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Orthodontics needs assessment for NHS England West Midlands

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1. Introduction

Since 2013, all dental services (including orthodontic services) have been commissioned by NHS England via its local offices.¹ This report considers the orthodontic need of the resident population in the area served by NHS England West Midlands and the orthodontic services provided therein. For the avoidance of doubt, this includes the Local Authority areas of Birmingham, Dudley, Coventry, Herefordshire, Sandwell, Solihull, Walsall, Warwickshire, Wolverhampton and Worcestershire.

This document, produced for NHS England West Midlands, provides an updated assessment of the need for orthodontic treatment amongst the local population and reviews the quantity of NHS orthodontic activity currently commissioned. It should be used in consultation with stakeholders and the public to help inform future commissioning arrangements. Quality of orthodontic services is outside the scope of this report; quality standards will be considered as part of the procurement of future services.

Orthodontics

Orthodontics, as defined in NHS England's orthodontic commissioning guide, is *"the dental specialty concerned with facial growth, development of the dentition and occlusion, and the assessment, diagnosis, interception and treatment of malocclusions and facial irregularities"*.² Orthodontic treatment often involves wearing fixed or removable appliances ('braces') to correct and/or prevent occlusal abnormalities. Some cases will necessitate a multidisciplinary approach, for example patients requiring surgical realignment of the jaws and/or restorative management of missing teeth. Most children undergoing orthodontic treatment will begin treatment around the age of 12 or 13, once all their permanent teeth have erupted.³ In some instances it is preferable to start treatment earlier in order to address a developing malocclusion and potentially reduce the need for more complex treatment later on (interceptive orthodontics). Orthodontic treatment can also be carried out on adults however this is not widely available on the NHS other than in specific circumstances.

Provision of orthodontic treatment

Orthodontic treatment is provided in both primary and secondary care settings by specialist and non-specialist dentists. Most courses of orthodontic treatment begin with a referral from a general dental practitioner to a specialist orthodontist or a dentist (non-specialist) with an interest in orthodontics. Where more complex treatment is required (or where there is no orthodontic provision in primary care), the case may be referred to a secondary care orthodontic service where treatment is led by consultant orthodontists.

Primary care orthodontic services are contracted via both GDS (General Dental Services) contracts and PDS (Personal Dental Services) agreements; secondary care services utilise the NHS standard contract. With the introduction of GDS contracts and PDS agreements in 2006

came the requirement for an individual's need and eligibility for NHS orthodontic treatment to be assessed; prior to 2006, orthodontic treatment could be provided to anyone with a desire for treatment. The Index of Orthodontic Treatment Need (IOTN) is a clinical assessment of malocclusion used within the NHS to identify those individuals who would benefit most from orthodontic treatment. The IOTN has two components - the dental health component (DHC) which consists of 5 grades indicating increasing irregularity of the occlusion and the aesthetic component (AC) which is determined based on a scale of 10 colour photographs. The GDS contracts and PDS agreements stipulate that, other than in exceptional circumstances, NHS treatment should be provided only to those with an IOTN DHC of 4 or 5 and those with an IOTN DHC of 3 plus an AC of 6 or above.^{4,5}

2. Orthodontic need and demand

As most orthodontic treatment is carried out when all permanent teeth have erupted, the prevalence of malocclusion in the 12 year old population is commonly used as the 'point' prevalence for quantifying need amongst the child population. There are a number of methods of assessing orthodontic need, all of which provide an estimate rather than a precise figure. A combined methodology, utilising elements of two commonly used methods, is described below.

Estimation of need using dental epidemiology data

In 2008/2009, a dental epidemiology survey of 12 year old children was undertaken throughout England.⁶ Orthodontic ('normative') need was assessed by examiners trained and calibrated in the use of IOTN. Normative need is clinical need as defined by a healthcare professional but it does not take into account whether the individual is suitable to undergo treatment nor whether they wish to undergo treatment and would actually seek care.⁷ By extrapolating from the epidemiology survey data, to the current population size, it is possible to estimate the number of 12 year olds in the current population with a normative need for orthodontic treatment.

Suitability for treatment

Individuals with a normative orthodontic need but who have poor oral hygiene and/or active caries (decay) are likely to be deemed unsuitable for treatment and be refused orthodontic care unless these factors can be well controlled. In order to more accurately estimate the quantity of orthodontic treatment required, adjustment of the normative need estimate is therefore required to account for those who are unsuitable for treatment due to poor oral health. The Child Dental Health Survey, 2013, showed that across England, 14% of the examined children had 'severe or extensive decay'.⁸ Based on a simple assumption that this proportion of the population would be unsuitable for orthodontic care, and adjusting

the figures accordingly, a revised estimate of need can be derived, taking into account those who would be unsuitable for treatment on the grounds of poor oral health.

Demand for treatment

In order to estimate demand, (i.e. how many children would actually seek treatment) children were asked, as part of this epidemiology survey, if they thought their teeth needed straightening and, if so, whether they would wear braces. As above, the proportion of children with a normative need who also expressed a demand for care, can be extrapolated to current population size. Whilst this may give some indication of demand in the population, it is important to note that the children in this survey were given no information about the potential benefits and outcomes of orthodontic treatment; it is anticipated that, if provided with this information, more children would request treatment (i.e. demand would be higher than the estimate derived from the survey data). It could be argued that, as for the normative need estimate, further downward adjustment of the estimated *demand* is required to account for those who are unsuitable for treatment due to poor oral health. It is reasonable to assume however that a proportion of those who would not be suitable for treatment due to poor oral health will have been captured already in the adjustment made on the basis of demand – some of those unwilling to take up treatment are likely to also be in the cohort of patients who would not be suitable for treatment on the grounds of poor oral health. Therefore, where *demand* for treatment has been adjusted for, as this is likely to include some of those who are unsuitable for treatment due to poor oral health, further adjustment for poor oral health has not been made.

Table 1 details the normative need, the adjusted need and the demand (amongst those with need) in the NHS England West Midlands area, estimated using local epidemiology data; it is based on a 2014 mid-year population estimate.

It is worth noting that during the epidemiology survey, those children who were *already* undergoing orthodontic treatment were excluded from further analysis; it seems reasonable to assume that all of these children had an orthodontic need and demand, and were suitable for treatment. The proportion of children already wearing an orthodontic appliance has therefore been added to the estimated proportions of need, adjusted need and demand.

Table 1 Estimated orthodontic need and demand using epidemiology survey data - 2014 population estimate

Local Authority areas*	12-year-old population (2014)	Number & % of children with need (excluding those currently wearing an appliance)		Number & % of children with need <u>adjusted for suitability</u> (excluding those currently wearing an appliance)		Number & % of children with need <u>and demand</u> (excluding those currently wearing an appliance)		Number & % of children already wearing an appliance (assumed need, demand & suitability)		Number & % of children with need (including those wearing an appliance)		Number & % of children with need <u>adjusted for suitability</u> (including those currently wearing an appliance)		Number & % of 12 year olds with need <u>and demand</u> (including those wearing an appliance)	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Coventry	3,470	977	28.2%	840	24.2%	595	17.1%	297	8.6%	1,275	36.7%	1,137	32.8%	892	25.7%
Herefordshire	1,920	446	23.2%	384	20.0%	295	15.4%	230	12.0%	676	35.2%	614	32.0%	525	27.3%
Warwickshire	5,808	1,138	19.6%	979	16.9%	827	14.2%	646	11.1%	1,784	30.7%	1,625	28.0%	1,473	25.4%
Worcestershire	6,007	1,809	30.1%	1,556	25.9%	1,152	19.2%	478	8.0%	2,287	38.1%	2,034	33.9%	1,630	27.1%
Birmingham	14,079	5,654	40.2%	4,862	34.5%	3,380	24.0%	757	5.4%	6,411	45.5%	5,619	39.9%	4,137	29.4%
Dudley	3,574	941	26.3%	809	22.6%	674	18.9%	254	7.1%	1,196	33.5%	1,063	29.7%	928	26.0%
Sandwell	3,786	1,369	36.2%	1,177	31.1%	685	18.1%	141	3.7%	1,510	39.9%	1,318	34.8%	826	21.8%
Solihull	2,394	1,012	42.3%	870	36.4%	526	22.0%	107	4.5%	1,119	46.7%	977	40.8%	633	26.4%
Walsall	3,325	1,356	40.8%	1,166	35.1%	685	20.6%	175	5.3%	1,531	46.1%	1,341	40.3%	860	25.9%
Wolverhampton	2,742	1,024	37.4%	881	32.1%	603	22.0%	70	2.6%	1,095	39.9%	951	34.7%	673	24.5%
TOTAL	47,105	15,728	33.4%	13,526	28.7%	9,421	20.0%	3,156	6.7%	18,883	40.1%	16,682	35.4%	12,577	26.7%

*The dental epidemiology survey was based on former PCT geography; former PCT areas are co-terminus with Local Authority boundaries except for Birmingham where data from three PCT areas has been combined to reflect the LA area.

**Minor discrepancies possible due to rounding of percentages

Estimation of need using the Stephens formula

The so-called ‘Stephens formula’ is another commonly used approach to estimating orthodontic need; unlike the method described above, it incorporates an additional calculation to account for those in the population who require early (interceptive) orthodontic treatment and those requiring orthodontics as an adult.⁹ The Stephens formula is expressed as:

$$\frac{\text{12-year-old population}}{3} \times \frac{100 + \text{Interceptive factor} + \text{Adult factor}}{100}$$

(Interceptive factor = 9, Adult factor = 4)

The first part of the equation is an estimate of the need in the 12 year old population and the second part of the equation is an estimate of the need of the remaining population. Table 2 details the estimate of need derived from the Stephens formula; no adjustment for poor oral health or demand has been made at this stage.

Table 2 Estimated orthodontic need using Stephens formula - 2014 population estimate

Local Authority areas	12-year-old population	Need in 12 year olds A	Total need in population A x 1.13
Coventry	3,470	1,157	1,307
Herefordshire	1,920	640	723
Warwickshire	5,808	1,936	2,188
Worcestershire	6,007	2,002	2,263
Birmingham	14,079	4,693	5,303
Dudley	3,574	1,191	1,346
Sandwell	3,786	1,262	1,426
Solihull	2,394	798	902
Walsall	3,325	1,108	1,252
Wolverhampton	2,742	914	1,033
TOTAL	47,105	15,702	17,743

Estimation of need using the Stephens formula and epidemiology survey data

The two methods described above are widely used for estimating orthodontic need however both have their limitations. The first method does not allow for those cases requiring early (interceptive) or adult treatment while the second method includes a calculation to allow for that but utilises a generic ‘12 year old population/3’ to determine need amongst 12 year olds rather than using local data as the first method does. It is therefore proposed that a combination of both methods could be used in an attempt to get a truer picture of the need in this population; a similar approach has been adopted by NHS

England North Midlands for their orthodontic needs assessment.¹⁰ Thus the first part of the Stephens formula is replaced with the estimate of need derived from the local epidemiology data, giving the following equation:

$$\text{Need derived from epidemiology data} \quad \times \quad \frac{100 + \text{Interceptive factor} + \text{Adult factor}}{100}$$

(Interceptive factor = 9, Adult factor = 4)

Table 3 details the estimate of need and demand calculated using the combined methodology.

Table 3 Estimated orthodontic need and demand using combined methodology - 2014 population estimate

Local Authority areas*	Estimated total (normative) need in 12 year olds	Estimated total need in 12 year olds <u>adjusted for suitability</u>	Estimated total need <u>and demand</u> in 12 year olds	Estimated total (normative) need in whole population	Estimated total need in whole population <u>adjusted for suitability</u> (Upper limit)	Estimated total need <u>and demand</u> in whole population (Lower limit)
	A	B	C	A x 1.13	B x 1.13	C x 1.13
Coventry	1,275	1,137	892	1,441	1,285	1,008
Herefordshire	676	614	525	764	693	593
Warwickshire	1,784	1,625	1,473	2,016	1,836	1,664
Worcestershire	2,287	2,034	1,630	2,584	2,298	1,842
Birmingham	6,411	5,619	4,137	7,244	6,350	4,675
Dudley	1,196	1,063	928	1,351	1,201	1,049
Sandwell	1,510	1,318	826	1,706	1,490	933
Solihull	1,119	977	633	1,264	1,104	715
Walsall	1,531	1,341	860	1,730	1,516	972
Wolverhampton	1,095	951	673	1,237	1,074	760
TOTAL	18,883	16,682	12,577	21,338	18,851	14,212

*The dental epidemiology survey was based on former PCT geography; former PCT areas are co-terminus with Local Authority boundaries except for Birmingham where data from three PCT areas has been combined to reflect the LA area.

