



NATIONAL
DOCTORS
TRAINING
& PLANNING

Annual Medical Retention Report 2023



HSE
National Doctors
Training & Planning



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Foreword

Irish medical training is internationally recognised for producing high quality doctors. To support the Irish health service into the future, we need to retain these doctors. While there have been concerns about the retention of Irish trained doctors for many years, there has been a paucity of data to accurately describe the complex flows of doctors moving in and out of Ireland as they progress through the various stages of training and on to Consultant posts. I am very pleased to say that the recent investment and maturation of the Doctors Integrated Management E-System (DIME) database of Consultants and Non-Consultant Hospital Doctors (NCHDs) now allows us to quantify these flows.



The recent expansion of our medical workforce planning team in NDTP will allow for this report to be published on an annual basis to document the evolution of retention rates over time. The report highlights the importance of data driven decision-making. Understanding the nature and likely drivers of doctor migrations at different stages of their careers is critical to implementing policies to improve retention rates. The medical workforce planning team in NDTP is currently undertaking a qualitative study on the personal and professional factors influencing retention of qualified specialist doctors in Ireland, which will further enrich the findings in this report. The strong culture of migration among Irish people in their 20's is evident among doctors who complete their Intern training. While half of Interns leave the Irish health system after completing Internship, the overwhelming majority go on to further medical training in Ireland a number of years later.

There have been substantial improvements in the retention of qualified specialists since we last reported retention data. Of the 2019 cohort who completed Higher Specialist Training (HST) and awarded a Certificate of Satisfactory Completion of Specialist Training (CSCST), 78% are currently working in Ireland in either a public or private posts. This has happened at a time when there have been large increases in the number of available posts. In collaboration with the Medical Council, it was discovered that of the 2016-2021 General Practice (GP) CSCST graduates, 87% were working as a General Practitioner (GP) in Ireland during the 12 months prior to IMC registration in 2022. The report also demonstrates the differences in retention between Irish and other nationality training scheme doctors. There are likely to be a number of overlapping drivers of substantially lower retention rates among both EU/UK and non-EU nationality training scheme doctors compared to Irish doctors.

In addition to documenting the most recent data on doctor retention rates, the report outlines a range of potential mechanisms that may be used to improve retention. Some of these, such as proleptic appointments, may yield results in the short term. Others, such as increasing the number of CAO medical places will take many years to bear fruit.

The much-needed expansion in the number of Consultants in recent years has been focused on the large Model 4 hospitals. There are significant unmet demands across a range of specialties in the regional Model 3 hospitals. These roles are currently viewed as less attractive to many prospective candidates. Further improvement in the retention of qualified specialists is needed, however improving retention while focusing growth in a range of specialties on the Model 3 hospitals will provide an additional challenge.

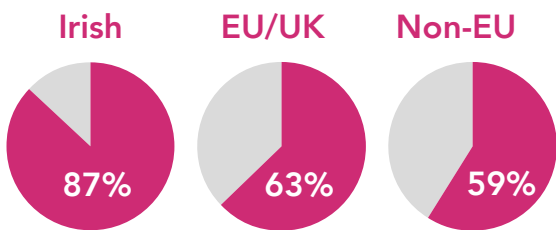


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Annual Retention Report in Numbers

Post-Internship



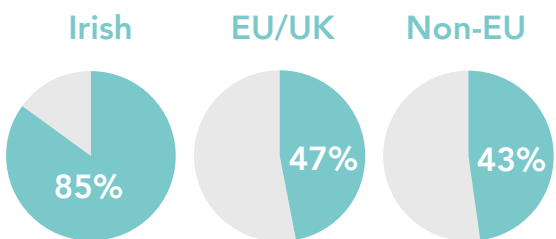
proportion of interns among the 2015-2018 cohort that commenced further training or is working in a NTSD post in Ireland by 2023

50% of interns are not working in the Irish public system in the year after internship

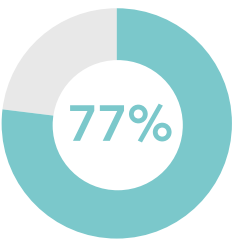


of 2015-2018 interns went on to further training or in Ireland by 2023

Post-BST

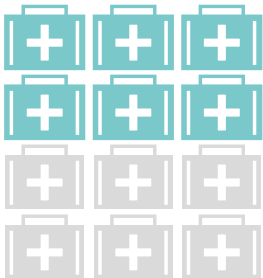


proportion of doctors that completed BST between 2017-2022 that go on to further training in Ireland by 2023

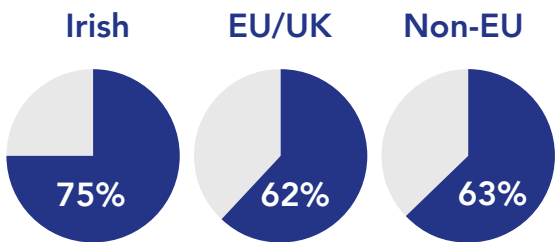


of BST completions between 2017-2020 go on to further training in Ireland by 2023

56% of BST completions go directly onto further training in Ireland

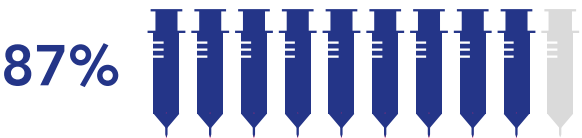


Post-CSCST



proportion of doctors among the 2018-2020 CSCST graduates working within the Irish public and private health service by 2023

Of the 2016-2021 GP CSCST graduates



were working as a GP in Ireland among the 12 months prior to IMC registration in 2022



of 2019 CSCSTs, were retained in Ireland in public and private posts by 2023

Executive Summary

Many Interns leave the Irish public health system after Internship. For the 2015 to 2022 Intern cohorts, on average 50% left the Irish health system in the year after their Internship. However, the vast majority subsequently return to take up a training post. For the 2015-2018 Intern cohorts, 82% had started Basic Specialist Training (BST) or GP training prior to 2023. The retention rates of Irish Interns is substantially higher than EU/UK or non-EU Interns. For the 2015 to 2018 Intern cohorts, on average 87% of Irish doctors returned to the Irish public health system by 2023 compared to 63% of EU/UK doctors and 59% of non-EU doctors.

Historically, there have been substantial competitive pressures between Basic and Higher Specialist Training programmes. In addition, prioritisation rules for applicants for Higher Specialist Training (HST) included residency status. These two factors are likely to be key drivers of the pattern of retention between these stages of training. From the 2017 to 2020 cohorts of doctors who completed BST in Ireland, on average 77% of these doctors go onto further training by 2023. Of this cohort, 85% of Irish doctors went on to further training in Ireland, in comparison to 47% of EU/UK doctors and only 43% of non-EU doctors going on to further training in this country.

The International Medical Graduate Training Initiative (IMGTI) programme, while still small has been expanding steadily. The report documents that 32% of doctors that completed the IMGTI programme between 2015 and 2020, returned to their home country before going on to work in the Irish public health system for a period of time.

Most fully qualified specialists leave the Irish health system after completing HST and being awarded a Certificate of Satisfactory Completion of Specialist Training (CSCST); they then return over subsequent years. Of the 2016 and 2017 cohorts of CSCSTs, on average 68% were working in the Irish health system (public & private) in 2023. There has been a substantial improvement in the retention rates of the 2018 and 2019 cohorts with 75% and 78% respectively working in public or private posts in Ireland in 2023. Two potential explanations for this trend include the large increase in Consultant posts available over the last few years and the effects of Covid-19. Of the doctors who remained abroad, most are working in the UK and North America. There are also substantial differences across the nationality groups with retention of 2018-2020 Irish nationality CSCSTs at 75% while EU/UK and non-EU retention rates are 62% and 63% respectively.

