

## A survey of English dental practices with costs in mind

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### Background

In 2010, the Department of Health (2010, p.6) announced their commitment to introducing a new National Health Service (NHS) dentistry contract to be based on 'registration, capitation and quality', rather than remunerating for units of dental activity. In 2014, PSSRU was asked by the Department of Health to explore the cost information available on dentists in England and to undertake a new study that would fill in any gaps in their knowledge about unit costs for Performer-Only and Providing-Performer dentists (pages 168-9) to inform the new contract. Potentially, this work could assist in setting remuneration rates and ensure resources are fairly allocated within the General Dental Services (GDS).

The dental publications produced by NHS Digital provide a detailed study of the self-employed earnings and expenses of GDS dentists in England and Wales, derived from anonymised tax data. The data are shown by business arrangement (e.g. sole trader, partnership) for Performer-Only dentists, who may undertake NHS activity if the practice owner holds an NHS contract (see Box 1), and for Providing-Performer dentists who can undertake NHS and/or private dental activity (see Box 1). The NHS Digital data exclude Provider-Only dentists as they have no NHS activity recorded against them. The data are not shown for England and Wales separately. Only a total cost is shown for England which includes expenses for office and general business, premises, employees, car and travel, 'other' (laboratory and material costs as well as advertising and promotion) for both Performer-Only and Providing-Performer dentists.

#### Box 1 Types of dentists

##### Provider

A Provider is a person or authorised body (including certain companies and NHS trusts) which has entered into a contract with NHS England to provide primary dental services.

##### Performer

A performer is a dentist who carries out dental activity.

##### Provider-Only

A Provider-Only is a Provider who sub-contracts all dental activity to other performers and does not perform NHS dentistry on the contract themselves.

##### Performer-Only

A performer-only delivers dental services but does not hold a contract with NHS England. They will be employed by a Provider-Only or a Providing-Performer.<sup>1</sup>

##### Providing-Performer

A Providing-Performer is a Provider who holds a contract and who also acts as a performer, delivering dental services themselves.

Source: HSCIC (2014) *NHS Dental Statistics for England: 2014-15*, p19. <http://content.digital.nhs.uk/catalogue/PUB15901/nhs-dent-stat-eng-2014-15-gui.pdf>

<sup>1</sup> In many practices the NHS contract holder (the Provider) will be the practice owner. In other situations associates may hold their own NHS contract or bid for an NHS contract. ([https://www.bda.org/dentists/advice/career/Documents/a17\\_associate\\_contracts\\_england\\_and\\_wales\\_-\\_apr11.pdf](https://www.bda.org/dentists/advice/career/Documents/a17_associate_contracts_england_and_wales_-_apr11.pdf))

Our exploration of the NHS Digital data also showed that the value of capital items such as x-ray machines, dental chairs and dental mirrors are excluded from the total cost figure but represented in the item 'net capital allowances' which dentists are able to deduct from profits before paying tax. There is some concern, however, that their cost is being underestimated, which could indicate that dentists are not maximising their tax relief (<http://www.dentax.co.uk/capital-allowances-tax-relief-for-your-dental-practise/>). These capital costs, as well as 'employee expenses' which are shown at a practice level for a Providing-Performer dentist, were therefore the focus of the new study.

## Method

### Survey/sample

In collaboration with the Chief Dental Officer for England and the Department of Health, a set of questions was developed and piloted with two local dentists and a dental hygienist. Contact was made with the GDC via the Department of Health, to secure access to a mailing list: the same list used by NHS Digital to generate data for their Earnings and Expenses reports. This list contained over 30,000 addresses of dentists, but was reduced to 7,500 by excluding all suspended dentists as well as those who qualified to practice before 1975 as we assumed that they would no longer be practising. We included those with an e-mail address and who lived in England. Additionally, only those practices undertaking at least some NHS activity were to be included in the analysis, as identified from the survey. A Data Sharing Agreement was signed with the GDC and a password encrypted list (Excel file) was transmitted to PSSRU. An e-mail with the survey link described the role of the survey in formulating the New Dental Contract, and one response was requested per practice. A reward for responding was offered and organised so that confidentiality of the practice was maintained. We ensured that the survey and cover e-mail could be accepted by all internet providers, and it was forwarded in batches with a request to reply within three weeks.

