# Registration and retention of dentists on the General Dental Council register between 2006 and 2016

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## In brief

Highlights the changing balance in routes onto the Dentists Register.

Identifies the variation in length of stay on the register.

Raises some important questions for planning care services.

**Background** There is considerable uncertainty over the dental future workforce requirements in the United Kingdom. This uncertainty has not been helped by the lack of clarity on the possible impacts on workforce following the results of the referendum to leave the European Union and enactment of Article 50. **Aim** This paper sets out to describe the contribution to the dental workforce over the reported period of non-UK qualified dental graduates. **Results** For the last three years over a third of new registrants have qualified from outside of the UK with over a quarter of registrants entering through mutual recognition of their qualification. Furthermore, the findings highlight the relatively short period for which those entering the register from the European Economic Area remain on the register when compared to other entrants. **Discussion** Those responsible for workforce policy will need to react rapidly to these findings given the short time period remaining to negotiate the terms and conditions of Britain's exit and this must include clarification of the entitlements of the current and future dental EEA qualified graduates.

## Introduction

All delivery systems are dependent on the availability of a suitably qualified workforce to provide care. The central issue in workforce planning lies in estimating the number of personnel required to ensure that the qualities of care best meet the needs of the population both now and into the future.[1] To date, workforce planning in the health sector has been at best vague and invariably inaccurate. Following the decision to leave the European Union (EU)[2] there are growing concerns about the impact that it may have on workforce given the reliance of the healthcare delivery arrangements on overseas healthcare personnel.[3,4] The WHO[5] have repeatedly highlighted the need to address the growing crisis in the health workforce, stressing that governments require accurate and timely information on workforce, not least due to limited capacity to collect, compile and analyse workforce data. To date, the majority of concerns have arisen in the nursing and medical sectors and the exploration of the dental sector has been limited with the exception of an excellent paper by Sinclair *et al.*[6] who highlighted the possible importance of British European Union Exit, 'Brexit'. This work builds on their work highlighting several changes in flows that will be important for policy makers to be aware of.

Current workforce policy is heavily dependent on dentists as the providers of care, although the use of dental care professionals has been promoted. Irrespective of the make-up of the workforce, all individuals need to be listed on the register of the General Dental Council. There are currently three ways through which a dentist can enter onto the GDC register. First, an individual can successfully complete an undergraduate course at one of the 14 UK dental schools. The second route is by passing the Overseas Registration Examination (ORE), organised by the GDC. The ORE replaced the International Qualifying Examination in 2007, that in turn had replaced the Statutory Examination in 2001.[7] The third route is by qualifying at a university within the European Economic Area (EEA) or Switzerland. The EEA includes EU countries and also Iceland, Liechtenstein and Norway. It allows them to be part of the EU's single market. Switzerland while neither an EU nor EEA member is part of the 'Single Market' which gives Swiss nationals the same rights to live and work in the UK as other EEA nationals. Prior to 2001, a further route to the register was through an individual holding a primary dental qualification from selected overseas, normally Commonwealth or former Commonwealth, countries that the GDC had made a visitation to.

Following the referendum in June 2016, the voting public wished to see Britain leave the EU, commonly referred to as 'Brexit'. The Government then took the decision to enact Article 50 of the Lisbon Treaty, an agreement ratified in 2009 that covers the process through which a member state may leave the EU. On 29 March 2017 the Prime Minister invoked Article 50 meaning that Britain would officially agree the terms of leaving with the rest of the EU member states by the end of March 2019.

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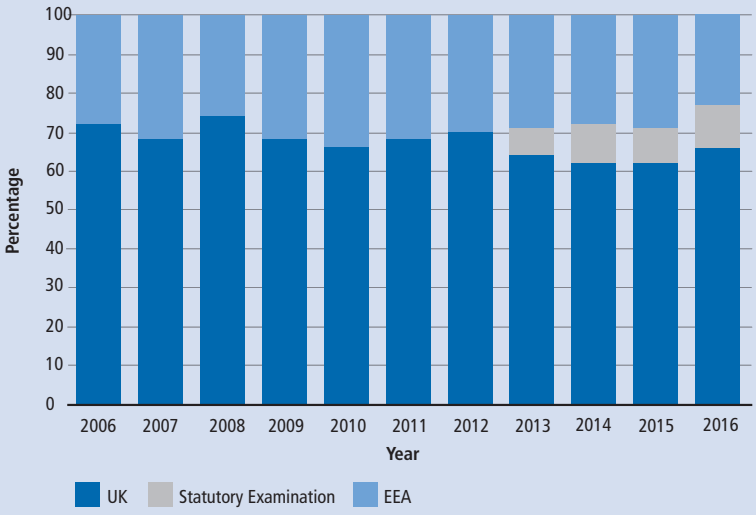
**Table 1 Number of new entrants onto the Dentists Register and route, 2006–2016**