In collaboration with the Irish Medical Council (IMC), this report documents the proportion of GP trainees working in general practice in Ireland. From the 2015-2022 cohorts of GPs, almost all had retained active registration with the Irish Medical Council in 2022. While some trainees go on to other medical roles, on average 87% of GPs from the above cohorts, reported working in a GP practice.



Introduction

International research suggests that, at an aggregate level, Ireland has a relatively high emigration rate in comparison to other countries [1]. Previous research carried out by NDTP documented the complex flows of doctors, out of and back into the Irish health system between 2015 and 2021 [2]. That study highlighted the importance of separately examining the flows of doctors at various stages of training. While there are large outflows of doctors after Internship from the Irish Health System, the vast majority return to pursue further training in Ireland. Many of these junior doctors, in common with other young Irish people, are likely to go to Australia [3].

Of greater concern is the rate at which qualified specialists leave and return to the Irish Health System. Upon completion of HST, a CSCST is awarded. The previous analysis showed that for the 2016-2017 cohorts of qualified specialists, 68% went on to take up a Consultant post in Ireland in subsequent years [2]. Recently qualified specialists who are abroad are most commonly working in the UK, Canada and the USA.

Career progression is a major driver of migration of qualified specialists [3, 4]. Most specialties, with the exception of GP, encourage trainees to migrate to achieve career progression (ibid). In addition to this, the number of post-CSCST fellowships available in Ireland is relatively small. For example, in 2022, in total there were 68 filled post-CSCST fellowships compared to the 452 CSCST graduates in the same year [7].

Working conditions have been highlighted as a key disincentive to returning to work Ireland [3, 4]. The intention to go abroad is also associated with a negative experience of mentoring which suggests that the quality of training and the way in which it is provided are important determinants of doctor's intention to remain in the Irish health system [5].

The relationship between nationality and retention is of critical importance for workforce planning. Ireland has the highest number of medical graduates per population among OECD countries, however approximately 50% of medical students are international, mainly fee paying, students [6]. Historically, due to the lack of access to Internships most of the non-EU graduates tend to leave Ireland after medical school [9]. However, increases in the number of Intern places since 2020 have resulted in a larger number of Intern places being available for non-EU graduates [11]. Previous studies have shown that the intention to go abroad is strongly associated with nationality – non-EU doctors that have trained or worked in Ireland are most likely to have an intention to leave and not return [5].

Prioritisation rules, based on visa status, applied in the recruitment process for entry postgraduate training programmes, and changes to the Medical Practitioners Act are likely to have impacted the number of non-EU doctors remaining in Ireland. These rules can make it more difficult to succeed where there is competition for higher specialist training places.

Three significant changes that may have affected the retention of non-EU doctors:

1. Previously doctors with General Employment Permits did not hold the same rights as doctors on the Critical Skills Employment permit, and needed to complete five years residence and work before they would be eligible for Stamp 4. Changes to Stamp 4 regulations in 2022 now mean access to Stamp 4 and spousal work rights for doctors with General Employment Permits who have been working in Ireland for more than two years [4].
2. Changes to the application of EU/EEA Community Preference for the allocation to postgraduate training programmes was agreed in autumn 2021. This change has meant that following competitive interview, appointable candidates who hold a Stamp 4, along with EEA candidates, will be allocated to training positions in the first instance following competitive interview.
3. Changes to the Medical Practitioners Act, implemented in 2020, removed the barrier of the requirement for a recognised Internship to apply for postgraduate training programmes. Following this amendment, a number of doctors are now eligible to apply to postgraduate training programmes where previously they were not.

It can be expected that these changes may affect the retention patterns for non-EU doctors in the future, particularly for those completing basic specialist training. This report uses the DIME database of NCHD and Consultant doctors to analyse the retention of doctors in the Irish public health system. This data allows us to document when doctors leave the Irish public health system and if or when they return in subsequent years. In addition, a web search was conducted to establish the current place/country of work for doctors currently not working in the Irish public health system. By doing this we can identify those qualified specialists who trained in Ireland and are currently working in the private sector in Ireland or abroad. Additional analysis was carried out by the Irish Medical Council, in collaboration with NDTP, to identify the retention rate of GP trainees.

Methods

Figure 1 outlines the typical career pathways of doctors in Ireland. The duration of training for doctors is long; following a year of Intern training, depending on the specialty, doctors complete two to three years of Basic Specialist Training (BST) and two to six years of Higher Specialist Training (HST) after which they are awarded a Certificate of Satisfactory Completion of Specialist Training (CSCST). Alternatively, following the Intern year doctors can enter the Anaesthesiology or GP streamlined training programmes. Following CSCST, doctors with the exception of GPs, frequently do one to two years of fellowship training, which is generally abroad.

Figure 1. Typical career pathways of doctors in Ireland



However, there have been recent increases in the number of post-CSCST fellowships in Ireland, which is expected to reduce the number of doctors going abroad after CSCST. In addition, doctors may work in non-training scheme posts in Ireland between training stages, or take leave years.

Due to the long training time spans, and given that the data is only available from 2015, a staged approach is used to show the retention rates between the training stages. For NCHDs, retention rates are shown between the Intern year and BST training, BST and HST, and finally between CSCST and Consultant posts.

Data on Consultants and NCHDs is sourced from the Doctors Integrated Management E-System (DIME), a comprehensive medical workforce database maintained by National Doctors Training & Planning (NDTP), a unit of the HSE. DIME is a quadripartite system, which encompasses NDTP, the Irish Medical Council, the postgraduate medical training bodies and clinical sites. DIME records registration, training and employment details of all NCHDs in Ireland who are employed in the public service. DIME includes doctor's medical council numbers, which can be used as a unique identifier over time; when doctors leave and return after several years the same medical council number is maintained.

The data relating to Consultants and NCHDs was accessed via the DIME database for October 2015 to October 2023 (the DIME database was established in 2015). Comparisons are made between subsequent training years. The BST and HST completions in July are compared with data in October of the same year and October of the following year. Trainees are allocated to year cohorts to show the time lags between programme completion and further employment in the Irish health system. The DIME records include information on trainees who were in the middle of a training programme when the data collection process started in 2015; thus, the analysis includes cohorts of HSTs with start dates from 2013. GP trainees are identified separately due to the different duration of training. Public Health and Occupational Health doctors are excluded from this study as Consultants/specialists in these areas in publicly funded services are not fully recorded on DIME. Anaesthesiology trainees are excluded from the BST section, as this is a streamlined training programme as well as GP trainees.

The International Medical Graduate Training Initiative (IMGTI) provides one possible route for overseas doctors wishing to undergo structured postgraduate medical training within the public health service in Ireland. The purpose of the IMGT Initiative is to enable overseas trainees to gain access to clinical experiences and training that they cannot acquire in their own country. The two main countries that participate in the programme are Sudan and Pakistan. Twenty-four months clinical training is provided under the IMGTI programme, after which doctors are required to return to their country of origin for their training to be certified. An analysis of this cohort of doctors, that commenced the scholarship programme, among the years 2015 and 2020 was undertaken to establish the proportion of doctors that returned to their country of origin and those that remained or returned to work in the Irish health system in later years.

The Irish Medical Council in collaboration with NDTP carried out an analysis of GP retention. This analysis was based on identifying the proportion of GP cohorts awarded CSCST from 2016-2021 recorded on the Medical Council's Annual Retention Application Form (ARAF) survey for 2022. When registering or renewing registration with the Irish Medical Council, doctors are asked to complete the ARAF survey. Within this survey, doctors are asked did they work in Ireland or somewhere else as well as Ireland in the last 12 months. Therefore, this data corresponds to a period of time rather than a point in time. For the purposes of this report, the ARAF 2022 data was used which reviewed registration numbers for GPs in 2022 and whether they were working in Ireland for the 12 months before that.

