Author’s response to reviews

Title: The impacts of training pathways and experiences during intern year on doctor emigration from Ireland

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Version: 1 Date: 26 Jul 2019

Author’s response to reviews:

Dear Professor Buchan,

Apologies - corresponding author's email now included in cover page.

Many thanks for allowing us the opportunity to re-submit the paper. We hope you find the revisions acceptable, and we look forward to hearing from you at your earliest convenience.

With kind regards,

Frances Cronin

Response to Reviewers
Deadline: 28 Jul 2019

(Editor’s letter) One additional request, can you add an identifier to the title so that international readers would be aware of the country being examined e.g "The impact of training pathways and early career experience on doctor emigration from Ireland".

And

(Reviewer 1)

I'm not sure that the title of the paper reflects its content, specifically in relation to training pathways. Suggest that the article title is modified to focus on the impact of the intern year on intent to emigrate.

Title changed to:

The impacts of training pathways and experiences during intern year on doctor emigration from Ireland

HRHE-D-19-00142

"The impact of training pathways and early career experience on doctor emigration"

Niamh Humphries (Reviewer 1)

Abstract

In the methods section specify that survey was administered to a cohort of recently qualified doctors at the end of their intern year.

Specify whether those surveyed were from all/some Irish medical schools (as mentioned on p6).

Abstract (Methods)

A baseline survey was administered online to all final year students in Ireland’s six medical schools.
Background

P4 please explain why Ireland has a high number of medical graduates per 100,000 but a relatively low number of practicing doctors per 100,000.

Sentence now reads:

This phenomenon is seen in Ireland’s healthcare system today. Currently, perhaps as a result of an historic reliance by Irish medical schools on non-EU student fees to subsidise the delivery of their medical programmes (13,14), Ireland has the highest number of medical graduates per 100,000 population of the Organisation for Economic Co-operation and Development (OECD) countries (15).


Foreign trained (p4) or non-EU (abstract). Use same terminology throughout and define.

“Foreign’ has been replaced with ‘non-EU’ throughout

P5 'The concern is that while this has been the practice for many years in Ireland (19), in the recent decade there is growing evidence to show that while many doctors migrate with the intention of returning to their homeland, a high proportion never return (26)'. Rephrase this sentence as it is unclear.
Paragraph now reads:

However, in some countries there may be a cohort of medical graduates that migrates solely to complete specialist training abroad, with a view to returning to their home country to take up specialist consultancy posts (20,27). Historically, this ‘circular’ pattern of migration has been accepted as a route to securing consultant posts in Ireland: indeed when competing for posts against domestically-trained doctors, the returning internationally-trained doctor has been considered by many to be viewed preferentially by interviewing panels (20). However, in countries with a history of circular migration such as Ireland, in more recent times, an increasing proportion of doctors who emigrated with the intention of returning to their homeland have decided not to return (20,28,29).


P5 'Similarly, a 2014 survey of 307 Irish-trained doctors who had emigrated 1-5 years previously, reported that those planning to remain abroad had increased from 10% at the time of leaving Ireland to 34% at the point of the survey. Furthermore, with the passage of time, those intending to return to Ireland had fallen from 50% to 25% (26)' Rephrase this sentence as it is unclear.

Paragraph now reads:

For example, one study traced almost 300 UK-trained doctors who, 10 years after their graduation, were registered to practice in New Zealand. Of these doctors, only 30% had originally intended to emigrate permanently; however ten years later, 89% were intending to stay in New Zealand permanently (25). Similarly, a 2014 study surveyed 307 Irish-trained doctors who had been working in Australia since 2008. When leaving Ireland, only 10% of the group had
intended to stay in Australia permanently and 50% of them intended to return to Ireland to practice medicine. When surveyed up to 5 years later, 34% intended to stay in Australia permanently, and only 25% planned to return to Ireland (28).


As the survey was conducted at the end of intern year, suggest that the authors explain the intern year and its place in the medical career pathway.

Page 6 (METHODS) now reads:

On graduation, both DEM and GEM students must complete a mandatory 1-year internship in accredited Irish hospitals to be awarded their ‘Certificate of Experience’, whereupon the Medical Council of Ireland then allows full registration as medical practitioners.

Methods

P6: why the baseline sweep of all final year medical students? Are the results of this survey published? If so, please reference.