**Minor discrepancies possible due to rounding of percentages

Quantifying service need

The level of services which should be commissioned for any identified healthcare need is debatable. Normative need indicates the likely numbers with a clinical need however it would be unrealistic ever to assume that all of these individuals would be suitable for treatment and/or willing to take it up. Compliance with treatment is likely to be a particular issue for orthodontic care due to the length of time required for completion of treatment. Adjustment of the normative need is necessary to provide a more realistic estimate of the amount of treatment activity that is required to service the local population. Normative need has been estimated and then adjusted to account for suitability and demand, using local epidemiology data and recognised methodologies to ensure as accurate an estimate of need as possible. A precise assessment of service need is impossible but upper and lower estimates of the number of case starts required, are suggested. In Table 3, with normative need provided as a reference figure, the adjusted need (on the grounds of suitability) has been denoted as the upper limit of the estimate of case starts required and the demand* denoted as the lower limit. The upper and lower estimates are provided again in Table 4, alongside the normative need. As discussed earlier in this report, it is important to remember that the estimate of demand derived from the survey data may be under representative as the children in the survey were given no information about the potential benefits and outcomes of orthodontic treatment; it is anticipated that, if provided with this information, more children would request treatment (i.e. the lower estimate of need would be higher). *It should also be noted that the normative need is arguably the true upper estimate of need as it indicates the likely numbers with a clinical need; it reflects what is assumed to be a hypothetical situation wherein all those who have a clinical need for orthodontic treatment have adequate oral hygiene and are motivated to seek and comply with treatment.*

Table 4 Suggested upper and lower estimates of the number of orthodontic case starts required and estimate of normative need

Local Authority areas	Estimated total (normative) need in whole population	Lower estimate of case starts required	Upper estimate of case starts required
Coventry	1,441	1,008	1,285
Herefordshire	764	593	693
Warwickshire	2,016	1,664	1,836
Worcestershire	2,584	1,842	2,298
Birmingham	7,244	4,675	6,350
Dudley	1,351	1,049	1,201
Sandwell	1,706	933	1,490
Solihull	1,264	715	1,104
Walsall	1,730	972	1,516
Wolverhampton	1,237	760	1,074
TOTAL	21,338	14,212	18,851

*As explained earlier, an assumption has been made that the adjustment for demand incorporates some adjustment on the grounds of suitability as some of those unwilling to undergo treatment are likely to be in the cohort of patients who would not be suitable on the grounds of poor oral health.

Population growth

The estimates of orthodontic need and demand detailed above are based on 2014 mid-year population estimates. Population projections based on anticipated future trends in population growth demonstrate that the size of the 12 year old population is likely to increase significantly over the next few years. In the NHS England West Midlands area the projected increase in this population cohort between 2014 and 2027 is 17%, with Coventry expected to see its 12 year old population increase by just under 36% (Table 5). Population changes such as this need to be taken into consideration when planning services for the future; the projected increase in size of population is accounted for later in this report (Table 18).

Table 5 Projected size of 12 year old population in 2027

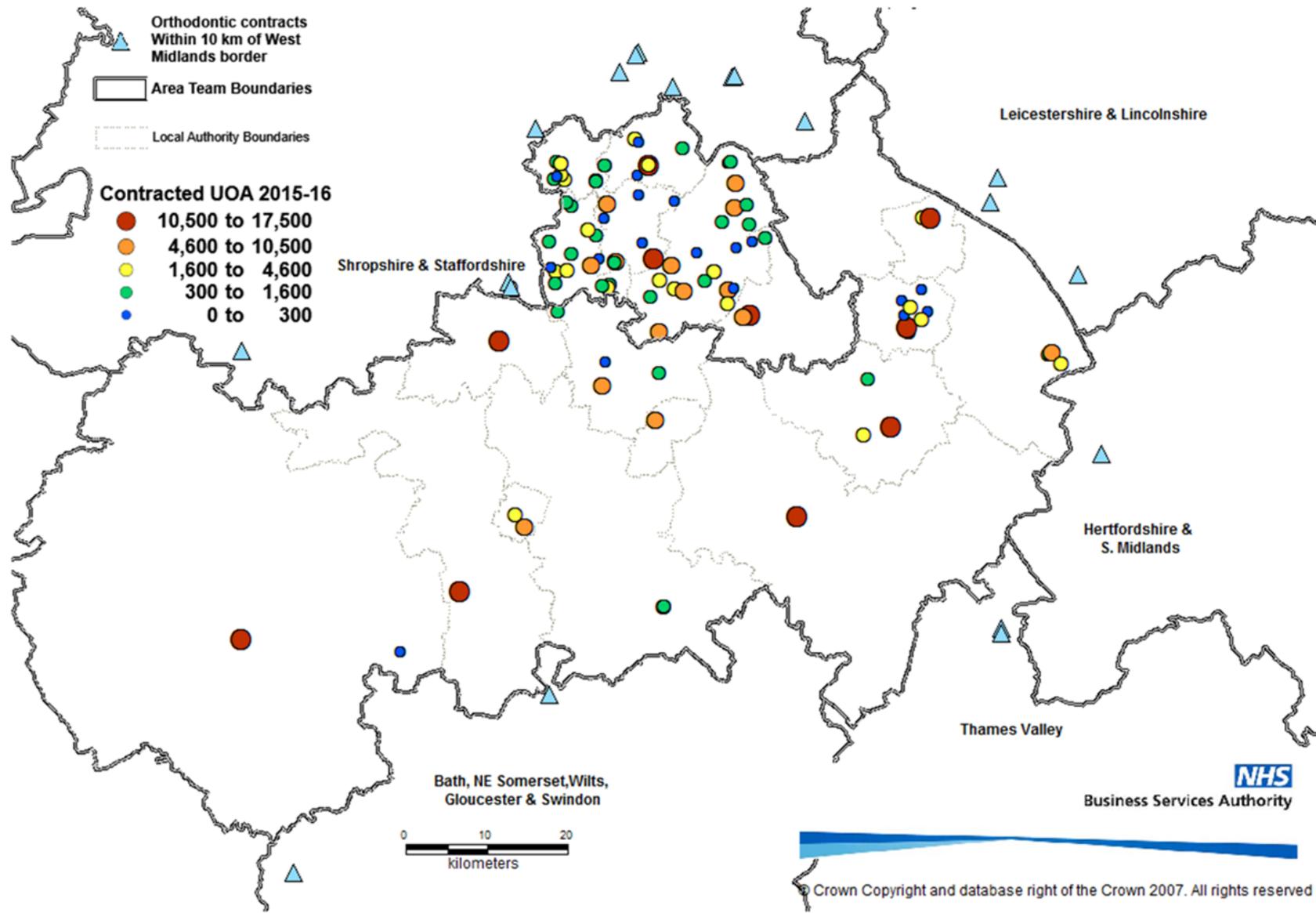
	2014	2027	Estimated % change from 2014 to 2027
Coventry	3,470	4,711	35.8%
Herefordshire	1,920	2,131	11.0%
Warwickshire	5,808	6,591	13.5%
Worcestershire	6,007	6,640	10.5%
Birmingham	14,079	16,304	15.8%
Dudley	3,574	3,894	9.0%
Sandwell	3,786	4,621	22.1%
Solihull	2,394	2,867	19.8%
Walsall	3,325	3,781	13.7%
Wolverhampton	2,742	3,379	13.5%
TOTAL	47,105	54,919	16.6%

3. Provision of orthodontic services

Primary care

Primary care orthodontics is contracted for on the basis of Units of Orthodontic Activity (UOAs). Providers may be commissioned to deliver orthodontics alone, via a PDS contract, or they may hold a mixed (GDS) contract which includes Units of Dental Activity (UDAs) for the provision of general dental services, as well as UOAs.

According to data extracted from the Dental Assurance Framework, in 2015-2016, across the area served by NHS England West Midlands, there were a total of 144 contracts which included units of orthodontic activity. Of these, 102 were GDS contracts and 42 were PDS orthodontic contracts (see Map 1 for location of contracts). In addition to this, there were 3 pilot contracts which included orthodontics and 1 contract which was held by a community trust. Including the community trust contract and the pilot contracts, there were a total of 316,074 UOAs commissioned recurrently, as detailed in Table 6 below. It is important to note that there had previously been another orthodontic contract held by a community trust; the provision of this service has ceased however the funding for that activity remains and the activity will be factored into the gap analysis at the end of this report.



Map 1 Location and size of orthodontic contracts held by NHS England West Midlands

Table 6 Orthodontic activity recurrently commissioned in 2015-2016

	Number of contracts	Mixed (GDS)	Orthodontics only (PDS)	Number of contracted UOAs
Coventry	10	8	2*	25,362
Herefordshire	6	5	1	12,355
Warwickshire	10	4	6	58,895
Worcestershire	12	3	9	53,121
Birmingham	43	31	12	70,817
Dudley	21	19**	2	17,130
Sandwell	11	10**	1	23,403
Solihull	2	0	2	18,929
Walsall	15	11	4	18,386
Wolverhampton	18	14	4	17,676
TOTAL	148	105	43	316,074

NB: This includes 48 contracts with just 1 UOA contracted and 2 contracts with 3 UOAs contracted. Out of these 50 contracts (54 UOAs), just 3 UOAs were scheduled in 2015-2016.

*Includes community trust contract – mixed PDS

**Includes prototype contracts (2 in Dudley; 1 in Sandwell)

This data does not include orthodontic activity which was commissioned non-recurrently nor does it include any activity that was carried forward from the previous year. One hundred and sixty cases were commissioned non-recurrently in January 2016 with a further five hundred allocated in January 2017 as part of a one-off ‘spot purchasing’ exercise; this activity is not captured in the table above. Further spot purchasing was also undertaken during 2017/18 with an additional one thousand, one hundred and fifty case starts allocated across Birmingham and the Black Country. This exercise was designed to address known waiting list issues with activity allocated in line with the interim findings of this needs assessment.

In order to assess the orthodontic capacity in the area, the number of contracted UOAs can be converted into an expected number of case starts. Units of orthodontic activity are utilised or allocated as follows:

- Orthodontic assessment 1 UOA
- Orthodontic course of treatment (including assessment and provision of treatment) for a patient aged less than 10 years 4 UOAs
- Orthodontic course of treatment (including assessment and provision of treatment) for a patient aged between 10 and 17 years 21 UOAs
- Orthodontic course of treatment (including assessment and provision of treatment) for a patient aged 18 years or over 23 UOAs

To allow for those patients who require an assessment only and for some variation in case management, a figure of 22.5 UOAs can be used to calculate the number of case starts that

can reasonably be expected for a given number of UOAs. Table 7 details the expected number of case starts based on the number of contracted UOAs.

Table 7 Expected number of case starts based on contracted activity

	Number of contracted UOAs	Expected number of case starts (=UOAs/22.5)
Coventry	25,362	1,127
Herefordshire	12,355	549
Warwickshire	58,895	2,618
Worcestershire	53,121	2,361
Birmingham	70,817	3,147
Dudley	17,130	761
Sandwell	23,403	1040
Solihull	18,929	841
Walsall	18,386	817
Wolverhampton	17,676	786
TOTAL	316,074	14,047

Patient flow across primary care

Prior to assessing whether the level of commissioned activity meets the estimated population need, it is essential to consider patient flow across the healthcare system.

Patient flow data for 2015-2016 has been provided by the Business Services Authority (BSA).

It is important to note that there are likely to be minor discrepancies between the BSA data used to analyse patient flow and the Dental Assurance Framework (DAF) data used above. The DAF data does not include any contra claims i.e when a claim is amended.