The main analysis in this study uses DIME data from 2015 to 2023. However, a targeted web search was carried out of CSCSTs who graduated between 2016 and 2019, and who were no longer recorded in the DIME system. The 2016 to 2019 CSCST cohorts were specifically analysed in this report, as the doctors who received CSCST between 2020 and 2022 were more difficult to find using this method. The aim of this search was to establish the country of current practice, in particular if they are working in Ireland in the private sector. The main sources of information included LinkedIn, hospital websites, NHS websites, Canadian medical registrations and affiliations on recent academic publications. While this method is not definitive, it gives a clear indication of the current location of practice of these doctors.

The report documents retention rates by nationality groups. This was included, as it has been shown in the previous literature to be potentially important [2, 8]. Two potential mechanisms, which will result in differences in retention rates by self-reported nationality, are attachment to place and visa based access to training schemes. Attachment to place is likely to be a significant driver for people who have extensive family connections to Ireland. Residency status is also likely to play a role – particularly in driving historic retention rates between basic and higher specialist training stages due to competitive pressures and prioritisation rules. To show the potential impact of these effects nationality is categorised between Irish, EU/UK and non-EU. Nationality is based on doctors' self-declared nationality on the National Employment Record (NER).

On DIME, there is a large amount of missing data for nationality in the 2017 cohort. Only 2018-2020 data is used in the analysis of retention by nationality for CSCST doctors. For the 2022 cohorts, too few doctors have returned to give a clear indication as to differences in retention rates between the groups.



Results

Intern Retention

Intern Retention in Subsequent Years

Table 1 shows the number of Interns in each year and the proportion that are still in the Irish public health system in the subsequent three years after Internship. In the year directly following the Intern year, on average 29% of trainees are on a BST programme, 21% are in non-training roles and 50% have no record. The latter figure indicates that on average half of Interns do not practice in the Irish public health system in the year following Internship.

In the second year after Internship, the proportion of Interns in BST programmes increases from 29% to 45% on average. By year three, the proportion of Interns having started a BST programme is 64% on average. In the second year after Internship the number of doctors in non-training scheme posts reduces from 21% to 8% and the proportion who are not working in the Irish public health system falls from 50% to 47%.

The table below indicates that many Interns are leaving the Irish health system after Internship. There is some indication that the proportion of Interns that go abroad has increased over time. In 2015, 47% of Interns have no record of working in Ireland in the year following their Internship compared to 2022, where 63% have no record of working in Ireland in the first year after Internship. However, by year three after Internship on average two-thirds have commenced training in Ireland.

Table 1. Number of Interns in the Irish public health system in subsequent years

		Y+1						Y+2						Y+3	
Year	Interns	Further Training in Y+1		Non Training Y+1		No Record Y+1		Further Training in Y+2		Non Training Y+2		No Record Y+2		Further Training in Y+1, Y+2 or Y+3	
2015	668	258	39%	95	14%	315	47%	386	58%	36	5%	246	37%	482	72%
2016	695	238	34%	112	16%	345	50%	359	52%	39	6%	297	43%	490	71%
2017	724	230	32%	134	19%	360	50%	334	46%	42	6%	348	48%	481	66%
2018	728	213	29%	132	18%	383	53%	357	49%	60	8%	311	43%	474	65%
2019	730	232	32%	252	35%	246	34%	315	43%	64	9%	351	48%	453	62%
2020	965	259	27%	248	26%	458	47%	363	38%	79	8%	523	54%	473	49%
2021	832	194	23%	138	17%	500	60%	238	29%	96	12%	498	60%	n/a	n/a
2022	805	99	12%	200	25%	506	63%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Average		29%		21%		50%		45%		8%		47%		64%	

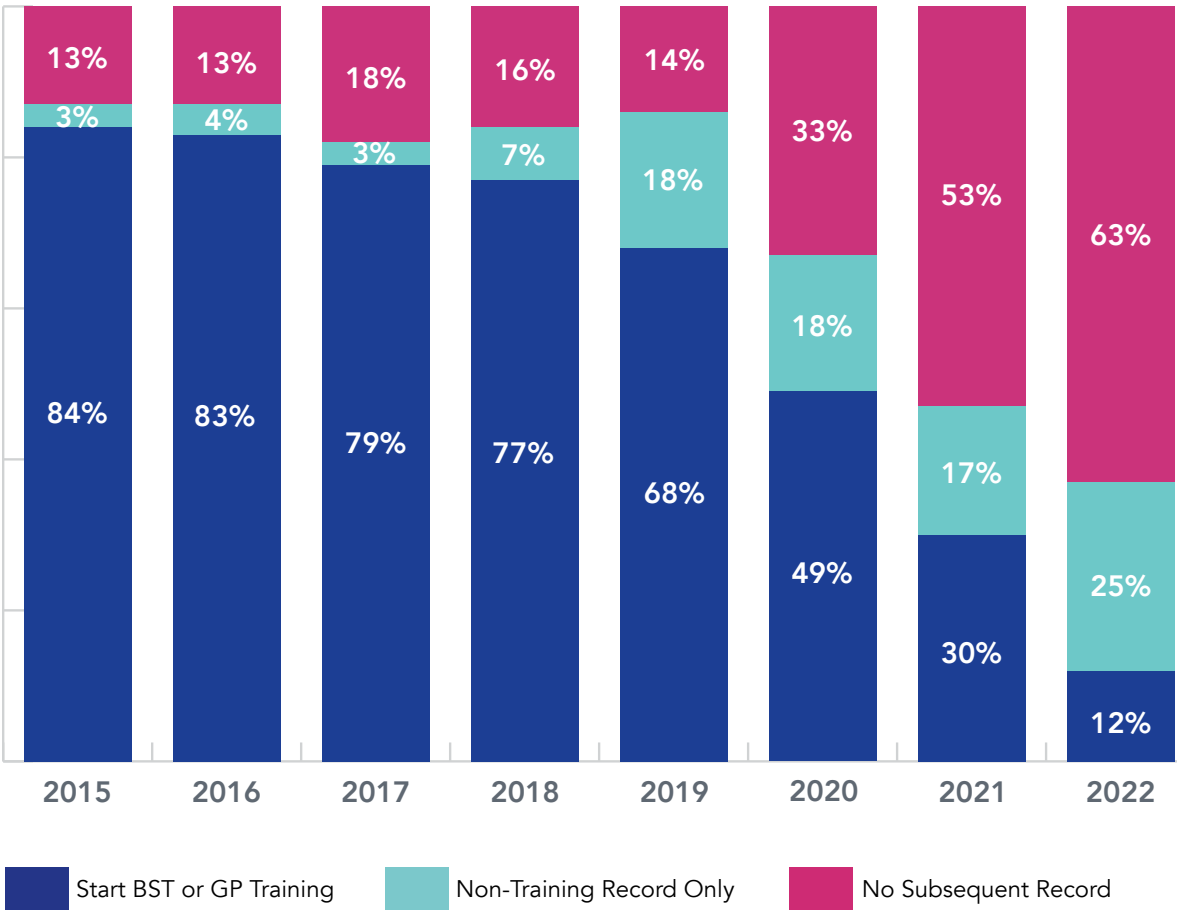
* The above table looks at retention rates up to and including three years after completing the Internship. This is due to the fact that many BSTs last 2 years. The total number of filled Intern posts is recorded on the Medical Workforce Report and Table 3 of this report. The figures above represent the number of Interns on DIME in October of each year. The difference between the two is likely to be due to the late commencements, periods of leave, early withdrawals from the scheme or Interns not being recorded on DIME at this point in time.

