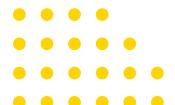
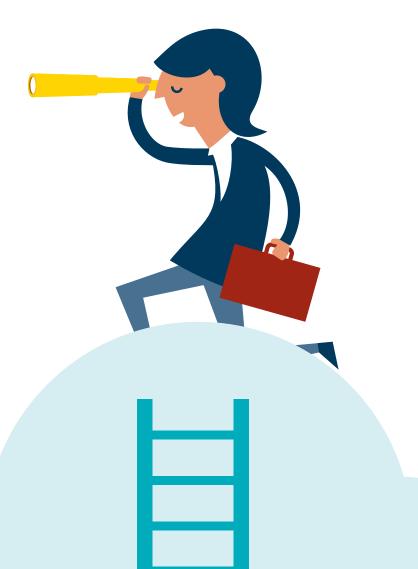


Employment Patterns of Canada's Newly Certified Medical Specialists:

Findings from the Royal College Employment Study

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Executive summary

Follow-up to a breakthrough study

In 2013, the Royal College of Physicians and Surgeons of Canada released a report entitled What's really behind Canada's unemployed specialists? Too many, too few doctors? The report summarized findings from a breakthrough study that exposed the extent of employment challenges among newly certified medical specialists as well as the key influencers behind those challenges.

The Royal College began studying this highly complex problem in 2011, seeking to determine if unemployment and underemployment are the simple and inevitable byproducts of an oversupply of physicians or if other more complex factors are at play. Since that time, study data has been collected by way of an online survey sent to successful candidates of the specialty and subspecialty Royal College certification exams; a Follow-Up Survey is also sent to those who reported that they did not have a clinical post at the time of their certification.

The 2013 report identified important factors that impact physician employment and revealed that newly certified specialists were experiencing employment challenges, most notably those in resource-intensive disciplines.

This report summarizes findings from the 2011 to 2018 surveys¹. It examines

- employment patterns of 7,178 specialists newly certified by the Royal College;
- physician employment trends by province;
- how long it took new specialists to secure a post; and
- what new specialists reported as the key enablers and barriers to finding employment.

Studying specialist employment since 2011

Since 2011, the Royal College has been examining the employment patterns of newly certified specialists and subspecialists and the factors underlying their unemployment through two separate online surveys:

- the Employment Survey, which is sent to all specialists newly certified by the Royal College within four to 12 weeks of their certification; and
- the Follow-Up Survey that is sent to the all of the respondents who reported in the first survey that they did not have a clinical post upon certification.

The Follow-Up Survey was added in 2014, as an expansion of the Royal College Employment Study.



Note: the report delves into the employment challenges experienced by specialist physicians and does not investigate any employment issue that may affect family physicians.

¹ This updated report includes revised 2017 and new 2018 data collected for the Employment Study longitudinal surveys. Changes to the 2017 revised data are outlined in greater detail in the appendix to this report.

What our investigation revealed

Since 2011, between 11 and 18% of new specialists who responded to the Employment Survey reported that they did not have work as a specialist at the time of their certification. Although there has been a declining percentage of respondents reporting employment challenges in the 2017 (12%) and 2018 (11%) Employment Surveys, these proportions still represent a concerning number of new specialists who are facing employment challenges. We will closely monitor future survey data to determine if these positive results are a developing trend and underlying causes.

New specialists who stated that they did not have a job at the time of certification reported that they were either continuing to search for a job or were planning to pursue additional training, including advanced clinical education (e.g. fellowships and subspecialization).

Greater employment challenges persist for specialists in surgery and other resourceintensive disciplines

Consistent with findings in the 2013 report, survey data continues to show that employment challenges are most pronounced in surgical and more resource-intensive specialties.

- Specialists in Neurosurgery and Radiation Oncology reported difficulty finding employment in all eight years of data collection.
- Specialists in Orthopedic Surgery reported difficulty finding employment in seven of the eight years of data collection.

Many newly certified medical specialists are pursuing additional training because they believe this will make them more employable in the long-run

Year over year, between 42% and 51% of survey respondents stated that they planned to continue training post certification. Although these physicians were not actively planning to enter the medical workforce at the time of the survey, a high proportion of these respondents noted that their decision was strongly influenced by their perception of the job market. Additional questions posed to this cohort revealed that 54% were pursuing additional training because they believe this will make them more employable in the long-run.

Physician employment patterns vary across provinces

Looking at the eight-year average of data collected between 2011 and 2018, only 8% of surveyed specialists who completed their residency training in Saskatchewan reported that they had not yet secured a clinical post; this percentage of those still seeking employment doubles among survey respondents who completed their training in other provinces, notably Ontario and Alberta (16% each). Employment challenges were also reported, albeit to a lesser degree, by new specialists who completed their training in Newfoundland and Labrador (9%), Quebec and Manitoba (11% each), Nova Scotia and British Columbia (15% each).

Provincial variability is not limited to those who reported employment challenges; it is also the case for those who reported their plans to continue training:

- 55% of survey respondents who trained in Manitoba and Newfoundland and Labrador said they intended to continue training post-certification, in contrast to
- 43% (each) of survey respondents who trained in Alberta, British Columbia, Nova Scotia and Ontario.

While the desire to continue training could be a planned career path, such as pursuing subspecialist certification, the Royal College's ongoing research shows that new specialists' decisions to pursue additional training are often influenced by their perceptions of the job market.

It can take more than one year for some medical specialists to find a clinical post

Although some new specialists are able to secure a post as an independent consultant before completion of training, others are not as fortunate. Two-thirds of the respondents to the Follow-Up Survey (cumulative total

using data from 2013 to 2017) said that they had found employment within 13 weeks of certification; the other one-third reported that it took up to 75 weeks after obtaining Royal College certification to secure a clinical post. Overall, a higher percentage of subspecialists than specialists reported they spent more than one year to find employment.

New medical specialists face a number of barriers to securing a clinical post

Newly certified specialists seeking employment were asked what they believe are the biggest barriers to finding employment. Six main factors were reported:

Biggest barriers reported to finding employment

Too few available Poor access to positions in their job listings specialty in Canada Desire or need to The need stay near family for spousal employment Lack of available The delayed retirement of health care resources (e.g. established funding, operating physicians and room time) surgeons (and their general reluctance to share resources)

New medical specialists have insights on enablers to securing a clinical post

Job seekers and those who had recently secured a position converged on the following three areas they would suggest to those seeking employment:

- NETWORK to increase your knowledge of job opportunities, to help find information about positions that are not advertised and to increase your visibility as a job seeker.
- PURSUE ADDITIONAL TRAINING, as this
 is often a job requirement and can be a
 stopgap measure in case a position does
 not come up.
- BE FLEXIBLE about where positions might be, and be ready to move in Canada/away from Canada to increase your job prospects.

Specialist physician employment challenges are multifactorial

It is wrong to assume that specialist physician employment challenges automatically mean there are too many specialists in the country, otherwise referred to as an "oversupply." The Royal College Employment Study shows that physician employment challenges are multifactorial, and ultimately a byproduct of shortcomings in workforce and health care planning.

