

IRELAND

A DESTINATION AND SOURCE
COUNTRY FOR HEALTH
PROFESSIONAL MIGRATION



RCSI



The authors of this report are Professor Ruairí Brugha, Dr Sara McAleese and Dr Niamh Humphries (Royal College of Surgeons in Ireland).

© RCSI, all rights reserved.

Comments on an earlier draft were provided by James Buchan (University of Technology, Sydney) and Giorgio Cometto (WHO).



Funding for the development of this document was provided through the project Brain Drain to Brain Gain: Supporting the WHO Code of Practice on International Recruitment of Health Personnel for Better Management of Health Worker Migration, co-funded by the European Union (DCI-MIGR/2013/282-931) and Norad, and coordinated by the World Health Organization. The contents of this document are the sole responsibility of RCSI, and can under no circumstances be regarded as reflecting the position of the European Union or WHO.

November 2015

Contents

Abstract	2
1. Background: the Irish health system.....	3
2. Methods.....	5
3. Results	5
3.1 Medical workforce	5
3.2 Surgical workforce	6
3.3 Drivers of health workforce migration into and out of Ireland.....	7
3.4 The policy environment for health workforce migration.....	9
4. Discussion and policy recommendations	11
4.1 Better health workforce data.....	11
4.2 Data linkage and medical workforce	11
4.3 Improving health workforce retention in Ireland.....	11
Annex 1. Ireland data protocol tables	12
Annex 2. Additional quantitative and qualitative data on health workers in Ireland	17
References	20

Abstract

The development of the case study in Ireland entailed the review of both available data from statutory bodies and professional councils and analysis of recent country-specific literature, building on prior experience and research led by the Royal College of Surgeons in Ireland (RCSI).

The Irish health workforce relies heavily on migrant health professionals. Data from the Organisation for Economic Co-operation and Development show that 36.1% of Ireland's doctors in 2014 were foreign trained. Recent data from the Medical Council of Ireland (MCI) confirm the high reliance (34.3%) on international medical graduates and to a lesser extent on non-national medical graduates. Ireland is also a source country from where locally trained health professionals migrate to other developed destination countries.

MCI 2014 data indicate that 1518 doctors named "surgery" as their area of practice, approximately 10% of the total, though an unknown number and proportion of these may be practising in another country while maintaining Irish registration. MCI data additionally reveal that 51.2% of doctors practising surgery in Ireland are international medical graduates.

Quantified data on doctor migration out of Ireland are limited due to the structure of medical registration data, which do not identify the reasons for exit from the Register of Medical Practitioners, i.e. the data do not distinguish emigration from retirement or death. However, an annual exit rate of 6.4% among Irish-trained graduates under 30 years of age in 2012, and 7.9% among younger doctors in 2013, suggests that emigration is an important factor; disaggregated data on exit of the surgical workforce are not available at present.

Based on qualitative and quantitative findings, migrant doctors working in Ireland are a potentially highly mobile group, many of whom are considering migrating onwards. Hence, undue reliance on them may undermine health workforce sustainability. Quantitative research findings from RCSI support these qualitative findings, with 240 out of 345 (70%) non-European Union doctor respondents to a survey reporting that they intended to leave – 161 (47%) to migrate onwards and 79 (23%) to return home. Factors that were significantly associated with intentions to migrate onwards from Ireland were lack of career progression opportunities in Ireland, salary as a motivation to migrate to Ireland, working on short-term contracts, lack of citizenship and overall dissatisfaction with their experiences in Ireland.

The evidence points to the need for effective retention measures in order to achieve medical workforce sustainability. Strategies that will achieve this in Ireland include better working conditions (shorter and more flexible working hours), better terms and conditions of service (including equitable salary levels), better access to training and research opportunities, and clearer career paths. Development of the new national employment record, which will attribute a unique identifier to doctors in Ireland, has the potential to dramatically improve the tracking of physicians' mobility in future.



IRELAND

A DESTINATION AND SOURCE COUNTRY FOR HEALTH PROFESSIONAL MIGRATION

1. Background: the Irish health system

Ireland has a two-tier health system, with both public and private health care provision. Public health care is provided by the Health Service Executive (HSE) and is funded by a combination of taxation and user fees. Private health care is available to those with private health insurance (approximately 44% of the population). According to the Department of Health, a core aim of Irish health policy is the development of a single-tier health system funded by universal health insurance (1), although this is an ongoing policy objective.

Ireland's health spending, at 8.9% of gross domestic product (GDP), is below the Organisation for Economic Co-operation and Development (OECD) average (2). Health spending decreased by almost 22% over the period 2009–2013 as a result of austerity measures (3). Cutbacks in health spending have involved reduced health staffing numbers, reduced wages and increased out-of-pocket costs for patients. Staffing levels have fallen by 12 200 or 10% of total staffing from peak levels in 2007 (3).

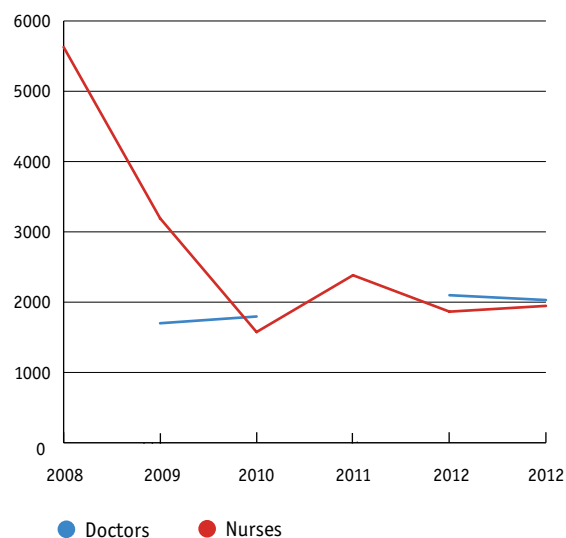
The Irish health workforce relies heavily on migrant health professionals. Since 2000, Ireland has become a popular destination country for doctors, nurses and midwives from low- and middle-income non-European Union countries (4, 5). In 2008, Ireland ranked highest among OECD countries in terms of its reliance on

foreign-trained nurses and ranked second highest in its reliance on foreign-trained doctors (international medical graduates) (6). Data recently released from OECD show that 36.1% of Ireland's doctors in 2014 were foreign trained (7). Ireland's foreign-trained doctors are largely from non-European Union countries, including India, Pakistan, South Africa and Sudan (5).

Ireland is also a source country from where locally trained health professionals migrate to other developed destination countries (8, 9). Ireland has a long tradition of emigration, including of its health professionals. Despite this, health professional emigration is not measured. The only indicator of health professional emigration is verification figures, which record intent to emigrate rather than emigration (Figure 1). Research on health professional emigration in the Irish context indicates that much recent emigration has been driven by dissatisfaction with working conditions in the health system and uncertain career progression opportunities, aggravated by austerity-related staff reductions, salary reductions and taxation increases (10). Other health professionals may be foreign-trained health professionals returning home or migrating onwards from Ireland.