Intern Retention by 2023

Figure 2 shows the progression of Interns by 2023, in each cohort year. The graph shows that for the 2015 to 2018 Intern cohorts, between 84% and 77% started BST training or GP training prior to 2023. As is to be expected, this proportion is higher in earlier cohorts. This is due to Interns temporarily leaving the public health system for one or more years before returning to commence further training.

There are a proportion of Interns that go on to non-training posts and do not progress to further training, comprising of 7% of the 2018 cohorts. These doctors typically work in non-training roles for a year or two before leaving the Irish public health system. In addition, there are 13% of Interns who left the Irish health system after Internship and did not return during each of these years. Together Table 1 and Figure 2 show that while many Interns leave the Irish public health system after Internship the vast majority subsequently return.

Figure 2. Training progression and non-training years of Intern cohorts 2015-2022 by 2023



Intern Retention by Nationality

Table 2 displays the retention rate by nationality for Interns that are both in training and non-training posts by 2023. On average for the 2015-2018 cohorts, 87% of Irish Interns had returned to take up a training post, compared to 63% of EU/UK and 59% of non-EU doctors. Historically, there have been a small number of non-Irish Interns; thus, the retention rate of the Irish cohort mainly determined the overall retention rate. However, since 2019 there has been a substantial increase in non-EU Interns. The difference between the proportions of Interns in training posts versus in non-training posts is quite similar for the later years. However, for the more recent years there is a greater proportion of Interns in non-training posts than training posts.

Table 2. Intern Cohorts: Retention by nationality by year including doctors in non-training posts

	Number of Interns					Started Further Training or NTSD Post by 2023			
Year	Total	Irish	EU	Non EU	Missing Status	Total	Irish	EU/UK	Non EU
2015	668	621	27	18	2	87%	90%	74%	39%
2016	695	634	31	26	4	87%	90%	58%	62%
2017	724	664	22	37	1	82%	84%	59%	65%
2018	728	663	39	25	1	84%	85%	62%	80%
2019	730	586	39	104	1	86%	89%	69%	74%
2020	965	644	39	282	0	67%	68%	46%	68%
2021	832	645	50	135	2	47%	45%	56%	57%
2022	805	635	31	139	0	37%	34%	32%	52%

Intern Cohorts and BST Intake

Table 3 shows the total number of Interns, including a small number each year that are not recorded on the DIME system. The table also shows the number of actual and approved BST places in the subsequent year. While there is typically a lag between the Intern year and BST for many Interns, the table demonstrates that on aggregate, in most years, there were limited or no competitive pressures in accessing further training in Ireland. While there are limited competitive pressures on aggregate, there may be substantial competition for training places in some programmes.

Table 3. Intern cohorts and BST intake in subsequent years

Year	Filled Intern Posts	Approved BST Intake Y+1	Actual BST Intake Y+1
2015	727	731 [2016]	715 [2016]
2016	727	735 [2017]	704 [2017]
2017	733	756 [2018]	734 [2018]
2018	734	761 [2019]	737 [2019]
2019	734	866 [2020]	851 [2020]
2020	995	848 [2021]	838 [2021]
2021	854	882 [2022]	888 [2022]
2022	824	918 [2023]	911 [2023]
2023	873	n/a	n/a

Basic Specialist Training

BST Retention in Subsequent Years

Table 4 shows the extent to which trainees who complete BST go on to further training (either HST or GP training) in the two training years following completion of a BST programme. Streamlined training programmes in Anaesthesiology and General Practice are analysed separately.

In the training year following completion of Basic Specialist Training, on average 56% of trainees go directly into a HST or GP training programme. A further 20% are in non-training posts and there is no record of 23% of trainees. The latter suggests they may have left the country, are working in the private sector, in research, or are not working in a clinical role. In the second training year after completing BST, the proportion in further training rises to 65% with the number in non-training roles falling to 11%. A small number of BST completions (on average 1%) go on to start a different BST programme and are not included in the figures below.

Table 4. BST completions in subsequent training years

	2	Y+1						Y+2					
Year	Complete BST	Further Training		Non Training		No Record		Further Training		Non Training		No Record	
2017	383	206	54%	93	24%	83	22%	238	62%	45	12%	99	26%
2018	442	237	54%	90	20%	111	25%	288	65%	56	13%	94	21%
2019	430	254	59%	84	20%	90	21%	299	70%	44	10%	84	20%
2020	449	253	56%	94	21%	97	22%	284	63%	48	11%	111	25%
2021	466	269	58%	82	18%	103	22%	296	64%	49	11%	114	24%
2022	542	305	56%	105	19%	130	24%	n/a	n/a	n/a	n/a	n/a	n/a
Average		56%		20%		23%		65%		11%		23%	

BST Retention by 2023

Table 5 shows the extent to which trainees who complete BST training go on to further training, in either general practice or HST by 2023. Of the 2017-2020 cohorts, between 78% (2017) and 74% (2020) of trainees had progressed to further training by 2023. Data on the completion of BSTs is not fully recorded for 2015 and 2016 and thus is not shown.

Table 5. BST completions that start HST or GP training by 2023

Year	Complete BST*	Further Training by 2023	
2017	383	297	78%
2018	442	340	77%
2019	430	333	77%
2020	449	331	74%
2021	466	318	68%
2022	542	294	54%

There are fewer HST places each year than doctors who complete their BST training. This can result in competitive pressures, which may negatively affect retention rates at this stage. However, the extent to which there are competitive pressures varies across the medical disciplines.

The variation across the medical disciplines in the number and proportion of doctors who having completed BST and proceed to further training by 2023 is outlined in Table 6. These proportions range from 54% (Ophthalmology) to 87% (Paediatrics).

Table 6. Progression of trainees who complete BST by medical discipline 2017-2020

Medical Discipline	Completed BST within 2017-2020	Further Training by 2023	
Emergency Medicine	100	78	78%
Medicine	857	626	73%
Obstetrics & Gynaecology	90	73	81%
Ophthalmology	28	15	54%
Paediatrics	162	141	87%
Pathology	100	78	78%
Psychiatry	139	120	86%
Surgery	228	194	85%
Total	1704	1325	77%

Progression of Basic Specialist Trainees by Medical Discipline

Some BST programmes supply trainees into several HST programmes as well as GP training. Table 7 shows the disciplines where this can happen. There are however, restrictions in the type of HST a trainee can undertake. For example, a BST in Medicine does not qualify the doctor to progress to HST in Obstetrics & Gynaecology, Psychiatry, Ophthalmology and Surgery; they would have to go back to do BST.

After completing a BST in Emergency Medicine, 62% of the trainees who go on to further training, undertake HST in Emergency Medicine. The majority of the remainder go on to do a HST in General Practice or Medicine. The discipline of Medicine supplies trainees for a number of HST training programmes. Of the 626 trainees that go on to further training after completing a BST in Medicine, 51% progressed to a HST in Medicine. Other major pathways for BSTs in Medicine are General Practice, Radiology and Pathology. For Obstetrics & Gynaecology, 77% of BST graduates in this discipline that progressed to further training undertake their HST in Obstetrics & Gynaecology. The remainder progress mainly to General Practice. Table 7 shows that of the 194 trainees that go on to further training after completing a BST in Surgery, 78% continued training in the Surgery discipline. The remainder generally go on to do Radiology or General Practice.

