

Undergraduate medical education in Scotland:

Enabling more general practice based teaching

FINAL REPORT

October 2019

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Recommendations

Recommendation 1 (Scottish Government and Health Boards)

Capital investment in primary care by Health Boards must include provision of fit for purpose space that can be used for educating the primary care workforce of the future.

Recommendation 2 (Scottish Government)

The new NHS Scotland Capital Investment Strategy is due to be published shortly. It is recommended that this should make the case for investment in primary and community care facilities recognising specifically the need to include facilities to train the workforce of the future.

Recommendation 3 (Scottish Government)

The SWAN (Scotland wide Area Network) programme should develop direct ties and representation with the R100 (Reaching 100%) delivery team in Scottish Government both to better understand the timeframes for the remaining very hard to reach locations and to influence decisions on how the R100 priorities are decided about which locations should be prioritised i.e. those where GP surgeries are without connectivity and could therefore have access accelerated.

Recommendation 4 (Universities and Health Boards)

Universities currently have information on problems with broadband and Wi-Fi access for their students. To provide a national picture, Universities and Health Boards should survey digital access for undergraduate teaching practices and premises across Scotland and plan to address access difficulties where this is possible, over the next 12 months.

Recommendation 5 (Universities/ NES ACT)

The tariff for clinical teaching in primary care (category A) should rise from £40 per student per session to £85. A ceiling value of £255 for three or more students should apply. Current falls in practice teaching capacity across Scotland suggest that this should be implemented as quickly as possible.

Recommendation 6 (Universities/ NES ACT)

Further work needs to be done by NES together with relevant stakeholders to streamline the current range of category B tariffs in Primary Care ACT. This should produce a simplified range of tariffs applicable to all medical schools within 12 months.

Recommendation 7 (Universities/ Board for Academic Medicine/ Universities Scotland/ Scottish Funding Council)

As part of progressing UG education in primary care, each medical school should develop over the next 12 months the outline implementation plan that they have submitted (chapter 5) for increasing teaching in primary care, as well as a strategy to develop and grow the GP educator workforce to increase teaching capacity. This should ensure that GP educators have a strong and effective voice within school decision making structures.

Recommendation 8 (Universities/ BfAM/ Universities Scotland/ Scottish Funding Council)

A national level group for GP Heads of Teaching or equivalent in Scotland reporting to the Scottish Deans Medical Education Group should be formally established. The aims of this should be to strengthen educational leadership, build on the implementation plans referred to in recommendation 7, and share innovations to increase capacity and further curricular development.

Recommendation 9 (Universities/ Health Boards/ Board for Academic Medicine/ Universities Scotland/ Scottish Funding Council)

Monitoring of these recommendations, supported by the GP Heads of Teaching group, should be undertaken with reports six monthly to the Scottish Deans' Medical Educator Group for review by the Board for Academic Medicine and Scottish Government. There should be an independent review of progress after 12 months.

Recommendation 10 (Universities/ Scottish Funding Council)

The investment involved in increasing undergraduate education in primary care requires rigorous evaluation from the outset. This should include (i) the indexing of all medical students at Scottish Universities at matriculation with a view to linking this data with existing data available through UKMed (ii) further educational research into attitudes of students and graduates in relation to careers in GP, all with a view better to understand the career choices of graduates. A programme of funded educational research will be required.

INTRODUCTION

This report reflects a great deal of work done over the past year by the *Increasing Undergraduate Education in Primary Care* group. I would like to express my thanks to all members of the group for their contributions and commitment to this work.

Change in undergraduate medical education in Scotland is needed because of increasing numbers of people with complex multimorbidity and because of the rapid demographic shift in our population towards older people. This has substantially increased demands for health and care services in hospitals, primary care and in the community. There is a consensus, supported by robust evidence, that developing primary and community services is better for older people and better for population health. High quality accessible hospital care is certainly required, but its delivery is supported and best facilitated by admitting only those whose health and care needs cannot be delivered in the community. This requires that clinical capacity within general practice based primary care is expanded, a key aim of Scottish Government policy. This also requires a focused approach to increasing the GP workforce.

There are several strands to increasing the GP workforce. This report focuses exclusively on the potential contribution of increasing undergraduate education in primary care. The last few years have seen two major UK reports, *By Choice, not by Chance* (HEE/MSc 2016) and *Destination GP* (RCGP/MSc 2017) which give clear guidance for what needs to be done in Scotland. Addressing tribalism and negativism, changing financial models underpinning education, providing quality placements in general practice that demonstrate the difference it can make, and providing positive role models for students are all essential. Increasing near peer teaching is imperative. Academic general practice leadership is vitally important so that students recognise the breadth and complexity of general practice care, and so that they become aware of and are stimulated by the complex intellectual challenges. The establishment of the short life group on academic training pathways in general practice in Scotland reporting to the Board for Academic Medicine, under Professor Frank Sullivan as Chair, is an important parallel development to this group's report.