Thus, Ireland represents a rich case in respect to health worker migration, being both a source and a destination country. As a supporter of the World Health Organization (WHO) Global Code of Practice on the International Recruitment of Health Personnel (11), Ireland is encouraged to promote domestic health workforce self-sufficiency and sustainability and to promote ethical recruitment

FIGURE 1. OVERALL NUMBER OF VERIFICATIONS ISSUED TO DOCTORS AND NURSES 2008–2013



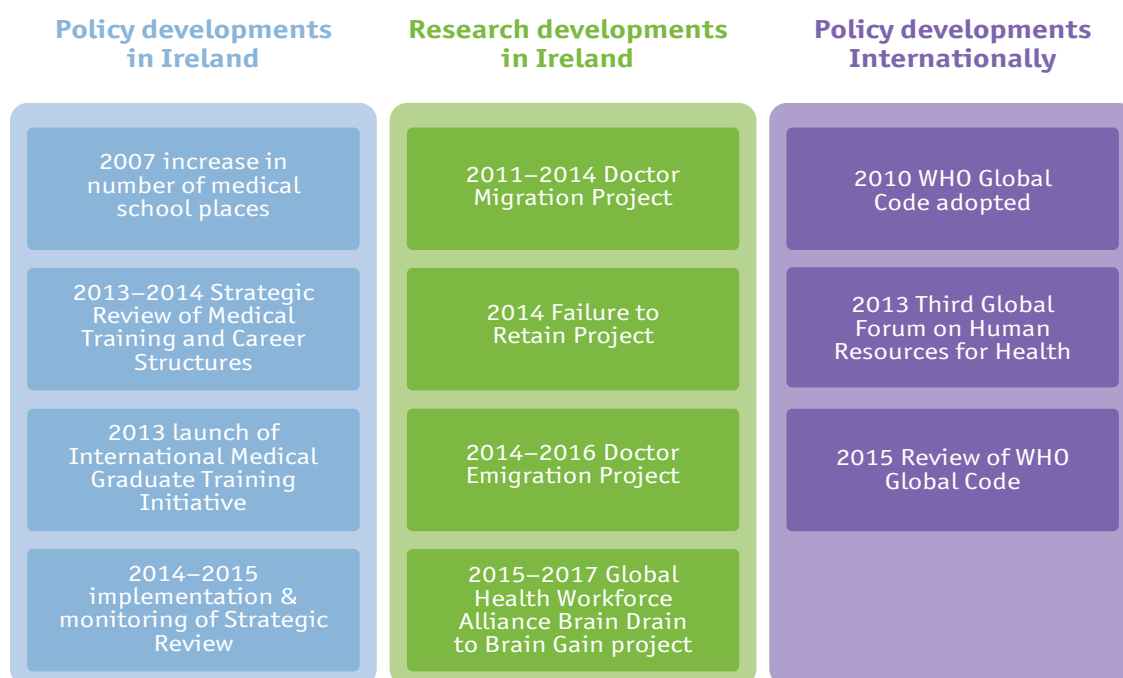
Source: Humphries, McAleese, Matthews and Brugha (10).

practices. In line with this, recent domestic policy recommendations have been developed with a view to improving the retention of medical graduates in Ireland. The Global Code also requests that countries improve data collection measures on the health workforce (11). Ireland's commitment to data collection is reflected in a renewed commitment to developing a medical workforce planning model (12).

The Royal College of Surgeons in Ireland (RCSI) Health Workforce Research Group has been researching health professional migration into and out of Ireland since 2006. Foreign-trained doctors in Ireland have been critical of the career progression opportunities available to them in the Irish health system (13, 14), while health professionals leaving Ireland have also been critical of the working conditions within the Irish health system (10). These findings all highlight the need for effective retention measures to encourage health professionals to remain in the Irish health system. Figure 2 provides a comprehensive overview of recent health workforce research and policy developments and maps them to key developments internationally (15).

Joining the Brain Drain to Brain Gain project in 2015 has enabled the research group to reconsider these issues, to compare the Irish situation with that of other partner source and destination countries and, most importantly, to reflect on how the WHO Global Code has changed the global context for research and policy-making on health professional migration nationally and globally. Within Ireland, the Brain Drain to Brain Gain project will enable a process of knowledge exchange between researchers and stakeholders. This process will continue for the duration of the project and will focus on the generation and gathering of information (data, case studies) to facilitate the better management of health worker migration in the Irish context.

FIGURE 2. TIMELINE OF KEY EVENTS 2007–15



2. Methods

Adopting a data collection and analysis protocol ¹ developed to support the research activities in the project, the RCSI Health Workforce Research Group mapped the available data on the medical and surgical workforce, and relevant data on international mobility of health workers.

Annex 1 includes the tables that were used to gather and systematize information on health workforce data availability.

Health workforce data were triangulated with and analysed in the context of the relevant literature on contextual information on the country, and the health systems and health workforce policy environment, in order to assess the relevance, value added and objectives of processes to strengthen the evidence base on health workforce mobility. Principles of the labour market approach are applied to discuss underlying factors of observed migratory flows.

Annex 2 summarizes the most relevant analyses and reports that have been produced in recent years and that represent the wider body of evidence that has informed the contents of this case study.

3. Results

3.1 Medical workforce

If a medical doctor wishes to practise medicine in Ireland, they must first register their qualifications with the

Medical Council of Ireland (MCI), which is the statutory body responsible for regulation of the medical profession in Ireland. MCI holds the official Register of Medical Practitioners in Ireland. Registration data are collected for the purpose of professional regulation; although they provide insights into the available medical workforce, they are not a substitute for workforce data. Since 2012, MCI has begun to further exploit the data it collects and holds about the medical workforce with a view to informing health workforce policy and planning. Since 2012, MCI has conducted an annual registration retention survey and produces an annual workforce intelligence report detailing the results of that survey and offering insight into the composition of the medical workforce (16, 17). Some of the latest available data from these workforce intelligence reports are presented in Table 1.

Since 2011, the HSE National Doctors Training and Planning (NDTP) has produced an annual assessment of posts for non-consultant hospital doctors (NCHDs), which provides information on NCHDs in official training posts and those not in training posts, their sex and their area of specialization. MCI and HSE NDTP reports are annual and are generally published 6–12 months after survey completion. While the information contained within these reports is invaluable for medical workforce planning, health workforce research would bring complementary, explanatory value to staff numbers and trend data, which would benefit the development of timely policy responses to emerging issues.

1 http://www.who.int/workforcealliance/HRHmigration_research_protocol_f_24Mar2015.pdf?ua=1.

TABLE 1. SELECTED DATA ON THE OVERALL MEDICAL WORKFORCE IN IRELAND

Data Category	Number/%
Total number of doctors on the Register of Medical Practitioners	18 160
Total number of new entrants	1576
Total number of verifications issued to doctors 2013	1947
Annual exit rate of doctors from the Register (%)	6.8
Proportion of international medical graduates (%)	34.3
Proportion of clinically inactive doctors (%)	4.0
Proportion practising in Ireland only (%)	79.8

Source: Data from MCI's annual registration retention survey, 2013. Verification data from MCI 2013 (16, 17).

