CASE STUDY | IRELAND | YEAR 2

IRELAND

BRAIN DRAIN TO BRAIN GAIN: IRELAND'S TWO-WAY FLOW OF DOCTORS

RCSI

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Abbreviations

BMQ	basic medical qualification
BST	basic specialist training
CPSP	College of Physicians and Surgeons in Pakistan
EEA	European Economic Area
EU	European Union
EWTD	European Working Time Directive
HSE	Health Service Executive
HSE-NDTP	Health Service Executive National Doctors Training and Planning
HST	higher specialist training
IMG	international medical graduate
IMGTI	International Medical Graduate Training Initiative
MCI	Medical Council of Ireland
NCHD	non-consultant hospital doctor
OECD	Organisation for Economic Co-operation and Development
RCSI	Royal College of Surgeons in Ireland
WHO	World Health Organization

SUMMARY

High line findings

- Medical workforce stressors continue to undermine Ireland's ability to achieve medical workforce sustainability and compliance with the WHO Global Code on the International Recruitment of health personnel. These include: i) high rates of emigration among graduates of Irish medical schools, attracted by working conditions, training and career opportunities in other English speaking countries; ii) the need to be compliant with the European Working Time Directive, which restricts hospital doctors' working week; and iii) increasing demand.

- The result is that the increased domestic supply of doctors is not sufficient to keep Irish hospitals staffed, which recruit or employ doctors from low-and-middle income countries, such as Pakistan and Sudan, to fill this gap. However, this is only a stop-gap measure.

- Ireland has implemented an innovative programme to provide structured postgraduate training to doctors from Pakistan – the International Medical Graduate Training Initiative (IMGTI). While popular, it is undermined by systemic medical workforce weaknesses, including the pressure on Irish specialists to provide training to its own graduates.

- Since 2013, Ireland's Health Service Executive (HSE) and Medical Council (MCI) have made progress in collecting and analysing routine medical workforce data, thereby generating medical workforce intelligence to inform national decision-making. The Brain Drain to Brain Gain project, run in Ireland by the RCSI Health Workforce Research Group –see http://www.healthworkforceireland.com/brain-drain-to-brain-gain-project.html, has supported this national policy goal and Ireland's compliance with the WHO Global Code, by linking these two sources of data so as to profile Ireland's medical workforce by nationality and country of training.

Trends and patterns of International Medical Graduates registered to practice in Ireland

- Despite an almost doubling of the number of Irish/ European Union (EU) graduates from 370 to 725 per year between 2006 and 2015, the percentage of Irish graduates on the MCI register continues to fall, from 65% in 2012 to 62% in 2015, even as the numbers rise.

- Pakistan contributes the most international medical graduates (IMGs). The proportion has been stable at 21-22% of registered IMGs between 2000 and 2015. However, the numbers have increased almost fourfold, from 375 (2000) to 1,481 (2015), which illustrates how domestic training is not sufficient to address rising attrition (emigration) and demand.

- The review of historical MCI registration data shows changing patterns. The 28% of IMGs trained in sub-Saharan Africa include rising numbers of doctors registering from Sudan and Egypt; and falling numbers from South Africa and Nigeria.

- A notable trend is the fast growth in numbers of doctors trained in central and Eastern European countries, who account for over 20% of IMGs. The increase in registered doctors trained in other EU countries from 9.6% (2012) to 13.2% (2015) of all registered doctors is mainly due to increases from Romania (from 193 in 2012 to 488 in 2015), Hungary, Poland and the Czech Republic.

New entrants and exits from the medical council register

- The number of new entrants doubled from 1,256 (2012) to 2,576 (2015), reflecting the scale of rising need for doctors; and the scale of losses, where emigration is a major factor. While Irish graduates entering the register rose by 6% from 772 (2014) to 859 (2015), new entrants from outside Ireland (and the EU) increased by 98% from 552 (2014) to 1,095 (2015).

- Of the 6.4% of doctors who exited from the medical register in 2015, two thirds were graduates of Irish medical schools and one third were IMGs. Age specific exit rates were highest for doctors aged 65+ years (10.9%), followed by doctors aged 25-34 years (6.4%), with high or rising rates of exits in 25-34 year old doctors among Irish, EU and non-EU graduates. This statistic is currently the best available proxy for emigration.

- Exit rates from the General Division of the Medical Register, an estimated two thirds of which are IMGs, were 3 to 4-fold higher than from the specialist division between 2012 and 2015. Published evidence (see http://www.healthworkforceireland.com/publications) and unpublished evidence from the RCSI research group show higher levels of intentions to migrate among IMGs, half of whom intend to move to another country (i.e. not home).

Patterns in background of non-consultant hospital doctors (NCHDs) working in Ireland

Despite the national policy of a consultant (permanent specialist) led and delivered health service, the numbers of NCHDs, i.e. doctors in training and non-training posts, continue to rise. Reasons include the need to comply with the European Working Time Directive (see earlier); multiple small volume hospitals that require teams of NCHDs to provide 24/7 care; the time and resources needed to train specialists; and increasing demand for health care. HSE data show:

- A 15.8% rise from 4,936 NCHDs in 2011 to 5,717 in 2015. This included an increase of 8.6% in those in formal training programme and a much larger 32% rise in non-trainee NCHDs. This shows that, despite a real effort and substantive increase in trainee posts, so as to deliver a specialist-led service, there was an almost 4-fold greater increase in non-trainees in post.

- In 2015, almost 77% of NCHDs not in training posts compared with 33% of NCHDs in training posts graduated outside Ireland.

Linking medical council registration data with HSE-workforce data

Data linkage enabled the linking of complete MCI data on country of qualification and nationality with the profiles of NCHDs working in Irish hospitals, produced by the HSE's National Doctor Training and Planning Unit. This shows Ireland's reliance on doctors who are from and/or are trained in other countries. It also shows an important new phenomenon: central European country medical school graduates – Irish, nationals and non-EU-nationals – are increasingly found working in Irish hospitals.

- Of those in the General Division who graduated from another European medical school (19.4% – 394), less than half (9.2% – 187) were passport holders from a European country.

- Of 290 doctors working in Ireland who qualified from a medical school in Romania, less than half were Romanian passport holders, with close to a third being non-EU nationals. Of 91 who graduated in Hungary, only 14 of them held passports from Hungary; and likewise 27 of 63 Polish medical school graduates were Polish passport holders.

- The proportions of graduates of Romanian medical schools in the General Division (75%) are not far short of the proportions for Pakistan (79%), India (83%) and Sudan (87%).

International Medical Graduate Training Initiative

The IMGTI enables overseas doctors to gain access to clinical experiences and training that they cannot get in their own country. Qualifications are dependent on them returning home. From the perspectives of Pakistani trainees who were interviewed through the 'Brain Drain' project:

- Trainees' experiences of Irish training were generally positive; they reckoned that it would give them better career prospects in Pakistan following completion of the programme.

- For some, the volume and complexity of cases, exposure and opportunities for practicing new procedures and opportunities to train at tertiary hospitals fell short of expectations, though experiences were site and speciality-dependent.

- IMG trainees experienced the same challenges as did Irish trainees in getting access to trainers. However, some felt that their training needs were seen as less of a priority.

- Many interviewees stated that they planned to return to Ireland or another European country following completion of their exams in Pakistan, to gain further experience, with a view to ultimately returning home to work in Pakistan.