Workforce planning is currently focused on aligning physician supply with the health care needs of society; it is missing a number of important elements, especially the link between practice resources and employability. Other factors also come into play when looking at employment patterns, like family obligations and access to/transparency of job postings.

Future reports will look deeper into the data

Additional reports will explore persistent medical workforce questions such as whether working as a locum (i.e., temporary replacement) is a deliberate career choice or a stopgap until a permanent post is secured, and if employment patterns are the same for men and women. The Royal College Employment Study aims to be a catalyst for solutions on physician employment challenges, and to inform health workforce and career planning.

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FIGURE 1: Overall employment status (percentage) 2011-2018, specialists and subspecialists combined, Canada. Source: Royal College Employment Survey

TABLE 1: Overall employment status (n) 2011-2018, specialists and subspecialists combined, Canada. Source: Royal College Employment Survey

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1. Introduction

From a boom cycle in the 1960s and 1970s, to a bust cycle in the 1990s¹ and back to a period of growth since 2000², Canada is now experiencing a new turn in its medical workforce history: physician employment challenges.³⁻¹²

The Royal College of Physicians and Surgeons of Canada has been examining specialist employment challenges and their underlying causes since 2011. Each year, the Royal College administers two separate online surveys to newly certified specialists and subspecialists:

1. An **Employment Survey** issued to all successful candidates between four to 12 weeks following their final Royal College certification examinations.

Specialty examinations are held in the spring and subspecialty exams in the fall.

 A Follow-Up Survey sent to all newly certified specialists who reported employment challenges when completing the initial survey. This survey is sent between 12 to 17 months following their Royal College certification.

The Royal College released the first wave of findings from these surveys in the 2013 report What's really behind Canada's unemployed specialists? Too many, too few doctors? The report revealed that the long established certainty of finding a clinical position after achieving specialty and subspecialty certification no longer remained.

This report builds on the 2013 report. With more longitudinal data and insights from more than 7,000 study respondents (36% overall response rate) it examines

- the employment patterns of 7,178 specialists certified by the Royal College between 2011 and 2018;
- a breakdown of physician employment trends by province; and
- how long it took new specialists to secure a post, and what new specialists reported as the key enablers and barriers to finding employment.

A detailed methodology on the Royal College Employment Study is available on the Royal College website.

Note: this report looks at employment issues that affect new specialist and subspecialist physicians, referred to as "certificants"; it does not investigate issues that may affect family physicians.

2. Putting the data in context: employment challenges do not necessarily mean an oversupply of physicians

A simple conclusion from the data could be made that new specialists cannot find employment because they are in surplus or oversupply. Care must be taken when making such assumptions. Putting employment data in context can lead to different conclusions.

Image 1 (*below*) paints a more comprehensive picture of Orthopedic Surgery in Canada and shows the complexities associated with the topic of physician employment. To simply say that we have an oversupply because new specialists are unable to find work, is an oversimplification that fails to recognize the complex factors underlying physician employment and unmet patient needs.

IMAGE 1



ORTHOPEDIC SURGERY: A CONCERNING PATTERN

An average of 37% of orthopedic surgeons surveyed by the Royal College reported not having a job at the time of their certification (Royal College Employment Survey, 2011 to 2018).

The Canadian Orthopaedic Association's survey of recent graduates also found that as of July 1, 2017, 165 recent graduates were still seeking full-time employment. This includes those completing locums, fellowships or research (Canadian Orthopaedic Association Employment Snapshot, 2010-2017)¹³.

Employment challenges occur within a larger context

Hip and knee replacements have gone up in Canada by 19% and 14%, respectively. These percentages are likely to continue rising with an aging population (based on feefor-service billing data between 2011 and 2015¹⁴).

Fewer Canadians in 2017 received hip and knee replacements within established wait time benchmarks. Nationally, 76% of hip and 69% of knee replacements were done within the established six month benchmark¹⁵, down from 82% and 77%, respectively, in 2013.

Limited access to resources (e.g., OR time, staff, beds) impacts how many can practice and how much work they can do. Orthopedic surgeons responding to the Royal College Employment Study survey wrote¹⁶:

- "I am currently doing a locum where I am just doing trauma/on-call work.
- I get no elective OR time and have no elective clinic access currently."
 - "I have a job in Saskatoon but no guaranteed OR time and minimal clinic time and
 - no time on the call schedule."

The Orthopedic Surgery workforce is aging and there are fewer trainees entering the field¹⁷

- For every nine orthopedic surgeons under the age of 35 there are 10 who are 65+ years old.
- Fewer orthopedic surgeons are entering the training pipeline; between 2011 and 2015, there was a 9% average annual decrease in the number of residency spots and new trainees in the discipline.

The question then is, will there be enough orthopedic surgeons to meet future population health needs?



3.Employment status of newly certified medical specialists in Canada

Since the inception of the Royal College Employment Study in 2011, an average 36% of eligible specialists and subspecialists have responded to our surveys about their employment status.

For ease of reading, the term "specialist" in this section also includes subspecialists.

3.1 Employment status defined

For the purposes of this study, employment status (at the time the survey was completed) is broken down into the following five categories:

- FOUND EMPLOYMENT: respondent planned career choice and was successful at securing employment as an independent specialist-consultant.
- ADDITIONAL TRAINING ALREADY
 PLANNED: respondent was not ready or planning to enter the medical workforce.
- 3. NO JOB PLACEMENT, PURSUING
 ADDITIONAL TRAINING*: respondent had planned to enter the medical workforce, was unsuccessful at securing employment and pursued additional training, such as a fellowship or advanced degree.

- 4. NO JOB PLACEMENT, NOT PURSUING OTHER TRAINING*: respondent had planned to enter the medical workforce, was unsuccessful at securing employment and did not continue additional medical training, or pursue research or an advanced degree.
- 5. **NOT YET APPLIED FOR JOBS:** respondent had not actively sought employment.

3.2 Employment status of newly certified medical specialists: Canada, 2011-2018

Figure 1 shows the annual per cent variation in employment status of newly certified specialists in Canada. Table 1 presents the number of survey respondents reporting a particular employment status. A more detailed analysis of the data, by employment status category, follows.



^{*}Note: Respondents who indicated their employment status as either "No job placement, pursuing additional training" or "No job placement, not pursuing other training," are described throughout the paper as respondents with "employment challenges."