Table 7. Progression of BST Emergency Medicine, GIM, Obstetrics & Gynaecology and Surgery 2017-2020 Cohorts by 2023

Medical Discipline	Further Training after a BST in Emergency Medicine		Further Training after a BST in Medicine		Further Training after a BST in Obstetrics & Gynaecology		Further Training after a BST in Surgery	
Anaesthesiology	0	0%	6	1%	0	0%	2	1%
Emergency Medicine	48	62%	0	0%	0	0%	0	0%
General Practice	11	14%	172	27%	14	19%	9	5%
Medicine	14	18%	319	51%	0	0%	3	2%
Obstetrics & Gynaecology	0	0%	0	0%	56	77%	0	0%
Occupational Medicine	0	0%	4	1%	0	0%	0	0%
Ophthalmology	0	0%	0	0%	0	0%	2	1%
Paediatrics	0	0%	0	0%	0	0%	1	1%
Pathology	3	4%	47	8%	1	1%	0	0%
Psychiatry	0	0%	0	0%	0	0%	0	0%
Public Health Medicine	0	0%	10	2%	2	3%	1	1%
Radiology	2	3%	64	10%	0	0%	24	12%
Surgery	0	0%	4	1%	0	0%	153	78%
Total	78	100%	626	100%	73	100%	195	100%

BST Retention by Nationality

Table 8 examines the progression of BST cohorts, by nationality, by 2023. For the 2017-2020 cohorts, on average 85% of Irish BSTs go on to HST or GP training in Ireland. For the EU/UK and non-EU BST completers, 47% and 43% respectively go on to HST or GP training in Ireland. The interpretation of these results is not straightforward. Prior to 2022, access to HST places in Ireland was prioritised based on nationality. In addition, there were fewer HST intake places than BST completions. This resulted in non-EU trainees being at a disadvantage in applying for HST places. EU/UK nationals, who did not face any competitive disadvantage compared to Irish candidates, also had lower retention rates.

Table 8. Progression of 2017-2022 BST cohorts to HST by 2023 by nationality

Year	Number of Complete BST (Excl. GPs & Anaesthesiology)					Start HST or GP Training by 2023 in Ireland			
	Total	Irish	EU/UK	Non EU	Missing Status	Total	Irish	EU/UK	Non EU
2017	383	305	15	59	4	78%	86%	47%	44%
2018	442	358	20	62	2	77%	87%	50%	32%
2019	430	366	28	35	1	77%	83%	39%	54%
2020	449	336	23	89	1	74%	84%	52%	42%
2021	466	392	29	45	0	68%	75%	48%	20%
2022	542	432	29	81	0	54%	59%	41%	33%

Historically there have been substantial competitive pressures between BST and HST. Table 9 shows the number of BST completions (excluding Anaesthesiology and GP trainees), the number of approved HST places and the number of actual HST intakes in the subsequent year. The table shows that the total number of potential candidates exceeds the number of approved HST places each year. It is important to note that not all those that completed BST would be eligible to apply for all the places available in HST. For example, those that received a BST in Psychiatry would not be able to apply for a Surgery HST. Therefore, there may be significant variation in the level of competition for HST places between the medical disciplines.

Table 9. BST 2017-2022 cohorts by Nationality and HST intake places in Subsequent Year

Year	Number of Complete BST*					Approved HST Places* Y+1	Actual HST Intake* Y+1
	Total	Irish	EU/UK	Non EU	Missing Status		
2017	383	305	15	59	4	304 [2018]	287 [2018]
2018	442	358	20	62	2	319 [2019]	306 [2019]
2019	430	366	28	35	1	338 [2020]	319 [2020]
2020	449	336	23	89	1	394 [2021]	346 [2021]
2021	466	392	29	45	0	416 [2022]	363 [2022]
2022	542	432	29	81	0	n/a	n/a

*Anaesthesiology and GP Trainees were excluded from these figures

International Medical Graduate Training Initiative (IMGTI)

IMGTI Retention by 2023

Table 10 shows the number of doctors that commenced on the IMGTI programme (scholarship only) between 2015 and 2020. The scholarship IMGTI programme is aimed primarily at doctors from countries with less developed health sectors and is not intended to lead to settlement in Ireland. Generally, these trainees will work in hospitals nationally usually at Senior House Officer (SHO) level during their first year of training and at Registrar level during their second year of training. Currently Pakistan and Sudan are the two countries participating in this programme.

The table shows the proportion of these that returned to Ireland after completing the two-year IMGTI programme. On average between 2015 and 2020, 68% of IMGTI did not return to work in the Irish health service following graduation from the IMGTI programme and return to their home country.

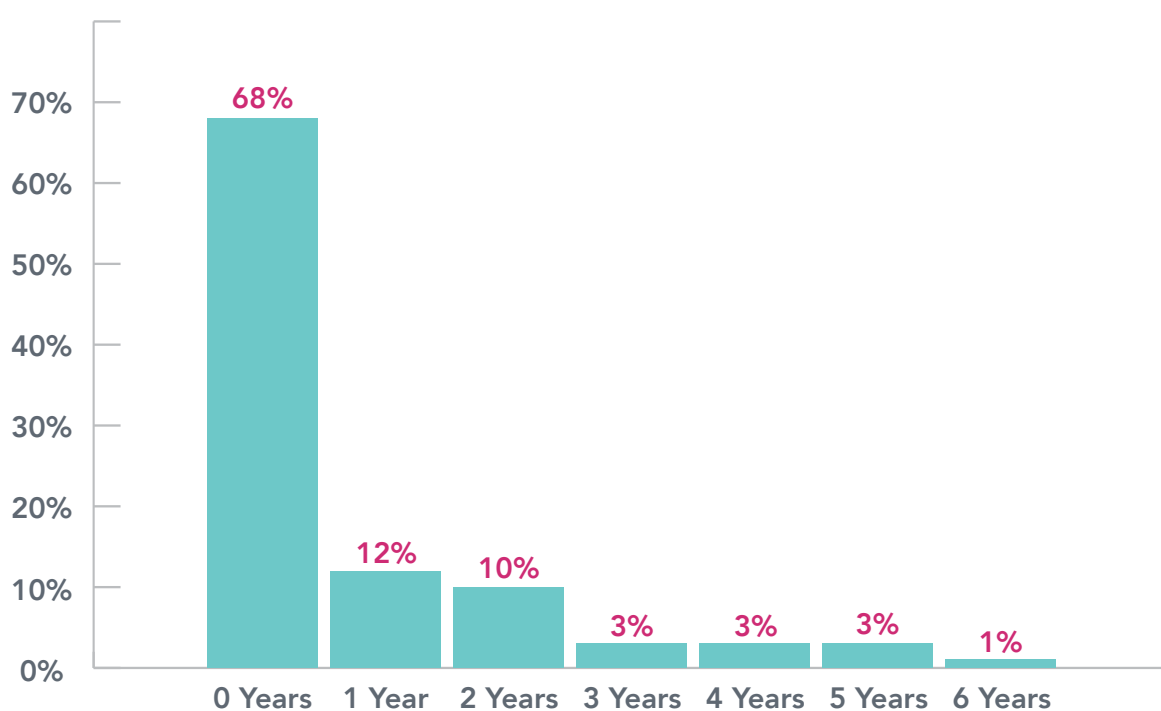
Table 10: IMGTI doctors after completion of the IMGTI programme

Start Year	Total	Currently working in the Irish Health Service in 2023	Returned to work in the Irish Health Service in later years but not currently working in the Irish Health Service in 2023	Returned to work in the Irish Health Service in later years
2015	73	14%	7%	79%
2016	42	17%	19%	64%
2017	59	17%	8%	75%
2018	48	23%	10%	67%
2019	57	37%	12%	51%
2020	58	33%	2%	66%

IMGTI Retention in Subsequent Years

Figure 3 shows how many years IMGTI doctors are spending in Ireland after completing the IMGTI programme. The majority of graduates (68%) leave the Irish Health service after completing the IMGTI programme and never return to work in Ireland again. However, after having returned to their own countries, approximately 22% subsequently return to Ireland to spend a further one or two years working in the Irish health service again.

