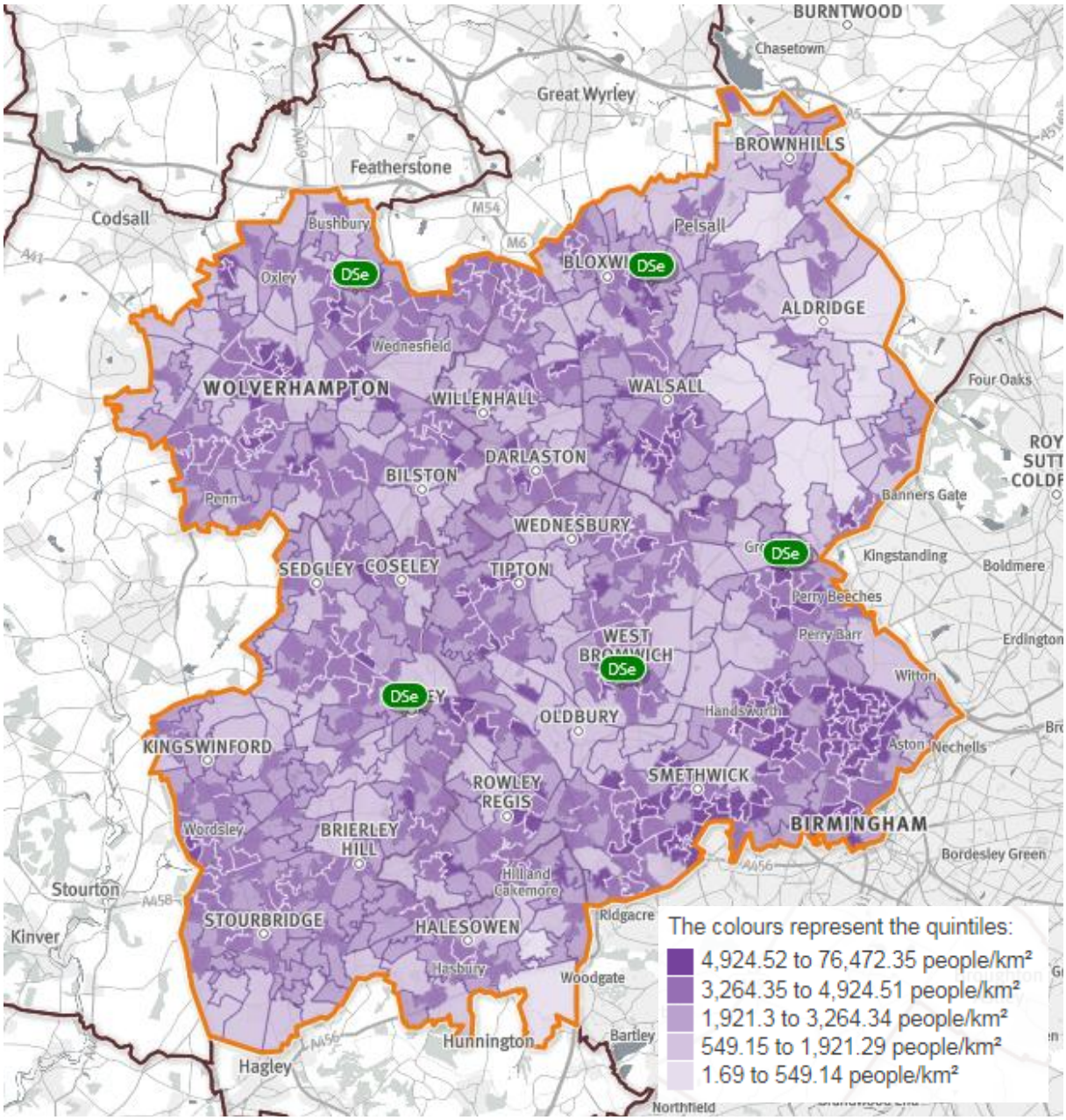


Figure 22. Current out of hours urgent dental care services in Black Country STP against population density

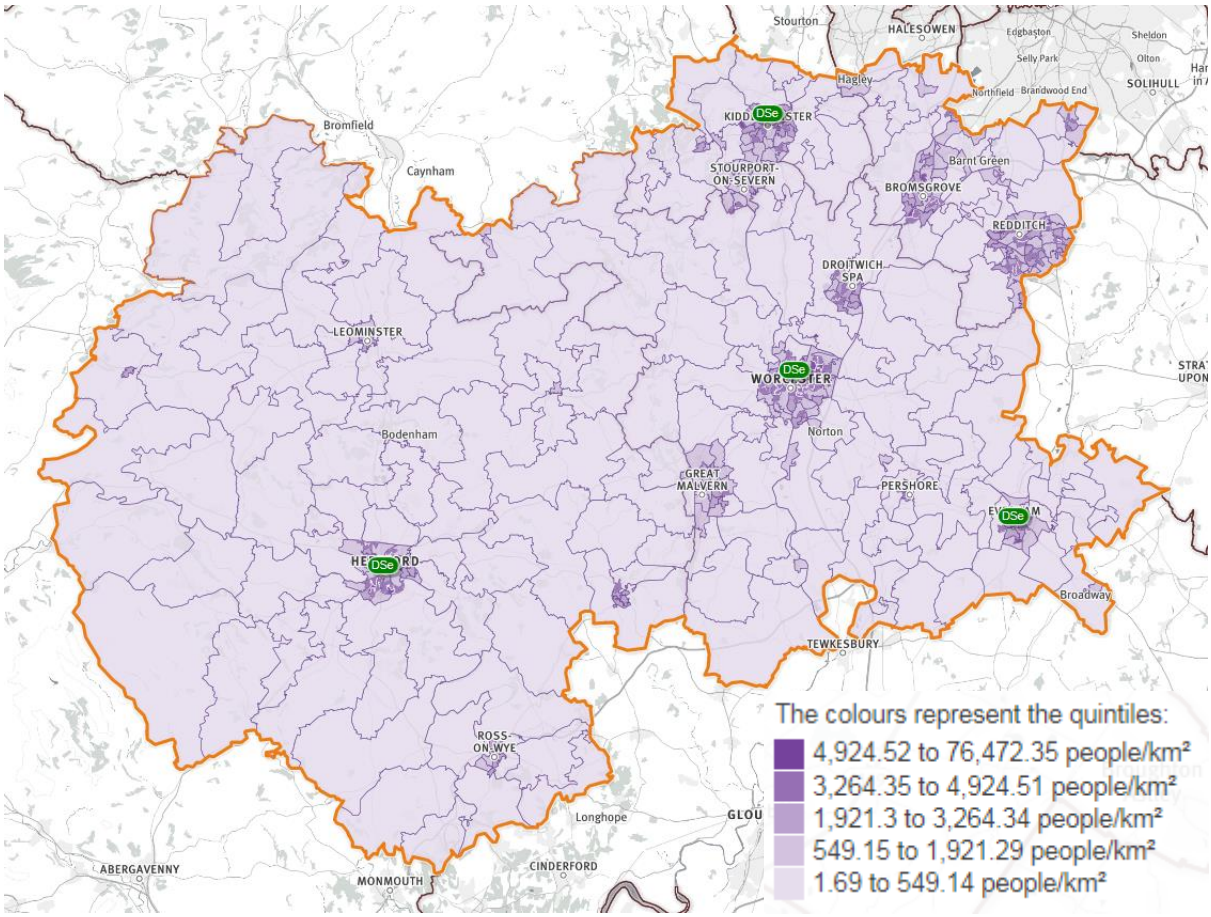


Figure 23. Current out of hours urgent dental care services in Herefordshire and Worcestershire STP against population density

3.3 Travel time and distance to current services

The travel time by car outside of rush hour is mapped from the locations of current out of hours urgent dental care services by STP below. The urgent dental care commissioning guide states that the travel time to reach an urgent dental care service could be up to 60 minutes. However, patients living within the NHS West Midlands footprint may access services elsewhere, and vice versa.