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BRAIN DRAIN TO BRAIN GAIN: IRELAND'S TWO-WAY FLOW OF DOCTORS

1. Background: introduction to brain drain in Ireland

Ireland, which contributed leadership and expertise to the drafting of the World Health Organization (WHO) Global Code of Practice on the International Recruitment of Health Personnel *(1)*, is firmly committed to its implementation. As a source and a destination country for migrating health professionals, especially doctors and nurses, the challenge for Ireland is to promote domestic health workforce self-sufficiency and sustainability, thereby reducing its dependence on international recruitment. In line with this policy aim, recommendations were developed as part of a national Department of Health *Strategic review of medical training and career structure*, which aimed to improve the terms and conditions of service, training and career progression opportunities for Irish medical graduates, thereby reducing the high rates of outward migration *(2)*.

Implementation is being monitored by a cross-sectoral group, led by the Department of Health, on which the coordinator of the Brain Drain to Brain Gain project[1] participates, thereby providing an opportunity for the project to support the objectives of the Global Code. As well as measures to make Ireland self-sufficient in terms of doctors, one of the strategic review recommendations calls for the establishment of a career path for those doctors in hospital "service posts", who are mainly international medical graduates (IMGs) unable to compete successfully to undertake specialist training. In 2016, the Department of Health established a new Steering Group to Develop a National Integrated Strategic Framework for Health Workforce Planning, on which the Brain Drain to Brain Gain project coordinator is also an active member, which is likely to lead to improved systems for data collection on the health workforce *(1)*.

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.[2] Findings from these studies highlight that the same underlying weaknesses of the Irish medical workforce system – poor access to training, lack of career opportunities and poor working conditions – account for onward migration by foreign doctors and emigration by Irish-trained doctors. Joining the Brain Drain to Brain Gain project in 2015 has enabled the research group to review how the WHO Global Code has contributed to a greater awareness of the consequences of international recruitment by Irish hospitals on other source countries (see Year 1 country case study) *(3)*. A common factor underlying health workforce migration across high, middle- and low-income countries is the need for better

1 Brain Drain to Brain Gain: Supporting the WHO Code of Practice on International Recruitment of Health Personnel for Better Management of Health Worker Migration.

2 See http://www.healthworkforceireland.com/publications for a list of publications.

and harmonized routine sources of data for health workforce planning, and the particular challenges in accessing and using routine data to monitor migration.

The Brain Drain to Brain Gain project provides an opportunity for the RCSI Health Workforce Research Group to express support for the equal relevance of the Global Code to a high-income country that recruits large numbers of doctors and nurses from low- and middle-income countries, because of its inability to retain the health professionals that it trains. The project is using its strong knowledge exchange linkages – with the Medical Council of Ireland (MCI), the Irish Health Service Executive National Doctors Training and Planning (HSE-NDTP) Unit and the Department of Health – to focus effort on optimizing the use of routine data for more effective strategic planning and monitoring of the medical workforce, and thereby on health worker migration into and out of Ireland.

2. Methods

Adopting a data collection and analysis protocol[3] developed to support the research activities in the project, the RCSI Health Workforce Research Group mapped the available data on the medical workforce. A data linkage exercise was used to link MCI registration data, which contained complete data on two important variables – country of medical school where qualified and passport held – to a public sector hospital employment database (see section 3.4 for a description of the exercise). Methods relating to the International Medical Graduate Training Initiative (IMGTI) case study, which is a managed doctor immigration initiative specific to Ireland with the aim of providing specialist training to doctors from low- and middle-income countries, are included in section 3.5.

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

3. Results

3.1 Medical workforce in Ireland

If a medical doctor wishes to practise medicine in Ireland, they must first register their qualifications with MCI, which is the statutory body responsible for regulation of the medical profession in Ireland. Registration data are collected for the purpose of professional regulation; and although they provide insights into the available medical workforce, they are not a substitute for employer-based 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. MCI conducts an annual registration retention survey and produces an annual medical workforce intelligence report detailing the results of that survey and offering insight into the composition of the medical workforce *(4–7)*. Data now available in these intelligence reports represent an improvement in the evidence available for

TABLE 1. SELECTED DATA ON THE OVERALL MEDICAL WORKFORCE IN IRELAND, 2015

Data Category	Number/%*
Total number of doctors on the Register of Medical Practitioners	20,473 +7.5% from 2014
Total number of new entrants	2576
Annual exit rate of doctors from the Register (%)	6.4%*
Proportion of international medical graduates (%)	37.9%*
Proportion of clinically inactive doctors (%)	2.9%*
Proportion practising in Ireland only (%)	77.3%*

* Some of the data in medical workforce intelligence reports are presented only as percentages.
Source: MCI (7).

medical workforce monitoring, specifically those data on new entrants by foreign doctors onto the medical register and on percentages of doctors exiting from the register by age group. There were 20,473 doctors on the register of Medical Practitioners in 2015 in Ireland, an increase of 7.5% from 2014 (Table 1) *(7)*. During 2015, 2,576 new doctors entered the register, and there was an exit rate of 6.4% from the register *(7)*. The number of doctors registered in Ireland in 2013 was 2.7 per 1,000 people, which was lower than the Organisation for Economic Co-operation and Development (OECD) average of 3.3 doctors per 1,000 population *(8)*.

3.2 Health workforce migration in Ireland

3.2.1 Doctor migration into Ireland

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 *(9, 10)*. Ireland continues to be amongst the top OECD countries in terms of reliance on IMGs in its workforce,[4] at fourth place in 2013 *(8)*, with only

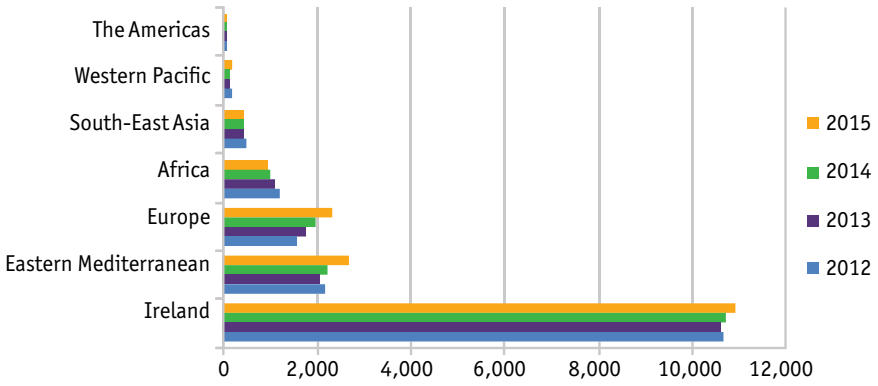
4 Measured in terms of total stocks.

TABLE 2. SOURCES (WHO Regions and Ireland) OF BASIC MEDICAL QUALIFICATION OF DOCTORS RETAINING REGISTRATION ON MCI REGISTER IN IRELAND, 2012-2015

Source	2012	2013	2014	2015
Ireland	10,656 (65.1%)	10,624 (65.7%)	10,715 (64.3%)	10,906 (62.1%)
Eastern Mediterranean*	2,187 (13.4%)	2,055 (12.7%)	2,242 (13.5%)	2,656 (15.1%)
Europe	1,575 (9.6%)	1,761 (10.9%)	1,993 (12.0%)	2,325 (13.2%)
Africa	1,227 (7.5%)	1,111 (6.9%)	1,022 (6.1%)	969 (5.5%)
South-East Asia	492 (3.0%)	430 (2.7%)	446 (2.7%)	438 (2.5%)
Western Pacific	168 (1.0%)	125 (0.8%)	159 (1.0%)	166 (0.9%)
The Americas	66 (0.4%)	76 (0.5%)	85 (0.5%)	99 (0.6%)

*Pakistan, which is also the initial country from which trainees have come for the IMGTI (see section 3.5), is included in the WHO Eastern Mediterranean Region.
Source: MCI (*4-7*).