The survey included questions about the number of dentists, dental nurses, hygienists and hygienists-therapists, practice managers and other staff such as receptionists/technicians that were working within the practice, and the number of sessions (4 hours) usually worked by each professional per week. Respondents were also asked to identify how many of the dentists in the practice were 'Providing-Performers', and whether the practice worked solely on NHS dental activity, treated both NHS and private patients, or treated only private patients. With this information, it was possible to estimate how many full-time equivalent (FTE; 35.8 hours per week for Performer-only dentists and 41.4 hours per week for Providing-Performers) dentists and other staff were working within practices, and also the number of FTE staff employed per dentist.

The survey also requested an approximate value for items of equipment (for example, dentist chairs, cabinetry, dental compressors and all dental technology) used in the practice and how often the larger items of equipment needed replacing. Finally, to be consistent with NHS Digital publications and to see whether costs differed between business arrangements, the survey asked whether the practice operated as a limited company, limited liability partnership, true partnership, expenses-sharing group, sole trader without help, sole trader with help, or in any other category.

### Costs

#### Employee expenses

Providing-Performer dentists take responsibility for employing support and other clinical staff such as dental nurses and hygienists (British Dental Association, 2011), and this is reflected in their expenses. However, for the purpose of estimating a unit cost for a Providing-Performer dentist, we have assumed that support and other clinical staff are equally distributed between Performer-Only and Providing-Performer dentists. For example, all dentists may require the services of a dental nurse and practice manager regardless of funding arrangements.

To calculate these employee costs, we multiplied the FTE for each professional per dentist by the appropriate Agenda for Change (AfC) band for April 2017 (<https://www.healthcareers.nhs.uk/explore-roles/dental-team/pay-dental-team-nhs>) and added on-costs. Where the response to the survey was 'other staff', we used AfC band 2.

The total FTE employee cost per dentist was calculated, first for all practices who undertook only NHS dental activity and then for practices that undertook both NHS and private dental activity. Costs were also calculated per business arrangement using a weighted cost based on the number of practices working in each business arrangement. A sensitivity analysis was performed using different combinations of staff and AfC bands.

## Equipment costs

We calculated the total and annual cost of equipment per dentist by dividing the total value provided by each practice for equipment items by the number of FTE dentists within the practice. The average cost per business arrangement per dentist was calculated, weighted by the number of practices within each business arrangement. An *annual* cost per dentist was estimated using responses to a survey question asking how often equipment was replaced and a discount rate of 3.5 per cent was applied (HM Treasury, 2015).

## Results

### Employee expenses

Responses were received from 251 practices employing 820 dentists, a response rate of 11 per cent (820/7500). Thirty-three practices undertook only NHS dental activity, and 168 carried out both NHS and private dentistry (Providing-Performers). The 50 practices that provided only private sector dental activities (Performer-Only) were excluded, as were those with incomplete responses. Many staff work part-time in dentist practices. The 201 practices included in our analysis employed 710 dentists, equivalent to 492 full-time dentists. On average, there were 3.4 (2.3 FTE) dentists per practice, 67 per cent of whom were Providing-Performer dentists. Table 1 shows the average number of FTE staff, including dentists, by the practice business arrangement. On average, there were 5.37 staff other than dentists in practices, which undertook both NHS and private dentistry, and 4.65 in those providing only NHS dental activities.

Table 2 shows the average FTE staff per FTE dentist by business arrangement, and the average cost per annum for those staff. These data support our calculation of the unit cost per dentist. Thus, for each dentist working in a practice that undertakes NHS and private activity, there were 1.4 FTE dental nurses, 0.17 hygienists, 0.23 practice manager and 0.50 other staff such as receptionists, technicians etc. The total staff cost is £55,834 per FTE dentist, within a range of £43,978 for business arrangements classed as 'other', to £67,556 for limited companies that provide NHS and private dentistry.

### Equipment

Table 3 shows that there were 152 responses to the questions on equipment. A weighted average cost of £56,256 per FTE dentist was calculated, which when annuitised over ten years (the most commonly-stated period at which equipment is replaced) produced an annual cost of £6,762. Again there are some cost differences, ranging from £33,972 for dentists working in practices labelled as 'other', to £64,402 for limited companies or those with limited liability.