It became clear, during the course of the 15 months of the life of this group, that a strategic approach to address these issues that have to date limited general practice education, and setting out practical ways to address them, was needed. In addition, the recommendations offer an opportunity to look creatively at expanding placements in both remote and rural practices and areas of deprivation. Out of hours GP services, though currently under workforce pressures, have great potential for more undergraduate general practice education.

It is also very clear that developing improved working across and between many of these organisations will be necessary for an increase to be achieved and maintained. In particular, the output of this group offers an opportunity to strengthen links between undergraduate and postgraduate medical education, and between Universities and Health Boards. Several examples of this are given in the report.

My recommendations, informed by the work of the group, cover three areas: addressing the issues identified by the teaching capacity survey, strengthening the GP educator workforce to deliver increased capacity to teach, and monitoring and evaluation of the required changes.

The teaching capacity survey showed that lack of space in primary care is a major issue, exacerbated by the growing multidisciplinary workforce. Further investment in premises is urgently needed. Policy should dictate that any new capital developments must always include provision for educating the primary care workforce of the future.

Digital infrastructure is improving rapidly through the roll out of the Scotland-wide Area Network (SWAN). However, coordination between this programme and the R100 Scottish Government project (“Reaching 100%” or R100 commitment) to provide super-fast broadband to all Scottish homes and businesses by 2021, would enable symbiotic success of these related activities. Access problems which interfere with education and assessment persist, especially in remote and rural areas. A survey of teaching practices to identify issues raised by students and faculty and a plan to address these within 12 months is needed.

The number of GP undergraduate teachers across Scotland is falling; inadequate reimbursement is a directly contributing factor. The valuable work undertaken by the NES Primary Care ACT review suggests that the category A tariff for clinical teaching should rise to £85 per session. The complex Category B tariffs require further work to produce a simplified range within 12 months.

More undergraduate teaching in primary care requires a strengthened voice for GP educators within medical schools. Each medical school should further develop their current commitments to expand undergraduate teaching in primary care, outlined in chapter five, as well as developing a strategy for developing and growing the GP educator workforce that will be needed to deliver this. A national level group for GP Heads of Teaching is proposed to strengthen educational leadership, encourage innovation and contribute to monitoring progress on these recommendations.

These substantial changes of investment require both monitoring and rigorous evaluation. I suggest six monthly monitoring reports to the Scottish Deans’ Medical Educator Group with review by the Board for Academic Medicine. Evaluation should include educational research into the attitudes of students and graduates, as well as detailed tracking of career intentions and choice through UKMED.

All medical schools are, of course, required to produce pluri-potential doctors who meet the GMC Outcomes for Graduates. An increase in exposure to general practice and primary care will contribute to *all* graduates having a better understanding of how the NHS works as a system and how primary, secondary and social care can best collaborate for the benefit of our patients. As a senior medical educator in Scotland has suggested, these proposed changes can help to produce *‘not just more GPs, but really good doctors.’*

There is now a real opportunity to achieve this through an evidence-based approach to undergraduate medical education, founded, in Sir Lewis Ritchie's words, on 'pulling together'. It is important that we grasp it. *Carpe diem*.

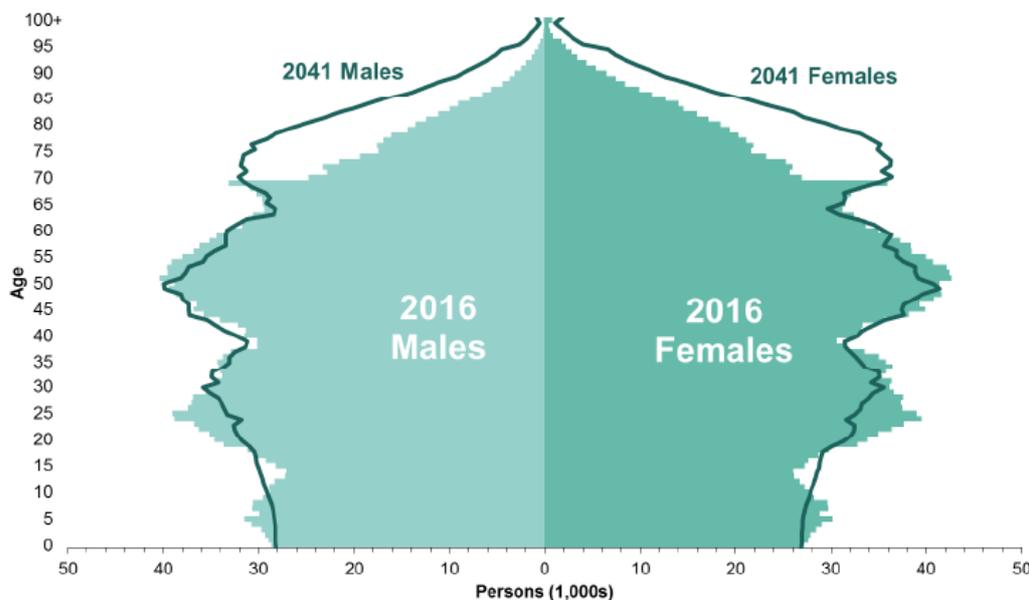
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August 2019

