



# Costing study of pre-registration nursing, midwifery and allied health disciplines

Report to HEFCE by KPMG

KPMG LLP

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This report contains 78 pages in total

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**Important notice**

This report has been prepared in accordance with the terms of our engagement with the Higher Education Funding Council for England (the 'Council') dated 26<sup>th</sup> August 2016 (the 'Services Contract'). Accordingly, save as set out in the Services Contract, we have (i) not verified the reliability or accuracy of any information obtained in the course of our work, or (ii) not taken into account the interests, needs or circumstances of other parties (whom we may be aware might read this report).

This report is based on fieldwork carried out between 8 September 2016 and 10 February 2017.

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In particular, the report has not been prepared to address the individual requirements of any higher education institution nor those of people or organisations involved in the education sector who might have an interest in the matters discussed in this report.

# 1 Executive Summary

## 1.1 Introduction and background

From 2017-18, students starting undergraduate courses that on successful completion lead to first registration as a professional in nursing, midwifery and certain allied health professions (pre-registration courses) will be supported through the higher education finance system. As a result of the transfer of funding responsibility, HEFCE has received funding to support these courses under the new finance arrangements.

HEFCE commissioned this study to understand more fully the costs of the NMAH provision in English higher education institutions (HEIs), in order to inform their funding policy decisions. This study does not include funding decisions or recommendations. These are decisions for HEFCE to take.

## 1.2 Purpose of this study

This study aimed to:

- Determine the average annual full economic cost per full-time equivalent student for the courses in scope on a Transparent Approach to Costing for Teaching, TRAC(T) basis;
- Understand the drivers of costs and cost variations; and
- Provide the basis for a critical analysis of the strength of the evidence base for the costing analysis.

The study also sought to identify any issues that HEFCE might need to consider in using the costing data to inform its future funding decisions. These are detailed in section 1.7.3 and section 5. The study collected costs at course level, but then aggregated these up to profession level. This is to reflect HEFCE's funding model which considers the cost of provision at Higher Education Statistics Agency (HESA) cost centre level, which then informs a small number of price groups<sup>1</sup>.

## 1.3 Courses in-scope

The 16 professions in-scope of this study are listed below:

#	Profession	#	Profession
1	Chiropody / podiatry	9	Physiotherapy
2	Dental hygiene / therapy	10	Pre-registration midwifery
3	Diagnostic radiography	11	Pre-registration nursing - adult
4	Dietetics	12	Pre-registration nursing - child
5	Occupational therapy	13	Pre-registration nursing - learning disabilities
6	Operating Department Practice	14	Pre-registration nursing - mental health
7	Orthoptics	15	Speech and language therapy
8	Orthotics and prosthetics	16	Therapeutic radiography

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<sup>1</sup> [www.hefce.ac.uk/pubs/year/2016/201607/](http://www.hefce.ac.uk/pubs/year/2016/201607/)

Some nursing courses are delivered covering a mix of adult, child, learning disabilities and mental health. These form a further category of courses, nursing – unclassified. Data for these courses have been shared with HEFCE, but is not included in this report due to the low number of HEIs delivering the provision. Also, the data for Orthoptics and Orthotics and Prosthetics, has been provided to HEFCE, but it is not in this report due to the low numbers of HEIs delivering the provision.

Finally, funding for Dental Therapy and Dental Hygiene will not transfer to the Higher Education finance system until after 2017/18. HEFCE plans to undertake further work to identify the costs of these subjects, therefore the data has not been disclosed in this report, but data for these courses have been shared with HEFCE to support that work.

HEIs deliver a range of courses with a variety of awards across these professions enabling students to qualify for registration with the relevant professional body. These awards range from BSc to MSc to a range of Diploma qualifications, all recognised and endorsed by the respective professional bodies. Further details of the courses included in this study are provided in 4.3 and Appendix 2.

#### 1.4 Costs in-scope

All the cost data provided by participants in the study relates to the 2014/15 academic year. The 2014/15 year was the most recent and complete year of available Transparent Approach to Costing (TRAC) data at the time of commencing this study and is not subject to changes in costs or patterns arising from the new Financial Reporting Standard 102 implemented in 2015/16. This provides a consistent basis for HEFCE to consider the **relative** cost of the provision in the scope of this study, with the other teaching activity it funds.

The study identifies and acknowledges some costs that will be present in 2017/18 that were not in 2014/15. A synopsis of these is provided for consideration by HEFCE as part of this report (Section 7), but we note that a number of these costs apply equally to other HEFCE funded provision.

The study used an amended version of the costs included in HEIs' annual TRAC(T) return as its starting point for determining course costs. TRAC is the standard method for costing in higher education in the UK and HEIs use this methodology to report on their cost of teaching, research and other activities<sup>2</sup>. TRAC(T) is the standard methodology for costing the teaching element, and is used to determine the full economic subject related cost of teaching a full-time HEFCE-fundable student across the HESA academic cost centres.

The costs for pre-registration courses funded by Health Education England (HEE) are excluded from TRAC(T), therefore the methodology used in this study required HEIs to add them back, to ensure the completeness of the costing. The cost of HEE funded bursaries are excluded from the study to provide a costing that is consistent and comparable with other TRAC(T) costs. The methodology also required the cost of placements funded by HEE to be excluded as this element of funding will continue. Any costs in excess of the funding received are however included.

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<sup>2</sup> 'TRAC: A guide for senior managers and governing body members, The Transparent Approach to Costing for UK Higher Education Institutions', Version 1 2 June 2015, [www.hefce.ac.uk/media/TRAC%20A%20guide%20for%20Senior%20Managers%20and%20Governing%20Body%20members.pdf](http://www.hefce.ac.uk/media/TRAC%20A%20guide%20for%20Senior%20Managers%20and%20Governing%20Body%20members.pdf)

## 1.5 Methodology

To achieve robust unit costs for each profession, the study needed a representative proportion of the student population and course coverage. As a result, a broad group of stakeholders were engaged to deliver a communication strategy across the sector to successfully achieve the coverage needed. We thank the groups for their valuable help and assistance.

A key element of the study was to assess the reasonableness of the submitted data. We have not audited or verified the data provided by HEIs. The methodology was designed to assess the reasonableness of the results, relative to data returned by other HEIs. The methodology also provided a level of consistency of the method used to calculate the course costs. We have listed below the steps taken to enable the study to deliver reasonable results:

- Standard templates developed with pilot institutions.
- Provision of guidance to promote consistent treatment of costs.
- The HEIs reviewing and validating their own data prior to submission.
- HEI Directors of Finance (or equivalent) confirming that in their submission:
  - the costs declared were representative of those incurred in delivering the courses in-scope;
  - the basis for allocating costs to the categories specified at academic department level were reasonable and materially correct;
  - the basis used for allocating academic staff costs to courses were reasonable, materially correct and reflective of the inputs to the course; and
  - the Dean or Head of the Health Faculty or Department or School had been appropriately involved in the process of calculating the course costs.
- A desk-top review of each HEI data submission, which considered the consistency of the data submitted:
  - within the HEI's submission;
  - with the other participants' submissions; and
  - with data provided by HEFCE for 2014/15 TRAC costs.
- Follow up communications with each of the HEIs to assess where source data differed to TRAC data previously submitted to HEFCE, where submissions were incomplete and to explore the factors behind the costs that in absolute or comparative terms were particularly high or low.
- Follow up queries with the HEIs based on upper or lower quartile unit costs at a profession level.
- A more detailed review of the submissions from a range of HEIs focusing on those submissions where we considered additional clarification was needed. This focused on profession level results in more detail with outliers in absolute or comparative terms and covered a range of HEIs (see detailed analysis later in Section 5).

## 1.6 Coverage of the study

The approach adopted to engaging with key stakeholders during the review, described in section 3, aimed to maximise the number of institutions participating in the study. All HEIs with pre-registration provision in England were invited to participate and 48 submissions from HEIs and one Further Education college were received. After quality checking and a number of resubmissions, five submissions were excluded from further analysis. Therefore returns from 44 HEIs have been included in the analysis and shared with HEFCE.

Applying the HEFCE threshold for excluding results which risks identifying individual HEIs, this report analyses 43 HEIs' submissions across 13 professions. The unit cost information, for the results excluded from this report has been shared with HEFCE to inform its policy deliberations.

Good coverage has been achieved by these submissions across a range of measures:

- On a like-for-like student full-time equivalent (FTE) basis (based on HESA data provided by HEFCE), the study achieved an approximate coverage of 70% of all possible student FTEs across 13 professions, with a range of 37% to 91%; and
- On a regional basis using the numbers of HEIs, the coverage ranged from 35% to 83%. The lowest coverage was 35% in London. On a like-for-like student FTE basis London coverage was 49%. HEFCE is undertaking further work to understand the variation in costs of delivering HE programmes in all subject areas in different geographical areas of England.

Section 4 provides more detail on the coverage achieved in detail.

## 1.7 Key findings and conclusions

### 1.7.1 Overall costs of provision

The study collected, assessed and analysed cost data from 43 HEIs and calculated the full economic cost of teaching a HEFCE-fundable FTE student for the following pre-registration nursing, midwifery and allied health professions courses. The costs are shown in Table 1.

**Table 1 - Average and median cost for a student FTE by profession**

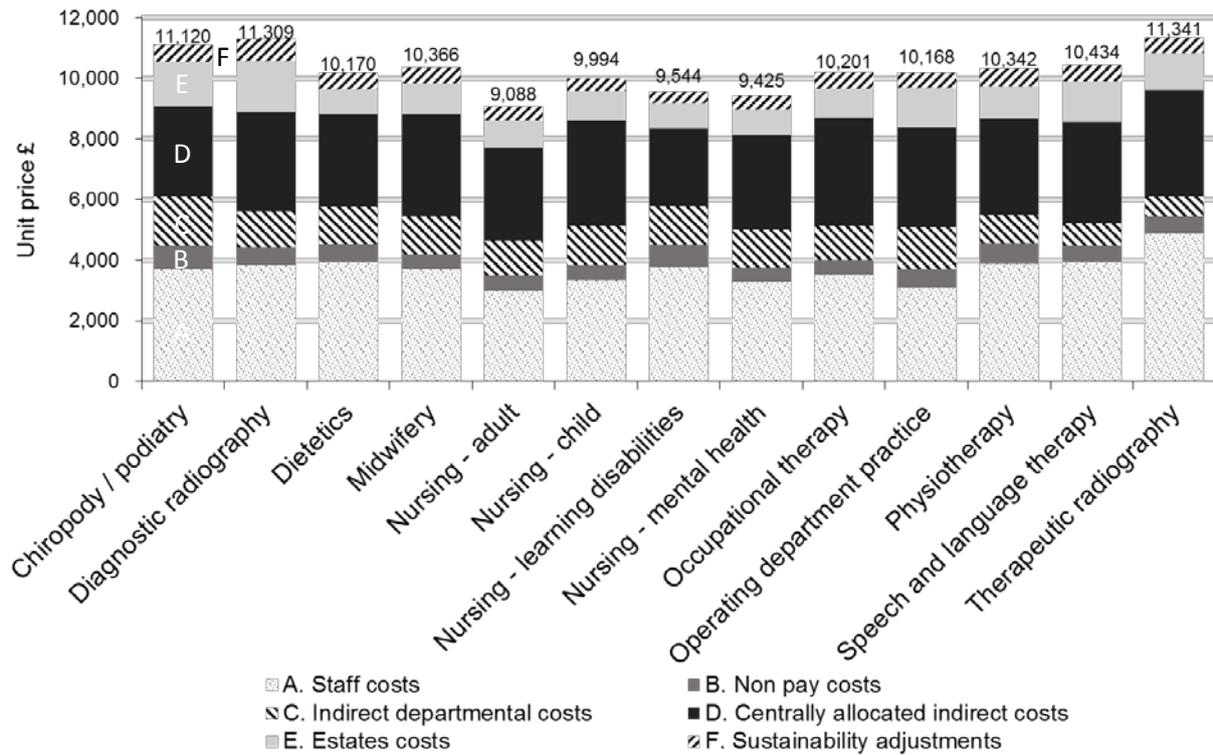
Profession	Mean unit cost £ (all regions)	Median unit cost £ (all regions)
Chiropody / podiatry	11,120	11,698
Diagnostic radiography	11,309	11,084
Dietetics	10,170	10,425
Midwifery	10,366	10,456
Nursing - adult	9,088	9,169
Nursing - child	9,994	9,718
Nursing - learning disabilities	9,544	9,566
Nursing - mental health	9,425	9,557
<b>All Nursing (for the four professions above)</b>	<b>9,259</b>	<b>9,266</b>
Occupational therapy	10,201	10,188
Operating Department Practice	10,168	10,139
Physiotherapy	10,342	10,397
Speech and language therapy	10,434	10,959
Therapeutic radiography	11,341	11,077
<b>Total for all professions (weighted £s)</b>	<b>9,669</b>	-

The key findings are that:

- Reported mean unit costs range from £9,088 for Nursing Adult to over £11,300 for Diagnostic and Therapeutic Radiography professions; and
- The mean and median costs are largely aligned, being no more than 5.2% different; and
- The costs illustrated in Table 1 include all modes of delivery (UG and PGT). This is because TRAC(T) does not differentiate between these types of provision and therefore this was necessary for comparison purposes. This difference in costs reported is analysed in section 6. This analysis found that on average PG provision was 6.8% higher than UG.

The HEIs provided detail for each course cost across six cost categories. The unit costs for each profession across these cost categories are illustrated in Figure 1:

Figure 1 - Profession mean unit costs by cost category



Indirect departmental costs comprise pay and non-pay costs within the Department that are not directly attributable to courses delivered by the Department, typically any remaining administrative staff and a proportion of senior management time.

Centrally allocated indirect costs comprise costs allocated to the Department or Faculty or School, through the TRAC model in respect of central overhead costs that are not estates costs.

Sustainability costs reflect the allocation of TRAC adjustments for cost of infrastructure and return for finance and investment.

The staff cost (comprising all pay and agency costs in the Department) is the largest element of the unit cost for nine of the 13 professions with centrally allocated costs being the largest cost category for the other four professions (being Nursing Adult, Nursing Child, Occupational therapy and Operating Department Practice). For those four professions staff costs were similar to Centrally allocated indirect costs (within 2%).

Figure 2 – The median, highest and lowest unit costs by Profession

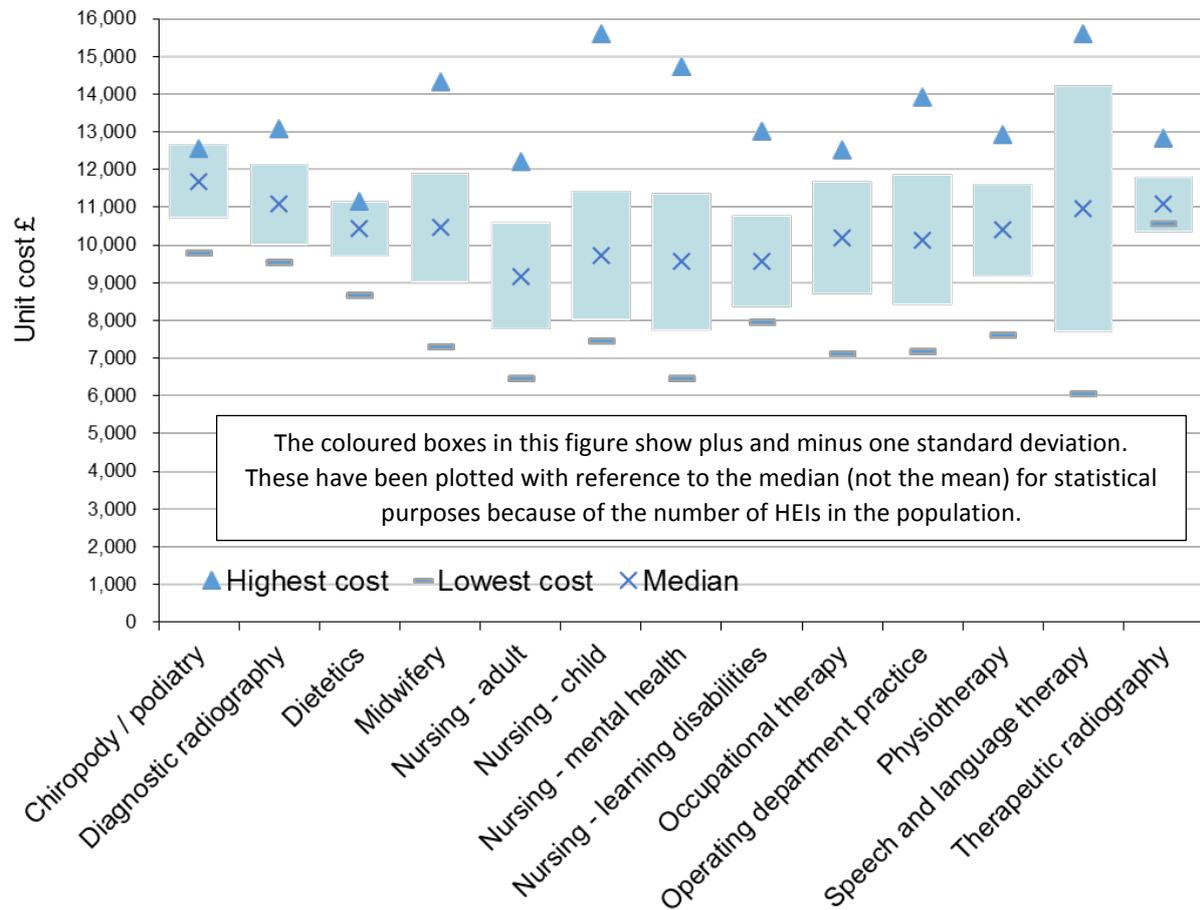


Figure 2 illustrates that each profession displays cost variation with standard deviations ranging from between £700 (for Therapeutic Radiotherapy) to £3,250 (for Speech and Language Therapy). Part of the reason for the wider standard deviation for Speech and Language therapy appears to be the fewer HEIs in the sample (six HEIs) and the reduction of HEE commissioned training places in this discipline.

Nursing Mental Health and Operating Department Practice had the next highest standard deviation (of £1,811 and £1,711 respectively). Further analysis of these results shows a number of high and low reported costs for similar levels of student FTEs contributing to these deviations.

Costs outside the higher and lower quartile costs by profession were queried with HEIs and in some instances led to resubmissions. The high and low instances shown here are after that process, therefore representing unit costs that HEIs have reviewed subsequent to submission and in many cases provided further reasons to explain the costs. Section 5 details the validation process followed during the study.

### 1.7.2 Understanding the cost components

The study analysed the costs in a range of ways to assess the reasonableness and consistency of how the costs had been reported. Some key observations from this are:

- Pay costs on average formed 34% of the costs when averaged across the professions, of which:

- Course delivery 78.2%;
  - Placement management 11.3%; and
  - Compliance management 6.0%.
- Departmental non-pay costs formed 5.4% of the costs. Of this, 28% were incurred on Disclosure and Barring Service (DBS), occupational health checks and uniforms. The table below details further the average (mean) costs incurred per FTE:

*Table 2 – Weighted average unit cost (£) for Disclosure and Barring Service (DBS), Occupational Health and Uniforms*

Item	DBS checks	Occupational Health checks	Uniforms
Number of HEIs	36	37	40
Median £	22	92	32
Mean £	25	99	33

- Whilst the majority of HEIs do not charge students for these costs, some HEIs indicated in our survey that they do, for example 14% of our survey respondents charged for DBS.
- Indirect department costs, centrally allocated indirect costs and estates costs comprise 55% of the total costs reported (12%, 33% and 10% respectively). These percentages did not vary significantly across the 13 professions.
- Sustainability costs (to reflect the full economic cost of infrastructure and return for finance and investment) comprise 5% of the submitted costs.

### 1.7.3 Limitations of the study

The study collected, assessed and analysed a significant amount of data, with over 7,500 cost records generated by the costing returns alone, covering a significant proportion of the total student FTE population studying these courses during 2014/15. This coverage and level of detail is greater than other HEFCE costing studies and more granular than TRAC(T) which has informed teaching funding levels. This should provide more reliable data, or visibility of anomalies which would not be evident in TRAC(T) data.

There are however some inherent limitations in this study, as follows:

- Whilst a range of measures have been used to assess the data, the study has not verified, substantiated or audited the data provided by HEIs.
- Trend analyses and relative comparisons have been used to provide an indication of whether HEIs have reasonably allocated and apportioned costs to the in-scope courses, but this does not provide absolute certainty that the costs are fairly stated.
- Guidance was taken from HEFCE regarding the acceptable level of coverage and response to the study.
- In completing the cost returns, HEIs used management judgement in certain cases to determine the costs that have been allocated to courses and the cost drivers used, but these were signed off by the Director of Finance or equivalent as appropriate.
- A 10% materiality threshold has been permitted in the guidance accompanying this study. This is consistent with the principle of materiality applied within the TRAC methodology.

- Responses to queries provided by HEIs have been accepted as provided and not verified.

Costing can be subjective and inevitably requires a number of judgments and assumptions to be made. We draw your attention to the principles set out in section 3.6.2 regarding TRAC and the principles HEIs should apply in using it. This study assumes these have been adhered to and that in addition:

- Costs determined at the department and cost item level are representative of the costs incurred;
- Methods used to allocate costs to courses are based on sound and representative judgements;
- The 2014/15 HESA FTE student record did not allow clear separate identification of the HEIs delivery of all the pre-registration provision (see Appendix 4). Therefore for the in-scope courses, we have been unable to reconcile fully the student FTEs returned by institutions to ensure completeness and accuracy. The student FTE data returned by institutions has therefore been assumed to be complete, accurate and calculated in line with the guidance provided for the study;
- The metrics determined by HEIs in allocating costs to courses are reliable and robust;
- The volume of students active on each year of the programmes in scope in 2014/15 is typical and representative;
- HEIs have undertaken the reasonableness checks specified in the guidance for this study and sign-off and submission of their return indicates that the results are robust for the courses operated at their institution; and
- Sector level data for the in-scope programmes will be refined in the HESA Student record for 2016/17 and future years. The collection of TRAC(T) for 2017/18 will also include the 'in-scope' courses. Therefore it would be prudent for the Council to consider revisiting the cost information at a point in the future to enable the rate of funding provided to be refined, if required.

## 2 Introduction and Background

### 2.1 Introduction

HEFCE commissioned this study to understand more fully the costs of pre-registration NMAH provision in HEIs in England, in order to inform its future policy decisions.

### 2.2 Background

From 2017-18, students starting undergraduate courses that on successful completion lead to first registration as a professional in nursing, midwifery and certain allied health professions (pre-registration courses) will be supported through the higher education finance system. As a result of the transfer of funding responsibility, HEFCE has received funding to support these courses under the new finance arrangements. The Government plans to phase the transition from 2017/18, with new entrants being supported through the new regime from 2017/18. For postgraduate courses leading to registration and Dental hygiene / Dental therapy students, the Government will continue to provide a bursary for tuition and maintenance to meet the costs of the course for a capped number of new students starting in 2017/18. The Government in due course will set out arrangements for Dental hygiene, Dental therapy and postgraduate courses leading to registration that start in 2018/19.

### 2.3 Aims and objectives of this study

The objectives of this study were to provide a greater understanding of the cost of undergraduate and postgraduate pre-registration provision for nursing, midwifery and allied health professions based on 2014/15, and specifically to:

- Determine the average annual full economic cost per full-time equivalent student for the courses in scope on a Transparent Approach to Costing for Teaching, (TRAC(T)) basis;
- Understand the drivers of costs and cost variations; and
- Provide the basis for a critical analysis of the strength of the evidence base for the costing analysis.