Table 8 Patient flow into NHS England West Midlands areas, 2015-2016

Contract location	Patient area of residence												TOTAL
	Birmingham	Dudley	Sandwell	Solihull	Walsall	Wolverhampton	Coventry	Herefordshire	Warwickshire	Worcestershire	Unknown	Outside NHSEWM	
Birmingham	2,671	31	140	109	81	0	0	0	13	58	63	33	3,199
Dudley	13	466	142	0	8	15	0	0	0	33	8	48	733
Sandwell	265	262	614	3	38	21	0	0	0	10	40	9	1,262
Solihull	296	2	0	494	0	0	1	0	30	10	29	5	867
Walsall	26	3	120	0	554	52	0	0	0	3	6	88	852
Wolverhampton	2	28	12	0	37	647	0	0	0	0	9	120	855
Coventry	10	0	0	7	0	0	943	0	124	2	78	15	1,179
Herefordshire	0	0	0	0	0	0	0	531	1	4	7	50	593
Warwickshire	41	0	0	71	12	0	157	0	2,027	137	44	387	2,876
Worcestershire	43	146	31	6	1	0	0	174	33	1,830	57	85	2,406
Total number of case starts delivered by providers based in the NHS England West Midlands area for patients resident <u>outside</u> the area, 2015-2016												840	
Total number of case starts delivered by providers based in the NHS England West Midlands area, 2015-2016													14,822

Table 9 Patient flow out of NHS England West Midlands areas, 2015-2016

Patient area of residence	Contract location											TOTAL
	Birmingham	Dudley	Sandwell	Solihull	Walsall	Wolverhampton	Coventry	Herefordshire	Warwickshire	Worcestershire	Outside NHSEWM	
Birmingham	2671	13	265	296	26	2	10	0	41	43	42	3409
Dudley	31	466	262	2	3	28	0	0	0	146	10	948
Sandwell	140	142	614	0	120	12	0	0	0	31	3	1062
Solihull	109	0	3	494	0	0	7	0	71	6	2	692
Walsall	81	8	38	0	554	37	0	0	12	1	25	756
Wolverhampton	0	15	21	0	52	647	0	0	0	0	44	779
Coventry	0	0	0	1	0	0	943	0	157	0	1	1102
Herefordshire	0	0	0	0	0	0	0	531	0	174	25	730
Warwickshire	13	0	0	30	0	0	124	1	2027	33	56	2284
Worcestershire	58	33	10	10	3	0	2	4	137	1830	33	2120
Total number of case starts delivered <u>outside</u> the area for residents of the NHS England West Midlands area, 2015-2016											241	
Total number of case starts delivered for residents of the NHS England West Midlands area, 2015-2016												13,882

Whilst patient flow is not relevant to calculation of need in the population, it must be considered and factored into commissioning decisions about the level of activity required. There is a considerable flow of patients between certain areas, presumably because of geographical location – for example between Birmingham, Dudley and Sandwell or between Birmingham and Solihull. It is likely that patients have simply sought care in locations that are convenient for them (which may well mean accessing care in a neighbouring Local Authority area) however it is possible that some patients have sought care further afield because they were unable to access an orthodontic service locally.

Table 10 focuses specifically on patient flow in and out of the NHS England West Midlands area as a whole, rather than flow between Local Authority areas within the NHS England West Midlands footprint. It shows that in 2015/2016, there were 840 orthodontic case starts delivered by primary care providers in the NHS England West Midlands area for patients who were not residents of this area. Almost half of these cases (387/840) were delivered on Warwickshire contracts, with a large number of these (160/387) coming from Leicestershire and Lincolnshire and many (138/387) coming from Shropshire and Staffordshire (detail not included in table). Table 10 shows that 241 NHS England West Midlands residents sought care outside the area.

Table 10 Patient flow in and out of NHS England West Midlands, as a whole, 2015-2016

	Flow out of NHSEWM area	Flow into NHSEWM area	Difference*
<i>Birmingham</i>	42	33	-9
<i>Dudley</i>	10	48	38
<i>Sandwell</i>	3	9	6
<i>Solihull</i>	2	5	3
<i>Walsall</i>	25	88	63
<i>Wolverhampton</i>	44	120	76
<i>Coventry</i>	1	15	14
<i>Herefordshire</i>	25	50	25
<i>Warwickshire</i>	56	387	331
<i>Worcestershire</i>	33	85	52
TOTAL	241	840	599

*negative number indicates more patients left the area to seek care elsewhere than the number who entered to seek care within the NHS England West Midlands area

Given that this is just one year's data, if an assumption is made that patient flow is relatively static over time, it could be argued that the difference (shown in Table 10) between the patient flow in and out of the West Midlands should be factored into the level of commissioned activity for each locality. For example, as Walsall has a net inflow of 63 patients, an additional 63 case starts should ideally be commissioned from providers in that area. Similarly, it could be argued that adjustments should be made to the recommended

commissioning levels in the different West Midlands areas, due to the flow within the West Midlands footprint – for example, 265 Birmingham residents were treated on Sandwell contracts and 140 Sandwell residents were treated on Birmingham contracts (difference = 125 cases), therefore 125 additional cases would be commissioned in Sandwell and 125 fewer cases would be commissioned in Birmingham. Alternatively, once levels of commissioned activity have been reviewed against need and adjusted if necessary, it may be that provision becomes more equitable and patterns of patient flow between neighbouring areas change as a result.

Secondary care

Secondary care orthodontic services are consultant led services within hospital settings. They offer advice and treatment planning support to primary care clinicians and provide treatment for complex clinical problems and multi-disciplinary cases.

Orthodontic services are provided by eight NHS trusts across the NHS England West Midlands region:

- South Warwickshire NHS Foundation Trust
- Worcestershire Acute Hospitals NHS Trust
- Wye Valley NHS Trust
- Birmingham Community Healthcare NHS Foundation Trust
- Dudley Group NHS Foundation Trust
- Heart of England NHS Foundation Trust
- Royal Wolverhampton NHS Trust
- Walsall Healthcare NHS Trust

Birmingham Children’s Hospital NHS Foundation Trust is not included in the list above but provides highly specialised tertiary level orthodontic services for multidisciplinary cases - for example, children with a cleft lip and/or palate.

Secondary care activity data details the number of first attendances and follow up attendances provided by each trust, as well as the number of procedure codes generated; this information is displayed in Table 11 for patients from the NHS England West Midlands area. Where procedure codes are being used (not all providers use them), they have been added in to the number of first attendance or follow up appointments, depending which appointment type the procedure code was linked to. Secondary care datasets refer to registered patients rather than resident patients (ie those who have a GP within the NHS England West Midlands area rather than those who are residents of this area); an assumption has been made that this is likely to reflect the area of residence.

It is important to note that during the reference period (2015-2016), Dudley Group NHS Foundation Trust were left without a consultant orthodontist, following a retirement, and therefore closed their waiting list.

Table 11 Secondary care activity data (SUS data) for West Midlands providers for patients from NHS England West Midlands, 2015-2016

FA – First attendance; F/U – Follow up attendance

Hospital trust	South Warwickshire NHS Foundation Trust		Worcestershire Acute Hospitals NHS Trust		Wye Valley NHS Trust		Birmingham Community Healthcare NHS Foundation Trust*		Dudley Group NHS Foundation Trust		Heart of England NHS Foundation Trust		Royal Wolverhampton NHS Trust		Walsall Healthcare NHS Trust		TOTAL	
	FA	F/U	FA	F/U	FA	F/U	FA	F/U	FA	F/U	FA	F/U	FA	F/U	FA	F/U	FA	F/U
Birmingham	-	-	3	53	-	2	757	7,581	1	36	266	2,386	1	-	6	53	1,034	10,111
Dudley	1	-	83	516	-	4	50	542	21	1,167	1	20	68	116	45	130	269	2,495
Sandwell	-	-	5	39	-	-	165	1,547	10	243	4	46	14	25	79	507	277	2,407
Solihull	5	77	1	4	-	-	13	618	-	1	154	1,626	-	-	1	4	174	2,330
Walsall	-	-	-	2	-	-	33	580	2	26	12	188	26	90	155	2,089	228	2,975
W'hampton	-	-	-	8	-	-	13	259	-	28	-	-	268	1,022	15	224	296	1,541
Coventry	76	880	-	-	-	1	17	313	-	-	3	27	-	-	-	11	96	1,232
H'fordshire	-	4	29	104	240	2,385	-	17	-	-	-	-	-	-	-	-	269	2,510
Warks	262	2,587	9	143	-	-	33	566	-	-	16	171	-	-	-	-	320	3,467
Worcs	15	174	576	6,473	4	50	39	564	1	73	5	51	-	-	2	-	642	7,385

* SUS data for BCHC known to be inaccurate. SLAM data has therefore been used instead. SLAM data does not however provide the same level of detail regarding patient area of residence. The SUS data has therefore been used to determine proportions of patients from each geographic area and this has been extrapolated to the SLAM data.

Patient flow across secondary care

Just as in primary care, patients living within the area served by NHS England West Midlands area, may cross 'health borders' to receive secondary care orthodontic treatment outside this area. The total number of secondary care orthodontic attendances recorded for patients living within the NHS England West Midlands area is as follows:

Table 12 Secondary care orthodontic activity provided to patients from the NHS England West Midlands area, 2015-2016

Patient area of residence	First attendances			Follow ups		
	Within NHS E WM	Outside NHS E WM	TOTAL	Within NHS E WM	Outside NHS E WM	TOTAL
Coventry	96	9	105	1,232	204	1,436
Herefordshire	269	6	275	2,510	69	2,579
Warwickshire	320	31	351	3,467	315	3,782
Worcestershire	642	20	662	7,385	175	7,560
Birmingham	1,034	10	1,044	10,111	177	10,288
Dudley	269	-	269	2,495	18	2,513
Sandwell	277	-	277	2,407	9	2,416
Solihull	174	1	175	2,330	12	2,342
Walsall	228	17	245	2,975	155	3,130
Wolverhampton	296	4	300	1,541	78	1,619

Case start data is difficult to obtain for secondary care providers, as there is no requirement for them to provide it, however the number of cases started is essential information for a needs assessment. Based on the number of first attendances recorded, it is possible to estimate the number of case starts provided using a new patient conversion ratio. In NHS England North Midlands, a ratio of 2.55 first attendances to one orthodontic case start was derived; if an assumption is made that other consultant-led units have a similar case mix, it is possible to estimate the number of case starts delivered for the residents of NHS England West Midlands.

Table 13 Estimation of orthodontic case starts delivered in secondary care in 2015-2016 for NHS England West Midlands residents

Patient area of residence	Number of first attendances recorded	Estimated number of case starts (conversion ratio of 2.55:1)
<i>Coventry</i>	105	41
<i>Herefordshire</i>	275	108
<i>Warwickshire</i>	351	138
<i>Worcestershire</i>	662	260
<i>Birmingham</i>	1,044	409
<i>Dudley</i>	269	105
<i>Sandwell</i>	277	109
<i>Solihull</i>	175	69
<i>Walsall</i>	245	96
<i>Wolverhampton</i>	300	118
TOTAL	3703	1453

Table 14 summarises the estimated number of orthodontic case starts provided in primary and secondary care in 2015-2016 to patients from the NHS England West Midlands area.

Table 14 Estimated number of case starts provided to patients from NHS England West Midlands

Patient area of residence	Primary care orthodontics		Secondary care orthodontics		Total number of case starts provided for patients from NHS E WM
	Number of case starts provided within NHS E WM	Number of case starts provided outside NHS E WM	Estimated number of case starts provided within NHS E WM	Estimated number of case starts provided outside NHS E WM	
<i>Coventry</i>	1101	1	38	4	1,144
<i>Herefordshire</i>	705	25	105	2	837
<i>Warwickshire</i>	2228	56	125	12	2,421
<i>Worcestershire</i>	2087	33	252	8	2,380
<i>Birmingham</i>	3367	42	405	4	3,818
<i>Dudley</i>	938	10	105	0	1,053
<i>Sandwell</i>	1059	3	109	0	1,171
<i>Solihull</i>	690	2	68	0	760
<i>Walsall</i>	731	25	89	7	852
<i>Wolverhampton</i>	735	44	116	2	897
TOTAL	13,641	241	1,414	38	15,334

*Minor discrepancies possible due to rounding

4. Gap analysis

The level of need and demand for orthodontic treatment has been estimated and upper and lower estimates of required case starts derived. The recurrent provision of orthodontic treatment in primary and secondary care has been quantified. Table 15 compares the estimates of case starts *required* to the estimated number of case starts *provided* for patients from NHS E WM. Again, it is important to bear in mind that the normative need is arguably the true upper estimate of need as it indicates the likely numbers with a clinical need; in terms of commissioning services however, it is reasonable to make some adjustment to the normative need to take into account those who are unsuitable for treatment due to poor oral health and those who will not seek care.