FIGURE 1Overall employment status (percentage) 2011-2018, specialists and subspecialists combined, Canada. Source: Royal College Employment Survey

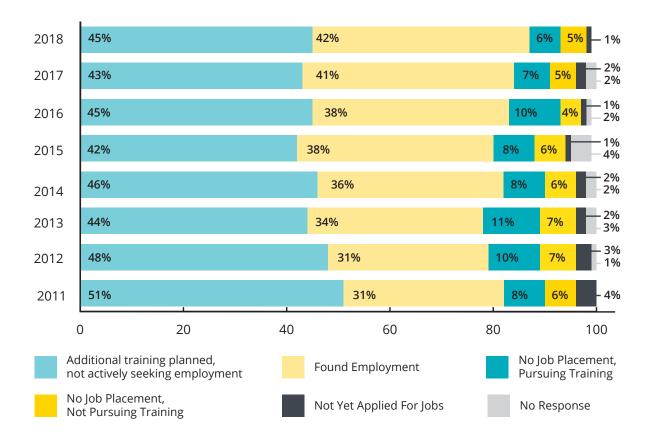


TABLE 1Overall employment status (n) 2011-2018, specialists and subspecialists combined, Canada. *Source: Royal College Employment Survey*

| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|--|------|------|------|------|------|------|------|------|
| Found Employment | 191 | 219 | 306 | 323 | 371 | 346 | 434 | 389 |
| Additional training planned, not actively seeking employment | 317 | 339 | 402 | 416 | 409 | 416 | 457 | 412 |
| No Job Placement, Pursuing Training | 48 | 74 | 98 | 70 | 78 | 88 | 77 | 53 |
| No Job Placement, Not Pursuing Training | 37 | 49 | 61 | 57 | 56 | 37 | 52 | 50 |
| Not Yet Applied for Jobs | 27 | 24 | 17 | 15 | 12 | 13 | 24 | 9 |
| No Response | 3 | 4 | 24 | 21 | 41 | 22 | 26 | 3 |

Found employment



In 2018, 42% of respondents reported that they had found employment.

From 2011 to 2018, a growing proportion of specialists indicated that they had secured employment, steadily rising from 31% in 2011 to 42% in 2018.

Additional training already planned

From 2011 to 2017, between 42% and 51% of respondents reported that they planned to continue training post certification.

 Although these specialists were not actively seeking employment at the time of the survey, a high proportion of them noted that they are strongly influenced by their perception of the job market.

Additional questions that were posed to this cohort revealed overall that

- 40% reported they were pursuing additional training because it is a requirement for obtaining a position,*
- 54% were pursuing additional training because they believe this will make them more employable, and
- 75% were pursuing additional training out of passion for the domain (i.e., a passion for the area in which they are pursuing additional training).

No Job Placement (pursuing training/ not pursuing training)

- From 2011 to 2018, between 11% and 18% of respondents reported that they had not secured a position within six to 24 weeks after confirmation of their specialty certification, although they had planned to enter independent medical practice.
- Since 2014, there has been a declining percentage of respondents reporting employment challenges, lowering to 12% in 2017 and 11% in 2018. We will closely monitor to determine if these positive results are a developing trend and if so, explore its underlying causes.



In 2018, 11% of respondents reported that they were unable to secure employment as an independent medical practitioner.

- While these results are encouraging, a concerning percentage of new specialists continue to face important employment challenges. For instance, out of 11% who reported not finding work in 2018, 5% stated they were not pursuing additional training like fellowships and subspecialisation.
- Although there was only a one per cent increase of respondents who said they had not secured a clinical post and were not pursuing additional training, rising from 4% in 2016 to 5% in both 2017 and 2018, it is equally important to note that this small percentage change may mask notable changes in the actual number of impacted respondents. In fact, the number of respondents without a clinical post and

^{*}Note: Includes responses obtained from 2013-2018 surveys, as this option was not available in the 2011 and 2012 surveys.

- who are not pursuing additional training rose from 37 in 2016 to 52 in 2017 and 50 in 2018.
- Since these specialists are most likely not involved in any form of clinical activity, this is a great loss for both patients and the concerned specialists.

Not yet applied for jobs

- From 2011 to 2018, between 1% and 4% of respondents indicated that, at time of certification, they had not yet applied for a job as an independent consultant specialist.
- When asked to explain why they had not yet applied for positions, respondents indicated a variety of reasons including locums, unavailability of positions and personal reasons (i.e. moving, sick leaves, etc.).

- For instance:
 - A medical biochemist wrote: "Health problems."
 - A new anesthesiologist stated:
 "[There are a] lack of suitable positions
 available. [I] need to sample practice
 environment through locums."
 - A new pediatrician wrote: "I am out of the country (in Australia) for one year (my first year post-residency) while my husband completes his second fellowship in foot and ankle surgery (orthopedics). I am not working while here as I am heavily pregnant with our second child — taking the year off to be mom here."



4. Most impacted disciplines

Table 2 provides annual survey data of the 14 most impacted specialties and subspecialties where employment challenges have been reported.

- Specialists in Neurosurgery and Radiation Oncology have reported difficulty finding employment in all eight years of data collection.
- Specialists in Orthopedic Surgery have reported difficulty finding employment in seven of the eight years of data collection.
- Specialists in Urology, Gastroenterology and Nuclear Medicine have reported difficulty finding employment in six of the eight years of data collection.
- Subspecialization does not appear to be a factor impacting employability. Among the 14 disciplines where employment challenges have been most-reported, eight are specialties and six are subspecialties.

Consistent with findings in the original Employment Study report (Fréchette et al., 2013), survey findings continue to show that employment challenges are most notably reported by specialists in surgical and more resource intensive specialties and subspecialties.





TABLE 2Most impacted disciplines reporting unemployment at time of certification 2011-2018, specialists and subspecialists combined, Canada. *Source: Royal College Employment Survey*