Doctors in training

HSE NDTP conducts an annual assessment of all official training posts for doctors in the public health system in Ireland (18–22). Selected data from the latest available annual assessment (2014) are presented in Table 2.

These data are disaggregated by specialty and sex in each annual assessment; however, the country of primary training or nationality of each doctor in training is not available.

Doctors not in postgraduate training posts

According to HSE NDTP, there are approximately 1000 medical posts within the Irish health system that are not connected to an official training programme. The doctors occupying these posts tend to be international medical graduates (22). While some level of professional development training is available to doctors occupying these posts, this training is not recognized for career progression purposes in the same way that formal postgraduate or specialist training is.

Doctors recorded in census

Another source of information on the Irish health workforce that can provide some indication of the stock of health workers resident in Ireland at a given point

in time comes from the census. The Irish census was undertaken in 2006 and 2011 and provides information on the number of individuals who record their occupation as “health professional”. Table 3 outlines the number of individuals who gave their occupation as “medical practitioner”, “nurse” or “midwife” in 2006 and 2011. The census records all those who self-report as doctors, nurses or midwives, rather than all those actually working in the health workforce, and could include health professionals working in other roles, for example as carers in nursing homes or providing home care. However, it does add to the evidence base on the number of available health professionals within the country and also provides detail on whether or not they are employed (self-reported) and their nationality and sex.

3.2 Surgical workforce

As shown in Table 4, there are limited data available on the surgical workforce in Ireland. Data collated below have come from a number of sources: the annual retention survey by MCI (16), the Annual assessment of NCHD posts conducted by HSE NDTP (22), the RCSI Surgical Affairs Department, and the 2009 FÁS (Irish National Training and Employment Authority) workforce planning report (23).

The MCI medical workforce intelligence report 2014 (16) provides the most comprehensive overview to date of doctors working within the surgical workforce in Ireland. It draws on an annual retention survey completed by doctors who retained registration in Ireland in 2013. The survey revealed 1518 doctors who named “surgery” as their area of practice.²

Approximately 10% of doctors registered to practise in Ireland practise surgery, although it should be noted that an

TABLE 2. SELECTED DATA ON THE NUMBERS OF DOCTORS IN OFFICIAL TRAINING POSTS IN IRELAND, 2014

Data Category	Number
Number of intern posts	684
Number of basic specialist training posts	1431
Number of registrar training programme posts	37
Number of higher specialist training posts	1512

Source: Annual assessment of NCHD posts, July 2014 to June 2015 (22).

² Doctors are asked to specific one area of practice.

TABLE 3. HEALTH CARE OCCUPATION BY NATIONALITY GROUP: CENSUS 2006 AND 2011

Category	2006	2011
Medical practitioners	Irish 7424 European Union 559 Rest of the world 2122 } 10 105	Irish 9159 European Union 916 Rest of the world 2211 } 12,286
Nurses and midwives	Irish 42 728 European Union 1931 Rest of the world 6317 } 51 145	Irish 45 300 European Union 2710 Rest of the world 7839 } 56,005

TABLE 4. DATA AVAILABLE ON SURGEONS IN IRELAND

Category	Entry	Exist	Exit
Register		√ (annual retention survey)	
Licensure/exam			
Census			
Employer census/surveys			
Labour force survey			
Migration permits/visa			
Work permits			
Recruitment agency databases			
Other training bodies		√	

unknown number or proportion of these may be practising in another country while maintaining Irish registration. The types of doctors practising surgery in Ireland include hospital consultants in surgery (38.3%), NCHDs in training (25.7%), NCHDs not in training (28.6%) and other consultants or specialists (5.1%). The MCI data reveal 716 surgical specialists, in the surgical specialities outlined in Table 5.

In terms of the contribution made by migrant health professionals to the surgical workforce, the MCI data reveal that 51.2% of doctors practising surgery in Ireland are international medical graduates (16).

Two other sources of information on the surgical workforce in Ireland are the HSE NDTP annual assessment

TABLE 5. SURGICAL SPECIALISTS IN IRELAND 2013

Surgical specialists	No.
Cardiothoracic surgery	33
General surgery	287
Neurosurgery	28
Ophthalmic surgery	101
Oral and maxillofacial surgery	15
Paediatric surgery	14
Plastic, reconstructive and aesthetic surgery	60
Trauma and orthopaedic surgery	178
Total	716

Source: MCI annual retention survey 2013 (16).

of NCHD posts 2014–2015 (22) and the RCSI Surgical Affairs Department.

- The HSE NDTP data provide information on the number of NCHD posts³ within the Irish health system, revealing that there are 380 surgical trainee posts at basic and higher specialist training levels and approximately 390 non-training posts (in surgery and emergency medicine) (22).
- The official training and regulatory body for surgeons in Ireland is RCSI. There is a possibility of assessing the nationality and country of primary training of the surgical workforce in Ireland. To access these data, ethical approval must be obtained from RCSI and MCI. The research team has initiated the process of seeking ethical approval from RCSI for these data and hopes to access it by the end of 2015.⁴
- The available RCSI data on the surgical workforce in Ireland reveal that there are 277 surgical training posts and 370 non-training posts (22). As of 2009, there were 484 consultant surgeons in Ireland, 7% of whom were non-Irish (23).

In terms of international comparisons, according to MCI (2014), Ireland has approximately 23.6 surgeons practising per 100 000 population, and 2.67 doctors registered to practise and active per 1000 population (16).

3.3 Drivers of health workforce migration into and out of Ireland

Migration into Ireland

Foreign-trained doctors comprise a significant proportion of the medical workforce in Ireland. Between 2000 and 2010, the proportion of foreign-trained doctors registered to practise medicine in Ireland rose from 13.4% to 33.4% (5) (Figure 3). By 2008, Ireland ranked second highest of

3 Occasionally the different data sources cited different figures for what appeared to be the same information, such as the number of surgical trainee posts. The research team considers that perhaps the various agencies are working to different definitions or that different data were reported at different stages in time.

4 It is possible that the development of a new national employment record, based on each doctor's unique identifier (MCI registration number), which aims to support and monitor staff rotations, will remove the need for a separate data linkage exercise. Development and testing of the national employment record was completed in May 2015 and was included in a progress report on implementation of the Strategic Review of Medical Training and Career Structures, tabled at a Department of Health meeting, 25 September 2015.

OECD countries in terms of its reliance on foreign-trained doctors, based on a cross-country comparison of medical registration data (6) (Figure 4). The proportion of foreign-trained doctors has remained relatively stable since 2008, at 34.3% in 2013 (16).

Non-European Union countries are the main source countries of foreign-trained doctors migrating to Ireland, comprising four of the five top countries: Pakistan, South Africa, the United Kingdom, Sudan and India (16). However, a particular feature of non-European Union doctors in Ireland is that a significant proportion (15%, n = 60) had qualified from Irish medical schools (24).