Page 6 (METHODS) now reads:

As part of a study on career choice, which asked respondents about their intended speciality during the final year of undergraduate training (paper in preparation), a baseline sweep was administered on-line between November 2016 and February 2017 to all final year students in
Ireland’s six medical schools. Respondents were asked to provide an email address for follow-up purposes. The intern sweep was administered during June 2018 - the final month of the mandatory internship year.

P6: suggest replace young doctor with early career doctor, or intern.

All references to ‘young doctor’ changed to ‘early-career doctor’ or ‘intern’

P8: include that the survey was sent to final year medical students in all 6 Irish medical schools (as mentioned on p6).

Now reads:

The baseline survey was sent in late 2016 to 1,100 final year medical students in all six Irish medical schools.

Within fig 1: All final year medical students in 2016; explain what is meant by 'outside EU students'; explain what is meant by 'baseline responders' and give year of this survey; add year (2018?) to the intern responder box.

Due to Reviewer 2 comments, sample size has changed. Figure 1 has been updated (Figure will not copy in 'Respond to Reviewers portal).

Results

P10: It would be interesting to see what proportion of respondents graduated from medical school with no debt. It would also be interesting to see debt levels by whether responders were DEM or GEM students during medical school.
This information isn’t available. The same categories as those used at baseline were employed for the intern survey with <5K being the lowest category. Debt in itself wasn’t associated with Intention to Migrate (the primary subject of this paper), so it was not considered further, however, we plan to return to the subject of intern debt in future papers.

Page 11 please define ‘experiencing callousness toward people’.

Page 6 (BACKGROUND) now reads:

In particular, the paper reports on whether the emotional exhaustion (burnout) and feelings of depersonalization (callousness), reported in more experienced hospital doctors, had already manifested within 12 months of graduates starting work, and whether or not these factors were associated with an intention to emigrate.

And

Page 12 (RESULTS)

In response to the statement measuring depersonalization (‘I have become more callous toward people since I took this job’), over one third (35%) reported experiencing feelings of callousness once a week or more often in the previous 12 months. Responding to the measure of emotional exhaustion (‘I felt burned out from my work’), 30% reporting feelings of burnout once a week or more often (Table 3).

Discussion

P14: this study of interns (rather than young doctors).

Now reads:

This study of interns
P15: raises a really interesting point, i.e. that 64% of respondent interns want to emigrate following their (mandatory) intern year! I think the implications of a negative experience of the intern year for the health system/medical training/medical profession should be discussed further.

The DISCUSSION (page 16) now reads:

Despite implementation since early 2015 of a multi-stakeholder, Department of Health-led national strategy designed to increase graduate retention in Ireland (42–44), this study of interns found that almost two thirds (64%) of our respondents intended to leave after their mandatory year of working within the Irish healthcare system. This should be of huge concern as while most intended (or hoped) to return, an earlier study of Irish-trained doctors abroad showed that many would not act on this intention unless working conditions and career opportunities in Ireland did not improve (23). Furthermore, evidence shows that as emigrants’ roots abroad are established, emigration becomes permanent (25,28).

Our study demonstrated an important and statistically significant predictor of the intention to migrate, which remained when adjusted for age, and which has not previously been reported: well over half (60%) of the GEM doctors intended to remain in Ireland following their internship, compared with only one quarter (24%) of DEM doctors. This finding suggests that GEM doctors are more likely to stay working within the Irish health system. However, among the doctors who planned to leave (64%, n=134), the same proportion of DEM and GEM doctors planned to return (89% DEM, 85% GEM) and to leave permanently (DEM 10%, GEM 15%) ($\chi^2(1) = 0.46, p=0.504$).

Second – and independent of the study pathway – doctors’ intention to migrate was significantly associated with their negative working experiences, and possible effects of their experiences, during their mandatory year as an intern. This was seen most strongly for those intending to leave permanently. In this study, negative working experiences – as previously reported in research among doctors in postgraduate training programmes in Ireland (18) and reported by Irish-trained doctors abroad in relation to working in Ireland (23,42) – are found to be evident after as little as one year of work as a hospital doctor. Our study found that of the interns who responded to our survey, 70% rated as negative both ‘protected training time’ and the ‘staffing levels in their workplace’, while close to 60% rated as negative their experiences of ‘non-core task allocation’. While reported previously in more experienced hospital doctors (24,45), this study also shows that burnout and callousness were common, experienced at least once a week, after a single year working in Irish hospitals. These experiences were also presenting as predictors of intention to migrate (with the strongest effect for both factors seen in those intending to leave permanently), however, in the absence of a temporal relationship, no causal link with working conditions has been demonstrated, which may be a subject for future studies.