| Year | Route | | | |
|---|---|---|---|---|
| | United Kingdom | United Kingdom (statutory exam only) | EU/EEA | Grand total |
| 2006 | 1090 | 0 | 433 | 1523 |
| 2007 | 1067 | 0 | 506 | 1573 |
| 2008 | 1277 | 0 | 449 | 1726 |
| 2009 | 1161 | 1 | 553 | 1715 |
| 2010 | 1268 | 2 | 647 | 1917 |
| 2011 | 1271 | 4 | 599 | 1874 |
| 2012 | 1292 | 0 | 562 | 1854 |
| 2013 | 1253 | 121 | 561 | 1935 |
| 2014 | 1268 | 206 | 583 | 2057 |
| 2015 | 1244 | 188 | 587 | 2019 |
| 2016 | 1283 | 210 | 460 | 1953 |

**Fig. 1 Percentage of entrants onto the Dentists Register by route for the period 2006–2016**




One of the implications of leaving the EU is the end to automatic free movement of labour between member states and an end to Britain recognising the legislation covering the mutual recognition of qualifications.

Historically, the health sector in the United Kingdom has been heavily dependent upon overseas as a source of labour. For example, Doyal *et al.*[8] in 1981 noted that a third of all doctors and a fifth of nurses working in the National Health Service at the time were born overseas. They commented that the rationale for this was to '(provide) a crucial source of cheap labour and their utilisation has always been an important component both in keeping down costs and in rationalising the labour process in health care'.

More recently, in an article exploring the wider ramifications of 'Brexit', Mossialos *et al.*[9] suggested that by leaving the EU there is a potential loss of a workforce that shared a common set of professional standards and agreed rules on medical education. Furthermore, they highlighted that a Britain outside of the EU would have to renegotiate these standards and would have no part in shaping future regulations, and while there would be the option of expanding the activities of the regulatory bodies, the General Medical Council (GMC) and Nursing and Midwifery Council (NMC) to help with recruitment, doing so would place increased pressure on an already overburdened system.

While discussions on the more general healthcare workforce have been considerable,[10,11,12] to date the implications for the dental system have not been explored. This paper sets out to address this shortcoming and provide information to help those involved in policy making with data to underpin the decisions taken going forward.

## Aim

The aim of the present study is to report the origins of and length of stay of entrants onto the GDC register for the period 2006–2016.

## Methods

The study uses the registration database held by the GDC. Registration with the GDC is required in order to legally practise dentistry. For the period 2006 to 2016, data on the successful applications onto and leaving the register were analysed. Data collected included route of entry onto the register, country in which the school of initial qualification existed, sex, and date leaving the register.

## Results

The number of new entrants onto the Dentists Register for the period 2006–2016 is shown in Table and Figure 1. Over the period 2006–2016 there were 20,146 new registrants. In 2006, there were 1,523 new dental registrants. This figure increased in the following year to 1,573 and subsequently to 1,726 in 2008. A substantial increase occurred in 2010 to 1,917, dropping to 1,874 and further to 1,954 in the subsequent two years. In 2013, the figure increased to 1,935 and in 2014 further to 2,057 new entries, but dipped slightly in 2015 to 2,019 and declined in 2016 to 1,953.

Over the study period the percentage of UK qualified entrants ranged from a high of 74% (in 2008) to a low of 62% (in 2014 and 2015). Entry onto the register following successful completion of the ORE examination has seen a substantial increase in numbers since 2013, with an average of approximately 180 registrants (approximately 10%) in successive years. This corresponds to approximately 10% of new registrants. Entry through the EU/EEA pathway has seen an average of just over 30% per annum over the study period, peaking in 2010 at 34% and a low point of 24% in 2016.