| Discipline | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| Neurosurgery | 3/10 | 5/11 | 1/4 | 2/7 | 7/13 | 3/5 | 2/5 | 3/8 |
| | (30%) | (45.5%) | (25%) | (28.6%) | (53.9%) | (60.0%) | (40%) | (37.5%) |
| Radiation Oncology | 4/12 | 10/16 | 16/23 | 4/7 | 8/12 | 7/11 | 5/9 | 7/11 |
| | (33.3%) | (62.5%) | (69.6%) | (57.1%) | (66.7%) | (63.6%) | (55.6%) | (63.6%) |
| Orthopedic Surgery | 6/30 | 9/31 | 15/42 | 15/40 | 17/35 | 13/34 | 14/39 | 14/26 |
| | (20%) | (29%) | (35.7%) | (37.5%) | (48.6%) | (38.2%) | (35.9%) | (53.8%) |
| Urology | 1/5 | 5/11 | 5/14 | 4/10 | 3/15 | 4/13 | 5/11 | 3/10 |
| | (20%) | (45.5%) | (35.7%) | (40%) | (20%) | (31.0%) | (45.5%) | (30%) |
| Gastroenterology | 4/13 | 5/14 | 8/23 | 2/17 | 3/11 | 2/14 | 3/9 | 2/7 |
| | (30.8%) | (35.7%) | (34.8%) | (11.8%) | (27.3%) | (14.3%) | (33.3%) | (28.6%) |
| Nuclear Medicine | 2/4 | 2/3 | 1/3 | 1/4 | 1/3 | 0 /2 | 1/3 | 0/5 |
| | (50%) | (66.7%) | (33.3%) | (25%) | (33.3%) | (0%) | (33.3%) | (0%) |
| Hematological | 0/1 | 2/3 | 1/2 | 2/5 | 2/4 | 0/0 | 0/0 | 1/4 |
| Pathology | (0%) | (33.3%) | (50%) | (40%) | (50%) | (0%) | (0%) | (25%) |
| Hematology | 4/16 | 3/9 | 6/12 | 4/8 | 1/7 | 1/9 | 2/13 | 2/6 |
| | (25%) | (33.3%) | (50%) | (50%) | (14.3%) | (11.1%) | (15.4%) | (33.3%) |
| Neonatal-Perinatal | 0/1 | 1/3 | 1/6 | 1/5 | 3/9 | 2/7 | 2/8 | 3/8 |
| Medicine | (0%) | (33.3%) | (16.7%) | (20%) | (33.3%) | (28.6%) | (25%) | (37.5%) |
| Cardiac Surgery | 0/1 | 0/4 | 2/5 | 2/3 | 0/1 | 1/3 | 3/5 | 0/2 |
| | (0%) | (0%) | (40%) | (66.7%) | (0%) | (33.3%) | (60.0%) | (0%) |
| Medical Biochemistry | 0/1 | 0/2 | 1/2 | 1/4 | 1/5 | 2/2 | 1/2 | 0/2 |
| | (0%) | (0%) | (50%) | (25%) | (20%) | (100%) | (50%) | (0%) |
| Plastic Surgery | 1/8 | 3/11 | 5/8 | 3/13 | 3/12 | 7/14 | 2/12 | 0/10 |
| | (12.5%) | (27.3%) | (62.5%) | (23.1%) | (25%) | (50%) | (16.7%) | (0%) |
| General Surgical Oncology | 0/2 | 1/2 | 1/2 | 1/4 | 0/3 | 1/3 | 0/4 | 0/2 |
| | (0%) | (50%) | (50%) | (25%) | (0%) | (33.3%) | (0%) | (0%) |
| Nephrology | 1/13 | 0/6 | 5/12 | 4/12 | 5/15 | 3/8 | 1/12 | 2/9 |
| | (7.7%) | (0%) | (41.7%) | (33.3%) | (33.3%) | (37.5%) | (8.3%) | (22.2%) |

Over a quarter of respondents in the discipline indicating they are unable to find a job placement for

- All 8 years of the Employment Survey
- 7 out of 8 years of the Employment Survey
- 6 out of 8 years of the Employment Survey
- 5 out of 8 years of the Employment Survey
- 4 out of 8 years of the Employment Survey

n/N: number of respondents who stated not having a job at the time of certification/total number of respondents in survey

%: percentage of respondents who stated not having a job at the time of certification

^{*}Respondents unable to find employment include those who do not have a job and have thus planned for further training and those who do not have a job and do not plan to pursue further training.

^{*}The most impacted disciplines were selected based on two criteria: a) the discipline must have had an overall response rate greater than 25% and b) the disciplines must have had more than 25% of respondents indicating that they were unable to find a job placement in four or more years.

5. Employment status of newly certified medical specialists: provincial trends

More detailed analysis of the data reveals that physician employment status of newly certified specialists varies across provinces.

5.1 Considerations to better interpret the provincial data in this section

The data collected on employment status by province is based on the location of postgraduate (residency) training. It should not be assumed that new certificants are seeking employment in the same province.

 Canada's 17 medical schools are situated in eight provinces but supply physicians for all 10 provinces and three territories. Response rates differ based on province of postgraduate training which varies between 32% in Quebec and 44% in Nova Scotia (refer to Table 3).

For simplicity, the term "specialist" in this section also includes subspecialists.

The data below should not be read as a precise reflection of the job market in each province. Other aspects, such as personal preferences of job seekers, also come into play.

TABLE 3Total number of respondents by province of postgraduate training* 2011-2018, specialists and subspecialists combined. *Source: Royal College Employment Survey*

| | PROVINCE | AB | ВС | MB | NL | NS | ON | QC | SK | Intl | Missing | TOTAL |
|-----------------------------|------------------|------|------|-----|-----|-----|------|------|-----|------|---------|-------|
| Specialists 2011-2018 | Response | 701 | 539 | 241 | 115 | 253 | 2015 | 1218 | 151 | 353 | 16 | 5602 |
| | Population | 1671 | 1269 | 606 | 280 | 576 | 5358 | 3693 | 392 | 1168 | | 15013 |
| 2011-2010 | Response Rate | 42% | 43% | 40% | 41% | 44% | 38% | 33% | 39% | 30% | | 37.3% |
| | Response | 235 | 171 | 57 | 8 | 56 | 618 | 362 | 14 | 55 | | 1576 |
| Subspecialists 2011-2018 | Population | 635 | 446 | 149 | 14 | 131 | 1925 | 1224 | 42 | 185 | | 4751 |
| | Response Rate | 37% | 38% | 38% | 57% | 43% | 32% | 30% | 33% | 30% | | 33.1% |
| | Response | 936 | 710 | 298 | 123 | 309 | 2633 | 1580 | 165 | 408 | 16 | 7178 |
| ALL 2011-2018 | Population | 2306 | 1715 | 755 | 294 | 707 | 7283 | 4917 | 434 | 1353 | | 19764 |
| | Response Rate | 41% | 41% | 39% | 42% | 44% | 36% | 32% | 38% | 30% | | 36.3% |

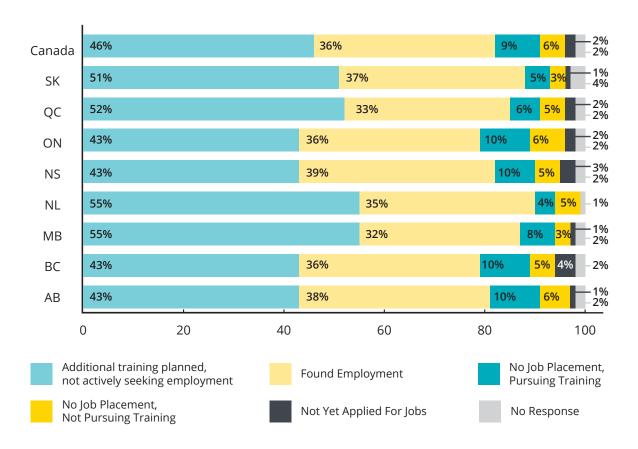
^{*} Province of faculty of medicine where certificants reported completing residency training

5.2 Employment status of newly certified specialists: provincial breakdown

More detailed analysis of the data shows that the employment status of newly certified specialists varies across provinces. Figure 2 provides the seven-year average of respondents' employment status by province of residency training.

FIGURE 2Overall employment status of newly certified specialists and subspecialists, by province of residency training (percentage) 2011-2018, specialists and subspecialists combined.