FIGURE 1. SOURCES (WHO Regions and Ireland) OF BASIC MEDICAL QUALIFICATIONS OF DOCTORS RETAINING REGISTRATION ON MCI REGISTER IN IRELAND, 2012-2015



Israel, New Zealand and Norway recording higher percentages of IMGs, as compared to second place in 2008 *(11)*. Table 2 and Figure 1 show the sources (WHO regions and Ireland) of basic medical qualification (BMQ) of doctors who retained registration on the MCI register in Ireland between 2012 and 2015. While fairly static, there is an upward trend for doctors who qualified in other European countries and Pakistan, and a slight downward trend for graduates from Ireland and Africa.

Table 3 shows that numbers of those on the MCI register with a BMQ outside Ireland have been increasing for many countries since 2000, with the exception of those with a BMQ from South Africa, which saw a large spike around 2010 and then a decrease up to 2015; whereas others, such as India and Nigeria, peaked in 2012 and have stayed stable since.[5] The source country with the greatest numbers of IMGs – every year except 2010 – was Pakistan, for which the percentage of those registered was fairly stable between 2000 and 2015 at around 22%, whereas the number of its graduates increased almost fourfold, from 375 to 1,481. This is the main country from which managed medical migration to Ireland occurs (see section 3.5).

There was an increase in the number of IMGs trained in Romania from 193 in 2012 to 488 in 2015, accounting for 7.3% of the total number of IMGs on the register by 2015. Other European Union (EU) countries where there have been year-on-year increases between 2012 and 2015 for country of medical qualification are Hungary, Poland and the Czech Republic. The EU/European Economic Area (EEA), at 6.7%, is an emerging source of medical graduates, including a growing number of Irish nationals obtaining their BMQ there (see also section 3.4). Four African countries – Sudan, South Africa, Nigeria and Egypt – together represent 28% of IMGs registered in Ireland. General immigration patterns are reflected in the rise in the number of doctors who graduated in Nigeria during the first decade of the 2000s, following which the numbers stabilized. A rising trend in doctors migrating from Sudan started during the 2000s and has steadily increased, making Sudan the third most common country of qualification by 2015, after Ireland and Pakistan. The unusual spike in South African doctors is explained next.

Table 4 shows, for 2015, for those countries where the total numbers of those retaining registration are greater than 200 (right-hand column), the proportions of doctors who reported practising within, outside, and both within and outside Ireland. The total of 16,995 reflects that not all doctors who retained registration answered this question in the annual survey. Of the 10,529 registered doctors who reported Ireland as a country of BMQ, 90.2% of these reported practising in Ireland only, with 6.3% practising outside Ireland only and 3.5% practising inside and outside Ireland. Out of 594 doctors registering South Africa as their country of BMQ, only 18.4% of these practised inside Ireland only, with 63% practising outside Ireland only.[6]

In an earlier publication *(10)*, we noted the phenomenon whereby significant numbers of South African doctors were coming to Ireland to undertake short-term locums (typically for a duration of several weeks, as commuters) on a regular basis. Some of these may be reporting that they practise outside Ireland only, or may no longer be doing locums in Ireland but are retaining their registration.

The broader phenomenon is that doctors who are now working in other jurisdictions (not necessarily in the country where they qualified) have registered with the Irish MCI at some point, and may have practised in Ireland. They may now be retaining their registration, annually, perhaps as an insurance policy to enable them to work in Ireland at a future point. Out of 100 doctors who identified Australia as their country of BMQ, only 19% practised inside Ireland only, and 68% reported practising

5 MCI records the medical school and country where a registered doctor qualified and the passport they declare on registration. The aim of the RCSI team is to unpack these data as, for example, Irish nationals (passport holders), and indeed nationals from Africa and South-East Asia, qualify as doctors in East European medical schools. However, a large (yet to be determined) number and percentage of these are likely to be EU/EEA national doctors who are migrating to Ireland. Analysis of MCI data sets and the data linkage exercise (see section 3.4) will enable us to unpack and distinguish passport nationality and country where qualified (BMQ).

6 There are two main reasons that the total numbers for country of BMQ do not match for Table 3 and Table 4. Questions regarding current practice are not mandatory on the annual registration retention survey. In addition, some doctors who retain registration do not practise at all; therefore neither of those appears in the data regarding location of practice. Therefore, Table 3 represents total numbers of doctors who retained registration (regardless of being active/inactive and where they practised); Table 4 details numbers of doctors who retained registration who are active and who disclosed whether they practised in and outside Ireland.

TABLE 3. COUNTRY OF BASIC MEDICAL QUALIFICATION FOR DOCTORS ON THE MEDICAL COUNCIL OF IRELAND REGISTER (OUTSIDE IRELAND)

Country	2000	2010	2012	2013	2014	2015
Pakistan	375 (21.4%)	1,075 (22.7%)	1,200 (21.3%)	1,086 (19.5%)	1,238 (20.8%)	1,481 (22.3%)
Sudan	64 (3.65%)	403 (8.3%)	527 (9.3%)	549 (9.9%)	571 (9.6%)	679 (10.2%)
United Kingdom	–	–	560 (9.9 %)	588 (10.6%)	603 (10.1%)	630 (9.5%)
South Africa	54 (3.0%)	1,582 (25.3%)	768 (13.6%)	672 (12.1%)	642 (10.8%)	607 (9.1%)
Romania	–	–	193 (3.4%)	274 (4.9%)	355 (6%)	488 (7.3%)
India	186 (10.6%)	460 (7.3%)	467 (8.3%)	407 (7.3%)	421 (7.1%)	412 (6.2%)
Nigeria	36 (2.1%)	389 (6.2%)	411 (7.3%)	385 (6.9%)	356 (6%)	337 (5.1%)
Egypt	79 (4.5%)	194 (3.1%)	196 (3.5%)	199 (3.6%)	208 (3.5%)	233 (3.5%)
Hungary	–	–	130 (2.3%)	146 (2.6%)	174 (2.9%)	210 (3.2%)
Poland	–	–	166 (2.9%)	175 (3.1%)	197 (3.3%)	211 (3.2%)
Australia	58 (6.1%)	196 (4.1%)	115 (2%)	108 (1.9%)	106 (1.8%)	102 (1.5%)
Czech Republic	–	–	52 (0.9%)	69 (1.2%)	97 (1.6%)	101 (1.5%)
Iraq	–	–	82 (1.5%)	87 (1.6%)	91 (1.5%)	100 (1.5%)
Germany	–	–	94 (1.7%)	92 (1.3%)	95 (1.6%)	88 (1.3%)
Libya	–	–	87 (1.5%)	74 (1.3%)	72 (1.2%)	77 (1.2%)
Bulgaria	–	–	34 (0.6%)	41 (0.7%)	55 (0.9%)	71 (1.1%)
Latvia	–	–	33 (0.6%)	50 (0.9%)	65 (1.1%)	73 (1.1%)
Italy	–	–	41 (0.7%)	46 (0.8%)	49 (0.8%)	67 (1.0%)
Slovakia	–	–	48 (0.9%)	47 (0.8%)	54 (0.9%)	55 (0.8%)
Spain	–	–	23 (0.4%)	31 (0.6%)	35 (0.6%)	44 (0.7%)
Croatia	–	–	≤ 0.1%	≤ 0.1%	11 (0.2%)	42 (0.6%)
Lithuania	–	–	25 (0.4%)	29 (0.5%)	29 (0.5%)	38 (0.6%)
Syrian Arab Republic	–	–	24 (0.4%)	25 (0.4%)	28 (0.5%)	34 (0.5%)
Netherlands	–	–	22 (0.4%)	20 (0.4%)	22 (0.4%)	27 (0.4%)
New Zealand	–	–	35 (0.6%)	32 (0.6%)	31 (0.5%)	26 (0.4%)
Russian Federation	–	–	21 (0.4%)	23 (0.4%)	23 (0.4%)	26 (0.4%)
USA	–	–	21 (0.4%)	23 (0.4%)	27 (0.5%)	27 (0.4%)
Bangladesh	–	–	14 (0.2%)	17 (0.3%)	20 (0.3%)	20 (0.3%)
China	–	–	≤ 0.1%	≤ 0.1%	≤ 0.1%	21 (0.3%)
France	–	–	17 (0.3%)	18 (0.3%)	16 (0.3%)	17 (0.3%)
Greece	–	–	10 (0.2%)	13 (0.2%)	13 (0.2%)	18 (0.3%)
Ukraine	–	–	16 (0.3%)	17 (0.3%)	18 (0.3%)	22 (0.3%)
Belarus	–	–	10 (0.2%)	11 (0.2%)	13 (0.2%)	14 (0.2%)
Belgium	–	–	11 (0.2%)	14 (0.3%)	13 (0.2%)	13 (0.2%)
Haiti	–	–	12 (0.2%)	11 (0.2%)	10 (0.2%)	10 (0.2%)
Oman	–	–	≤ 0.1%	≤ 0.1%	≤ 0.1%	13 (0.2%)
Phillipines	–	–	≤ 0.1%	≤ 0.1%	11 (0.2%)	11 (0.2%)
Republic of Moldova	–	–	≤ 0.1%	10 (0.2%)	10 (0.2%)	11 (0.2%)
Jordan	–	–	10 (0.2%)	9 (0.2%)	9 (0.2%)	≤ 0.1%

