

**How long do new registrants  
stay registered for?**

**An analysis of first-time  
HCPC registrations:  
2013 to 2018**

## FOREWORD

Workforce planning is crucial for the health and care sector. Workforce pressures can exacerbate waiting times, create backlogs and can compromise patient safety. Recruitment is part of the answer, but retaining good staff is vital too, and has perhaps never been more important.

Workforce planning is complex and with the analysis in this report we hope to play our part by assisting those responsible for workforce planning. This report provides profession by profession analysis of the retention data for the 15 professions we regulate across the United Kingdom. This analysis can be used by employers, professional bodies and others responsible for workforce planning to better understand retention rates amongst the health and care professions regulated by the HCPC.

While it is good news that the analysis shows 94% of new registrants remained registered four years after first registering<sup>1</sup>, the fact remains that around 1 in 18 left one of our professions during this time. There was significant variation in leaving rates between our professions. Only 1 in 56 paramedics left our Register within four years, whereas the figure was as high as 1 in 8 among prosthetists and orthotists. The impact of factors such as age, sex and nationality have been analysed in this report. Further analysis is necessary to understand the drivers of the observed effects.

The quality of preceptorship support has been proven to improve retention rates.<sup>2</sup> High quality preceptorship programmes support health and care professionals to develop and maintain confident, safe and effective practice throughout their careers.

This report is also an important step in the HCPC's programme of work to understand how preceptorship can best be designed to support the professions we regulate. Promoting high quality professional practice as a compassionate regulator is a core part of our Corporate Strategy.

The analysis in this report will support our programme of work to understand how preceptorship can be designed to best support the professions we regulate. We are collaborating with Health Education England (HEE) to engage stakeholders across the 4 UK nations and the 15 professions we regulate to build on existing examples of good practice in preceptorship. We have recently consulted on a set of evidence-led principles for Foundation Preceptorship that aim to promote excellence and standardisation in the quality of preceptorship programmes available. We will be publishing the final principles in early 2023.

We hope this report provides useful information for employers, professional bodies, education institutions and others, to support their workforce planning programmes.

**Andrew Smith**

**Interim Deputy CEO**

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<sup>1</sup> The analysis looked at first registrations between 2013-2018.

<sup>2</sup> ['Good preceptorship positively impacts staff recruitment and retention' | Nursing Times](#)



## EXECUTIVE SUMMARY

This report contains the HCPC's first scientific assessment of the time new HCPC registrants stayed registered for. It uses appropriate statistical methods to assess all first-time UK application route registrants between 2013 and 2018, following them all up for four years. Time spent on the register is analysed separately by:

- age at first registration
- gender / sex
- profession
- nationality
- place of training.

The HCPC embarked upon this analysis to inform our work on preceptorship. We consider that the findings are of wider value. They have particularly important implications for providers and funders of training, and for workforce planners. They are also likely to be of great interest to other stakeholders including professional bodies.

In summary the key findings of the analysis were:

- 5.7% (equivalent to 1 in 18) of all new registrants deregistered within four years.
- Deregistration rates varied between professions from 1.8% (1 in 56 Paramedics) to 12.8% (1 in 8 Prosthetists / Orthotists).
- There is strong evidence for a link between profession size and deregistration rate (whereby smaller professions appear more likely to deregister within four years).
- Deregistration rates varied between UK nations / English Regions where qualifying training took place (training areas) and between nationalities of registrants, with the latter likely to account for much of the former.

This first analysis provides a starting point from which the HCPC will seek to build its understanding of registrant retention. Future analysis is anticipated to cover:

- Multivariate models for individual professions.
- First-time overseas route applications (international & EMR), excluding the training provider element.
- The inclusion of an additional cohort (first-time registering 2018-2020).

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## INTRODUCTION

Preceptorship is defined by NHS Employers as “...a period of structured transition to guide and support all newly qualified practitioners from student to autonomous professional practitioner”. [1] Whilst structured preceptorship programmes are available to NHS employees in parts of the UK, such as Flying Start NHS® in NHS Scotland, [2] there are no universally applicable definitions of, or programmes for, preceptorship. As such, HCPC is currently engaged in a collaborative project to develop principles for such programmes that could be used by all employers to provide preceptorship support of the same high and consistent standard. [3]

In support of that HCPC project, a programme of analytical work has been initiated to develop relevant insights from existing HCPC data. Given the complex mix of the 15 HCPC professions and their various settings, sectors and locations, these first analyses use time-to-event analysis methods to assess time remaining registered in the four years that followed first registration.

The purpose of this first set of analyses was to:

- (a) obtain general estimates of deregistration for all registrants and for individual professions; and
- (b) to investigate possible associations between individual characteristics and de-registration.

## METHODS

### Data

All HCPC registration records with a first registration date between 12 June 2012 and 12 June 2022 were extracted. From those data, profession specific cohorts were created consisting of solely UK-route registrants whose first registration fell between the first day of their professions first renewal window on or after 1 March 2013 up until 31 August 2018.

Profession specific cohorts were necessary as most deregistrations were observed to occur on the day after the closure of a renewal window and profession renewal windows occur at different points in time over a two-year cycle. [4] Therefore, to ensure equal exposure to those key time points, the profession specific cohorts were aligned to their respective renewal windows (Table 1). It should therefore be borne in mind when all professions are considered together, or when different professions are being compared, that there will be some degree of variation in their cohort times. In the most extreme case, for the professions at opposite ends of the renewal cycle, this means their two-year cohorts overlapped by only six months.

This first analysis was restricted to UK-route registrants, namely those who had qualified in the UK by undertaking an approved programme of study. The restriction to UK-route registrants was due to clear demographic differences with those making a first registration via the overseas route. The overseas route first-time registrants looked to be older and presumably therefore at a more advanced stage in their career. They also appeared to be more likely to deregister, perhaps a consequence of only looking to work in the UK for a relatively short period. As such overseas route first-time registrants will be assessed in a separate future analysis.