The study consisted of two phases. Phase one included engagement with key stakeholders to build our understanding of the courses, how they are delivered and the key features to the provision. We worked with and undertook visits to six pilot institutions to develop the costing methodology and associated data collection templates. The pilot institutions completed the returns and learning from this experience was used to further refine the templates and approach to the full study.

All institutions delivering the 'in-scope' courses were invited to participate. To encourage participation stakeholders kindly engaged with their respective members to promote the study. We also provided two web-ex briefing sessions to assist HEIs in completing the required work. A help-line was also established to provide further bespoke assistance to institutions as they were compiling their returns.

Throughout the study a governance structure was in place to oversee and guide the work undertaken. HEFCE established a Steering Group, which was further supported by a Technical Group.

Section 3.2 details the responsibilities of these groups and Appendix 1 details the membership of both groups.

## 2.4 Acknowledgements

A key part of the study was to engage effectively with key stakeholders. This was achieved through a combination of one-to-one meetings, a conference presentation and group meetings. We detail below the groups that we would like to thank for their contribution, co-operation and assistance with this study. Particular thanks goes to:

- all the pilot HEIs;
- participating HEIs in the sector wide data collection;
- the Allied Health Professions Federation;
- the British Dietetics Association;
- the British Universities Finance Directors Group;
- the Chartered Society of Physiotherapy;
- the Council of Deans of Health;
- Health Education England;
- the Nursing and Midwifery Council;
- the Royal College of Speech and Language Therapists;
- the Society of Chiropodists and Podiatrists;
- the Society of Radiographers; and
- Universities UK (UUK).

## 2.5 Structure of this report

This report contains the following key sections:

- Scope and methodology;
- Coverage;
- Data validation;
- Analysis and findings;
- Other costs to consider;
- Glossary; and
- Appendices.

## 3 Scope and Methodology

### 3.1 Scope

The study focused on undergraduate and postgraduate pre-registration courses for nursing, midwifery and allied health professions in HEIs in England. The study included all related courses that are recognised by the relevant professional bodies. Appendix 2 provides a full list of the courses included in the study.

The study excluded:

- 1) Post-registration courses and foundation degree courses (for example in Midwifery) where these did not lead to professional registration upon completion; and
- 2) Courses that had started or finished in 2014/15 and exhibited unusual student FTEs and costs. This affected a small number of courses.

In the same way as reported for TRAC, this report also excludes results which risk identifying individual HEIs' results. This report uses the same threshold for detailing aggregated results and only details results where five or more HEIs have provided course costs. As a result, this report excludes Nursing unclassified, Orthoptics, and Orthotics and Prosthetics. This report also excludes Dental therapy and Dental hygiene as funding for Dental Therapy and Dental Hygiene will not transfer to the Higher Education finance system until after 2017/18. HEFCE plans to undertake further work to identify the costs of these subjects, therefore the data has not been disclosed in this report, but data for these courses have been shared with HEFCE to support that work.

For the remaining 13 professions in-scope, details on 324 different courses were submitted. The professions are:

- 1) Chiropody / Podiatry
- 2) Diagnostic Radiography
- 3) Dietetics
- 4) Midwifery
- 5) Nursing – adult
- 6) Nursing – child
- 7) Nursing – learning disabilities
- 8) Nursing – mental health
- 9) Occupational therapy
- 10) Operating Department Practice
- 11) Physiotherapy
- 12) Speech and Language Therapy
- 13) Therapeutic Radiography

## 3.2 Summary of approach

To achieve reasonable unit costs for each profession, the study needed robust costs and a generally representative proportion of the student population and course coverage. To achieve this, the approach used:

- TRAC-based data as a robust and auditable source of data that captures full economic costs;
- A pilot stage to refine the approach prior to launching the full study;
- A consistent collection tool – developed during the pilot stage; and
- Close liaison with HEFCE and a range of stakeholders. These interactions also helped develop the approach, understand the training of NMAH and debate the reasonableness of emerging findings.

A governance structure was established by HEFCE to oversee the study, provide technical insights and further stakeholder engagement. Details of the Steering Group and Technical Group membership are provided in Appendix 1. The key stages in the approach included:

- Steering Group meetings to oversee the delivery of the study;
- Technical Group meetings where the membership:
  - Advised on the methodology for the cost collection and detail of the contextual survey;
  - Provided insight and agreed the appropriate cost drivers and data sources to be used in the study;
  - Agreed the cost collection and contextual survey templates for use in stage two of the study;
  - Shared views and their understanding on aspects of course delivery, activities and management; and
  - Acted as sounding board to the KPMG team.
- Engaging with the pilot participants, to:
  - Discuss and develop the methodology;
  - Develop material to support sector-wide participation; and
  - Agree an appropriate and consistent methodology to capture the costs.
- Engaging with a range of stakeholders to understand course delivery issues, profession requirements and the sector environment, gain support for further engagement with HEIs and act as an agent to encourage HEI participation.
- Producing a data collection template for the participants to capture costs consistently and a second return to capture key contextual factors;
- Publishing requests to HEIs to participate in the full-scale sector study and submit cost and contextual information;
- Provision of a helpdesk to assist HEIs as they collected the data and follow up with target HEIs;
- Webinars to explain the approach and detail of the submissions required;

- Assessing and analysing the data once submitted, to assess whether it complied with the methodology and was consistent across the participants; and
- Producing cost analyses and assessing results in conjunction with the responses from the contextual survey.

Having obtained and assessed the data, the study calculated unit cost results, obtained key findings and drew conclusions.

### 3.3 Pilot selection

Our approach established a small pilot group of HEIs to refine and test a proposed costing methodology and contextual survey. In response to HEFCE's letter to HEIs (dated 14 September 2016) notifying them of the approach, 30 expressions of interest were received, complemented by a further ten HEIs likely to provide support to the pilot stage. Each interested HEI was contacted to provide clarity over the likely workload demands as a result of being a pilot, set out expectations over their pilot phase involvement and ensure clarity over the opportunity to inform HEFCE of course costs at the later stage of the study should they not be selected as a pilot.

In discussion with HEFCE, and based on the contact with institutions, six pilots were selected (see Appendix 5). The pilot institutions also provided membership to the Technical Group, see (Appendix 1).

### 3.4 Pilot work

We visited each pilot HEI to discuss features of their courses' delivery, the proposed costing approach and the collection returns for the costs and contextual information. We then refined the data collection returns and the pilot HEIs then completed draft returns within three to five weeks.

On completing the returns, the pilot HEIs reported that although they had to deal with a number of competing pressures and staff absences (as a result of for example reading week, half-term and other financial planning and data return activities), they completed the returns to a high degree of satisfaction. They also provided invaluable feedback to indicate that:

- The format of the returns was reasonably easy to follow; and
- The proposed period planned for completion by the sector should be sufficient.

Importantly the pilots provided feedback which enabled us to refine the methodology, the collection approach, the apportionment methods, and the content of guidance materials.

### 3.5 Stakeholder engagement

In parallel with the pilot stage, a range of engagement exercises were undertaken to raise awareness and participation in the costing study. In discussion with HEFCE, a range of stakeholders were identified. Further individual meetings or group meetings were held with representatives from:

- the Allied Health Professions Federation;
- the British Dietetics Association;

- the British Universities Finance Directors Group;
- the Chartered Society of Physiotherapy;
- the Council of Deans of Health;
- Health Education England;
- the Nursing and Midwifery Council;
- the Royal College of Speech and Language Therapists;
- the Society of Chiropractors and Podiatrists;
- the Society and College of Radiographers; and
- Universities UK (UUK).

Each was designed to communicate the importance of the study, to learn the collective views and insights for us to consider in the study and gather support for HEI involvement. It was also an opportunity to explain the purpose of this study, the methodology and test its suitability among the experts from those professions.

In preparation for the sector-wide cost collection exercise, a process of registration was undertaken. This helped raise awareness in the sector, assess likely coverage and prioritise further work to gather as many returns as possible and address coverage issues.

As part of the sector-wide launch we held two webinars to support HEIs complete the returns. These attracted over 77 participants. Detailed guidance was also produced and issued alongside the webinars and with the collection templates. HEIs also had access to a dedicated helpline and regular emails were issued to the participating HEIs with Frequently Asked Questions. Some of the stakeholders previously listed also issued further communications to support the exercise.

## 3.6 Costing methodology

### 3.6.1 Overview

In line with HEFCE requirements, a TRAC(T)-based costing methodology was adopted for this study. A TRAC(T) based costing model provides the following benefits:

- It provides a 'top-down' model so that costs are reconcilable to the audited financial statements for the year;
- It provides a common basis for HEIs to identify the costing of teaching, thus giving a consistent starting point for the study;
- It is a process that is governed and controlled within HEIs and across the sector. Standard TRAC guidance and requirements are published for all HEIs to follow. The TRAC process can be subject to internal audit within HEIs;
- It provides a basis for data that can be compared to the cost of other teaching provision in the English HE sector; and
- It provides a basis for ensuring that all overheads are captured in the costing.

### 3.6.2 Applying TRAC principles in the approach

TRAC is a principles-based costing method that is underpinned by detailed requirements and guidance. As a familiar approach in the HE sector, this study communicated a similar approach, meaning that:

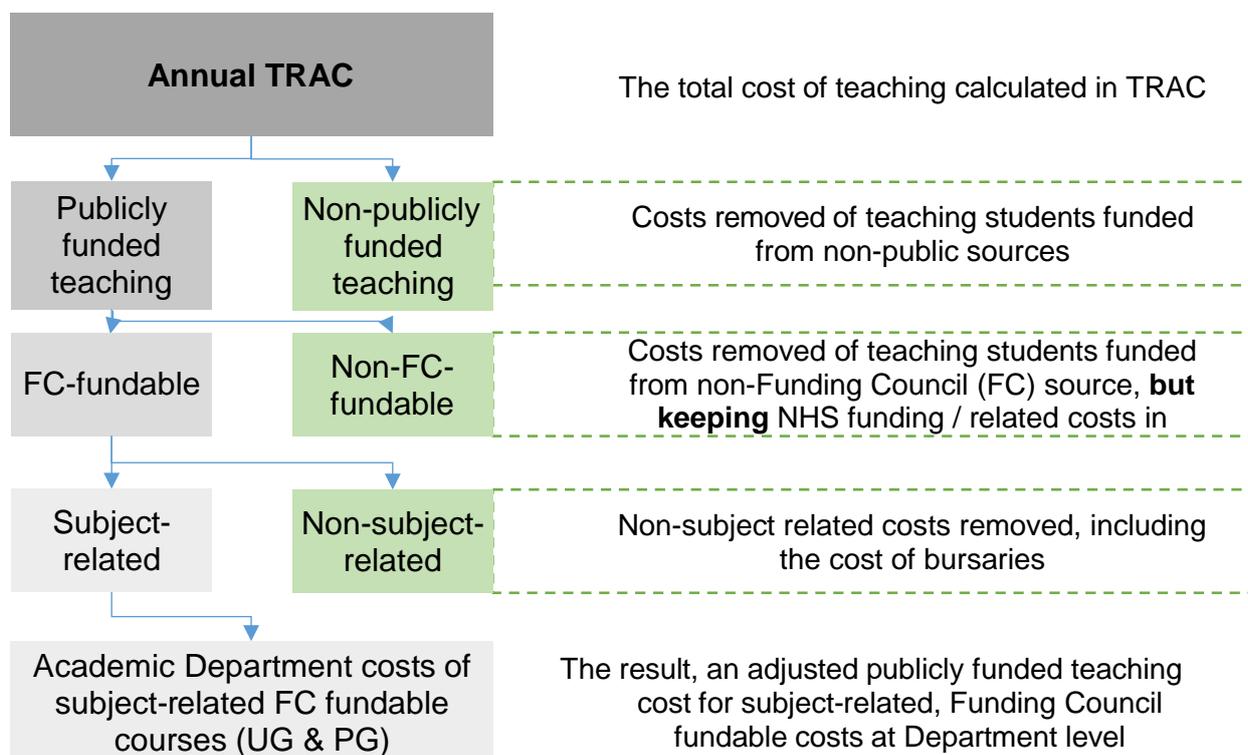
- HEIs should take a transparent and materially robust approach;
- HEIs were instructed to ensure they analysed costs and used allocation methods that could be justified;
- The process provided a consistent and fair basis for HEIs to cost activities. For example, HEIs were guided as to the preferred methods of allocating different types of costs;
- The process provided comparability; and
- HEIs established an audit trail to promote accountability. For example, HEIs were instructed to keep track of their key judgements, in order to explain cost variations where required.

This study also applied the materiality threshold used in TRAC of 10%, applied to the total course cost. Therefore the methods used to apportion and allocate costs to courses needed to be accurate within a tolerance of 10% by HEI.

### 3.6.3 The costing model

The costing model used an amended version of TRAC(T) in its approach. To identify the academic area costs (for the Faculty, Department or School etc.) the approach began with the TRAC(T) returns for 2014/15. To arrive at the TRAC(T) costs of subject-related Funding Council fundable courses by academic area the HEIs successfully made a small number of modifications, summarised in the Figure 3 illustration:

Figure 3 – Overview of HEI steps to determine department costs using TRAC(T)



HEIs then reconciled this result to their own Department costs. The number of Departments specified by HEIs varied depending on the extent of courses delivered and their own structures. Appendix 3 provides further detail on the costing approach taken.

### 3.7 Costs in-scope

This study sought to determine relevant costs from HEIs that they incurred in delivering the pre-registration courses in-scope and sought to divide these costs by the number of student FTEs to determine a full economic unit cost per FTE. This methodology determined relevant costs by:

- Using TRAC(T) methodology (as developed for other HEFCE-fundable provision), and thereby excluding non-subject-related costs such as:
  - payments made to students for bursaries, scholarships and hardship. (Note: Costs of HEE funded in-scope courses are included in this study.)
  - further support to students, for example remedial tuition and premium for existing HEFCE funded London students.
- Excluding any non-EU student items both in financial terms and in counting the FTEs, as HEFCE does not fund non-EU national students studying in the England;
- Excluding any costs incurred by the NHS in supporting work placements and not invoiced to the HEI. These costs will continue to be borne by the NHS; and
- Including any costs incurred by HEIs for services paid for by the NHS (on the basis that these would continue from 2017/18). This included the provision of patient services for which the HEI received NHS income, thereby netting off income and expenditure where equal.

### 3.8 Collection approach

To assist HEIs collecting the data in a consistent and comparable format, two data collection templates were produced for the participating HEIs to complete; one to determine the course unit costs and a contextual survey to provide a basis for understanding certain characteristics of the HEI provision.

The costing return captured the following information for each HEI:

- TRAC(T) costs;
- Adjustments for expenditure relating to in-scope courses funded by HEE;
- Department costs for courses in and out-of-scope;
- Central indirect and estates costs and the basis of allocation to Departments and courses;
- Allocation methods and the statistics used to allocate costs from departments to courses;
- The student FTE data for each in-scope course and the out-of-scope courses in total; and
- Calculated an average full economic unit cost for each course and the out-of-scope courses in total.

The template also included a series of validation checks, for example to check mathematical completeness across courses and allocations, that TRAC(T) costs matched departments costs and total course costs in aggregate. It also provided the HEI with detailed comparative unit cost data for its courses and the amounts allocated by each allocation method.

HEIs were instructed to review and consider the results of their data, and consider whether these were in line with their expectations and understanding before submission. HEIs also declared that they were TRAC compliant.

The guidance notes outlined the approach to data collection, its consistency with the TRAC(T) methodology and preferred treatment of allocation methods for costs. The guidance also contained instructions to quality assure and check the reasonableness of the results before submission.

Further details on the cost allocation process are provided in Appendix 3.

## 4 Coverage

### 4.1 Overview

We received 49 data returns. Of these, six were not included in the data analysis for the following reasons:

- Three were incomplete;
- One HEI had not provided a TRAC return for 2014/15 and therefore comparability checks could not be undertaken;
- One submission was received from a further education college and as further education colleges do not return TRAC data, comparability checks could not be undertaken; and
- One further HEI submission only contained costings for Dental Therapy and Hygiene and is therefore excluded from the following analysis.

From the 43 returns processed and analysed for this report, the study assessed coverage based on:

- Student FTEs;
- HEI regional presence; and
- Professions.

### 4.2 Student FTE coverage

Definitions for student FTEs are varied, complex and supported by detailed guidance issued by various sector bodies. The study used an FTE definition that is aligned with the Higher Education Students Early Statistics survey and TRAC(T). The guidance to the participating HEIs stated that:

- *Student numbers should be reported in terms of full-time equivalents (FTEs) according to how they would be counted in columns 4 or 4a of Tables 1 to 3 of HEFCE's Higher Education Students Early Statistics (HESES) survey – that is, students who, according to HEFCE's definition, would be treated as a non-completion should be excluded from the student FTEs reported for the study.*

HEIs were also reminded that the costs of teaching and supporting non-completing students should still be included in their costing data. This approach is to ensure consistency with how costs and student FTEs are treated for TRAC(T) purposes.

We were informed that the student FTE data from the 2014/15 HESA student record did not contain consistent identification of all HEIs' delivery of the pre-registration provision as we understand that not all students on NMAH courses were consistently flagged as leading to registration with regulatory professional bodies (see Appendix 4). Therefore, although HEFCE provided an extract from the HESA student record of the FTE data for the in-scope courses, we have been unable to reconcile fully the student FTEs returned by institutions to ensure completeness and accuracy.

We have therefore undertaken analysis to provide an approximation of coverage by FTE achieved in this study. Table 3 matches HEIs and professions from the HESA student record data provided by HEFCE for the institutions that participated in this costing study, but using the data in the HESA student record (not the FTE returned to us). We have referred to this as a 'like-for-like' approximation of coverage. For example, where HEI A delivers Midwifery and the HEI reported 100

students in its HESA student record, 100 students are counted towards the matched student FTE used to calculate the coverage analysis for Midwifery.

The analysis in Tables 3 and 4 is therefore an approximation of coverage.

**Table 3 – Student FTE coverage by profession**

Profession	Number of student FTEs from HESA where the HEI returned the profession to the costing study	2014/15 HESA student FTE	as a %
Chiropody / Podiatry	555	620	90%
Diagnostic Radiography	1,424	2,216	64%
Dietetics	880	964	91%
Midwifery	3,264	5,477	60%
Nursing - adult	19,168	27,169	71%
Nursing - child	3,452	5,264	66%
Nursing - learning disabilities	856	1,189	72%
Nursing - mental health	4,005	6,317	63%
Occupational Therapy	2,999	3,550	84%
Operating Department Practice	490	883	55%
Physiotherapy	3,091	3,586	86%
Speech and Language Therapy	408	1,101	37%
Therapeutic Radiography	543	624	87%
<b>Total</b>	<b>41,135</b>	<b>58,960</b>	<b>70%</b>

Based on the analysis above, coverage of 41,135 student FTEs provides an approximate coverage of 70% of the student population indicated in the 2014/15 population. The lowest coverage is of 37% (for Speech and Language Therapy). In comparison to the costing study for postgraduate taught studies published in December 2014<sup>3</sup>, this coverage exceeds the 22% it achieved. From this analysis (and the further detail provided in Appendix 4), the coverage is strong and meets HEFCE's requirements.

### 4.3 HEI and course coverage

To provide further perspective on the robustness of the coverage, the study analysed the proportion of HEIs that participated compared with the total HEIs that responded to the HESA for 2014/15. The following table summarises the results.

324 different courses were submitted by 43 HEIs across the 13 different professions. As expected from HESA returns, many HEIs deliver the same courses but the provision in some professions is more limited than others. For example, 37 HEIs provided course costs for Nursing Adult across 59 courses. A full list of course titles included in this study is provided in Appendix 2.

<sup>3</sup> 'A Review of the Cost of Postgraduate Taught Provision', HEFCE, 2014, <http://www.hefce.ac.uk/pubs/rereports/year/2014/pgtcostreview/>

**Table 4 – Coverage of HEIs and courses by profession**

Profession	# of HEIs returning courses	HEIs returned in the HESA data	Coverage as a %	# of Courses submitted
Chiropody / Podiatry	5	6	83%	6
Diagnostic Radiography	10	13	77%	12
Dietetics	7	8	88%	10
Midwifery	29	38	76%	38
Nursing – adult	37	50	74%	59
Nursing – child	29	40	73%	36
Nursing – learning disabilities	14	20	70%	14
Nursing – mental health	32	44	73%	44
Occupational Therapy	19	20	95%	31
Operating Department Practice	16	10	160%	17
Physiotherapy	25	26	96%	39
Speech and Language Therapy	6	8	75%	8
Therapeutic Radiography	7	7	100%	10
<b>Total</b>				<b>324</b>

Note: HEFCE confirmed that data identified in the HESA student records for NMAHP is acknowledged to be low compared to the known level of activity. This explains some of the coverage over 100% in the table above.

This analysis shows strong coverage of 70% or over for each profession.

The Steering Group suggested some further comparative work would be useful to assess whether there were any material issues arising from the proportionately low number of London HEIs that participated (at 35%). Of the five (from six) HEIs in London matched to HESA data on a like-for-like basis, they provide a student FTE coverage of 56% (a coverage in excess of HEFCE rates achieved in other costing studies of this nature).

On a like-for-like basis of professions, further work was undertaken to compare unit costs across the six cost categories between London and non-London HEIs. The results were then compared with a summary of differences in London provision provided by a Director of Finance from a London based HEI. This identified common themes between the results including:

- Higher pay costs reflecting the need to attract staff to work in London with its associated higher cost of living;
- Negligible non-pay cost differences on the basis that some additional transport costs could be offset by some larger economies of scale and national pricing for certain significant items such as energy; and
- Higher indirect costs and estates reflecting the higher inherent staff costs, particularly for those lower paid support service staff and higher real estate costs albeit with some efficiencies built-in as a result of increased focus and multi-floor structures.

#### 4.4 Summary

Coverage results were shared with the Technical Group and the Steering Group. They shared common views that the overall coverage results were better than expected and well above the threshold used by HEFCE in other costing studies.

The lower coverage rates in London were assured by assessing student FTE coverage and by comparing unit costs to non-London HEIs. We also understand that the costs (and benefits) of delivery across London and other geographies are also subject to further work by HEFCE.

## 5 Data validation

### 5.1 Overview

A key focus of the study was to critically analyse the submitted data returns. This included assessing whether the prescribed methodology for the study was applied consistently, based on the information provided in the costing and contextual returns across all the submitting HEIs. Where the methodology was not followed in full we reviewed the basis followed and assessed it for reasonableness. Data validation also occurred prior to submission, by HEIs and within the returns themselves. The study also undertook comparative checks across the whole population of returns as well as using broader information to compare results in aggregate terms. The checks applied are explained below.

This study obtained data at a lower level of granularity compared with the TRAC(T) data that HEFCE routinely uses to review its funding methodology. Therefore the level of checking that was possible on the data obtained in this study was more extensive compared with the checks performed on the TRAC(T) data.