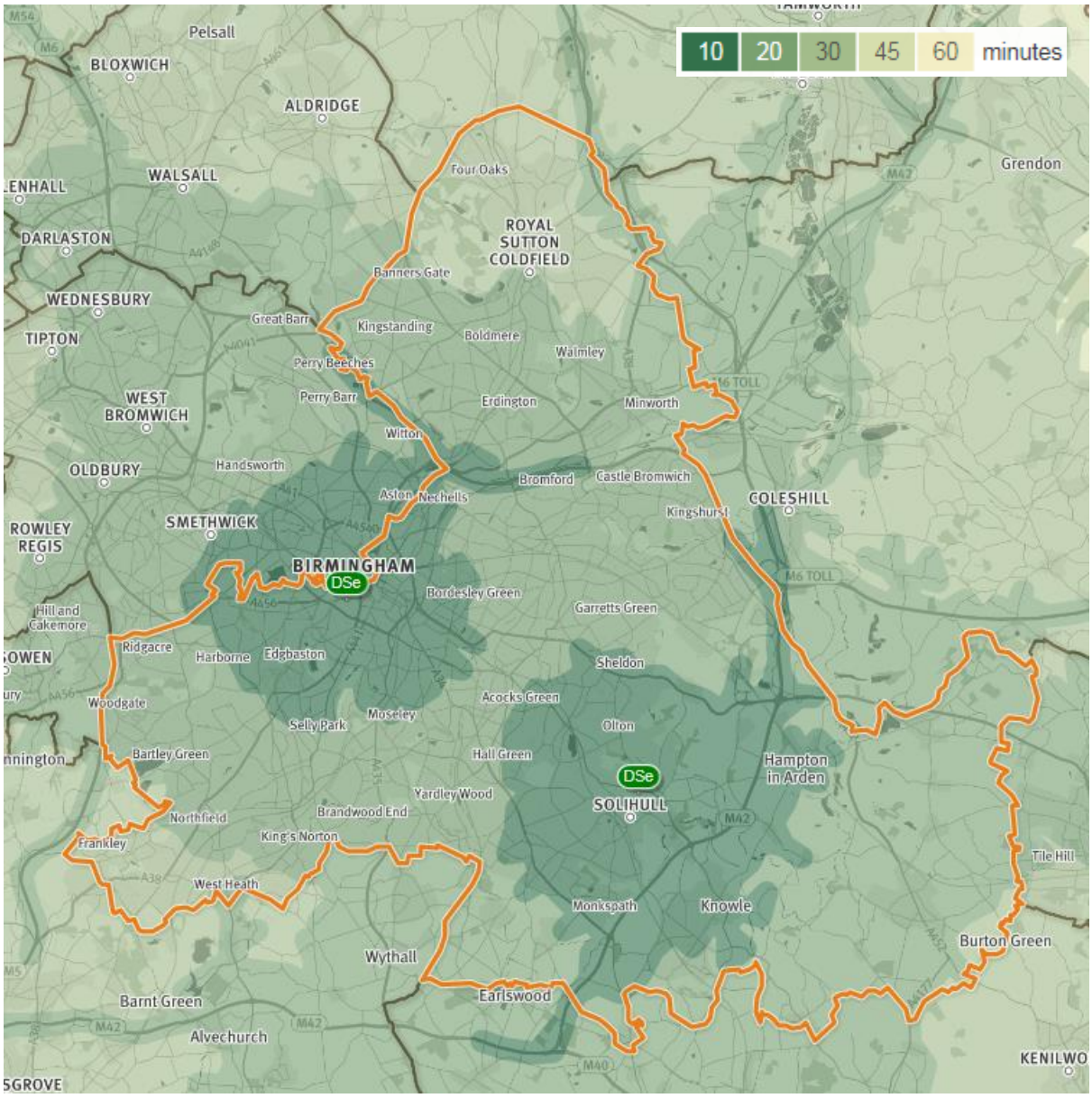


Figure 24. Travel time by car outside of rush hour to current out of hours urgent dental care services in Birmingham and Solihull STP

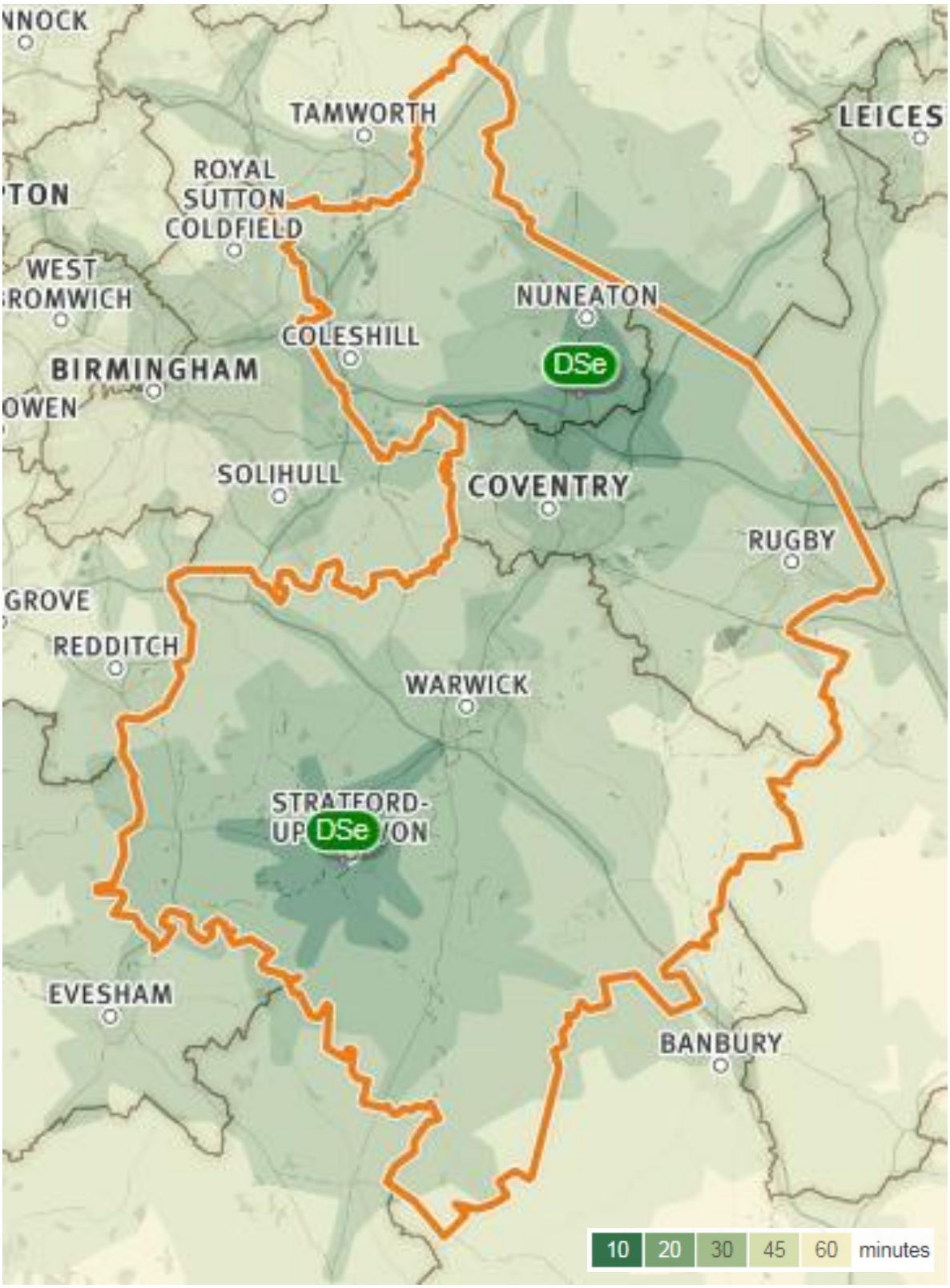


Figure 25. Travel time by car outside of rush hour to current out of hours urgent dental care services in Coventry and Warwickshire STP