Figure 3: Percentage of IMGTI doctors spending time in the Irish Health Service after completing the IMGTI programme



Qualified Specialists

CSCSTs Working in Ireland (Public and Private) and those that are abroad

Table 11 shows the number of CSCSTs by year of award (excluding GPs, Public Health and Occupational Health specialists) and their status in 2023. Overall 60% of the 2016 CSCST cohort are employed in a public Consultant post in 2023. The proportion of each cohort in a Consultant post by 2023 declines for the more recent cohorts as is to be expected. This is due to many recently qualified specialist undertaking fellowships abroad; for the 2022 cohort 37% are in a Consultant post. A small number of recently qualified specialists are recorded as working as NCHDs in the public health system.

This table also shows the total proportion that are working in Ireland, in both the public and private sectors. The years 2016 to 2019 were selected, as it is more difficult to establish the location of the more recent cohorts.

Of the 213 CSCSTs in the 2016 cohort, 143 are employed in either a public or private Consultant post in Ireland. Of this cohort, 128 are employed in a Consultant post in the Irish public health system in 2023. A web search indicated that 15 were likely to be practicing in Ireland in the private sector and 70 were abroad or their location was unknown. This pattern is repeated for the 2017, 2018 and 2019 cohorts. The proportion identified as working in Ireland, public and private, has increased in latter cohorts, from 67% in 2016 to 78% in 2019.

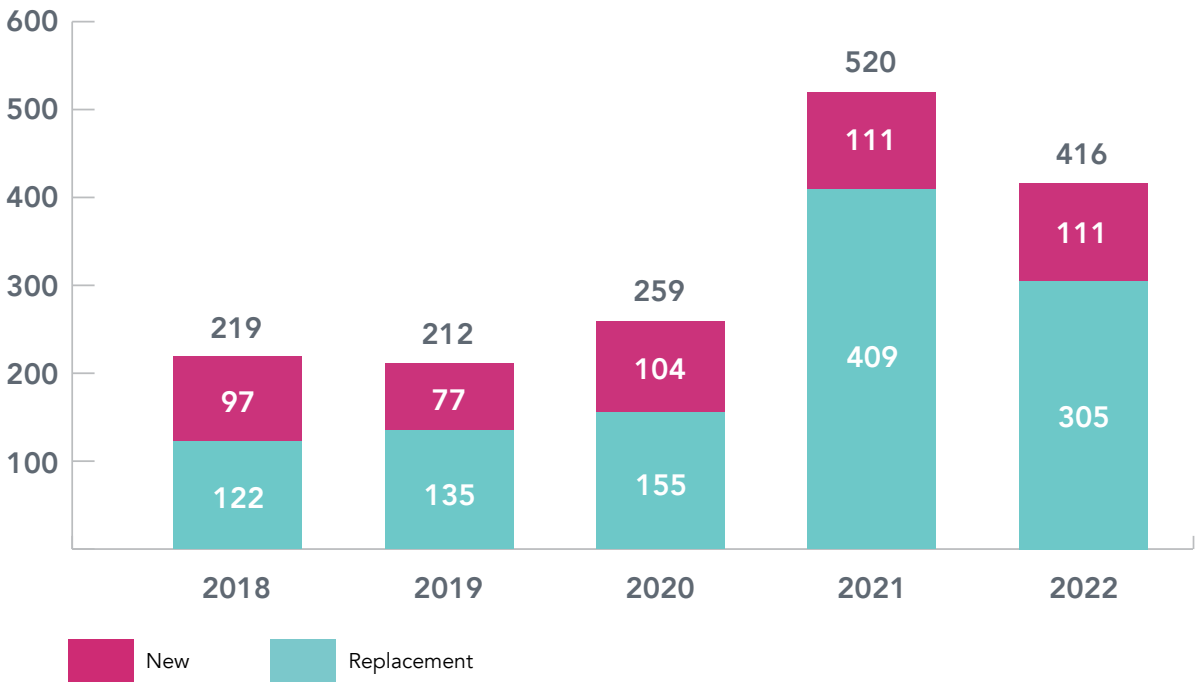
Table 11. Number of CSCST completions by year and status as of 2023*

Year	CSCST	Public Consultant Post in 2023		NCHD in 2023		Ireland (Public & Private) in 2023		Abroad/Unknown in 2023	
2016	213	128	60%	0	0%	143	67%	70	33%
2017	202	122	60%	1	0%	139	69%	63	31%
2018	209	130	62%	1	0%	156	75%	53	25%
2019	188	137	73%	3	2%	147	78%	41	22%
2020	170	91	54%	2	1%	n/a	n/a	n/a	n/a
2021	254	131	52%	4	2%	n/a	n/a	n/a	n/a
2022	259	95	37%	16	6%	n/a	n/a	n/a	n/a

*Excludes GPs, Public Health and Occupational Health

Figure 4 shows the dramatic increase in the number of new and replacement Consultant posts approved by the Consultants Applications Advisory Committee (CAAC) in the last 5 years. The dramatic increase in the number of available posts may have affected the increased retention rate in 2018/2019.

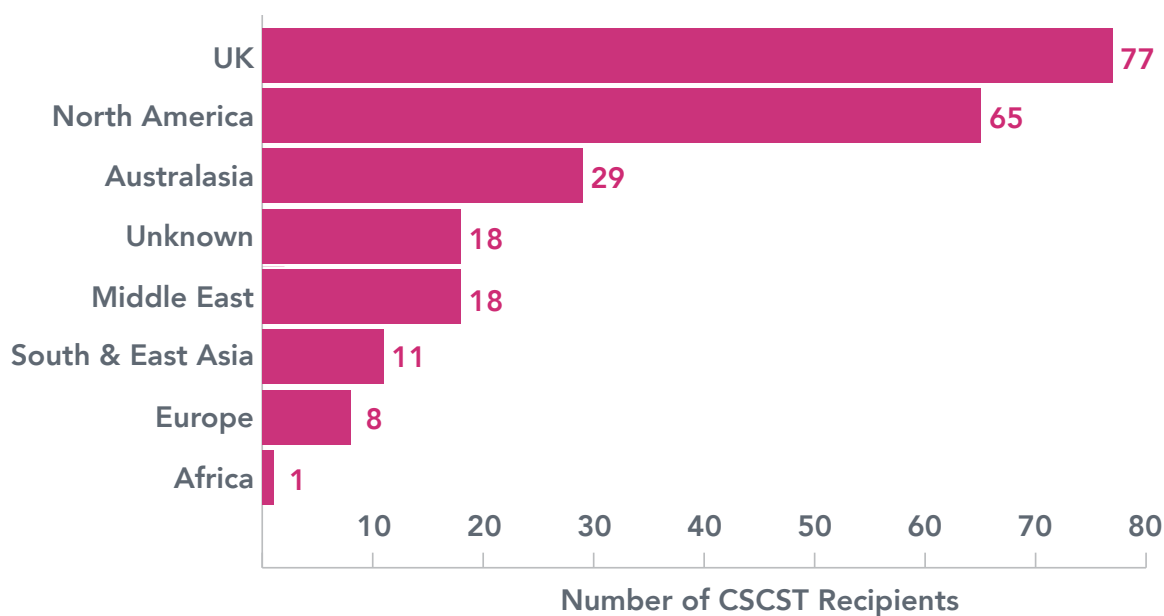
Figure 4: Number of CAAC approved new and replacement posts 2018-2022



CSCSTs Working Abroad

Figure 5 shows the probable current country of practice of the 2016-2019 CSCST cohorts that are not working in Ireland. The figure shows that the UK is the most frequent country of current practice for this group, followed by the USA and Canada.

Figure 5. Current country of practice of 2016-2019 cohort not working in Ireland



CSCST Retention by Medical Discipline

Table 12 shows the retention rates by medical discipline for the 2016-2019 cohorts. The table shows a variation in the retention rates across the disciplines. While there is a degree of variation across the four years, disciplines such as Radiology, Medicine and Anaesthesiology have lower retention rates compared to Psychiatry and Obstetrics & Gynaecology.