### 5.2 Assumptions

Costing can be subjective and inevitably requires a number of judgements and assumptions to be made. We draw your attention to the principles set out in section 3.6.2 regarding TRAC and the principles HEIs should apply in using it. This study assumes these have been adhered to and that in addition:

- Costs determined at the department and cost item level are representative of the costs incurred;
- Methods used to allocate costs to courses are based on sound and representative judgements;
- The metrics determined in allocating costs to courses are reliable and robust;
- The 2014/15 FTE data from the HESA student record did not allow clear separate identification of the HEIs delivery of all the pre-registration provision (see Appendix 4). Therefore for the in-scope courses, we have been unable to reconcile fully the student FTEs returned by institutions to ensure completeness and accuracy. The student FTE data returned by institutions has therefore been assumed to be complete, accurate and calculated in line with the guidance provided for the study;
- The metrics determined by HEIs in allocating costs to courses are reliable and robust;
- The volume of students active on each year of the programmes in scope in 2014/15 is typical and representative; and
- HEIs have undertaken the reasonableness checks specified in the guidance for this study and sign-off and submission of their return indicates that the results are robust for the courses operated at their institution.

### 5.3 Pre-submission validations

As part of the data collection and prior to submitting the data returns, HEIs were asked to review their data, consider whether they were in line with their understanding of their institution and obtain senior officer sign-off. All the submissions were obtained and signed-off by the Director of Finance, or suitably senior equivalent. This sign-off confirmed that:

- The costs declared were representative of those incurred in delivering the courses in-scope;
- The basis for allocating costs to the headings specified at academic department level was reasonable and materially correct;
- The basis used for allocating academic staff costs to courses were reasonable, materially correct and reflective of the inputs to the course; and
- The Dean or Head of the Health Faculty or Department or School had been appropriately involved in the process of calculating the course costs.

As described previously, the costing return also contained a number of validation checks to support the above process.

### 5.4 Individual validation procedures

Following submission of the data, each HEI data submission was reviewed and a range of reasonableness checks were completed before the data was analysed further. The procedures aimed to address any consistency or completeness issues in the data. The submission checks for the cost return included:

- Cross-check to overall 2014/15 TRAC(T) costs provided by HEFCE;
- Assessment of completeness of costs categories compared with the costing guidance for this study;
- A reasonableness check over the variation of HEI unit costs across the professions for the courses submitted;
- Review of the courses' category of profession selected by the HEI to ensure alignment with the course title;
- Review to assess whether the courses specified were 'in-scope'; and
- Review of compliance with allocation methods. Each HEI's allocation methods were reviewed against those outlined in the guidance. The majority of individual cost items aligned to the guidance and many of the alternative measures appeared to use more refined approaches than suggested in the guidance. Where alternative measures were identified, further review was undertaken to confirm the adequacy of the basis used. Only five queries remained unresolved from this work and the scale of their impact was low.

The submission checks for the contextual survey included checking for consistency with the courses reported in the cost return, completeness of responses and confirmation of 'sign-off' as specified in the guidance.

The survey also asked whether the 2014/15 costs were atypical. Six responses indicated that the course was either in its first or last year which resulted in unusual costs, therefore we excluded these

from further analysis. A further three responses indicated some factors that made 2014/15 different but none were considered material against the 10% threshold applied:

- One HEI indicated a programme of equipment purchases in 2013/14 totalling £75,000 (out of £8.5 million course cost total for 2014/15).
- One HEI reported a number of atypical staff vacancies in:
  - Adult Nursing of 4.3 FTE with a cost impact of around £240,000. The total cost for the courses delivered for this profession for this HEI was £6.4 million.
  - Child and mental health nursing each of 1.00 FTE with a cost impact of £50,000 to each department. The total costs for the courses delivered for this profession for this HEI was £0.9 million and £1.3 million respectively.
- One HEI reported some restructuring costs incurred in 2014/15 affecting one course. They calculated that the overall impact on their unit cost calculations would be an increase in cost per student of 3% for the BSc course and 3.5% increase for MSc. They deemed the total value of the impact as not significant and was estimated at £70,000 (out of totalled submitted course total costs of over £38 million).

Based on the explanations given and figures determined no further adjustments were made.

## 5.5 Comparative validation procedures

Further reasonableness checks were undertaken using the population of returns received, firstly in comparing with each HEIs' unit costs and secondly by using data provided by HEFCE on the total student populations and total TRAC(T) costs. These comparisons were not intended to provide an exact reconciliation, but to indicate whether the costs were materially different or overstated in the costing returns.

Further enquiries were made of HEIs that focussed on two aspects for each profession. HEIs were asked to respond to outliers:

- In the upper or lower quartile range at the unit cost level (120 queries); and
- Outside the standard deviation at the unit cost category level (104 queries).

HEIs reviewed their submissions and confirmed that the results provided were correct or resubmitted costings.

## 5.6 Outcome of validation procedures

As a result of the validation work, queries to HEIs were made (for example, where above upper quartile or where lower than bottom quartile) to confirm and understand variations. Nine HEIs also resubmitted costings as a result of these checks. Within the data submissions from the 43 HEIs, six individual courses were excluded:

- One course from each of Podiatry, Physiotherapy, Operating Department Practice, Occupational therapy and Adult nursing because their costs were unusual as a result of being in the final or first year of its delivery; and

- One Nursing Learning Disabilities course because its costs were unusually high. The HEI explained its student FTE numbers in later years increased with no significant impact on overall costs.

From the comparative procedures undertaken, over 220 individual cost item queries were raised with HEIs for example to explain and check a low, or high, unit cost. At the time of report production 34 queries remained outstanding. We applied a sensitivity analysis to these remaining queries. In conclusion from the sensitivity analysis, we were satisfied that no remaining query could have an impact of more than 10% on the weighted unit cost for a profession.

Appendix 6 provides detail on all of the validation issues and exclusions applied.

We produced a summary figure detailing each median, cost variation, and high and low unit costs for each profession based on the validated dataset (see Figure 4).

Figure 4 – The median, highest and lowest unit costs by Profession

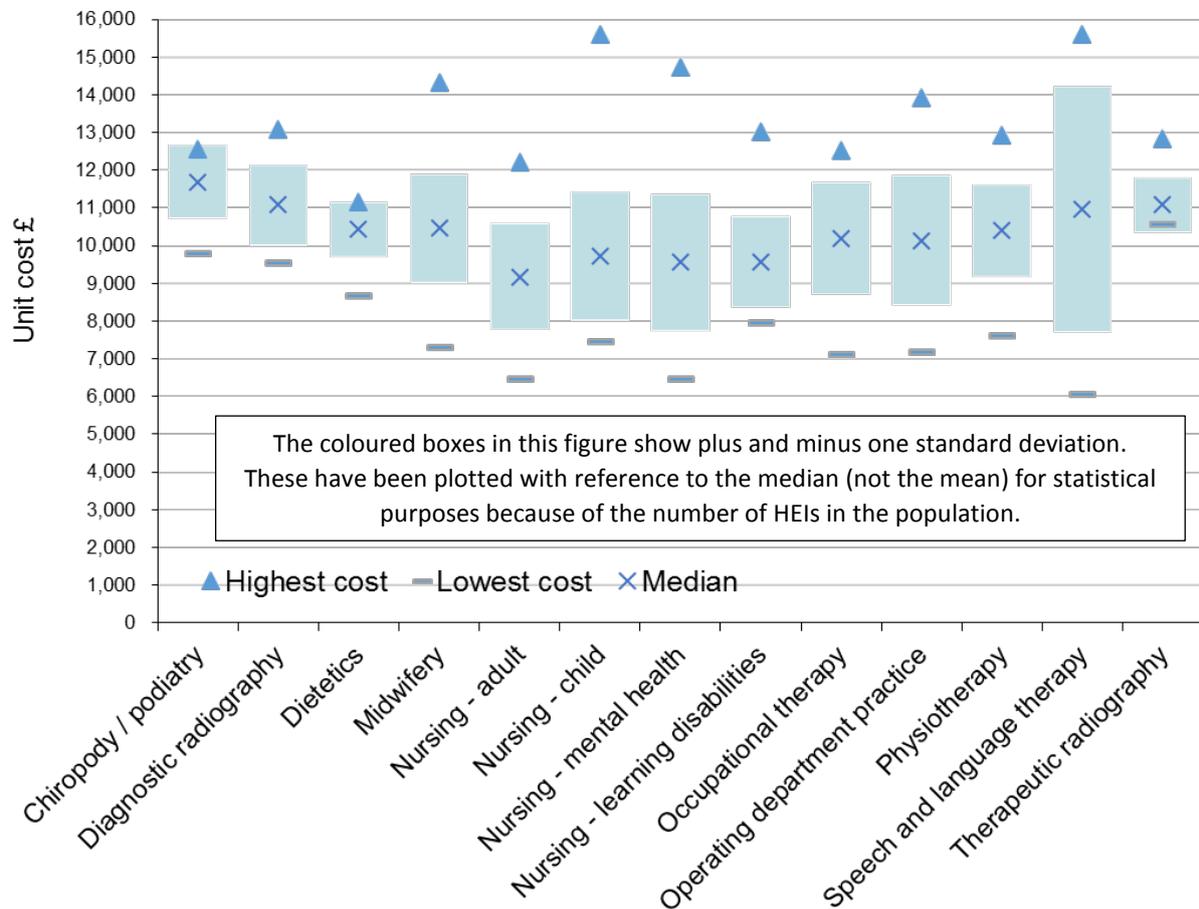


Figure 4 illustrates that each profession experiences cost variation with standard deviations ranging from between £700 (for Therapeutic Radiotherapy) to £3,250 (for Speech and language therapy). Part of the reason for the wider standard deviation for Speech and Language therapy appears to be the fewer HEIs in the sample (six HEIs) and a reduction of HEE commissioned training places in this discipline.

Nursing Mental Health and Operating Department Practice had the next highest standard deviation (of £1,811 and £1,711 respectively). Further analysis of these results shows a number of high and low results for similar levels of student FTEs contributing to these deviations.

Costs outside the higher and lower quartile costs by profession were queried with HEIs and in some instances led to resubmissions. The high and low instances shown here are after that process, therefore representing unit costs that HEIs have reviewed subsequent to submission and in many cases provided further reasons to explain the costs.

## 5.7 Limitations inherent in the study

The study collected, assessed and analysed a significant amount of data, including over 7,500 cost records generated by the costing returns alone, covering a significant proportion of the total student FTE population studying these courses during 2014/15. This coverage and level of detail is greater than other HEFCE costing studies.

There are however some inherent limitations in this study, as follows:

- Whilst a range of measures have been taken to assess the data, the study has not verified, substantiated or audited the data provided by HEIs;
- Trend analyses and relative comparisons have been used to provide an indication of whether HEIs have reasonably allocated and apportioned costs to the in-scope courses, but this does not provide absolute certainty that the costs are fairly stated;
- Guidance has been taken from HEFCE regarding the acceptable level of coverage and response to the study;
- In completing the cost returns, management judgement has been used in certain cases to determine the costs that have then been allocated to courses and the cost drivers used, but these have been signed off by the Director of Finance or equivalent as appropriate;
- A 10% materiality threshold has been permitted in the guidance accompanying this study. This is consistent with the principle of materiality applied within the TRAC methodology as a whole; and
- Responses to queries provided by HEIs have been accepted and not verified.

Sector level data for the in-scope programmes will be refined in the HESA Student return for 2016/17 and future years. The collection of TRAC(T) for 2017/18 will also include the 'in-scope' courses. Therefore it would be prudent for the Council to consider revisiting the cost information at a point in the future to enable the rate of funding provided to be refined, if required.

## 6 Analysis and Findings

### 6.1 Overview

Having obtained and reviewed the data, we carried out a range of analyses designed to meet the objectives and assess the robustness of the unit costs and the key drivers of cost. The analyses considered:

- The cost of teaching provision as expressed as a cost per student FTE, at a total level, profession level and split across the cost categories collected;
- The unit cost expressed as a mean or median and the quartiles for each profession;
- The NMAH costs and student FTEs of the in-scope courses compared with all other HEFCE funded teaching delivered by the HEI;
- The cost of Postgraduate provision compared with undergraduate provision at the participant HEIs by profession;
- Differences between London and non-London HEIs across unit cost comparisons; and
- The impact of a range of drivers of cost.

The methodology enabled unit costs to be calculated at both the course level and profession for each HEI. For profession level costs by HEI the study took the total of all the course costs delivered by the HEI for the same profession and then divided by the total number of student FTEs for those same courses. This approach therefore calculated a 'weighted' average. In line with HEFCE practice, only professions with more than five institutions reporting data have been included in the analysis. This section sets out the detailed analysis and related findings.

### 6.2 What are the unit costs for each profession?

Based on the participating HEIs (less the excluded results), we calculated a unit cost for each profession using two measures:

1. A weighted unit cost per student FTE by dividing the total cost from all submissions (by profession), by the corresponding total of student FTEs; and
2. The median value from the HEIs' unit costs for each profession (identified for each profession by ordering the result of dividing the total cost from each HEI by the corresponding total number of student FTEs, and then identifying the middle value).

**Table 5 – Profession cost per student FTE**

Profession	Total cost £	Total FTEs	1) Weighted mean unit cost £	2) Median Unit Cost £	# of HEIs
Chiropody / Podiatry	6,703,379	603	11,120	11,698	5
Diagnostic Radiography	17,411,031	1,540	11,309	11,084	10
Dietetics	8,582,335	844	10,170	10,425	7
Midwifery	42,541,497	4,104	10,366	10,456	29
Nursing - adult	206,995,450	22,776	9,088	9,169	37

Profession	Total cost £	Total FTEs	1) Weighted mean unit cost £	2) Median Unit Cost £	# of HEIs
Nursing - child	38,081,290	3,810	9,994	9,718	29
Nursing - learning disabilities	8,847,446	927	9,544	9,566	14
Nursing - mental health	46,804,367	4,966	9,425	9,557	32
Occupational Therapy	33,869,081	3,320	10,201	10,188	19
Operating Department Practice	10,719,846	1,054	10,168	10,139	16
Physiotherapy	38,300,535	3,704	10,342	10,397	25
Speech and Language Therapy	7,498,672	719	10,434	10,959	6
Therapeutic Radiography	8,781,047	774	11,341	11,077	7
<b>Total</b>	<b>475,135,976</b>	<b>49,140</b>			

### 6.2.1 What does the analysis show?

Table 5 shows a range of weighted average unit costs from:

- Over £11,300, (£11,341 for Therapeutic Radiography and £11,309 for Diagnostic Radiography and medians of £11,077 for Therapeutic Radiography and £11,084 for Diagnostic Radiography); to
- The lowest unit cost of £9,088 for Nursing Adult (median £9,169).

The results also highlight that:

- The difference between the weighted unit cost (measure 1) and median (measure 2) ranged from +£276 (Nursing Child) to -£578 (Podiatry), a difference of no more than 5.2% across all mean and median costs;
- Podiatry had the highest median cost of £11,698; and
- The largest profession in both terms of total cost and student FTE is Adult Nursing with £207 million (44% of the total cost) and 22,776 student FTEs (46% of the total). Nursing as a whole represented 63% of the total cost of all the in-scope courses and 66% of the total student FTEs covered by the study.

Analyses showing the distributions of costs by professions but without identifying individual providers was discussed with the Steering Group and the Technical Group. All commented that the levels of cost by profession were in line with the levels and values anticipated. Although this is a proximate test, it is an important validation given the collective knowledge and experience of the individuals on these groups.

### 6.2.2 Are the costs similar for London and non-London institutions?

The study collected returns from six HEIs in London (both inner and outer London regions). It was expected that the costs for London HEIs would be higher than other locations. This is analysed in Figure 5.

**Figure 5 – Weighted average unit costs (for all professions) of London HEIs vs non-London HEIs**

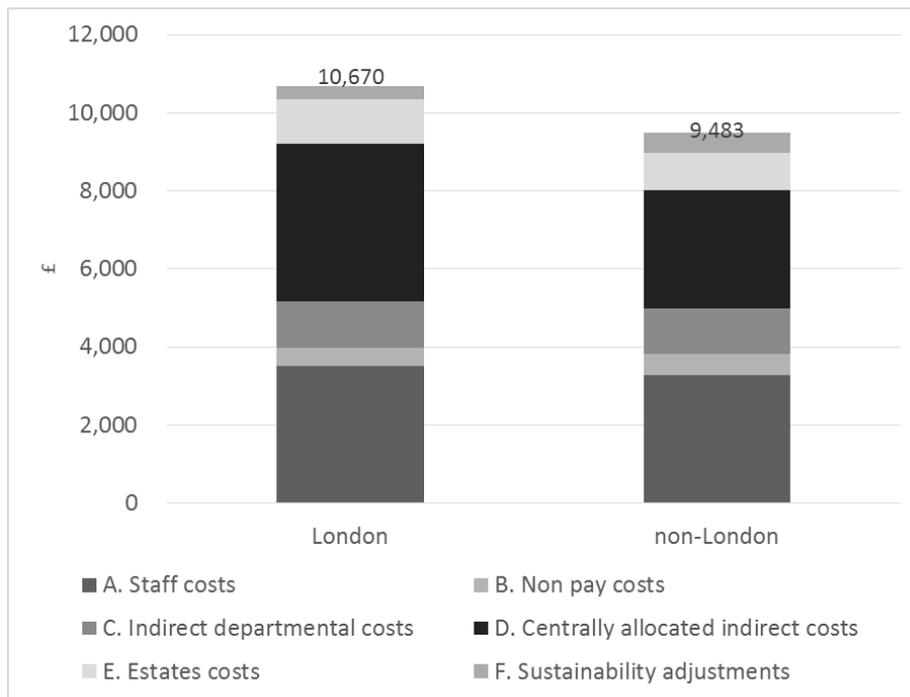
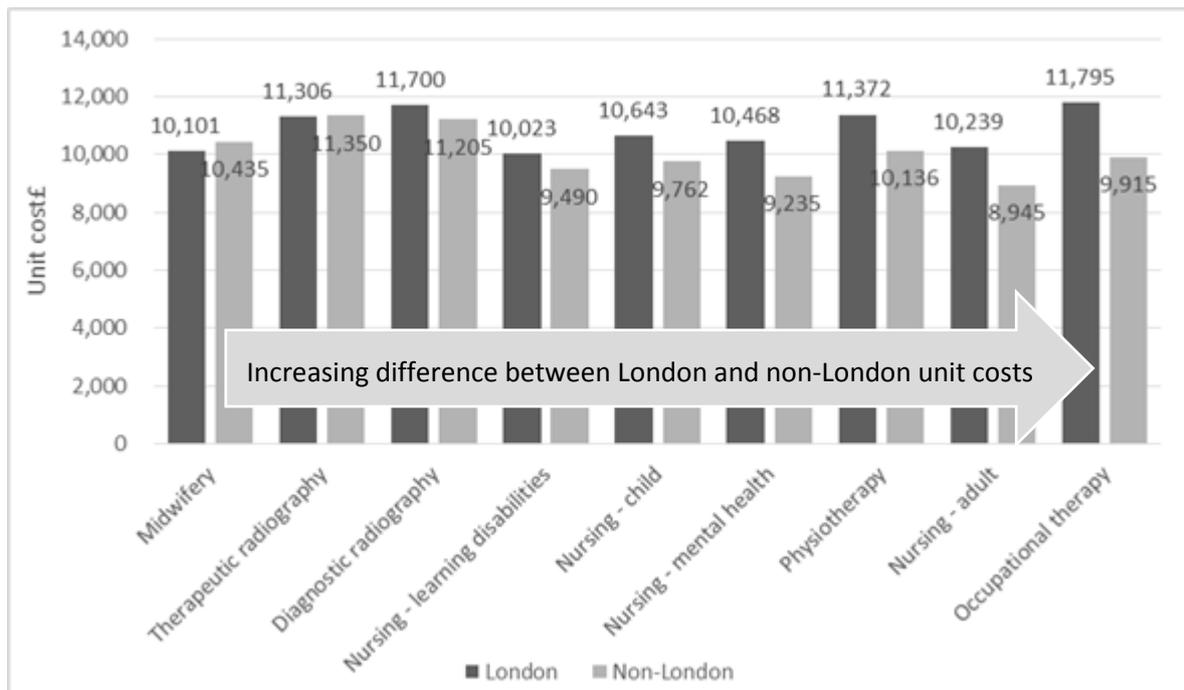


Figure 5 shows a 12.5% higher weighted average unit cost between London HEIs and non-London HEIs. The HEIs in the analysis above include those that shared the same mix of professions to provide a valid comparison.

As part of the review we discussed with a large London HEI the types of cost differential that would be expected in the data. This confirmed that staff costs, estates related costs and indirect costs (due to these containing both staff and estates costs) are the areas where costs would be expected to be higher in London. The results reported above are in line with this expectation.

To further appraise the differences in cost between London and non-London HEIs, courses are analysed at the profession level in Figure 6 for professions where two or more HEIs in London delivers courses in the profession.

Figure 6 – Profession level weighted average unit costs of London HEIs vs non-London HEIs



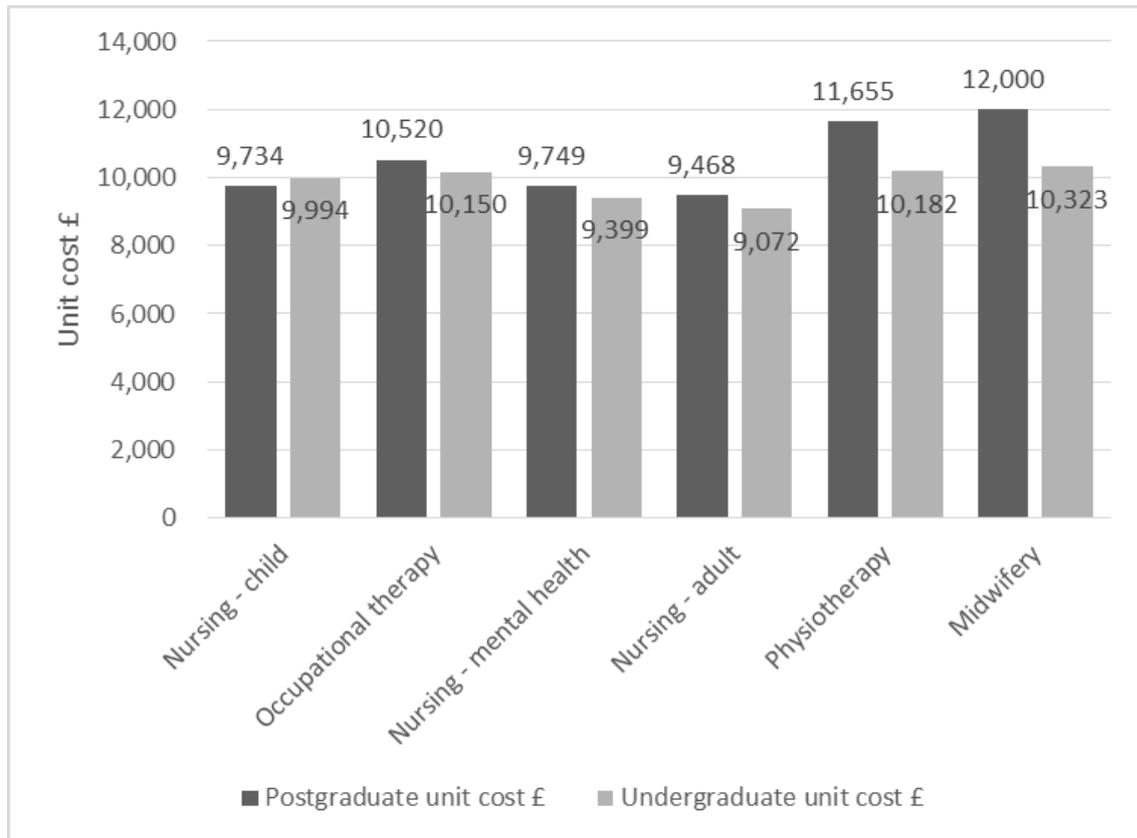
The weighted average unit cost for professions varied by London HEI from 6% higher (for Nursing learning disabilities) to 19% (Occupational Therapy). Midwifery and Therapeutic Radiography have been reported as costing marginally less in London, based on the returns received.