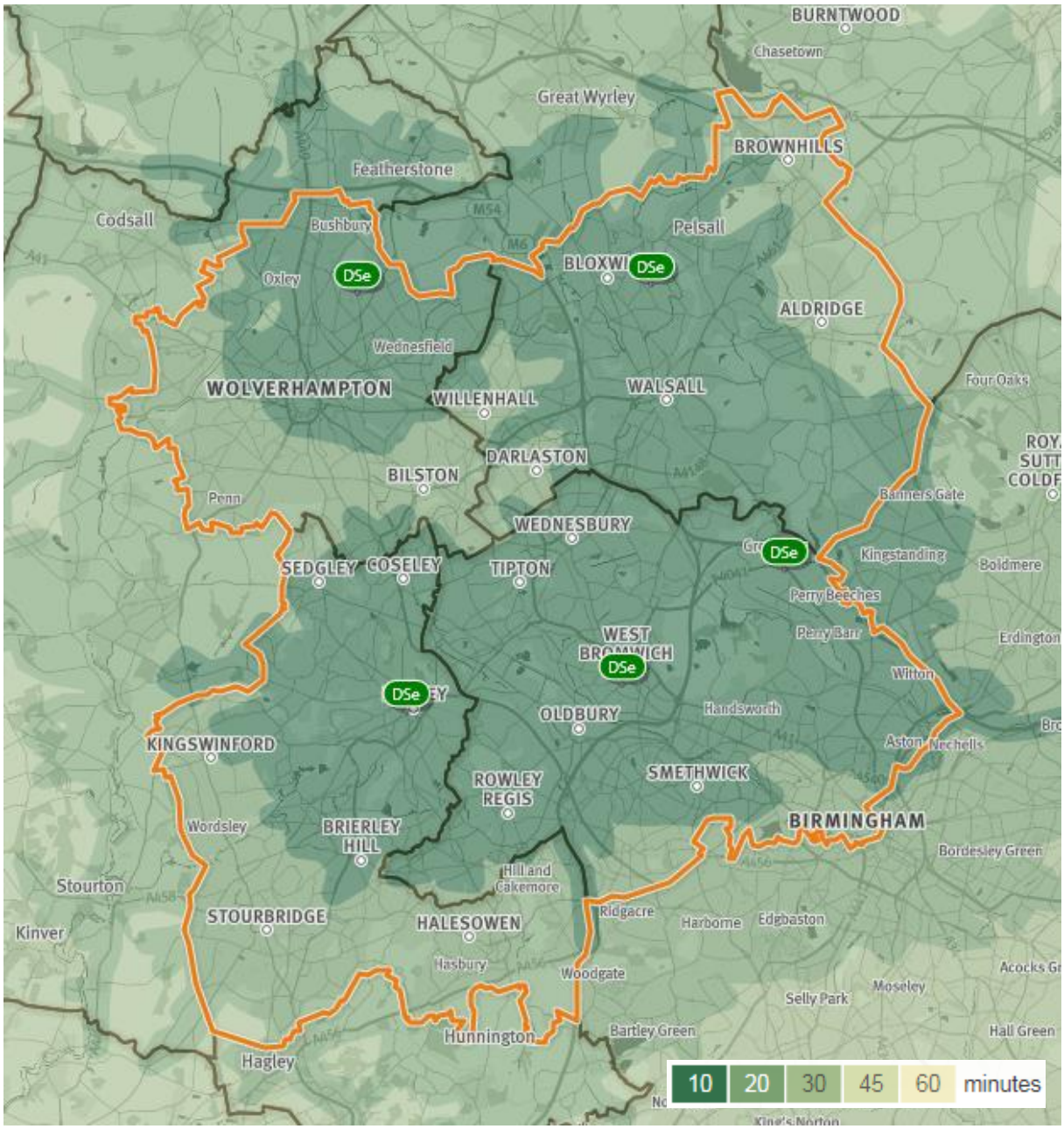


Figure 26. Travel time by car outside of rush hour to current out of hours urgent dental care services in Black Country STP

