

# ORAL & MAXILLO FACIAL SURGERY



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This document sets out factors that will be considered when assessing the supply and requirement of the future medical workforce. The first section of the fact sheet focuses on the future requirement of the specialty; the second section focuses on the current supply. This information will form part of the body of evidence used to advise recommendations of future medical training numbers. At this stage it does not present conclusions or recommendations. This is a live document that represents work in progress; it will be updated on an ongoing basis as information is located and made available to the CfWI. The CfWI welcomes relevant contributions to the content or interpretation of information within the medical specialty workforce fact sheets.

As a guide, the document is set out in the following divisions. Some of the themes that have been identified may overlap several divisions.

## **Considerations for future requirements**

- Current Status of Specialty's Requirement
- Demographics
- Health and Lifestyle
- Prevalence and estimated future incidence of factors that affect requirement
- Changes in practice which may affect level of service
- Finished Consultant Episodes (FCEs) and Outpatient Attendances
- Weighted Capitation

## **Historical and forecast supply**

- Existing Workforce
- Consultant projections
- Geographic distribution
- Recruitment to further medical training
- Related healthcare workforce

# CONSIDERATIONS FOR FUTURE REQUIREMENTS

## Current Status of Specialty's Requirement

The Royal College of Surgeons England (2005) identify the need for 1 Full Time Equivalent (FTE) consultant per 150,000 populations. Based on a population size of 52 Million in England this generates a need of 347 FTE. The IC Census 2009 recorded a total of 310 FTE (345 headcount) consultants.

## Vacancies and Locum Staff

The most recent data available (extracted via iView from ESR, March 2010) records that 3.6% of the practising consultant workforce are locums (10 locums out of a total of 265 consultants).

The IC vacancy survey (2008) records a three-month vacancy rate of 1.8% for Oral and Maxillofacial consultants in England. Geographically, this is highest in Yorkshire and the Humber at 7.3%.

## Demographics

Figure 1 shows growth of the population up to 2031 by age band as predicted by the ONS. It indicates that the greatest growth of the population is in the over 60s. The bold lines indicate the level of the population in 2031.

Figure 1: 2031 population estimate and indication of age and gender of the population which relies most heavily on Oral & Maxillo Facial Surgery.

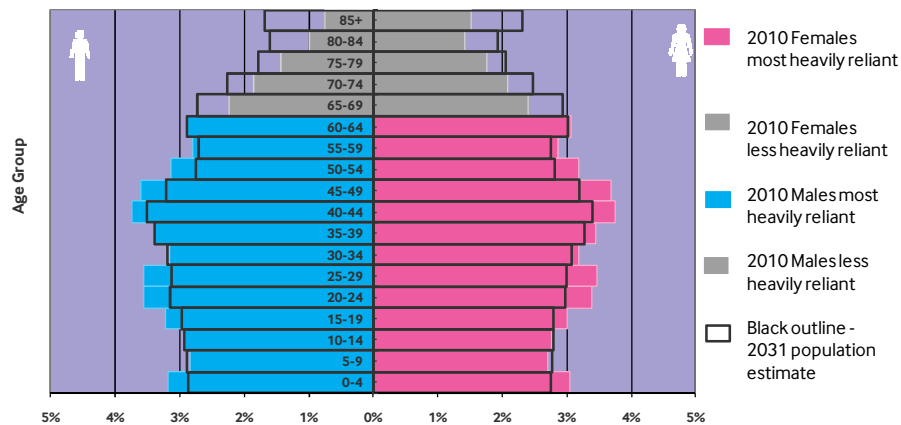
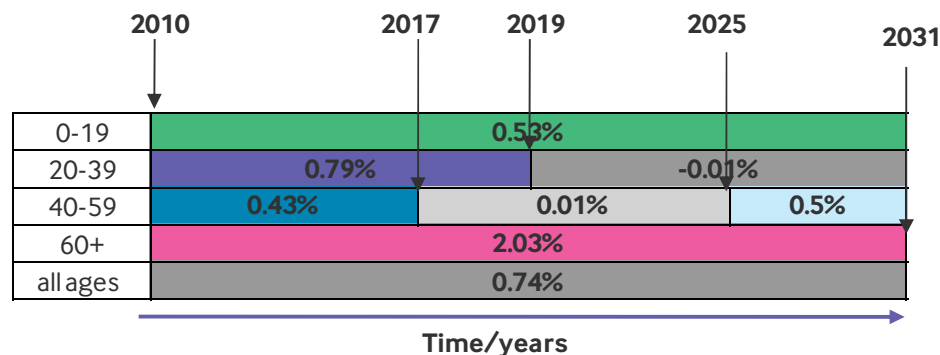