### 6.2.3 Further undergraduate versus postgraduate analysis

Although not a primary aim of this study, we undertook further analysis on the weighted average unit costs examining the impact of undergraduate versus postgraduate pre-registration provision. The purpose of this was to further understand the behaviour of the reported costs. We have identified from the submissions received, a total student FTE of 42,440 covering six professions where both undergraduate and postgraduate programmes were provided and data was reported by more than five institutions in each profession. From this population, the unit costs for each profession were determined and are shown in Figure 7. Note: Diagnostic Radiography, Dietetics, Speech and Language and Therapeutic Radiography have been excluded from Figure 7 as the postgraduate costs were provided by less than five HEIs.

Postgraduate pre-registration courses in NMAH deliver the same skills and competencies as undergraduate pre-registration courses but students recruited already hold a HE qualification and the delivery is accelerated. These courses lead to Masters or PGDips. Because the skills and competencies are the same, HEIs often complement this provision with Undergraduate courses which may explain why the cost differential is not as high as has been observed for other areas of PG delivery in a previous study of Postgraduate Taught costs.

Figure 7 - Weighted average unit costs for each Profession by undergraduate and postgraduate students



Overall there is a 6.8% higher weighted average unit cost at the profession level between PG and UG and 7.5% for the six professions above. The analysis shows that in all but one profession (Nursing Child), post graduate study is more expensive than the undergraduate course in the same profession. The difference of 2.6% for Nursing Child (relative to the UG unit cost) is small and may be due to the small number of HEIs participating in the study for those professions.

In total for this group of professions and students, the weighted average unit cost of postgraduate provision £10,288 for postgraduate versus £9,597 for undergraduate. Midwifery was 16% higher for postgraduate study and Nursing Child was 3% lower.

It should be noted that these results are based on relatively few HEIs providing postgraduate teaching (see table 6); less than seven HEIs for Midwifery and Nursing Child. For the three professions with more than ten HEIs (Nursing Adult, Nursing Mental Health and Physiotherapy), collectively the cost of postgraduate taught courses were 8.6% higher.

HEIs often have postgraduate and undergraduate courses in the same profession. We noted differences in the number of courses that are run, which could also affect the robustness of the postgraduate course data in comparison with cost data for undergraduate courses. We note that three of the six professions listed in this analysis have fewer than ten postgraduate courses aggregated in this study. An analysis of the numbers of undergraduate and postgraduate courses delivered for the professions in-scope is provided in Table 6.

Table 6 – Analysis of the number of undergraduate and post graduate courses

Profession	Undergraduate courses	Postgraduate courses	Course UG to PG ratio	UG FTEs	PG FTEs	FTE UG to PG ratio
Midwifery	31	6	5.2: 1	3,911	102	39: 1
Nursing - adult	42	17*	2.5: 1	21,817	958	23: 1
Nursing - child	29	6	4.8: 1	3,590	151	24: 1
Nursing - mental health	32	11*	2.9: 1	4,560	328	14: 1
Occupational therapy	22	9	2.4: 1	2,860	460	6: 1
Physiotherapy	27	12*	2.3: 1	3,302	401	8: 1
<b>Total</b>	<b>183</b>	<b>61</b>		<b>40,040</b>	<b>2,400</b>	

\* Three highest numbers of PG courses.

Table 6 shows that there are many fewer postgraduate than undergraduate courses included in the analysis.

For the three professions with the greatest number of postgraduate courses (marked with an asterisk in Table 6), the PG course costs are consistently higher than UG courses:

- Nursing – adult (4.4% higher for PG);
- Nursing – mental health (3.7% higher for PG); and
- Physiotherapy (14.5% higher for PG).

A further issue that may influence differences between undergraduate and postgraduate level is the course length. Whilst Postgraduate pre-registration courses in NMAH deliver the same skills and competencies as undergraduate pre-registration courses the delivery is accelerated. This acceleration and therefore shortened course length is shown in Table 7 from the submissions received.

Table 7 – Course length for Undergraduate vs Postgraduate courses

Length of course (years)	UG (282 courses)	PG (68 courses)
2	8.6%	75.0%
3	83.1%	25.0%
4	7.8%	0.0%
5	0.4%	0.0%
<b>Grand Total</b>	<b>100%</b>	<b>100%</b>

From Table 7 we note that the majority of PG courses are two years in length compared with three years for an undergraduate course.

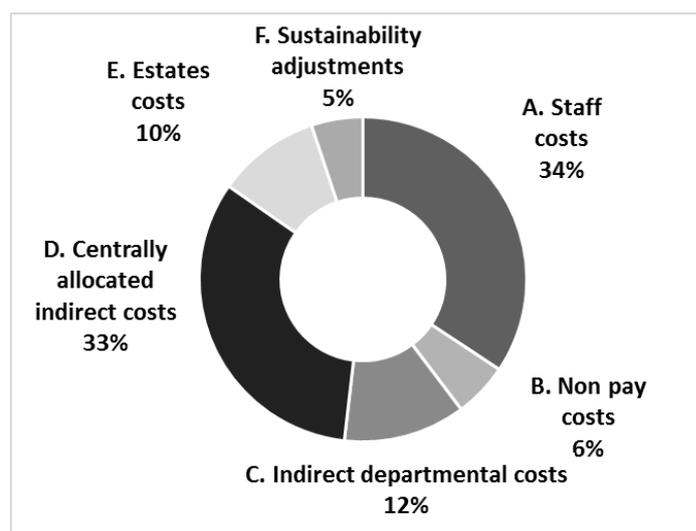
In summary, we did not find conclusive evidence for any dominant factor(s) making the unit cost of PG higher than UG courses, even where the number of courses and student FTEs was more statistically robust, for example for Physiotherapy and Adult Nursing. The shortened period of study is likely to be a factor in the higher unit cost for course delivery and non-pay costs.

### 6.3 What types of cost are included in the unit costs?

HEIs provided details on expenditure incurred in delivering the pre-registration courses in-scope. This approach excluded costs incurred by placement providers, to the extent that these costs are met by HEE, and costs were limited to UK and EU national students.

Costs were categorised into six cost categories and divided further into 22 cost items. For the total costs of £475.2 million collected across the 13 professions, the proportion of costs across the six cost categories is shown below.

Figure 8 – Proportion of costs by category of cost



Staff costs are the highest category of cost in total from the participating HEIs (34% of the total cost), followed closely by centrally allocated indirect costs (33%).

In the contextual survey we invited HEIs to indicate the factors that had the greatest impact on the level of cost incurred. 41 HEIs completed a question ranking nine factors according to their influence on the costs. Scoring the rankings shows that staff, students and space are perceived to be the top three factors influencing cost. Facilities costs form part of the centrally allocated estates and indirect costs and non-pay cost categories.

Table 8 – Cost driver survey

Factor	Weighted result	Rank (out of 9)
Teaching staff	1.56	1
Students	3.03	2
Space	4.27	3
Facilities	4.92	4
Non-teaching staff	5.03	5
Placement management	5.13	6
Selection and recruitment	7.21	7
Compliance	7.24	8
Kit	7.49	9

These results concurred with our findings from the pilot stage and the significance of the costs submitted. Further detail is given later in this section but this survey also confirms the expectation that staff, space and facilities are the most significant drivers of cost.

#### 6.4 To what extent do the unit costs by cost categories vary across professions?

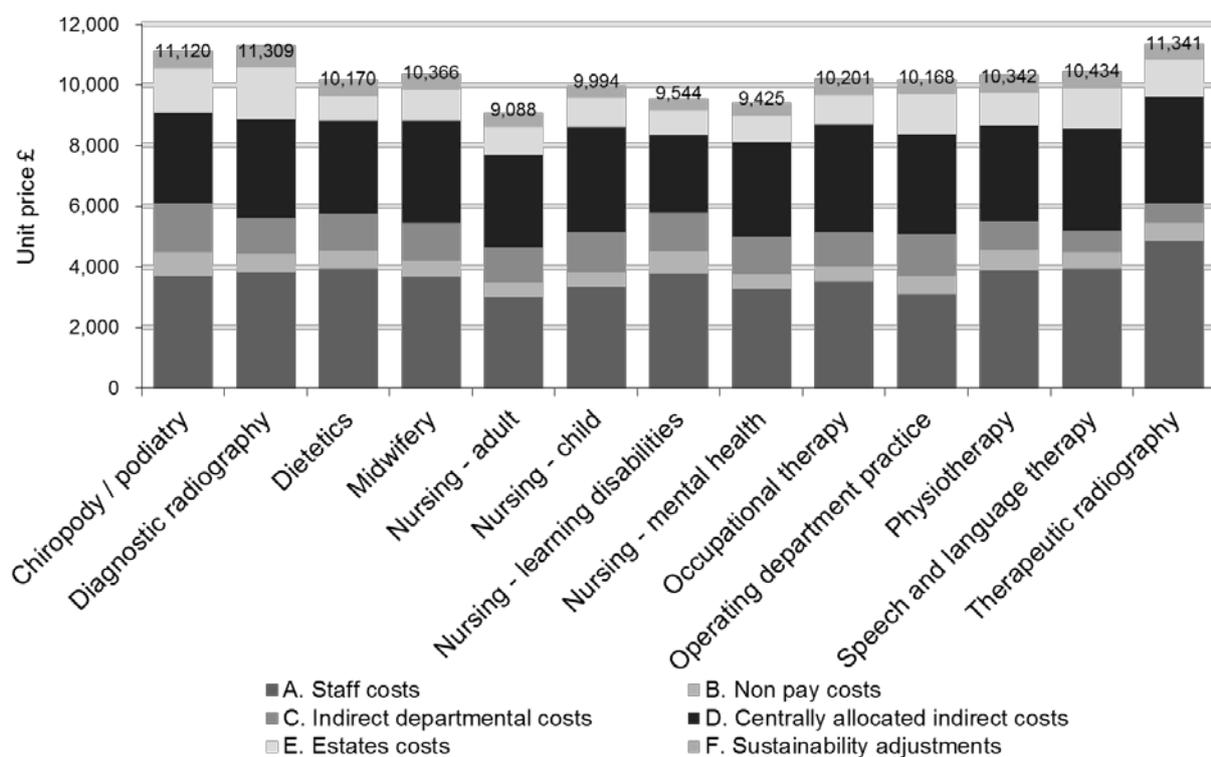
To understand the nature of the costs that are incurred in delivering the provision that is in-scope, we have analysed the different components of cost by profession in Figure 9 and Figure 10. These analyses also informed the checks we undertook to assess the reasonableness and completeness of the costs that were returned by HEIs.

Further detail of costs by category and profession is provided at Appendix 7 and by HEI at Appendix 9.

##### 6.4.1 Unit costs by profession

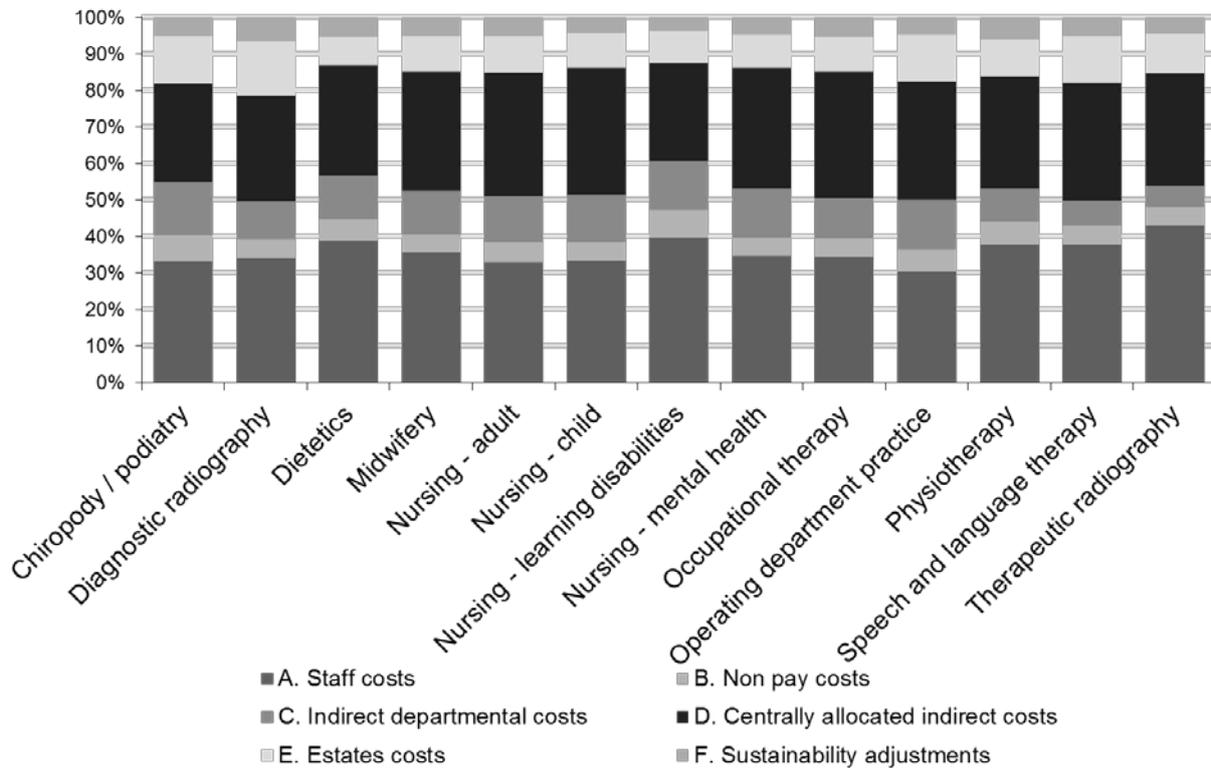
The study adopted the same approach to calculate each cost category unit cost by totalling all the costs provided by each cost category and then dividing by the total number of student FTEs for the profession.

Figure 9 – Weighted average unit cost by cost category and profession



The share of each cost category is shown in Figure 10. This analysis confirms pay as the largest, or at least equal, share of cost across each profession, closely followed by centrally allocated indirect costs.

Figure 10 – Weighted average unit Cost proportions by cost category and profession



Obviously each cost category proportion was influenced by others. For example this analysis confirmed the expectation that estates would be higher for Diagnostic radiography, Therapeutic radiography, Chiropody and Operating Department Practice given the combination of space and expensive equipment involved in the provision for example in imaging suites and operating theatre intensive care labs and their respective servicing and replacement cost. As a result, the pay proportion for these professions however, was at the lower end of the range (30% for OPD and 34% for Diagnostic Radiotherapy).

Podiatry also attracted higher estates proportions as a result of the estate costs associated with providing patient clinics alongside teaching provision. The pay proportions range from 30% (Operating Department Practice) to 43% (Therapeutic Radiography) whilst centrally allocated indirect costs ranged from 27% to 35% across all professions. HEIs explained that Therapeutic radiography costs could be higher as a result of staff being in short supply, employed at higher grades and needed a slightly higher staff to student ratio (SSR) for supervision and teaching purposes.

Physiotherapy also had a higher pay proportion, possibly reflecting the additional activities needed to support the course, skills teaching and practical exams and thus creating a higher level of academic input.

#### 6.4.2 Staff costs

Within the pay category, HEIs provided further detail across the following six headings:

- Course delivery;

- Placement management – academic time;
- Placement management – administrative team;
- Compliance management and professional Staff Development;
- Seconded costs; and
- Technician costs.

Table 9 details the costs across these items.

**Table 9 - Total Staff costs**

Cost item (Staff costs)	Total Staff costs £ (34.4% of the Total)	Item cost as a % of Staff costs	Item cost as a % of all costs
Course delivery	127,719,619	78.2%	26.9%
Placement management – academic time	12,999,016	8.0%	2.7%
Placement management – administrative team	5,437,887	3.3%	1.1%
Compliance management and professional Staff Development	9,768,709	6.0%	2.1%
Seconded costs (typically when NHS staff teach)	4,019,354	2.5%	0.8%
Technician costs	3,292,214	2.0%	0.7%
<b>Total</b>	<b>163,236,798</b>	<b>100.0%</b>	<b>34.4%</b>

Table 10 shows the range of average course delivery costs across the professions as a percentage of the total staff costs.

**Table 10 - Course delivery as a percentage of Staff costs by profession**

Profession	Course delivery £ as a % of Staff £
Chiropody / Podiatry	74.6%
Diagnostic radiography	74.1%
Dietetics	80.7%
Midwifery	79.0%
Nursing – adult	76.7%
Nursing – child	76.5%
Nursing – learning disabilities	78.4%
Nursing – mental health	77.2%
Occupational Therapy	79.5%
Operating Department Practice	81.3%
Physiotherapy	84.6%
Speech and Language Therapy	82.4%
Therapeutic Radiography	85.4%

The proportion of course delivery costs is consistently high across the professions at between 74% and 85%.

### 6.4.3 Non-pay costs

Within the Non-pay category, HEIs provided further detail across the following seven headings:

- Compliance and registration fees;
- Consumables;
- DBS checks;
- Equipment;
- Occupational Health checks;
- Placement costs; and
- Uniforms.

In the cost data schedule, HEIs also had the opportunity to detail costs for a further three ‘other’ categories if they wished to separately identify specific costs, and refine the bases of allocation for these costs to courses where it was significant to their provision. This resulted in 42 further items of cost being categorised below into specified and unspecified groups depending on the detail provided.

**Table 11 – Total Non-pay costs**

Cost item	Total Non-pay cost £ (5.4% of the Total)	Item cost as a % of non-pay costs	Item cost as a % of all costs
Compliance and registration fees	733,189	2.9%	0.2%
Consumables	3,258,025	12.7%	0.7%
DBS checks	1,064,701	4.1%	0.2%
Equipment	3,249,051	12.7%	0.7%
Occupational Health checks	4,628,222	18.0%	1.0%
Placement costs	1,566,737	6.1%	0.3%
Uniforms	1,594,499	6.2%	0.3%
Other – specified	3,172,578	12.4%	0.7%
Other – unspecified	6,398,366	24.9%	1.3%
<b>Total</b>	<b>25,665,368</b>	<b>100.0%</b>	<b>5.4%</b>

Within the ‘other’ specified costs HEIs had detailed items such as travel and subsistence; printing and stationery; and hardships costs. One HEI included hardship costs (where these were in excess of any funding received) across its courses with a unit cost for each student ranging between £82 and £100. Anecdotally, we were aware of other HEIs supporting students in a similar way, but they could not easily separate the costs involved and allocate to individual courses.

We also noted from the submissions that some costs should have been allocated to other cost category headings, for example rent to Estates (direct). In one instance, the total amounted to £400,000 (1.6% of the total non-pay costs, 0.08% of the total costs). The HEI that provided this detail used the same basis to allocate its estate costs (using student number metrics) and therefore no further recalculations were deemed necessary.

In examining the proportion of total non-pay costs in detail by profession, we noted the following:

- Compliance and registration fees were highest in Speech and Language Therapy (4.7%) and Occupational Therapy (4.1%);
- Consumables were highest in Speech and Language Therapy (33%), ODP (24%) and Podiatry (22%); the rest were less than 19%;
- Equipment costs were highest in Diagnostic and Therapeutic Radiography (40% and 42% respectively). Podiatry was next highest at 33% and the remaining professions were less than 15%. This accorded with our expectation from the pilot visits;
- Occupational health costs were highest in the Nursing professions (~20%) with the exception of Nursing Learning Disabilities which were 14%; and
- Uniforms were less than 7.5% of the total non-pay costs across all professions. Nursing generally had higher proportions and Midwifery had the highest proportion. Anecdotally, we understand this was due to the repeated wear and tear experienced in service delivery.

A number of HEIs that we queried on their higher non-pay costs indicated that they had multiple sites or ‘hub and spoke’ arrangements which could explain differences in cost.

#### 6.4.4 Indirect department costs

Within this category, HEIs divided the TRAC-sourced cost data into staff or non-staff costs.

**Table 12 – Indirect department costs**

Cost item (Indirect department)	Total Indirect department cost £ (12% of the total)	Item cost as a % of total indirect costs	Item cost as a % of all costs
Non-staff costs	16,337,510	28.5%	3.4%
Staff costs	40,972,148	71.5%	8.6%
<b>Total</b>	<b>57,309,658</b>	<b>100.0%</b>	<b>12.1%</b>

Whilst this division between staff and non-staff costs is provided, both elements of indirect costs were generally allocated on the basis of student FTEs thus making little difference between them to the overall course cost allocations of £57 million.

#### 6.4.5 Centrally allocated indirect costs

The amount of costs allocated to the Department, Faculty or School through the TRAC model in respect of central indirect costs, totalled £156.4 million (33% of the total costs). These costs relate to the central functions in the University.

#### 6.4.6 Estates costs

Where possible and appropriate, HEIs separated out direct estates costs from centrally allocated estates costs. The centrally allocated estates cost was allocated to the academic area through the TRAC model. The direct estates costs are those incurred directly at the academic unit level, and/or those where the central estates cost could be directly allocated to this provision (see Table 13).

**Table 13 – Estate costs**

Cost item (Estates)	Total Estate cost £ (10% of the total)	item cost as a % of total Estates cost	Item cost as a % of all costs
Centrally allocated estates costs	35,472,817	73.3%	7.5%
Direct estates costs	12,911,982	26.7%	2.7%
<b>Total</b>	<b>48,384,798</b>	<b>100.0%</b>	<b>10.2%</b>

At the pilot stage HEIs requested this detailed division of cost items to help better reflect the specific estates resources consumed by some pre-registration courses. Whilst 73.3% of estate costs relied on broader measures to allocate space costs to schools or departments and then to courses, HEIs reported being able to identify and allocate specialist areas to professions and therefore this division of estates costs proved a useful step to inform more accurate allocation of costs to courses.

Further unit cost information at the profession level is provided in Appendix 9.

#### 6.4.7 Sustainability adjustments

TRAC applies two sustainability adjustments referred to as the ‘infrastructure’ and ‘return for finance and investment’ adjustment. The purpose of these economic adjustments is to provide the ‘full economic cost’ of an activity. The adjustments are a standard part of TRAC and are accepted by Government. The sustainability adjustments are designed to account for the fact that the ‘real’ cost of activity is higher than the historical expenditure stated in most HEIs published financial accounts. This difference is due to a combination of understatement of asset values in some HEIs (which account for property at historical cost rather than current valuation) and the need to allow a surplus or margin for risk, financing and development. The costs allocated from TRAC for sustainability in this study totalled £24.2 million, 5.1% of the total.

Appendix 3 provides further detail on the definition of cost items.