CHAPTER ONE: CONTEXT

Introduction

Across the UK and internationally, demand on our primary care services is steadily increasing due to a combination of an ageing population, rising levels of multi-morbidity and increasing patient expectations. According to National Records of Scotland (NRS, 2017) the number of people aged 65 and over is estimated to increase by around 45% from 1.00 million to 1.44 million by 2041, leading to substantial rises in those with long-term conditions and a rising demand on services. To be fit for purpose, the healthcare system *must* innovate and modernise, focus on developing preventative models of care to improve long-term outcomes. It must be financially sustainable and structured in such a way as to reduce pressure on the workforce while meeting the needs of the population of Scotland.

Figure 1: Estimated and projected age structure of Scotland's population, mid-2016 and mid-2041



To deliver this modernised health care system NHS Scotland has committed to the Chief Medical Officer's vision of *"Realistic Medicine"* (Scottish Government, 2016a); putting the person receiving health and care at the centre of decision-making and encouraging a personalised approach to their care. Its aims of reducing harm and waste, tackling unwarranted variation in care, managing clinical risk, and innovating to improve, are essential to a well-functioning and sustainable NHS. The CMO has stated that by 2025 all health care professionals will deliver care aligned to these principles. In order to realise this ambition, it is imperative that we examine how and where we educate our future health professionals.

The *Health and Social Care Delivery Plan* (Scottish Government, 2016b) sets out the ambition of shifting the balance of where care and support is delivered from hospital to community care settings, and to individual homes when appropriate. To help deliver this, *The National Health and Social Care Workforce Plan: Part 3 – Improving workforce planning for primary care in Scotland* focusses on developing, building and expanding Multidisciplinary Teams (MDTs), made up of professionals each

contributing their unique skills to managing care and improving outcomes. This vision closely reflects the 21 underpinning principles on the future of primary care set out by Scotland's health professional groups in 2016 (QNIS,RCGP 2016).

The Plan sets out a series of ambitious commitments to significantly expand and strengthen the primary care workforce, backed by a historic increase in investment of £500m in primary care by 2021 (including £250 million in direct support of general practice). This includes an intention to deliver an additional 2,600 nurse and midwife training places by 2021-22, an investment in general practice and community nursing, increasing the number of health visitors by 500, and a commitment to recruit at least 800 (headcount) additional GPs over the next 10 years to address predicted increases in demand and ameliorate current vacancy and workload issues.

To help to increase the medical workforce (including the General Practice workforce) substantial investment in excess of £23 million has been made by Scottish Government. By 2021 undergraduate medical places will have been increased by 190 (22%) over 2016 levels. Additional places have been commissioned with a focus on encouraging graduates into shortage specialties and locations. Sixty new places commencing in 2019/20 will have a strong focus on general practice based education. In addition, 100 additional General Practice Specialty Training (GPST) posts were introduced in Scotland from 2016 to develop future capacity in the GP workforce.

The increase in the primary care workforce is being supported by refocused roles for clinical and non-clinical staff. Integrated community nursing teams will play a key role in planning, providing, managing, monitoring and reviewing care, building on current roles and best practice to meet the requirements of people with more complex health and care needs in a range of community settings. The new GMS Contract (Scottish Government/BMA, 2017) articulates a refocused role for GPs as Expert Medical Generalists (EMGs). This recognises the GP as the senior clinical decision maker in the community, who will focus on:

- undifferentiated presentations;
- complex care in the community;
- whole system quality improvement and clinical leadership.

Expert Medical Generalists will ensure strong connections to, and coordination with, the enhanced primary care team, health and social care community based services and with acute services where required. Better coordination of patient care, enabling access to the right professional at the right time, will deliver improved patient outcomes and a more proportionate use of resources.