Table 15 Estimated case starts required and estimated number of case starts provided across primary and secondary care for residents of each LA area

Local Authority areas	Estimated total (normative) need in whole population	Lower estimate of case starts required	Upper estimate of case starts required	Estimated total number of case starts provided
Coventry	1,441	1,008	1,285	1,144
Herefordshire	764	593	693	837
Warwickshire	2,016	1,664	1,836	2,421
Worcestershire	2,584	1,842	2,298	2,380
Birmingham	7,244	4,675	6,350	3,818
Dudley	1,351	1,049	1,201	1,053
Sandwell	1,706	933	1,490	1,171
Solihull	1,264	715	1,104	760
Walsall	1,730	972	1,516	852
Wolverhampton	1,237	760	1,074	897
TOTAL	21,338	14,212	18,851	15,334

This data suggests that, overall, the number of orthodontic case starts provided across NHS England West Midlands in 2015-2016 falls within the estimated range of case starts required to meet the need of the local population. The number of case starts provided for the residents of Coventry, Dudley, Sandwell, Solihull and Wolverhampton falls within the estimated range required. The number of case starts provided for Herefordshire, Worcestershire and Warwickshire residents is shown to be above the estimated range required and for Birmingham and Walsall it is below the estimated range required. It is important however to return to the issue of patient flow. Whilst the number of case starts provided to Dudley residents, for example, appears to be just above the lower estimate of the range, Tables 8 and 9 show that only 466 (49%) of the 948 primary care case starts were delivered on Dudley contracts; 146 case starts (15%) were delivered on Worcestershire contracts and 262 (28%) on Sandwell contracts. This may reflect a lack of availability of

primary care orthodontic services in Dudley and indicates a need to review the distribution of activity throughout the West Midlands against the estimates of need.

Earlier in this report, Table 14 displayed an estimate of the number of case starts provided to NHS England West Midlands residents in 2015-2016; this number is derived by adding the total number of primary care case starts provided (irrespective of where they were delivered within NHS England West Midlands) to the estimated number of secondary care case starts provided. In Table 16, this has been re-framed to reflect the contracted primary care orthodontic activity in each area, rather than the primary care case starts delivered for that resident population. The expected number of primary care case starts for each area, based on contracted activity, is added to the estimated number of secondary care case starts to produce an estimate of the number of case starts available for each area. The net flow of patients into the West Midlands has also been factored in – for example, in 2015-2016, there was a net flow of 331 patients (case starts) into Warwickshire from outside the West Midlands; the expected number of case starts available in Warwickshire has therefore been reduced by this number of case starts, to reflect the number of case starts available for local use. Patient flow *within* the West Midlands has not been accounted for here – the assumption being that some of this patient flow is due to a lack of availability of services in certain areas.

As was mentioned earlier in this report, there used to be an additional orthodontic contract, held by a community trust, which provided services in Sandwell and Dudley; the provision of this service has ceased however the funding for that activity remains (with spot purchasing having been undertaken in the short term pending reprocurement) and therefore the activity has been factored into the gap analysis below, with an additional 2,000 UOAs in Dudley and an additional 4,000 UOAs in Sandwell. Furthermore, due to recent rebasing of a contract in Coventry, the commissioned activity in the city has reduced by 500 UOAs; this has been factored into the calculations below.

Table 16 Estimated number of case starts available in each of the NHS England West Midlands Local Authority areas

Local Authority area	Primary care orthodontics			Secondary care orthodontics		Estimated number of case starts available for each area C + D + E
	Expected number of case starts available (=UOAs/22.5) A	Net flow of primary care patients into NHS E WM B	Expected number of case starts available for local use C = A - B	Estimated number of case starts provided within NHS E WM D	Estimated number of case starts provided outside NHS E WM E	
Coventry	1,105	14	1091	38	4	1,133
Herefordshire	549	25	524	105	2	631
Warwickshire	2,618	331	2,287	125	12	2,424
Worcestershire	2,361	52	2,309	252	8	2,569
Birmingham	3,147	-9*	3,147**	405	4	3,556
Dudley	850	38	812	105	0	917
Sandwell	1218	6	1,212	109	0	1,321
Solihull	841	3	838	68	0	906
Walsall	817	63	754	89	7	850
Wolverhampton	786	76	710	116	2	828
TOTAL	14,292	599	13,684	1,414	38	15,136

*negative number indicates more patients left the area to seek care elsewhere than the number who entered to seek care within the NHS England West Midlands area

**Birmingham - expected number of case starts available for local use remains the same as the expected number of case starts available from contracted activity as there is no net flow of primary care patients into the area

Table 17 compares the estimates of case starts required to the estimated number of case starts available for each of the Local Authority areas; it does not account for patient flow *within* the West Midlands but does account for flow in and out of the West Midlands.

Table 17 Estimated case starts required and estimated number of case starts available across primary and secondary care, based on 2014 population estimates

Local Authority areas	Estimated total (normative) need in whole population	Lower estimate of case starts required	Upper estimate of case starts required	Estimated total number of case starts available for each area	Case starts available compared to estimate of range required
Coventry	1,441	1,008	1,285	1,133	Within range
Herefordshire	764	593	693	631	Within range
Warwickshire	2,016	1,664	1,836	2,424	Above range (+588)
Worcestershire	2,584	1,842	2,298	2,569	Above range (+271)
Birmingham	7,244	4,675	6,350	3,556	Below range (-1119)
Dudley	1,351	1,049	1,201	917	Below range (-132)
Sandwell	1,706	933	1,490	1,321	Within range
Solihull	1,264	715	1,104	906	Within range
Walsall	1,730	972	1,516	850	Below range (-122)
Wolverhampton	1,237	760	1,074	828	Within range
TOTAL	21,338	14,212	18,851	15,136	Within range

This indicates that the total number of case starts available, overall, in the West Midlands (15,136) falls towards the lower end of the range of estimates (14,212 - 18,851) of the number of case starts required to meet the needs of the population. According to these calculations, the number of orthodontic case starts available in Warwickshire and Worcestershire is above the range required to meet the population needs; the reverse is true in Birmingham, Dudley and Walsall where there are insufficient case starts available to meet the population need. Table 17 is based on 2014 population estimates; in Table 18, the figures have been recalculated based on the projected increase in the population of 12 year olds between 2014 and 2027. An additional column in this table compares the number of case starts available to the lower estimate of number of case starts required.

Table 18 Estimated case starts required and estimated number of case starts available across primary and secondary care, based on 2027 population projections

Local Authority areas	Lower estimate of case starts required	Upper estimate of case starts required	Estimated total number of case starts available for each area	Case starts available compared to estimate of range required	Case starts available compared to LOWER estimate of range
Coventry	1,368	1,745	1,133	Below range (-235)	-235
H'fordshire	658	769	631	Below range (-27)	-27
Warwickshire	1,888	2,084	2,424	Above range (+340)	+536
Worcestershire	2,036	2,540	2,569	Above range (+29)	+533
Birmingham	5,414	7,354	3,556	Below range (-1858)	-1,858
Dudley	1,143	1,309	917	Below range (-226)	-226
Sandwell	1,139	1,819	1,321	Within range	+182
Solihull	856	1,322	906	Within range	+50
Walsall	1,105	1,724	850	Below range (-255)	-255
W'hampton	937	1,324	828	Below range (-109)	-109
TOTAL	16,545	21,988	15,136	Below range (-1,409)	-1,409

This indicates that the total number of orthodontic case starts available overall in the West Midlands will be insufficient to meet the lower estimate of need, based on population projections for 2027. It falls considerably below the upper estimate of need.

5. Stakeholder engagement

Stakeholder engagement has been undertaken as part of this process. The establishment of an Orthodontic Reference Group has helped to ensure ongoing engagement with clinicians from primary and secondary care throughout the process of writing this report. A stakeholder engagement event for the dental profession took place on 18th July 2017; feedback was sought on the findings of the needs assessment, the implications for commissioning and the way in which the patient/public engagement should be conducted. See Appendix 1 for collated feedback and responses. Further feedback is now being sought from general dental practitioners through a survey. The patient engagement took place in June 2018. Children and parents from across the NHS England West Midlands area were invited to participate in a survey sent by the NHS Business Services Authority to patients who were in treatment, or had recently completed treatment, at local orthodontic practices across the West Midlands area. This was subsequently analysed at Local Authority Level.

Views have also been sought from those who have never accessed orthodontic services. This has been done through a further web based survey disseminated to the public via Healthwatch, Local Authorities and CCGs. This was undertaken during October and November 2018

Feedback and views from each of the engagement exercises have been considered by NHS England as part of the next stage of the needs assessment process and used to inform the

final lotting for the procurement. The final report summarising the findings of the patient engagement is being collated and will be shared separately and should be read in conjunction with this document.

6. Discussion

The level of need and demand for orthodontic treatment has been estimated and the recurrent provision of orthodontic treatment in primary and secondary care has been quantified. A gap analysis has been conducted to compare the estimated number of orthodontic case starts required, to the estimated number of case starts currently commissioned. This suggests that, based on the projected size of the 12 year old population in 2027, insufficient orthodontic activity is available to meet the lower estimate of need.

It is important at this stage to note the limitations of this report. As discussed above, the level of services which should be commissioned for any identified healthcare need is debatable. The estimated normative need indicates those with a clinical need; adjustments have then been made to provide a more realistic estimate of the amount of treatment activity required for the local population, taking into account patient suitability, demand etc. A precise assessment of clinical need and service need is impossible but upper and lower estimates of the number of case starts required, are suggested. A lack of secondary care data means that hospital orthodontic activity has been estimated using a conversion ratio, rather than actual activity figures being used however every effort has been made to ensure that these figures are likely to reflect actual activity. Due to the issue of patient flow, activity assumptions and adjustments have been made accordingly in an attempt to ensure that no area is disadvantaged.

Aside from these data issues, there are several further points to consider. This report has not considered hospital (consultant) orthodontic services in detail however it is important to note the lack of such a service in Coventry. This is due to a historical cessation of service linked to provider issues rather than a commissioning decision to cease the provision. Although alternative services for patients from this area have subsequently been reinstated at Nuneaton and Warwick this means that Coventry residents have to travel further afield to seek hospital care and/or they are simply not receiving it. Further assessment should be made of the need to restore a service in this area. The existing service is now under review with the aim of increasing capacity and improving access.

Finally, it is essential to note that this needs assessment does not take waiting lists into account. The comparison between the estimate of need and the commissioned activity in each area has not been adjusted to reflect existing waiting lists. Anecdotal evidence suggests very large orthodontic waiting lists, particularly in some parts of the West Midlands, however accurate information about the extent of the problem is not available. It is hoped that the planned introduction of an electronic Referral Management System (RMS) will address the issue of lack of data. Recurrent commissioning at a level to meet the estimated need will not lead to a reduction in waiting lists; additional non-recurrent funding is required to address this back log. Dependent on the size of waiting lists consideration may be made to a phased approach to reducing waiting lists by way of additional activity commissioned over the life of the new contracts.

This report should be used to support commissioning decisions about future orthodontic services. In light of the imminent expiry of the vast majority of PDS orthodontic contracts (in March 2019) and the upcoming procurement, it is essential that further analysis of the split of activity between GDS and PDS contracts is carried out to inform procurement decisions.

Following the completion of this needs assessment, guidance was issued by PHE centrally with a suggested methodology for calculating need. This reviewed the range of methodologies previously used and concluded that a national approach would be used that was based on a third of the 12 year old population (see below).

Many of the needs assessments referred to above adopted all or a combination of these methods and then used the mean of the different methods to estimate need. These mean estimates approximate to a third of the 12-year-old population. Based on this and the figures from the table above, the national approach to assessing need for orthodontic treatment will be based on a third of the 12-year-old population.

The calculations within this report have been reviewed against the suggested approach. It should be noted that this national methodology is less sophisticated or rigorous than the one used in the West Midlands. This is because of the following adjustments that are not included:

- Adjustment to take account of the fact that some who are in need of treatment will not be suitable and/or will not demand treatment
- Cross boundary flows where case starts provided locally are to patients from outside the immediate area or where patients from the area seek treatment in other areas
- Account of interceptive or assessment only cases in assessing the number of existing primary case starts based on the number of commissioned UOAs
- Differences to the estimate of secondary case starts based on the number of hospital attendances

The net effect of using the national methodology in full is to reduce the number of case starts that are required to be commissioned locally even at the lower estimate of need. It has therefore been decided to use this original needs assessment methodology to inform the procurement in preference to the national model.