– Not available.

Note: Doctors trained in other countries representing 0.1% or fewer of the total numbers of doctors registered for each reported year have not been included in Table 3.

Source: MCI *(4-7)*.

TABLE 4. PROPORTION OF DOCTORS PRACTISING INSIDE AND OUTSIDE IRELAND, BY COUNTRY OF QUALIFICATION, 2015

Country of BMQ	Both within and outside Ireland	Outside Ireland only	Within Ireland only	Totals
Ireland	3.5%	6.3%	90.2%	10,529
Other than Ireland				
Pakistan	16.3%	21.6%	62.1%	1,439
Sudan	17.1%	29.6%	53.2%	648
United Kingdom	21.5%	13.0%	65.5%	614
South Africa	18.7%	63.0%	18.4%	594
Romania	23.9%	19.5%	56.5%	476
India	11.8%	16.0%	72.3%	400
Nigeria	17.7%	19.2%	63.1%	328
Egypt	19.2%	27.1%	53.7%	229
Poland	22.1%	8.7%	69.2%	208
Hungary	16.9%	21.9%	61.2%	201
Other countries				1,329
Subtotal (other than Ireland)				6,446
Total				**16,995**

Source: MCI (7)

outside Ireland only. Hence, where MCI registration data go beyond simply registering nationality (passport) and country of BMQ/training and begin to capture additional data on location of practice, these more complex patterns of medical migration begin to emerge.

Table 5 shows the region of BMQ for new entrants to the medical register. There has been a significant increase in total numbers from 1,256 in 2012 to 2,576 in 2015. Between 2014 and 2015, there was an increase in the number of new entrants from outside Ireland and the EU, from 552 to 1,095, representing an increase in IMGs newly registering from 28.2% to 42.5%. Two related factors are likely to account for this rise: (a) increasing numbers of new entrants to the register are compensating for an increasing number who are exiting from the register (see Table 7) because they are migrating out of Ireland or are retiring; and (b) there is an increased demand for doctors in Ireland as a result of a recent decision by the European Court of Justice, following a referral by the European Commission, that Ireland had failed to comply with the European Working Time Directive (EWTD).[7] The result is that Irish employers

7 http://health.gov.ie/future-health/tackling-the-capacity-deficit/european-working-time-directive/.

TABLE 5. LOCATION OF BASIC MEDICAL QUALIFICATION FOR NEW ENTRANTS TO THE MEDICAL REGISTER

Location of BMQ	2012	2013	2014	2015
Ireland	–	–	772 (39.4%)	859 (33.3%)
Outside Ireland and the EU	–	–	552 (28.2%)	1,095 (42.5%)
EU medical school (EU national)	–	–	437 (22.3%)	428 (16.6%)
EU medical school (non-EU national)	–	–	196 (10.0%)	194 (7.5%)
Total	**1,256**	**1,576**	**1,958 (100%)**	**2,596 (100%)**

– No data.

Source: MCI (4–7).

(mainly hospitals) have been instructed to reduce the hours per week worked by doctors in training, which is putting huge pressure on them to recruit more doctors, which in turn requires them to recruit internationally.

The trend from 2014 to 2015 shows that graduates of Irish medical schools accounted for a 6% increase in new entrants; however, their contribution fell to second place behind graduates from outside the EU – from the low- and middle-income countries represented in Table 3 – whose contribution increased by almost 100%. IMGs now account for most new entrants to the medical register. Ireland has increased its production of doctors annually from 370 Irish/EU/EEA graduates in the mid-2000s to 725 graduates annually in 2015 *(12)*, which is the current complement of posts. This is a quite dramatic demonstration of the challenge facing Ireland, which is unable to meet its needs through only training and retaining its own graduates and recruiting doctors from low- and middle-income countries.

Table 6 shows that approximately 50% of new specialists in 2014 and 2015 graduated from an Irish medical school and around 30% graduated from another EU medical school. There has been an overall increase in the number of new specialists registered, rising to 737 in 2015, an unknown number of whom – from the four categories or locations of qualification – will have specialized in Ireland. The data show that Ireland is still relying on its own graduates to staff over half of its permanent specialist posts; is somewhat reliant on other EU nationals; and is rather less reliant on non-EU nationals to fill its specialist posts.

3.2.2 Doctor migration out of Ireland

Despite the fact that Ireland has a long tradition of emigration of its health workers, emigration is not measured. Types of data on health professional emigration include exit data from MCI – which report those who do not retain registration on the register[8] – professional registration, and work permit data. 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 medical register, i.e. the data do not distinguish emigration from retirement or death. Overall, 1,195 doctors exited the register in 2015, which represented an exit rate of 6.4% of all doctors. Graduates of Irish

8 Annual re-registration is required of all doctors who wish to practise medicine in Ireland.

TABLE 6. LOCATION OF BASIC MEDICAL QUALIFICATION OF NEW SPECIALISTS, 2012-2015

Location of BMQ	2012	2013	2014	2015
Ireland	–	–	333 (50.0%)	389 (52.8%)
Outside Ireland and the EU	–	–	118 (18.0%)	125 (17.0%)
EU medical school (EU national)	–	–	208 (31.0%)	217 (29.4%)
EU medical school (non-EU national)	–	–	7 (1.0%)	6 (0.8%)
Total	**691**	**509**	**666**	**737**

– No data.
Source: MCI (4–7).

