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## Medical undergraduate primary care teaching across the UK: what is being taught?

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## RESEARCH

# Medical undergraduate primary care teaching across the UK: what is being taught?

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### ABSTRACT

**Background:** All UK medical schools use primary care settings to deliver their undergraduate courses. However there is no national undergraduate curriculum for primary care and it is thought that the learning objectives of primary care teaching vary considerably between medical schools. **Aim:** The overall aim was to establish what is being taught within and by primary care across UK medical schools. We did this by collating learning objectives from the primary care department at each school. In order to categorise and compare the list of learning objectives from each school we mapped the learning objectives to the postgraduate curriculum of the Royal College of General Practitioners (RCGP). **Design and setting:** Cross sectional survey sent to heads of teaching of primary care at all 32 UK medical schools. **Method:** GP teacher handbooks for primary care modules at each medical school were requested. Information was extracted based on key headings from the RCGP postgraduate curriculum. **Results:** Topics taught by primary care at all medical schools include: consulting and communication skills, leading and working in teams, and developing yourself and others. Novel topics, taught at a few medical schools include: learning disability, genetics and multi-morbidity. The majority of medical schools address aspects of over half of the RCGP postgraduate curriculum headings in their learning objectives for primary care. **Conclusion:** This project provides valuable information about primary care teaching at an undergraduate level across the UK. Although it confirms widespread variation in learning objectives, it also highlights considerable common ground and opportunities for sharing teaching resources between schools.

### ARTICLE HISTORY

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### KEYWORDS

Primary health care; undergraduate; curriculum; medical schools; general practice; family practice; learning objectives

### What is already known in this area

All UK medical schools use primary care settings to deliver their undergraduate courses. There is uncertainty over the extent to which primary care is just used as a venue to deliver general medical education or whether specific primary care topics are taught.

### What this work adds

This work identified a widespread variation in learning objectives. However, it also highlights significant common ground that could provide a foundation for a national undergraduate primary care curriculum whilst still encouraging and encompassing individual variety. By mapping current primary care teaching across the UK we have also created a resource to aid collaboration between medical schools on the development of their undergraduate primary care curricula.

### Suggestions for future work or research

Further research is needed to explore the current undergraduate primary care curricula in more depth. In particular to understand: hidden curricula that are not obvious from the GP teacher handbooks; how individual schools approach different topics; how primary care content relates to medical student preference for general practice as a career; and how well it prepares them for this specialty.

## Introduction

Primary care teaching for undergraduate medical students has increased considerably over the last 30 years. [1] Several influential documents including the Mackenzie report [2] and *Tomorrow's Doctors* [3,4] have highlighted

the need for increased teaching outside hospital and have influenced the shift from ad hoc to more structured primary care teaching. A recent survey of UK medical schools [5] demonstrated that all schools have a department of primary care and teach some primary care but this

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varies in the nature, amount and purpose with teaching ranging from 3% to as much as 50% of the curriculum. However we do not know what aspects of primary care are actually taught.

Unlike specialties such as obstetrics and gynaecology [6] and psychiatry [7] there is no national curriculum for undergraduate primary care and primary care teaching is determined locally by primary care teaching teams with no systematic collaboration between medical schools. The General Medical Council's (GMC's) declaration of its aspiration for a national medical examination, the recent release of the commission on generalism [8] and the shape of training review,[9] all suggest an increasing need for generalist broad based training. It can be argued, therefore, that there is an increasing need for primary care learning objectives to be standardised across the UK.[10] To do this, we need to start by establishing what is already being taught.

The purpose of this study therefore was to collate learning objectives from all 32 medical schools to map primary care teaching across the UK.

## Method

A letter was sent out to primary care heads of teaching at each medical school in January 2013 outlining the aims of the project and requesting their primary care curricular documents. Heads of teaching who did not respond to the initial invitation were sent a reminder. Documents were collected up until December 2013. Where possible, any missing data were clarified with the individual heads of teaching. For example, if handbooks were not received for all years, it was confirmed that primary care teaching did not take place in the other years; and if a handbook referenced another module that was not provided then aims and objectives for this were also requested.

Although there is no national undergraduate curriculum for primary care, the Royal College of General Practitioners (RCGP) has developed a consensus document [11] on learning outcomes for postgraduate primary care, which is largely based on the European Academy of Teachers in General Practice/Family Medicine (EURACT) consensus for core primary care objectives.[12] Due to the large amount of textual information that had to be processed, the main headings from this core curriculum statement were used as a template to help structure and collate information from the current undergraduate primary care teaching (see Table 1). An Access data base was created using these headings in order to provide an overview of what is being taught in each year at each medical school.