### 6.5 How significant are the staff costs of managing placements and do they vary across professions?

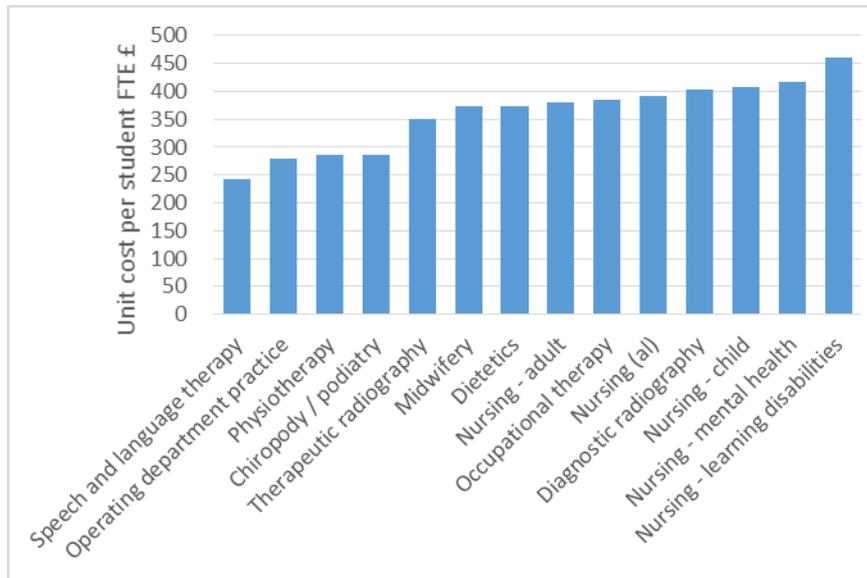
Pilot HEIs explained that a significant number of academic and administrative activities were required to manage placement organisations and the students when on placement. HEIs reported a range of support, including but not limited to:

- Student visits;
- Telephone and email support for both students and their placement mentors;
- Focus groups; and
- Placement materials and handbooks.

Across all courses, the submissions indicated that 2.7% of all costs were dedicated to managing placements by academic staff and 1.1% by administrative staff, see Table 9. The non pay cost

associated with placements were low (0.3% of overall costs), as reported in Table 11. Figure 11 shows the staff cost element of placement costs for each student FTE by profession.

**Figure 11 – Placement unit costs**

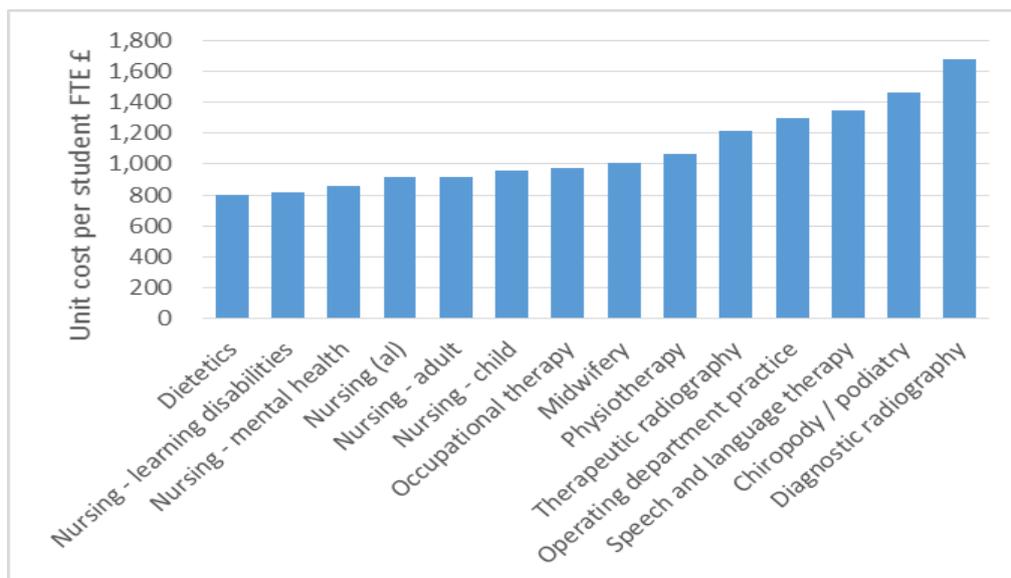


Placement unit costs are fairly uniform in Nursing across Adult, Child and Mental Health (being in the range of £381 to £418).

## 6.6 How significant are the estates costs?

The analysis from the previous section (6.5) reports that the Estate cost are 10% of all costs. Figure 12 shows the unit cost of Estate costs by profession.

**Figure 12 - Estate unit costs**

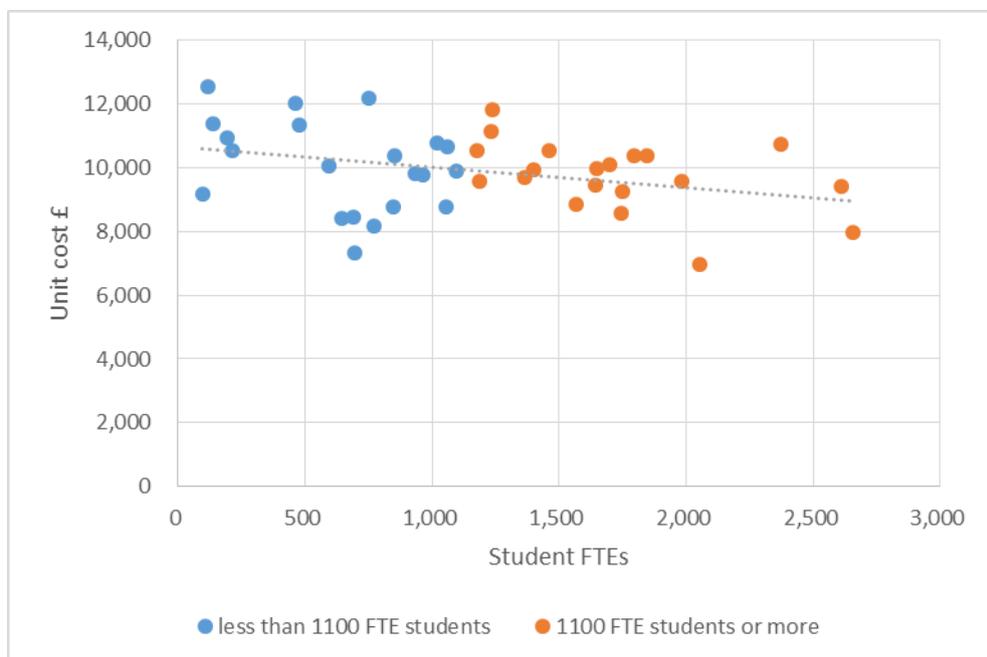


Those professions with a known heavier estates usage feature as higher unit costs in this chart, namely Chiropody, Radiology, Speech and Language Therapy and Operating Department Practice. HEIs reported that these professions needed dedicated laboratory and simulation spaces often containing expensive and complex equipment such as CT and MRI imaging equipment and operating theatre equipment (including specialist lights, mannequins, tables, trolleys and monitoring equipment).

### 6.7 What are the key factors influencing cost?

HEIs used student FTEs extensively in allocating costs. They also reported that courses with fewer student FTEs tended to be higher cost for each student. To test this hypothesis we plotted overall weighted unit costs for each HEI against student FTEs for all professions provided by the 43 HEIs. This is presented in Figure 13.

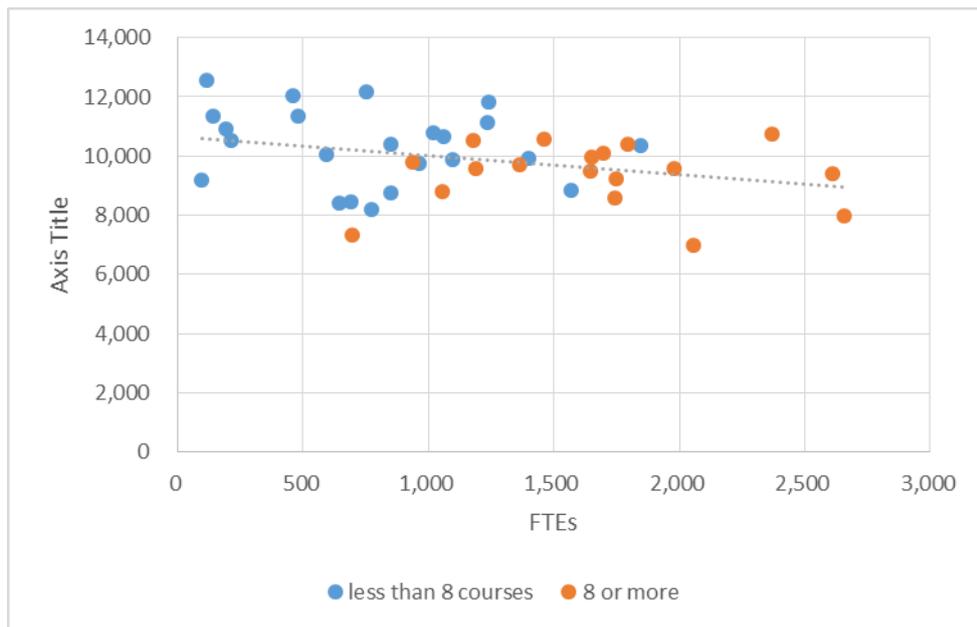
Figure 13 – Weighted unit costs by student FTEs



A trend line was added which showed a negative gradient indicating that the higher student FTEs the lower the weighted unit cost. Those HEIs with less than 1,110 student FTEs (selected to divide the population into equal halves) were coloured blue (this divided the 43 submissions into roughly half).

To test this hypothesis further the study used the number of courses to divide the 43 HEI submissions into those with 8 or more courses and those delivering fewer (selected to divide the population into equal halves). This was to assess whether the number of in-scope courses delivered lowers the cost per FTE. Figure 14 shows the same plots with different colours, blue dots for those HEIs which deliver fewer than eight courses.

Figure 14 – Weighted unit costs by student FTEs – showing differences in number of courses provided



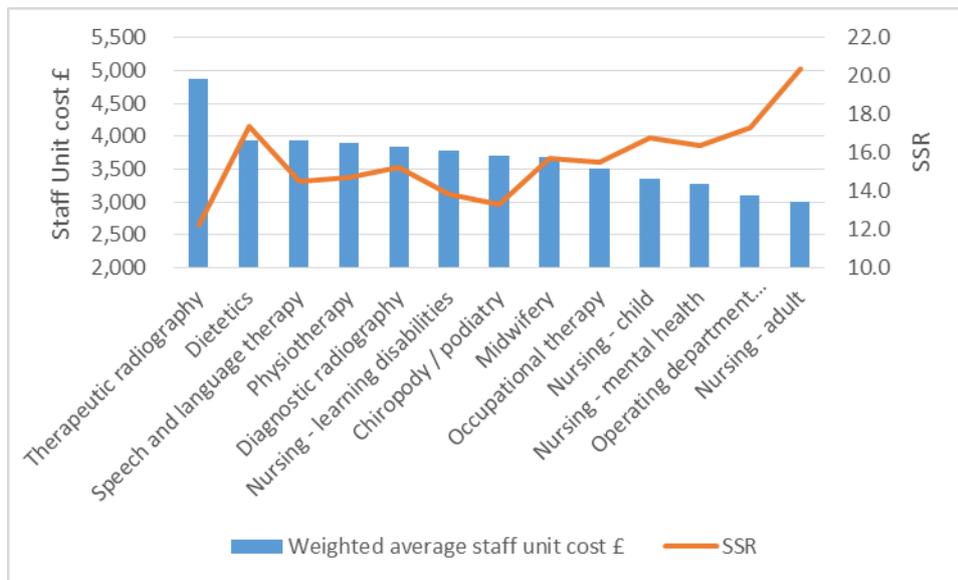
To assess whether there is a relationship between unit cost and student FTE, a line of best fit was added to a scatter plot of these variables. Although the correlation of numbers of courses to the cost per student is not as strong as in the previous analysis, there does appear to be some relationship between the numbers of courses delivered and the unit cost.

### 6.7.1 Student Staff Ratios (SSRs)

We used the staff and student FTE data provided in the contextual survey to calculate a SSR for each HEI course submission. For each profession, we took the total student FTE from all courses and divided this by the total staff FTE. Where there were material differences between the student FTEs returned in the contextual questionnaire, compared to that stated in the costing questionnaire, the data has been excluded from the SSR analysis.

Figure 15 shows an analysis to understand the SSR impact on staff costs as HEIs reported that staff costs have the greatest impact on course costs in Table 8.

**Figure 15 - Staff unit costs (weighted by student FTEs) versus Student to Staff ratios (SSR) by Profession**



In Figure 15 the SSRs contribute some explanation to factors for higher and lower staff unit costs, for example with Therapeutic radiotherapy (at the higher unit cost end, with lower SSRs) and Operating Department Practice, Nursing Child, Mental Health and Adult (at the lower unit cost end, with higher SSRs). Despite this insight, this level of analysis does not fully explain cost differences across all Professions. For example, Dietetics looks higher and Podiatry lower in staff cost than their SSRs would suggest from other Professions.

Our contextual survey also collected staff cost banding information for each course, thereby giving us some further insight into the skill / experience mix used to deliver the provision and its cost. For each course, we collected full time equivalent information across 17 salary bandings, from less than £50,000 to £200,000 and over, in £10,000 increments.

Understanding those professions with the higher grades of staff helped further to explain the contribution made towards the overall staff cost. For example, Dietetics and Speech and language has a higher SSR (14:1), but its mix of staff is proportionally more costly. Similarly 21% of Diagnostic radiography staff costs are in the higher cost bands, which could explain why the costs are not lower when compared to other professions with similar SSRs.

In summary, this analysis shows that the SSR is an important component for the staff unit cost and the overall unit cost, but also that there is not necessarily a linear relationship between SSRs and staff costs or course costs for all professions.

## 6.8 What variation exists across specific cost items?

A requirement of the study was to identify the costs of a number of relatively small value but important features of these courses, namely DBS checks, occupational health checks and uniforms. 8 provides details on these costs. In summary, we found:

- Median costs of £21 for DBS checks, £92 for occupational health checks and £32 for uniforms; and

- A small proportion of HEIs charge students for some or all of the cost of these items. For example, one HEI quoted not charging for an initial set of nursing uniforms, issued at the start of the year, but that they would then charge for any subsequent uniforms required.

Further detail is provided in Appendix 8.

## 7 Other cost considerations

### 7.1 Background

The study was based on costs incurred in the academic year 2014/15. This approach provides a consistent basis for HEFCE to consider the relative cost of the provision in the scope of this study, with the other teaching activity it funds.

As HEFCE will use this study to inform its funding decisions for 2017/18 onwards, the costs incurred by HEIs in 2017/18 will be different for a variety of reasons. It is important to note however that a number of these additional or different costs will apply to other provision that HEFCE funds, and are not therefore unique in all cases to the provision that is in the scope of this study.

### 7.2 Other areas of cost

This study is based on 2014/15 costs and did not consider uplifts for a known range of factors increasing costs across the sector. The cost changes since 2014/15 include:

- Financial Reporting Standard 102 and its impact for example on the valuation and associated costs of pensions for defined benefit schemes. HEFCE commented in its report 'Financial health of the higher education sector: 2015-16 to 2018-19 forecasts'<sup>4</sup> that 'pension liabilities are expected to increase from £4.9 billion at 31 July 15 to £7.2 billion at 31 July 2016; an increase of 45.8 per cent';
- Inflation. For example, within the health sector, the inflation estimate for 2015/16 was 3%<sup>5</sup> and for 2016/17 3.1%<sup>6</sup> and HEFCE commented in its report 'Financial health of the higher education sector: 2015-16 to 2018-19 forecasts' that 'salary and wage costs are forecast to increase by 6.1 per cent in 2016-17.';
- Cost obligations under the Office for Fair Access (OFFA) agreement. Previously HEIs did not have an obligation under their OFFA agreement for Pre-Registration NMAH students. The move to the new funding arrangements under HEFCE and student loans will mean that Nursing, midwifery and allied health students fall within the scope of the OFFA agreement which could create a financial obligation; however a number of HEIs reported that they already provide some financial and other forms of support for these students; and
- Staff vacancies being carried – though HEIs will have experienced this in 2014/15, it is likely that vacancies will continue and vary in impact as HEIs compete with the NHS and other HEIs for staff.

In addition to inflation costs since 2014/15, we were informed that HEIs have met other NMAH student costs arising from their placement. One HEI commented that they pay for smartcards which are used in the NHS to restrict access to patient information to those that have a valid reason to do

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<sup>4</sup> 'Financial health of the higher education sector - 2015-16 to 2018-19 forecasts', HEFCE, November 2016, [http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201634/HEFCE2016\\_34.pdf](http://www.hefce.ac.uk/media/HEFCE,2014/Content/Pubs/2016/201634/HEFCE2016_34.pdf)

<sup>5</sup> 'The Forward View Into Action: Planning For 2015/16', NHS England Publications Gateway Number: 02768, December 2014, <https://www.england.nhs.uk/wp-content/uploads/2014/12/forward-view-plning.pdf>

<sup>6</sup> 'Economic assumptions 2016/17 to 2020/21', NHS Improvement, 23 March 2016. <https://www.gov.uk/government/publications/economic-assumptions-201617-to-202021/economic-assumptions-201617-to-202021>

so. Similar to chip and PIN bank cards, the card is transferable from placement to placement and we were informed that each card costs around £120.

This study did not consider the impact of regulatory changes that may have occurred since 2014/15 on the quality of teaching and placements. Regulatory bodies offer guidelines on staff to student ratios. This study only focussed on what was observed and not what may be necessary to meet current or future regulation. For example HEIs will need to address the outcome-based standards of proficiency being developed by the NMC for future midwives and nurses.

This study did not consider the long term impact where HEIs are managing costs to available income.

HEFCE may wish to consider these issues in its deliberations over funding decisions.

## 8 Glossary

This section details the acronyms and terms used throughout this report.

Term	Description
Cost driver	Cost drivers are used for allocating those costs that cannot be directly allocated to a department and/or an activity category.
Direct cost	A cost that is only incurred as a result of undertaking a particular activity and can be wholly attributed to that activity.
DBS	Disclosure and Barring Service
Estates cost	The costs of the HEI's space e.g. lecture theatres, laboratories, meeting rooms, offices and corridors.
FTE	Full-time equivalent. A measure of time for one student on a full-time course, 1.00 describes one full-time student.
HE	Higher education.
HEE	Health Education England.
HEI	Higher Education Institution.
HEFCE	The Higher Education Funding Council for England.
HEFCE -fundable	Activities that may be counted within funding calculations by the Higher Education Funding Council for England.
HEFCE price groups	HESA academic cost centres with similar teaching costs are grouped together in four (five from 2013/14) price groups from A, reflecting the highest cost courses, to D, being the lowest cost courses to deliver.
HESA	The Higher Education Statistics Agency. HESA collects a range of data every year UK-wide from universities, higher education colleges and other differently funded providers of higher education. These data are then provided to UK government and higher education funding bodies to support their work in regulating and funding higher education providers. <a href="http://www.hesa.ac.uk">www.hesa.ac.uk</a> .
In-scope	Term used to refer to the courses included in this study that lead to registration with the appropriate professional body for NMAHs.
NMAHs	Nursing, Midwifery and Allied Health professions. The collective term used to describe the professions in-scope for this study.
PG	Postgraduate.
PGT	Postgraduate taught student.

<b>Term</b>	<b>Description</b>
PG:UG ratio	The measure of how the cost of postgraduate teaching compares with the cost of undergraduate provision – a ratio of 1:1 indicates that the cost of both activities is the same.
Student FTE	A full-time equivalent student, based on a student studying full-time for a full year.
Time allocation survey	A survey completed by staff at an HEI to determine the proportion of their time spent on various teaching, research and other activities, used to allocate staff costs to activities.
TRAC	The Transparent Approach to Costing.
TRAC(T)	The Transparent Approach to Costing Teaching.
UG	Undergraduate.
Workload Planning Model (WLM)	A method, like the Time Allocation Survey, of establishing the staff time spent on teaching, research and other activities. The WLM plans staff time for the academic year and is based on the full year rather than the TAS 'snapshot' survey.

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## Appendix 1 – Steering Group and Technical Group representation

Member of the Steering Group were:

- Chris Millward, HEFCE (Chair)
- Helene Fouquet, HEFCE
- Steven Hill, HEFCE
- Ed Hughes, HEFCE
- Toby West-Taylor, HEFCE
- Heather Williams, HEFCE
- Clare Padley and Peter Thompson, Nursing and Midwifery Council
- Professor Stephen West CBE, University of the West England, Bristol and Universities UK
- Steve Large, King's College London
- Andrew Bush, KPMG
- David Sharif, KPMG

The Technical Group comprised representation from:

- The Council of Deans of Health
- Health Education England
- Higher Education Funding Council for England
- KPMG
- University of Huddersfield
- University of Nottingham
- University of Salford
- University of Sheffield
- University of Southampton
- University of the West of England, Bristol
- Universities UK

## Appendix 2 – List of courses costed

HEIs provided the following courses with costs. This table contains the course titles and awards provided by HEIs and as a result some entries are provided here with similar descriptions.