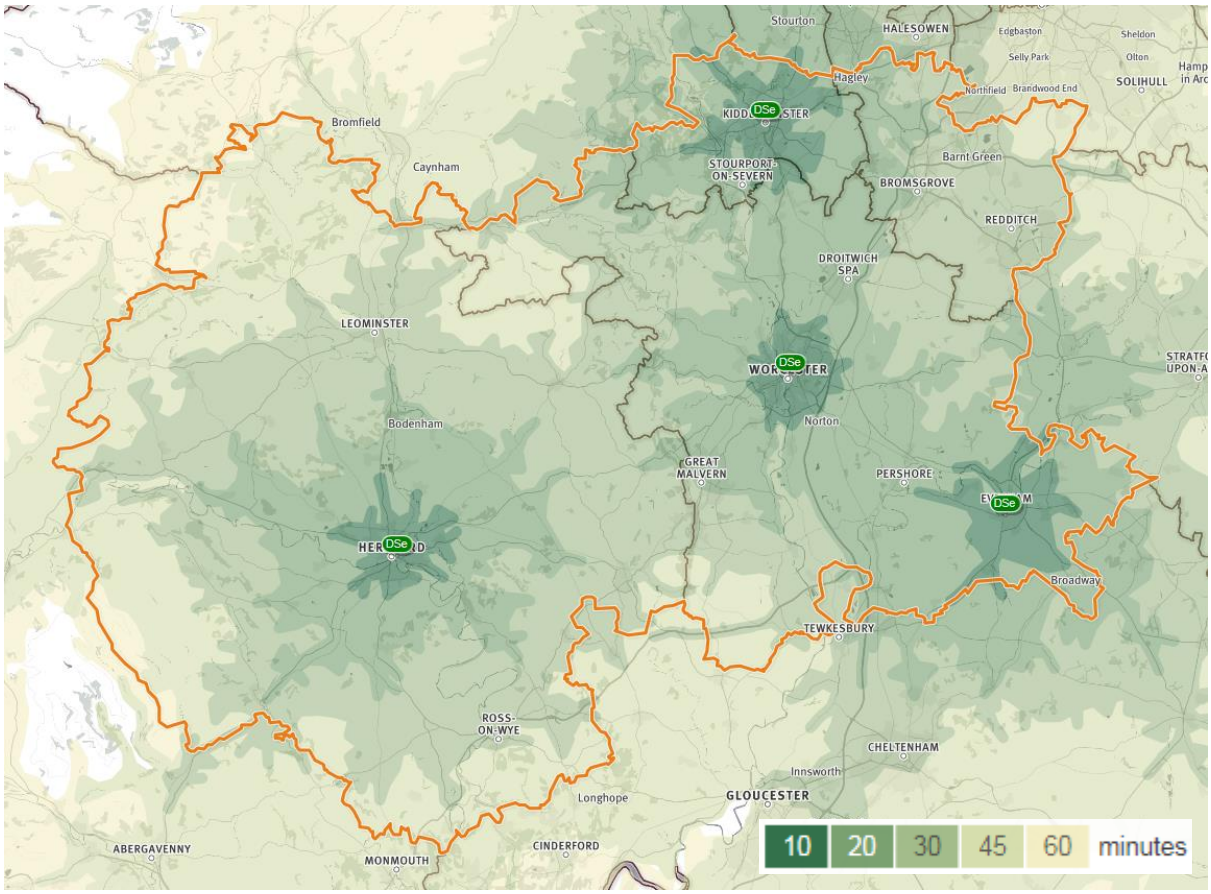


Figure 27. Travel time by car outside of rush hour to current out of hours urgent dental care services in Herefordshire and Worcestershire STP

3.4 Opening times and access arrangements

The opening times for the existing services are provided in Table 11 below. These vary considerably with little evening provision in some areas, however access is also available via dental access centres with extended opening hours.

	Service opening times			
Service	Weekday	Saturday	Sunday	Bank holiday
Birmingham and Solihull STP				
1	18.00-21.00	9.00-13.00	9.00-13.00	9.00-13.00
2	no service	9.30-12.30	9.30-12.30	9.30-12.30
Coventry and Warwickshire STP				
3	18.30-22.30	8.00-20.00	8.00-20.00	8.00-20.00
4	18.00-22.00*	8.00-20.00	8.00-20.00	8.00-20.00
Black Country STP				
5	18.30-20.30	9.00-15.00	9.00-11.00	9.00-11.00
6	17.30-23.00	8.30-23.00	8.30-23.00	8.30-23.00
7	18.00-21.00	9.00-12.00	9.00-12.00	9.00-12.00
8	19.00-21.00	9.00-12.00	9.00-12.00	9.00-12.00
9	no service	9.00-13.00	9.00-13.00	9.00-13.00
Herefordshire and Worcestershire STP				
10	no service	9.00-13.00	9.00-13.00	9.00-13.00
11	no service	9.00-13.00	9.00-13.00	9.00-13.00
12	no service	9.00-13.00	9.00-13.00	9.00-13.00
13	17.30-20.00	9.00-11.30	9.00-11.30	9.00-11.30

Table 11. Opening times for existing urgent dental care services. *Except on New Year's Eve when the service opening times are 18.00-20.00.

In some cases 111 triage patients before directing them to a service, while in others patients contact the service directly. This mirrors the situation nationally, which features considerable variation in access arrangements both within and between regions. Research undertaken in South Wales found that services operating on a walk-in model were less accessible than those based on telephone access [27]. It also found that walk in services may also be cost-inefficient since almost half of attending patients reported they would have been happy with advice plus a reliable appointment when surgeries reopened. The access arrangements for the existing services are provided in Table 12.

Service	Access arrangements
Birmingham and Solihull STP	
1	Via 111 referral, appointment or walk-in
2	Via 111 referral
Coventry and Warwickshire STP	
3	Via 111 referral
4	Via 111; 111 e-mails patient details to the service and the service subsequently makes telephone contact with the patient
Black Country STP	
5	Via 111 referral or appointment via mobile telephone number
6	Via 111 referral, appointment or walk-in
7	Via 111 referral, appointment or walk-in
8	Via 111 referral or telephone
9	Via 111 referral, appointment or walk-in
Herefordshire and Worcestershire STP	
10	Via 111 referral or walk-in
11	Via 111 referral or walk-in
12	Via 111 referral or walk-in
13	Via 111 referral or walk-in

Table 12. Access arrangements for existing urgent dental care services collated from service specifications, service level agreements and information supplied by providers

Specialist urgent dental care, including orthodontic emergencies, lies beyond the scope of urgent dental care except in cases where it falls within the “urgent dental conditions” and “dental emergencies” categories presented previously. Special care dental patients may require a different pathway to accessing urgent dental care; this is to be defined as part of a community dental service redesign which is currently on going.

Between January and March 2018 2.2 million adults were asked about access to NHS dentistry as part of the GP Patient Survey [28]. Those unsuccessful in accessing an NHS dentist for routine and preventative dental care are more likely to require urgent dental care. Dental access data is presented by STP in Table 13.

	% of population who tried to get an NHS dental appointment and were successful
Birmingham and Solihull STP	91.05
Coventry and Warwickshire STP	94.79
Black Country STP	91.98
Herefordshire and Worcestershire STP	94.30
West Midlands	92.78
England	92.55

Table 13. % of population who tried to get and NHS dental appointment and were successful by STP. Data extracted from the GP patient survey (2018)

3.5 Current service usage

The demand for out of hours care is likely to be influenced to a degree by capacity of in hours services. Therefore any change in in hours service capacity could impact on the demand for out of hours provision. Given that much in hours urgent dental care activity is delivered within general dental services contracts, often within routine courses of treatment, it is difficult to quantify.

Data on the days and times when the demand for urgent dental care peaks is important when considering service capacity and accessibility. Table 14 and Figure 28 show demand expressed by 111 dental call volumes for a six month period in the West Midlands. Although some providers may have accepted patients who made direct contact with their service, the majority are likely to have been signposted by 111 and the large number of calls included in the sample (15,205) is sufficient for trend analysis. Times of peak call volume are likely to correlate - to a degree - with times of peak need. However, they may also be influenced by patient and public awareness of service opening times and geography. It is worth noting that the volume of calls to 111 in the evenings is relatively low considering that most services operate weekday evening sessions. 111 providers are commissioned by Clinical Commissioning Groups (CCGs) and not NHS England. It is understood that while 111 operates 24 hours a day, a dental nurse is only available at certain times. It is also worth noting that the dental triage categorisation used by 111 differs from that in Table 1.

Day	Number of dental calls received from 1 August 2018 - 31 January 2019	% by which call volume exceeded that on reference day (Tuesday)
Monday	2,202	35.51%
Tuesday	1,625	reference day
Wednesday	1,771	8.98%
Thursday	1,714	5.48%
Friday	2,172	33.66%
Saturday	3,042	87.20%
Sunday	2,679	64.86%

Table 14. Total number of dental calls received by 111 by day of week, including the % by which this exceed the total number of calls on a Tuesday, from 1 August 2018 – 31 January 2019 in the West Midlands