**Table 1: Profession specific Cohort periods**

| Profession                         | First registration   |                      |
|------------------------------------|----------------------|----------------------|
|                                    | Cohort 1             | Cohort 2             |
| Practitioner Psychologists         | Mar-2013 to Feb-2015 | Mar-2015 to Feb-2017 |
| Paramedics                         | Jun-2013 to May-2015 | Jun-2015 to May-2017 |
| Orthoptists                        | Jun-2013 to May-2015 | Jun-2015 to May-2017 |
| Clinical Scientists                | Jul-2013 to Jun-2015 | Jul-2015 to Jun-2017 |
| Prosthetists / Orthotists          | Jul-2013 to Jun-2015 | Jul-2015 to Jun-2017 |
| Speech & Language Therapists       | Jul-2013 to Jun-2015 | Jul-2015 to Jun-2017 |
| Occupational Therapists            | Aug-2013 to Jul-2015 | Aug-2015 to Jul-2017 |
| Biomedical Scientists              | Sep-2013 to Aug-2015 | Sep-2015 to Aug-2017 |
| Radiographers                      | Dec-2013 to Nov-2015 | Dec-2015 to Nov-2017 |
| Physiotherapists                   | Feb-2014 to Jan-2016 | Feb-2016 to Jan-2018 |
| Arts Therapists                    | Mar-2014 to Feb-2016 | Mar-2016 to Feb-2018 |
| Dieticians                         | Apr-2014 to Mar-2016 | Apr-2016 to Mar-2018 |
| Chiropodists / Podiatrists         | May-2014 to Apr-2016 | May-2016 to Apr-2018 |
| Hearing Aid Dispensers             | May-2014 to Apr-2016 | May-2016 to Apr-2018 |
| Operating Department Practitioners | Sep-2014 to Aug-2016 | Sep-2016 to Aug-2018 |

## Outcome variable

The outcome variable, time-to-event, was the time in days from the date of first registration to the date of deregistration. For registrants who had not deregistered, this was the time from first registration to the censoring date: 12 January 2023. All records included in this study had minimum of four years follow up from the point of registration.

Deregistrations for involuntary reasons (Fitness to Practise, Continuing Professional Development audit failures, non-renewal, and non-payment of fees) and deregistrations for voluntary reasons (where the registrant had notified HCPC themselves) were all included. Records where the deregistration was due to the death of the registrant or where the registration being deregistered had been made in error, were excluded.

Registrants who had deregistered but had subsequently reregistered before the censoring date were not counted as having left. This ensured that those who unintentionally deregistered through non-renewal and then readmitted did not affect the analysis.

## Explanatory variables

The following explanatory variables were univariately assessed: age at first registration, gender / sex (historically collected interchangeably); UK area hosting approved programme of study, and registrants' nationality. The UK area hosting approved programme was based on the geographical location of the principal site of the institution and was coded into: Wales, Scotland, Northern Ireland, and NHS England regions. Non-geographically based providers were aggregated into a UK-wide provider group. Nationality was grouped into single continents except for Europe which was split into UK, Republic of Ireland and Other European countries.

## Statistics

The univariate times-to-event were analysed using the Kaplan-Meier method. Multivariate time-to-event analysis investigation used the Cox Proportional Hazards Model. All analyses were conducted in Stata 17.0 BE.

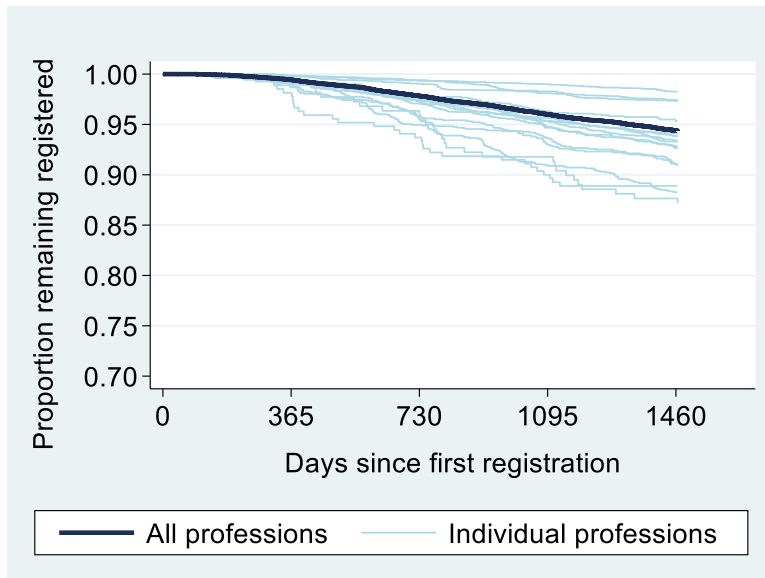
# RESULTS

The record selection process yielded 44,453 first-time new UK registrants' records for these analyses.

## Univariate time-to-deregistration analysis

Overall, 97.8% of new registrants were still registered after two years and 94.3% after four years (Figure 1 & Annex A). There were considerable differences between professions in terms of the proportions remaining registered at these points.

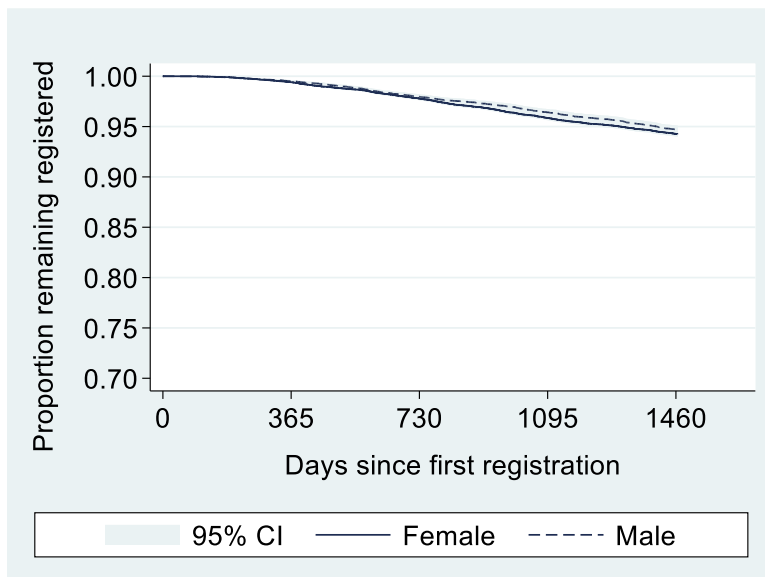
**Figure 1: Per cent remaining registered, all persons**



The highest levels remaining registered and both two and four years were observed in Paramedics (99.4%, 98.2%). The lowest rates at two years were observed in Orthoptists (93.7%) and the lowest rates at four years in Prosthetists / Orthotists (87.2%). Annex D contains the detailed output by profession.

The two- and four-year figures for all professions combined were almost identical for females (97.7%, 94.2%) and for males (97.9%, 94.6%) (Figure 2 & Annex A). The majority of these new registrants were female (74%).