More detailed analyses of the data highlight the considerable variation between individual countries (Table 2). While 13,474 (66.9%) were



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**Table 2 European Economic Area qualified entrants onto the GDC register by Country, 2006–2016**

| | Year | | | | | | | | | | | Grand Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country of qualification | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | |
| Austria | | | 1 | | 2 | | 1 | 1 | 2 | 1 | 1 | **9** |
| Belgium | 4 | 3 | | 3 | | | | | | 1 | 1 | **12** |
| Bulgaria | | 38 | 52 | 51 | 62 | 54 | 31 | 29 | 35 | 22 | 9 | **383** |
| Croatia | | | | | | | | 1 | 3 | 1 | 5 | **10** |
| Czech Republic | 6 | 5 | 12 | 22 | 18 | 19 | 20 | 16 | 21 | 28 | 19 | **186** |
| Denmark | 2 | 1 | 5 | 1 | 4 | 5 | 1 | 3 | | 2 | | **24** |
| Estonia | 2 | 1 | | | | 1 | | 2 | 2 | 2 | | **10** |
| Finland | 1 | 1 | | 2 | | | | | | 2 | | **6** |
| France | 7 | 4 | 6 | 4 | 4 | 8 | 4 | 9 | 14 | 15 | 5 | **80** |
| Germany | 43 | 32 | 24 | 22 | 19 | 19 | 20 | 22 | 24 | 25 | 20 | **270** |
| Greece | 44 | 44 | 32 | 46 | 69 | 83 | 91 | 64 | 50 | 54 | 48 | **625** |
| Hungary | 28 | 29 | 31 | 17 | 36 | 38 | 51 | 48 | 47 | 40 | 62 | **427** |
| Ireland | 14 | 17 | 27 | 31 | 59 | 45 | 45 | 50 | 30 | 31 | 15 | **364** |
| Italy | 14 | 13 | 21 | 13 | 20 | 18 | 21 | 39 | 66 | 49 | 16 | **290** |
| Latvia | 4 | 4 | 7 | 7 | 13 | 10 | 6 | 4 | 3 | | | **58** |
| Lithuania | 20 | 19 | 4 | 22 | 16 | 16 | 10 | 10 | 18 | 23 | 12 | **170** |
| Malta | 2 | 2 | 3 | 1 | 1 | 2 | 3 | | 1 | | 2 | **17** |
| Netherlands | | 3 | 1 | 1 | 3 | 2 | 2 | 2 | 6 | 4 | 3 | **27** |
| Norway | | 2 | | 4 | | | | | 1 | 1 | 2 | **10** |
| Poland | 152 | 70 | 48 | 23 | 20 | 22 | 35 | 29 | 37 | 29 | 18 | **483** |
| Portugal | 35 | 47 | 53 | 66 | 70 | 51 | 50 | 59 | 53 | 40 | 28 | **552** |
| Romania | | 123 | 73 | 94 | 103 | 67 | 61 | 66 | 71 | 74 | 81 | **813** |
| Slovakia | 2 | 6 | 6 | 1 | 1 | 2 | 1 | 4 | 5 | 7 | 2 | **37** |
| Slovenia | | | | | | 1 | 1 | | 1 | | | **3** |
| Spain | 29 | 29 | 31 | 95 | 114 | 111 | 94 | 87 | 75 | 88 | 69 | **822** |
| Sweden | 19 | 11 | 8 | 21 | 7 | 5 | 11 | 4 | 10 | 15 | 5 | **116** |
| Switzerland | 1 | | 1 | 1 | | | 1 | 4 | | | | **8** |
| **Grand total** | **1,523** | **1,573** | **1,726** | **1,715** | **1,917** | **1,874** | **1,854** | **1,935** | **2,057** | **2,019** | **1,953** | **20,146** |

UK qualified, 822 (2.7%) were from Spain, 813 Romania, 625 from Greece, 552 Portugal, and 483 Poland. The other major sources of registrants were 427 from Hungary and 383 Bulgaria. There were 364 Irish graduates who entered the register over this period, 290 from Italy and 270 from Germany. The number qualified by successful passing of the ORE/IQE was 732 (3.6%) with nearly all entering the register since 2012.

There are no clear trend patterns in entry to the register by country. For example, in Hungary in 2006, 28 entered the register. This figure had more than doubled to 62 by 2016. The number from Bulgaria also rose steadily initially, for example from 38 in 2007 to 62 three years later, but has fallen since. In 2016 only 19 were accepted onto the register. In 2006, similar numbers entered from Germany and Greece, 43 and 44 respectively, but by 2016, while the number from Greece had shown a slight increase to 44, only 20 entered the register from Germany. In 2006, 14 graduates entered from both Italy and Ireland, a similar number to those in 2016. However in the in-between years the number from Ireland peaked in 2010 (59 entrants) while the number from Italy (66) peaked in 2014.