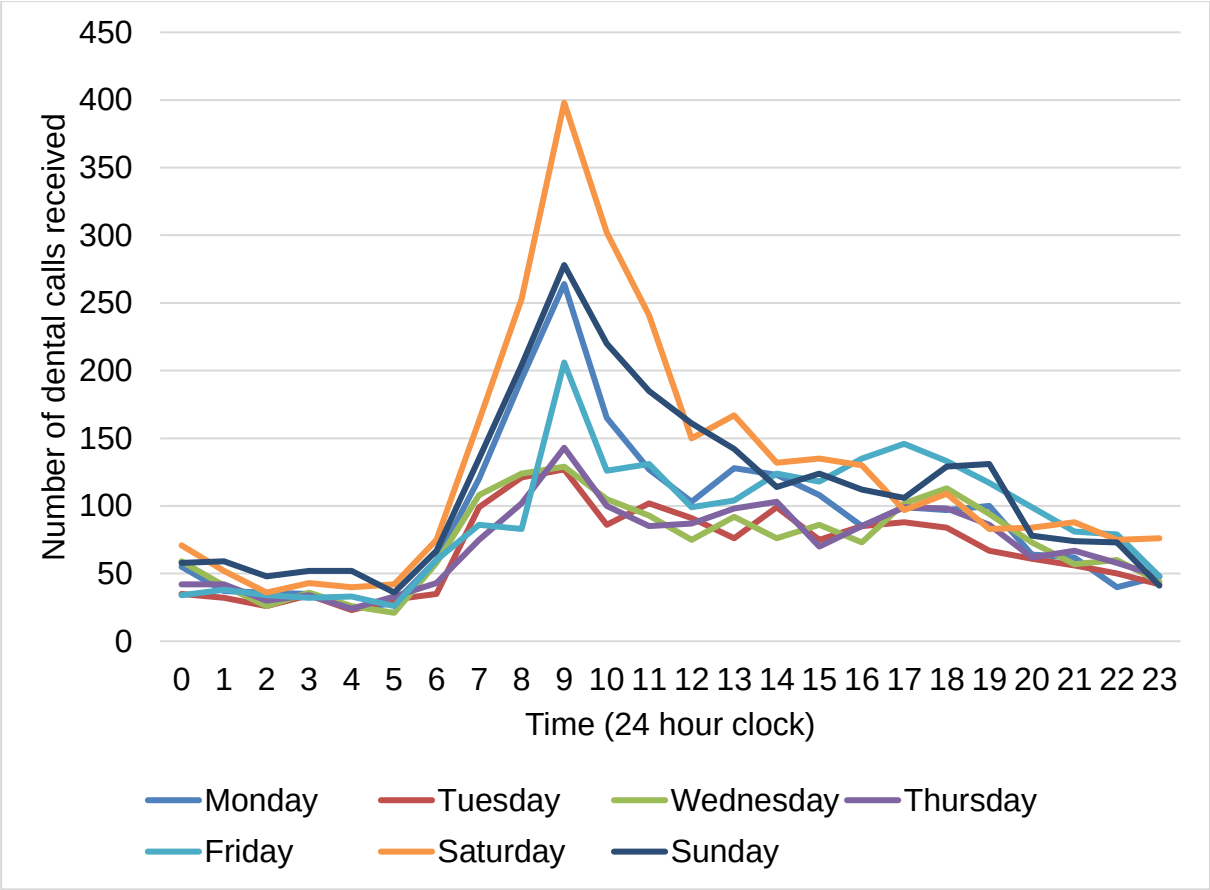


Figure 28. 111 dental call volumes by time of day and day of week from 1 August 2018 – 31 January 2019 in the West Midlands

The number of patient contacts by the current out of hours urgent dental care providers, by STP, are shown in Table 15. These are likely to be greater than the number of unique patients treated given that some patients may have attended more than once.

	Annual patient contacts*	**Mean weekly patient contacts**
Birmingham and Solihull STP	1,867	35
Coventry and Warwickshire STP	525	10
Black Country STP	7,887	152
Herefordshire and Worcestershire STP	6,308	121
West Midlands	16,587	319

Table 15. Annual and mean weekly patient contacts by the current out of hours urgent dental care providers by STP. Figures are estimates based on differences in process between providers. *Based on activity for the 2018-2019 financial year where available and the 2017-2018 financial year in other cases.

3.6 Cost of current services

The remuneration model varies considerably between the current out of hours urgent dental care services. It is accepted that most services undertake triage activity within their contractual arrangements; the cost per patient contact is likely to be inflated as patients triaged who are not subsequently seen by the service do not count as patient contacts. For the 2018-2019 financial year the total spend on out of hours urgent dental care in the West Midlands was estimated to be £1,362,290, with the cost per patient contact estimated to vary from £22.66 to £872.00 between services. Table 16 shows the estimated mean annual cost of out of hours urgent dental care per head of population for 2018-2019 by STP.

	Estimated mean annual cost per head of population for 2018-2019 (£)
Birmingham and Solihull STP	0.28
Coventry and Warwickshire STP	0.19
Black Country STP	0.41
Herefordshire and Worcestershire STP	0.41
West Midlands	0.32

Table 16. Estimated mean annual cost of out of hours urgent dental care per head of population for 2018-2019 by STP. Calculations undertaken using 2019 population data from NOMIS

3.7 Prescribing

Dental antimicrobial prescribing data is a useful indicator of urgent dental care activity. Table 17 shows how dental antimicrobial prescribing in the West Midlands compares to the England mean.

	Antimicrobial items as % of total FP17s
Birmingham and The Black Country	8.78
Arden, Herefordshire and Worcestershire	7.21
England	7.33

Table 17. Antimicrobial items as a % of total FP17s from for April 2017-March 2018 [29]

The urgent dental care MCN undertook an audit of antimicrobial prescribing throughout 2016 and 2017. A clinician from seven of the thirteen current out of hours urgent dental services participated in this. The key findings from the audit were:

- Antimicrobials were prescribed in 33%-45% of urgent dental care consultations.
- Amoxicillin and metronidazole were the most frequently prescribed antimicrobials.
- Reasons for antimicrobial prescribing included patients declining operative treatment, failed anaesthesia, failed drainage, systemic spread and trismus.

- Antimicrobials were frequently prescribed where no operative treatment had been undertaken and the reasons for prescribing suggest a significant amount of inappropriate prescribing.

Following the audit an advice sheet was produced for urgent dental care services on antimicrobial prescribing. The advice sheet contained flowcharts for the management of acute and chronic antimicrobial infections and pericoronitis.

There are a number of pathways to urgent dental care out with the present out of hours provision. Patients may attend their regular dental practice and were a course of NHS treatment is open at the time urgent treatment is required to be delivered within this. Patients may also source urgent dental care from private dental providers, even if they receive routine NHS dental care. Some attend a GP or other medical professional and research has shown that more than half presenting to a GP with a dental problem are prescribed antimicrobials, with the incidence of this increasing on Mondays, Fridays and in December [30]. This raises concerns about antimicrobial resistance and public awareness of and access to urgent dental care. Data on GP and hospital attendances for dental problems is not routinely available at local level, nor is detailed dental prescribing data due to the continued use of paper prescriptions within dentistry. However, should such data become available in the future it would be of great use in the commissioning of urgent dental care services.

3.8 Quality of current services

The Care Quality Commission (CQC) is the independent regulator of health and social care in England [31]. The CQC inspects 10% of dental services annually and highlights whether these services are meeting the standard which they expect [31]. The year and outcome of the most recent CQC inspection for the current out of hours urgent dental care services can be found in Table 18. Inspections typically cover the broader service offered by each provider rather than just the out of hours urgent dental care element. The outcome classification differs between trust and general dental services providers, accounting for variation in inspection outcome nomenclature.

Service	Year and outcome of CQC inspection*
Birmingham and Solihull STP	
1	2014: good
2	2016: good
Coventry and Warwickshire STP	
3	2013: meeting standard
4	2015: meeting standard
Black Country STP	
5	2013: meeting standard
6	2016: meeting standard
7	2014: good
8	2018: meeting standard
9	2014: good
Herefordshire and Worcestershire STP	
10	2018: good**
11	
12	
13	2015: good

Table 18. Provider CQC outcomes. Extracted from CQC inspection reports (25 January 2019 and 8 April 2019) [31]. *Services operated in general dental practices are classified only as meeting or not meeting the required standard. **Service inspected as part of a broader inspection which included dental services.