P15: ‘These findings are of great concern, particularly in light of the ongoing implementation of recommendations that were introduced in 2015 to address unsatisfactory training and working conditions (see (39,40)’. Sentence unclear, please rephrase.

Page 16 (DISCUSSION)

Now reads:

Despite implementation since early 2015 of a multi-stakeholder, Department of Health-led national strategy designed to increase graduate retention in Ireland (42–44), this study of interns found that almost two thirds (64%) of our respondents intended to leave after their mandatory year of working within the Irish healthcare system. This should be of huge concern as while most intended (or hoped) to return, an earlier study of Irish-trained doctors abroad showed that many would not act on this intention unless working conditions and career opportunities in Ireland did not improve (23). Furthermore, evidence shows that as emigrants’ roots abroad are established, emigration becomes permanent (25,28).

And (page 17)

These findings should be of great concern to Irish health workforce policy makers. The 2014 national strategy was introduced specifically to address unsatisfactory training and working conditions in order to improve graduate retention (42,43). The recommendations targeted the enforcement of protected training time and the reduction of non-core task allocation for doctors in training. Our results show that these areas continue to be sources of difficulty for interns in 2018, and are contributing to interns’ migration intentions.


Some of your most interesting findings are not discussed in the discussion/conclusion. I'd recommend you discuss some/all of the following findings in the discussion section:

• Debt levels on graduation, including the size of the debt accrued by GEM/DEM graduates and the implications for intent to migrate.
Response

There was no association between debt and intention to migrate. However, the Discussion/Conclusion sections have been re-visited and discuss findings in more details as per Reviewer 1 request.

• That 64% of respondent interns intend to go abroad to practice medicine

Response

DISCUSSION (page 16) now reads:

Despite implementation since early 2015 of a multi-stakeholder, Department of Health-led national strategy designed to increase graduate retention in Ireland (42–44), this study of interns found that almost two thirds (64%) of our respondents intended to leave after their mandatory year of working within the Irish healthcare system. This should be of huge concern as while most intended (or hoped) to return, an earlier study of Irish-trained doctors abroad showed that many would not act on this intention unless working conditions and career opportunities in Ireland did not improve (23). Furthermore, evidence shows that as emigrants’ roots abroad are established, emigration becomes permanent (25,28).


That 70% of respondents had a negative experience of staffing levels and 69% had a negative experience of protected training time, during their intern year.

DISCUSSION (page 17) now reads

Second – and independent of the study pathway – doctors’ intention to migrate was significantly associated with their negative working experiences, and possible effects of their experiences, during their mandatory year as an intern. This was seen most strongly for those intending to leave permanently. In this study, negative working experiences – as previously reported in research among doctors in postgraduate training programmes in Ireland (18) and reported by Irish-trained doctors abroad in relation to working in Ireland (23,42) – are found to be evident after as little as one year of work as a hospital doctor. Our study found that of the interns who responded to our survey, 70% rated as negative both ‘protected training time’ and the ‘staffing levels in their workplace’, while close to 60% rated as negative their experiences of ‘non-core task allocation’. While reported previously in more experienced hospital doctors (24,45), this study also shows that burnout and callousness were common, experienced at least once a week, after a single year working in Irish hospitals. These experiences were also presenting as predictors of intention to migrate (with the strongest effect for both factors seen in those intending to leave permanently), however, in the absence of a temporal relationship, no causal link with working conditions has been demonstrated, which may be a subject for future studies.
These findings should be of great concern to Irish health workforce policy makers. The 2014 national strategy was introduced specifically to address unsatisfactory training and working conditions in order to improve graduate retention (42,43). The recommendations targeted the enforcement of protected training time and the reduction of non-core task allocation for doctors in training. Our results show that these areas continue to be sources of difficulty for interns in 2018, and are contributing to interns’ migration intentions.


Respondent perceptions of work life balance abroad vs in Ireland.