Current context

Delivery of primary care

Under the current model of undergraduate medical education, approximately 90% of medical education is delivered in secondary care while an estimated 90% of patient contacts are delivered in primary care (Hobbs et al, 2016). Annually in Scotland we see over 4 million attendances in hospital outpatients and admit approximately 1.2

million people to hospitals (NHS NSS, 2018a). However, with an estimated 25 million appointments in general practice in Scotland annually (Scottish Government, 2016c) there is both necessity and opportunity to shift the balance of where future doctors learn and importantly what they learn. GPs in Scotland constitute 27% of the medical workforce.

Clinical decisions made in primary care impact, directly and indirectly, on activity and costs elsewhere in the healthcare system. This can include the number of unplanned admissions, rates of referral for new outpatient appointments, A&E attendances and prescribing costs. Primary care is therefore able to influence the level of demand for other care settings, acting as a 'navigator' to secondary care, developing anticipatory care plans, coordinating care, screening and health promotion. Primary care is particularly well placed to support self-management and shared decision-making by helping patients to fully understand and manage their problems, promoting a focus on prevention, rehabilitation and independence.

The dramatic demographic change in our population and shortening hospital stays are also both drivers for increasing undergraduate education in primary care. In addition, continuity of care is now recognised as making a significant contribution to reducing mortality (Pereira Gray et al., 2018). Continuity is important for high quality clinical care and also enables students to learn about the course of illness in patients. It may be easier to achieve through increased provision of general practice based primary care.

The work of the late Barbara Starfield over a period of more than twenty years showed that increasing the supply of primary care physicians (GPs) results in lower mortality from cancer, heart disease, and stroke as well as all-cause mortality; better self-reported health; reduced hospital admissions and decreased infant mortality. There is also an impact on health inequalities and a reduction in cost (see, for example, Caley, 2013).

Recently published evidence from the United States (Basu, et al., 2019) supports Starfield's findings. An increase in the supply of primary care physicians is associated with a decrease in population mortality, and conversely a decrease in GP supply is associated with an increase in mortality. Any reduction in GP numbers in Scotland relative to population is therefore a matter of serious concern. Don Berwick (Berwick, 2012), President of the Institute for Healthcare Improvement, and an important advocate for person-centred care, suggested this in his ten top tips for the NHS:

'Reinvest in general practice and primary care. These, not hospital care, are the soul of a proper, community-oriented, health-preserving care system. General practice, not the hospital, is the jewel in the crown of the NHS. It always has been. Save it. Build it.'

GP Workforce

The evidence tells us that high quality exposure to GP and primary care during the undergraduate years makes it more likely that students will choose a future career in

general practice (see, for example, Health Education England/ Medical Schools Council 2016). There are also likely to be benefits for all medical students from increased exposure to general practice in gaining an understanding of whole system working, and the importance for patients of being able to move seamlessly from primary to secondary care and vice versa.

There is new evidence from the Scottish Medical Education Research Consortium (SMERC) that medical students from less traditional backgrounds are more likely to work in underserved areas and in primary care on qualification (NES, 2018). In a large recently published study using the UKMED database (Kumwenda et al, 2018) of 6,065 doctors entering specialty training after Foundation Year 2 posts, they found that the trainees coming from a family background where no parent was educated to a degree level and those entering medicine as mature students were significantly more likely to choose general practice or mental health. This has clear implications for UK medical school admissions policy.

Bringing together the considerable weight of the educational and the health services evidence, it is therefore vital that we collaboratively find ways of increasing the amount of high quality undergraduate teaching that takes places in primary care and by GPs during the undergraduate years. The Scottish Funding Council (SFC) has set out an aspiration in its outcomes agreement with Scottish universities, to work to increase the percentage of teaching that takes place in general practice to 25% of the clinical curriculum. All of this provides a useful impetus for all involved to work together to increase undergraduate education in primary care.

The desire to increase education in primary care needs to be seen in the context of a primary care system that is already under considerable pressure, with nearly a quarter (24%) of GP practices responding to the 2017 Primary Care Workforce Survey reporting GP vacancies, compared with 9% in 2013 (NHS NSS, 2018b). In addition, 6% of responding GP practices reported vacancies for registered nurses. Workload challenges are well documented. 37% of Scottish GPs feel overwhelmed on a weekly basis (RCGP Scotland 2019). Despite these pressures, patients remain highly positive of their experience of the health service, with 83% of people rating the overall care provided by their GP practice as good or excellent in 2017-18.

The current workload stresses are exerting considerable pressures on the ability of primary care to deliver undergraduate and postgraduate teaching. Scottish medical schools typically report increasing difficulty in recruiting practices and in delivering placements in primary care. For instance,

- Glasgow and Dundee medical schools seeing the number of practices involved in teaching fall by over a third in the last 6-7 years. There have also been falls in Aberdeen and St Andrews.
- Glasgow reports increased difficulty in recruiting GP tutors to teach vocational studies in years 1 and 2; with rate of ACT reimbursement being quoted as the most significant factor.