TABLE 7. EXIT RATES BY REGISTRATION DIVISION, 2012–2015

Division	2012	2013	2014	2015
General	936 (13.6%)	772 (11.4%)	709 (9.2%)	855 (10.5%)
Specialist	276 (3.8%)	277 (3.7%)	280 (3.5%)	318 (3.7%)
Supervised	28 (12.0%)	6 (81.0%)	2 (25.0%)	2 (1.9%)
Trainee Specialist	10 (0.5%)	4 (0.2%)	4 (0.2%)	20 (1.0%)

Source: MCI (4–7).

medical schools accounted for over two thirds (4.4%) and foreign-trained doctors (IMGs) for one third *(7)*. The exit rate for all doctors was 5.6% in 2014, compared to 6.8% in 2013 *(5, 6)*.

There are five divisions on the medical register: (a) Trainee Specialist Division (includes internship registration and trainee specialist registration); (b) Specialist Division; (c) General Division; (d) Supervised Division; and (e) Visiting EEA Practitioners Division. When higher specialist training (HST) is completed, a doctor must make an application to transfer from the Trainee Specialist Division to the Specialist Division. While most doctors do this when they qualify, if they do not they are defaulted to the General Division of the register. Those in the Specialist Division have secured a Certificate of Completion of Specialist Training and are eligible to apply for – or are already occupying – hospital consultant and general practitioner posts. Those in the General, Trainee Specialist and Supervised Divisions all fall within the category of non-consultant hospital doctor (NCHD).[9]

9 NCHD is the term used in the Irish health services for doctors who have not yet obtained a permanent consultant specialist or general practitioner post. NCHDs encompass interns, doctors in training posts/rotations, and those in the General Division who are not (yet) in training posts. Some such posts are known as "service posts", which are mainly in smaller hospitals and are not posts from which it is difficult to compete for training posts and rotations. The equivalent term in the United Kingdom is "junior doctor".

The highest exit rate in 2012–2015 was from the General Division (see Table 7), which comprises NCHDs who have completed internships (the one-year postgraduate training period); those awaiting (intending) entry to basic specialist training (BST); and those in between basic and higher specialist training (HST). However, the General Division also includes doctors in long-term service posts, which provide little or no opportunity for career progression *(13, 14)*. Most of these are IMGs and are unlikely ever to gain access to a specialist training programme. The next highest number and rate of exits is from the Specialist Division, which may include those reaching retirement age and also those who have completed specialist training, obtained a Certificate of Completion of Specialist Training and transferred to the Specialist Division; but who have not secured a consultant or general practitioner position, or have chosen to leave Ireland for other reasons.

Table 8 shows the age categories of those who exited the register in 2014 and 2015. It shows an increase in the percentage of exits among the 25–34 age group, from 2014 to 2015, in all graduate categories – Irish medical schools (the largest number, where the numbers who exited rose from 157 to 191), EU medical schools (EU and non-EU nationals), and non-EU medical schools. There was a similar upward trend in exits in the 35–44 age group from all categories, except among graduates of Irish medical schools. The total numbers exiting from the register in the age category 25–34 years increased

TABLE 8. AGE CATEGORY OF DOCTORS EXITING THE REGISTER, 2014–2015

	Exit rate 2014				Exit rate 2015			
Age	Irish medical school	EU medical school: EU national	EU medical school: non-EU national	Medical school outside EU and Ireland	Irish medical school	EU medical school: EU national	EU medical school: non-EU national	Medical school outside EU and Ireland
< 25		0 (0%)	0 (0%)	0 (0%)	1 (8.3%)	0 (0%)	0 (0%)	0 (0%)
25-34	157 (5.5%)	74 (15.9%)	28 (8.6%)	48 (7.8%)	191 (6.4%)	107 (18.8%)	50 (11.4%)	79 (8.6%)
35-44	131 (4.3%)	54 (10.2%)	5 (5.4%)	113 (7.6%)	107 (3.5%)	80 (12.8%)	21 (15.3%)	129 (8.6%)
45-54	36 (1.6%)	33 (8.4%)	3 (15.8%)	84 (6.0%)	26 (1.1%)	35 (7.8%)	1 (4.0%)	75 (5.2%)
55-64	49 (2.5%)	20 (8.8%)	0 (0%)	40 (6.5%)	50 (2.6%)	25 (9.8%)	1 (16.7%)	55 (7.9%)
65+	95 (8.5%)	12 (14.3%)	0 (0%)	13 (9.8%)	127 (10.9%)	14 (16.1%)	0 (0%)	21 (15.2%)

Source: MCI (6,7).

from 307 (2014) to 427 (2015), with a more modest rise among 35–44-year-olds, from 303 (2014) to 337 (2015). These trends are a cause of concern and need to be monitored. Implementation of the 2014 Strategic Review of Medical Training and Career Structure recommendations began in late 2014, and ought to be having an impact on (contributing to a reduction in) exit rates in the 25–44 age range in the 2016 MCI data.

Based on qualitative and quantitative findings from the RCSI Health Workforce Research Group *(13–16)*, funded by Ireland's Health Research Board, migrant doctors working in Ireland are a potentially highly mobile group. Qualitative findings report a cycle of brain gain, waste and drain *(16)*, whereby Ireland has at the first stage experienced a brain gain due to international recruitment of non-EU 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 deskilling) *(16)*, with many reporting their intention to migrate onwards to another destination country (brain drain) such as the United Kingdom and Australia. Findings from a recent study have shown that many IMGs in Ireland experience slow or stagnant career progression when compared with Irish-trained non-EU doctors *(14)*. A quantitative study that analysed the migration intentions of 345 foreign doctors in Ireland found that 30% planned to remain in Ireland, 23% planned to return home and 47% to migrate onwards *(13)*.

Short-term emigration of young EU graduates of Irish medical schools has been a common finding over several decades (since the 1960s) due to a tradition of accessing training in high-volume centres abroad, usually at the end of specialist training, and prior to returning to Ireland to take up permanent positions in the Irish health service. However, there has been a change in the pattern of emigration in recent years, with more doctors leaving at an earlier stage in their training (many within one or two years of graduation), and more doctors staying abroad rather than returning. 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 *(17)*. Other health professionals may be foreign-trained health professionals returning home or migrating onwards from Ireland. A recent study of 388 health professionals who emigrated from Ireland showed that while over half had originally intended to stay out of Ireland on a short-term basis, the desire to remain abroad on a permanent basis increased over time. Only a quarter of doctors and a half of nurses and midwives intended to return to practise in Ireland in the future *(18)*.

3.3 Non-consultant hospital doctors in Ireland

The focus of this case study, in Year 2, is what is termed the non-consultant hospital doctor (NCHD) in Ireland: see section 3.3.2 and footnote 9, where the different divisions of the MCI register are explained and some trends in NCHD migration are mentioned. Findings are divided into two sections:

- a synthesis of secondary data relating to NCHDs in Ireland (section 3.4);
- emerging results from the IMGTI evaluation study (section 3.5).

In Ireland, NCHDs comprise doctors who work mainly in hospitals, with some working in general practice and community settings. NCHDs include those in general practice and specialist training posts; and doctors in non-training posts, which are termed "service posts". Some of those in service posts have "contracts of indefinite duration", whereas most NCHDs are in temporary posts. NCHD grades include intern (postgraduate year 1); senior house officer (postgraduate years 2 and 3); registrar/specialist registrar posts; and senior registrar posts in psychiatry.