7. Recommendations

NHS England may wish to consider the following:

1. Reviewing the figures in this report against the number of referrals being sent/received and cases accepted for treatment, once this data is available via an electronic Referral Management System.

2. Reviewing orthodontic waiting list information when it becomes available following the implementation of an electronic Referral Management System and scoping out the options for using non-recurrent funding to address the issue.
3. Supporting secondary care orthodontic providers to implement a system for collecting and reporting case start data in a consistent manner.
4. Establishing robust management of orthodontic contracts (PDS, GDS and secondary care) to support the provision of efficient, high quality services for the benefit of patients.
5. Using this report to support commissioning decisions about future orthodontic services (includes undertaking further analysis of the split of orthodontic activity between GDS and PDS contracts to inform PDS procurement decisions).
6. Continuing to engage with the dental profession and the public about the commissioning and provision of orthodontic services.

The findings of the Patient and Public Engagement Exercise will be published in a separate report in Feb 2019.

8. References

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Appendix 1

Collated feedback from NHS England West Midlands Orthodontic Stakeholder Engagement Event, 18th July 2017

Q1 What conclusions have you drawn from the needs assessment?

The first sections are the verbatim comments and questions recorded on the day. The second section starting on P6 provides a detailed response to the points raised.

General

- Better than some as at least not under estimate
- Conclusion haphazard
- Needs assessment is incomplete. Given the current climate (legal challenge) down south, surely the current format leaves the AT vulnerable?
- Needs assessment needed for each area
- Not enough funding for ortho to distribute
- Not enough money in NHS for patients qualifying for treatment
- Education – GDP – OHI – unpopular – parents shocked
- Quality
- If resources are limited it would be fairer to only treat IOTN 4 and above instead of disallowing those who had some decay (they can be educated and ortho is a good motivator)
- GDS contracts not up for procurement – so how will this fit with allocating need?
- Practice locations good
- How does West Midlands compare to rest of country?
- Existing practices successful due to location, transport, perceived need
- Existing system will not meet demand – reintroduce clinical assistant programme to provide local provision
- Previously clinical assistants under a consultant worked very well for 70% of cases.
- Overall a good needs assessment but needs to ensure that contracts have flexibility eg +/- 10%
- Don't feel commissioners will listen to feedback
- Commissioners need to listen to providers as they hold all the information regarding needs and their patients.
- 10 years – huge changes in “types” plus can you use previous figures/extrapolate

- From 2003 to 2013 unmet need up in 15 year olds. GP shows problems in contracting since last contract reform

Data

- Needs assessment flawed and old information
- Needs to be more factual
- Inappropriate to plan a service on essentially a guesstimate
- 10 year old data extrapolated is an unreliable foundation to build this process on. Too much has changed – population, demand, perception etc
- Why was the 2013 dental epidemiology survey not used?
- Wasn't there a 2013 oral health survey of 12 year olds?
- Why is all that data that was collected nearly 10 years old?
- Needs assessment based on data nearly 10 years old
- 12 year old – missed canine (so underestimate)
- Data used for some needs assessments is old, almost 10 years old
- Is the data in the needs assessment up to date enough?
- National agreed formula? Level of planning based on flawed data?
- How qualified is the data on caries/OH in 12 year olds?
- Validity of Stephen's formula?
- Sample size for 12 year olds that decision to take up treatment is made
- Needs assessment on 12 year olds. How many 12 year olds realise importance – underestimate of need
- Demand – do 12 year old children know if they need or require treatment?
- Under estimate of need as many 12 year olds do not know if they have a serious malocclusion ie impacted canine
- Asking children if they want treatment can under estimate the demand. ?Representative?
- Need greatly under estimated
- Patient flow numbers may be an under estimate
- Cross border flows don't seem to be properly represented
- Referrals coming through from other areas
- Under estimated the need ie there is more need than they think
- The more successful the treatment outcomes the more the demand
- Not convinced that historic under provision has been taken into account. Stephen's formula is simplistic but perhaps better
- Stephens formula flawed. Concern about planning on this needs assessment
- Modified IOTN – used 2008/9 survey not calibrated to IOTN standards (Cardiff) Is this valid?
- Raw Data problems – sample sizes range 2% - 45% 19% Hereford = 10% 12 years sampled will be 200/2000. Is the data robust for use?
- Better stats CDH surveys 2003 than those used

Population figures

- More current data should have been used – population changes etc
- Not taking into account influx of European immigrants

- EU children coming in have not been taken into account
- Housing – new homes built not incorporated
- Uncertainty on population growth + new build
- Population growth not taken into account - % of immigrants / UK born – as numbers will fluctuate post settlement into other areas
- New builds in areas affecting provision

Waiting lists

- Data seems very old; should look at existing waiting lists
- Waiting list data ignored
- Not taken waiting lists into account
- I feel you should access the correct data to base your needs assessment on. You can access waiting list data to give a true picture
- Waiting list data (as of 2013) is critical to decide definitively what the needs assessment within each area is in both primary and secondary care
- Look at waiting list times = starting point to assess where the need is.
- Not taking into account waiting lists
- Certain areas have closed their waiting lists – what happens to those regions and their needs?
- Waiting lists continue to grow. Is this not an indication of treatment need?
- Gap analysis does not take account of waiting list
- Gap analysis does not address waiting lists – average 2-3 yr currently
- % of starts in cases in existing contracts – becoming a weight on waiting list and delivery of treatment
- Provision for current waiting lists not taken into account
- Why were waiting lists not accounted for?
- Needs analysis does not taken into account waiting lists

Secondary care data

- Secondary care data may be an underestimate? Therefore overall need analysis may well be underestimate.
- Why can we not get secondary care data?
- Why can't they get data from secondary care?
- Secondary care provision: no figures – guess very low provision
- Lack of secondary care data – analysis flawed
- Secondary care – post code restriction

Assumptions / Adjustments

- Methodology is fair with data she has but with serious limitations on assumptions made
- Out of date in that expectation of parent/child wanting treatment is not 8 years ago.
- Old info. What effect have adjustments/assumptions made?

- Some major assumptions made which may not be true: a child with one cavity is not eligible for treatment. This is discriminatory for those from lower economic group who have more caries. Also, ortho is a good motivator for dental care by patients.
- False assumption. Level of children with need who want treatment is becoming much higher. The Snapchat generation are very focused on their dental appearance. Demand is rising and awareness through said media
- Vague data about the adjustments
- Needs assessment is vague. Adjustments / exclusions do not reflect my practice
- Caries and OH can be addressed but ruled out!
- What effect have adjustments made?
- Vague data adjusted
- Needs assessment has been reduced due to historical low uptake but as patients see the benefit of ortho, demand increases
- Some children with poor oral health do want orthodontics and respond to preventative advice to improve their oral health
- Promise of orthodontics can be a good motivator for those children with poor oral health
- Should the question around patients who don't want treatment rather be a question of how you get a patient dentally fit so they can have treatment?
- Poor OH should not be discounted as patients can be educated
- Poor OH can be improved / one carious tooth does not rule out treatment
- Do not revert to using the inverse care law. Those that most need our help in the most deprived areas need more help with their oral hygiene and decay. Support the most in need!!
- Patients with poor OH taken from data
- Patients with one cavity taken from data
- Carious patients – 16% + but some can be re-educated, hypoplastic 6s etc
- High number for patients with poor OH – 16%. Re-education.
- Caries rate – 16% 12 year + 1 cavity = accurate? Why condemn?
- 12 year olds – poor OH – hypoplastic 6s – educate and change, not condemn
- Poor OH improves and caries treated so underestimate of need
- West Midlands fluoridated therefore less caries
- Should area be treated same as fluoridated?

Gap analysis

- Gap analysis. You can't run a service on this data.
- Gap analysis = guesstimate? Bham – 2400. +1300 others = diff (1100)
- Gap analysis under estimates true need

Locality specific

- Data is incorrect as in Warwickshire we had no secondary care for 3 years and these patients were referred to Northampton

- Secondary care in North Warwickshire for several years (until January 2017) we referred outside of Warwickshire to Northamptonshire as Warwick Hospital would not accept referrals from Rugby and North Warwickshire
- Coventry – poor consultant support. Patients waiting 9-15 months for ortho
- Hereford – vast area. Take time to access.
- Density of population in Hereford
- Stratford – more and more patients from out of area ie other practices nearby
- Worcestershire – inflow and outflow into an area should not be penalized if on a regional border and providing an orthodontic need
- Vulnerable – unsuitable locations? History?
- Warwickshire has largest excess orthodontic case starts
- There is underprovision of orthodontic treatment in Birmingham, Walsall, Coventry, Dudley
- As a GDP on Walsall / Birmingham border the waiting lists for our kids are 3 years – we desperately need more UOA activity

Response to feedback on needs assessment

General

- Needs assessment is indeed incomplete (in draft) at present pending further engagement with stakeholders and the public; this is to allow feedback from engagement exercises to inform the final version.
- This needs assessment effectively incorporates a needs assessment for each area that NHS England West Midlands has responsibility for.
- Current regulations allow NHS orthodontic treatment to be provided to those with an IOTN of 3 plus an AC of 6 or above; it would have to be a national rather than local decision to raise that.
- GDS contracts are not up for procurement however the vast majority of case starts available in each area are provided via the PDS contracts which expire in March 2018 (extended to March 2019). As per the recommendations in the needs assessment, further analysis of the split of orthodontic activity between GDS and PDS contracts is needed to inform PDS procurement decisions. An assumption will have to be made that the number of case starts delivered through contracts, other than those being procured, is effectively 'fixed'. It will then be possible to calculate how much additional activity is required in each area to meet the identified need.
- Local data on need and service has been used extensively in this needs assessment so a quick comparison with the rest of the country is simply not possible.

Data

- A needs assessment is never going to produce an exact figure and is always going to be an estimate of need hence the need for the assumptions and adjustments to be clearly laid out.
- There was a Child Dental Health Survey (CDHS) carried out in 2013 which looked at orthodontic treatment need however it was a national rather than a local survey, which therefore does not give figures specific to the local population. Use of the earlier (2008/2009) survey data which provides figures at a more local level allowed better differentiation in terms of need between the areas across the West Midlands. However, it is reasonable to argue that instead of the figure of 16.2% (2008/2009 survey - % of children in the West Midlands who had at least one carious tooth) which was used to make an adjustment to reflect those who may be unsuitable for orthodontic care on the grounds of poor oral health, the national figure from the 2013 CDHS could be used, albeit this relates to 15 year olds, not 12 year olds. The CDHS reports that 14% of 15 year olds in England were found to have severe or

extensive dental decay. The data calculations for the needs assessment have therefore been re-run using this figure.

- Demand may indeed have been underestimated in the 2008/2009 survey, as explained in the needs assessment document:

In order to estimate demand, (i.e. how many children would actually seek treatment) children were asked, as part of this epidemiology survey, if they thought their teeth needed straightening and, if so, whether they would wear braces. As above, the proportion of children with a normative need who also expressed a demand for care, can be extrapolated to current population size. Whilst this may give some indication of demand in the population, it is important to note that the children in this survey were given no information about the potential benefits and outcomes of orthodontic treatment; it is anticipated that, if provided with this information, more children would request treatment (i.e. demand would be higher than the estimate derived from the survey data).

Given the concern about this underestimate, an addition has now been made to the report in section number 2, under the sub heading 'Quantifying service need' to highlight the fact that this needs to be taken into consideration.

- Patient flow and waiting list data picked up in subsequent sections.

Population figures

- Population projection figures were accessed from Nomis, a service provided by the Office for National Statistics. The projected population figures take a number of factors into account. According to the Office for National Statistics:
"The projections are trend-based, making assumptions about future fertility, mortality and migration levels based on trends in recent estimates, usually over a five-year reference period. They give an indication of what the future population size and age and sex structure might be if recent trends continued."
"...the population is adjusted for internal (movement between areas within England), cross-border (movements between England and the other countries of the UK), and international (movements between England and countries outside of the UK) migration."