## Discussion

This survey of English dental practices was carried out in 2014 at the PSSRU in collaboration with the Department of Health and the General Dental Council. There were two main aims: first to identify direct employee costs for Performer-Only and Providing-Performer dentists by business arrangement, and second to identify spending on equipment and the replacement rate. The latter set of information would provide some guidance as to whether the net capital allowances recorded by dental practices on their tax returns are adequate to cover their costs. The findings could assist policy makers in setting remuneration levels for the New Dental Contract, expected to be rolled out in 2018 (Evans, 2017).

### Employee expenses

The Dental Earnings and Expenses publication shows that, in 2014/15, an average of £6,900 was recorded for employee expenses for Performer-Only dentists, and £86,400 for Providing-Performers (assumed to be practice level expenses; NHS Digital, 2016, p.32-33). To gauge whether these expenses adequately cover practice staffing costs, we have estimated costs for all staff working within dental practices (dental nurses, hygienists, therapists, practice managers, receptionists, technicians etc.) using national pay scales, and assumed that both Providing-Performers and Performer-Only dentists require equal access to them.

To enable a comparison of published expenses with this work, we weighted employee expenses' recorded by NHS Digital (NHS Digital, 2016, p.32-33) by the proportion of dentists who are Providing-Performers or Performer-Only dentists found in this study (67% were Performer-Providers). Using the NHS Digital data, we found that each FTE dentist was supported by 2.32 FTE staff, at a total cost of £59,946 for all practices with NHS activity; a figure which is strikingly similar to our own (Table 2; £59,254). For NHS-only practices, this cost is lower (£55,662), although no data for comparison were found in the NHS Digital Dental Earnings and Expenses publications. Our survey also allows costs to be identified by business arrangement, adding to the information currently provided by current NHS Digital, and thus could assist policy makers in assessing the usefulness of a single contract. Inevitably, however, the comparison is sensitive to assumptions about

salaries, and some caution should be exercised. Our sensitivity analysis showed that if, for example, we had assumed dental nurse specialists were employed (AfC band 5) and 'other' staff were graded as a mix of band 2 and band 7 (dental technician advanced), our costs could rise to nearly £73,000 for practices with NHS activity. This figure exceeds the expenses recorded in the Dental Earnings and Expenses publication by around £12,500.

### Equipment costs

When plant and machinery are purchased, dentists are able to deduct some or all of the items from profits before paying tax (Gov.UK, 2016). This study has attempted to gain some insight into whether dental practices are maximising their claims. In 2014/2015, Providing-Performer dentists allowed £7,100 and Performer-Only dentists £1,100, a weighted average of £5,108. Table 4 shows that 39 per cent of dentists replace major items of equipment every ten years, at an annual cost of £6,762 per FTE dentist. This is £1,654 higher than the average claim reported in the Dental Earnings and Expenses submission. The results of this survey show that 46 per cent of dentists replace their equipment more frequently than every ten years. The data suggest a larger discrepancy of £3,077 for those replacing equipment every eight years, and £7,353 for those replacing it every five years. It would appear that only those replacing equipment every 15 years are maximising their full claims.

### Conclusion

This study shows that when routinely collected Performer-Only and Providing-Performer employee expenses are combined (NHS Digital, 2016, p. 32-33), they are highly comparable with the staffing expenses calculated for this study, although this is dependent on assumptions made about staff grade and salaries.

However, we found that dental practices may not be maximising their claim to capital allowances. Most dental practices replace large items of equipment at least every ten years, and the average annuitised values for all business arrangements are greater than those for which they are claiming a capital allowance.