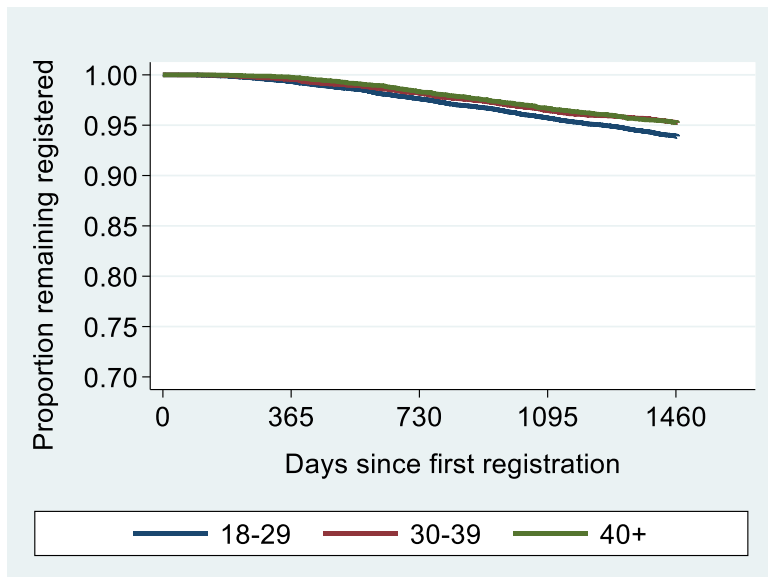
**Figure 2: Per cent remaining registered, gender / sex**



The profession specific reports show that for most professions the gap was similarly small. There were notable differences in a few professions though. Female retention was 5% lower than male retention for Hearing Aid Dispensers. Conversely, male retention was almost 4% lower than female retention for Physiotherapists and over 6% lower than female retention for Orthotists / Prosthetists.

There was little difference in retention rates by age for all professions combined, with four-year rates being 95.3% in both the 30-39 and 40+ age groups, and 93.9% in the 18-29 age group (Figure 3 & Annex A). The majority of these new registrants were aged 18-29 (65.3%), with 23.2% being 30-39 and 11.5% being aged 40+.

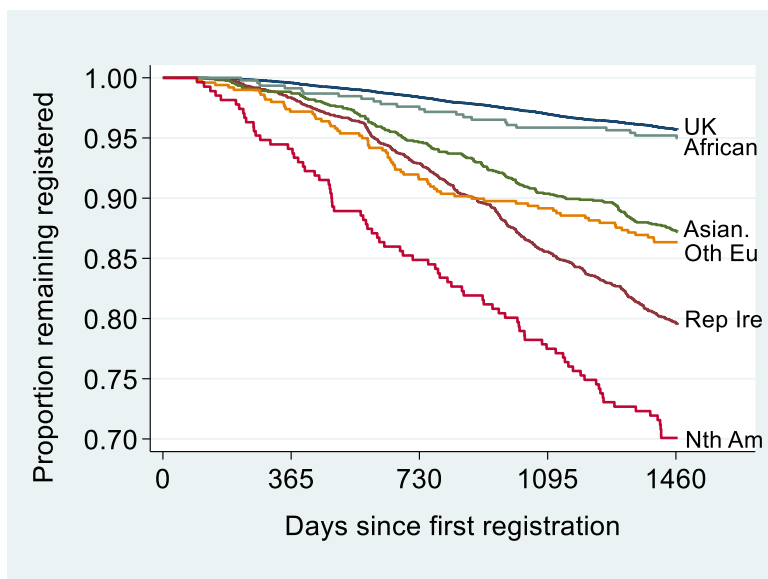
**Figure 3: Per cent remaining registered, age group**



The profession specific reports show many variations in age specific retention rates. Also apparent were the quite different entry age structures in the different professions. The greatest difference in both senses occurred in Orthoptists where virtually all new registrations were aged under 30 and retention rates were over 90% for those aged 20-24 and under 70% for those aged 25+.

As would be expected, by far the biggest nationality group was UK, accounting for 89% of all UK-route registrants. Accordingly, the two- and four-year rates for new UK registrants (98.4%, 94.6%) were similar to the overall rates of 97.8% and 94.3% (Figure 4 & Annex B).

**Figure 4: Per cent remaining registered, nationality**



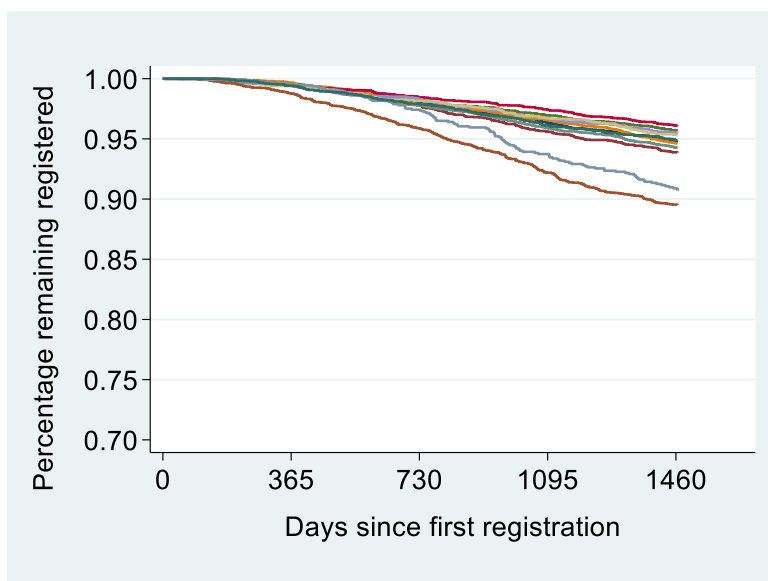
The rates were noticeably lower for the next biggest nationality group, Republic of Ireland, which made up 5% of all new registrants, with 92.9% remaining registered at two-years and 79.5% at four-years. Other notable nationality rates were the very low two- and four-year rates for North Americans (84.9%, 69.7%) and the very high rates for Africans (98.9% and 95.0%) though these groups accounted for only 0.6% and 1% of the total respectively.

Rates for South American and Oceanian nationalities are not shown in Figure 4 due to their very small numbers but are detailed in Annex B.



All but two locations of training course provider had two-year rates between 98.4% (South East England) and 97.7% (North West England) and four-year rates between 96.0% (South East England) and 93.7% (North West England) (Figure 5). The two exceptions with rates below these ranges were Northern Ireland (97.3%, 90.8%) and Scotland (95.8% , 89.4%). Annex C contains the detailed outputs by location of training course provider. Scotland (6 professions) and Northern Ireland (3 professions) had the lowest retention rates for the majority of the 15 professions. However, they also had the highest retention rates for five: Biomedical Scientists, Prosthetists / Orthotists and Operating Department Practitioners (Scotland); Paramedics and Hearing Aid Dispensers (Northern Ireland).