The aims and objectives from the handbooks as well as relevant information from the main text were extracted. The data were either mapped under one of the RCGP

**Table 1.** Number of medical schools teaching RCGP provisional enhanced topic headings.

RCGP heading (listed in order of prevalence)	Number (%) of medical schools
Consulting and communicating	30 (100)
Leading and working in teams	30 (100)
Developing yourself and others	30 (100)
Diagnostic and treatment services	28 (93)
Promoting health and preventing disease	27 (90)
Mental health	25 (83)
Prescribing safely in the community	25 (83)
Improving safety and quality of care	24 (80)
Metabolic health	24 (80)
Cardiovascular health	23 (77)
Musculoskeletal	23 (77)
Respiratory	23 (77)
Urgent and emergency care	23 (77)
Digestive health	22 (73)
Neurology	22 (73)
Skin health	22 (73)
Women's health	22 (73)
Child health	21 (70)
ENT, oral and facial	21 (70)
Renal and urology	21 (70)
End of life care	20 (67)
Supporting carers and families	20 (67)
Survive, recover, relapse	19 (63)
Harmful behaviours	18 (60)
Older adults	18 (60)
Sexual health	17 (57)
Unexplained problems	13 (43)
Haematology	11 (37)
Eye health	10 (33)
Infectious disease	10 (33)
Intellectual disability	6 (20)
Multimorbidity	6 (20)
Genetics	5 (17)

headings or recorded as text if it did not specifically fit to one of these categories. Two primary care academics (VB & AB) independently extracted this information for 61 documents from four medical schools chosen at random. The outcomes were compared and any discrepancies in interpretation of the headings were discussed with a third primary care academic (MR) to achieve consensus. A protocol for data extraction was finalised and a further 40 handbooks from three medical schools were mapped individually by AB and VB to confirm agreement. This agreement was analysed using STATA version 11. The remaining handbooks were mapped by one researcher (VB).

For each medical school each student year was mapped separately. Common topics that were not explicit from the RCGP headings were defined by consensus within the research team as additional headings (see Table 2). If it was clear from the handbook that the authors had mapped the learning objectives to *Tomorrow's Doctors* 2009 [4] or to the RCGP postgraduate curriculum [11] this was also recorded. Other information of note that was recorded included: clinical skills teaching, provision of a core problem list and whether primary care was integrated across the medical school curriculum. The data were analysed descriptively using Access.

**Table 2.** Number of medical schools teaching additional topic headings.

Additional heading (listed in order of prevalence)	Number (%) of medical schools
Holistic care	30 (100)
Chronic disease & disability	29 (97)
Ethics and professionalism	28 (93)
Primary care environment	27 (90)
Rationing and commissioning	18 (60)
Minor illness	16 (53)
Inequalities	7 (23)
Occupational medicine	6 (20)
Complementary medicine	5 (17)
Domestic violence	4 (13)
Obesity	4 (13)
Normality	4 (13)
Pain	4 (13)
Self-care	1 (3)
Nutrition	1 (3)

## Results

Thirty out of the 32 UK medical schools supplied a total of 243 documents. The number of handbooks provided by each medical school varied greatly in number ranging from 1 to 56. Those medical schools which provided the most number of handbooks were those which taught primary care in every year of their programme. Some medical schools also provided supplementary handbooks for individual workshops and seminars.

St Andrews and Durham only offer a 3 year pre-clinical course so these medical schools were excluded from further analysis.

### What aspects of primary care are being taught?

The RCGP curriculum headings taught at all medical schools are: consulting and communication skills, leading and working in teams and developing yourself and others (Table 1). Other common topics include: diagnostic and treatment services (93%) and health promotion and prevention (90%). Novel RCGP topics taught at a minority

of schools include: intellectual disability (20%), genetics (17%) and multi-morbidity (20%). Common topics specifically recorded that were not explicit from the broad RCGP curriculum headings include: holistic care, chronic disease and disability and ethics and professionalism. Pain, self-care and nutrition are additional topics specifically taught at a minority of medical schools (Table 2).