Based on qualitative and quantitative findings (13, 24, 25), migrant doctors working in Ireland are a potentially highly mobile group, many of whom are considering

FIGURE 3. REGISTRATION WITH THE MEDICAL COUNCIL OF IRELAND 2000–2010 BY COUNTRY OF PRIMARY MEDICAL QUALIFICATION

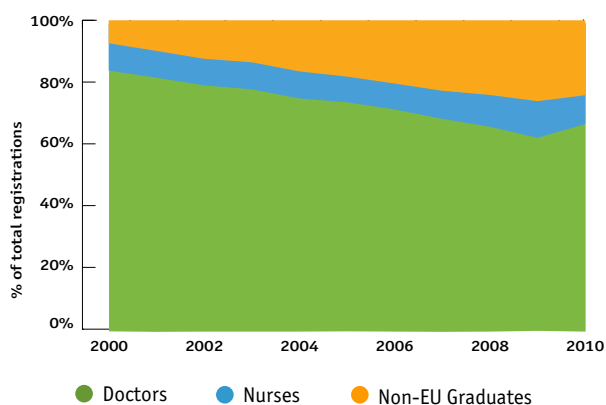
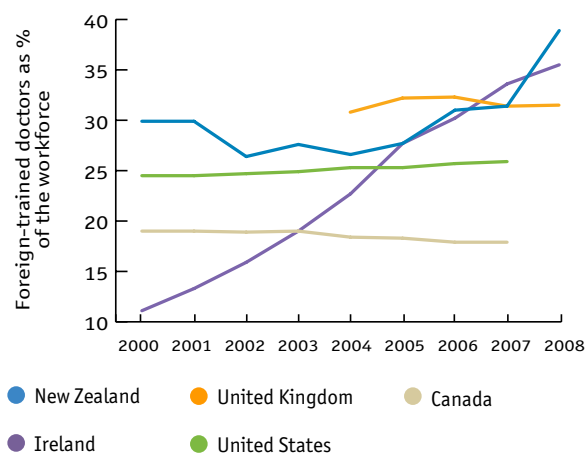


FIGURE 4. PROPORTION OF FOREIGN-TRAINED DOCTORS IN SELECTED OECD COUNTRIES 2000–2008



migrating onwards. Hence, undue reliance on them may undermine implementation of Article 5 of the Global Code – health workforce sustainability.

Qualitative findings report a cycle of brain gain, waste and drain (13), whereby Ireland has at the first stage experienced a brain gain due to international recruitment of non-European Union foreign-trained doctors. However, neither Ireland nor these doctors appear to have capitalized fully on this, in that many foreign-trained doctors have reported what has been described as “brain waste” (classified as de-skilling) (13), with many reporting their intention to migrate onwards to another destination country (brain drain).

Quantitative research findings from RCSI (24) support these qualitative findings, with 240 out of 345 (70%) non-European Union doctor respondents to a survey reporting that they intended to leave – 161 (47%) to migrate onwards and 79 (23%) to return home. Factors that were significantly associated with intentions to migrate onwards from Ireland were lack of career progression opportunities in Ireland, salary as a motivation to migrate to Ireland, working on short-term contracts, lack of citizenship and overall dissatisfaction with their experiences in Ireland.

Factors that were significantly associated with intentions to return home included being born in South Africa or another high-income country, being motivated by family rather than salary in the decision to migrate to Ireland, a perception that there is a lack of training and career opportunities available in Ireland, and lack of Irish citizenship.

Doctor migration out of Ireland

Quantified data on doctor migration out of Ireland are limited due to the limitations of medical registration data, which do not identify the reasons for exit from the Register of Medical Practitioners, i.e. the data do not distinguish emigration from retirement or death. However, an annual exit rate of 6.4% among Irish-trained graduates under 30 years of age in 2012, and 7.9% among younger doctors in 2013, suggests that emigration is an important factor (17). Of those doctors who exited in 2013, 62.3% were non-European Union-trained doctors, while 12.6% were non-Irish but European Union-trained (16). These figures suggest significant levels of doctor migration out of Ireland, comprising Irish-trained Irish doctors, Irish-trained non-European Union doctors, and foreign-trained non-European Union doctors.

An exploratory study of 388 health professionals, including 307 doctors, who had trained at undergraduate level or who had worked in Ireland but had subsequently emigrated, revealed that only 24% intended to return to practise medicine in Ireland in the future (26). Most respondents (90%) were Irish-trained doctors who had emigrated to Australia (30%), the United Kingdom (25%) and the United States of America (19%). Respondents described their main motivation for emigration as the working conditions and environment in Ireland, and the availability of better training and research opportunities abroad (10).

Similar reasons for intending to leave Ireland were reported in the study of non-European Union doctors working in Ireland (24) as were reported by doctors who had trained and worked in Ireland and subsequently migrated to another country. In the case of both foreign- and Irish-trained non-European Union doctors in Ireland, two thirds reported an intention or likelihood that they would leave (24). Only one quarter (24%) of the Irish-trained doctors who had left intended to return to Ireland. One third (33%) were not planning to return and 38% were uncertain – an improvement in terms and conditions of service being the factor that would encourage their return (10). The longer they were abroad, the less likely it was that they would return to Ireland (26).

3.4 The policy environment for health workforce migration

Ireland illustrates the importance of the WHO Global Code's injunction to countries to train and retain the health workforce they need. While Ireland is now graduating sufficient numbers of doctors to meet the needs of its health system, it is not retaining them in sufficient numbers, and continues to be a major destination country for doctors from low- and middle-income countries.

The relevance of the Global Code to Ireland was demonstrated through research on inward migration of foreign nurses and doctors conducted between 2007 and 2012, which made the link between the research evidence and Ireland's obligations under the Global Code.

Pre-existing links between health workforce researchers and individuals in relevant national agencies – HSE, MCI and national medical training bodies – provided channels for highlighting the relevance of the Global Code to Ireland in 2011–2012.

New research findings were presented at a series of policy dialogues in 2013–2014, hosted by national health workforce researchers and attended by the relevant national stakeholders. Among these was the Department of Health, which was developing comprehensive medical workforce training and career responses to address Irish doctor emigration, which has been the root cause of inward migration of foreign doctors.

A national Strategic Review of Medical Training and Career Structures in 2013–2014, which had as its primary aim the retention of Irish-trained doctors, recommended specific measures to address the posts (mainly “service” posts with no official training) that are predominantly filled by foreign-trained doctors. The monitoring of implementation is being supported by national health workforce researchers.

Additional initiatives to support implementation of the Global Code include:

- an International Medical Graduate Training Initiative, which is providing tailored postgraduate training in Ireland to doctors from low- and middle-income countries. The doctors must return to their countries to complete their training and graduate;
- the College of Surgeons of East, Central and Southern Africa (COSECSA) programme, whereby surgeons from RCSI are supporting postgraduate training of surgeons in situ in Africa;
- a series of research studies, including evaluation of the International Medical Graduate Training Initiative and the COSECSA programme, being undertaken by the RCSI Health Workforce Research Group under the Brain Drain to Brain Gain project.