Source: Royal College Employment Survey



The data shows complex career and employment patterns across the country for new specialists certified between 2011 and 2018. Below are some highlights:

- On average, there were fewer specialists in Manitoba (32%) and Quebec (33%) who reported they had found employment than anywhere else in Canada.
- More than half of new specialists in Manitoba and Newfoundland and Labrador (55%), Quebec (52%) and Saskatchewan (51%) stated that they were pursuing additional training during that same period. Consistent with findings from our earlier¹⁹ and ongoing research, the decision to pursue additional training is often influenced by new specialists' perceptions of the job market. Other factors may also underlie new specialists' decisions to pursue additional training, such as a fellowship being a job requirement for some positions in academic centres.
- The highest average of specialists who stated they had found employment were those who reported having completed their residency training in Nova Scotia, Alberta and Saskatchewan (39%, 38% and 37%, respectively).
- The lowest average of specialists who stated that they were planning to pursue additional training were those who reported having completed their residency training in Alberta, British Columbia, Nova Scotia and Ontario (tied at 43%). Interestingly, there was also a higher percentage of new specialists who completed their training in these

- jurisdictions also reporting they had not secured a clinical post, compared to other provinces (Ontario: 16%; Alberta: 16%; British Columbia and Nova Scotia: 15%).
- Fewer specialists who reported having completed their residency training in Saskatchewan reported that they had not yet secured a clinical post (8%) than anywhere else in Canada.

While employment challenges among new specialists persist, an international survey found that Canadians report the longest wait times to see a specialist among peer countries; over half of Canadians (56%) waited longer than four weeks to see a specialist, which is demonstrably higher than the international average of 36% reported in the survey.²⁰

Findings of the Follow-Up Survey to new specialists who reported employment challenges –2013 to 2017

After consistent reporting of employment challenges among newly certified specialists and subspecialists, the Royal College Employment Study was expanded in 2014 to include a Follow-Up Survey for those who reported that they did not have a clinical post upon certification. This group of specialists/subspecialists is sent the Follow-Up Survey between 12 and 17 months post-certification. The survey asks them about their employment status and factors underlying their current situation.

To date, the Follow-Up Survey has been issued to 822 certificants certified between 2013 and 2017. Of those, 389 responded with an average response rate of 47.3%. Those certified in 2018 who reported employment challenges will be surveyed again in 2019.

6.1 Employment status of newly certified medical specialists reporting employment challenges

66%

66% of new specialists who reported employment challenges at the time of certification had secured a clinical position by the time they received the Follow-Up Survey.

Five years of Follow-Up Survey data shows that, overall, 66% of new specialists and subspecialists who reported employment challenges at the time of certification had secured a clinical position by the time they received the Follow-Up Survey (12-17 months post-certification). Thirty-four per cent said they were still looking for employment when they responded (Figure 3).

Looking at the data broken down year by year, there was a relatively consistent 60/40 split of employment and unemployment from 2013 to 2016 (Figure 4). However, in 2017 we see a spike in the number of certificants reporting to have found employment (84%).



FIGURE 3

Employment status 12-17 months post-certification of respondents who reported they did not have a clinical position at time of certification, 2013-2017, specialists and subspecialists combined, Canada. N=389. *Source: Royal College Follow-Up Survey*

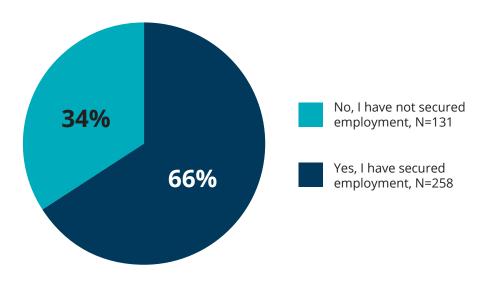
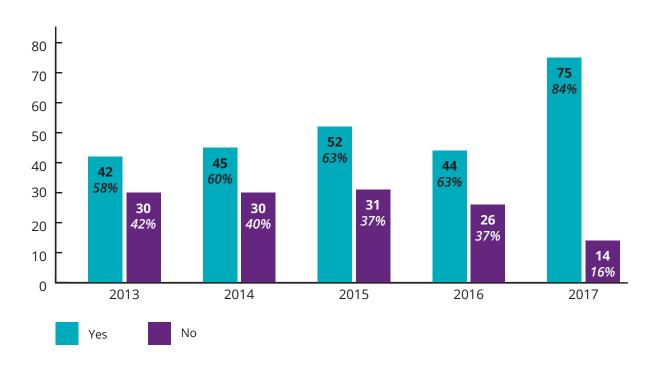


FIGURE 4Employment status 12-17 months post-certification of respondents who reported they did not have a clinical position at time of certification, by year, 2013-2017, specialists and subspecialists combined, Canada. N=389. Source: Royal College Follow-Up Survey



6.2 Length of time to secure a position as an independent specialist-consultant after obtaining Royal College certification (specialists and subspecialists combined)

Some new specialists and subspecialists are able to secure a post as an independent consultant before completion of training. While the majority of respondents said they had found employment within 13 weeks of certification, others reported that it took up to 75 weeks after obtaining Royal College certification to secure a clinical post (Figure 5).

6.3 Length of time to secure a position as a specialist-consultant compared to a subspecialist-consultant after obtaining Royal College specialist certification

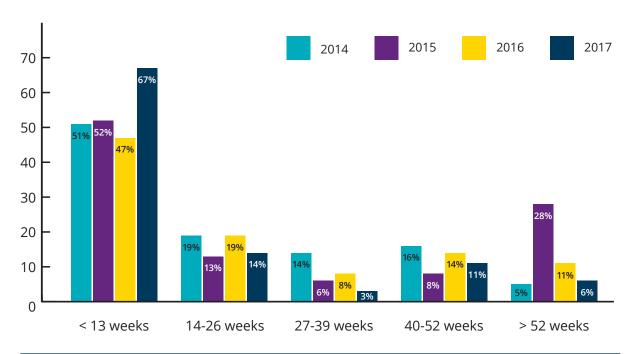
Of those who initially said they had not secured a clinical post after certification, just over half subsequently reported that they had found a post within 13 weeks of certification. A higher percentage of subspecialists than specialists reported they had found a position within 13 weeks, except in 2016 when the rate dropped to 29% from 80% in the previous year (Figures 6 and 7).

Overall, a higher percentage of subspecialists than specialists without a clinical post at the time of certification spent more than one year to find employment. However, there were exceptions in 2015 and 2017. In 2015, the percentage of specialists and subspecialists reporting that it had taken 52 weeks or more to find employment was almost equal (21% and 20%, respectively); in 2017, there was a higher proportion of specialists than subspecialists reporting it had taken one year or more to find employment (7% and 5%, respectively).