It was clear from the handbooks received that the majority (17, 56%) of medical schools explicitly based their primary care curriculum on *Tomorrow's Doctors* learning outcomes, with only five mapping to the RCGP postgraduate curriculum. It was unclear from the handbooks of the remaining eight medical schools what, if any, template had been used to develop their curricula. Despite this, 22 (79%) medical schools include aspects of over half of the 33 RCGP postgraduate curriculum headings and 13 (46%) cover over 80% of the curricula (Figure 1). Medical schools which covered a minority of the RCGP headings tended to use primary care attachments to teach core concepts of patient care rather than teach about specific primary care disease presentations.

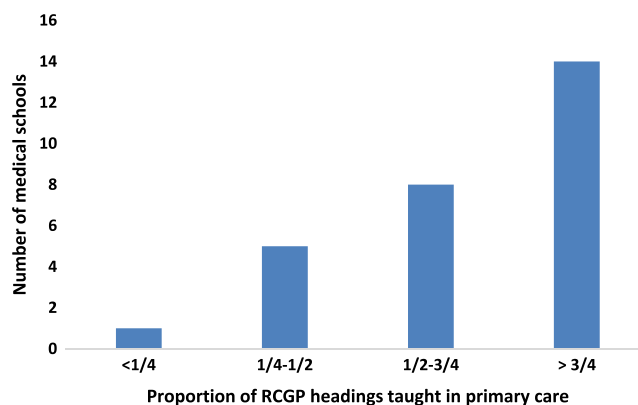
### Where is primary care taught across medical school curriculum?

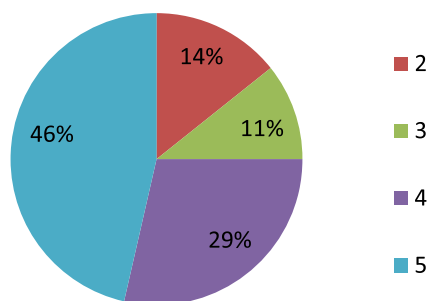
Almost half of the 28 five year medical courses that provided handbooks taught primary care in all five years of the medical undergraduate curriculum but 25% of medical schools taught in only two or three years (Figure 2).

The first year at medical school is the year in which primary care is taught most commonly out of all the years (Figure 3).

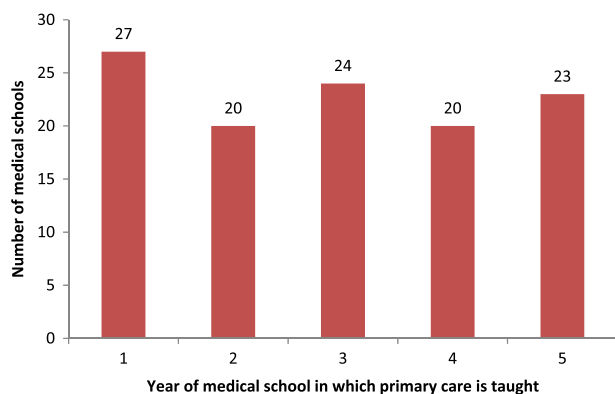
### Additional findings

Seventeen medical schools (56%) had a list of core problems that students are expected to learn about during their primary care attachments. These varied in nature

**Figure 1.** Proportion of RCGP headings taught in primary care at each school.



**Figure 2.** Number of years in which primary care is taught as a percentage of medical schools.



**Figure 3.** Years of the medical school curriculum in which primary care is taught.

between medical schools but mainly comprised a list of core clinical conditions that students were expected to know about by the end of their placement. Twenty medical schools (67%) use primary care modules to teach clinical skills as part of the core aims and objectives. It was clear from the handbooks of 11 medical schools (35%) that primary care teaching is integrated across the whole medical curriculum. This meant that each module of the course that concentrated on a clinical specialty included teaching about the primary care aspects of this topic alongside hospital teaching.

## Discussion

This project provides valuable information about core primary care learning objectives at an undergraduate level across the UK. Although it confirms a widespread variation in learning objectives, it also highlights significant common ground with the majority of medical schools covering aspects of the majority of the RCGP postgraduate primary care headings.

The primary care curriculum at most schools provides a firm foundation for the RCGP postgraduate curriculum. The strongest area of consensus is on generic skills (consultation and communication skills, working in teams,

personal development) and general themes within primary care (disability, management of chronic disease and holistic care). There is less agreement about the specific clinical topics taught in primary care and primary care as a specialty but over three quarters of schools teach about the role of primary care in patients with mental health problems, metabolic disease, cardiovascular disease, respiratory disease, musculoskeletal problems and urgent care.