Waiting lists

- Waiting list data would be useful and interesting, if it were available, however it is not in itself an indicator of need.
- Unfortunately accurate waiting list data is not readily available for all providers across the West Midlands. Furthermore with some providers utilising 'waiting for assessment' lists and others 'waiting for treatment' lists, it would be impossible to combine the data, if it were available, in a meaningful way, at present.

- Waiting lists are not, in themselves, a true indication of need and moreover, do not necessarily indicate local needs. For example, an area with no specialist orthodontic provision will show up as an area with no waiting lists; this clearly only reflects the fact that there are no services there, rather than indicating that there is no need in that locality. Similarly if a service had closed its waiting list some time ago and had managed to address the backlog and reduce its waiting list, it may appear that that locality had less need than a similar area where the waiting list had not been closed but simply continued to grow.
- The remit of the needs assessment was to assess the level of service provision required on a recurrent basis; this does not mean that waiting lists have been ignored but acknowledges that they need to be dealt with separately. If there has been historic under-provision, waiting lists will indeed have built up; it would be unreasonable to commission NHS services on a recurrent basis at a level to address the historic back log. Instead, services should be commissioned recurrently at a level to meet the estimate of population need and non-recurrent funding should be used to address the backlog.

As explained within the needs assessment report:

Recurrent commissioning at a level to meet the estimated need will not lead to a reduction in waiting lists; additional non-recurrent funding is required to address this back log.

- The planned introduction of a Referral Management System later this year should help considerably with the provision of waiting list data from providers across the West Midlands. One of the recommendations from the report relates specifically to the need to review waiting list information once it is available and to use non-recurrent funding to tackle the problem:

NHS England may wish to consider the following:

2. Reviewing orthodontic waiting list information when it becomes available following the implementation of an electronic Referral Management System and scoping out the options for using non-recurrent funding to address the issue.

Secondary care data

- Secondary care figures are included within the report but were not covered in detail at the stakeholder event.
- The difficulties with accessing meaningful secondary care data are explained within the needs assessment report. Considerable time was spent on making as accurate an estimate as possible of the numbers of cases being treated in secondary care.
- The number of cases being carried out in secondary care were estimated and taken off the estimate of need in the population to give a figure for the number of case starts which are required in primary care (as per equation below):

Estimate of need in pop'n - no. of cases being carried out in 2^o care = no. of case starts required in 1^o care

If the secondary care figures have been underestimated, as has been suggested, this would mean that more cases are being carried out in secondary care and therefore fewer case starts are required in primary care, than detailed in the needs assessment currently.

- Secondary care services should not be applying post code restrictions and if this is the case, NHS England should be notified.

Assumptions / Adjustments

- As explained within the needs assessment report, the assessment of clinical need is different to the assessment of level of services which should be commissioned:
The level of services which should be commissioned for any identified healthcare need is debatable. Normative need indicates the likely numbers with a clinical need however it would be unrealistic ever to assume that all of these individuals would be suitable for treatment and/or willing to take it up. Compliance with treatment is likely to be a particular issue for orthodontic care due to the length of time required for completion of treatment. Adjustment of the normative need is necessary to provide a more realistic estimate of the amount of treatment activity that is required to service the local population.

It would be irresponsible to commission an NHS service at an idealistic level with absolutely no regard for the fact that some of those with a clinical need are unlikely to be suitable for a lengthy course of treatment and/or motivated to seek care.

- Detail about the adjustments that have been made is included within the report but was not covered at the stakeholder event. The effect of the adjustments is clearly laid out in Tables 1 and 3.
- The issue of demand is picked up above under the 'Data' section.
- Assumptions that are made as part of a needs assessment are not clinical decisions about eligibility for treatment; those decisions rest solely with the practitioner. A mathematical calculation about the likely proportion of patients who may not be suitable for treatment is not '*condemning / excluding / discriminating against*' more disadvantaged patients but simply making an adjustment as part of an exercise in the planning of services. It in no way implies that patients with poor oral health should be automatically ruled out of having orthodontic treatment but reflects the fact that some of those with poor oral health will not be clinically suitable for treatment and in fact, may be further disadvantaged if they were to undergo orthodontic treatment without their basic oral health needs being met.
- The essence of the needs assessment is about ensuring equity of provision so that those who are more disadvantaged are able to access care as well as those in more

affluent areas and are no longer disadvantaged by historical under provision in areas of social deprivation.

- Many orthodontic needs assessments make an adjustment on the basis of the percentage of the population who are accessing primary care services – the rationale being that for a referral based service like orthodontics, only those who seek care with a GGP will be able to be referred on for treatment. No adjustment has been made in this needs assessment however based on the proportion of the population who are accessing primary care dental services; the rationale for this was that as a healthcare system, we should all be striving to ensure that everybody can access primary care services and therefore has the opportunity to be referred on for specialist services.
- With regard to the points raised about the West Midlands being fluoridated and therefore having less caries - as explained within the needs assessment report, the caries prevalence figure of 16.2% was a regional West Midlands figure, not a national figure.
- As explained above, under 'Data' the calculations have now been re-run (following the stakeholder engagement event) incorporating a national caries prevalence figure of 14% from the CDHS, instead of the 16.2% regional figure from the 2008/2009 survey.

Gap analysis

- Points addressed above.

Locality specific

- Secondary care data that was used included all cases that were carried out for West Midlands residents, whether this was by secondary care providers inside or outside the West Midlands. The data included in Table 12 of the draft needs assessment report shows the activity that was carried out for residents of each of the West Midlands areas, irrespective of where the activity was delivered. This would therefore capture any Warwickshire residents who were seen in Northampton General Hospital.
- As explained within the needs assessment report, patient inflow and outflow on a regional border has not been 'penalized' but rather an allowance has been made so that any such affected area has effectively been credited with a need for additional activity to account for the additional patients from outside the West Midlands. For example, there was a net flow of 331 patients (case starts) into Warwickshire from outside the West Midlands; when the amount of currently commissioned activity for Warwickshire was considered, 331 case starts were therefore taken off the Warwickshire figure to reflect the fact that these 331 case starts are not actually available for the local population. This means that 331 additional case starts are

required in Warwickshire to compensate for those cases lost to non-West Midlands residents.

Q2 Issues that are important to patients and factors to take account of in deciding locations

There were two schools of thought – the people who felt that services should be arranged to suit the practitioner and that patients were happy to accept existing arrangements and those who made almost opposite comments about what they felt concerned patients.

A lot of people agreed that waiting times are one of the biggest issues with people prepared to juggle to get seen quicker.

There was a range of opinions about opening times and locations (including transport links and parking) but some helpful specific comments some of which may be area specific. These are things that will need to be tested through the patient engagement.

Some people mentioned quality of care and/or continuity of care – although the current system is set up to ensure this latter point.

Waiting Lists

- Waiting list is biggest thing for patients
- Waiting time before first seen by orthodontist eg 2-3 years on waiting list
- Reduce waiting lists
- Treatments waiting times
- Waiting lists – time to wait for treatment
- Low waiting times
- Waiting lists to assessment and treatment
- Patients want to know why they have to wait to start treatment
- Length of waiting time
- Waiting times number one over location and opening times
- Waiting lists are number one issue rather than extended opening hours

Opening Times

- Sport on Saturday – unpopular as children in teams
- Opening times are important
- Opening hours
- No issues re opening times
- Do not think evening appointments are popular
- Actually patients don't want out of hours or weekend appointments
- School hours
- Don't need so much availability before/after school times
- Limit out of school time

- Appointment timing – school – certain school years
- Patients want to be seen daytimes in the week – not late at night
- Patients want early – do not want rush hours
- Urban traffic jams a problem around school run for those who drive
- No evening transport
- Opening times not late in evening as patients cannot get there
- Patients not wanting children to be travelling in evening as other children to look after and buses a problem and cost for appointment
- Most patients are part of a family of +1 children – most choose patients times to attend before 5pm!
- Morning opening 8am good for some and popular
- 3.30 – 5 pm very busy GCSE prefer 7 pm popular

BUT

- Opening times outside school hours – suggest 30%
- All patients seem to have a preference for out of school appointments
- Patients would like to access service out of school hours ie 3.30 – 5pm
- Access – opening times – early/late within reason (refuse too late)
- Appointments made available to patients outside school hours
- Consider buses at school and work and at night time
- One late evening – have it rotating as all can have access
- After School appointments/Not After School appointments
- Outside school hours but able to charge for missed appointments as practice overheads increase
- Essential – practice opening before and after school and Saturday morning (Urban)
- Opening out of hours will increase costs for providers will cost be included in this
- Need to make clear to providers if more funds for out of hours
- Definitely opening times – after school appointments
- No such thing as an orthodontic emergency so Saturdays Yes Late Nights No
- Late opening
- Occasional ad hoc Saturdays
- Needs to be flexible with patient choice
- Timings - lunchtime or on way to school if walking

Continuity of Care

- Patients want to see consistency of provider and for families to be together.
- Continuity of Care
- Same provider – not change every time
- Consistency of provider
- Patients want to see their preferred provider

Areas of Need

- More provision in areas of need
- Priority to low socio economic areas
- Travel is a particular problem for low income families
- Cost of transport is an issue

Patient Satisfaction

- Patient satisfaction with practice environment
- Patients happy with service and clinicians
- Quality
- Patients often happy to wait for better service
- Patients are happy to travel and wait to see a specialist orthodontist
- Patients want expertise and will travel to see the best person
- Patients will travel for best service and quality
- People will travel for good service

Transport Links

- Access and travel
- Good public transport links – bus and train – no more than one bus ride
- Transport Links
- Easy public transport links
- Practices in accessible locations
- Times of travel are an issue Practice travel times and access are more important than opening times
- Only one car/no car or driver can be a problem for families
- Travel times going to a practice that's convenient eg. school or work
- Rural Areas – patients willing to travel further. Distance may be longer but sometimes not so long to travel as less traffic

Location

- Practices close to schools (Coventry)
- Need to be in population hubs – helps for those who need lifts for work or school
- Travel distance, parking and access may be issues if patients are sent to practices far away by the referral management system
- In urban areas (Coventry) patients prefer services near where they live
- Location near home
- Location near to patients
- Close to home not necessarily schools because parents who work may not be able to leave work and also schools are not keen on kids leaving school
- Location of schools relative to practice
- Close locality
- Locality most important

- Need for more local services
- Patients would prefer to be local but some will travel if not too far to get treated
- Local access paramount
- Increase provision of clinical assistants/ortho provision in GDP surgeries (more accessible)

Parking

- Availability of parking (even if have to pay) – particularly for rural practices
- Parking
- Direct access to Redditch via M5 – close to borders for access for those willing to travel
- Comment about patient concerns with restriction re IOTN
- How fund steady state?

Not an issue

- Patients have always been prepared to travel for treatment and wait
- Patients are willing to wait for their preferred provider or to travel
- Patients willing to travel, willing to wait
- Practices have been sited for easy access otherwise would not be busy
- Use existing practices and providers who are ready established – both private and NHS.

BUT

- Patients are aggrieved when they can't have treatment where they want and when they want

Other

- Disability access important if bringing in other children
- Care of other children while someone at orthodontic practice with child
- Herefordshire access issues mentioned by 2 people plus travelling distance for those in West Herefordshire.
- Make-up of population very different – Birmingham 8 different nationalities seen this morning. Differences urban vs rural
- Sandwell and Dudley area – lots travel out for treatment
- Kidderminster Oasis – Jump for shortest lists. Doctor shopping very common in the more urban regions
- Walsall/Sandwell – closed lists. Tamworth is open
- So GDPs will refer up to “open lists” No point sending a referral if there is a 3 year waiting list.

Q3 What factors should NHS England (West Midlands) take into account when considering where to procure PDS agreements (e.g. population size, transport links, secondary school location, shopping hub, other - please specify)?

Population size

- Population size. Near secondary schools – less travel time for patients
- Population size. Needs assessment. Private provision
- No population data
- Population density
- Practice location must relate to population density
- Sensible spread of provision
- Density
- Population density
- Move ortho provision where there is a large teenage population predicted.
- Local referring population
- Distance from other borders to accept cross referrals. Number of GDPS to generate referrals.