Figure 1 also identifies the population of England as of 2010 and highlights the age and proportion of males and females that typically present for care in Oral & Maxillo Facial Surgery. The areas highlighted in blue and pink show the ages that require the most significant portion of Oral & Maxillo Facial Surgery services for males and females respectively. A grey area illustrates the population distribution where neither males nor females in the age range are typically treated or have interventions delivered by this speciality.

Figure 1 indicates that the greatest growth of the population will in the over 60s, and that the younger and adult populations are most reliant on Oral & Maxillo Facial Surgery services and will drive the requirement for those services.

Figure 2 displays the relative population percentage growth per year broken down by age groups highlighting the variable rates over time and age.

Figure 2: Demographic Summary



In Oral & Maxillo Facial Surgery the age group which accounts for the most significant proportion of care required is generally the child and younger adult population.

## Health and Lifestyle

### Lifestyle Influences

In 2010 the British Association of Oral and Maxillofacial Surgeons (BAOMS) reported the following:

“A population of 500,000 yields in excess of 4,000 facial injuries per year, of which 250 will be facial fractures, excluding simple nasal fractures. The incidence of facial fractures continues to rise. In the United Kingdom, the major cause of trauma to the facial area is inter-personal violence, with the incidence of injuries from road traffic accidents showing a decline in recent years. This may be a reflection of the effectiveness of seatbelt legislation, improved car design and safety equipment, and improvements in pre-hospital care and rapid patient transfer to trauma-accredited hospitals. This has led to an increase in the number of patients arriving at hospital with multi-system trauma and severe facial injuries.”

A national facial injury survey, conducted by BAOMS in 163 Accident & Emergency Departments across the United Kingdom, identified in one week 6,114 patients who presented with facial injuries. Specifically, the survey found that:

- nearly a quarter of facial injuries in all age groups were associated with alcohol consumption
- one in three of these had serious facial injuries requiring specialist treatment or hospital admission
- at least half a million facial injuries occur in the United Kingdom annually and 180,000 are of a serious nature
- assault was the cause of 25% of facial injuries, i.e. at least 125,000 facial injuries per year are caused by assault
- 40% of assaults caused serious facial injuries
- 51% of assault victims had drunk alcohol within 4 hours of the injury
- 40% of all the assaults occurred in the 15-25 age group and more than 40% of these caused serious facial injury
- more women than men were assaulted in the home, nearly half of all assaults on women occurred in the home. Overall, however, 4 men were assaulted for every assault on a woman.
- road traffic accidents caused 5% of facial injuries, but more than 40% of these resulted in serious facial injury
- 1 in 6 patients involved in road traffic accidents had drunk alcohol within four hours of the injury
- 10% of patients with facial injuries caused by falls had drunk alcohol within four hours of the injury

The analysis from BAOMS identifies alcohol consumption as a demand driver. Table 1 shows the trends alcohol consumption.