Course title	Course Award	Course length
Adult	BSc	FT
Adult	PG Dip	FT
Adult Nursing	BNurs (Hons)	FT
Adult Nursing	BSc	FT
Adult Nursing	BSc	FT or PT
Adult Nursing	DipHe	FT or PT
Applied Nursing (Learning Disability) & Social Work	BSc	FT
Bachelor of Nursing	BSc	FT
Bachelor of Nursing (Adult and Child)	BN	FT
Bachelor of Nursing (Adult and Mental Health)	BN	FT
Bachelor of Nursing (Child)	BN	FT
Bachelor of Nursing (Mental Health)	BN	FT
Child	Bsc	FT
Child Nursing	BSc	FT
Children and Young People's Nursing	BSc	FT
Children's Nursing	BNurs (Hons)	FT
Chiropody / Podiatry	BSc	FT
Clinical Communication Studies	Mmed	FT
Clinical Language - Speech and Language	BSc	FT
Diagnostic Radiography	BSc	FT
Dietetics	BSc	FT
Dietetics	BSc	FT or PT
Dietetics	MSc	FT
Dietetics	PGDip	FT
Dietetics (Nutrition) (UG)	MSc	FT
Language Pathology	MSc	FT
LD	BSc	FT
Learning and Disabilities	BSc	FT
Learning Disabilities Nursing	BSc	FT
Learning Disability Nursing	BNurs (Hons)	FT
Mental Health	BSc	FT
Mental Health	PG Dip	FT
Mental Health Nursing	BNurs (Hons)	FT
Mental Health Nursing	BSc	FT
Midwifery	BA	FT
Midwifery	BSc	3 YEARS FT
Midwifery	BSc	FT
Midwifery	BSc	FT (18mth)
Midwifery	BSc	FT (3Yr)

Course title	Course Award	Course length
Midwifery	BSc	FT (3yrs)
Midwifery	BSc (Hons)	FT
Midwifery	BSc Midwifery	18mths
Midwifery	BSc Midwifery	3yrs
Midwifery	MSc	FT
Midwifery	PG Dip	FT
Midwifery	PGDip	FT
Midwifery Practice and Registration as a Midwife	PGDip	FT
Midwifery Programmes	BSc	FT or PT
Midwifery Studies and Registration as a Midwife	BSc	FT
Nurse Adult	BSc/MSc	FT
Nursing	BSc	FT
Nursing	BSc Nursing (Adult)	3yrs
Nursing	BSc Nursing (Child)	3yrs
Nursing	BSc Nursing (Mental Health)	3yrs
Nursing	MSc	FT
Nursing	PG Dip Nursing (Adult)	2yrs
Nursing	PG Dip Nursing (Mental Health)	2yrs
nursing - adult	BSc	3 YEARS FT
nursing - adult	BSc	FT
nursing - adult	BSc (Hons)	FT
nursing - adult	BSc/BA/ADNS	FT
nursing - adult	MSc	FT
nursing - adult	PGDip	FT
nursing - child	BSc	3 YEARS FT
nursing - child	BSc	FT
nursing - child	BSc/BA/ADNS	FT
Nursing - Child (Pre Reg)	PGDip	FT
nursing - learning disabilities	BSc	FT
nursing - mental health	BSc	3 YEARS FT
nursing - mental health	BSc	FT
nursing - mental health	BSc (Hons)	FT
nursing - mental health	BSc/BA/ADNS	FT
nursing - mental health	PGDip	FT
Nursing - Mental Health (Pre Reg)	PGDip	FT
Nursing (Adult)	Bachelor of nursing honours	FT
Nursing (Adult)	BSc	FT
Nursing (Adult)	BSc	FT (3yrs)
Nursing (Adult)	BSc (Hons)	FT
Nursing (Adult)	BSc Hons	FT

Course title	Course Award	Course length
Nursing (Adult)	MSc	FT
Nursing (Adult)	PG Dip	FT
Nursing (Adult)	PGDip	FT
Nursing (Adult)	PGDip	FT (2yrs)
Nursing (Child Health)	BSc	FT
Nursing (Child)	BSc	FT
Nursing (Child)	BSc	FT (3yrs)
Nursing (Child)	BSc (Hons)	FT
Nursing (Child)	BSc Hons	FT
Nursing (Child)	PG Dip	FT
Nursing (Child)	PGDip	FT (2yrs)
Nursing (L Dis)	BSc Hons	FT
Nursing (Learning Disabilities)	BSc	FT
Nursing (Learning Disabilities)	BSc	FT (3yrs)
Nursing (M Health)	BSc Hons	FT
Nursing (Mental Health)	BSc	FT
Nursing (Mental Health)	BSc	FT (3yrs)
Nursing (Mental Health)	BSc (Hons)	FT
Nursing (Mental Health)	MSc	FT
Nursing (Mental Health)	PG Dip	FT
Nursing (Mental Health)	PGDip	FT (2yrs)
Nursing Adult	BSc	FT
Nursing Adult	MNurSci	FT
Nursing Adult Graduate Entry	BSc	FT
Nursing Adult	BSc/MSc	FT
Nursing Child	BSc	FT
Nursing Child	MNurSci	FT
Nursing Child Graduate Entry	BSc	FT
Nursing Learning Disabilities	BSc	FT
Nursing Mental Health	BSc	FT
Nursing Mental Health	MNurSci	FT
Nursing Mental Health Graduate Entry	BSc	FT
Nursing Midwifery	BSc	FT
Nursing Studies with Registration as a Children's Nurse	BSc	FT
Nursing Studies with Registration as a Mental Health Nurse	BSc	FT
Nursing Studies with Registration as an Adult Nurse	BSc	FT
Nursing with Registration as a Children's Nurse	PGDip	FT
Nursing with Registration as a Mental Health Nurse (PG Dip)	PGDip	FT
Nursing with Registration as an Adult Nurse	PGDip	FT
Nursing(Adult)	BSc	FT
Nursing(Adult)	DipHe	FT

Course title	Course Award	Course length
Nursing(Child)	BSc	FT
Nursing(LD)	BSc	FT
Nursing(Mental)	BSc	FT
Nutrition & Dietetics	BSc	FT
Nutrition/Dietetics	BSc	FT
Occupational therapists	BSc	FT
Occupational therapy	BHSc	FT
Occupational therapy	BSc	FT
Occupational therapy	BSc	FT (3yrs)
Occupational therapy	BSc	FT or PT
Occupational therapy	BSc	FT/PT
Occupational therapy	BSc	PT
Occupational therapy	BSc	PT (4yrs)
Occupational therapy	BSc (Hons)	FT
Occupational therapy	BSc (Hons)	FT
Occupational therapy	BSc (Hons)	PT
Occupational therapy	MSc	FT
Occupational therapy	MSc	FT
Occupational therapy	PGDip/MSc	FT (2yrs)
Occupational Therapy (2 Years)	MSc	FT
Occupational Therapy (3 Years)	BSc	FT
Occupational Therapy (4 Years)	BSc	PT
Occupational Therapy (Practice Based Learning)	BSc	FT
Occupational Therapy : Health Through Occupation	MSc	FT
ODP	BSc Hons	FT
ODP	Dip HE	FT
ODP	DipHe	FT
ODP	Diploma	FT
ODP	PGDip	FT
OPD	DipHe	FT
Operating Department Practice	BSc	FT
Operating Department Practice	Dip HE	FT
Operating Department Practice	DipHe	FT
Operating Department Practice	PGDip	FT
Operating Department Practitioners	DipHe	PT
Operating Department Practise	DipHe	FT
Operating Department Practitioner	BSc	FT (3yrs)
Operating Department Practice	DipHe	FT
Operating Departmental Practice	BSc Hons	FT
OT	MSc	FT
Physiotherapists	BSc	FT
Physiotherapy	BHSc	FT
Physiotherapy	BSc	FT
Physiotherapy	BSc	FT or PT

Course title	Course Award	Course length
Physiotherapy	BSc	FT/PT
Physiotherapy	BSc	FT
Physiotherapy	BSc (Hons)	FT
Physiotherapy	BSc (Hons)	FT 3 years
Physiotherapy	BSc Hons	FT
Physiotherapy	MSc	FT
Physiotherapy Rehabilitation science	MSc	FT
Physiotherapy	MSc	FT 2 years
Physiotherapy	BSc	PT 4 years
Physiotherapy (Practice Based Learning)	BSc	FT
Physiotherapy (Pre-Reg)	MSc	FT FastTrack
Physiotherapy (Pre-Registration)	MSc	FT
Podiatric Medicine	BSc Hons	FT
Podiatry	BSc	FT
Podiatry	BSc	PT
Pre Reg Midwifery	BSc	FT
Pre Reg Nursing - Adult	BSc	FT
Pre Reg Nursing - Child	BSc	FT
Pre Reg Nursing - Learning Disabilities	BSc	FT
Pre Reg Nursing - Mental Health	BSc	FT
Pre-reg nursing - adult	Adv Dip/BSc (Hons)	FT
Pre-reg nursing - adult	BSc	FT
Pre-reg nursing - adult	BSc (Hons)	FT 3 years
Pre-reg nursing - adult	MSc	FT
Pre-reg nursing - adult	PGDip	FT
Pre-reg nursing - child	Adv Dip/BSc (Hons)	FT
Pre-reg nursing - child	BSc	FT
Pre-reg nursing - child	BSc (Hons)	FT 3 years
Pre-reg nursing - child	MSc	FT
Pre-reg nursing - learning disabilities	BSc	FT
Pre-reg nursing - mental health	Adv Dip/BSc (Hons)	FT
Pre-reg nursing - mental health	BSc	FT
Pre-reg nursing - mental health	BSc (Hons)	FT 3 years
Pre-reg nursing - mental health	MSc	FT
Pre-registration midwifery	BSc	FT
Pre-registration midwifery	BSc (Hons)	FT
Pre-registration midwifery	BSc (Hons)	FT 3 years
Pre-Registration Nursing (Adult)	BSc Hons	FT
Pre-Registration Nursing (Children)	BSc Hons	FT
Pre-Registration Nursing (Mental Health)	BSc Hons	FT
Radiography	BSc	FT
Radiography	MSc	FT
Radiography (Diagnostic)	BSc	FT
Radiography (Diagnostic)	BSc	FT (3yrs)

Course title	Course Award	Course length
Radiography (Diagnostic)	BSc	PT (3.5yrs)
Radiography (Diagnostic)	BSc (Hons)	FT
Radiography (Therapeutic)	BSc	FT (3yrs)
Radiography (Therapeutic)	PGDip	FT (2yrs)
Radiotherapy & Oncology	BSc	FT
Radiotherapy & Oncology in Practice	PGDip	FT
Speech & Language Sciences	BSc	FT
Speech & Language Therapy	BSc	FT
Speech and Language Sciences	BMed	FT
Speech and language therapy	BSc	3 YEARS FT
Speech Pathology & Therapy	BSc	FT
Therapeutic Radiography	BSc	FT
Therapeutic Radiography	BSc	FT
Therapeutic Radiography	BSc (Hons)	FT
Therapeutic Radiography	MSc	FT
Therapeutic Radiotherapy	BSc	FT

**Note:**

A number of HEIs deliver courses with the same course title (and length and award). As a result, there are not 324 entries in the table to reconcile to the total number of courses costed in this study.

## Appendix 3 – Allocation of costs in the model

### Overview

For each HEI-specified Department, HEIs provided detailed costs across six cost categories (for Staff, Non-pay, Indirect department costs, Centrally allocated indirect costs, Estates costs and Sustainability costs). The cost items included within each category were derived from discussions with HEFCE and the pilot HEIs as key areas of cost, delivery and/or interest to the study and/or were expended in different ways. For example, within Staff costs (expected to be a significant proportion of the overall cost) the resources consumed managing placements was deemed to comprise both administrative staff and academic time spent on placement activities, either on site or at the institution.

HEIs indicated that these costs could be different across courses and were driven by a mix of the numbers of students but also the number and type of placement. As a result, the guidance provided definitional support to appropriately classify the costs and different methods to allocate to courses.

### HEI steps

Once the Department costs based on a TRAC(T) basis were established, HEIs took the following steps to allocate costs to courses:

- To determine course costs, the methodology did not restrict HEIs' choice of cost drivers to allocate each Department cost item. In order to help consistency across the sector, the detailed guidance issued to HEIs set out the preferred allocation methods to apply in the cost collection spreadsheet. HEIs were encouraged to use the preferred allocation methods where possible, unless a more accurate approach could be used.
- For Staff costs, workload planning (WLP) data was the preferred method for allocating Course delivery costs and academic resources spent managing placements. Sampled time allocation data was deemed the next best allocation method. The use of Student FTE or weighted headcounts was also specified to cover compliance management activities, technician costs and secondees costs where appropriate.
- The guidance specified that the majority of Non-pay costs should be allocated on the basis of student FTEs or headcount. The guidance contained detailed references to HEFCE material to help HEIs use the correct student counts.
- The remaining indirect and overhead type costs were allocated on the basis of student FTEs or head count, and expenditure amounts derived from the preceding cost category allocations.
- Areas of some judgement were anticipated as necessary, for example for Estates costs on the basis of course usage, and placement costs using weighted student headcount for non-pay placement costs if the course has a disproportionate demand.

Some HEIs adopted different methods of allocation where they believed it to be more accurate and representative.

### Cost category and cost item details

The cost collection return captured a range of costs. HEIs were instructed to detail the following costs across their Departments and then allocate each to their courses.

<b>Cost category and item</b>	<b>Description of the cost heading</b>
A. Staff costs	All pay costs including agency and part-time staff expenditure.
Course delivery	All pay costs of academic staff, technicians and non-academic staff associated with delivering student learning activities, for example direct face-to-face teaching, preparation and assessment.
Placement management - administrative team	Include all administrative pay costs dedicated to managing placements.
Placement management - academic time	Include all academic staff time associated with placement activities, either on site or at the institution. This would include for example, travel, placement meetings, support to students and any related preparatory work. Any student oversight activities on site related to learning should be classified as Course delivery.
Compliance management and professional Staff Development	Academic and non-academic staff costs in undertaking compliance activities such as regulatory management, reporting, audits and governance as well as ensuring academic staff are suitably qualified and up to date on relevant professional knowledge.
Technician costs	Balance of technician costs not dedicated to course delivery, placement or compliance activities.
Secondee costs	Typically, invoices paid for NHS staff course teaching. A cost should only be recorded where a cost is incurred by the institution at the School/Faculty/Departmental level.
<b>B. Non-pay costs</b>	
Uniforms	Include all replacement items issued at the cost to the institution, i.e. gross cost of uniforms less any contribution from students or other sources.
DBS checks	Typically the direct costs incurred in processing year one students' criminal record checks to standard or enhanced levels.
Occupational Health checks	Costs to the institution i.e. gross cost less any contribution from students or other sources.
Consumables	Day to day consumables used by students and teaching staff in the course of teaching delivery and study, for example syringes, drugs, plasters. Depending on the subject, these may vary in nature.
Placement costs	Costs paid directly to placement organisations in excess of any funding received. Please note this will only be relevant where the HEI pays the placement provider directly and in this case the 'net' cost should be recognised i.e. the gross cost, less any income received from HEE directly. Where HEE pay the placement provider directly, a cost should not be included in this box.

<b>Cost category and item</b>	<b>Description of the cost heading</b>
Equipment	Typical annual expenditure on routine items for course equipment or premises not activity driven, for example beds, blood pressure monitors, physio aids, rent for a facility. Do not include depreciation. As an area where differences may happen from one year to the next, please ensure any exceptional spend in 2014/15 is described in the contextual survey.
Compliance and registration fees	Other costs associated with meeting compliance requirements, for example insurance, external examiners costs, registration with professional body.
Other costs 1 - specific named	Any other material costs that are specific to the Department (named)
Other costs 2 - specific named	Any other material costs that are specific to the Department (named)
Other costs 3 - other	Balance of costs not allocated to a category above.
<b>C. Indirect departmental costs</b>	
Staff costs	All other pay costs within the Department that have not been allocated above, typically remaining administrative staff and a proportion of senior management time.
Non-staff costs	All other non-pay costs within the Department that have not been allocated above.
<b>D. Centrally allocated indirect costs</b>	This is the amount of costs allocated to the Department/Faculty/School through the TRAC model in respect of central overhead costs that are not estates costs.
<b>E. Estate costs</b>	
Direct estate costs	Estate usage costs where significant, identifiable and attributable to the specific needs of courses in-scope, for example a physiotherapy gym (used by both OT and physio), a radiography suite (even where shared with Medical students). Does not include non-specific costs such as classroom space or offices but does include both maintenance and space costs.
Centrally allocated estates costs	This is the Department/Faculty/School share of estates costs that is allocated from the central department(s) and the balance of estates costs from TRAC(T).
<b>F. Sustainability adjustments</b>	Two sustainability adjustments are calculated and included in TRAC costs: <ol style="list-style-type: none"> <li>1. Infrastructure Adjustment – to adjust infrastructure costs based on either a historical cost or valuation to ensure the basis takes account of the full long-term costs of maintaining the infrastructure; and</li> </ol>

Cost category and item	Description of the cost heading
	2. Return for Financing and Investment - used to approximate the surpluses required for rationalisation, updating and development, including investment in human capital and innovation, and the costs of raising and servicing capital.

## Allocation methods

Table 14 provides further detail on the allocation methods outlined in the guidance produced for each cost item. We reviewed HEI compliance to these allocation methods.

*Table 14 - Allocation methods contained in the guidance*

Proposed	Preferred allocation method (if not possible to directly allocate)	Other allocation methods
A. Staff Costs		
Course delivery	Proportion of staff time or staff FTE metrics based on workload planning (WLP) data or robust time allocation data, (weighted for payscale differences)	Sampled time allocation data or calendar data weighted for payscale differences or Head of Department judgment.
Placement management - administrative team	Student headcount weighted by placement length	Estimate of placement management proportions across courses from Head of Department or course leader judgment.
Placement management - academic time	Staff time or FTE metrics based on workload planning (WLP) data or robust time allocation data, (weighted for payscale differences)	Student headcount weighted by placement length. Sampled time allocation data or calendar data, (weighted for payscale differences).
Compliance management and professional Staff Development	Student headcount	Student FTE
Technician costs	Mix of directly allocated costs (where appropriate) plus student FTE for remaining amount, (weighted for payscale differences)	Student FTE
Secondee costs	Directly allocated based on billing or general ledger information	Student FTE

<b>Proposed</b>	<b>Preferred allocation method (if not possible to directly allocate)</b>	<b>Other allocation methods</b>
<b>B. Non-pay costs</b>		
Uniforms	Unit uniform cost based on year 1 student headcount	Student headcount
DBS checks	Year 1 student headcount x Unit Cost	-
Occupational Health checks	Year 1 student headcount x Unit Cost	-
Consumables	Student FTE (possibly weighted if course has disproportionate use of consumables based on Head of Department or course leader judgment)	Student FTE
Placement costs	Student headcount (possibly weighted if course has disproportionate demand based on Head of Department or course leader judgment)	Student headcount
Equipment	Mix of directly allocated costs (where appropriate) plus student FTE	Student FTE
Compliance	Student FTE	-
Other costs	Student FTE	-
<b>C. Indirect departmental costs</b>		
Staff costs	All staff expenditure in line with course cost analysis (i.e. using cost category A spend)	Student FTE (possibly weighted by course delivery staff costs from cost category A to account for mix of staff and student activities covered)
Non-staff costs	Student FTE	Mix of staff FTE and student FTE (using estimate of share of costs between the two)
<b>D. Centrally allocated indirect costs</b>	Student FTE	-
<b>E. Estates costs</b>		
Direct estates costs	Actual estate usage weighted by estate costs (informed by estates	Weighted student FTE using estimate of usage

<b>Proposed</b>	<b>Preferred allocation method (if not possible to directly allocate)</b>	<b>Other allocation methods</b>
	data or Head of Department estimates)	
Centrally allocated estates costs	Proportion of costs A to C	Student FTE weighted for on campus time
F. Sustainability adjustments	Costs A to E	-

## Appendix 4 – Coverage of in-scope courses by student FTEs and region

### A. Student FTEs

To assess student FTE coverage, HEFCE provided FTE data from the 2014/15 HESA student record. To enable the courses in the scope of this study to be identified from the HESA student record, institutions needed to have consistently flagged students as being registered on pre-registration NMAH courses. HEFCE was aware that this had not been consistently done by all institutions and therefore there were some limitations on how accurately student FTEs on the pre-registration NMAH courses could be extracted from the data. In addition, these fields do not allow differentiation in 2014/15 between the different professions leading towards registration with the Nursing and Midwifery Council, nor between diagnostic and therapeutic radiography. HEFCE is working to address this categorisation for the 2016/17 HESA student record.

Therefore we assessed the FTE coverage in two ways. In section 4 (Table 3) we used the HEFCE extract from the HESA student record to compare the FTEs reported in HESA, for the institutions participating in the study, to the total FTEs extracted from the HESA student record for each profession, to get a like-for-like approximation of the coverage.

In Table 15 below, we have estimated coverage differently. This has taken the FTE data that institutions returned in this study and has compared it to the total FTE data extracted from the HESA student record.

**Table 15 - Student FTE coverage by profession**

Profession	Student FTEs from HEI returns	2014/15 HESA student FTE	as a %
Chiropody / Podiatry	603	620	97%
Diagnostic Radiography	1,540	2,216	69%
Dietetics	844	964	88%
Midwifery	4,104	5,477	75%
Nursing - adult	22,776	27,169	84%
Nursing - child	3,810	5,264	72%
Nursing - learning disabilities	927	1,189	78%
Nursing - mental health	4,966	6,317	79%
Occupational Therapy	3,320	3,550	94%
Operating Department Practice	1,054	883	119%
Physiotherapy	3,704	3,586	103%
Speech and Language Therapy	719	1,101	65%
Therapeutic Radiography	774	624	124%
<b>Total</b>	<b>49,140</b>	<b>58,960</b>	<b>83%</b>

In total, the HEI returns reported student FTEs totalling 49,140 covers 83% of the student population indicated in the 2014/15 HESA population.

Table 15 shows some coverage in excess of 100% where the HESA student record did not allow clear separate identification of all students on pre-registration NMAH courses and for the same reason the

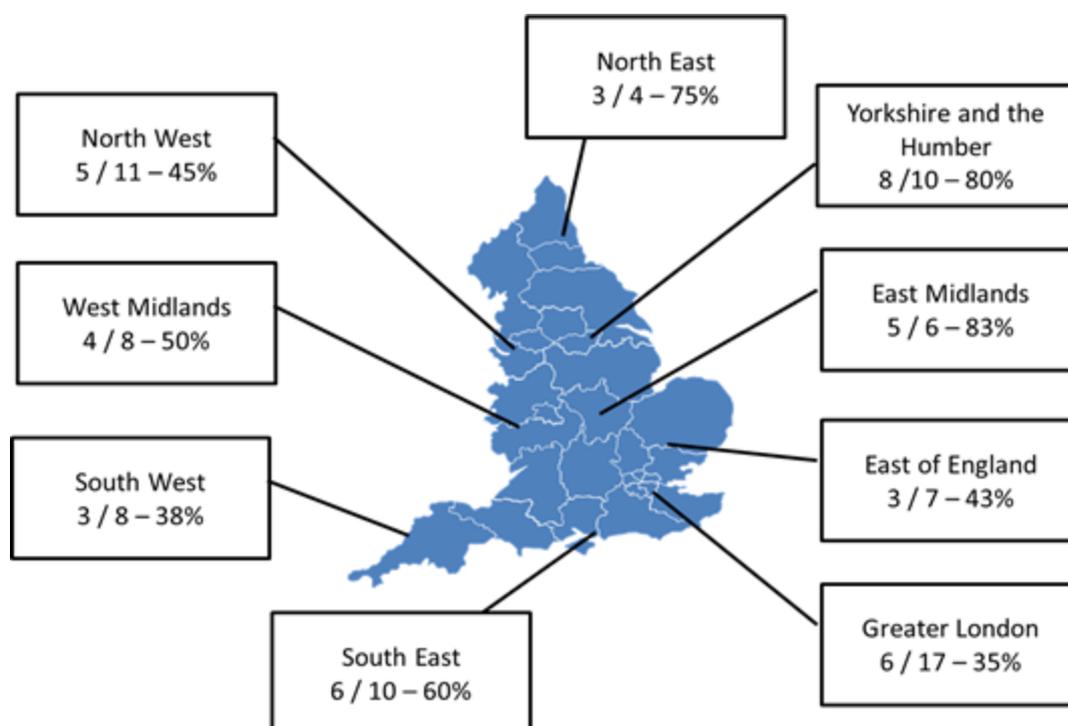
percentages for other professions may also overstate coverage of student FTEs in each profession. In our study a greater number of institutions returned in-scope student FTEs for some professions than was flagged in the HESA student record. An example of this is Speech and Language Therapy where the HESA student record indicated eight institutions were delivering this profession. Of these eight institutions, three provided data for this costing study, but a further three institutions, that were not identified in the HESA data also provided data for this study.

Nevertheless, based on the analysis in Table 3 and Table 15 above, although both analyses provide an approximation of coverage, we consider that the costing data provided by institutions gives sufficient coverage of each profession to meet HEFCE’s requirements.

## B. Region

Using regional data provided by HEFCE, we analysed the coverage of HEIs providing in-scope courses across England. Coverage across the HEFCE defined regions in England on the basis of the 43 HEIs varied from 35% in London to 80% and over in Yorkshire and the Humber, and the East Midlands.

Figure 16 - HEI coverage across England



Despite a lower HEI coverage in London (of 35%) the six HEIs provide a higher student FTE coverage of 48%. The South West region has an HEI coverage of 38% but 88% from an analysis of like-for-like student FTE coverage analysis. From this analysis, we conclude that there is sufficient coverage to be representative of the sector as a whole. A list of participating HEIs is provided in Appendix 5.