Table 3 shows the average length of stay on the register broken down by qualification entry route and sex. For all entry routes, males remain on the register for longer. For example, for those entering through the UK qualification route, the average length on the register for males was 30.6 years, while for females it was 22.8 years. The lowest length of stay on the register was for individuals who entered through the EEA route. For males the average length of stay was 8.1 years, for



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**Table 3 Mean and standard deviation of length of stay in years on the register by entry route and sex**

| | Sex | | | |
|---|---|---|---|---|
| **Qualification route** | **Male** | | **Female** | |
| | Mean | Std. Dev | Mean | Std. Dev |
| UK | 30.6 | 14.8 | 22.8 | 14.5 |
| EEA | 8.1 | 8.7 | 6.5 | 5.8 |
| Non-EEA | 27.9 | 12.6 | 20.7 | 9.5 |
| Statutory Exam | 16.7 | 14.5 | 9.4 | 7.4 |

**Table 4 The percentage of retention rates for dental graduates entering onto the register in 2007 by entry route**

| Qualification route | Year | | | | |
|---|---|---|---|---|---|
| | **2008** | **2009** | **2010** | **2011** | **2012** |
| UK | 99.28 | 97.59 | 96.99 | 96.63 | 96.27 |
| EEA | 87.43 | 73.89 | 67.71 | 62.73 | 57.85 |
| Non-EEA | 84.85 | 69.70 | 65.15 | 56.06 | 46.97 |
| Statutory Exam | 98.46 | 97.30 | 95.75 | 94.98 | 93.82 |

females 6.5 years. The variance in length of stay provides an indication of the non-normal distribution of each group. The group formed by EU/EEA and Swiss graduates not only had the shortest length of stay on the register but the most skewed distribution. A more detailed analysis of the data, for the period of those entering the register in 2007, while showing overall a similar relative pattern between the entry routes highlights a growing divide between them. Over 50% of registrants, male or female, had left the register within two to three years of entry (Table 4). Using the data of registrants' entry route from 2007, the longitudinal changes for the subsequent five-year period from 2008–2012 are shown. For those qualifying through the UK route, 96.3% remained on the register compared to less than 47% overseas and 57.9% through the EEA route. The figure for those entering through the Statutory Examination was close to that of the UK entry route at 93.8%.

## Discussion

The make-up of the origins of the dentist registrants of the GDC shows a continually evolving structure. In 1992, Batchelor[13] reported on the pattern of dentist migration to the UK from the then European Union states. The findings highlighted that at that time movement of labour was negligible with an annual average entry of just over 75 personnel, the vast majority of who qualified in Ireland. Since the publication, the EU has expanded with, in 1995, Austria, Finland and Sweden joining. Subsequently, in 2004, eight Central and Eastern European countries, (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia), along with two Mediterranean countries (Malta and Cyprus) became member states with a further expansion in 2007 that saw Romania and Bulgaria join, and Croatia in 2013. This growth in member states, when combined with the Mutual Recognition of Professional Qualifications 2005/36/EC, has provided the opportunity for far more dental personnel to move within the EU including to work in the UK.

A further factor that may help explain any changes in movement is the work of the Association for Dental Education in Europe (ADEE). Established in 1975, one of its mission statements includes the wording: 'To promote the development of assessment and examination methods and 'To *[sic]* promote exchange of staff, students and programmes.'[14]

By bringing together academic institutions and fostering relationships and opportunities for exchanges, potential barriers to post qualification movement can only be reduced.

The present study has identified two major changes from the previous work. First, the annual entry from overseas onto the GDC register is far more substantial than previously and now forms over a third of new entrants. Currently, nearly a quarter are coming from the EU member states. Second, the source of new entrants has changed with the largest percentage coming from Central and Eastern European member states as opposed to Ireland. The rationale for this is unknown but two possible reasons are perceptions in financial rewards as well as work opportunities; the healthcare systems in a number of Central and Eastern member states are in very difficult circumstances, in particular the dental arrangements. Balasubramanian *et al.* concluded that a major factor influencing migrant dentists to practise in Australia lay in their education: they wished to practise high-end dentistry, while a large proportion of the population in their country of origin, especially those based in regional areas, cannot afford high-end dental services.[15]

A further possible rationale for the changes in graduate flow lies with the increase in the number of dental schools, particularly those outside of state funding. For example, Spain now has 18 dental schools, six of which are privately funded, training 2,000 students. Given the economic problems and the lack of employment opportunities, it is perhaps not surprising that some choose to seek work in the United Kingdom. Portugal now has seven schools, four of which are funded privately, representing nearly two thirds of the total intake, that is, 359 out of 542.[16] The issue of privately funded schools also arises in the Czech Republic and Hungary where, anecdotally, individuals who cannot obtain a place in a UK dental school have sought their training.