The facilities available at each of the current out of hours urgent dental care services are indicated in Table 19.

	Facility									
Service	Braille	Signing	Induction loop	Wheelchair access	Disabled WC	RNID typetalk	Step-free access	Car parking	Cycle parking	Disabled parking
Birmingham and Solihull STP										
1*	X		X	X	X		X	X	X	X
2				X	X		X	X		X
Coventry and Warwickshire STP										
3				X	X		X	X		
4			X	X	X		X	X	X	
Black Country STP										
5		X	X	X	X		X	X		X
6				X	X		X	X	X	X
7*	X		X	X	X		X	X	X	X
8				X	X		X	X	X	X
9			X	X	X			X	X	X
Herefordshire and Worcestershire STP										
10				X	X			X		
11				X	X			X		
12				X	X			X		
13	X		X	X	X			X		X

Table 19. Provider facilities. Extracted from NHS Choices (24 January 2019) [32]
*Information provided by the service as it was unavailable on NHS Choices

4. What do professionals, patients, the public and other stakeholders want?

4.1 Stakeholders

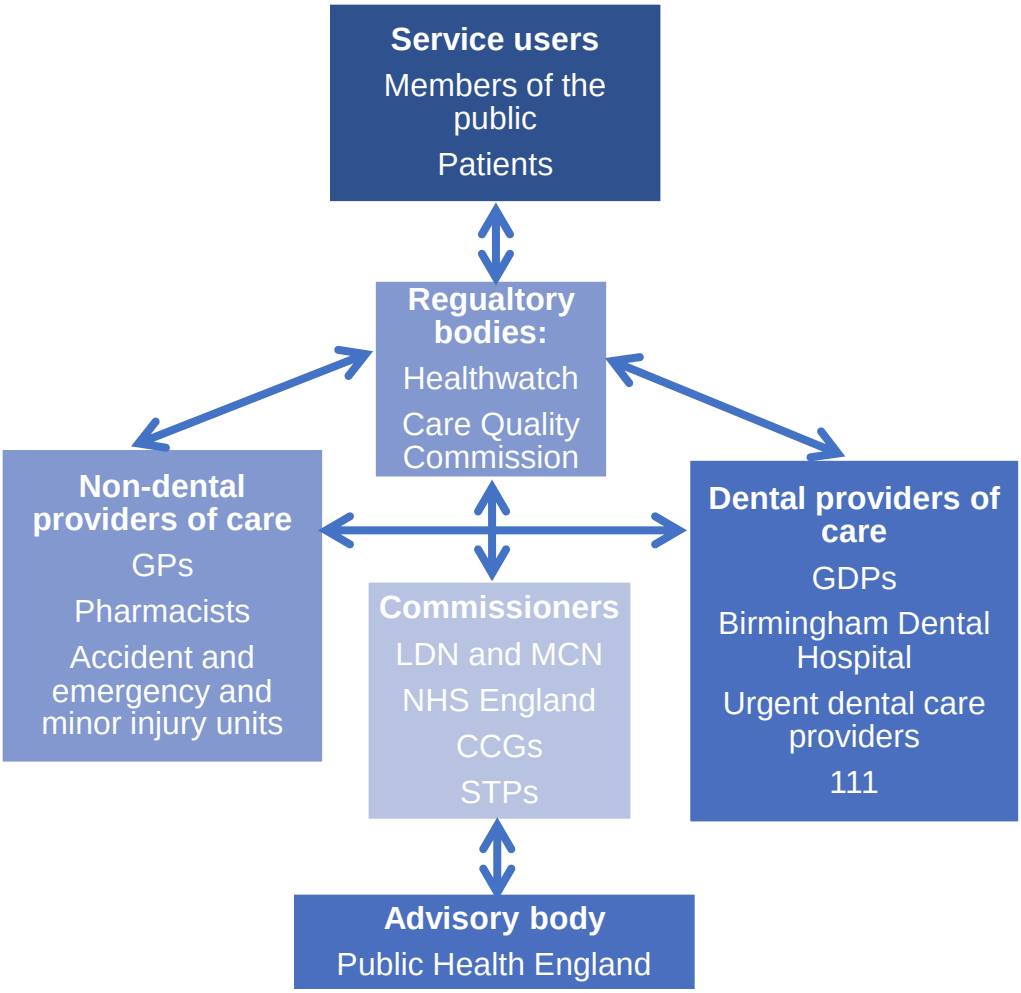


Figure 29. Urgent dental care stakeholders

4.2 Patient and public consultation

A patient and public engagement exercise to support the review of out of hours urgent dental care in the West Midlands was undertaken by Midlands and Lancashire Commissioning Support Unit in late 2018. The key findings from the engagement exercise were:

- 27% of patients called 111 to access an urgent dental care provider and 50% of those did so on the recommendation of a dentist.
- 58% of patients and 55% of the public had used 111 for help or advice and 57% of patients and 49% of the public were aware they could call 111 with dental issues.
- 96% of patients and 94% of the public said seeing a dentist within 24 hours was important when accessing urgent dental care.

- 94% of patients and 95% of the public said the opening hours of urgent dental care services were important. Weekday evenings between 5pm and 10pm and Saturday and Sunday mornings between 9am and 12pm were the most preferable urgent dental care opening times for patients and the public.
- 49% of patients and 77% of the public drove to an urgent dental care service, while 37% of patients and 5% of the public were passengers in a car. 16% of patients and 31% of the public found parking difficult or very difficult.
- 8% of patients and 13% of the public walked to an urgent dental care service and 2% of patients and 3% of the public travelled by bus.
- 97% of patients and 92% of the public agreed they received the level of service they were expecting when accessing urgent dental care but just 59% of patients and 75% of the public agreed that the issues had been resolved.
- 66% of patients and 44% of the public said they were prescribed medication to resolve the issue.

Below are some of the verbatim responses from public survey respondents explaining how they would get an out of hours or urgent dental appointment:

"I have no idea how to access this service. When my son broke his front tooth off out of hours I was really struggling to get the help that we needed."
(Female public respondent, aged 48)

"Ring my usual dentist and if they were not there hopefully there would be a message to tell me what number to ring. Otherwise would have to ring 111."
(Female public respondent, aged 65)

"I work for the NHS so I know that to get an urgent appointment at the local dental department I have to phone after 9am on the day. I know they only have a certain number of urgent appts and sometimes by the time you manage to get through there are no appts available and you have to try again next day."
(Female public respondent, aged 54)

"Ring my own Dentist first then 101 and then 101 who are a waste of time and then have to ring round all dentists until I find one that works after 5pm and on weekends."
(Female public respondent, aged 59)

"Majority of the dentists are [x]. When I need an out of surgery appointment I phone my dentist and then get the number to phone for emergency which is the [x] practice."
(Female public respondent, aged 54)

"Call the dentist immediately number to enquire about an emergency appointment."
(Male public respondent, aged 34)

The findings of the engagement exercise indicate there is some confusion among patients and the public about how to access out of hours urgent dental care, although most received the level of service they were expecting when they attended.

