

TITLE PAGE

Undergraduate general practice exposure is correlated with likelihood of entering GP training

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ABSTRACT 248

Background

It has been suggested that the quantity of exposure to general practice teaching at medical school is associated with future GP career choice.

Aim

To examine the relationship between general practice exposure at medical school and the percentage of each school's graduates appointed to a general practice training programmes after foundation training (postgraduate years 1 and 2).

Design and Setting

Quantitative study of 29 UK medical schools.

Method

The UKFPO destination surveys of 2014 and 2015 were used to determine the percentage of graduates of each UK medical school which was appointed to a GP training programme after foundation year 2. We used the Spearman rank correlation to examine the correlation between these data and the number of sessions spent in placements in general practice at each medical school.

Results

A statistically significant association was demonstrated between the quantity of authentic general practice teaching at each medical school and the percentage of its graduates which entered GP training after Foundation programme year 2 in both 2014 ($r=0.41$, $p=0.027$) and 2015 ($r=0.3$, $p=0.044$).

Discussion

We have demonstrated, for the first time in the United Kingdom, an association between the quantity of clinical GP teaching at medical school and entry to general practice training. This study suggests that an increased use of and investment in undergraduate general practice placements would help ensure that the UK meets its target that 50% of medical graduates enter general practice.

Keywords

Undergraduate teaching; general practice; career destination

How this fits in

We know that undergraduate medical education influences student career choices, and that a large proportion of undergraduate medical teaching is delivered in the secondary care setting. Currently, there is a great shortage of doctors entering general practice training. The English Department of Health has set a target that 50% of postgraduate medical training places would be allocated to general practice, a target which has been challenging to meet. We have shown an association between increased undergraduate general practice exposure at medical school and more graduates entering general practice training. Medical schools need to seriously consider their role in addressing the service needs of the nation, the GP recruitment crisis and the contributions they can make through revising their courses.

BACKGROUND

The Department of Health has set a target that 50% of postgraduate medical training places will be allocated to general practice (GP).[1] However, the proportion of UK medical graduates which intends to enter GP is well below this target and the proportion is decreasing rather than increasing:[2,3] 17.4% of F2 doctors were appointed to GP training in 2015.[4] UKFPO (UK Foundation Programme Office) data also highlight a variation (7.3-30%) in the proportion of graduates from UK medical schools which enters general practice training post Foundation Year 2.[4]

Undergraduate medical education influences student career choice [5, 6] and it is important that universities accept that they have a responsibility to promote GP as a career to medical students.[7, 8]. The vast majority of undergraduate medical education in the UK has traditionally occurred in a secondary care setting.[9] The RCGP first pushed for primary care involvement in 1952 but it took more than 30 years for significant increases to be seen [10, 11] with recent calls to expand this further.[6, 12] Some of the newer medical schools are innovative in this respect, delivering up to a third of their curriculum in the community.[13]

A number of factors underlie the desire for more teaching in the community. Firstly, learning experiences in hospitals can be hampered by shorter inpatient stays, increasing sub-specialisation, lack of supervision [14] and increasing regulation. Secondly, learning experiences in the community are increasingly perceived as fulfilling many of the key objectives for medical student learning.[15 16]

It has been suggested and even presumed that the quantity of exposure to GP teaching at medical school is associated with future GP career destination.[11, 16] However, others have questioned this [17] and the drivers of career choices while students are at medical school are undoubtedly complex.[18]

Our aim was to examine the relationship between the amount of time spent in primary care as a medical undergraduate, and subsequent appointment to a GP training programme post-Foundation

training. If such a link is confirmed, it would strengthen the call for increased exposure of medical students to General Practice in help fulfil the Department of Health mandate.

METHOD

Data collection

The following question set was sent via email to the current heads of GP teaching at all 31 UK medical schools:

“What exposure to primary and community care did your 2008 entry students experience (list in as much detail as needed)? Was this identical to the 2007 entry students (if not, how did it differ)?”

The data was returned via email and the universities that had not responded were prompted to reply until a 100% response rate was achieved. Two schools’ data were excluded: one because it is a new school with no available UKFPO data and the other as it is a graduate entry only school:

Internationally, there is evidence that medical students who are graduates (extra 1) and mature (extra 2 and 3) are more likely to choose careers in general or family practice or in rural and shortage specialities (extra 4).