Dissemination and take-up of the WHO Global Code among those with a remit for medical workforce policy and strategy in Ireland was facilitated by:

- multiple channels of influence and communication from global to national level;
- emergence of Global Code champions in relevant national bodies who understood its relevance and importance;

- a combination of bilateral communications between stakeholders and dissemination and discussion forums, which have contributed to a growing collaboration between decision-makers and health workforce researchers, where trust was fostered through a series of policy dialogue events;
- academic outputs (conference presentations and journal articles).

The Global Code has reinforced and helped to shape some of the national health workforce policies and strategies in Ireland. It has supported the national strategy being rolled out to scale up the training of doctors in Ireland, and has provided the context for the development and implementation of measures to ensure medical career structures are in place to retain Irish-trained doctors. Among some of the most significant national initiatives to which the WHO Global Code added momentum, it should be highlighted that:

- In 2006–2007, Ireland developed and quickly implemented a policy of self-sufficiency in undergraduate and specialist medical training to reduce its dependency on foreign-trained doctors. It moved quickly to increase the Irish/European Union annual student intake to medical school from 305 per year towards the 725 estimated to be required for medical workforce self-sufficiency, partly through the creation of new graduate entry medical programmes. The target intake was reached by 2011, with the graduation of 700+ Irish/European Union medical graduates expected in the year 2014/15.
- In 2013 the Irish Department of Health established a working group to carry out a Strategic Review of Medical Training and Career Structures. In three reports between July 2013 and June 2014, the group made 25 high-level recommendations relating to training and career pathways for doctors with a view to improving graduate retention in the public health system; planning for future service needs; and realizing maximum benefit from investment in medical education and training. Among the recommendations to address a range of barriers and issues relating to the recruitment and retention of doctors in the public health system, one was specifically focused on doctors in service posts, many of whom are foreign-trained doctors.

Other initiatives relating to training international medical graduates in Ireland and establishing partnerships with

overseas academic institutions have been put in with funding from Irish Aid, HSE and national training bodies. These initiatives aim at supporting postgraduate training of doctors from low- and middle-income countries, and are designed to retain those doctors in their source countries.

Factors conducive to the effectiveness of the WHO Global Code in Ireland included:

- Ongoing funding and emerging research findings, dissemination of background papers and meetings with national decision-makers to outline the significance of the Global Code to Ireland, and existing linkages with new Global Code champions, have all been contributory factors.
- Dissemination of research findings and uptake into policy and practice were facilitated through a series of policy dialogues between the researchers and national decision-makers, using the Chatham House Rule.
- These dialogues and the development of relationships of trust have contributed to collaboration in implementation and monitoring of the new national Strategic Review of Medical Training and Career Structures.
- Funding from the Brain Drain to Brain Gain project, through the WHO Global Health Workforce Alliance, is supporting the evaluation of the two initiatives whereby Irish national bodies are supporting the postgraduate training and retention of doctors in low- and middle-income countries.

4. Discussion and policy recommendations

4.1 Better health workforce data

As Tables A1.1–A1.5 (Annex 1) demonstrate, there are useful data available on the Irish health workforce, but there is considerable room for improvement in the way that data are collected and managed. Much of this stems from the fact that the various agencies involved in gathering health workforce data have a remit for only one element of that workforce.

In relation to measuring the flow of health workers into and out of the health workforce, data are sparse.

With regard to emigration, verification is currently the only available measure of emigration intent. Given the significance of emigration to the Irish health workforce, there is an urgent need for improved, comprehensive and accurate data on health worker emigration.

Recommendations in relation to the production of better health workforce data are as follows:

- The Global Code recommends improved data collection, and although Ireland has made progress in relation to this (particularly in relation to the MCI medical workforce intelligence reports since 2012 and from HSE NDTP since 2011), more remains to be done. The first recommendation in relation to the production of better health workforce data in the Irish context is the allocation of additional resources to produce and coordinate these data, which is being addressed in Department of Health recommendation 3.2.
- To improve the available data on verification, particularly the connection between emigration intent and emigration, the regulatory bodies could be asked to incorporate a short survey into the verification process. This would enable additional data to be mined from potential emigrants about their emigration plans and perhaps provide an opportunity to follow up with them after a suitable time period, for example one year. The research team will liaise with the regulatory bodies to examine the possibility of incorporating a survey into the verification process. In terms of immigration data, visa waivers have meant that immigration data are an unreliable measure of health worker immigration.
- Many of the available data on the health workforce relate to the number of health professionals registered to practise, rather than the number active in the health workforce. There is a need for more workforce data and disaggregation of those data by speciality, nationality, country of training, age and sex. The new national employment record may help to achieve this.

4.2 Data linkage and medical workforce

In the first year of the Brain Drain to Brain Gain project, the Irish research team sought to promote cooperation between the various agencies collating information about the health workforce with a view to achieving coordination and linkage of existing data sets.

It may be that progress made by HSE in developing and testing the national employment record (recommendation 1.7), which in the first instance is being rolled out to reduce paperwork and facilitate doctors moving from one job to the next, will have a broader range of health workforce planning applications, and may be exploited by Irish researchers for the purposes of the Brain Drain to Brain Gain project. While such a tool would not extend to monitoring transnational movement of doctors, it could enable the provision of accurate and timely tracking of information on doctors – Irish and foreign trained – as they transition through the public sector medical workforce, thereby helping to meet part of the data set requirements of the Brain Drain to Brain Gain project. A meeting with the Head of HSE NDTP, who is the lynchpin in medical workforce policy development, is needed to confirm this potential, and to enquire how the data can be used for project reporting.

4.3 Improving health workforce retention in Ireland

The evidence – which is consistent with research on inward and outward migration from other settings – points to the need for effective retention measures so as to achieve medical workforce sustainability. Strategies that will achieve this in Ireland include better working conditions (shorter and more flexible working hours), better terms and conditions of service (including equitable salary levels), better access to training and research opportunities, and clearer career paths.

The recommendations of the Department of Health-led 2013–2014 Strategic Review of Medical Training and Career Structures included ones specifically to address the 900 “service posts” that are mainly occupied by foreign-trained doctors, which will include measures to provide them with training and roles that meet their needs for career progression, along with the needs of the health system, through establishing better oversight and supervisions systems. Most of the recommendations, inasmuch as they succeed in retaining Irish doctors, will lead to much less international recruitment in the future.

If these recommendations are adequately resourced and implemented, they have the potential to address the systemic factors that have been driving outward migration of doctors, both Irish- and foreign-trained, and the inward migration of non-European Union-trained doctors to fill these gaps. By placing retention and sustainability at the

centre of national workforce policy development, Ireland will fulfil its commitment under Article 5 of the Global Code, but more importantly, will maximize the workforce potential of every doctor, regardless of their country of training, in Ireland.

There have been several recent research studies exploring the emigration intentions of health professionals in Ireland conducted by the RCSI Health Workforce Research Group and other Irish research groups.