- Dundee sought to introduce 2 half-day sessions in general practice per student in each of years 1-3 but couldn't recruit sufficient placements, having to limit them to 1 session for each student in years 2 and 3.

These recruitment problems currently put further pressure on GP educators and staff to try to maintain currently levels of undergraduate teaching. Increasing clinical teaching in primary care, and by GPs in medical schools, therefore brings with it both significant opportunities but also a number of complex challenges for NES, medical schools, service planners and the NHS. If the ambitions set out in the primary care workforce plan and in the SFC outcomes agreement are to be met, a systematic approach to increasing undergraduate education in primary care needs to be prioritised and developed. Individual initiatives on their own will not be sufficient

Short Life Working Group

Under the joint auspices of the Scottish Government and the Board for Academic Medicine, an *Increasing Undergraduate Education in Primary Care Working Group* was established in 2018 to consider ways of increasing undergraduate education in primary care settings. The Group was chaired by Professor John Gillies with representation from all Scottish medical schools, the Royal College of General Practitioners Scotland (RCGP Scotland), Scottish General Practitioners' Committee (SGPC), National Education for Scotland (NES), the Scottish Deans' Medical Education Group (SDMEG), Scottish Funding Council, student representation and the Scottish Government (full remit and membership is provided in Annex A).

The aims of the Group were to:

- Determine the current level of undergraduate teaching in primary care in Scottish Medical Schools;
- Establish the number of GPs who currently teach, their capacity to increase teaching time and mechanisms to support them do so;
- Identify GPs who don't teach who would like to do so and mechanisms to support them do so;
- Understand the infrastructure, physical and digital, needed to support an increase in undergraduate teaching;
- Investigate factors that have a positive influence, including innovative practice within Scotland and elsewhere, and barriers to change;
- With support from NHS Education for Scotland, consider the role of funding in increasing clinical placements in primary care.

The group met approximately every 2 months between March 2018 and May 2019 to discuss and share key learning on the barriers and facilitators to increasing undergraduate teaching and discuss innovative teaching approaches being used across Scottish medical schools. Professor Gillies conducted a series of meetings with key stakeholders during the duration of the group including with the Scottish Deans' Medical Educators Group and the Scottish Academics GP Heads of Teaching Group. An intern supported the work of the group as part of the Scottish Graduate School of Social Science-Scottish Government for a three-month period from October 2018.

In addition, NHS Education has established the *Educational Capacity Group*, chaired by Professor Moya Kelly, to review current training capacity in primary care, identifying the training needs of learners from all disciplines delivering primary care. This group, with multi-disciplinary membership including representatives from Medicine, Pharmacy, Nursing, Allied Health Professionals and undergraduate medical schools, has postgraduate education as its initial focus. There are clear synergies across the groups with joint representation to ensure a joined up approach across undergraduate and postgraduate training with the awareness of need to develop capacity for both.

As set out in Chapter 3, a concurrent review of Additional Cost of Teaching (ACT) funding, provided by the Scottish Government to cover the cost of teaching medical undergraduate students, has been undertaken by NHS Education for Scotland (NES).

CHAPTER TWO: CHALLENGES AND FACILITATORS TO INCREASING UNDERGRADUATE EDUCATION IN PRIMARY CARE

There is a range of UK and international evidence on factors that affect career choice among undergraduate medical students. Understanding these drivers, both negative and positive, is essential in developing approaches which actively encourage students to consider general practice as a career choice. Equally, there are a range of organisational and structural issues that can impact on teaching capacity at both medical school and practice / community level. These issues are explored in more detail below and help inform both the approaches to innovative practice highlighted in section 4 and the recommendations that follow.

Influences on career choice

The ambition to increase the primary care workforce and deliver increased education and training in community settings has to be considered in the current context of a range of challenges including addressing widely held negative perceptions of careers in general practice. In a response to a crisis of GP numbers more than twenty years ago, Sullivan and Morrison (Sullivan and Morrison, 1997) suggested that medical schools needed to 'broaden the range of entrants, make general practice attachments mandatory and at least six weeks long'. We have come a long way since 1997, but the journey is not yet over.

Student perceptions

The Royal College of General Practitioners and Medical Schools Council's (RCGP/MSC, 2017) *Destination GP* report found a range of issues relating to promoting general practice as an excellent career choice.

Peers and role models

Peers at medical school are one of the most influential groups on students' views of future career choices. However, over 9 in 10 (91%) medical students believe their peers hold negative views about general practice. The RCGP/MSC analysis reported that students are most likely to associate the profession with being "boring", "lower status than other medical professions" and "less intellectually challenging". It is concerning that students' peers' attitudes towards general practice are much more likely to have a negative impact on students' likelihood of pursuing a career in general practice (33%) than a positive one (13%). There is therefore a pressing need to challenge these perceptions.