Table 12. Number of CSCSTs (2016-2019 cohorts) in Consultant posts by medical discipline

Medical Discipline	CSCST 2016-2019	Consultant Post (Public or Private) 2023	
Anaesthesiology	155	102	66%
Emergency Medicine	29	22	76%
Medicine	224	146	65%
Obstetrics & Gynaecology	29	25	86%
Paediatrics	53	39	74%
Pathology	56	45	80%
Psychiatry	81	72	89%
Radiology	76	48	63%
Surgery	109	86	79%
Total	812	585	72%

CSCST Retention by Nationality

Table 13 outlines the retention rates by nationality for the 2018-2020 cohort. Retention rates of Irish cohorts are on average 12-13% higher than the EU/UK and non-EU cohorts. There are substantial amounts of missing data as shown; this is mainly in the 2018 data. The 2020 cohort retention rate will increase in future years. Three years of data are aggregated in this analysis to avoid small numbers in the EU and non-EU Cohorts.

Table 13. CSCST retention of 2018-2020 cohorts by nationality and medical discipline by 2023

						Retention by 2023				
	Total	Irish	EU/UK	Non EU	Missing Status	Total	Irish	EU/UK	Non EU	Missing Status
Total	567	477	21	30	43	73%	75%	62%	63%	58%

GP CSCSTs

Table 14 shows the number of GP trainees that were awarded CSCST by year and the proportion of those that retained Irish Medical Council registration in 2022. While GP retention data is not recorded centrally, the Medical Council hold information based on self-reported activity recorded in the Annual Retention Registration Form (ARAF). This information was used along with the CSCST graduates in GP practice to estimate retention rates in this sector. The table shows that almost all GP trainees from recent training cohorts retained registration with the Medical Council in 2022. However, an active Medical Council registration does not necessarily mean the doctor is currently working in Ireland. From the ARAF submission, 87% of GP CSCSTs reported working as a GP in Ireland, or Ireland and other country, in the 12 months prior to their 2022 registration.

Table 14. Number of GP CSCST completions by year

Year	GP CSCST Awarded	Retained Registration with IMC in 2022	Working as a GP in Ireland, or Ireland and another country, in the 12 months before 2022 registration
2016	122	96%	86%
2017	143	94%	86%
2018	128	92%	86%
2019	136	97%	87%
2020	141	96%	85%
2021	160	98%	93%

Limitations

The number of Consultants in private hospitals is not centrally recorded. The web search method used in this study to identify Consultants working in the private sector is not definitive and highlights the need for better data sources for the private sector. The quality of data held on DIME has improved over time with increasing site compliance and data validation exercises; however, missing records are likely in the earlier years of the database. This is particularly relevant for the data related to CSCST nationality prior to 2019.

The report does not analyse the flows of non-training scheme doctors. This large group of doctors do not have access to specialty training programmes and are typically on very short-term contracts.

The level of competition experienced by applicants for higher specialist training is a function of their citizenship status due to prioritisation rules; an analysis of competition ratios, the ratio of BST completions to Higher Specialist Training places by medical discipline and specialty, is beyond the scope of this study.

Policies to Improve Retention

There are a wide-range of approaches, outlined in table 15, which can be used to improve the retention of Irish trained doctors.

Table 15. Approaches to Improving Retention (including current policies)

Approach	Discussion
Medical school places for Irish graduates of Irish schools	Ireland has the highest number of medical graduates per population among OECD countries. However, half of the students come from other countries with implications for the nationality of the supply of post graduate trainees [6]. The data presented in the report indicates that increasing the CAO intake of medical students will increase the retention rate at various stages of training. Work on increasing the CAO intake of medical students has already begun with the department committing to an additional 200 medical course places being made available through the CAO over the next 5 years.
New Consultant posts and planning future posts	Increasing the number and attractiveness of new Consultant posts is one approach to increasing the retention of CSCST doctors. The number of new Consultant posts approved increased from 155 in 2020 to 305 in 2022. This may result in an increase in retention rates of CSCSTs in the coming years, as more posts are available. However, if the number of new posts reverts to the previous trend this will reduce retention rates. Due to the long-time scales from submitting a business plan, to Consultant Applications Advisory Committee (CAAC) approval, to Consultant appointment, the process for the creation of post needs to commence long in advance so that posts are available when CSCSTs qualify. Both increasing the number of Consultant posts and creating them in advance of the training system producing suitable candidates, will increase the number of vacant Consultant positions in the short term.

Approach	Discussion
New Consultant posts and planning future posts (contd.)	Increasing the number of Consultants will also move the health system closer to being a Consultant delivered service, in line with current Government policy [7]. A Consultant delivered service in the Irish context is one whereby the Consultant is available on the ward to support in clinical decision-making and patient management, thereby ensuring increased efficiency in diagnostics, treatment and discharge vis-à-vis a service that is highly dependent on Non-Consultant Hospital Doctors for service delivery. A Consultant delivered service has the potential to improve the working environment of doctors across hospitals in Ireland, thereby improving retention.
Proleptic appointments	Proleptic appointments are a mechanism for providing qualified specialists with a clear pathway to a Consultant post in Ireland. Under this approach, qualified specialists are given provisional Consultant appointments in public hospitals to take effect, post fellowship, either in Ireland or abroad. Proleptic appointments are geared towards highly specialist roles. No formal national proleptic appointments process currently exists, therefore providing this may give our specialists an additional incentive to return within a shorter timeframe.
Policies to support recruitment and retention in smaller and medium sized hospitals or underdeveloped services	<p>A key challenge for the health service is to make Consultant and training positions in smaller and medium sized hospitals more attractive to potential applicants. Some smaller and medium sized hospitals are highly dependent on doctors not on training schemes and have higher vacancy rates, indicating recruitment difficulties [8]. Further reviewing the structure of approved Consultant posts, such as the way in which posts are split between larger (hub) and smaller (spoke) sites may help to make working in smaller hospitals more attractive [9].</p> <p>There are a range of policies that can be employed to improve recruitment and retention [10]. The available evidence shows that improved recruitment is associated with undergraduate and postgraduate placement in these areas [11].</p> <p>For services that are substantially underdeveloped, one approach is to appoint a number of Consultants to substantially expand a particular service. This approach is likely to be more attractive to new appointments [7]. The Model 3 Hospitals Report, recently launched by NDTP, conveys the challenges faced by Model 3 hospitals regards service delivery and recommendations that can be implemented in these hospitals to improve retention of doctors working here.</p>
Policies to support generalist training	Generalism is seen as a strength of the Irish medical care and medical education system [12]. The most common model of care in most specialties is for doctors to practice the full breadth of their specialty, with sub-specialties being areas of particular competence within the broader scope of practice. Policies aimed at supporting generalist training and practice may be best suited to matching supply with population health needs in Ireland [12]. Better matching of supply and demand for skills is likely to lead to improved retention.