The information submitted by each medical school was reviewed and the total number of sessions of clinical or “authentic” sessions [18] (such as teaching in Practice with patient contact) and non-clinical sessions (such as group tutorials in the medical school) determined for each school.

The UKFPO destination surveys of 2014 and 2015 [4, 19] were used to determine the percentage of foundation doctors who were appointed to a GP training programme for each UK medical school.

Analysis

Spearman’s rank correlation[20] was used to examine the correlation between the number of sessions spent in clinical placements in general practice (authentic placements) and all teaching

sessions delivered by General Practice teachers at each medical school and the percentage of F2 (Foundation doctors year 2) graduates who were appointed to GP training programmes two years after graduation. The data from the 2007 entry students were correlated with the 2014 destination survey results and the 2008 entry students compared with the 2015 destination survey; the majority though not all students would have completed five years as an undergraduate and then subsequently two years as a Foundation doctor.

RESULTS

Data from 29 medical schools were included in the analysis. The median total number of sessions spent in General Practice per medical school was 106 (range 44 to 376; interquartile range 83 to 158) and the median number of authentic General Practice sessions was 80 (range 32 to 299; interquartile range 67 to 95). No schools reported any changes in the number of sessions for the entry years 2007 and 2008. The median percentage of F2 graduates selected for GP training per medical school in 2014 was 20.6% (range 11.3% to 31.6%; interquartile range 18.5% to 25.5%) and, in 2015, 17.5% (range 7.3% to 30%; interquartile range 12.6% to 22.2%). A statistically significant association was demonstrated between the quantity of authentic GP teaching per medical school and the percentage of their F2 graduates who selected GP training programmes in both 2014 ($r=0.41$, $p=0.027$) and 2015 ($r=0.3$, $p=0.044$). See figures 1 and 2.

Comparison of total GP teaching exposure, which includes for example small group teaching in the medical school provided by GPs, with the percentage of F2s appointed to GP training programmes for 2014 and 2015 demonstrated a non-significant association ($r=0.32$, $p=0.085$ and $r=0.23$, $p=0.227$ respectively).

DISCUSSION

Summary

We have clearly demonstrated, for the first time in the United Kingdom, an association between the quantity of clinical GP teaching at medical school and later career destination of general practice after Foundation training. This association, previously presumed but not demonstrated, has serious implications for medical schools and the Department of Health. It supports the stance adopted by House of Commons Committee report of April 2016 that “Medical schools should recognise that they have a responsibility to patients to educate and prepare half of all graduates for careers in general practice... Those medical schools that do not adequately teach primary care as a subject or fall behind in the number of graduates choosing GP training should be held to account by the General Medical Council.”[8]

Strengths and limitations

A strength of this study is that we have included data from all UK medical schools with an undergraduate entry in the relevant time frame. This improves the validity of the data when being applied to UK medical schools. Also, this is the first published study to review the association between the amount of time spent in primary care as a medical undergraduate, and subsequent appointment to a GP training programme after Foundation training and to look at a national as opposed to regional or single school datasets.

Potential limitations of the study need to be recognized: association does not prove causation and it can be reasonably hypothesized that potential medical students who are attracted to General Practice as a career may be attracted to medical schools known to provide more teaching in primary care. The statistical association we have found would suggest that other factors are also implicated and certainly the striking variation of graduates appointed to GP training programmes across the medical schools has been highlighted and is worthy of further exploration [6]. The data collection relies on the accuracy of submissions from each medical school and, in integrated curricula, schools may be unable to accurately attribute clinical course time clearly to general practice or hospital. In

our analysis, we have assumed that all students graduated 5 years after entry so ignores the effects of 4 year graduate entry courses in schools with parallel 4 and 5 year courses, 6 year courses with an intercalated degree, intercalation and resits. We consider that this is reasonable given that the pace of curricular change is slow. We have also relied on data for F2 doctors: Many will select GP as a career later but there is no reason to suggest why this would vary across medical schools. And finally, we have demonstrated a relationship between exposure and the percentage of F2 doctors appointed to GP training programmes and used this as a proxy for career choice; we are aware that there may be other factors other than the candidate's choice that determines their final career outcome such as selection procedures and competition rates.