The major new finding of the present work lies in the variation of period of stay that a registrant has. While registrants who qualified through the home route or via the ORE have similar lengths on the register, over 90% remaining over a ten year period, the figure for those entering by the EEA route was decidedly lower. Less than 50% remained after three years. Again the rationale for this flow is unknown, although the nature of the working arrangements must be considered. Possible reasons include an ability to settle, disillusionment with the working arrangements, and personal or financial reasons. The vast majority of EEA graduates are working under independent contractor status and there is a time lag between commencing work and Her Majesty's Revenue and Customs (HMRC) being aware of an individual's status and earnings. However, irrespective of the precise reasons, the relative short period that EEA qualified individuals remain on the register only highlights the



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urgency for the need for clarification concerning their abilities to work in the UK.

The possible changing culture within Britain and its attitude to immigration may also be a contributing factor for the relatively short time period that individuals remain on the GDC register.

Concerns surrounding the impact of future care provision in the UK following 'Brexit' have been raised on numerous occasions. The UK has relied on immigration for health professionals over a considerable period of time, indeed there have been numerous government initiatives to recruit personnel over several decades.[17] Immigrants now make up approximately 14% of the employed population in the UK, but are much more strongly represented in the health workforce, making up more than a third of medical practitioners, pharmacists, and dental practitioners, and over one fifth of nurses. In a recent publication the Nuffield Trust[18] argued that there must be a commitment either to continue to allow substantial nurse migration after 'Brexit, or to step up domestic training, even if this proves more difficult and more expensive than current policies anticipate. These arguments are in line with the Government's own Migration Advisory Committee who, in 2016, commenting on nursing staff levels stated: 'It seems to us that the shortage is mostly down to factors that could, and should, have been anticipated by DH and related bodies. Further, there seems to be an automatic presumption that non-EEA skilled migration provides the sector with a "Get Out Of Jail, Free" card.'[19]

To date, there is a silence from the Government or the Department of Health on the dental situation. This lack of clarity cannot be conducive for sound workforce planning. Indeed perhaps of greater importance than whether graduates from the post-'Brexit' EEA will be allowed to work here automatically (all graduates can of course sit the ORE), is the impact that any potential changes in policies may affect the current EEA graduate workforce. Zaghini *et al.*[20] in a literature review exploring what is termed Counterproductive Work Behaviours (CWB) in the nursing profession identified the positive role that job security played. The converse was also true: individuals with weak job security were associated with negative patient care. Uncertainty of knowing whether an individual will be allowed to continue to have the right to employment has implications for well-being[21] and indeed, may well shorten the already limited period that a registrant remains. Should this impact on the numbers deciding to enter the UK over the short period before 'Brexit', the impact on workforce would become more acute. Those negotiating the terms of 'Brexit' and the entitlements of personnel must take into account the impact both on the individual registrant and the patients for whom they are providing care.

Overall, the paper highlights the important role that non-UK graduates make to the dental workforce and highlights the considerable contribution that dentists from the EEA make towards it. Most importantly, the relatively short period that the modal value of EEA registrants stay on the GDC register stresses the need for those involved in planning workforce to push for answers from the Government. It is not as though the issue has not been highlighted previously.[22]

## Summary

The present study has highlighted the major contribution that graduates from non-UK sources are currently making to the Dentists Register. Currently, each year nearly 40% of new entrants onto the register are graduates from abroad. However, for service delivery issues perhaps the more critical issue is the length of stay for which individuals remain on the register. When compared to home or ORE qualified graduates, those from within the EEA remain for a far shorter period of time. There are a wide range of reasons why this may be the case, but most importantly, given their considerable current contribution to the present supply of the dental workforce, the lack of clarity that the Government has provided on EEA graduates future possible working arrangements is worrying.

To ensure a sustainable workforce, this lack of clarity is a major failing and, as within the other aspects of the healthcare sector, the Government must address this as a matter of urgency. While changes in oral health policy, for example in the way the professions work or in the role that the state plays, will also change personnel requirements, the current lack of clarity in policy can only hinder the development of an effective and efficient dental care delivery system.

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