- **Training posts:** interns, streamlined training, BST and HST, and general practice training.
- **Posts under the IMGTI:** usually senior house officer and registrar posts (see section 3.5).
- **Non-training posts:** senior house officer and registrar posts, which can be (a) interim posts occupied while an NCHD is seeking to enter a specialist training rotation; and (b) service delivery posts with no training component, usually at a level 1 or 2 hospital – some are temporary, requiring the doctor to move hospital and residence at the end of the contract, while others are semi-permanent.

Two sources of data exist relating to NCHDs in Ireland. Since 2011, the HSE-NDTP has produced an annual assessment of posts for NCHDs, which provides information on NCHDs in training posts and those not in training posts *(12, 19–21)*. Despite an increased effort on the part of the Irish Health Service Executive (HSE) to reduce NCHD numbers, in line with a policy to move towards a more consultant-led health service, there has been a growth in NCHD numbers, increasing from 4,936 in 2011 to 5717 in 2015 *(12, 19–21)*.

Of the 5717 current NCHD posts in 2015/2016, 3706 are "training posts" and 2011 are "non-training posts" *(12)*. As Table 9 shows, the numbers of both categories have been rising since 2011. Larger numbers of doctors need to be recruited to provide the same service in order to comply with the EWTD, which restricts excessive night work and provides for a maximum of a 48-hour working week. There are limits to the rate of expansion of specialist training posts, in terms of suitability (as defined by training bodies) and availability of funded consultant posts at the end of training. As a consequence, more of the expansion has been in non-training posts. Therefore, the need to comply with the EWTD is undermining efforts to put a consultant-led and delivered specialist service in place.

The second source of data relating to NCHDs is the MCI medical workforce intelligence reports *(4–7)* – see sections 3.1 and 3.2. Almost 77% of NCHDs not in training posts in 2015 graduated outside Ireland, a slight increase from 74% in 2013 *(7)*. In comparison, 33% of NCHDs in training posts in 2015 graduated outside Ireland. Hence, both sources of data – the MCI data (Table 10), which reports the numbers of registered doctors, and the HSE-NDTP data (Table 9), which records numbers of actual posts and employed doctors – show that the biggest increase in the numbers of NCHDs in the period 2013–2015 was in non-training posts.

This can be seen as a retrograde step for the Irish health system, reversing the policy aim of consultant-delivered specialist services, which stems from a number of factors, including the enforced increased numbers of NCHDs demanded by the implementation of the EWTD; the long-standing hospital configuration, characterized by multiple small-volume hospitals all requiring teams of NCHDs to provide 24/7 care and to be available for unscheduled care delivery; limitations due to the time and resources needed to train specialists (10 to 16 years from entry to medical school); and the increasing demand for health care. The result of this perfect storm is the increased demand for IMGs – doctors from the range of low- and middle-income countries shown in Tables 2–4. Hence, the period 2013–2015 has seen an almost 50% increase in the numbers and percentage of such service posts from 2,032 to 3,026,[10] based on MCI registration data, three quarters of which are occupied by IMGs (see sections 3.3.1 and 3.3.2 for further details).

3.3.1 NCHDs in training

Postgraduate training in Ireland has traditionally consisted of a one-year postgraduate internship, an average period of three to four years BST, followed by four to five years of HST. Transitions from internship to BST and then to HST are not automatic; and doctors may choose to take (or they may lose) some additional years in transition. Recently there has been a move towards more streamlined training. In July 2015, there were 691 internship posts available in the Irish health

10 Note: NCHDs on the MCI register include those working for locum agencies and private hospitals.

TABLE 9. NON-CONSULTANT HOSPITAL DOCTOR NUMBERS, 2011–2016

Year	Trainees	Non-trainees	Total NCHDs
2011/2012	3,412	1,524	4,936
2012/2013	3,458	1,447	4,905
2013/2014	3,370	1,549	4,919
2014/2015	3,504	1,798	5,302
2015/2016	3,706	2,011	5,717

Source: HSE (*12*).

TABLE 10. NON-CONSULTANT HOSPITAL DOCTORS IN IRELAND, 2012–2015

Year	NCHD graduates of Irish medical schools in training	NCHD graduates of medical schools outside Ireland in training	NCHD graduates of Irish medical schools not in training	NCHD graduates of medical schools outside Ireland not in training
2012	–	–	–	–
2013	2,250 (22.4%)	1,155 (21.7%)	527 (5.2%)	1,505 (28.2%)
2014	2,302 (22.2%)	1,082 (18.7%)	637 (6.1%)	1,895 (32.8%)
2015	2,287 (21.6%)	1,141 (17.5%)	701 (6.6%)	2,325 (35.6%)

– No data.

Source: MCI (*4-7*).

system, with 684 doctors completing their intern year *(12)*.[11] HST programmes vary from one to six years across the 43 recognized specialities. HST trainees are typically employed at specialist or senior registrar grade. The number of HST trainees in Ireland in 2015/2016 was 1,528 *(12)*. As explained in the introductory text to section 3.3, between 2012 and 2015, 33–34% of NCHDs in training graduated outside Ireland.

To date, while the specialities and subspecialties, the numbers and the sites of NCHD trainee posts are regulated by MCI and HSE, there has been no central regulation of non-training NCHD posts. The establishment of such posts is undertaken by individual hospital employers, often as a short-term measure, based on local need. In some cases, hospitals will actively recruit IMGs to fill these posts. In 2014, HSE-NDTP established an online portal for registering all NCHDs – the NCHD National Employment Record – with a view to establishing accurate numbers of both training and service NCHD posts. The populating of the database started in early 2015 and is expected to be close to complete by the end of 2016 (see section 3.4).

3.3.2 NCHDs not in postgraduate training posts

According to HSE-NDTP, there were approximately 2,011 NCHDs in the Irish public health system[12] in 2015/2016 who were not affiliated to an official training programme *(12)*. "Safe and timely service delivery in the Irish healthcare system is hugely dependent on this group of doctors, but unlike training posts, there is not the same rigorous oversight of their numbers and regulation" *(12)*. Contracts for this category of doctors are usually for 6–12 months. These positions usually involve 24/7 care, and hence may not be EWTD compliant, and are mainly based in model 1 and 2 periphery hospitals.[13] While some of this cohort is made up of doctors who are between training posts, almost 77% are IMGs *(12)*. Many of these arrive to Ireland with the hope of progressing to specialist training programmes and career progression *(13)*, but do not succeed due to lack of eligibility or due to competition within the selection system *(2)*. Table 9 shows that between 2011/2012 and 2015/2016 there was an increase (from 1,524 to 2,011) in non-trainee numbers in the public sector *(12)*, with up to a further 1,015 non-trainees in private hospitals, employed by agencies or unaccounted for (Table 10).

3.4 Data relating to the health workforce in Ireland: data linkage process

The potential for linking health workforce data sets was identified by the RCSI Health Workforce Research Group in Year 1 of the project, with the purpose of enabling improved workforce planning. The Irish Brain Drain to Brain Gain team have continued to work with MCI and HSE-NDTP in Year 2 of the project to link routine medical workforce data sets covering registration data (MCI) and new employment-based data, the systems for which have been put in place by HSE-NDTP, following a recommendation of the 2013/2014 *Strategic review of medical training and career structure (2)*.

11 The internship is a compulsory period of practice, following graduation, after which full registration is awarded.

12 HSE-NDTP does not collect data from locum agencies or from the private sector, including private hospitals.

13 Model 1 hospitals are community/district hospitals. Model 2 hospitals include ambulatory care, diagnostics, selected medical inpatients, medical assessment and local injuries units.