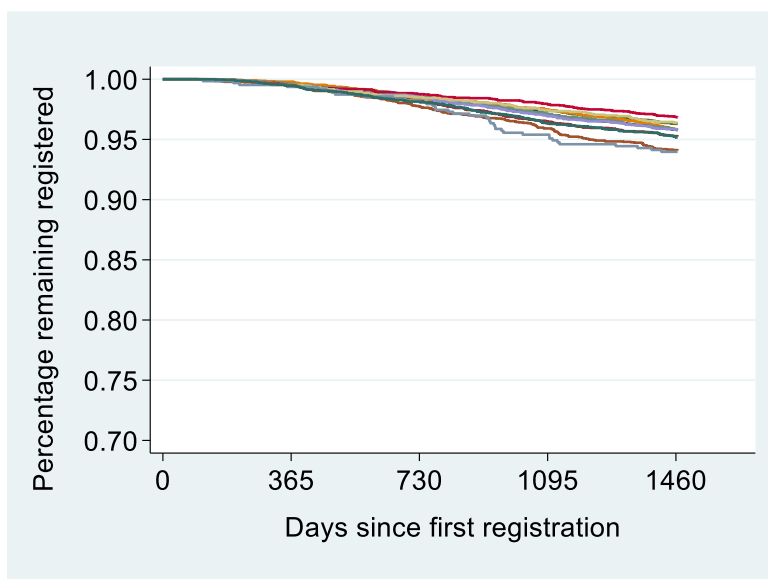
**Figure 5: Per cent remaining registered, location of training course provider**



Northern Ireland and Scotland had large percentages of their new registrants reporting Republic of Ireland nationality, 40% and 13% respectively. The per cent of new registrants of Republic of Ireland nationality for the other training areas was very much lower, ranging from 2.1% to 4.7%.

Restricting the time-to-event analysis to UK nationals considerably narrowed the gap between the training areas but did not close it (Figure 6).

**Figure 6: Per cent remaining registered, location of training course provider, UK nationals only**



There were considerable differences between professions in terms of the proportions remaining registered after two- and four-years (Figure 1). The highest levels remaining registered were observed in Paramedics (99.4%, 98.2%) and the lowest at two-years in Orthoptists (93.7%) and at four-years in Prosthetists / Orthotists (87.2%). Annex D contains the detailed output by profession.

Considering the four year time-to-event per cents and their 95% confidence intervals, there appeared to be three groups of professions (Figure 7), the groups being:

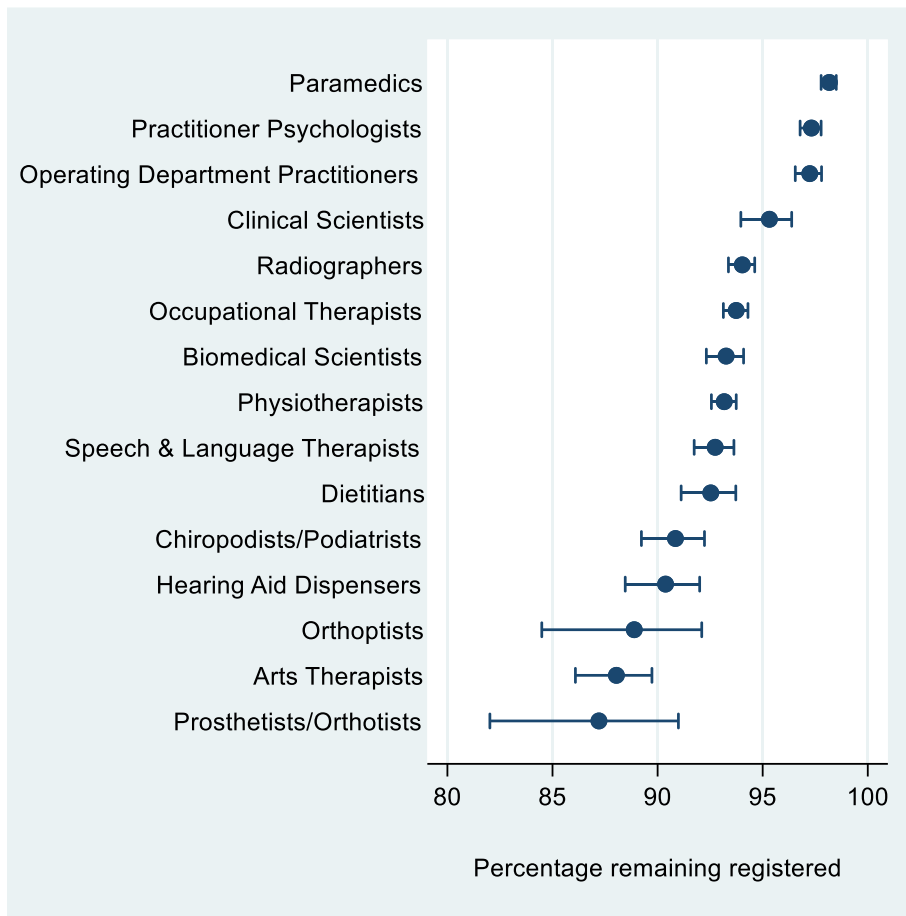
- Higher per cent remaining registered (>97%), very narrow confidence intervals, significantly different to others: Paramedic, Practitioner Psychologists, Operating Department Practitioners.
- Mid-range per cent remaining registered (92.5% to 95.3%), narrow confidence intervals: Clinical Scientists, Radiographers, Occupational Therapists, Biomedical Scientists, Physiotherapists, Speech & Language Therapists, Dieticians.
- Lowest per cent remaining registered (<91%), wide confidence intervals, some cross over with the lower end of the mid-range group: Chiropodists/Podiatrists, Hearing Aid Dispensers, Orthoptists, Arts Therapists, Prosthetists/Orthotists.

Notable from Figure 7 is the indication of a relationship between the percentage remaining registered and the size of the profession with the lowest per cents being in the smallest professions. This association is very clear when considering those two factors directly, plotted as Z scores with population having first been square root transformed (Figure 8).