Approach	Discussion
Hiring policies and Post-CSCST fellowships	The culture of migration of training doctors has a long history in Ireland with many doctors being encouraged to migrate to improve their career prospects [4]. While recognising the benefits of overseas experience to the system, retention may be improved by further developing post-CSCST fellowships as a way to facilitate specialists in remaining in Ireland while progressing their career. Fellowships can also offer training to specialists in a narrow field where there are skill shortages, and provides candidates additional experience required to apply for specialist Consultant posts. Historically in Ireland, there were few post-CSCST fellowships, in 2021 there was a substantial increase to 44 fellowships. However, there may be substantial room to further increase this figure, given that there are c.200 CSCSTs per year in Ireland (excluding GPs public health and occupational health) [8]. These post CSCST fellowships need to be aligned with future Consultant opportunities.
Clinical education & training pilot	Clinical Education & Training Pilots, which provide increased structure in onsite training, are currently being trialled in three sites in Ireland. These programmes are expected to improve retention by improving the training experience of doctors [5].
Seamless training opportunities	Increase the number of HST places to align BST and HST places allowing for more seamless training opportunities thus reducing the necessity of gap years between BST and HST and the competitiveness of the HST application process. While there may be a benefit from having an element of competition by having a higher level of BST completions than HST intake, this needs to be balanced against the risk of losing doctors that do not achieve HST on the first application.
Flexible working policies	There are currently a small number of flexible training posts for trainees relative to the potential demand [13]. Increasing the availability and scope of flexible training may substantially improve the work-life balance of training doctors [14]. In addition, trainee retention may be influenced by flexible working policies at post-CSCST and Consultant level as trainees consider their future work-life balance.
Promoting Consultant opportunities	There are currently no formal structures to maintain contact with CSCSTs who leave Ireland. Targeted recruitment strategies may be beneficial in attracting CSCSTs to apply for jobs in Ireland.

Discussion

Within this report, retention rates are analysed between the Intern year and Basic Specialist Training (BST), BST and Higher Specialist Training (HST), and finally between qualifying as a specialist (CSCST) and starting a Consultant post in Ireland. The report assesses retention rates of various cohorts of doctors up to October of 2023. The results reported here are in line with those reported previously by NDTP based on 2021 data [2]. Additional material has been included in the report including analysis of GP Retention, the IMGTI programme and retention rates by self-reported nationality.

The report documents the outflow of Interns in the year following Internship followed by the return of the vast majority of these Interns in subsequent years. Although the historic trends from the earlier cohorts, suggest that a large majority of Interns return to work in the Irish health service, we need to continuously monitor these trends to ensure they do not change. In addition, while all BST places are currently being filled, further analysis is required to identify the extent to which they are filled with doctors that have gone through the Irish Intern programme.

Following completion of BST training on average 77% of doctors go on to further training in Ireland by 2023; this can be either to HST or GP training. The data shows that many doctors have out of programme years between BST to HST programmes; only 56% of doctors go directly from BST to HST. There are a number of reasons for gap years including competition for HST training programmes, research years or going abroad. A streamlined training programme has been recently proposed for Medicine to remove out of programme years and minimise the duration of training [15].

Through the International Medical Graduate Training Initiative (IMGTI), overseas doctors can undergo structured postgraduate medical training within the public health service in Ireland for a period of two years after which the overseas doctors are expected to return to their country of origin for certification of training. The majority of doctors on the IMGTI programme do not subsequently work the Irish public health system. However, after a period out of the country, 22% of programme participants did return to work for 1-2 years in Ireland before leaving the country again.

The long tradition of migration following qualifying as a specialist in Ireland is reflected in the data [4]. In the year following CSCST 33% of doctors are working in the Irish health system. However, by 2023 on average 75% of 2016-2019 CSCSTs are working in Consultant posts. While some level of variation is to be expected between years, the retention of the 2018 & 2019 cohorts is substantially higher than the 2016 & 2017 cohorts. This may be a result of the large increase in the number of Consultant posts in 2021 and 2022 [18] as well as Covid-19 having some influence on migration patterns and thus retention rates. Another factor, which may be important to note, is the increase in the number of Anaesthesia CSCSTs in 2016, which doubled in comparison to previous years. This cohort mainly comprised of non-EU doctors who are more likely to leave and return to their own country, thus affecting the 2016 retention rate. It is also useful to note that the proportion of CSCSTs in the 2016 & 2017 cohorts working

in Ireland has not increased since we previously reported on these groups based on 2021 data [2]. Both of these findings point towards the importance of the timing of available Consultant posts – there is likely to be a narrow time window following CSCST to attract people back to Ireland to take up a Consultant post before they become settled abroad. For those CSCST recipients that are working abroad, the most popular countries are the UK, USA and Canada.

The proportion of GPs who trained in Ireland that are on the Medical Council register is very high, at 96%. While a percentage of these may not be clinically active or out of the country, it suggests a different pattern of migration to other specialties. The report also shows that 87% of GP trainees were working in GP practice with an additional small percentage going into other clinical roles.

The report documents substantial differences across nationality groups in retention rates. Between each career stage, trainees who self-report as Irish, have a higher retention rate than either the EU/UK trainees or the non-EU trainees. Between Internship and BST/GP training, the difference is on average 27-31% respectively; between BST and HST the difference is 38-42%; following CSCST the difference is 12-13%. The difference in retention between the Irish cohorts and the EU/UK cohorts indicates that attachment to place is an important driver of retention; the EU/UK group did not face any difference from the Irish cohort in access to training programmes. Access to further training and career progression have been highlighted as key drivers of remaining in Ireland [19]. This is particularly the case between BST and HST training stages. Historic prioritisation rules based on visa status have made career progression difficult for many non-EU doctors. Recent changes to Stamp 4 and EEA Community Preference may positively impact retention rates between BST and HST training stages.



Glossary

A

Annual Retention Application Form (ARAF):

All doctors complete this application form during the renewal of their medical council registration on an annual basis.

B

Basic Specialist Training (BST):

A hospital based training programme that prepares trainees for Higher Specialist Training, which is the final stage of training.

C

Central Applications Office (CAO):

Processes applications for undergraduate courses in Irish Higher Education Institutions.

Certificate of Satisfactory Completion of Specialist Training (CSCST):

Awarded on completion of Higher Specialist Training (HST), which is the final step towards becoming a specialist.

D

Doctors Integrated Management E-System (DIME):

Is a quadripartite system, which encompasses National Doctors Training & Planning (NDTP), the Irish Medical Council (IMC), the Postgraduate Medical Training Bodies and Clinical Sites. DIME records registration, training and employment details of all NCHDs in Ireland who are employed in the public service and registration and employment details of Consultants working in the public service in Ireland.

G

General Practice (GP):

Is a specialty undertaken by those doctors, which seek to work as a general practitioner in Ireland.

H

Higher Specialist Training (HST):

The final step in training before becoming a specialist and usually consists of four to six years in a training programme.

I

Irish Medical Council (IMC):

Regulates medical doctors in the Republic of Ireland. All doctors must register with the Irish Medical Council before commencing employment in Ireland. The main purpose of the Medical Council is to protect the public by promoting and ensuring high standards of professional conduct and professional education, training and competence among doctors.

International Medical Graduate Training Initiative (IMGTI):

The purpose of this 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. The period of clinical training under the IMG Training initiative is usually 24 months, after which the overseas doctors are expected to return to their country of origin.

N

Non-Consultant Hospital Doctor (NCHD):

Sometimes referred to as a junior doctor, is a term used in Ireland to describe qualified medical practitioners who work under the supervision of a Consultant.

National Doctors Training & Planning (NDTP):

Provides key information and analysis of the medical workforce, enabling the health sector to prepare for the appropriate levels of trained doctors in the future. In response to these plans, we work with the Postgraduate Medical Training Bodies to facilitate the development and promotion of training programmes, providing a skilled workforce that meets current and future needs of the health service.

National Employment Record (NER):

A system, developed by NDTP, that is specifically designed to minimise repetitive paperwork requirements for NCHDs and eliminate as much duplication as possible when rotating employers within the Irish health system.

O

Organisation for Economic Co-operation and Development (OECD):

Is an international, intergovernmental organisation with 38 member countries that works to establish evidence-based international standards and finding solutions to a range of social, economic and environmental challenges.

S

Senior House Officer (SHO):

Is a type of Non-Consultant Hospital Doctor (NCHD). SHOs are supervised in their work by Consultants and registers.

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