ANNEX 1. IRELAND DATA PROTOCOL TABLES

Table A1.1 Record of stakeholder engagement and data identification (Ireland)

stakeholder	Level of engagement/data availability [tick one]				
	Engaged/ data available	Responded/ no data	Contacted/ no response	Not contacted	NA
Designated national authority	√				
Professional councils	√				
National data managers in ministries of health	√				
National authorities charged with reporting on the Global Code	√				
Various line ministries, including health, education, finance, ministries dealing with immigration				√	
Regulatory bodies	√				
Professional associations				√	
Training institutes	√				
Student bodies				√	
International recruitment agencies				√	
Labour unions representing health workers				√	
Diaspora groups, including associations representing foreign health professionals				√	
Senior managers and boards of public or private hospitals or health districts				√	
Civil society				√	
Private sector health organizations				√	
Recruitment agencies				√	
Other					

Table A1.2 Data sources for monitoring migration of health workers (Ireland)

Main data source	Can be used for:	Report on likely strengths/limitations
Professional registers	Entry/Exist/ Exit	<p>Medical Council of Ireland (Medical Register)</p> <ul style="list-style-type: none"> • Mandatory registration of doctors in Ireland • Total number of doctors registered to practise • Total number of new entrants • There are five main categories of registration – specialist, general, trainee, supervised and visiting (i.e. health workers from the European Economic Area) • Additional information about the total number of doctors registered, including country of training and whether they are active or inactive, and whether they are practising in Ireland only or in Ireland and another country • Since 2012, MCI has undertaken an annual retention survey of all those on the register, the results of which are published annually • Since 2014, MCI has undertaken an annual survey of trainee Experiences (“your training counts”), the results of which are published annually • Verification figures available, but only absolute number of certificates issued per annum; verification data available on request • Nursing and Midwifery Board of Ireland (Nursing Register) <p>Mandatory registration of nurses and midwives in Ireland</p> <ul style="list-style-type: none"> • Total number of nurses/midwives registered to practise • Total number of nurses/midwives registered by country of training • Total number of nurses/midwives registered by grade: advanced practitioner (nurse, midwife), children’s, general, intellectual disability, nurse prescriber, psychiatric, public health, tutor) • Total register and whether trained in Ireland, European Union or another country • Active/inactive divisions of register • Total number of new entrants • Information about new entrants, including whether trained in Ireland, European Union or another country • Verification figures available: overall numbers, number of requests per nurse/ midwife and destination country • Verification data published annually online
Migration visas and work permits	Exit/Entry	<p>Entry: Data from the Department of Enterprise, Jobs and Innovation on the number of visas/work permits issued to doctors and nurses have in the past been a valuable indicator of the number of non-European Union doctors and nurses working in Ireland (European Union health professionals do not need work permits or visas to work in Ireland). A visa waiver for non-European Union doctors employed in the public health system that was in place between 2012 and 2015 means that no visa data on doctors are available for those years.</p> <p>Exit: No exit information is collected by Irish authorities on emigrating health professionals. However, immigration and/or registration data are available from key destination countries. Work is ongoing in this regard.</p>

ANNEX 1. IRELAND DATA PROTOCOL TABLES

Table A1.2 Data sources for monitoring migration of health workers (Ireland) (continued)

Main data source	Can be used for:	Report on likely strengths/limitations
Population censuses	Exist	Census 2006 and 2011 (another due in 2016) Records those who classified their occupation as “medical practitioner” or “nurses and midwives”, their sex, nationality and whether they are employed/unemployed.
Administrative and population registers	NA	NA
Employer surveys and censuses	Stock measure/ Exist	HSE produces an annual national overview of health service employment. This is a headcount of Whole Time Equivalents (WTEs) broken down by grade. Provides no additional information about staff.
Labour force surveys	Stock measure/ Exist Survey of employment	The Central Statistics Office of Ireland undertakes a quarterly national household survey, which provides information on employment levels within the public health sector over time, but not on specific occupations within the sector or on migration.
Recruitment agency databases	Stock or flow measures	With the exception of large-scale active recruitment of nurses from India and the Philippines in the early 2000s and smaller-scale recruitment of doctors from India and Pakistan in 2011 and 2013, most health professional migration to Ireland has not involved recruitment agencies.

Table A1.3 Current record of relevant data sources and data providers identified

Data source	Data available with potential for health worker migration tracking? (yes/no/don't know)	If yes, are data for: Entry, Exist, Exit?	Key stakeholder source(s) (list contact details)
Designated national authority	No		Department of Health: Although the Department of Health itself holds no data on health worker migration, it has initiated a data linkage working group to explore the potential of existing sources for medical career tracking. If implemented, this would provide valuable tracking data on migrant health workers working within the Irish health system.
Professional registers	Yes	Entry Exit	The Nursing and Midwifery Board of Ireland provides information on the country of training of new entrants (Entry) and verification information on those who intend to emigrate (Exit). The Medical Council of Ireland has a “living database” that can analyse the whole register by country of training. It records the number of verifications issued annually (Exit). The annual retention survey and annual workforce intelligence reports are a source of valuable information on the medical workforce in Ireland.
Professional licensure or examination data	No		NA

Table A1.3 Current record of relevant data sources and data providers identified (continued)

Data source	Data available with potential for health worker migration tracking? (yes/no/don't know)	If yes, are data for: Entry, Exist, Exit?	Key stakeholder source(s) (list contact details)
Migration visas and work permits	Yes	Entry Exit	<p>Entry: Data from the Department of Enterprise, Jobs and Innovation on the number of visas or work permits issued to doctors and nurses have in the past been a valuable indicator of the number of non-European Union doctors and nurses working in Ireland (European Union health professionals do not need work permits or visas to work in Ireland). A visa waiver for non-European Union doctors employed in the public health system that was in place between 2012 and 2015 means that no visa data on doctors are available for those years.</p> <p>Exit: No exit information is collected by Irish authorities on emigrating health professionals. However, immigration or registration data exist for key destination countries. Work is ongoing in this regard.</p>
Work permits	See above		See above
Population censuses	Yes	Exist	Census 2006 and 2011 (another due in 2016): records those who classified their occupation as “medical practitioner” or “nurses and midwives”, their sex, nationality and whether they are employed or unemployed.
Administrative or population registers	No		
Employer surveys or censuses	No		HSE produces an annual national overview of health service employment. This is a headcount of WTEs broken down by grade. Provides no additional information about staff.
Labour force surveys	No		The Central Statistics Office of Ireland undertakes a quarterly national household survey, which provides information on employment levels within the public health sector over time, but not on specific occupations within the sector or on migration.
Recruitment agency databases	No		With the exception of large-scale active recruitment of nurses from India and the Philippines in the early 2000s and smaller-scale recruitment of doctors from India and Pakistan in 2011 and 2013, most health professional migration to Ireland has not involved recruitment agencies.
Other training bodies	Yes	Exist	The postgraduate training bodies (such as the Royal College of Surgeons in Ireland) hold information on those registered on formal training schemes (BST, HST) and also those availing of professional competency schemes. Nationality is one of the variables collected. The training bodies should be able to say what proportion of trainees are migrants (pending research ethics approval).