Table 1: Trends in lifestyle behaviours for a select set of behaviours

Lifestyle behaviour		2000	2001	2002	2003	2004	2005	2006	2007	2008
Drinking (adult males)	%	28	27	27	(-)	(-)	24	31	(-)	28
Drinking (adult females)	%	17	15	17	(-)	(-)	13	20	(-)	19
Binge drinking (adult males)	%	21	21	21	23	23	18	23	25	21
Binge drinking (adult females)	%	9	9	9	9	9	8	15	16	14

Source: Department of Health (DoH) Health Profile for England, published March 2010

(-) Indicates no available data

The table indicates drinking in adults has fluctuated since 2000 with a high of 31% in 2006 for men (20% in 2006 for women) and a low of 24% in 2005 (13% in 2005 for women). There is no evidence to suggest that drinking will not stay between these extremes in the near future. Binge drinking for males in 2008 (21%) is at the same level it was in 2000 after peaking in 2007 at 25%. In females, however, the recent trend is a decreasing one although it is still higher in 2008 (14%) than it was in 2005 (8%).

In addition to emergency generated activity BOAMS also identifies the following workload areas:

- Dentoalveolar Surgery
- Orofacial Cancer and Reconstructive Surgery
- Orthognathic Surgery
- Cleft Lip and Palate
- Craniofacial Surgery
- Skull Base Surgery
- Stereolithography in Maxillofacial Surgery

- Facial Aesthetic Surgery
- Minimally Invasive Surgery
- Pre-Prosthetic Surgery and Dental Implants
- Facial Pain
- The Temporomandibular Joint
- Oral Medicine and Oral Mucosal Disorders
- Salivary Gland Disease
- Distraction Osteogenesis

The generated healthcare drivers for these procedures are wide and varied for example the ageing population which exhibits an increased incidence of degenerative illness. The activity driven for this specialty will, however, be driven by referrals by the related specialities identified in the related workforce section below.

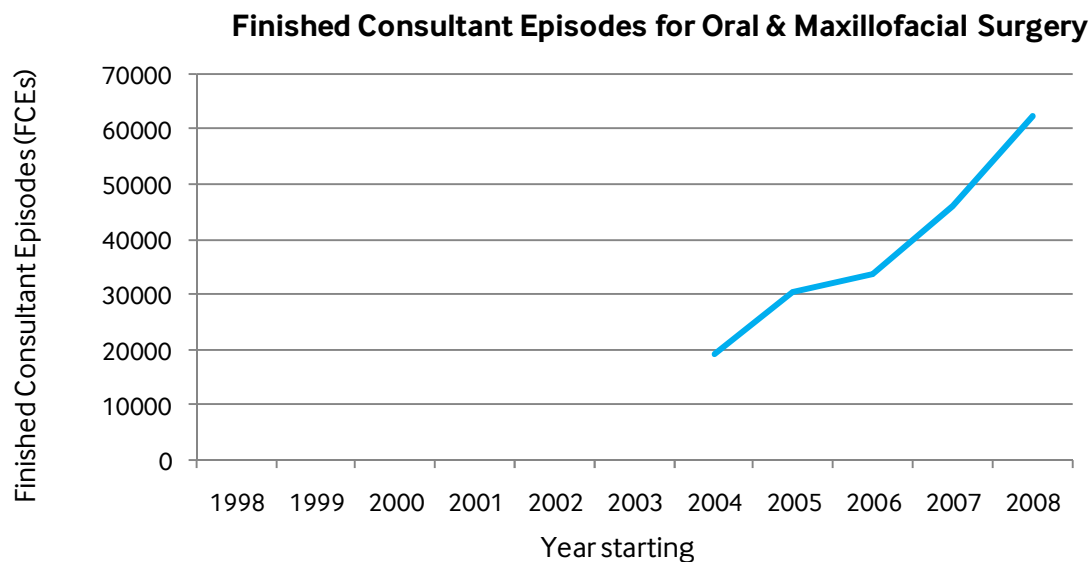
### **Changes in practice which may affect level of service**

Royal College of Surgeons England (2010) identify that “Three-dimensional radiographic anatomical displays (CT scans), and Magnetic Resonance Imaging (MRI scans) have allowed surgeons to view accurate and detailed three dimensional pictures of the inside of patients’ head and neck anatomy and pathology. Images may be manipulated by computer in order to generate precise models in order to plan surgery. Navigational systems linked to complex images allow the surgeon to view a “head up display” in the operating theatre, are being piloted.”