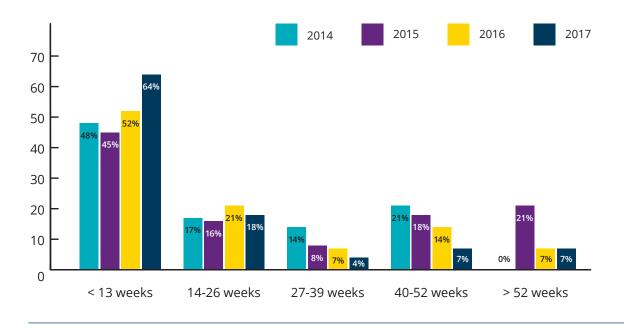
FIGURE 5

Time to secure employment after Royal College certification for respondents with initial employment challenges 2014-2017*, specialists and subspecialists combined, Canada. N=189. Source: Royal College Follow-Up Survey



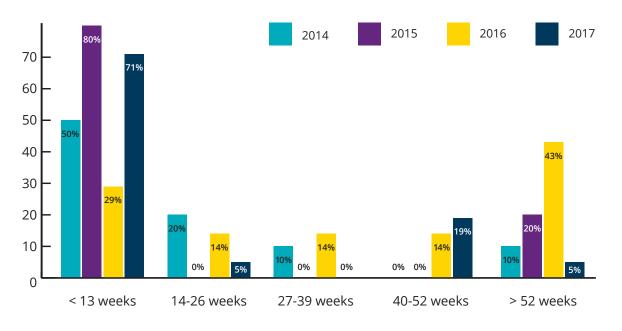
^{*2013} data not included due to a methodological change.

FIGURE 6Time to secure employment after Royal College certification for specialists reporting initial employment challenges, 2014 – 2017*, Canada. *Source: Royal College Follow-Up Survey*



^{*2013} data not included due to a methodological change.

FIGURE 7Time to secure employment after Royal College certification for subspecialists reporting initial employment challenges, 2014 – 2017*, Canada. *Source: Royal College Follow-Up Survey*



^{*2013} data not included due to a methodological change.

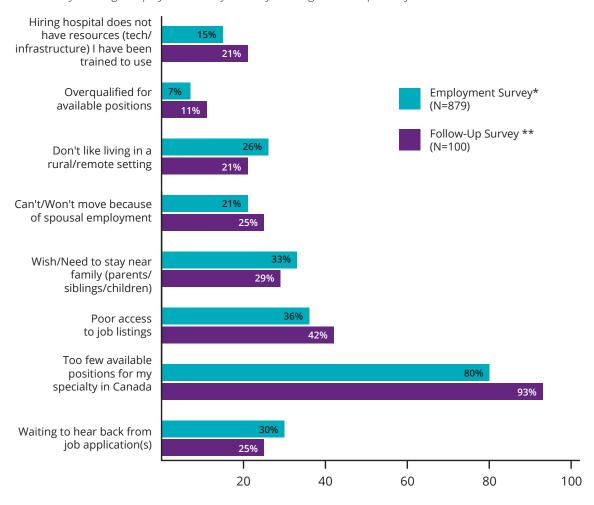


6.4 What are the barriers to securing employment?

The Royal College Employment Survey asked newly certified specialists (for simplicity, the term "specialist" in this section also includes subspecialists) who reported not having found a job what they perceived as the major barriers to employment. The same question was posed in the Follow-Up Survey to the respondents who continued to face employment challenges, and to an additional sub-set of certificants who indicated that they had found a non-clinical placement with which they were not satisfied.

FIGURE 8

Main reasons respondents perceived as a barrier to employment (percentage), Employment Survey (2012-2018) and Follow-Up Survey (2013-2017), specialists and subspecialists combined, Canada. Source: Royal College Employment Survey and Royal College Follow-Up Survey



Notes: Respondents were allowed to select multiple options and thus the bars may exceed a total of 100%. This question was not posed in the 2011 Employment survey.

^{*} Question posed to respondents who reported they did not secure employment

^{**} Question posed to respondents 1) who reported they did not secure employment or 2) Secured non-clinical employment and indicated they were not satisfied with placement

Shortage of full-time job opportunities: the most important factor

The majority of respondents in the Royal College Employment Survey (80%) and Royal College Follow-Up Survey (93%) felt that there was a shortage of full-time job opportunities for new certificants.

"There are very few, if any jobs in Otolaryngology at the present time. This is despite the fact that we graduate over 30 new otolaryngologists per year. The hospitals and potential employers currently have the upper hand as there are many applicants for few jobs."

Newly certified otolaryngologist

"Pediatric Emergency Medicine is now a much tighter market with limited positions."

 Newly certified pediatric emergency medicine physician

The annual scan of advertised job opportunities carried out by the Canadian Medical Association (CMA) supports the view that there is a tight job market for specialists and subspecialists. The CMA compares the availability of advertised job opportunities to the distribution of trainees exiting postgraduate medical training.

The 2018 scan found that

- Specialists finishing training accounted for 56.6% of all graduates, while advertised practice opportunities in specialized medicine accounted for only 43.3% of all advertised opportunities.
- Conversely, family physicians accounted for only 43.1% of postgraduate training exits but 55.8% of advertised practice opportunities were in family medicine.²¹

Survey findings reveal that almost all new certificants facing employment challenges believe there are too few available positions for their discipline in Canada.

Specialists also point to other factors such as poor access to job listings and competition with other physicians for limited resources as barriers to employment.

Lack of information about available jobs: the second most reported barrier

The second most reported barrier to employment was poor access to job listings (Employment Survey: 36%; Follow-Up Survey: 42%). Similarly, the Resident Doctors of Canada found in their 2018 National Resident Survey that less than one in five residents "definitely knew where to locate job opportunities in their medical specialty."²²

Many respondents to the Royal College Employment Survey stated (respondent writeins) that there lacks a systematic approach to job advertising and hiring practices. The following comments they provided speak to a number of issues, including lack of consistent systemization and transparency in the job advertising process:

- "Job availability is often word of mouth.
 In my province, the academic site hiring practices are variable. Sometimes they hire without advertising and other times they follow "university hiring" procedures. It seems to be on a whim."
 - Newly certified diagnostic radiologist
- "Hospital[s] do not use fair hiring practices and do not offer interviews or equal opportunity for all applicants. Positions are given away to pre-selected individuals and this has occurred at several hospitals."
 - Newly certified hematologist
- "Job positions are not transparent. If there is an official posting, it is usually done after the hospital has found their candidate and are posting because it is government mandated. It is usually already filled by new candidates that had already had previous personal contact with the hiring hospital prior to last minute posting."
 - Newly certified orthopedic surgeon

- "Approach to job applications vary [sic] between provinces. Not enough advice or guidance."
 - Newly certified internist
- "Jobs are for those in mid-career rather than early entry. Jobs are often not posted or there is an internal candidate whom has already been selected for the position."
 - Newly certified public health and preventive medicine physician

Personal factors and preferences

New certificants also made it clear that a variety of personal factors and needs can impact their employment choices, including the desire/need to stay near family (Employment Survey: 33%; Follow-Up Survey: 29%) and spousal employment (Employment Survey: 21%; Follow-Up Survey: 25%).

"[I] cannot move due to husband's employment: already sacrificed five years of training living in different cities."

Newly certified anesthesiologist

"Spouse is also a surgeon and we are limited by needing two surgical positions in the same city!"

Newly certified general surgeon

"Do not want to go to [a] small centre."