The RCGP/MSC survey also found that GP tutors in medical schools have a particularly positive impact, with 71% of students saying this group made them want to work in general practice more (only 12% saying the opposite). GP Society events also appear to have a positive impact, with 41% of students saying attending had a positive influence on their interest in general. This is reinforced by positive feedback from a successful recent Scottish Universities GP society event in Aberdeen. (see boxed text on p 42).

Clinical placements:

Previous studies (Alberti et al., 2017; Wiener-Ogilvie et al., 2015) found the presence or quantity of undergraduate placements in general practice to be associated with increased entry to general practice training and careers. The RCGP (RCGP/MSC, 2017) found that GPs interacting with students on placements are the most influential group on students' perceptions of general practice, with four fifths (81%) of students reporting that this group had most influenced their perceptions. Similarly, Wiener-Ogilvie et (2015) survey of foundation trainee doctors across Scotland found "undergraduate GP placement was reported as the strongest influence in favour of a career in General Practice followed by discussion with family and friends and discussion with specialty trainees". This influence was particularly marked in graduates from Aberdeen and Dundee medical schools. In addition, the RCGP survey reports that those who say they are most influenced by GPs on placements are more likely than other students to associate general practice with the positive phrases such as "continuity of care" and "varied", and less likely to use terms like "boring" and "lower status". One Foundation Year doctor interviewed to inform this report noted:

In clinical years, so that is the final three years, I think I had a total of six weeks in general practice, out of three years. It actually wasn't that much and I would definitely have liked to have done more. I could have benefitted from more experience of general practice.

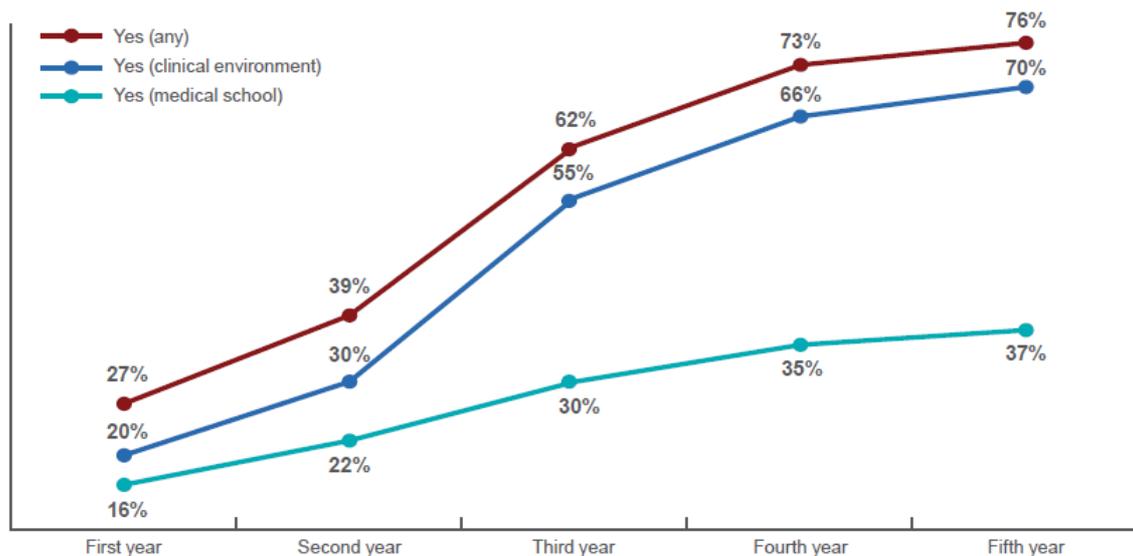
The quality of placements is also important. A focus group study of students from nine UK medical schools reported that they were more likely to pursue a career in general practice if their placements were of good quality, provided authentic practice experience and showed the impact which GPs can make. This is consistent with a Scottish study that found that Foundation Year doctors were more likely to consider a career in GP if they had had good quality experience of undergraduate general practice placement.

As well as quality of exposure itself, longitudinal placements (>6 months) are associated with increased likelihood of pursuing GP as a career compared to traditional block placements (Amin et al, 2018) and this may reflect their capability to deliver the experience students identify as influential to career choice. Longitudinal programmes are found to promote a number of characteristics including clinical responsibility, developing a broad skill set, patient-centred practice and holistic practice (Walters et al, 2012) which can all complement primary care practice. Research also suggests that longitudinal programmes can also lead to reduced exposure to potentially negative effects of institutional hidden curricula (Hirsh et al. 2012). Furthermore, longitudinal programmes claim to offer a nurturing environment by placing greater focus on strategies to deal with the challenges of primary care.