## Appendix 5 – Participant HEIs

The pilot HEIs comprised:

- The University of Huddersfield
- The University of Nottingham
- The University of Salford
- The University of Sheffield
- University of Southampton
- University of the West of England, Bristol

HEIs participating in the full study:

- Anglia Ruskin University
- Bournemouth University
- Brunel University London
- Buckinghamshire New University
- Coventry University
- De Montfort University
- King's College London
- Kingston University & St George's, University of London
- Leeds Beckett University
- Liverpool John Moores University
- London South Bank University
- Manchester Metropolitan University
- Middlesex University
- Newcastle University
- Oxford Brookes University
- Sheffield Hallam University
- Teesside University
- The University of Birmingham
- The University of East Anglia
- The University of Huddersfield
- The University of Hull
- The University of Leeds
- The University of Liverpool
- The University of Nottingham
- The University of Salford
- The University of Sheffield
- The University of Surrey
- The University of Wolverhampton
- University of Brighton
- University of Bristol
- University of Central Lancashire
- University of Derby
- University of East London
- University of Hertfordshire
- University of Leicester
- University of Lincoln
- University of Northumbria at Newcastle
- University of Plymouth
- University of Portsmouth
- University of Southampton
- University of the West of England, Bristol
- University of Worcester
- University of York
- York St John University

## Appendix 6 – Validation issues and exclusions applied

Issue	Analysis	Impact
FdSc midwifery course	Not a qualifying pre-registration course with the NMC	One course removed from analysis of cost
Physiotherapy course with unit cost of £28,000 – a significant outlier	HEI's last year of running this course with low FTE, distorting costs. Low overall cost of £131,154	One course removed from analysis of cost
Courses with 2014/15 as first or last year (Chiropody, ODP, Adult Nursing, Occupational Therapy)	For a number of HEIs this has distorted unit costs	Four courses removed from analysis of cost
One Nursing Learning Disabilities course with demonstrable high SSR for 2014/15, evidenced significant increase in future student FTEs with zero increase in staff FTE.	Unusually high staff unit cost	Whilst subsequent year costs were provided this course was removed from analysis of cost

## Appendix 7 – Profession Unit costs by cost category

Table 16 and Table 17 provide the summarised data to calculate the unit costs by cost category for each profession.

*Table 16 - Costs by Profession*

Profession	Total costs						Total £
	A. Staff costs	B. Non pay costs	C. Indirect departmental costs	D. Centrally allocated indirect costs	E. Estates costs	F. Sustainability adjustments	
Chiropody / Podiatry	2,227,706	479,589	973,588	1,801,767	880,816	339,912	6,703,379
Diagnostic Radiography	5,908,040	926,161	1,803,955	5,044,828	2,588,399	1,139,648	17,411,031
Dietetics	3,325,815	508,395	1,027,951	2,590,664	678,761	450,749	8,582,335
Midwifery	15,139,789	2,062,323	5,150,799	13,888,985	4,131,243	2,168,358	42,541,497
Nursing - adult	68,226,682	11,131,904	26,254,571	69,847,288	20,954,674	10,580,330	206,995,450
Nursing - child	12,741,502	1,860,686	4,947,774	13,269,632	3,650,580	1,611,117	38,081,290
Nursing - learning disabilities	3,499,704	688,084	1,183,358	2,373,737	759,655	342,908	8,847,446
Nursing - mental health	16,244,815	2,368,676	6,225,365	15,479,510	4,282,651	2,203,349	46,804,367
Occupational Therapy	11,668,262	1,661,182	3,757,559	11,744,503	3,238,256	1,799,319	33,869,081
Operating Department Practice	3,255,692	648,756	1,464,421	3,471,931	1,370,203	508,843	10,719,846
Physiotherapy	14,411,885	2,481,279	3,485,324	11,717,303	3,942,950	2,261,794	38,300,535
Speech and Language Therapy	2,822,127	395,439	524,045	2,409,305	967,137	380,619	7,498,672
Therapeutic Radiography	3,764,781	452,894	510,947	2,712,772	939,473	400,181	8,781,047
<b>Total</b>	<b>163,236,798</b>	<b>25,665,368</b>	<b>57,309,658</b>	<b>156,352,225</b>	<b>48,384,798</b>	<b>24,187,127</b>	<b>475,135,974</b>

Table 17 - FTEs and unit costs by Profession

Profession	Student FTE (rounded to zero decimal places)	Unit costs £						Total Unit cost £ (rounded)	HEIs
		A. Staff costs	B. Non pay costs	C. Indirect departmental costs	D. Centrally allocated indirect costs	E. Estates costs	F. Sustainability adjustments		
Chiropody / Podiatry	603	3,694	795	1,615	2,988	1,461	564	11,117	5
Diagnostic Radiography	1,540	3,836	601	1,171	3,276	1,681	740	11,306	10
Dietetics	844	3,941	602	1,218	3,070	804	534	10,169	7
Midwifery	4,104	3,689	503	1,255	3,384	1,007	528	10,366	29
Nursing - adult	22,776	2,996	489	1,153	3,067	920	465	9,088	37
Nursing - child	3,810	3,344	488	1,299	3,483	958	423	9,995	29
Nursing - learning disabilities	927	3,775	742	1,277	2,561	819	370	9,544	14
Nursing - mental health	4,966	3,271	477	1,254	3,117	862	444	9,425	32
Occupational therapy	3,320	3,515	500	1,132	3,538	975	542	10,202	19
Operating Department Practice	1,054	3,089	616	1,389	3,294	1,300	483	10,171	16
Physiotherapy	3,704	3,891	670	941	3,163	1,065	611	10,340	25
Speech and Language Therapy	719	3,925	550	729	3,351	1,345	529	10,429	6
Therapeutic Radiography	774	4,864	585	660	3,505	1,214	517	11,345	7
<b>Total</b>	<b>49,141</b>								

Note: The rounding of the student FTE in table 17 above leads to a rounding difference in the total unit cost, when compared to the unit costs reported in section 6, where roundings have not been applied.

## Appendix 8 – Other specific costs within the Midwifery, Nursing and Allied Health courses

A requirement of the study was to identify the costs of a number of relatively small value but important features of these courses, namely uniforms, occupational health checks and DBS checks. This data was requested from HEIs in the cost collection template. The summary results are provided in the table below. Charts are then provided to show the range of results by type of cost.

**Table 18 - Analysis of costs for DBS checks, occupational health checks and uniforms**

Item	DBS checks	Occupational Health checks	Uniforms
Frequency	36	37	41
Median £	21	92	32
Mean £	25	99	33

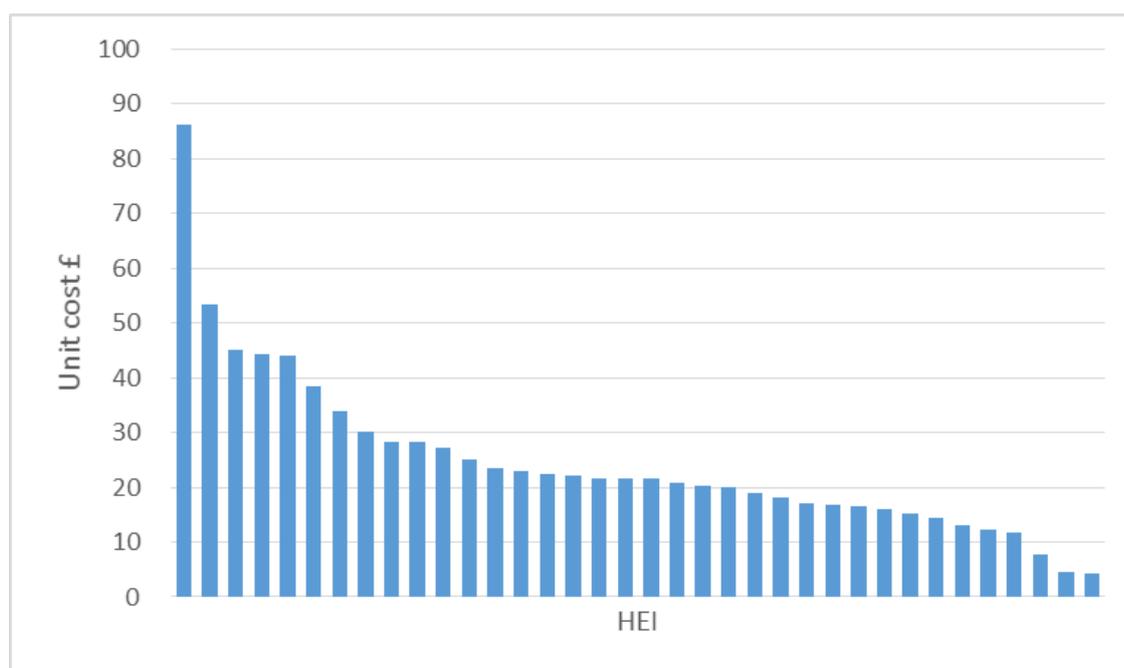
Whilst the majority of HEIs do not charge students for these costs some HEIs indicated that they do. The table below summarises the frequency of these charges for those that responded to the question.

**Table 19 - Proportion of HEIs charging students**

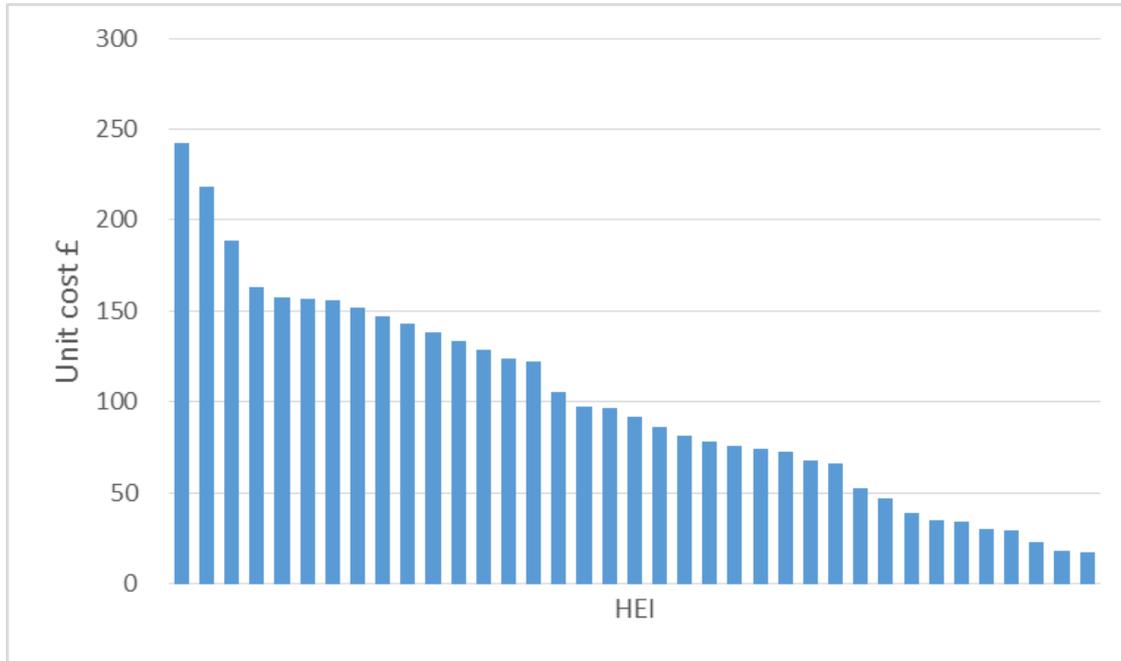
Charges made to student?	DBS checks	Occupational Health checks	Uniforms
Yes	14%	7%	12%
No	86%	93%	88%

The figures below illustrate the distribution of unit costs for each of these cost items by HEIs. They show some variation across each category.

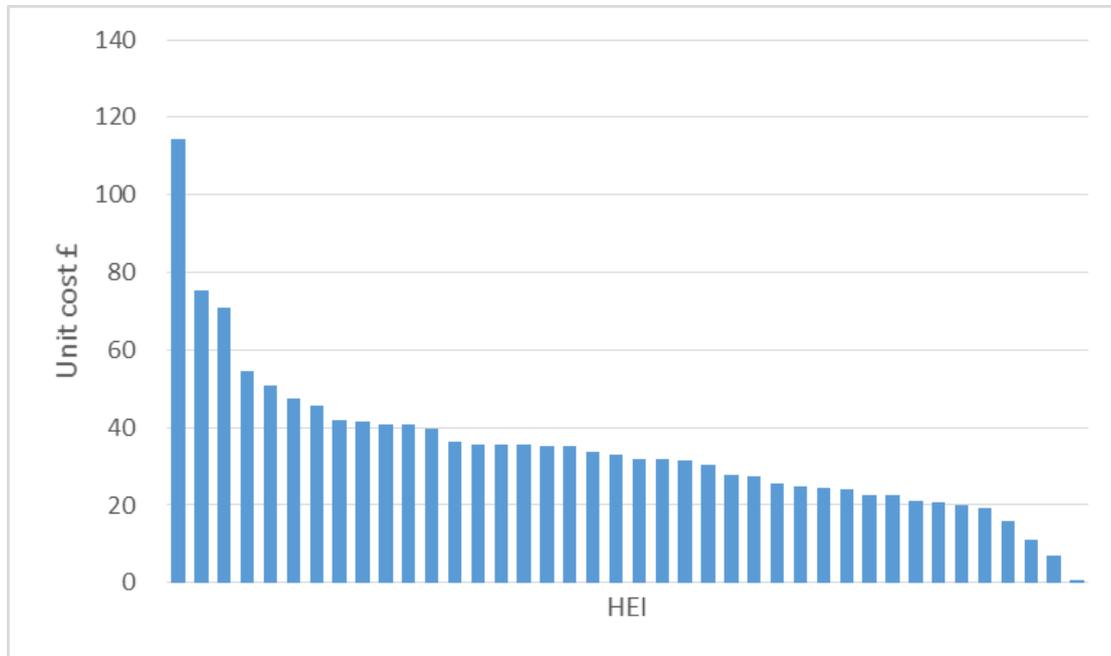
**Figure 17 -- Distribution of costs reported for DBS checks**



**Figure 18 - Distribution of costs reported for occupational health checks**



**Figure 19 - Distribution of costs reported for uniforms**

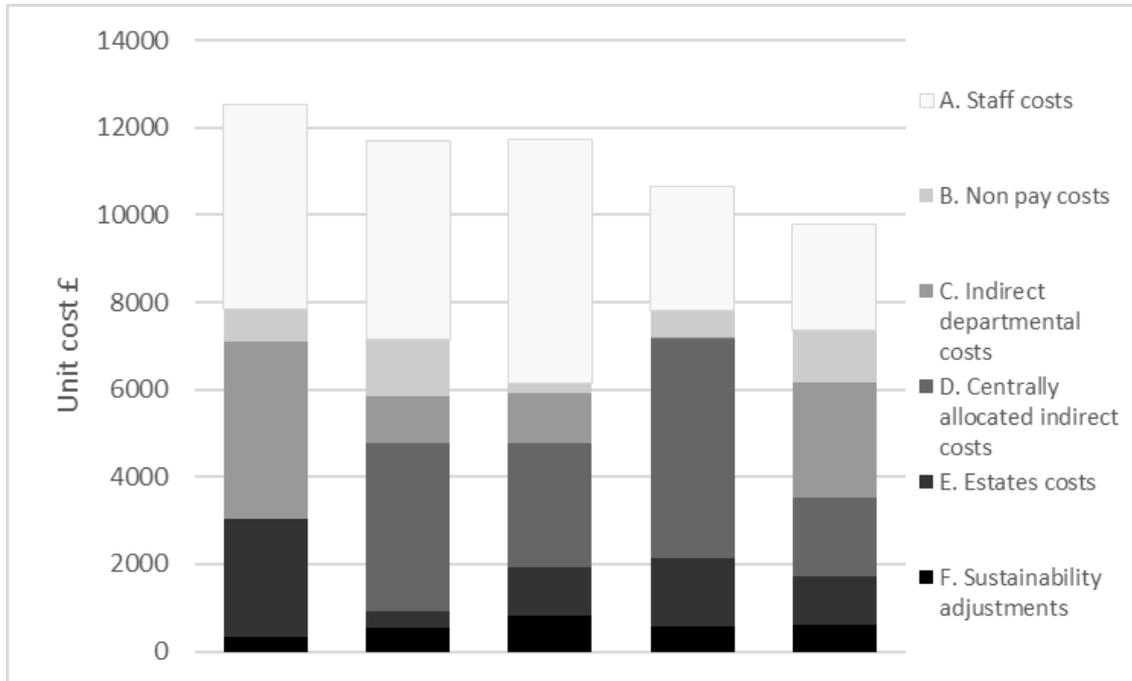


Given the relatively low unit costs involved (none greater than £250), the outstanding queries relating to the upper and lower unit costs above were not deemed significant to the overall objectives of this study. This could however, be an area for HEFCE to investigate further, if required.

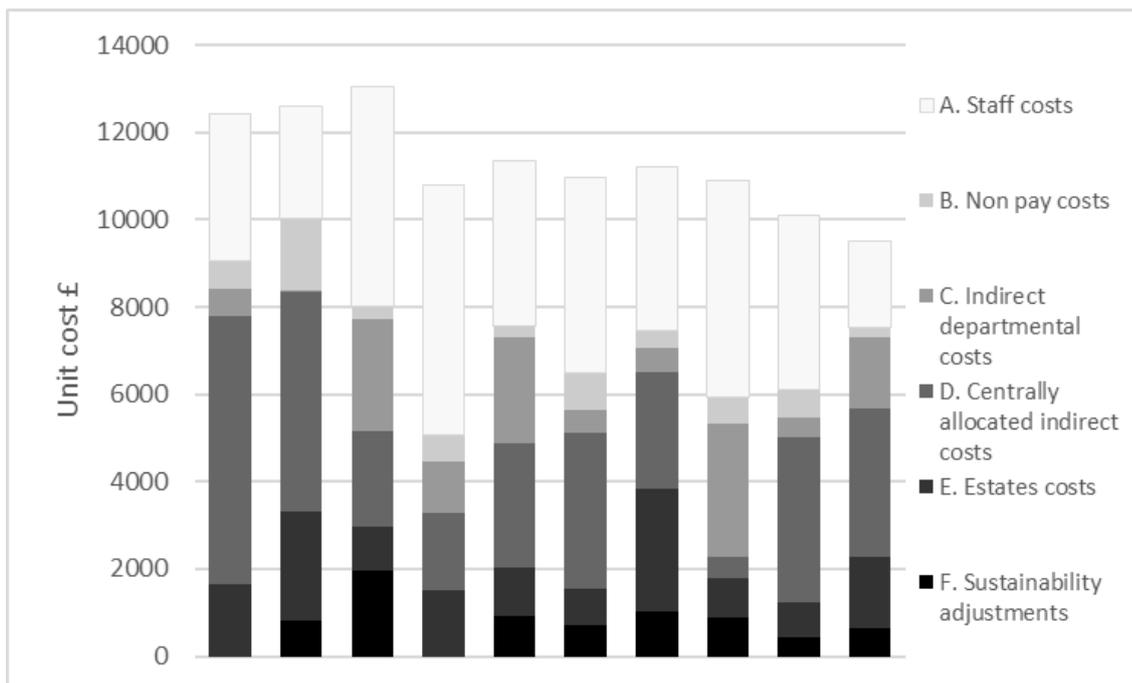
## Appendix 9 – Cost per student FTE at the cost category group level

Of the 43 HEIs submissions covering the 13 professions reported, the unit costs reported by HEI, for each cost category are provided below.