**Table 1: Average number of FTE staff per practice by business arrangement**

<b>Business type (number of practices)</b>	<b>Performer-Providers</b>	<b>Performer dentists</b>	<b>Total dentists</b>	<b>Dental Nurses</b>	<b>Hygienist/therapist</b>	<b>Practice Manager</b>	<b>Other staff</b>
<b>Sole trader (with and without help)</b>							
NHS only activity (n=20)	1.12	1.02	2.14	2.94	0.06	0.44	0.95
NHS/Private activity (n=82)	1.23	0.66	1.89	2.88	0.31	0.49	1.01
<b>Expenses-sharing</b>							
NHS only activity (n=4)	1.24	0.74	1.98	2.40	0.27	0.08	1.28
NHS/Private activity (n=23)	2.34	0.16	2.50	3.04	0.60	0.46	1.02
<b>True partnership</b>							
NHS only activity (n=7)	1.61	0.65	2.26	3.70	0.07	0.50	1.26
NHS/Private activity (22)	1.96	0.92	2.88	3.72	0.52	0.50	1.05
<b>Limited company</b>							
NHS only activity (n=2)	1.31	0.09	1.40	2.03	0.46	0.93	1.06
NHS/Private activity (n=31)	1.56	1.33	2.89	4.72	0.63	0.69	1.54
<b>Other</b>							
NHS/Private activity (n=10)	2.55	1.28	3.44	2.85	0.50	0.72	1.94
<b>All business arrangements with NHS activity</b>							
NHS only activity (n=33)	1.25	0.85	2.10	3.00	0.11	0.44	1.10
NHS/Private activity (n=168)	1.57	0.80	2.35	3.30	0.40	0.52	1.15

**Table 2: Average FTE employees and employee expenses per FTE dentist, by business arrangement**

Business type (number of practices)	Dental nurses per FTE dentist and cost		Hygienists per FTE dentist and cost		Practice manager per FTE and cost		Other staff per FTE dentist and cost		Weighted average costs
<b>Sole trader (with and without help)</b>									
NHS-only activity (n=20)	1.37	£35,916	0.03	£866	0.21	£6,373	0.44	£8,916	£52,073
NHS/private activity (n=82)	1.52	£39,836	0.16	£5,068	0.26	£8,036	0.53	£10,732	£63,689
<b>Expenses sharing</b>									
NHS-only activity (n=4)	1.21	£31,688	0.14	£4,214	0.04	£1,252	0.65	£12,983	£50,150
NHS/private activity (n=23)	1.21	£31,789	0.24	£7,416	0.18	£5,703	0.41	£8,194	£53,126
<b>True partnership</b>									
NHS-only activity (n=7)	1.63	£42,800	0.03	£957	0.22	£6,857	0.55	£11,197	£61,814
NHS/private activity (n=22)	1.29	£33,768	0.18	£5,579	0.17	£5,381	0.36	£7,322	£52,067
<b>Limited company</b>									
NHS-only activity (n=2)	1.45	£37,707	0.33	£10,153	0.66	£20,590	0.76	£15,206	£83,887
NHS/private activity (n=31)	1.63	£42,697	0.28	£6,736	0.24	£7,400	0.53	£10,702	£67,556
<b>Other</b>									
NHS/private activity (n=10)	0.83	£21,659	0.14	£4,491	0.21	£6,487	0.56	£11,326	£43,978
<b>All business arrangements with NHS activity</b>									
NHS-only activity (n=33)	1.41	£37,274	0.06	£1,854	0.22	£7,057	0.51	£9,984	£59,438
NHS/private activity (n=168)	1.43	£36,984	0.17	£5,107	0.23	£6,717	0.50	£10,274	£55,834

**Table 3 Equipment costs by business arrangement (annuitised over ten years)**

Business arrangement	No. of practices (n=152)	Equipment cost per FTE dentist	Annuitised cost (discounted at 3.5%)
Sole trader with/without help	73	£59,343	£7,133
Expenses-sharing groups	24	£49,888	£5,997
True partnership	19	£43,412	£5,218
Limited company/Limited liability partnerships	32	£64,402	£7,741
Other	4	£33,972	£4,083
<b>Weighted average cost</b>	<b>152</b>	<b>£56,256</b>	<b>£6,762</b>

**Table 4 Sensitivity analysis of annual equipment costs per FTE dentist**

	Average total cost per FTE dentist : £56,256			
Average life of equipment/ percent of practices	39%: 10 years	26%: 8 years	20%: 5 years	16%: 15 years
Average annuitised cost per FTE dentist	£6,762: 10 years	£8,185: 8 years	£12,461: 5 years	£4,805: 15 years

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