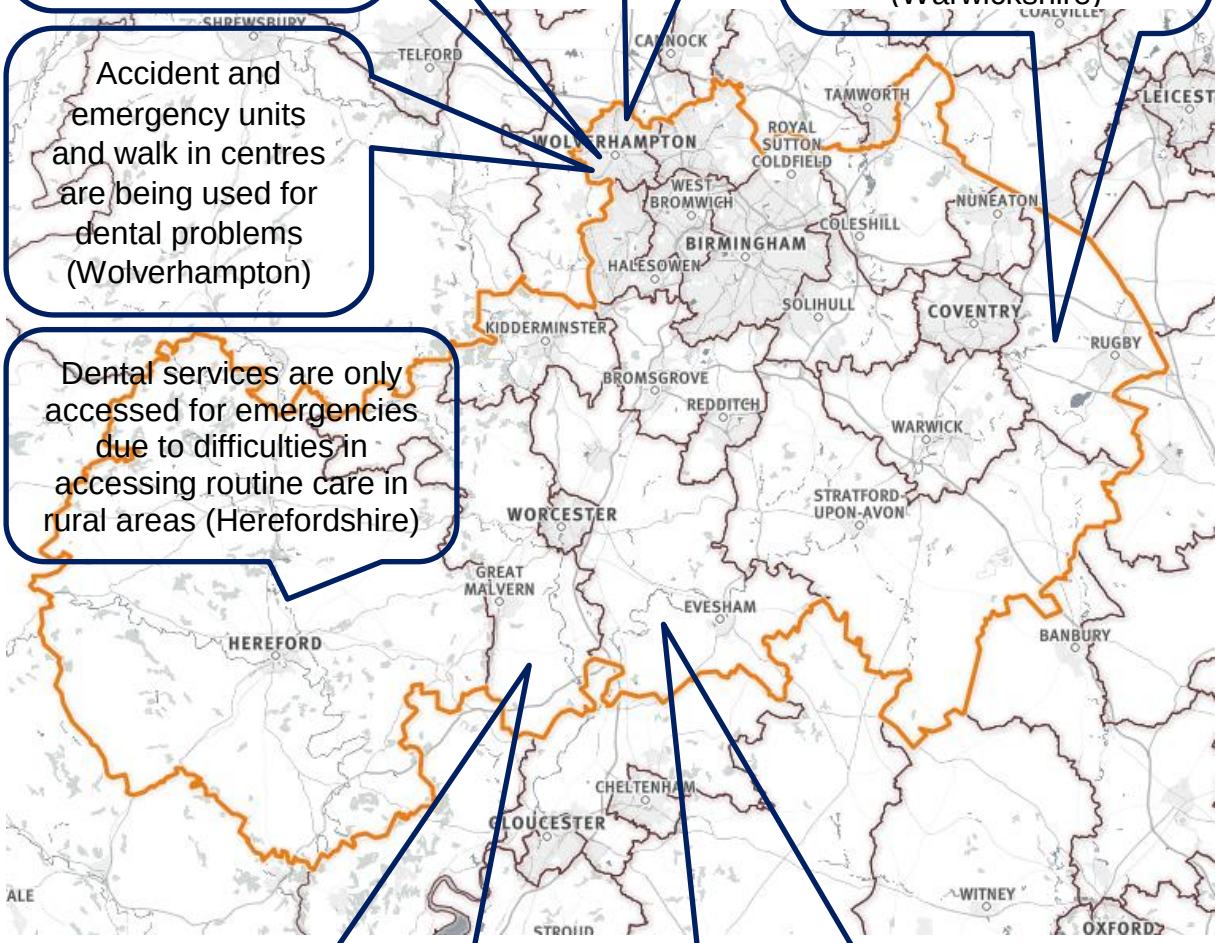
4.3 Patient satisfaction

A patient survey was undertaken by the out of hours urgent dental care providers in the West Midlands in 2018. It was co-ordinated by the West Midlands' urgent dental care managed clinical network (MCN) and the key findings were:

- 48% of patients attended regular appointments with a dentist but just 31% contacted their regular dentist about the problem before seeking out of hours urgent dental care.
- 29% of patients contacted 111 and 21% of patients made an appointment through 111.
- 8% of patients usually used the out of hours urgent dental care service rather than a regular dentist.
- The duration of the dental problem which patients attended with varied from 4 hours to 2 years. The most popular self-help options were taking paracetamol and ibuprofen.
- 83% of patients found the out of hours service easy to contact.
- 55% of patients travelled by car and 26% travelled by bus.
- 76% of patients travelled for less than 30 minutes and 16% travelled for 30-60 minutes.

4.4 Healthwatch feedback

Healthwatch is an independent consumer champion for health and care. Local Healthwatches ensure those who run health and care services in their area act on what matters to service users. Reports from Healthwatches in the West Midlands have highlighted some key findings on out of hours urgent dental care as shown below. From these a limited awareness of services available and access are evidently issues.



Information of urgent dental care services in languages other than English would be helpful (Wolverhampton)

Awareness of urgent dental care services is poor (Wolverhampton)

Patients in Warwickshire have been told that the nearest urgent dental care service on a Saturday is in Birmingham (Warwickshire)

Accident and emergency units and walk in centres are being used for dental problems (Wolverhampton)

Dental services are only accessed for emergencies due to difficulties in accessing routine care in rural areas (Herefordshire)

General dental practices are not always providing information on local urgent dental care services when contacted or via their answerphone messages, although they are consistently providing information on using 111 (Worcestershire)*

Awareness of urgent dental care services is limited and although people are likely to visit a dental access centre when experiencing a dental problem, the service is reported to have a poor reputation; however most of those who used the service had a positive experience (Worcestershire)

Figure 30. Key findings on out of hours urgent dental care from Healthwatches in the West Midlands. *It is important to note that the correct pathway for those seeking urgent dental care is via 111, therefore this comment demonstrates that correct practice has been adopted.

4.5 Engagement with West Midlands' Urgent Dental Care Managed Clinical Network

A draft of the needs assessment was presented to those present at the MCN meeting at St. Chad's Court on 30th January. There was an opportunity for the content and structure to be reviewed and suggestions were received which related to strengthening the narrative, particularly in relation to STP boundaries, and including data from 111. These suggestions were adopted in the subsequent revision.

4.6 Market engagement

A market engagement exercise was undertaken by NHS England to better understand the perspectives of potential out of hours urgent dental care providers on the provision of out of hours urgent dental care. Eight responses were received from a range of organisations both within and beyond the West Midlands, the majority of which were currently providing out of hours urgent dental care. While market engagement is an important element of the procurement process, it should be noted that responses based on commercial interests are almost inevitable.

Most respondents highlighted the need for equity of access and several mentioned the importance of considering the needs of vulnerable groups. Some respondents valued certain aspects of the current service model, although a number noted benefits which alternative arrangements would confer. Weekday evenings and weekend mornings, which are the current service operating times, were the prevalent preference. There was little perceived benefit expressed in a single provider across the West Midlands beyond the economy of scale this could achieve. Preferred contract lengths ranged from 2-10 years, with the limitations of short-term contracts stressed; these included a lack of incentive to invest, increased operating costs and difficulty securing finance.

In terms of payment block and sessional payment arrangements were favoured, in some cases with an element of monitoring or the use of key performance indicators. There was little merit seen in remuneration based on the UDA system with inconsistent UDA values and the limitations of UDA targets cited as reasons. Concern was expressed that services which reached their UDA target prior to the end of the year would be unable to see further patients and conversely that services struggling to meet their target may see patients who do not meet the criteria for urgent dental care.