ANNEX 1. IRELAND DATA PROTOCOL TABLES

Table A1.4 Viable data sources to monitor Entry, Exist and Exit of migrant health workers

Source	Entry	Exist	Exit
Register	√	√	√
Licensure, exam			
Census		√	
Employer census, surveys		√	
Labour force survey			
Migration permits, visa	√		
Work permits	√		
Recruitment agency databases			
Other training bodies		√	

Table A1.5 Viable data sources to monitor Entry, Exist and Exit of migrant health workers working in surgical care

Source	Entry	Exist	Exit
Register		√ (annual retention survey)	
Licensure, exam			
Census			
Employer census, surveys			
Labour force survey			
Migration permits, visa			
Work permits			
Recruitment agency databases			
Other training bodies		√	

ANNEX 2. ADDITIONAL QUANTITATIVE AND QUALITATIVE DATA ON HEALTH WORKERS IN IRELAND

Findings from these research projects provide important contextual information on the migration of health professionals into and out of Ireland since 2000.

Nurse Migration Project (2006–2009)

The Nurse Migration Project was undertaken in RCSI by two members of the research team (RB, NH) from 2006 to 2009, and comprised a mixed-method study of non-European Union migrant nurses working in Ireland. The project was initiated in response to the active recruitment of almost 12 000 nurses, primarily from India and the Philippines, during the period 2000–2009, to fill vacancies in the Irish health sector (4).

In terms of methods, the Nurse Migration Project began by collating and analysing all available data on nurse migration to Ireland, including registration and visa information (4). The project then conducted in-depth qualitative interviews with 21 non-European Union migrant nurses in Ireland in 2007. Respondents were accessed via the Overseas Nurses section of the main Irish nursing union (Irish Nurses and Midwives Organisation) (27, 28). In 2009, a survey was conducted with 337 non-European Union migrant nurses, accessed via the Irish Nursing Register held by the Nursing and Midwifery Board of Ireland (28).

A major quantitative finding of the Nurse Migration Project was that 72% of respondents intended to leave Ireland, either to return home or to migrate to another country (28). The qualitative findings outlined that the reasons for considering onward migration included a lack of certainty around citizenship and family reunification in Ireland (27). Nurses were emigrating to countries such as Australia, Canada and the United Kingdom, where they felt they would have more stability in terms of migration status (27).

Doctor Migration Project (2011–2013)

The Doctor Migration Project was a collaborative project between RCSI and Trinity College Dublin undertaken 2011–2013. The project followed on from the Nurse Migration Project in considering the inward migration of health workers to Ireland. The focus for the Doctor Migration Project was the inward migration of non-European Union migrant doctors to Ireland. Between 2000 and 2010, Ireland became increasingly reliant on migrant

doctors to staff its health system (5). Doctor migration to Ireland was largely passive, with only some active recruitment campaigns to India and Pakistan (5).

In terms of methods, the Doctor Migration Project began by gathering secondary data on doctor migration to Ireland. These data (registration, visa) revealed that foreign-trained doctors accounted for 33.4% of all registered doctors by 2010 and that main source countries were India, Pakistan, South Africa and Sudan (5). The project undertook in-depth qualitative interviews with 37 non-European Union migrant doctors on their experiences of working and living in Ireland, and followed this with a quantitative online survey of 366 non-European Union migrant doctors (5, 13, 14).

The qualitative research findings revealed that respondents occupied hard-to-fill posts within the Irish health system that offered limited career progression opportunities (28). Respondents felt that they were becoming de-skilled in these posts and that their aspirations for career progression and formal training in Ireland had not materialized (28). Of qualitative respondents, 21 of 37 had come to Ireland seeking career progression and post-graduate training (29). Findings from the quantitative survey echoed the qualitative findings, in that respondents were actively seeking to migrate onwards (13, 29). Among survey respondents, only 30% (n = 105) intended to remain in Ireland, with 23% (n = 79) intending to return home and 47% (n = 161) intending to migrate onwards (24). These findings support a growing body of evidence that both Irish-trained and migrant doctors are emigrating from Ireland because they are dissatisfied with working conditions and career progression opportunities.

Failure to Retain Project (2014)

The Failure to Retain (F2R) Project (2014) was a one-year project, conducted by RCSI in collaboration with Dublin City University, which explored health professional (doctor, nurse and midwife) emigration from Ireland (10, 26). This project consisted of an online mixed-method survey that used Facebook to survey recently emigrated health professionals from Ireland. The survey received responses from 388 health professionals who had recently migrated from Ireland (26).

Quantitative results revealed that when they initially arrived in their destination country, over half of respondents (55%, n = 162) intended to spend up to five years in the destination country. At the time of the survey respondents' intentions had changed, with more respondents considering permanency in the destination country, with 34% (n = 94) now intending to remain permanently (26). Furthermore, only 24% (n = 66) of doctors and 47% (n = 36) of nurses and midwives intended to return to practise in Ireland in the future (26). These findings suggest that the longer health professionals remain abroad, the less likely they are to return to their source countries.

Qualitative findings (from open-ended survey questions) revealed that working conditions were a key driver of emigration intent for respondent emigrant health professionals (10). Respondents reported superior working conditions in their destination countries (mainly Australia, the United Kingdom and the United States of America), which they felt vindicated their decision to emigrate from Ireland and complicated the decision to return (10). Returning to practise in Ireland was felt to be contingent on significant reforms within the Irish health system (10).

Doctor Emigration Project (2014–2016)

The Doctor Emigration Project is a research project that began in 2014 and will run until 2016. This project is focused on the outward migration of doctors from Ireland. The project involves a strong knowledge exchange component. Two key stakeholders, MCI and HSE NDTP, are formal collaborators on the project.

In terms of methods, the project is a mixed-method study consisting of two quantitative surveys and a qualitative interview study. It involves an element of tracking whereby the emigration intentions of trainee doctors in Ireland were measured via survey in 2014, and will be again in 2016, to see how those intentions change over time. The project also involves a qualitative component, interviewing doctors who work in Ireland, those who have left and those who intend to leave. The project will also involve analysis of available data measuring doctor emigration from Ireland – verification data from MCI and also registration data from the key destination

countries for Irish-trained doctors (Australia, Canada, New Zealand, United Kingdom and United States).

The initial quantitative survey (2014) was delivered in collaboration with MCI. Four questions concerning emigration intentions were included in the wider trainee survey that MCI was conducting. This survey was completed by 1269 respondents. Among respondents, only 22% (n = 281) definitely intended to practise medicine in Ireland in the future. The most popular intended destination countries of respondents were the United Kingdom (31%, n = 378), Canada (25%, n = 297) and Australia (18%, n = 222). The second survey (in early 2016) will again ascertain the emigration intentions of respondents and will consider how intentions to emigrate have translated into reality for respondents (of the 1269 respondents to the first survey, 927 agreed to having their responses tracked in subsequent surveys).

The qualitative component of this study was conducted between February and August 2015 and involved in-depth interviews with 50 doctors – some working in Ireland, some working abroad and others with intent to emigrate. The qualitative analysis is ongoing with initial results expected in coming months.

Other studies of health worker emigration in the Irish context

Emigration intent of medical students. A 2015 survey on the emigration intentions of all medical students studying in Ireland revealed that 34% were definitely emigrating and a further 53% were considering emigration from Ireland upon completion of their medical degree or their intern year (30). The main factors motivating the decision to emigrate were career opportunities, working conditions and lifestyle (30). The findings of this survey indicate that retention of medical graduates will continue to be a problem for the health workforce in Ireland, and a serious threat to a sustainable domestically trained medical workforce in Ireland.