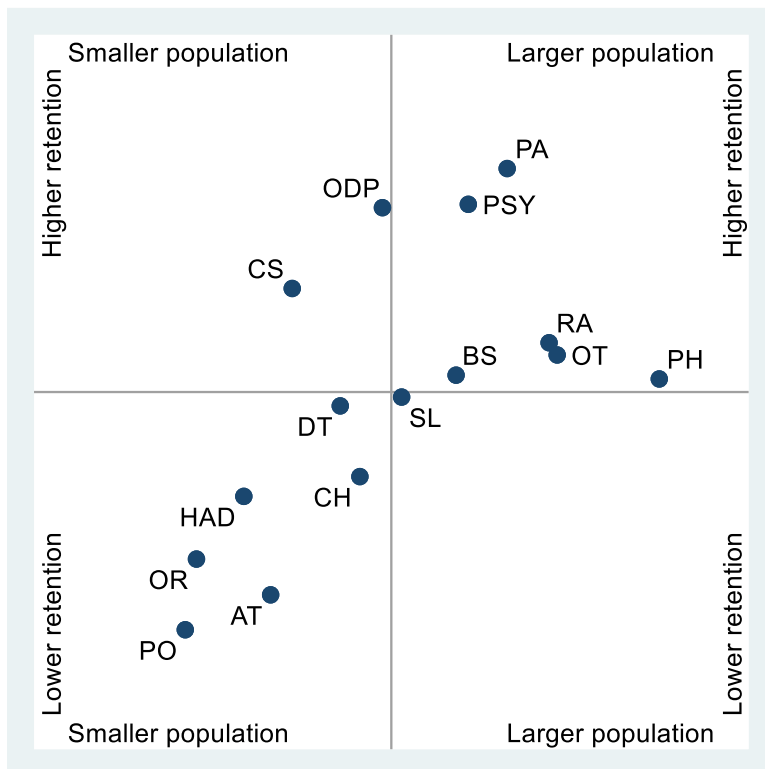
### Multivariable time-to-deregistration analysis

It was not possible to build a valid multivariable Cox Proportional Hazards model for all professions combined. This was likely due to real differences in the professions in important variables, such as new Orthoptist registrants almost exclusively being under 25 whilst Practitioner Psychologists don't usually finish training until their early thirties. Similarly, some other professions, including Paramedics, seemed to attract new registrants over a wide age-range. Testing of profession specific multivariable modelling indicated it would be possible to produce valid models for some professions though not all.

**Figure 7: Per cent & 95% CI remaining registered at four years, profession**



**Figure 8: Per cent remaining registered at four years against register size, profession Z scores**



## DISCUSSION

This analysis has revealed some interesting patterns in the longevity of new registrations via the UK-route. Whilst it seems good news that 94% of new registrants remained registered after four-years that does also mean approximately one in seventeen left. More important than the combined figure is the variation between professions ranging from one in fifty-five Paramedics deregistering within four-years to one in eight Prosthetists / Orthotists.

There appears to be a strong association between the size of the profession and the extent of deregistration. This raises an important question which is unanswerable from these routine data: Why do those who deregister voluntarily do so? The answers to this question would enable insight into whether those who leave voluntarily left the profession or rather just left the UK workforce.

Some of the variation between professions may be due to the differing extents of employment options outside of the protected titles. For example, Biomedical Scientists may well be experienced laboratory scientists in other settings moving into the regulated profession. Or, have greater opportunities to move in the other direction out of regulated roles.

Structural differences between the professions may play a role in explaining the demographic and deregistration differences. For example, professions with (unregulated) technician roles, such as Paramedics, may lead to a higher percentage of professionals entering those professions at a later age and with more practical experience.

The difference in deregistration rates between different nationalities is notable and raises some important questions for those planning, providing and funding training programmes. Although UK nationals make up eight out of nine registrants in this study, the differences in deregistration rates for non-UK registrants were sufficiently large to affect the deregistration rates in training areas with larger proportions of non-UK registrants. However, it is important to note that even in those nationalities most likely to deregister, the majority of those students remained registered at four-years.



## References

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- [2] NHS Education for Scotland, "Flying Start NHS," 18 August 2022. [Online]. Available: <https://learn.nes.nhs.scot/735/flying-start-nhs>. [Accessed 23 August 2022].
- [3] Health & Care Professions Council, "HCPC launches new work on preceptorship," 22 June 2022. [Online]. Available: <https://www.hcpc-uk.org/news-and-events/news/2022/hcpc-collaborates-on-preceptorship-programme/>. [Accessed 23 August 2022].
- [4] HCPC, "When to renew," 05 07 2018. [Online]. Available: <https://www.hcpc-uk.org/registration/registration-renewals/when-to-renew/>. [Accessed 17 01 2023].
- [5] StataCorp, "Stata Statistical Software: Release 17," StataCorp LLC, College Station, TX, 2021.