Newly certified anesthesiologist



Practice location is also a factor for some new specialists looking for a post. Consistent with the 2013 Royal College Employment Study findings¹⁹, some respondents stated that they do not wish to live in rural/remote settings (Employment Survey: 26%; Follow-Up Survey 21%). This reticence could be tied to the personal considerations outlined above, among other factors, including education and safety for children, and family support²³ — all of which are known to impact choosing a rural setting to practice.

Resource limitations

Among the most common survey write-ins by new specialists about barriers to employment related to the lack of available health care resources (e.g. funding, operating room time) and the fact that established physicians and surgeons are delaying retirement, and are reluctant to share resources. These observations are consistent with findings in the original Royal College Employment Study.¹⁹

Here follows what some respondents told us:

- It is getting more and more competitive to secure employment. In speaking with the local health authorities in BC, unless a urologist retires there is no room for adding another surgeon due to the significant hospital budget constraints. The sentiment is that the budgetary constraints are only going to worsen in the years to come."
 - Newly certified urologist

- "No jobs in the academic centres which I was trained to do. I have done lots of research and training. Some hospitals would like to hire me but no funding for OR time so no job. Older surgeons don't want to retire."
 - Newly certified general surgical oncologist
- "The current established specialists in my region in my field do not want to dilute their work load with new consultant staff."
 - Newly certified respirologist.
- "Positions being advertised come with little to no OR or clinic time, mostly just call coverage with little resources."
 - Newly certified plastic surgeon

Practice resource challenges, including personnel and infrastructure, persist across the country. For example, the 2018 "report card" published by Vancouver Coastal Health notes that wait time challenges persist "as a result of the unprecedented OR nurse shortages affecting Vancouver Acute and to a lesser degree but still significantly, Lions Gate Hospital. With reduced and insufficient OR capacity to meet demand, surgeons are providing care for the most urgent patients first and patients with less urgent conditions are waiting longer." 18



6.5 What are the enablers to securing employment?

We asked participants of the Follow-Up Survey to reflect on what they felt, 12-17 months after certification, were the key enablers for securing employment. Regardless of whether they had secured employment at the time of the Follow-Up survey, respondents converged on three key areas that they would suggest to those seeking employment: networking, pursuing additional training, and being flexible about the type and location of practice pursued. These areas are explored further below.

Networking: the most commonly cited enabler

Respondents emphasized the importance of networking tactics, such as attending conferences and using existing networks (e.g. mentors, supervisors) to expand their contact base. According to respondents, networking serves a number of purposes: it helps increase your knowledge of job opportunities, helps you find information about positions that are not advertised and increases your visibility as a job seeker.

- "Make as many connections as possible during residency and continue to foster those throughout fellowship/beyond.
 Getting yourself 'out there' is the only reliable way to ensure that you are made aware of job opportunities when they arise. DO NOT RELY ON THE ONLINE JOB SERVERS ALONE!"
 - Newly certified orthopedic surgeon
- "Find mentors who are well connected and make a telephone call for you to find unlisted positions."
 - Newly certified radiation oncologist

- "Working hard as a fellow to earn the support of my supervisors and maintaining dialogue with supervisors about various job opportunities so they could support the applications appropriately."
 - Newly certified ophthalmologist
- "Go to conferences and try to meet people/ make connections (be vocal that you are actively seeking a job)."
 - Newly certified cardiologist
- "Speaking with colleagues, connecting, sending out emails to department heads, going to meetings to increase opportunities to meet the right people."
 - Newly certified gastroenterologist

Pursuing additional training

Many Follow-Up survey respondents highlighted the importance of pursuing additional training, such as fellowships or graduate degrees, as an enabler of employment. Respondents said:

- "Do a fellowship in an area of need (i.e. pediatrics/foot and ankle)".
 - Newly certified orthopedic surgeon
- "Be prepared to do one or more fellowships prior to starting a staff specialist position. This can vary by specialty, with job availabilities reaching troughs and peaks."
 - Newly certified radiation oncologist
- "Have a few fellowships lined up and organized in case a job doesn't come up after your first fellowship."
 - Newly certified plastic surgeon
- "If they are in a surgical residency then a fellowship is almost a necessity to find employment. In addition, a master's degree should be considered, especially for larger urban centres."
 - Newly certified urologist

Job seekers are not the only ones who believe that pursuing additional training is a key enabler to securing a clinical post. As reported in section 4.2 above, pursuing additional training to increase employability was a view also held by 54% of new certificants who reported in the initial survey that they were pursuing additional training rather than entering practice at this juncture of their careers.

Data from the Canadian Post-MD Education Registry (CAPER) echoes these trends. CAPER is a national data source that maintains individual-level data for all residents and fellows in Canada. CAPER data confirms that there have been significant increases in the number of trainees pursuing fellowship programs in many of the disciplines most impacted by employment challenges.²⁴

Flexibility around type and location of practice pursued

Many Royal College Employment Survey respondents reported that preference about location and type of practice was a barrier to securing employment. Conversely, job seekers responding to the Follow-Up Survey suggested that new certificants need to be flexible about the type and location of practice they pursue.

Manage expectations about the position:

- "Had to accept practising in a community setting, where my fellowship-acquired skills would not necessarily be put to use."
 - Newly certified plastic surgeon

- "Finally, be open to not getting your dream job ... but the job you get might end up being one you'll enjoy and prosper in."
 - Newly certified anesthesiologist
- "Be prepared to accept jobs that may not constitute ideal mix of job duties. Consider relative importance of goals: relative importance of securing employment (i.e. obtaining an income asap) versus waiting to obtain the 'right' job."
 - Newly certified psychiatrist
- "Just do locums for now because the market is saturated."
 - Newly certified anesthesiologist

Be flexible about the location of the position in Canada:

- "Don't get attached to the city you are currently living. Be open to the idea that you have to move to be able to pursue your ideal career."
 - Newly certified medical oncologist
- "Do locums as often as you can in places you might want to work (they're not just scouting you, you should be scouting them too)."
 - Newly certified cardiologist
- "Be patient, apply everywhere possible, don't restrict yourself to a certain geographical area."
 - Newly certified critical care specialist



Be ready to move away from Canada:

- I also ended up with a permanent full-time position in the U.S., so doing my USMLE and U.S. medical board exams enabled me to be eligible for positions in the U.S. as there were very few openings in Canada."
 - Newly certified radiation oncologist
- "Also look beyond Canada for employment and take the US Medical Licensing Exams and become board-certified in the US...."
 - Newly certified radiation oncologist
- "Make sure you have the required documents in order to apply abroad as well..."
 - Newly certified urologist

Leaving Canada: another brain drain?

A notable number of respondents wrote about pursuing employment opportunities outside of Canada (particularly in the United States) given the current job market.