## Strengths and limitations

This is the first study looking at all the objectives of primary care teaching at UK medical schools. A major strength of this piece of work is the high response from the medical schools. Only two medical schools did not supply their handbooks. They were both new medical schools but we have no reason to believe that the content of their curriculum would significantly affect our findings. The handbooks provide objective evidence of what aspects of primary care students are expected to know about by the end of the attachment. When compared, agreement between researchers reviewing the handbooks was good, so we believe the findings are an accurate representation of primary care curricula across the UK, as stated in the supplied handbooks.

However there are several limitations to this work. Some curriculum headings were more ambiguous than others, for example, holistic care, and this corresponded to a lower inter-rater consensus. In addition some medical schools, especially those with integrated teaching, did not have specific primary care handbooks or did not have clearly defined learning objectives. Also, just as stated learning objectives may not be achieved, so learning not covered by the handbooks will also take place. This could be substantive and circumstantial (e.g. learning from a patient encounter during a routine surgery) or part of the 'hidden curriculum' (e.g. reinforcing/challenging students' perceptions of the role of primary care clinicians). For example, we know that Bristol has a workshop led by general practitioners (GPs) that focuses on communicating with people who have a learning disability but as this is not documented in our GP teacher handbook, it does not appear in our findings. Further research, possibly qualitative, with course developers and students, would help address this issue as well as enabling us to explore the hidden curricula.

By using broad topic headings, we are only able to provide a broad overview of curriculum coverage rather than in-depth analysis. Further research would be needed to explore the difference in depth and spirality of teaching. It must also be noted that curricula are constantly evolving so some of the information presented will already be out of date.

### Comparison with existing literature

Almost all medical schools teach primary care in the first year of the course. This finding is consistent with a national survey which showed that most medical schools use primary care as a vehicle for providing early patient contact in the first two years of the course.[13]

Several studies have shown that teaching in primary care encourages more students to consider a career in general practice.[14–17] Therefore, with the current difficulties in recruitment to general practice there is some pressure on medical schools to increase the amount of time that students spend in primary care. We know that on average primary care occupies a small part of the total curricula at medical schools [5] but this study shows that half of the UK medical schools teach primary care in all five years of the course.

For a long time there has been a debate within academic departments of primary care about whether primary care teachers should focus on the delivery of a curriculum that is owned by primary care or whether they should provide a primary care perspective on the entire undergraduate course. Several studies have shown that modules in primary care can enhance students' learning about other specialties such as obstetrics and gynaecology [18] and psychiatry.[19] This study shows that the majority of schools contain these topics in their learning objectives for primary care and in one-third of medical schools primary care teaching is integrated with the teaching of all other specialties.

At a workshop convened in 1996 there was no enthusiasm amongst the leaders of undergraduate medical teachers to create an undergraduate curriculum for primary care.[20] Since then UK academic departments of primary care have collaborated in the teaching of generic skills needed by all doctors, particularly communication skills.[21] This may explain why 'consulting and communicating' is one of the most commonly taught topics in primary care. The other two most commonly taught topics are also generic skills: leading and working in teams and developing yourself and others. These could be taught by any specialty, in any clinical setting. On the other hand topics such as multi-morbidity and intellectual disability, which seem to fall naturally within the remit of primary care, appear within the aims and objectives of primary care teaching at a minority of schools. This is a balance that needs to be readdressed.

### Implications for research/practice

The findings of this study and the database of primary care teaching across the UK that has been developed could be used by medical schools as a tool to develop their

curriculum and could encourage collaboration between medical schools, to share resources and develop new primary care teaching. For example, topics identified in this project that could be more widely addressed by medical schools include normal health and occupational medicine.

Further research would help to explore current undergraduate primary care teaching in more depth. Analysis of the core problem lists for primary care (that have been created by over half of the medical schools) may reveal more about the level of consensus between the schools and might provide the basis for a national undergraduate curriculum in primary care. Further research would also help to understand hidden curricula not obvious from student handbooks, how individual school approaches and primary care content relates to medical student preference for general practice as a career and how well it prepares them for this specialty.

### Ethical approval

The Bristol University Faculty of Dentistry and Medicine ethics department deemed that the collection of curriculum handbooks for this study did not require ethical approval.

### Competing interests

AB was a member of the RCGP Curriculum Development Committee.

### Acknowledgements

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### Disclosure statement

No potential conflict of interest was reported by the authors.

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