However, clinical placements are also known to expose students to negative views about general practice and this builds over their time in medical schools (RCGP/MSC, 2017). By their fifth year, three quarters (76%) of students have encountered negativity towards general practice from academics, clinicians or educational trainers. Seven in ten (70%) have encountered this in a clinical setting.

The study showed that no less than 79% of students believe doctors and other staff on placements have negative associations with general practice. When the students' experiences of negativity towards general practice were examined, they most commonly cited issues concerned referrals (37%), which often involved secondary care clinicians criticising referrals they had received from GPs.

Figure 2: Whether students have encountered any negativity towards general practice from academics, clinicians and/or educational trainers over time (RCGP/MSc, 2017)



Attitudes within medical schools

Despite GPs comprising around 27% of the medical workforce, the UK's academic GPs account for only about 6% of all clinical academics. Academic leadership and role modelling is important to ensure that students recognise the breadth and complexity of general practice care, and that they become aware of and are stimulated by the complex intellectual challenges. GP academics will also play an important role in supporting undergraduate tutors to deliver high quality education (HEE/MSc, 2016).

Concerns about isolation

The RCGP report found that a concern around isolated working was the second most common reason given for not wishing to pursue a career in general practice, and that this concern built up over the students' time in medical school.

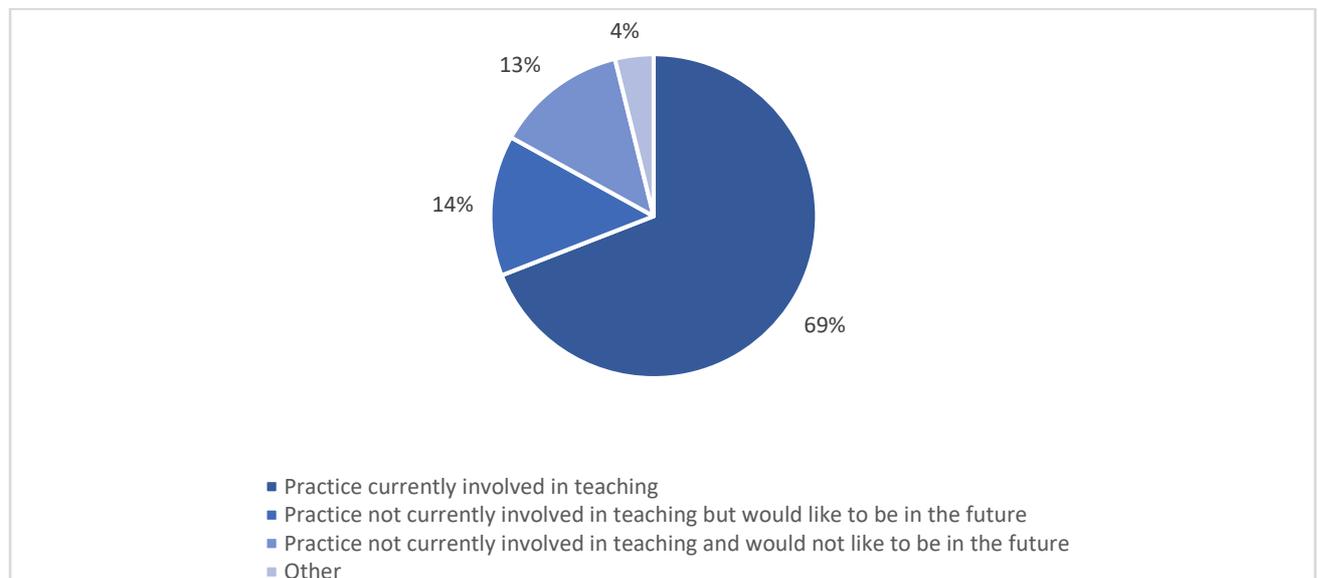
General Practice Perspective

As part of the work of the Group, a survey of current and anticipated future capacity in general practices to support undergraduate education in general practice in

Scotland was conducted over the summer of 2018. The survey, which had an overall response rate of 44%, built on a previous survey undertaken in NHS Highland earlier that year. The key aim of the survey was to identify current and future teaching capacity, including perceived barriers and facilitators to increase teaching in primary care.

The majority (69%) of practices who responded to this survey are currently involved in undergraduate or postgraduate teaching at some level. About half of those who are not currently involved said they would like to be in the future, with a similar proportion saying they would not like to be involved (see Figure 3). Note that the question about future involvement was not asked of practices in NHS Highland.