## Finished Consultant Episodes (FCEs) and Outpatient Attendances

Figure 3 shows Finished Consultant Episode (FCE) data for OMFS from 2003 up to 2008. (OMFS activity before 2004 was not recorded) It is assumed that the recording and definition of FCEs in this speciality has not changed significantly over this time period, and therefore the rise in FCEs from 2004 onwards indicates an increase in activity in the speciality. Figure 3 shows the trend in outpatient FCEs from 2003-2008; it also indicates a trend of considerable increase in activity.

Figure 3: FCE per year for Oral & Maxillo Facial Surgery

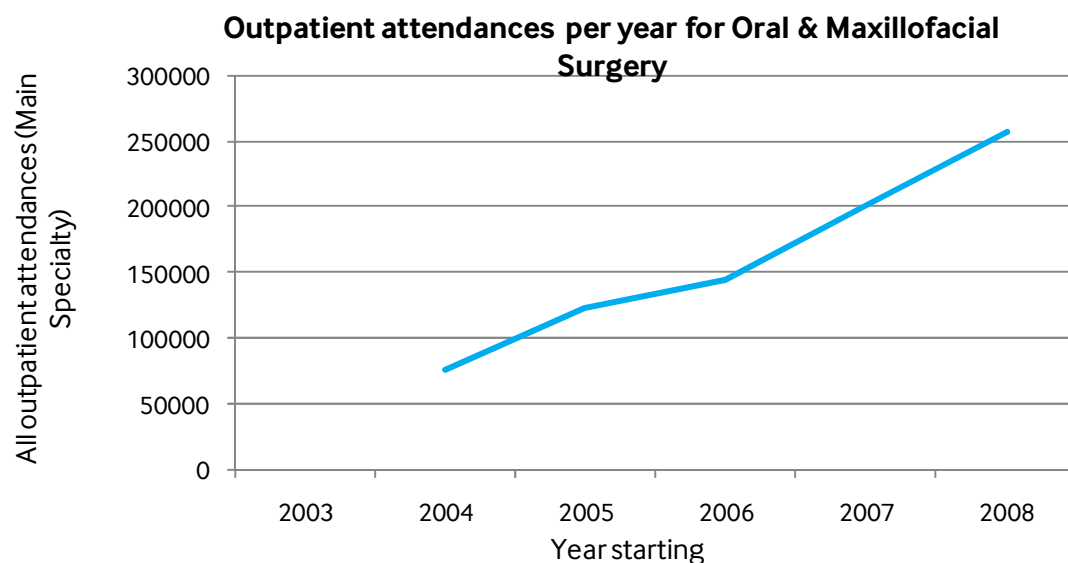


Source: The NHS Information Centre, Hospital Episode Statistics for England. Inpatient statistics, 1998-2008.

It should be noted that the data in the chart does not represent all the activity in this speciality; outpatient data is not covered, which makes up a significant proportion of the OMFS service (see Figure 4).



Figure 4: All outpatient attendances per year for Oral & Maxillofacial Surgery



Source: The NHS Information Centre, Hospital Episode Statistics for England. Outpatient attendances (main specialty), 2003-2008.

Again assuming consistency of recording over the years, Figure 4 shows a strong growth in OMFS outpatient activity.

### Weighted Capitation

Table 2 displays six scenarios based on weighted capitation (WCAP) alone for the possible requirements of junior doctors in Oral & Maxillo Facial Surgery. Column 2 is the ratio of the actual capitation to the calculated theoretical capitation. Columns 3 to 8 are the scenarios where all except the most under-capitated and the most over-capitated are moved to the mean, median, least, 2<sup>nd</sup> least, 2<sup>nd</sup> most and most capitated levels respectively. The values in the 2<sup>nd</sup> row are the mean, median, least capitated, 2<sup>nd</sup> least capitated, the 2<sup>nd</sup> most and most capitated respectively.