## Annexes

### Annex A: Time-to-deregistration analysis – all, by gender / sex, by age group

| Population | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|            |                                | %                    | 95% CI (%)   |                                |                             |
| All        | 0                              |                      |              | 44,453                         | 263                         |
|            | 1                              | 99.4                 | 99.3 to 99.5 | 44,190                         | 718                         |
|            | 2                              | 97.8                 | 97.6 to 97.9 | 43,472                         | 830                         |
|            | 3                              | 95.9                 | 95.7 to 96.1 | 42,642                         | 735                         |
|            | 4                              | 94.3                 | 94.1 to 94.5 | 41,907                         |                             |
| Females    | 0                              |                      |              | 32,868                         | 203                         |
|            | 1                              | 99.4                 | 99.3 to 99.5 | 32,665                         | 539                         |
|            | 2                              | 97.7                 | 97.6 to 97.9 | 32,126                         | 644                         |
|            | 3                              | 95.8                 | 95.6 to 96.0 | 31,482                         | 534                         |
|            | 4                              | 94.2                 | 93.9 to 94.4 | 30,948                         |                             |
| Males      | 0                              |                      |              | 11,582                         | 60                          |
|            | 1                              | 99.5                 | 99.3 to 99.6 | 11,522                         | 179                         |
|            | 2                              | 97.9                 | 97.7 to 98.2 | 11,343                         | 186                         |
|            | 3                              | 96.3                 | 95.8 to 96.7 | 11,157                         | 201                         |
|            | 4                              | 94.6                 | 94.2 to 95.0 | 10,956                         |                             |
| Aged 18-24 | 0                              |                      |              | 17,264                         | 108                         |
|            | 1                              | 99.4                 | 99.3 to 99.5 | 17,156                         | 287                         |
|            | 2                              | 97.7                 | 97.5 to 97.9 | 16,869                         | 333                         |
|            | 3                              | 95.8                 | 95.5 to 96.1 | 16,536                         | 305                         |
|            | 4                              | 94.0                 | 93.7 to 94.4 | 16,231                         |                             |
| Aged 25-29 | 0                              |                      |              | 11,758                         | 91                          |
|            | 1                              | 99.2                 | 99.1 to 99.4 | 11,667                         | 216                         |
|            | 2                              | 97.4                 | 97.1 to 97.7 | 11,451                         | 226                         |
|            | 3                              | 95.5                 | 95.1 to 95.8 | 11,225                         | 228                         |
|            | 4                              | 93.5                 | 93.1 to 93.9 | 10,997                         |                             |
| Aged 30-34 | 0                              |                      |              | 6,765                          | 32                          |
|            | 1                              | 99.5                 | 99.3 to 99.7 | 6,733                          | 89                          |
|            | 2                              | 98.2                 | 97.9 to 98.5 | 6,644                          | 129                         |
|            | 3                              | 96.3                 | 95.8 to 96.7 | 6,515                          | 85                          |
|            | 4                              | 95.1                 | 94.5 to 95.5 | 6,430                          |                             |
| Aged 35-39 | 0                              |                      |              | 3,564                          | 19                          |
|            | 1                              | 99.5                 | 99.2 to 99.7 | 3,545                          | 53                          |
|            | 2                              | 98.0                 | 97.4 to 98.4 | 3,492                          | 55                          |
|            | 3                              | 96.4                 | 95.8 to 97.0 | 3,437                          | 41                          |
|            | 4                              | 95.3                 | 94.5 to 95.9 | 3,396                          |                             |
| Aged 40-44 | 0                              |                      |              | 2,460                          | 4                           |
|            | 1                              | 99.8                 | 99.6 to 99.9 | 2,456                          | 31                          |
|            | 2                              | 98.5                 | 97.9 to 98.9 | 2,425                          | 44                          |
|            | 3                              | 96.8                 | 96.0 to 97.4 | 2,381                          | 34                          |
|            | 4                              | 95.4                 | 94.5 to 96.2 | 2,347                          |                             |
| Aged 45-49 | 0                              |                      |              | 1,607                          | 6                           |
|            | 1                              | 99.6                 | 99.2 to 99.8 | 1,601                          | 21                          |
|            | 2                              | 98.3                 | 97.6 to 98.8 | 1,580                          | 26                          |
|            | 3                              | 96.7                 | 95.7 to 97.5 | 1,554                          | 18                          |
|            | 4                              | 95.6                 | 94.5 to 96.5 | 1,536                          |                             |
| Aged 50+   | 0                              |                      |              | 1,034                          | 3                           |
|            | 1                              | 99.7                 | 99.1 to 99.9 | 1,031                          | 20                          |
|            | 2                              | 97.8                 | 96.7 to 98.5 | 1,011                          | 17                          |
|            | 3                              | 96.1                 | 94.8 to 97.2 | 994                            | 24                          |
|            | 4                              | 93.7                 | 92.1 to 95.0 | 970                            |                             |

## Annex B: Time-to-deregistration analysis – nationality by continent

| Population          | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|---------------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|                     |                                | %                    | 95% CI (%)   |                                |                             |
| UK                  | 0                              |                      |              | 39,558                         | 174                         |
|                     | 1                              | 99.6                 | 99.5 to 99.6 | 39,384                         | 477                         |
|                     | 2                              | 98.4                 | 98.2 to 98.5 | 38,907                         | 569                         |
|                     | 3                              | 96.9                 | 96.7 to 97.1 | 38,338                         | 520                         |
|                     | 4                              | 95.6                 | 95.4 to 95.8 | 37,818                         |                             |
| Republic of Ireland | 0                              |                      |              | 2,196                          | 36                          |
|                     | 1                              | 98.4                 | 97.7 to 98.8 | 2,160                          | 121                         |
|                     | 2                              | 92.9                 | 91.7 to 93.9 | 2,039                          | 162                         |
|                     | 3                              | 85.5                 | 83.9 to 86.9 | 1,877                          | 130                         |
|                     | 4                              | 79.5                 | 77.7 to 81.1 | 1,747                          |                             |
| Other European      | 0                              |                      |              | 1,382                          | 17                          |
|                     | 1                              | 98.8                 | 98.0 to 99.2 | 1,365                          | 57                          |
|                     | 2                              | 94.7                 | 93.3 to 95.7 | 1,308                          | 59                          |
|                     | 3                              | 90.4                 | 88.7 to 91.8 | 1,249                          | 43                          |
|                     | 4                              | 87.3                 | 85.4 to 88.9 | 1,206                          |                             |
| Asian               | 0                              |                      |              | 499                            | 15                          |
|                     | 1                              | 97.0                 | 95.1 to 98.2 | 484                            | 28                          |
|                     | 2                              | 91.4                 | 88.6 to 93.5 | 456                            | 12                          |
|                     | 3                              | 89.0                 | 85.9 to 91.4 | 444                            | 15                          |
|                     | 4                              | 86.0                 | 82.6 to 88.7 | 429                            |                             |
| African             | 0                              |                      |              | 460                            | 5                           |
|                     | 1                              | 98.9                 | 97.4 to 99.6 | 455                            | 7                           |
|                     | 2                              | 97.2                 | 95.2 to 98.4 | 448                            | 8                           |
|                     | 3                              | 95.7                 | 93.3 to 97.2 | 440                            | 3                           |
|                     | 4                              | 95.0                 | 92.6 to 96.7 | 437                            |                             |
| North American      | 0                              |                      |              | 271                            | 16                          |
|                     | 1                              | 94.1                 | 90.5 to 96.3 | 255                            | 25                          |
|                     | 2                              | 84.9                 | 80.0 to 88.6 | 230                            | 20                          |
|                     | 3                              | 77.5                 | 72.0 to 82.0 | 210                            | 21                          |
|                     | 4                              | 69.7                 | 63.9 to 74.8 | 189                            |                             |
| South American*     | 0                              |                      |              | 22                             | 0                           |
|                     | 1                              | 100.0                | -            | 22                             | 0                           |
|                     | 2                              | 100.0                | -            | 22                             | 0                           |
|                     | 3                              | 100.0                | -            | 22                             | 0                           |
|                     | 4                              | 100.0                | -            | 22                             |                             |
| Oceanian*           | 0                              |                      |              | 61                             | 0                           |
|                     | 1                              | 100.0                | -            | 61                             | 3                           |
|                     | 2                              | 95.1                 | 85.5 to 98.4 | 58                             | 0                           |
|                     | 3                              | 95.1                 | 85.5 to 98.4 | 58                             | 2                           |
|                     | 4                              | 91.8                 | 81.4 to 96.5 | 56                             |                             |

\* Not shown in Figure 4 due to small counts.