Emigration intent of general practitioners. A 2014 study conducted by the Irish College of General Practitioners revealed that only 25% of general practitioner (GP) trainees definitely intended to practise in Ireland, with 75% either definitely or considering emigrating (31). The main

motivation for emigration related to concerns about the viability of a career in general practice in Ireland and financial prospects (31). Also included in this study was a survey of GP graduates (i.e. those who had completed their training), of whom 17% were currently working overseas, and only

17% of these intended to return to practise in Ireland in the future (31). Of the GP graduates who were currently working in Ireland, 10% definitely intended to emigrate and 17% were considering emigration from Ireland in the future (31).

References

1. Department of Health webpage (<http://health.gov.ie/>).
2. Health at a glance: Europe 2014. Paris: Organisation for Economic Co-operation and Development; 2014.
3. Thomas S, Burke S, Barry S. The Irish health-care system and austerity: sharing the pain. *Lancet*. 2014;383(9928):1545–6. doi:10.1016/S0140-6736(14)60744-3.
4. Humphries N, Brugha R, McGee H. Overseas nurse recruitment: Ireland as an illustration of the dynamic nature of nurse migration. *Health Policy*. 2008;87(2):264–72. doi:10.1016/j.healthpol.2007.12.014.
5. Bidwell P, Humphries N, Dicker P, Thomas S, Normand C, Brugha R. The national and international implications of a decade of doctor migration in the Irish context. *Health Policy*. 2013;110(1):29–38.
6. International migration of health workers: improving international co-operation to address the global health workforce crisis. Paris: Organisation for Economic Co-operation and Development; 2010.
7. International migration outlook 2015. Paris: Organisation for Economic Co-operation and Development; 2015.
8. García-Pérez MA, Amaya C, Otero A. Physicians' migration in Europe : an overview of the current situation. *BMC Health Services Research*. 2007;7:201.
9. Irish Nursing and Midwifery Organisation. Forcing graduates to emigrate is a “scandal”. *World of Irish Nursing*. 2010;18(10).
10. Humphries N, McAleese S, Matthews A, Brugha R: “Emigration is a matter of self-preservation. The working conditions ... are killing us slowly.” Qualitative insights into health professional emigration from Ireland. *Human Resources for Health*. 2015;13:35. doi:10.1186/s12960-015-0022-6.
11. WHO Global Code of Practice on the International Recruitment of Health Personnel. Geneva: World Health Organization; 2010.
12. Strategic review of medical training and career structure: report on medical career structures and pathways following completion of specialist training. Dublin: Department of Health; 2014.
13. Humphries N, Tyrrell E, McAleese S, Bidwell P, Thomas S, Normand C et al. A cycle of brain gain, waste and drain: a qualitative study of non-EU migrant doctors in Ireland. *Human Resources for Health*. 2013;11:63. doi:10.1186/1478-4491-11-63.
14. Humphries N, Bidwell P, Tyrrell E, Brugha R, Thomas S, Normand C. “ I am kind of in stalemate.” The experiences of non-EU migrant doctors in Ireland. In: Buchan J, Wismar M, Glinos I, Bremner J, editors. *Health professional mobility in a changing Europe: new dynamics, mobile individuals and diverse responses*. European Observatory on Health Systems and Policies; 2014.
15. McAleese S, Brugha R. Relevance and effectiveness of the WHO Global Code in Ireland: processes and achievements. Policy Brief B. Dublin; 2015.
16. Medical workforce intelligence report: a report on the annual retention survey 2013. Dublin: Medical Council of Ireland; 2014.
17. Medical workforce intelligence report: a report on the annual registration retention survey 2012. Dublin: Medical Council of Ireland; 2013.

18. Annual assessment of NCHD posts, July 2010 to June 2011. Dublin: Health Service Executive, HSE Medical Education and Training Unit; 2010.
19. Annual assessment of NCHD posts, July 2011 to June 2012. Dublin: Health Service Executive, Medical Education and Training Unit; 2011.
20. Annual assessment of NCHD posts, July 2012 to June 2013. Dublin: Health Service Executive, Medical Education and Training Unit; 2012.
21. Annual assessment of NCHD posts, July 2013 to June 2014. Dublin: Health Service Executive, Medical Education and Training Unit; 2013.
22. Annual assessment of NCHD posts, July 2014 to June 2015. Dublin: Health Service Executive, Medical Education and Training Unit; 2014.
23. Behan J, Condon N, Milicevic I, Shally C. A quantitative tool for workforce planning in healthcare: example simulations. Report by the Skills and Labour Market Research Unit (FÁS) on behalf of the Expert Group on Future Skills Needs. Dublin: FÁS; 2009.
24. Brugha R, McAleese S, Dicker P, Tyrrell E, Thomas S, Normand C et al. Passing through: reasons for onward migration of doctors to new destination countries. *Human Resources for Health*. 2015; under review (supplement reviewing the relevance and effectiveness of the WHO Global Code of Practice on the International Recruitment of Health Personnel).
25. Tyrrell E, Keegan C, Humphries N, McAleese S, Thomas S, Normand C et al. Predictors of career progression and obstacles and opportunities for non-EU doctors to undertake postgraduate training in Ireland. *Human Resources for Health*. 2015; under review (supplement reviewing the relevance and effectiveness of the WHO Global Code of Practice on the International Recruitment of Health Personnel).
26. McAleese S, Clyne B, Matthews A, Brugha R, Humphries N. Gone for good? A survey of emigrant health professionals. *Human Resources for Health*. 2014; under review (supplement reviewing the relevance and effectiveness of the WHO Global Code of Practice on the International Recruitment of Health Personnel).
27. Humphries N, Brugha R, McGee H: "I won't be staying here for long." A qualitative study on the retention of migrant nurses in Ireland. *Human Resources for Health*. 2009;7:68. doi:10.1186/1478-4491-7-68.
28. Humphries N, Brugha R, McGee H. Nurse migration and health workforce planning: Ireland as illustrative of international challenges. *Health Policy (New York)*. 2012;107:44–53.
29. Humphries N, McAleese S, Tyrrell E, Thomas S, Normand C, Brugha R. Applying a typology of health worker migration to non-EU migrant doctors in Ireland. *Human Resources for Health*. 2015;13:52.
30. Gouda P, Kitt K, Evans DS, Goggin D, Mcgrath D, Last J et al. Ireland's medical brain drain: migration intentions of Irish medical students. *Human Resources for Health*. 2015;13:11. doi:10.1186/s12960-015-0003-9.
31. Collins C, Mansfield G, O'Ciardha D, Ryan K. Planning for the future Irish general practitioner workforce: informed by a national survey of GP trainees and recent GP graduates. Irish College of General Practitioners; 2014.



For further information, please contact:

Royal College of Surgeons in Ireland,
123 St Stephen's Green, Dublin 2, Ireland.
Tel: +353 1 402 2100