Table 2: Table of six scenarios for each SHA based on weighted capitation for the possible requirements of Junior Doctors – Oral & Maxillofacial Surgery

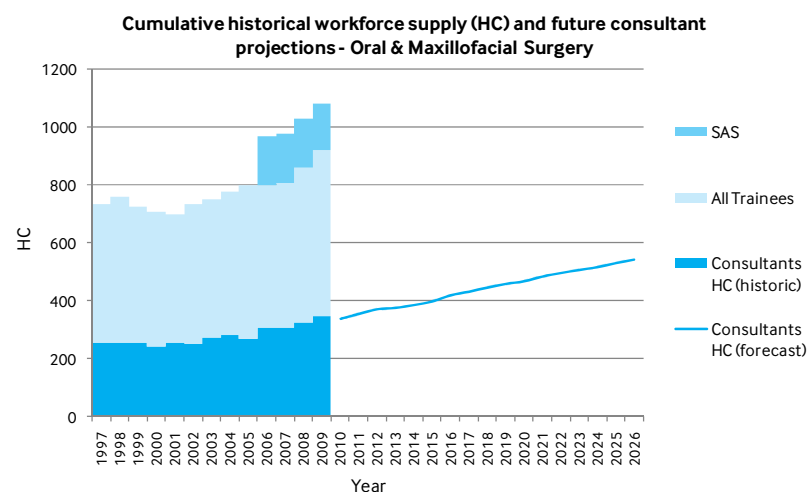
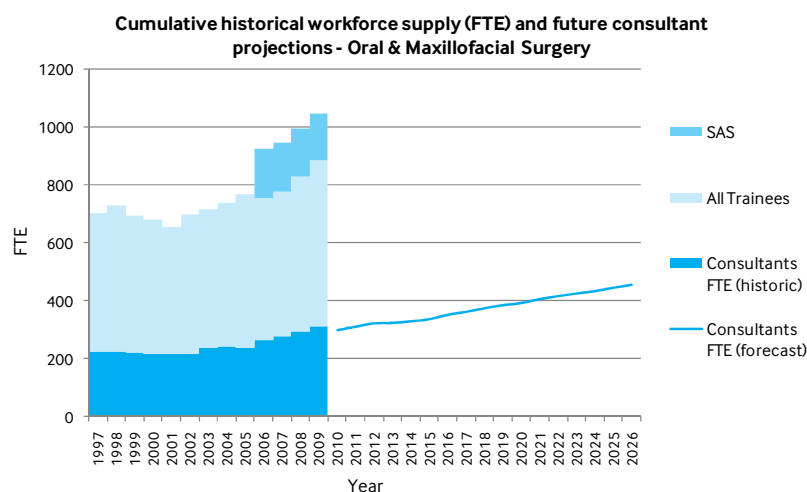
Strategic Health Authority	Ratio of Actual: Weighted capitation	Move all to average value	Move all to median value	Move all to min	Move all to 2nd min	Move all to 2nd Max	Move all to Max
		0.98	1.08	0.00	0.41	1.43	1.78
North East	1.14	-1	0	-8	-5	2	5
North West	1.11	-2	0	-20	-13	6	12
Yorkshire & The Humber	1.78	max	max	max	max	max	max
East Midlands	0.00	min	min	min	min	min	min
West Midlands	1.05	-1	0	-14	-9	5	10
East of England	0.41	7	8	-5	0	12	17
London	1.43	-8	-6	-24	-17	0	6
South East Coast	0.66	3	4	-6	-2	7	10
South Central	1.23	-2	-1	-10	-6	2	4
South West	0.79	2	3	-9	-4	7	12
Total		-2	8	-96	-56	41	75
% change		-0.7%	2.4%	-30.1%	-17.7%	12.9%	23.4%

This analysis reveals that change in requirements range from an increase of 12.9% (2<sup>nd</sup> most capitated) to a decrease of 17.7% (2<sup>nd</sup> least capitated) on average when only WCAP is considered for Oral & Maxillofacial Surgery junior doctors.

## HISTORICAL AND FORECAST SUPPLY

The supply of OMFS consultants is shown in Figures 5a-b. The figures are based upon the latest data available (SAS data only dates back to 2005).