Many of the core items required for the WHO Global Code minimum data set are available in both data sets, crucially including the MCI registration number, which is the unique number needed to link the two data sets. The differences are important: the employment-based NDTP data identify doctors who are working – though currently only those in the public sector – and not those who work for locum agencies or who are in supernumerary posts. The NDTP databases contain much more detail on training stage and location of employment. Whereas the passport and nationality data are only 50% complete in the NDTP data set but are virtually 100% complete in the MCI data set, the latter has the drawback of including an unknown number of doctors who are not working in Ireland, as well as those who may be working outside the public sector.

The data linkage process aims to link data collected by MCI and HSE-NDTP, including (a) annual retention application forms data collected by MCI; and (b) the HSE-NDTP database, including the new National Employment Record module. The additional potential of the new National Employment Record, on top of the existing data that are collected annually by MCI and HSE-NDTP, is that it should be possible not only to describe the medical workforce cross-sectionally but also to *track* Ireland's medical workforce, as doctors move from hospital to hospital; and in the case of IMGs, those who continue in non-training service posts. The Brain Drain to Brain Gain project in Ireland aims to generate a profile of the types of posts where foreign-trained doctors are working and perhaps insights into migration flows. Following several delays, both regulatory and technical, data linkage was achieved in early December 2016; an initial analysis is tabulated in Tables 11 and 12.

The main finding in comparing Table 11 (based on country of BMQ) and Table 12 (based on country of passport) is that of those in the General Division (which includes those in service posts) who graduated from another European medical school (19.4% – 394), less than half (9.2% – 187) were passport holders from another European country. Drilling down into BMQ and passport holders for particular countries throws

TABLE 11. REGISTRATION BY DIVISION ON REGISTER AND BY COUNTRY/REGION OF BASIC MEDICAL QUALIFICATION

Country/ region where qualified	Division on register				Total
	General	Specialist	Supervised	Trainee Specialist	
Ireland	520 (25.6%)	41 (29.3%)	0 (0.0%)	1,753 (79.4%)	2,314 (52%)
EU	394 (19.4%)	75 (53.6%)	0 (0.0%)	284 (12.9%)	753 (17%)
Other	1,118 (55.0%)	24 (17.1%)	71 (100.0%)	172 (7.8%)	1,385 (31%)
Total	**2,032**	**140**	**71**	**2,209**	**4,452**

Note: this initial linkage has captured circa 80% of NCHD posts in the HSE public sector for which data on BMQ (country of BMQ) and passport were available.
Source: HSE-MCI.

TABLE 12. REGISTRATION BY DIVISION ON REGISTER AND BY COUNTRY/REGION OF PASSPORT

Country/ region of passport	Division on register				Total
	General	Specialist	Supervised	Trainee Specialist	
Ireland	435 (21.5%)	43 (30.9%)	0 (0.0%)	1,699 (76.9%)	2,177 (49%)
EU	187 (9.2%)	69 (49.6%)	1 (1.4%)	145 (6.6%)	402 (9%)
Other	1,402 (69.3%)	27 (19.4%)	70 (98.6%)	365 (16.5%)	1,864 (42%)
Total	**2,024**	**139**	**71**	**2,209**	**4,443**

Source: HSE-MCI.

light on some of the trends that emerged earlier in Table 3. While there were 290 doctors in posts who qualified from a medical school in Romania, only 128 of these were Romanian passport holders. In addition, of 91 who qualified from Hungary, only 14 were Hungarian passport holders; and of 63 who qualified from Poland, 27 were Polish passport holders. Further analysis will reveal the make-up, including country of origin of these graduates of central European countries, some of whom may be Irish passport holders and nationals.

In the case of Ireland, the numbers who qualified from Irish medical schools (2,314) exceeds the number of Irish passport holders (2,177). This is a historical legacy whereby Irish medical schools have a long tradition of graduating non-Irish (especially non-EU) nationals, some of whom have stayed in Ireland to undertake their postgraduate specialist training. This number appears to still exceed the number of Irish nationals (passport holders) who have graduated in non-Irish medical schools, including in the United Kingdom and elsewhere in Europe.

The findings for individual countries provide insight into the breakdown in the proportions of graduates and passport holders from different countries who are occupying Trainee Specialist Division posts and General Division (mainly service) posts. For graduates of Irish and United Kingdom medical schools, the breakdown is roughly 80:20 (80% in the Trainee Specialist Division and 20% in the General Division). For graduates of most other EU medical schools, the ratios are closer to 50:50; whereas 75% (216) of graduates of Romanian medical schools are in the General Division, which is not far short of the proportions for Pakistan (79% – 492), India (83% – 87) and Sudan (87% – 246). Additional analysis, which is now possible, will further elucidate the hierarchy and patterns of medical school graduates and nationals of a range of European and non-European countries, most from the low- and middle-income countries of South-East Asia and Africa, who contribute to keeping Irish hospitals staffed.

3.5 International Medical Graduate Training Initiative

The International Medical Graduate Training Initiative (IMGTI) enables suitably qualified overseas postgraduate medical trainees to undertake a fixed period of active training in clinical services in Ireland. The purpose of the initiative is to enable overseas trainees to gain access to clinical experiences and training that they cannot get in their own country, with a view to enhancing and improving the individual's medical training and learning and, in the medium to long term, the health services in their own countries. Trainees must return to their source country after two years of postgraduate training in Ireland to be awarded a qualification. The initiative was launched in 2013 and is governed by HSE and the postgraduate training bodies in Ireland through the Forum of Irish Postgraduate Medical Training Bodies. Costs associated with the programme are covered by HSE. In 2013, 28 trainees from the College of Physicians and Surgeons in Pakistan (CPSP) were involved in the programme. This had increased to 81 in 2014. Seventy-three new trainees joined the programme in 2015 and 43 trainees joined in 2016. The IMGTI also operates with other countries – 33 fully sponsored trainees joined the programme in 2016 from Kuwait, Saudi Arabia, Oman and the United Arab Emirates. The IMGTI evaluation study is being undertaken by the RCSI Health Workforce Research Group as part of the Brain Drain to Brain Gain project. It aims to evaluate the IMGTI from the perspectives of Pakistan trainees – studying at CPSP – who have been involved in the programme (2013 and 2014 cohorts), and also key stakeholders in Ireland and Pakistan who were involved in its development and implementation. In-depth interviews – conducted by staff funded by the Brain Drain to Brain Gain project – of visiting trainees are exploring how well the bespoke training meets their needs, and the likelihood that the programme will contribute to retaining them in Pakistan. It is hoped that the lessons learned can be used to strengthen the initiative and to provide lessons to other destination countries of IMGs who are interested in developing a similar training initiative. To date, 28 in-depth interviews (18 trainees and 10 key stakeholder interviews) have been undertaken between late 2015 and

mid 2016. Preliminary results are included in sections 3.5.1 to 3.5.3 below, and a presentation of interim findings was made by the RCSI team to the IMGTI Steering Committee on 13 September 2016.

3.5.1 Motivation and general experience of Irish training

Trainee motivations to undertake the programme in Ireland include international exposure to a more advanced health system, advancing clinical skills, and taking advantage of research opportunities. Trainees considered that experience abroad would increase career prospects in Pakistan following completion of the programme. In Pakistan, there is no rotation system and not all specialities exist as they would internationally.