There was some benefit identified in co-locating out of hours urgent dental care services with minor injuries units in principle, yet in practice this was considered impracticable based on the lack of required infrastructure for a dental service to operate from existing minor injuries units. An appointment-based model was generally favoured, with some scope to accommodate walk-in patients from an accessibility perspective. Single call direct booking was supported although some reservations surfaced about the ability of 111 to integrate with existing services' software and the likely success of this based on previous experience. Regarding

domiciliary care proposals varied from operating a separate service to delivering this within out of hours urgent dental care services.

5. What are the most appropriate and cost effective interventions?

5.1 Service considerations

In considering potential interventions it is of note that two current out of hours urgent dental care services, numbers 5 and 6, hold contracts which are in perpetuity. Any intervention would therefore work in tandem with, rather than replace, these services.

The following factors are important considerations in planning the model, location, and capacity of out of hours urgent dental care services:

1. Population and predicted population growth
2. Oral health and oral health needs
3. Deprivation
4. Ethnicity
5. Disability
6. Water fluoridation
7. Transport links
8. Demand for services and trends in demand
9. Access requirements
10. General dental provision and access
11. Stakeholder feedback
12. Workforce

Table 20 compares the key factors for consideration in planning out of hours urgent dental care services by upper tier local authority. The same caveats apply to the data within the table as were highlighted when the data was presented previously. Some data, although relevant, has been excluded because it cannot be readily converted to a dichotomous format; free text consultation responses are an example of such data.

	Factor								
Upper tier local authority	**Predicted 2020-2025 population increase ≥2.89%***	**Population density ≥5.9 persons per hectare***	**Deprivation (IMD 2015) score ≥21.8***	**White ethnic group ≤78.1%***	**Absence or partial absence of water fluoridation**	**Day-to-day activities limited either a lot or a little ≥20%**	**Average d3mft of five-year-old children ≥0.8***	**Urgent courses of treatment as a % of total courses of treatment ≥7.7***	**Urgent courses of treatment as a % of total population ≥1.3***
Birmingham	X	X	X	X			X		
Solihull		X						X	X
Coventry	X	X	X	X			X		
Warwickshire									X
Dudley		X	X			X		X	X
Sandwell	X	X	X	X		X		X	X
Wolverhampton		X	X	X		X	X	X	X
Walsall		X	X			X	X	X	
Herefordshire					X		X	X	X
Worcestershire					X				X

Table 20. Comparison of key factors for consideration in planning out of hours urgent dental care services by upper tier local authority. *West Midlands average

5.2 Service capacity and availability

Data provided by 111 on the days and times when the demand for urgent dental care services in the West Midlands is greatest indicates that on all days of the week demand is greatest from early to mid-morning. This is important when planning service opening hours as it highlights the demand for urgent dental care services is most acute early in the day, rather than in the evening. Considering this and the 24 hour time scale for the provision of urgent dental care, the case for evening services is weak. Given that call volume varies greatly by day of week, it is likely that variation in service capacity by day of week is needed to meet expressed need.

5.3 Service access and triage

Urgent dental care services operating on a telephone access model have been shown to be more accessible and cost effective than those operating on a walk-in model. Although 111 currently triage patients prior to signposting them to services, some patients contact services directly rather than via 111. This creates the potential for inequity in access through triage protocols which may differ between providers. A suggested triage protocol, based on published guidance [2], is shown in Figure 31.

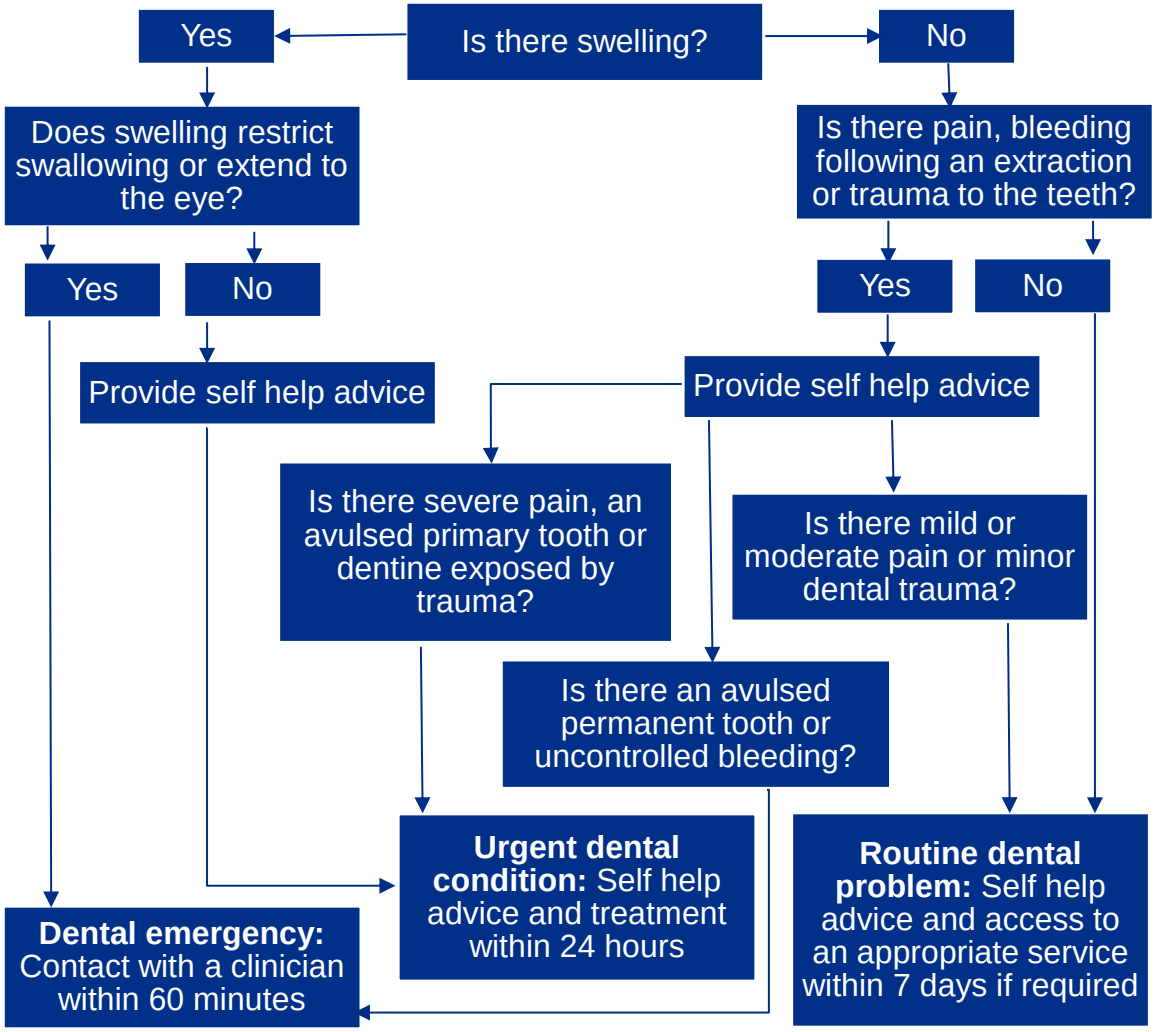


Figure 31. Suggested triage protocol based on published guidance [2]

An arrangement where 111 undertakes the triage of all patients, in conjunction with the direct booking of patients, would be preferable. It would afford equity of access and potentially generate a cost saving through centralising triage processes. However, this model of access may require piloting and the timeframe necessitated to deliver it could prevent it from going live at contract mobilisation. Additionally, any change to the configuration of services, including how they are accessed, would require communication to ensure patient and public awareness of the new arrangements.

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