Waiting lists

- Waiting lists. Population change.
- Review of waiting list and decide on need. Study too vague!
- Look at waiting list in practice. Missing information about the waiting list for patients – this would indicate need.
- How is waiting list being taken into account?
- Need as per waiting list for area
- Patients happy to travel to orthodontist with shortest list
- Waiting list
- Waiting list times in practice (plus all factors listed in Q)

Schools

- Schools
- Locality from schools and transport links for reasonable travel
- Proximity to schools is not necessary since you would expect parental supervision
- Secondary schools, new housing. Immigration movement into permanent settlement. Transport links.

Transport

- Transport links
- Transport links
- Transport links
- Local train links
- Good public transport links
- Transport links, roads etc
- City/town centre and transport links (public transport)
- Motorway links
- Birmingham inner ring road
- Main bus routes eg no. 11
- Location of practice should have good transport connections – existing practices usually do.
- More central provision to facilitate travel to and from appointments
- Convenience of location – patients not particularly fussed which person they see.
- Rural areas – those less well off will find it harder to travel so maybe not the best located
- Patients willing to travel for good orthodontist
- People rely less on public transport so access may not be an issue.
- Free patient parking
- Free parking

Existing provision

- Existing contract size. Existing contract performance. Population in immediate and surrounding areas.
- Current providers did their needs assessment prior to siting practices.
- Practices were traditionally sited where historic transport links, population etc.
- Current practice location is good.
- Practices open traditionally with areas of need and demand.
- Practice sites are in population areas with good travel. Trusted providers, referrers and patients.
- Practice distribution correct. Good transport connections.
- Utilising existing buildings NHS/private would reduce risk financially
- Procure based on: current provision, population, needs assessment
- Premises
- Multiple contracts in close proximity

Clinical

- Prioritise IOTN5. Treat only IOTN>4
- Consider whether oral hygiene instruction is provided and premises. Extended.

- Confidence of referrers
- Concern for practices that never refer patients on (?quality of assessment and treatment planning?)
- Quality of care from therapists if provision drops off
- Depends on orthodontist
- Attend on recommendation
- Availability of oral hygiene instruction or therapists
- Oral health education, hygienist, therapist. Opening hours (extended)
- IOTN education for dentist and orthodontist
- Consistency of IOTN scoring
- Is there a consistency to how patients are assessed?
- Standard assessment
- How many patients start treatment in primary care and are then transferred to secondary care – a proportion is expected but large volumes suggest poor assessment

Other

- Siblings
- Hereford and Stratford - ? hub and spoke
- Hereford patients flowing into Worcestershire due to lack of NHS practices in Hereford

Q3a Taking this into account, are there locations with no provision that should have provision?

- No increase in funds therefore extra provision in one area will remove it from another. Waiting lists.
- Need to deal with current patient waiting lists
- No
- No
- ? provision in Shropshire
- ? North and West Hereford
- Should be more than one practice in Hereford.
- Herefordshire - should be more than one practice in any area
- Hereford – central provision may well be most equitable if providing quality
- Hereford – more practices required which provide NHS treatment
- Wednesfield. Willenhall. Increased density, insufficient provision.
- North West Worcestershire for access

- Dudley and Black Country have no provision.
- South Birmingham served better than North Birmingham
- No provision in Sutton Coldfield?
- Kingstanding / New Oscott / Handsworth (Birmingham). Procurement should be what can be provided.
- No provision in New Oscott / Kingstanding area
- Erdington and Black Country have very little provision for population.
- Birmingham is area with greatest need
- North Birmingham – in Great Barr / Streetly / Walsall area – our children have no provision in the area. Great Barr/Walsall deprived area – people have difficulty travelling.
- Central Birmingham heavily commissioned – outskirts of Birmingham not as much commissioning.
- Seems little provision in North and East/South East Birmingham compared to central areas
- Wolverhampton, Solihull & Bromsgrove – the suggestion is that there are sufficient provisions available in these regions but actually either long waiting lists exist or they are closed.
- Walsall under provided therefore long journeys
- *(Warwickshire. Great Malvern. Kidderminster too huge. Redditch on border of Birmingham and Solihull and needs proportioning.)* *Should this sit with the question below?

Are there locations with orthodontic provision that do not meet these criteria currently?

- Where the waiting lists are closed is where the need is greatest
- Does it make a difference where schools are concentrated?
- GPs need to be competent
- Second opinions

Q4 How large should individual procurement lots be (UoAs/case starts)

- There were a range of opinions expressed from those who wish to maintain existing contracts, those arguing for larger contracts or smaller contracts and others who chose to express a view that there should be a consistent approach that took into account local need but also the viability of contracts.
- There were also opinions expressed about consortia approach and subcontracting – mostly as a negative but also as a way of ensuring viable contracts that were split to be convenient to patients.
- There were detailed suggestions on the optimum size (with a range of values suggested) and some area specific comments.

Maintain Status Quo

- Base on current practice needs
- Depends on capacity of practice
- Look at what has been done historically in the area
- Historic sizes – size reflects service delivery
- Historic provision – over delivery and waiting list length
- Procurement should preserve number of UoA to keep clinics going
- To optimise proven practice capacity

Smaller Contracts

- Smaller contracts are acceptable if other quality metrics are in place (e.g working part time as a Consultant)
- Larger contracts mean less choice
- Big worries about centralisation of contracts and how hard this will make access for patients difficult
- Limit too large provision
- Lots should not be concentrated in one main large city due to travelling requirements. Correlate to days open, hours and number of surgeries
- Big enough to manage but small enough not to create monopolies locally
- If large tenders given must specify that is divided up to where the need is

Larger Contracts

- Most evidence shows larger exposure implies higher quality
- Minimum equipment requirements OPG ceph – very small numbers may be uneconomic
- Important that don't have very big lists

Mixed Economy

- Depends on need and capacity
- Size of practice/available sessions/available practitioners/need
- Needs to depend on each area and current waiting lists
- Look at area – current contracts and waiting lists
- Procurement should involve a range
- Procurement lots should take into account how provision for treatment is made
- Considering the needs of patients in our area – a smaller/mid size contract in Great Barr covering SE Walsall, Great Barr, Streetly, Perry Barr, Kingstanding regions
- Mixture of UoAs to allow flexibility
- Incremental approach – start at 5000 then do 2500 increments in size 7500, 10000 etc.

Size Suggestions

- 700 case starts
- Coventry 6000 UoA per practice
- 500 case starts

- 300 cases per year could be undertaken by a single hander full time (not case starts? But those in treatment)
- Full time orthodontist could take on 70 cases per year
- BOS figure of 300 cases per provider dependant on population and accessibility
- 200-600 case starts per annum
- Range of lots from 2,000 – 12,000 UoA
- Lot size 100 case starts would be ideal lot size or at least should be divided into sub lots
- Different lot sizes would be good idea depending on population size and need – 100-500 case starts
- Minimum 50 case starts (3000 UoA)
- Lower limit of 50 cases per site
- 1 person/week = approx 5000 UoA but alters depending on OT or non specialist assistance

Other Factors

- Procurement lots should be given in manageable amounts – ability for them to be increased
- Ability to deliver and maintain financial viability
- Procurement lots need to be sufficient to be managed effectively – optimise practices capacity
- Depends on workforce available per practice – eg. Therapists
- Allow more equitable provision for new entrants

Consortia

- Not good to force consortia
- Practices should not be forced into bidding for larger contracts than they can manage
- No alliance of contracts or sub contracting of a main contract
- Legal aspects of subcontractors

Q5 NHS England (West Midlands) is unable to separately procure level 2 and 3a services. How best, as a contractor, could you deliver both elements, potentially combining specialist and non-specialist provision?

General Comments

- GDP to be assessed via North wales project.
- Grandfathering to be opened again.
- GDP to have history of 50 cases/year for 5 years

Fundamental questions

- Level 2 GDS contracts = all level 2, who assesses?
- Is this division from Commissioning guides and are they relevant?
- Individual practice skill mix takes account of Level2/3 already
- Six months smiles is not orthodontics

- This question has little relevance as both Level 2 and 3a are treated utilising appropriate skill mix
- Do commissioners care for standards or VF Money
- Not sure agree with commissioning guide
- As a contractor I am unable to work out how to combine level 2 and 3a services!
- How do you split 2 and 3a on referral
- Cases are rarely level 2 only
- Only 50 cases minimum is not enough for competency
- Should providers treat what they are capable of
- Does it have to be looked at this way. Both levels are already treated with varied skill mix
- Manpower issues already – disenfranchising existing GDPs (non specialists) will significantly worsen this.

Non specialist led

- Some 3a cases have been treated historically by experienced unqualified ortho prac therefore likely to be skills gap, inc in WL
- Many non specialist orthodontic GDPs do some Level 3a work eg patients with restorative problems
- Many non specialists can treat 3a cases
- Could get level 2 separate contractor for all specialists to send patients to
- 2a cases should only be seen by level 2 pract not specialist ortho
- Experience DWSI could manage level 3 a cases. Could decide if care needs to be done by a specialist
- Level 2 practitioners could be utilised to provide interceptive treatments if they are indemnified and specialist can refer too
- Dentist with special interest have years of experience and have ability to treat level 2 and 3a
- Not sure why Level 2 cannot treatment plan
- Grandfather more level 2 performers as specialists – due to number of cases completed and experience
- Reopen grandfather to specialist list
- Level 2 – competent skill sets with a minimum number of years and cases completed
- Look at quality of contractors delivered by level 2 performers – benchmark to approve, number of cases, PAR scores, years of experience.
- If you choose the right provider it's not a problem
- Not sure how specialists can monitor service
- Depends on experience of provider
- Does experience include private work
- Orthodontic therapist, do they need onsite support always
- 5 years is not enough time for you to invest in personnel, equipment, Therapist training. For you to develop service, need longevity.
- Do commissioners recognise time commitment for specialists to review treatment every other visit.
- GDS contracts have no specialists anyway
- GDS contracts, how do they answer qs
- Level 2 cases will generally be low IOTN not suitable for NHS treatment

Specialist led

- All specialist practitioners provide both Level 2 and 3 services already
- Can't see any value in differentiating between level 2 and 3a. These are cases part and parcel of specialist practice
- Level 2 can be delivered. Level 3a may require clinical attachment with consultant orthodontist
- Most specialists providers routinely treat level 2 and 3
- Under umbrella of a specialist contract. Reimbursement of specialist
- Contract to specialist, subcontract 2a to DSI designated. Alleviate access and flow
- In specialist practice we already combine Level 2 and 3a. Achieved as outline
- Contracts – named specialist for approval of level 3a treatment plan
- Specialists required to plan cases which non specialists could treat
- Specialist can treatment plan and let dentists and orthodontic therapists carry out the treatment to help with caseload
- Specialists treatment plan
- Specialist led supporting all treatments
- Provision of both 2 and 3 by a specialist led team
- Level 2 and 3a services are conducted now. Specialist onsite. Consultative process with DWSI. Therapists work to prescription
- Specialist orthodontist sees pt for assessment then allocates accordingly
- Would need specialist available on contract but would not need to see every patient
- All contracts should be held by 3a who would be responsible
- Named specialist on the contract. Risk of short term DWSI providing multiple skill mix
- Contracts given to specialists and secondary care to be more accountable for the service they provide
- Specialist treatment planning using GDPs and therapists to be overseen on regular basis

Payment

- Single tier payment for L2 and L3 as exists now
- Will complexity differential equate to different payment level
- Split fee level. Higher UOA value for tier 3 provision
- Specialist has to be reimbursed separately to the level 2 treatment. If have to pay for 3a advice, will not treat 3a cases
- Tier 2 monitoring. Travel (?) fee if full treatment not provided
- Level 2 has a named mentor who is assigned and remunerated. Access
- Contract is with an Orthodontist – experience of business set up, quantity and quality of delivery
- Best option would be if specialist on site, but does not need to be there all the time
- For practices to have the facilities to treat highly complex cases if the right specialist skill is available
- Clear referral pathways between primary and secondary care. Better working relationships between primary and secondary care eg joint clinics
- In theory this contract should be best delivered by corporates but experience would indicate that corporates do not necessarily produce the best care

Innovation

- Virtual support for complex cases
- MCN could be more active in an educational way. Treatment planning forum etc

Skill mix

- Tenders should be from multidisciplinary teams
- Have varied skill mix of clinicians. Mix of specialists and non specialists
- Level 2 and 3a should be on the same site
- Everything (level 2 and 3a) is provided in house already
- Team approach all patient levels treated
- Team approach to provision

Q6 Performance Indicators

The biggest single concern was protected characteristics or social class with a universal response against this both in principle and practice. Waiting lists were another concern.