Figures 5a-b: (a) Workforce supply (FTE) and, (b) Workforce supply (HC) – Oral & Maxillo Facial Surgery



The charts above show that the consultant workforce expanded by 30% during the past five years based upon the Information Centre (IC) census. The number of trainees (which are defined as those in the Foundation 2, SHO and registrar groups) has also increased, and the combination of trainees and SAS grade doctors now constitute nearly 70% of the medical OMFS workforce. The supply of OMFS consultants over the next 10 years is forecast to increase to 374 FTE in 2018 (458 headcount), an average increase of 2.4% annually, based on the following assumptions:

- retirement occurs at 62 years of age
- 30% of current trainees are delayed in completing their training by one year and 5% are delayed for 2 to 5 years

- there are no international recruits or returners per annum, and there are 2 young leavers (non-retirements) per annum,
- there are no conversion from staff grade or associate specialist posts to consultant posts
- there is a wastage rate amongst registrars of 0%.

In the past, the accuracy of WRT's projections in this specialty have underestimated the consultant growth by 25%, based upon records published by the IC from 2005 to 2009.

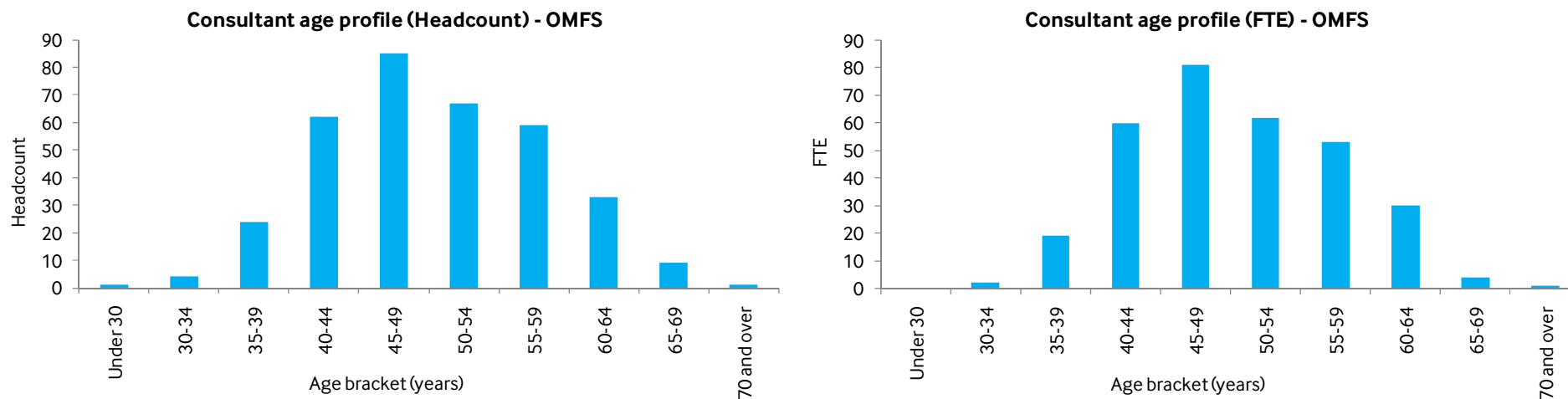
## Existing Workforce

### Supply

According to the 2009 IC census there are 310 FTE (345 headcount) consultants, while Electronic Staff Records (ESR) from September 2009 show 240 FTE (260 headcount). This is a difference of 29% in comparison to census records. The latest available data records 245 FTE consultants (265 headcount) (ESR, extracted via iView, March 2010).

The age profile of the current consultant workforce as at September 2009 is shown in Figures 6a-b.

Figures 6a-b: (a) age profile (FTE) and, (b) age profile (Headcount) – OMFS consultants



The charts show a strong supply of younger staff and would not suggest an imminent retirement bulge.

### Geographic Distribution

Tables 3a and 3b below show the geographic distribution of doctors and trainees in absolute values and in relation to the weighted capitation of each Strategic Health Authority (SHA) (a definition of weighted capitation is given below\*).