## Annex C: Time-to-deregistration analysis – UK area hosting approved programme

| Location               | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|------------------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|                        |                                | %                    | 95% CI (%)   |                                |                             |
| North East & Yorkshire | 0                              |                      |              | 6,889                          | 32                          |
|                        | 1                              | 99.5                 | 99.3 to 99.7 | 6,857                          | 99                          |
|                        | 2                              | 98.1                 | 97.8 to 98.4 | 6,758                          | 121                         |
|                        | 3                              | 96.3                 | 95.9 to 96.8 | 6,637                          | 111                         |
|                        | 4                              | 94.7                 | 94.2 to 95.2 | 6,526                          |                             |
| North West             | 0                              |                      |              | 4,009                          | 24                          |
|                        | 1                              | 99.4                 | 99.1 to 99.6 | 3,985                          | 67                          |
|                        | 2                              | 97.7                 | 97.2 to 98.1 | 3,918                          | 89                          |
|                        | 3                              | 95.5                 | 94.8 to 96.1 | 3,829                          | 71                          |
|                        | 4                              | 93.7                 | 92.9 to 94.5 | 3,758                          |                             |
| Midlands               | 0                              |                      |              | 6,438                          | 30                          |
|                        | 1                              | 99.5                 | 99.3 to 99.7 | 6,408                          | 91                          |
|                        | 2                              | 98.1                 | 97.8 to 98.4 | 6,317                          | 84                          |
|                        | 3                              | 96.8                 | 96.4 to 97.2 | 6,233                          | 83                          |
|                        | 4                              | 95.5                 | 95.0 to 96.0 | 6,150                          |                             |
| East of England        | 0                              |                      |              | 3,442                          | 11                          |
|                        | 1                              | 99.7                 | 99.4 to 99.8 | 3,431                          | 65                          |
|                        | 2                              | 97.8                 | 97.2 to 98.2 | 3,366                          | 45                          |
|                        | 3                              | 96.5                 | 95.8 to 97.1 | 3,321                          | 70                          |
|                        | 4                              | 94.5                 | 93.6 to 95.2 | 3,251                          |                             |
| London                 | 0                              |                      |              | 6,122                          | 36                          |
|                        | 1                              | 99.4                 | 99.2 to 99.6 | 6,086                          | 100                         |
|                        | 2                              | 97.8                 | 97.4 to 98.1 | 5,986                          | 116                         |
|                        | 3                              | 95.9                 | 95.4 to 96.4 | 5,870                          | 102                         |
|                        | 4                              | 94.2                 | 93.6 to 94.8 | 5,768                          |                             |
| South East             | 0                              |                      |              | 4,005                          | 24                          |
|                        | 1                              | 99.4                 | 99.1 to 99.6 | 3,981                          | 40                          |
|                        | 2                              | 98.4                 | 98.0 to 98.8 | 3,941                          | 43                          |
|                        | 3                              | 97.3                 | 96.8 to 97.8 | 3,898                          | 55                          |
|                        | 4                              | 96.0                 | 95.3 to 96.5 | 3,843                          |                             |
| South West             | 0                              |                      |              | 2,815                          | 15                          |
|                        | 1                              | 99.5                 | 99.1 to 99.7 | 2,800                          | 33                          |
|                        | 2                              | 98.3                 | 97.7 to 98.7 | 2,767                          | 48                          |
|                        | 3                              | 96.6                 | 95.9 to 97.2 | 2,719                          | 32                          |
|                        | 4                              | 95.5                 | 94.6 to 96.2 | 2,687                          |                             |
| Wales                  | 0                              |                      |              | 1,799                          | 12                          |
|                        | 1                              | 99.3                 | 98.8 to 99.6 | 1,787                          | 23                          |
|                        | 2                              | 98.1                 | 97.3 to 98.6 | 1,764                          | 26                          |
|                        | 3                              | 96.6                 | 95.7 to 97.4 | 1,738                          | 26                          |
|                        | 4                              | 95.2                 | 94.1 to 96.1 | 1,712                          |                             |
| Scotland               | 0                              |                      |              | 3,511                          | 45                          |
|                        | 1                              | 98.7                 | 98.3 to 99.0 | 3,466                          | 102                         |
|                        | 2                              | 95.8                 | 95.1 to 96.4 | 3,364                          | 131                         |
|                        | 3                              | 92.1                 | 91.1 to 92.9 | 3,233                          | 94                          |
|                        | 4                              | 89.4                 | 88.3 to 90.4 | 3,139                          |                             |
| Northern Ireland       | 0                              |                      |              | 1,087                          | 5                           |
|                        | 1                              | 99.5                 | 98.9 to 99.8 | 1,082                          | 24                          |
|                        | 2                              | 97.3                 | 96.2 to 98.1 | 1,058                          | 40                          |
|                        | 3                              | 93.7                 | 92.0 to 95.0 | 1,018                          | 31                          |
|                        | 4                              | 90.8                 | 88.9 to 92.4 | 987                            |                             |



| Population        | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|-------------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|                   |                                | %                    | 95% CI (%)   |                                |                             |
| UK wide providers | 0                              |                      |              | 3,975                          | 23                          |
|                   | 1                              | 99.4                 | 99.1 to 99.6 | 3,952                          | 60                          |
|                   | 2                              | 97.9                 | 97.4 to 98.3 | 3,892                          | 72                          |
|                   | 3                              | 96.1                 | 95.5 to 96.7 | 3,820                          | 59                          |
|                   | 4                              | 94.8                 | 94.1 to 95.5 | 3,769                          |                             |