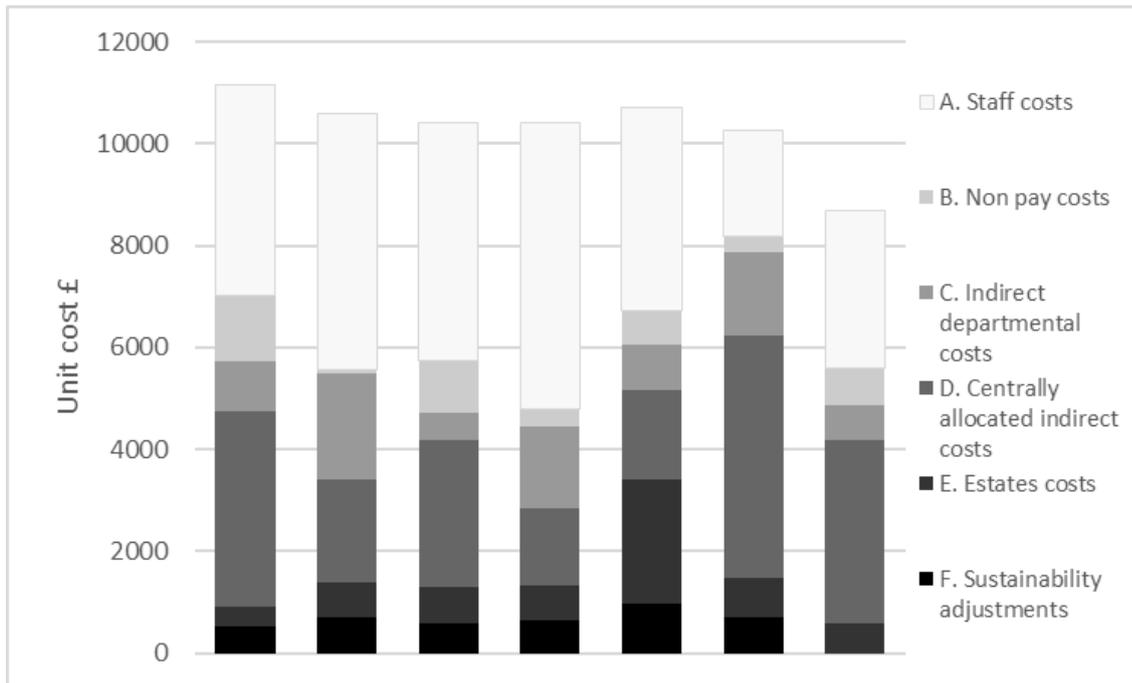
### 1. Chiropody / Podiatry



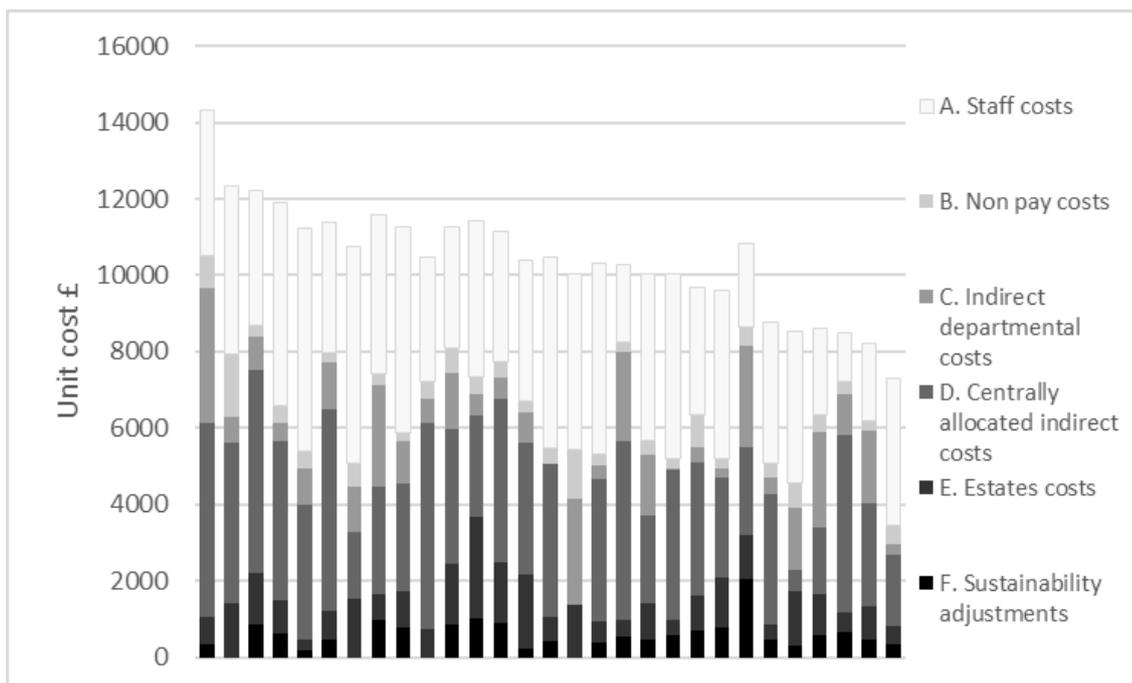
### 2. Diagnostic Radiography



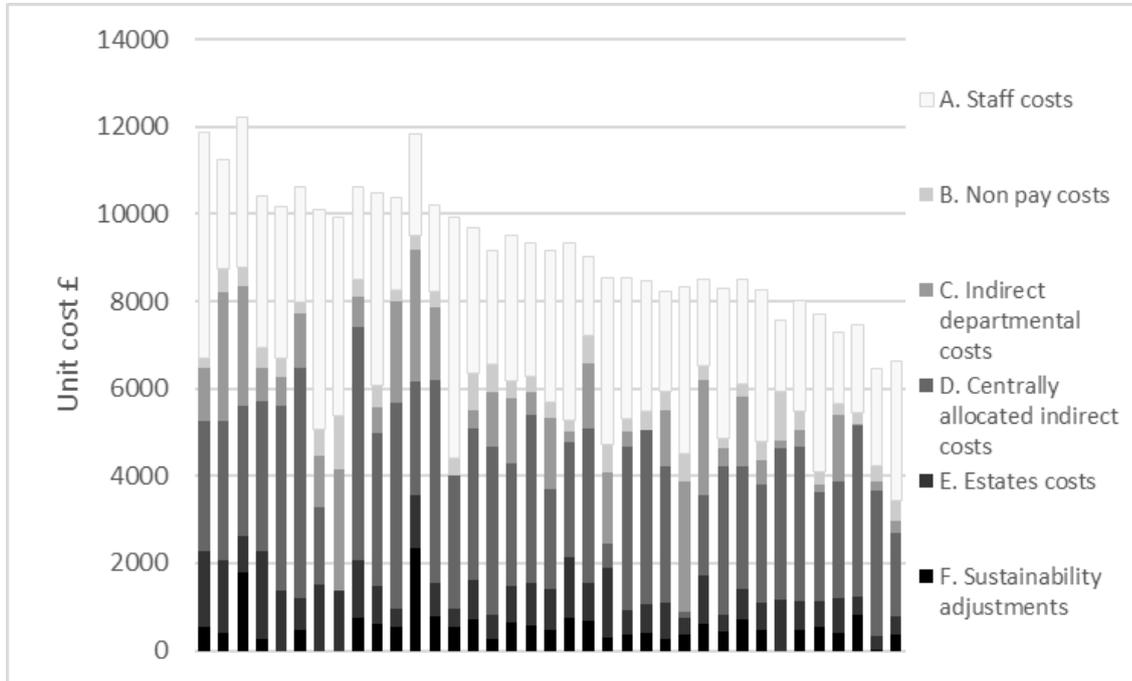
### 3. Dietetics



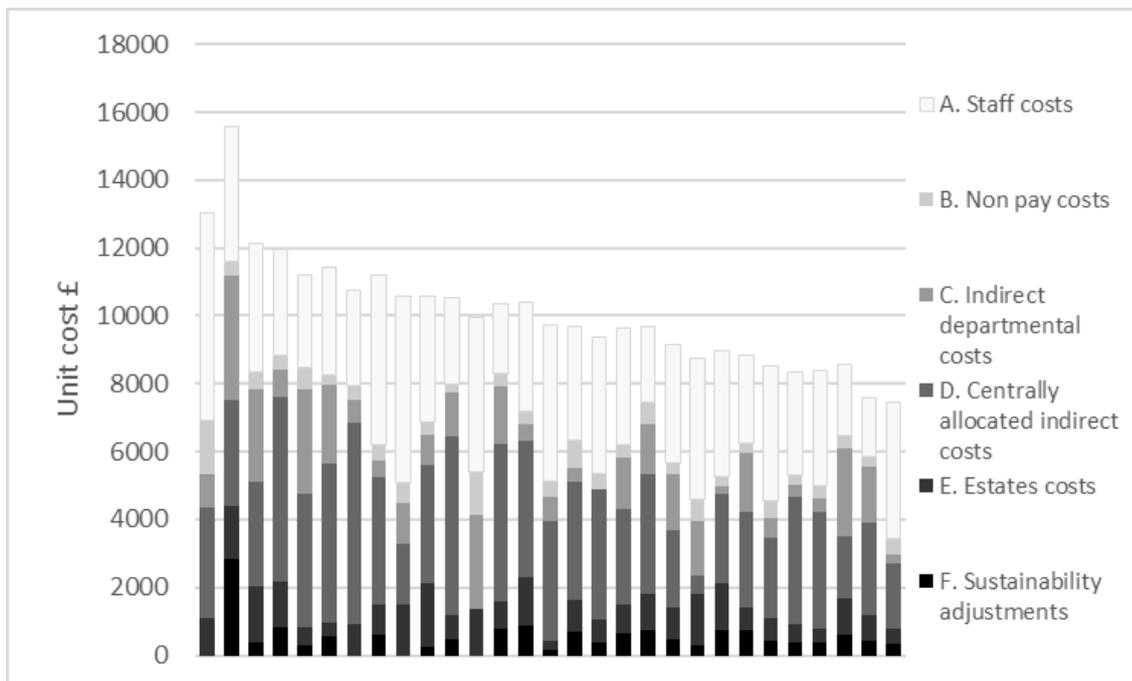
### 4. Midwifery



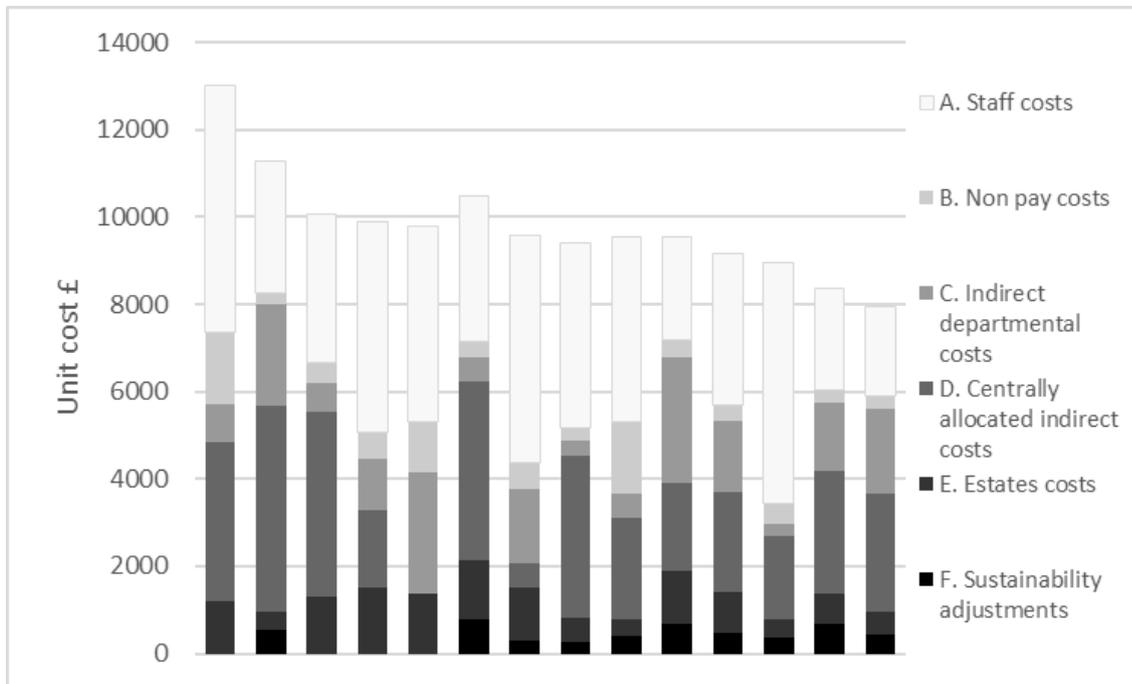
### 5. Nursing – Adult



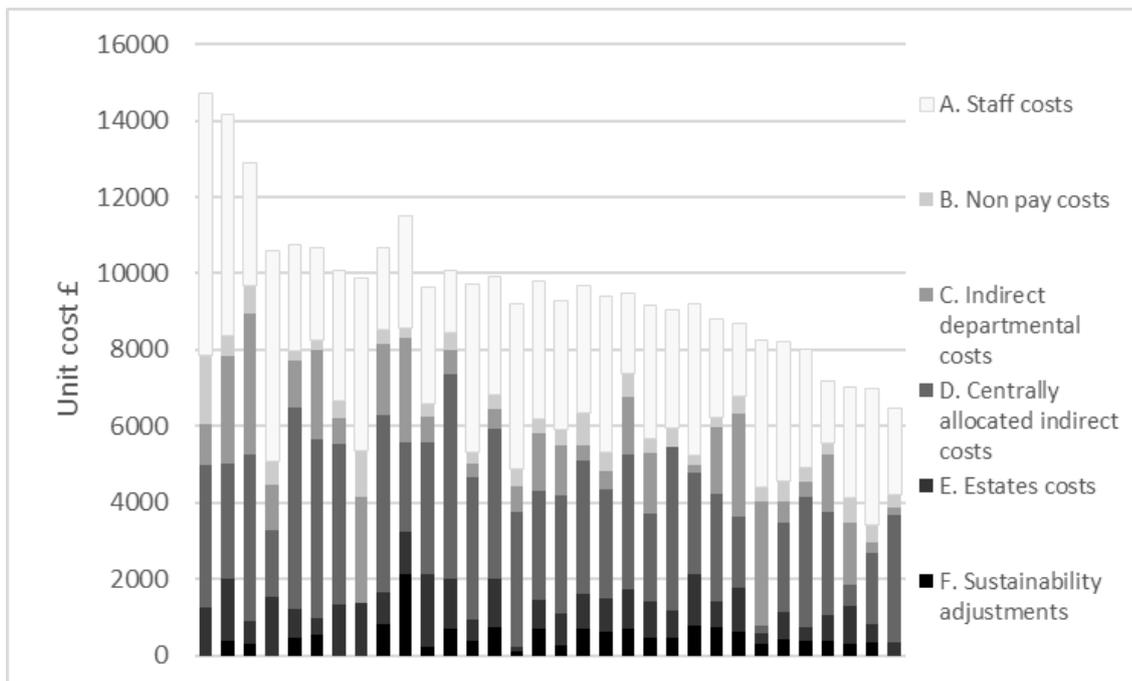
### 6. Nursing – Child



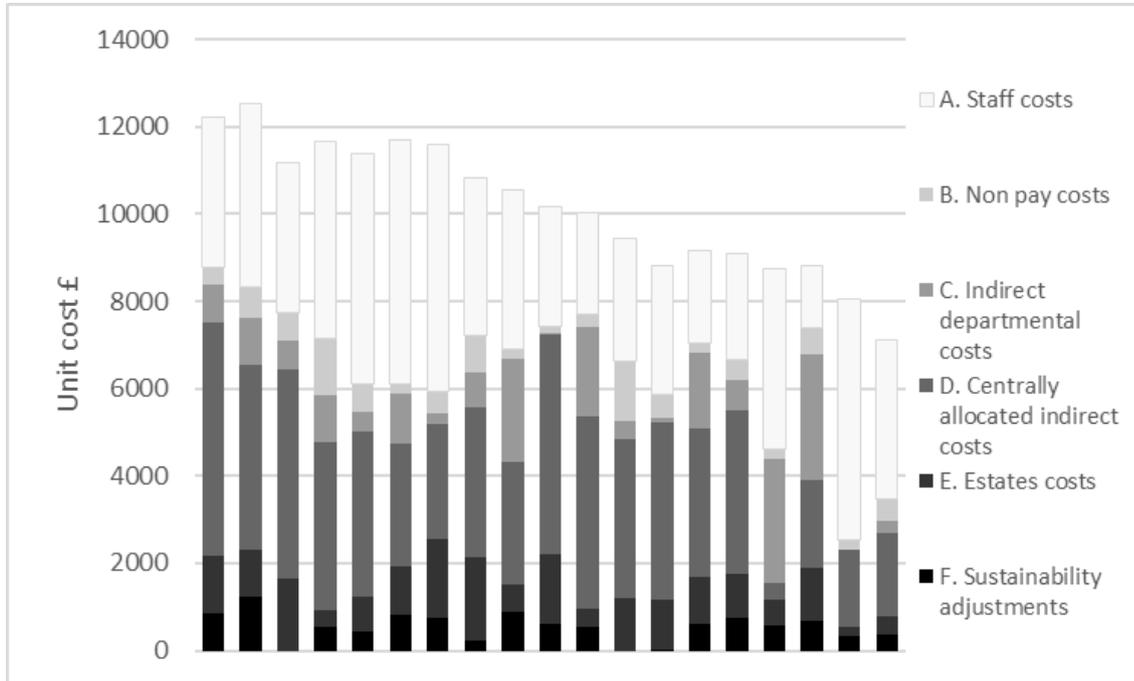
### 7. Nursing – Learning Disabilities



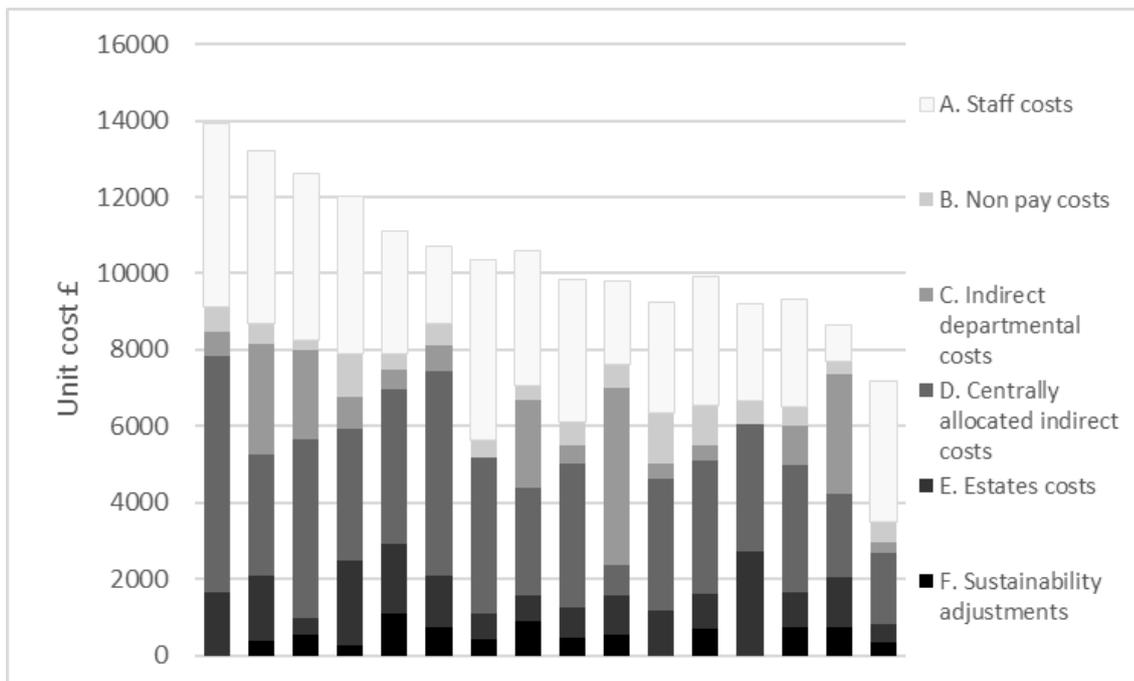
### 8. Nursing – Mental Health



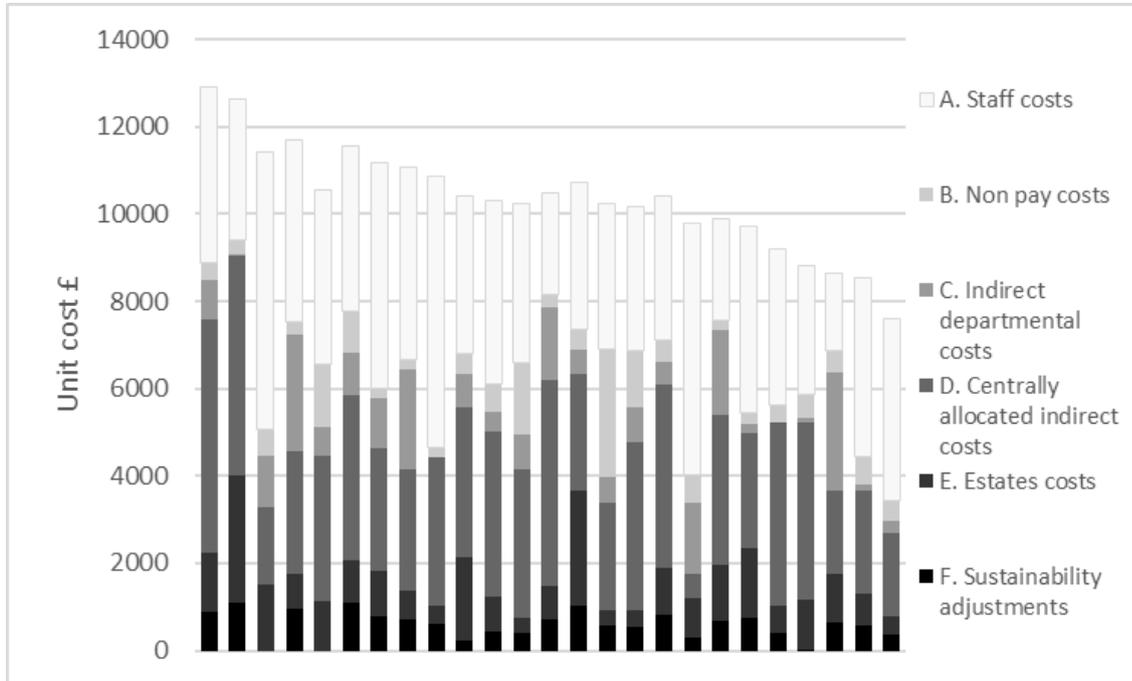
### 9. Occupational Therapy



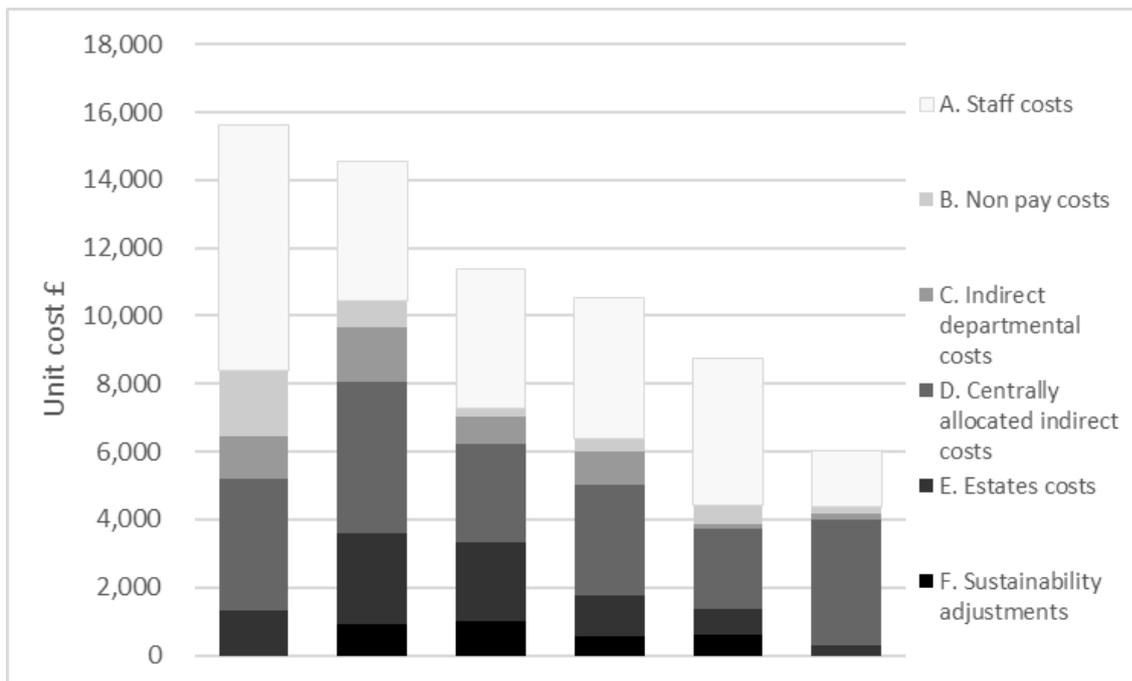
### 10. Operating Department practice



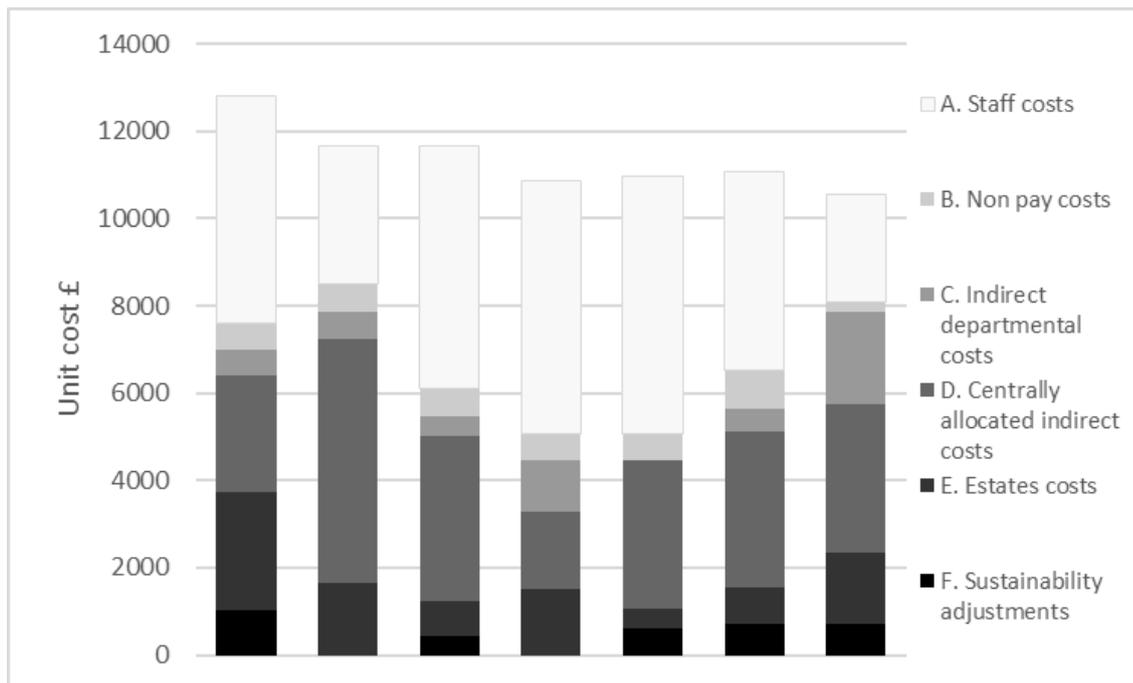
## 11. Physiotherapy



## 12. Speech and Language Therapy



### 13. Therapeutic Radiotherapy



A number of submissions did not contain costs in the categories – notably for sustainability. These were followed up and resulted in a number of resubmissions, or explanations as to which category the costs were located, thus confirming that the overall cost was correct. Also significant variations in cost category resulted in either a HEI re-submission or further confirmation that the costs were correct.