Note: respondent perceptions of work-life balance abroad vs in Ireland forms part of the ‘negative perceptions of training in Ireland’

Discussion (page 18) now includes:

However, considering the global networks among medical graduates (23), it will be necessary for Ireland’s medical training to be viewed as competitive when considered against the training opportunities, staffing levels and working conditions in destination countries such as Australia (21,41).


Conclusion

P16: I think that the conclusion should focus more on why such a high % of respondent interns (GEM and DEM) intend to emigrate and the implications for the Irish health system.

The reasons why such a high % of respondent interns (GEM and DEM) intend to emigrate has now been covered in much more details in the Discussion section (see above).

Furthermore, the opening paragraph of Discussion now reads:
Migration of doctors from their country of training impacts on medical workforce planning (1,9,21,39), represents a major loss of state investment in medical education (3,40), and may impact negatively on health sector goals. There is clear evidence that once abroad, increasing numbers of early-career doctors who emigrate with intentions of returning to their homeland to work, never actually return (21,25,28,29,41). The continued emigration of early-career doctors from Ireland is resulting in a loss of investment to the exchequer (13); necessitates high levels of replacement through inward migration of non-EU doctors (in 2017, 42% of doctors in Ireland were non-EU-trained, (16,22); and is contributing to the high number of Ireland’s currently unfilled consultant posts (41). In addition, doctor emigration deprives the Irish health system of “potential leaders who might otherwise demand, initiate and deliver reform” (20).


9. Gauld R, Horsburgh S. What motivates doctors to leave the UK NHS for a ‘life in the sun’ in New Zealand; and, once there, why don’t they stay? Hum Resour Health. 2015 Sep 8;13:75–75.


And closing paragraph of Conclusions now reads:

Experiences as an intern – the first year working as a doctor – may well contain the critical events that will determine the disposition of graduates towards ultimately making their careers in the country that trained them – regardless of whether they plan a period living and working abroad. This study points to the need for further research to explore the causes and consequences of burnout and other dimensions of ill-health in early-career doctors; and to determine and understand what factors may be contributing to better retention intentions among GEM graduates.

And on respondents’ experience of the (mandatory) intern year (staffing levels, training time, service demands, perceptions of training in Ireland vs abroad).
My take home from the findings presented in the paper is that the intern year should be improved in order to encourage retention/discourage intent to emigrate.

See above

See above

HRHE-D-19-00142

"The impact of training pathways and early career experience on doctor emigration"

G Y M Alsheikh, MD, PhD, DPHC, FFPH-RCP (Reviewer 2)

I sincerely appreciate the great efforts exerted by the authors in producing this good project tackling a "hot" challenge facing large number of OECD countries. The manuscript is well written and analysis is superb. However, I find the study population and sample used in the study unacceptable and needs serious consideration. The study divided the population of the locally medical graduates as being (1) Irish/EU students, (2) Outside EU students. According to the WHO Global Code of Practice on the International Recruitment of Health Personnel which was endorsed by all member states in the 63rd World Health Assembly, May 2010*, the issue of international immigration addresses the member states and their national health systems. The current study is addressing emigration from Ireland and its national health system. The sample included graduates from EU in addition to the nationals of Ireland as one category. No doubt, such sample is not representing a homogenous targeted sample of Irish nationals and so affects the analysed choices. As they are studying the effects of Irish national health system, authors need to reconsider this issue and include only nationals of Ireland. I find it difficult to justify recommending the study for publication. Certainly, nationals from other EU countries have different reasons for "emigrating" from Ireland when compared to nationals of Ireland. The migration of doctors from one EU member state to other EU member state is a completely different and complex issue.

In response to Reviewer 2 comments, non-Irish passport holders (n=13) were removed from the sample and the analysis was re-run using only nationals of Ireland (Irish passport holders). This made no substantial difference to the findings (other than strengthening many associations).
As the primary outcome of interest was to examine factors associated with the emigration of Irish doctors from Ireland (and not the migration plans of non-nationals, even if they had graduated from Irish medical schools) non-Irish passport holders (n=13) and those who did not respond to the item on migration (n=9) were excluded from further analysis, providing a final sample size of n=210. While the response rate of 48% (32% of the original cohort) was adequate, the sample size was only sufficient to identify factors associated with intention to migrate, and was not sufficient to systematically examine interactions between all predictor variables.