7. Future reports: Looking deeper into the data

This report covers high-level findings on the employment patterns of 7,178 specialists and subspecialists newly certified by the Royal College, and key enablers and barriers to securing employment. There remain many other areas to explore. Future technical reports will address some persistent medical workforce questions, such as:

- Is locum work a choice or a necessity?
 Our investigation has collected differing perspectives from new certificants on whether locum (temporary replacement) positions are a satisfactory career choice or the only alternative to unemployment.
 A future report will examine the types of jobs new specialists and subspecialists have secured (e.g. locum, full-time, part-time), where these jobs are located (e.g. urban, rural) and their satisfaction levels about their employment.
- Are employment patterns the same for men and women? This analysis will examine if there are variations between men and women in terms of securing a post, continuing training, the types of positions that were secured and levels of satisfaction, among other factors.



8. Conclusion

Since the release of the 2013 report, we have made great efforts to quash the simple conclusion that unemployed physicians means there is an oversupply of physicians. Our work since 2011 clearly shows that physician employment challenges are multifactorial and ultimately a byproduct of shortcomings in workforce and health care planning.

Workforce planning is currently focused on aligning physician supply with the health care needs of society. Although important elements, this limited approach to planning is missing a number of important elements, especially the link between practice resources and employability.

The Royal College Employment Study also identifies other factors that impact physician employability, including access to and transparency of job postings, and personal needs and preferences of job seekers.

While some of these issues are more difficult to address, there are others that could be more readily tackled. For instance, less than one in five residents definitely knows where to locate job opportunities; this could be a good place to start.

Newly certified specialists and subspecialists also offer key advice, through this study, that can help others in their search for employment. This includes encouraging job seekers to network to learn more about job opportunities, pursue additional training and be flexible about where they are willing to work. These insights might help bolster career counseling efforts across the country.

The Royal College Employment Study aims to be a catalyst for solutions on physician employment challenges, and to inform health workforce and career planning. The Royal College's data collection and analysis continue, with more reports to follow.



Appendix: summary of changes to 2017 data

A syntax error was found in the calculations of the employment status of respondents to the 2017 Employment Survey. As such, the data published in the May 1, 2019 version of this report has been revised in the October 2019 version.

The originally published and corrected data for the 2017 Employment Survey is as follows:

2017 Employment Survey: Overall Employment Status

| | Number | Percentage |
|---|--------------------|--------------------|
| Found employment | 352 434 | 33% 41% |
| Additional training already planned | 453 457 | 43% |
| No job placement, pursuing training | 75 77 | 7% |
| No job placement, not pursuing training | 126 52 | 12% 5% |
| Not yet applied for jobs | 24 | 3% 2% |
| No response | 26 26 | 2% |

References

¹Adams, O., Chauhan, T.S., & Buske, L. (2017). Assessing the prospects for physician supply and demand in Canada: Wishing it was rocket science. *Health Care Management Forum, 30*(4), 181-186.

²Canadian Institute for Health Information. *Scott's Medical Database: Data Tables.* Retrieved from https://www.cihi.ca/en/physicians-in-canada

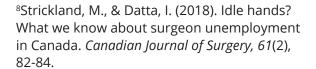
³Brandt, M. G., Scott, G. M., Doyle, P. C., & Ballagh, R. H. (2014). Otolaryngology – Head and Neck Surgeon unemployment in Canada: A cross-sectional survey of graduating Otolaryngology - Head and Neck Surgery residents. *Journal of Otolaryngology - Head & Neck Surgery*, 43.

⁴Cooper, J. A., Dubois, L., Power, A. H., DeRose, G., MacKenzie, K. S., & Forbes, T. L. (2015). Canadian vascular surgery residents' perceptions regarding future job opportunities. *Vascular*, *23*(3), 253-259.

⁵Kondro, W. (2004). New neurosurgeons left jobless: Where's the plan? *CMAJ, 170*(9).

⁶Manusow, J. S., Buys, Y. M., & Bellan, L. (2016). The underemployed opthalmologist - results of a survey of recent opthalmology graduates. *Canadian Journal of Opthalmology, 51*(3), 147-153.

⁷Razik, R., Cino, M., Directors, C. G., & Nguyen, G. C. (2013). Employment prospects and trends for gastroenterology trainees in Canada: A nationwide survey. *Canadian Journal of Gastroenterology*, *27*(11), 647-652.



⁹Sullivan, P. (1997). For first time, unemployment line awaits group of new Canadian specialists. *Canadian Medical Association Journal*, *156*, 1739-41.

¹⁰Vogel, L. (2014). National summit on physician employment finds no quick fixes for specialist job shortages. *Canadian Medical Association Journal*, *186*(5), 331.

¹¹Wakearm, E., & Feinberg, S. (2016). Surgeon unemployment: Would practice sharing be a viable solution? *Canadian Journal of Surgery*, *59*(2), 141-142.

¹²Williams, L. S. (1993). Future looks bleak for new MDs as practice limitations become national issue. *Canadian Medical Assocation Journal, 148*(12), 2175-2180.

¹³Canadian Orthopedic Association *Bulletin* #120, Summer 2018. Page 39. Retrieved from https://issuu.com/coa-aco/docs/summer 2018 coa bulletin

¹⁴Canadian Institute for Health Information (2018). *National Physician Database, 2015-2016* (Custom data request – eight provinces).

¹⁵Canadian Institute for Health Information (2018). *Wait Times for Priority Procedures in Canada, 2017*. Retrieved from https://www.cihi.ca/en/wait-times-for-priority-procedures-in-canada-2017.

¹⁶Royal College of Physicians and Surgeons of Canada (2018). *Employment Follow-Up Survey 2013-2016*. Ottawa, Ontario.

¹⁷Royal College of Physicians and Surgeons of Canada (2018). *Medical Workforce Knowledgebase 2.0*. Retrieved from http://www.royalcollege.ca/rcsite/health-policy/medical-workforce-knowledgebase-e

¹⁸Vancouver Coastal Health. (2018, March 9). *Our Health Care Report Card*. Retrieved from http://www.vch.ca/Documents/Report-Card-Mar-9-2018.pdf, page 9.

¹⁹Fréchette, D., Hollenberg, D., Shrichand, A., Jacob, C., & Datta, I. 2013. *What's really behind Canada's unemployed specialists? Too many, too few doctors? Findings from the Royal College's Employment Study*. Ottawa, Ontario: The Royal College of Physicians and Surgeons of Canada.

²⁰Canadian Institute for Health Information. How Canada Compares: Results From The Commonwealth Fund's 2016 International Health Policy Survey of Adults in 11 Countries. Retrieved from https://www.cihi.ca/en/ commonwealth-fund-survey-2016

²¹Canadian Post-MD Education Registry. *Physician Opportunities in Canada.*

²²Resident Doctors of Canada. *2018 National Resident Survey*. Retrieved from https://residentdoctors.ca/publications/national-resident-survey/nrs-2018/

²³Rourke, J. Increasing the number of rural physicians. *Canadian Medical Assocation Journal*, *178*(3), 322-325.

²⁴Canadian Post-MD Education Registry. Fact Sheet: Trends in fellowship training. Retrieved from https://caper.ca/sites/default/files/pdf/ fact-sheets/FactSheet-FellowshipTraining_ en.pdf