## Annex D: Time-to-deregistration analysis – Professions

| Population                         | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|------------------------------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|                                    |                                | %                    | 95% CI (%)   |                                |                             |
| Physiotherapist                    | 0                              |                      |              | 7,134                          | 59                          |
|                                    | 1                              | 99.2                 | 98.9 to 99.4 | 7,075                          | 130                         |
|                                    | 2                              | 97.4                 | 97.0 to 97.7 | 6,945                          | 148                         |
|                                    | 3                              | 95.3                 | 94.8 to 95.7 | 6,797                          | 150                         |
|                                    | 4                              | 93.2                 | 92.6 to 93.7 | 6,647                          |                             |
| Radiographers                      | 0                              |                      |              | 5,544                          | 32                          |
|                                    | 1                              | 99.4                 | 99.2 to 99.6 | 5,512                          | 95                          |
|                                    | 2                              | 97.7                 | 97.3 to 98.1 | 5,417                          | 116                         |
|                                    | 3                              | 95.6                 | 95.0 to 96.1 | 5,301                          | 88                          |
|                                    | 4                              | 94.0                 | 93.4 to 94.6 | 5,213                          |                             |
| Paramedics                         | 0                              |                      |              | 5,314                          | 8                           |
|                                    | 1                              | 99.9                 | 99.7 to 99.9 | 5,306                          | 24                          |
|                                    | 2                              | 99.4                 | 99.2 to 99.6 | 5,282                          | 24                          |
|                                    | 3                              | 99.0                 | 98.6 to 99.2 | 5,258                          | 41                          |
|                                    | 4                              | 98.2                 | 97.8 to 98.5 | 5,217                          |                             |
| Occupational Therapists            | 0                              |                      |              | 6,645                          | 39                          |
|                                    | 1                              | 99.4                 | 99.2 to 99.6 | 6,606                          | 99                          |
|                                    | 2                              | 97.9                 | 97.6 to 98.2 | 6,507                          | 147                         |
|                                    | 3                              | 95.7                 | 95.2 to 96.2 | 6,360                          | 130                         |
|                                    | 4                              | 93.7                 | 93.1 to 94.3 | 6,230                          |                             |
| Practitioner Psychologists         | 0                              |                      |              | 4,111                          | 9                           |
|                                    | 1                              | 99.8                 | 99.6 to 99.9 | 4,102                          | 19                          |
|                                    | 2                              | 99.3                 | 99.0 to 99.5 | 4,083                          | 52                          |
|                                    | 3                              | 98.1                 | 97.6 to 98.4 | 4,031                          | 30                          |
|                                    | 4                              | 97.3                 | 96.8 to 97.8 | 4,001                          |                             |
| Biomedical Scientists              | 0                              |                      |              | 3,102                          | 18                          |
|                                    | 1                              | 99.4                 | 99.1 to 99.6 | 3,084                          | 61                          |
|                                    | 2                              | 97.5                 | 96.8 to 98.0 | 3,023                          | 66                          |
|                                    | 3                              | 95.3                 | 94.5 to 96.0 | 2,957                          | 64                          |
|                                    | 4                              | 93.3                 | 92.3 to 94.1 | 2,893                          |                             |
| Speech & Language Therapists       | 0                              |                      |              | 2,922                          | 28                          |
|                                    | 1                              | 99.0                 | 98.6 to 99.3 | 2,894                          | 59                          |
|                                    | 2                              | 97.0                 | 96.3 to 97.6 | 2,835                          | 67                          |
|                                    | 3                              | 94.7                 | 93.9 to 95.5 | 2,768                          | 57                          |
|                                    | 4                              | 92.7                 | 91.7 to 93.6 | 2,711                          |                             |
| Operating Department Practitioners | 0                              |                      |              | 2,685                          | 5                           |
|                                    | 1                              | 99.8                 | 99.6 to 99.9 | 2,680                          | 22                          |
|                                    | 2                              | 99.0                 | 98.5 to 99.3 | 2,658                          | 21                          |
|                                    | 3                              | 98.2                 | 97.6 to 98.7 | 2,637                          | 26                          |
|                                    | 4                              | 97.2                 | 96.6 to 97.8 | 2,611                          |                             |
| Dieticians                         | 0                              |                      |              | 1,579                          | 8                           |
|                                    | 1                              | 99.5                 | 99.0 to 99.8 | 1,571                          | 36                          |
|                                    | 2                              | 97.2                 | 96.3 to 97.9 | 1,535                          | 42                          |
|                                    | 3                              | 94.6                 | 93.3 to 95.6 | 1,493                          | 32                          |
|                                    | 4                              | 92.5                 | 91.1 to 93.7 | 1,461                          |                             |
| Clinical Scientists                | 0                              |                      |              | 1,197                          | 8                           |
|                                    | 1                              | 99.3                 | 98.7 to 99.7 | 1,189                          | 18                          |
|                                    | 2                              | 97.7                 | 96.7 to 98.5 | 1,171                          | 18                          |
|                                    | 3                              | 96.3                 | 95.1 to 97.3 | 1,153                          | 11                          |
|                                    | 4                              | 95.3                 | 94.0 to 96.4 | 1,142                          |                             |

| Population                 | Years since first registration | Remaining registered |              | At risk at start of period (n) | Deregistering in period (n) |
|----------------------------|--------------------------------|----------------------|--------------|--------------------------------|-----------------------------|
|                            |                                | %                    | 95% CI (%)   |                                |                             |
| Chiropodists / Podiatrists | 0                              |                      |              | 1,431                          | 20                          |
|                            | 1                              | 98.6                 | 97.8 to 99.1 | 1,411                          | 45                          |
|                            | 2                              | 95.4                 | 94.2 to 96.4 | 1,366                          | 28                          |
|                            | 3                              | 93.5                 | 92.1 to 94.7 | 1,338                          | 38                          |
|                            | 4                              | 90.9                 | 89.2 to 92.2 | 1,300                          |                             |
| Arts Therapists            | 0                              |                      |              | 1,229                          | 12                          |
|                            | 1                              | 99.0                 | 98.3 to 99.4 | 1,217                          | 51                          |
|                            | 2                              | 94.9                 | 93.5 to 96.0 | 1,166                          | 49                          |
|                            | 3                              | 90.9                 | 89.1 to 92.4 | 1,117                          | 35                          |
|                            | 4                              | 88.0                 | 86.1 to 89.7 | 1,082                          |                             |
| Hearing Aid Dispensers     | 0                              |                      |              | 1,071                          | 10                          |
|                            | 1                              | 99.1                 | 98.3 to 99.5 | 1,061                          | 41                          |
|                            | 2                              | 95.2                 | 93.8 to 96.4 | 1,020                          | 31                          |
|                            | 3                              | 92.3                 | 90.5 to 93.7 | 989                            | 21                          |
|                            | 4                              | 90.4                 | 88.5 to 92.0 | 968                            |                             |
| Orthoptists                | 0                              |                      |              | 270                            | 5                           |
|                            | 1                              | 98.2                 | 95.6 to 99.2 | 265                            | 12                          |
|                            | 2                              | 93.7                 | 90.1 to 96.0 | 253                            | 10                          |
|                            | 3                              | 90.0                 | 85.8 to 93.0 | 243                            | 3                           |
|                            | 4                              | 88.9                 | 84.5 to 92.1 | 240                            |                             |
| Prosthetists / Orthotists  | 0                              |                      |              | 219                            | 2                           |
|                            | 1                              | 99.1                 | 96.4 to 99.8 | 217                            | 6                           |
|                            | 2                              | 95.9                 | 92.3 to 97.8 | 211                            | 11                          |
|                            | 3                              | 91.3                 | 86.7 to 94.4 | 200                            | 9                           |
|                            | 4                              | 87.2                 | 82.0 to 91.0 | 191                            |                             |