Infection control was mentioned specifically by a number of people and there was debate about how things fit with existing CQC registration and inspection routines.

There were some useful comments about being outcome focussed on patient experience. Detailed responses about PAR scoring.

A number of people raised the issue of the burden of reporting and who would be analysing this. There were also some general comments.

Protected Characteristics

- Collected separately
- Avoid bias
- Difficult to collect 100% - not achievable if living
- Invasive
- Need to remove protected characteristics as not relevant
- RMS will take postcode? Does this indicate social class
- How legal is this? How easy to determine? What sort of information is required to determine social class?
- Very uneasy about this item and for reports asked for relating to social class etc.
- What is information on protected characteristics – is it relevant?
- The first two points are more about demographics etc and not performance
- Protected characteristics should be voluntary not mandatory on patients
- Impossible to collect social class
- We are not equipped to assess social class of parents
- How do you collect social class of a person?
- How do you score social class of parent?

- What is social class these days?
- How do you divine social class and how do you ask this to parents?
- Patients should not have to fill in details of personal data
- Some patients may not wish to disclose this information 100% not achievable – this should be voluntary
- Don't want to do an equality report – BSA have data – let them do it
- How are you going to ask what social class patient is from? Free School meals?
- Scrap reducing inequalities KPIs why?
- How will collecting data on inequality reduce inequality?
- Need to remove social class from KPIs
- Including reducing inequality will be difficult if exclude patients who have had caries!
- Social class – will Gilly Cooper be writing the script?
- How is inequality being measured
- Social class of parent is irrelevant – discriminative – cannot be asked at job interview!
- Reducing inequality – will not be able to collect data as patients do not fill in information – voluntary
- Inequalities – mandatory reporting ? big change
- Why do we assess social status? How?
- What score of social class will be used?
- How do we identify the socio-economic status?
- Reducing inequalities should be voluntary – we do not need to know – not the responsibility of the orthodontist
- Higher social economic status patients better oral hygiene less caries
- Reducing inequalities should not be a performance target – can be measured by the BSA
- Reducing inequalities reducing inequities – if the patient is being referred by the referral management system we do not select patients ourselves

Waiting Lists

- Existing lists??
- 8 week receipt of referral – waiting list dependent – what will be done about lists?
- Waiting lists 10 working days for assessment

Cross Infection

- Orthodontic cross infection control requirements should be no higher than those for other fields of dentistry
- Infection control
- Infection control essential 100%
- Infection control – agree 100% threshold – if CQC compliant Ok

CQC

- CQC compliant = compliance
- Performance indicators already covered by CQC
- Should we measure what is being examined by others GDC/CQC

- CQC compliant
- How can you ensure conformance is 100% by CQC set standards prior to allocating contracts
- Coventry practices already have to be CQC compliant – too many indicators about CQC requirements
- Indicators need condensing – duplicate of CQC/CPD - not related to orthodontic quality
- How can you give a contract to a practice if there has not been a CQC inspection

Burden of Collection

- Is a good deal of work to provide KPIs – who will pay for it?
- Data collection – who is analysing?
- Too many KPIs
- All performance indicators already met - nothing new?
- Duplication if report required on information already collected by referral management scheme – eg ethnicity/social class

DDA

- DDA access might be difficult for older premises
- Access alternative sites provided for wheelchair access
- Comply with DDA
- DDA compliant

Patient Focussed

- Survey at end – good idea
- Proposed performance indicators poor – ask patients directly if they are happy or not
- Patient Feedback
- FFT - Patients get fed up of questionnaires – some use but don't overdo it

PAR Scoring

- PAR scores should be external?
- There should be an independent PAR scorer externally
- PAR scoring – should this be external?
- PAR score all?
- PAR score 20 plus 10% of all cases – unfair on larger contracts – cost implication
- Independent PAR score
- PAR for all cases disadvantages LARGE contract – cost/time/effort
- PAR scoring within peers
- Need PAR random cases scoring in contract again – isn't this a duplication of BSA and existing quality framework?
- Some concern that PAR scoring is not a fair measure for Level 3 cases eg. Impacted canines
- PAR Score all cases
- PAR scoring at 100% too difficult to achieve.

General

- Overall think quality indicators are fair
- Need more about clinical outcomes and quality
- Should collect NHS number instead
- What is the weighting between indicators?
- Time limits on referrals/actions re letters are nonsense
- Referral KPIs are fraught – how do you confirm which patients have been contacted?
- Total treatment time
- Number of appointments but some exceptions for FTA's
- How are Level 2 governed from compliance ref DwSI
- All UoA's delivered within a specialist practice – not discounting DwSI working in right setting
- Any parameter that requires 100% as standard is too draconian/too difficult to achieve
- Better use traffic lights? Red/Amber/Green system like BSA perhaps Red if <75% achieved Amber if 76-90% achieved and Green if >90%
- What are reports required? Monthly – what about holidays.

Q7 What are your views on how L2 skills and competencies should be assessed for performers?

Suggestions:

- Can the N Wales project for provision be used to assess GDP?
- Experience, qualifications, outcomes of treated cases (PAR)
- Could be assessed by peer review and audits
- Qualifications
- FGDP primary care in orthodontics qualification
- PAR score, portfolio (photo, SMS scores/scais, IOTN), Feedback - PROMS, PREMs, Peer review, audit
- Assessment criteria, clinical assistant course
- Set minimum number of cases defined/annually
- Should take into account BSA reports

Comments

- Assessment cannot be based solely on outcomes. Knowledge and competencies can only be assessed by examination/training

Concerns

- Difficulty in knowing skills levels of DwSI
- Entry onto specialist list easier for non English graduates?

- DwSI big worry that have to wait and see a specialist for Class 2 cases when could make a big difference to see sooner.
- *Specialists are overskilled to be used for reviews! Skill for treatment planning and hands on!*
- *Specialists should not be wasting their skills and time supervising cases – treatment planning, review of treatment plans*
- *For specialists to review cases so regularly – waste of skill set [NB these 3 comments from same person]*
- Who assesses secondary care consultants?
- Open opportunity to get on specialist [list]

Is it necessary?

- No framework, can't be done
- We don't think there is a need for this two tier system therefore no need for assessment
- Level 2 performer cannot be identified, so question doesn't make sense
- Should be given autonomy
- Level 2 are more than competent!! Most practitioners level 2 have been working long term, over 10 years with good results.
- Contracts only given to specialists

Ideas of how to configure

- Level 2 skills should be managed by Level 3a overseer or contract holder
- Ideal - Specialist GDC registered to lead, but in reality.....
- Practical – Non Specialist – clinically competent/experience
- Try BDJ May 2017 North Wales DwSI re accreditation
- 100% of anything is too draconian

Other Questions/Comments from the Orthodontic Stakeholder Engagement Day

1. Maps

Believe that some of sticker sizes are incorrect

We have tried to represent the existing contracts as best we could from the data but the maps were intended to be indicative to spark discussion about the locations and travel times. We did not include all the small GDS contracts.

2. Referral Management System

Are you checking all the General Practitioners will use remote Referral Management System (training? Information?)

There will be an implementation plan for the RMS over a number of months that will involve training for all practices in our area (and neighbouring large referrers). We will be encouraging use of the

system and referrals that are paper based will be converted and entered by the service onto the system.

Why have a referral management system if we haven't established who the providers are? Waste of resources if begun too soon.

We do know who the current providers are currently even though this may change in the future. The specification has built in the requirement for the system to adapt to changes in provision. The RMS is for a range of services not just orthodontics and is very important to help us managing Referral to Treatment times for Oral Surgery also and to monitor waiting lists.

3. Orthodontic Reference Group

Who is in the Orthodontic Working Group?

This information was included on the slides and has been included again for your information see slide 9.

4. Needs Assessment

Too short on time

Insufficient time to read the Needs Assessment

The needs assessment should have been circulated sooner

More time required to digest drafts – too detailed with figures/charts

The needs assessment document was circulated in advance of the meeting. It is detailed because it is a complex piece of work and we wanted to be transparent about all the information that has been reviewed as part of the process.

5. Workforce Planning

Does NHS WM have any influence on workforce planning?

Health Education England are responsible for Workforce planning and they are active members of the Local Dental Network.

6. Timing of Event and Procurement

When will the procurement happen?

A letter has been issued recently advising of a 1 year extension to existing contracts due to expire on the 31st March 2018. This is due to delays by both the General Election and the limitations on patient consultation during the period of purdah. There have also been issues relating to an ongoing legal challenge in another area of the country.

We will be developing a revised timeline to work towards a new service commencement date of the 1st April 2019. This will be shared at the upcoming engagement events in the autumn.

Why is this meeting occurring now? Why not ask us these questions 6months, 1 year, 18 months ago?

It was important that we waited for the information contained in the needs assessment in order to be able to better understand the local situation and have an informed discussion. We intend to have further meetings in the autumn when we will be able to consult on a proposed lotting strategy.

7. Patient Engagement

Who will be doing the Patient Engagement Exercise?

How many patients will be asked?

Isn't it too late to have a patient evaluation and discussion now before April 2018?

We are currently preparing a brief for a patient engagement exercise that will be delivered by a CSU under the extended framework. This brief is being informed by the feedback from this event and also from the development of a draft lotting strategy. We will be guided by the expertise of the successful provider for the engagement exercise as to the best routes to access views and the number of patients/carers to be sampled. It is the intention that the exercise covers all local authority areas.

The extension to contracts gives us the opportunity to do a thorough piece of work that will ensure patient views are included when determining where to procure new services.

8. New Market Entrants

What are opportunities for newcomers?

A procurement is run as an open process to ensure we have the best possible provision to meet the specification and give value for money. Both existing and new providers will be eligible to bid provided they meet the requirements.

Should be level playing field – will specialists be assessed as well as Level 2 providers?

We are expecting national guidance and will be guided by this. We would expect equity of treatment between providers.

Why do GDPs who have been providing service for over 5 years with 50+ workload need to be assessed?

As part of the procurement process we will need to be able to assess all providers/performers to ensure they meet the requirements within the specification. This is to ensure we get the best possible service for patients.

How can you ensure equal opportunity of entrance to the market for new performers? (Specialists)

Please see responses above. All bidders will be treated equitably. The decision on the lotting strategy will be based on patient need and views on access.

9. Contract Monitoring

Who will monitor all the timescales in the service specification?

This is part of normal contract monitoring – undertaken currently by the staff in the local office with the support of the BSA

10. Pricing for the Service

Pay for UOA should be the same in the country – no different UOA value!

There is a national pricing strategy that is being developed through a national orthodontic working group which will provide a guide to ensure consistency. This will be shared at our next set of events in the autumn.

11. Dynamic Purchasing System

Are you going to use DPS?

At the present time we are not committed to this however we are engaged with the national orthodontic working group and watching developments and experience in other areas.

12. Level 2 and Level 3 services

Why can't NHS England separately procure Level 2 and Level 3a services?

At present we do not have sufficient granularity of data to be able to develop a sensible lotting strategy. This was discussed at great length and agreed by the orthodontic working group. We will be keeping this under review and the extension of existing contracts may give an opportunity to review this

13. Advice and Guidance

Consultants worried that advice must happen with primary care. Otherwise will be referred more to tertiary care.

It is intended that there will be a facility within the RMS to support advice and guidance from Consultants to primary care and the local office will be .

Level 3 Contract – Orthodontist able to sub contract to separate practices?

- Level 2a
- Level 2a
- Level 2a

Orthodontic Appeals

How well organised is the patient appeals process?

In most areas patients with a borderline IOTN seem to access a second opinion by a referral to an alternate orthodontic provider. In Birmingham there has previously been an established appeals

process involving the Dental Hospital. This has been reviewed recently with onward referral for a second opinion by another specialist orthodontist in primary care.

Additional Comments

LAT should spend time in primary care

Unfortunately we no longer have the staffing to be able to spend as much time out and about visiting practices as was possible in PCT days. However we do have staff in the team with a lot of experience of dealing with primary care contractors.

Can we have CPD certificates (GDC compliant) – *we are arranging for these to be issued to you – apologies for the delay.*

Access Issues

We are aware that there are significant access issues – both in terms of locations of services and the very long waiting times. Hopefully the procurement will be able to address these which is why we are keen to consult to ensure we get this right.