Tables 3a-b: (a) Number of Oral & Maxillofacial Surgeons minus the weighted capitation value for each area, and (b) Actual number of medics in each area, across ten SHAs for Oral & Maxillofacial Surgery

		Actual number of doctors minus the weighted capitation, shown for <i>Oral &amp; Maxillofacial Surgery</i> by SHA - Based on latest data available as at April 2010					Number of doctors by grade and SHA, shown for <i>Oral &amp; Maxillofacial Surgery</i> - Based on latest data available as at April 2010				
		Table (a)					Table (b)				
SHA	Weighted Capitation	Junior Doctors	Staff Grade	Specialty Doctor	Associate Specialist	Consultant	Junior Doctors	Staff Grade	Specialty Doctor	Associate Specialist	Consultant
North East	5.9%	1	-1	-1	1	-3	8	3	2	4	15
North West	15.2%	2	1	-3	0	-12	20	11	3	8	36
Yorkshire & The Humber	10.8%	10	-1	5	-4	1	23	6	10	2	35
East Midlands	8.6%	-10	3	-2	-1	-5	0	9	2	3	22
West Midlands	11.2%	1	-7	-1	-4	-4	14	1	3	2	31
East of England	10.2%	-7	-1	2	3	3	5	5	7	8	34
London	14.1%	7	3	-4	-1	5	24	12	2	6	49
South East Coast	7.6%	-3	-2	1	3	10	6	3	5	7	34
South Central	6.6%	2	-3	3	2	0	10	1	6	6	21
South West	9.8%	-2	8	-1	1	4	9	15	3	6	35
<b>Total</b>	<b>100%</b>						<b>119</b>	<b>66</b>	<b>42</b>	<b>51</b>	<b>310</b>

\*The Department of Health uses a weighted capitation formula (WCAP) to distribute resources to primary care trusts (PCTS) based on the relative health needs of each PCT's catchment area. If qualified doctors and trainees were equitably distributed according to the formula, all other columns in Table 3a would be zero. Values greater than zero indicate that the SHA has more doctors and trainees than would be included by WCAP; values less than zero indicate evidenced room for growth of the workforce.



## Recruitment 2009

The summary position of recruitment to OMFS in the 2009 recruitment round is shown in Table 4.

*Tables 4: 2009 Specialty Recruitment for Oral & Maxillofacial Surgery at ST1*

Deanery	Available Posts	Accepted Posts	Fill Rate
East Midlands	0	0	-
East of England	0	0	-
Kent, Surrey and Sussex	0	0	-
London	6	5	83%
Mersey	0	0	-
North West	1	0	0%
Northern	0	0	-
Oxford	0	0	-
Peninsula	0	0	-
Severn	0	0	-
West Midlands	3	0	0%
Wessex	2	2	100%
Yorkshire and the Humber	3	0	0%
<b>Total</b>	<b>15</b>	<b>7</b>	<b>47%</b>

OMFS recruitment was undertaken by some post graduate deaneries as part of national recruitment, so the table will not identify regional differences in the recruitment. The table does, however, identify that full recruitment to OMFS is difficult. In CfWI's view, the degree to which the current number of available posts is filled together with the geographic distribution is essential factors in evaluating the requirement for additional posts.

## Related Healthcare Workforce

British Association of Oral and Maxillofacial Surgeons (2010) identify that the OMFS workforce work alongside a variety of specialists in other fields such as:

- Accident & Emergency
- Sport injuries
- Neurosurgery & Neurosciences
- Ophthalmology
- Dental Specialities
- Dermatology
- Clinical Genetics
- Clinical Oncology and Radiotherapy
- Anaesthetics
- Endocrinology
- Cardiology and Cardiothoracic Surgery
- Paediatrics
- Orthopaedics

- ENT
- Psychiatry
- Rheumatology
- Intensive Care
- Respiratory Medicine
- Gastroenterology
- Renal Medicine
- Speech therapy
- Dieticians
- Physiotherapy
- Occupational therapy
- Audiology

In addition General Practice and High Street dentistry will be a prime patient referral source for OMFS.

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