Comparison to existing literature

Until now, the empirical UK literature on career choices has either been that of Goldacre's group [2, 3, 21-24] which was based on national surveys of postgraduate career intentions and choice, or smaller quantitative and qualitative studies.[18, 25] Internationally, evaluations of the impact of medical curricula have demonstrated that embedding medical education in underserved (usually rural) communities and targeted recruitment to medical school from those communities has increased the number of graduates who choose to return to practice in those communities.[26-31] This is the first study to demonstrate an association between the number of days students spend in authentic placements in general practice and the likelihood of them entering general practice training.

Implications for research and medical school practices

Further research is needed to confirm or refute the association we have identified, to explore what factors within "authentic teaching" may be relevant and to further interrogate the intertwining factors of recruitment and teaching exposure. Nicholson et al [18] have started that exploration but as they observe, further work is needed to fully understand the factors (of which the medical curriculum and exposure to general practice are two) which impact on eventual career choice.

Nevertheless, in order to reflect the changing landscape of healthcare, universities need to urgently consider means to increase the amount of primary care exposure within their curriculum. This study suggests that an increased percentage of medical undergraduate funding should be directed towards general practice placements in order to address the crisis in recruitment to primary medical care. Furthermore, because of the uncertain and complex funding arrangements currently in place within medical schools, we recommend that this money is ring-fenced to ensure that it reaches its intended destination safely.

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ETHICAL APPROVAL

No ethical board permission required

COMPETING INTERESTS

We would like to acknowledge that all the authors are General Practitioners who all believe that General Practice can and should make a major contribution to undergraduate medical teaching.

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CONTRIBUTORSHIP

The study proposal was developed jointly by HA, RKM and AH. The data were collected by HR and analysed by HA with input from RKM and AH. The first draft of the paper was written by HR and HA and amended by RKM and AH. All authors approved the final version of the paper.

DATA SHARING

Extra data are available by emailing hugh.alberti@newcastle.ac.uk.

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Extra 4:

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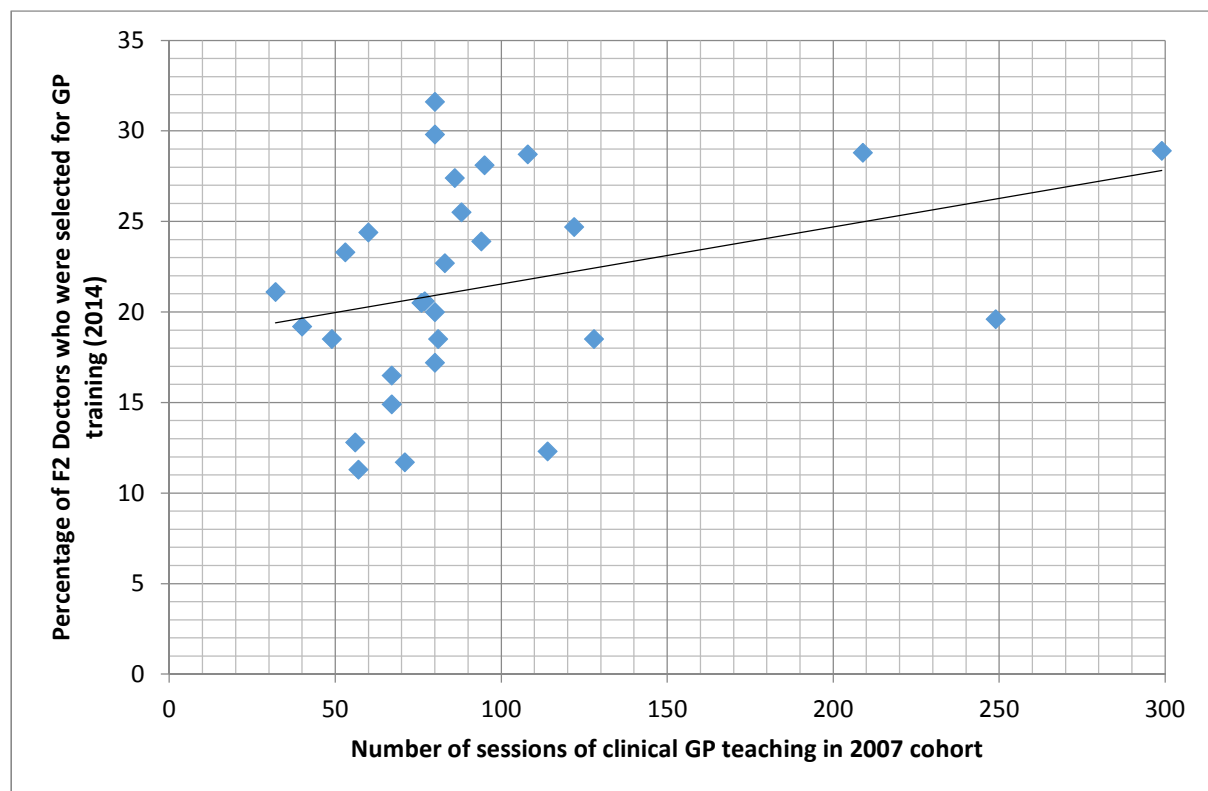