Trainees' experience of Irish training was generally positive. Most trainees reported that they were treated as equal to Irish trainees, were supported well professionally, and had positive experiences with supervisors, staff and the wider community, with a huge diversity in cultures now present in the Irish health system. For some interviewees, the volume and complexity of cases was not what was hoped for, and many stated that they did not experience much hands-on procedural work.

While there was an expectation that trainees would rotate to a tertiary hospital, many remained in peripheral hospitals throughout their two years. Experiences were site and speciality dependent. Trainees had a short lead-in time, reporting that they started work in the designated hospital within a few days of arriving in Ireland, despite not having much knowledge of the health care system in the country. Trainees and stakeholders reported that there was an expectation that they should hit the ground running. Some stakeholders thought that there should be a two-week orientation period during which the trainees have no on-call responsibilities. Logistics – such as visas and work permits – were generally only finalized a short time before arrival. Trainees had expected that they would move from senior house officer to registrar, which did not always happen. Some trainees and stakeholders described how some consultants were not aware of the programme and some reported that they were treated as non-trainee NCHDs. This was reported to have improved over time.

3.5.2 Equality of opportunity for trainees?

Many stakeholders believed that even if it were not possible to have all doctors working in an IMGTI-type initiative, the principle should apply across the board, namely that all doctors should be treated equally and given appropriate opportunities. One of the challenges mentioned was engaging trainers who were willing to dedicate sufficient time to trainees, whether Irish or Pakistani trainees. Some stakeholders stated that the needs of Irish and Pakistani trainees were different, and more dedicated programme support was needed for the Pakistani trainees.

While most Pakistani trainees felt that they were treated equally to Irish trainees, some interviewees considered that their training needs were given less priority than those of Irish trainees, and in a small number of cases they perceived that the Irish trainees were given preference over Pakistani trainees. It was also sometimes reported that IMGTI trainees were placed in smaller peripheral hospitals because there were staff shortages in those hospitals.

The two years of Irish training is recognized by CPSP, but not in Ireland. This means that if the programme participants wish to return to Ireland in the future, they do not have access to HST. The extent to which this was considered ethical differed amongst stakeholders. Many IMGs who arrive to Ireland, not under the IMGTI, enter and remain in service posts even though this was not their intention. While they are permitted to apply for national training programmes, it is a struggle for most, due to the fact that have to compete with Irish graduates.

3.5.3 Future plans

Many interviewees stated that they planned to return to Ireland or another European country in the short term (one to two years) following completion of their exams in Pakistan, to gain further experience, with the longer-term intentions of returning to Pakistan. Trainees sign a number of agreements at the beginning of the programme, as follows:

- Each trainee signs a training agreement with their respective Irish training body. This agreement is similar to the one that is signed by trainees on the domestic

programme. The agreement specifies that the trainee must fully participate in all aspects of the programme, i.e. undertake all courses and assessments, follow the curriculum, comply with rotations, act professionally, and accept clinical responsibility. It also states that they must return to Pakistan in two years.

- Trainees also sign a brief declaration with the CPSP stating that they will return to Pakistan after the two years on programme – this is signed by a commissioner for oaths.
- Each trainee signs the NCHD 2010 contract – this is an employment contract that all NCHDs in Ireland sign, setting out their employment entitlements.
- A tripartite agreement signed by HSE, CPSP and each Irish training body outlines each stakeholder's responsibility.

While the trainees have no legal obligation to return to Pakistan, they would forfeit their training and qualification in Pakistan if they did not return on completion of the programme in Ireland. Stakeholders stated that HSE has spent much time actively engaging with hospital sites throughout the country, communicating that it is critical that posts are not offered to trainees at the end of the two years in Ireland. The documentation and contracts have been strengthened since the inception of the programme to emphasize that the trainees must return after completion of the IMGTI programme.

3.5.4 Conclusion

Overall, both trainees and stakeholders were positive about the programme. While there is room for improvement, the initiative is in its infancy, and it is considered to be a good model and structure for IMGs coming to Ireland. Contracts should be strengthened to emphasize return to Pakistan. More follow-up information on what they do when they return would be beneficial. Further stakeholder interviews are planned for late 2016/early 2017. The presentation of interim findings to the IMGTI Steering Committee in September 2016 will feed into the strategic review of the IMGTI, which is currently under way.

4. Discussion and policy recommendations

4.1 Better health workforce data

Data continue to be sparse in relation to measuring the flow of health workers into and out of the health workforce in Ireland, although new opportunities are emerging through data linkage; and through a new exit survey that has been established by MCI, once doctors withdraw from the medical register. 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.

The WHO Global Code recommends improved data collection, and although Ireland has made progress in relation to this – for example through the MCI medical workforce intelligence reports since 2012, HSE-NDTP data gathering since 2011, and now through the proposed data linkage process (see section 3.4) that the Brain Drain to Brain Gain project is contributing to – 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 *(2)*. While national stakeholders prioritize the use of the data for national workforce planning, the Brain Drain to Brain Gain project ensures that WHO Global Code monitoring and compliance is also at the centre.

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 workforce data that are disaggregated by speciality, nationality, country of training, age and sex. The data linkage exercise, which is being progressed by RCSI, HSE-NDTP and MCI, will help to achieve this for medical doctors. This process will need to be resourced into the future to ensure that the data remain live, and are not merely gathered as a one-off exercise. Similar opportunities need to be created to establish data collection systems for workforce planning of other health professionals.

4.2 Interaction between health workforce researchers and policy-makers

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. In addition, compliance with the EWTD, following a decision by the European Commission, means that larger numbers of doctors need to be recruited to provide the same service, which to an extent is reversing the policy aim of providing consultant-delivered and led specialist services.

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. The Global Code continues to be as relevant to Ireland in 2016 as in 2010. However, the need to be compliant with the EWTD, the increasing demands for health care (in the context of new technology possibilities and an ageing population), the lag time of 10–16 years to produce specialists, and the comparative lack of attractiveness of medical training and careers in Ireland compared to other Anglophone countries (notably Australia, Canada, New Zealand, the United Kingdom and the United States) combine to undermine the ability of Ireland to achieve medical workforce sustainability and to comply with the WHO Global Code.

New research findings were presented at a series of four annual policy dialogues between 2013 and 2016, hosted by the RCSI Health Workforce Research Group, which were attended by the relevant national stakeholders, including the Department of Health. The Department has been 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. Regular attenders also included MCI, HSE-NDTP and the major national training bodies.

The national *Strategic review of medical training and career structure* in 2013/2014 *(2)*, 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.

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 fo-rums, which have contributed to a growing collabora-tion 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 context for the development and implementation of measures to ensure medical career structures are in place to retain Irish-trained doctors.

Other initiatives relating to training IMGs in Ireland and establishing partnerships with overseas academic institutions have been put in place 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 have 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 four policy dialogues (2013–2016) between the researchers and national decision-makers, using the Chatham House Rule, hosted by the RCSI National Health Workforce Research Group.
- 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, on which the Brain Drain to Brain Gain project coordinator in Ireland is an active member.
- Funding from the Brain Drain to Brain Gain project 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.

4.3 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 *(15–18)*.

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 supervision systems. In November 2016, the Implementation and Monitoring Group responsible for overseeing implementation of the strategic review recommendations undertook to write to Ireland's Minister for Health requesting that the drafting of a contract for doctors in service posts be prioritized. Most of the recommendations of the strategic review, inasmuch as they are implemented, ought to increase the retention of Irish-trained doctors and reduce reliance on 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-EU-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 and, more importantly, will maximize the workforce potential of every doctor in Ireland, regardless of their country of training.

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