Figure 1

Scatter diagram of the number of sessions of clinical (authentic) placements in general practice for the 2007 entry cohort against the proportion of F2s who were selected for GP training in 2014 per medical school

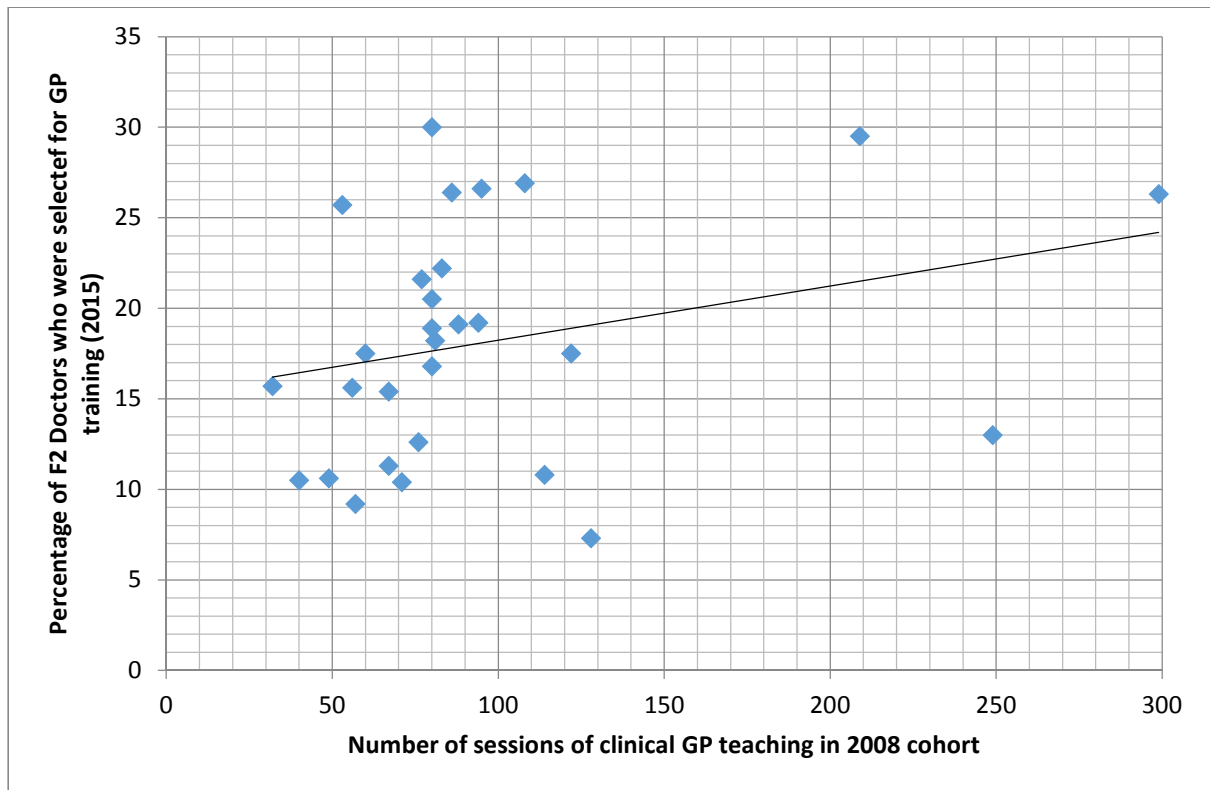


Figure 2

Scatter diagram of the number of sessions of clinical (authentic) placements in general practice for the 2008 entry cohort against the proportion of F2s who were selected for GP training in 2015 per medical school