Figure 3: Practice involvement in teaching



Likelihood of involvement in teaching varied according to the list size of practices. Practices with a list size of less than 4,000 patients were less likely to be currently involved in teaching than larger practices. Those practices which said that they currently had at least one GP vacancy were also less likely to be involved in teaching.

Critically, respondents described a tension between teaching and clinical service. This tension was manifested as competition for the resources of time and space which has been exacerbated by rising clinical workload and inadequate staffing levels in many practices. Respondents described staffing gaps or inability to secure locums as barriers to becoming involved in teaching. For some practices the pressures of providing clinical service alone or lack of time resource to adequately support teaching efforts was enough.

“I work full time in general practice and would very much like to teach. We had representatives from [Scottish University] attend and would like to offer us this. However, such is patient demand we would need to take on more staff and the costs would not be recuperated.”

Four sets of factors were identified as potential barriers to teaching: organisation interface, practice, patient and personal.

Organisation interface

A range of perceived barriers to involvement in undergraduate teaching were reported, although many of these described perceptions of undergraduate teaching requirements which were factually misinformed (e.g. needing to have MRCGP, teaching always involves school holidays). This suggests a need to better inform the GP workforce on the range of teaching opportunities available as well ensuring ready access to accurate information on the different accreditation processes and qualifications required.

Other reported barriers included:

- Perceived onerous application and ongoing accreditation processes;
- Feeling disconnected from the teaching organisation;
- Structure of teaching.

Practice level

Many of the respondents described lack of space hindering development of teaching in their practice.

“Room space within the practice. We would like to be more involved and have the teaching capacity to do this but are constrained by our building and have not had any support from [NHS HEALTH BOARD] to help accommodate more students/trainees.”

Specific issues for more peripheral (including rural) practices included:

- Transport for learners;
- Learner preferences to be more central leading to fewer allocations;
- Multiple sites made teaching logistically more challenging for practices with branch surgeries;
- Accommodation costs needing to be met by some practices and the need to arrange accommodation were barriers.

These issues of limited space, GP shortage and accommodation costs are highlighted in the vignette from Biggar Medical Practice (page 28)

Some respondents felt that changes to clinical service delivery due to new developments could be detrimental to teaching. This included the move to a doctor first telephone triage system; recent practice mergers or practice collapses; practices becoming established as 2C practices having been taken over by the health board, thus creating uncertainty over future sustainability.

Patient factors

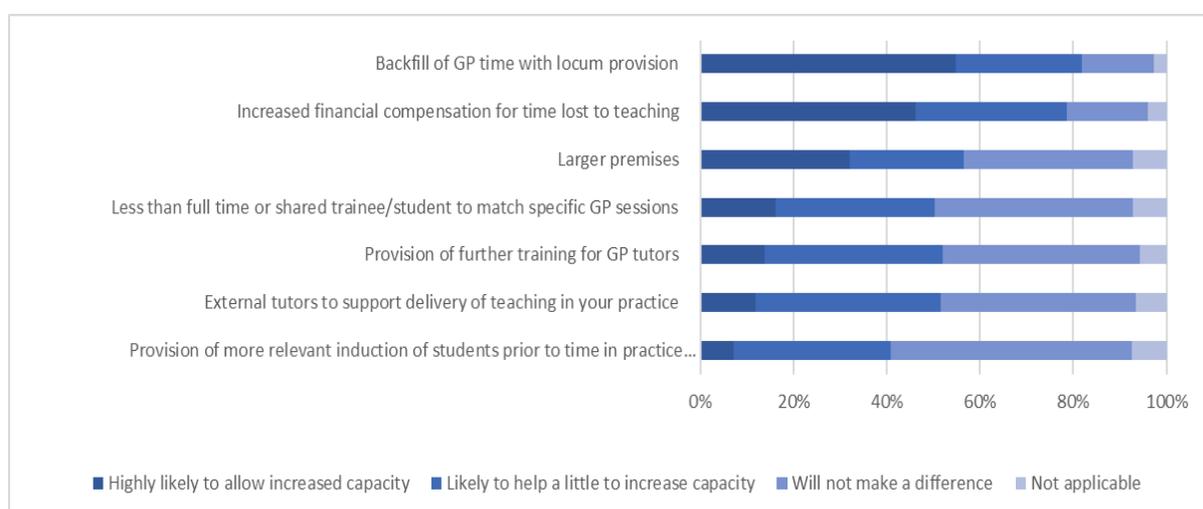
Increased patient demands, including more complex cases and increased frailty, were also noted to have increased pressure on practices. GPs were also mindful of not overburdening patients with teaching involvement (noting potential ‘patient fatigue’ with repeated requests for involvement with teaching).

Personal factors

Personal barriers mentioned included a lack of confidence, access to tutor training, enthusiasm and lack of experience. It was recognised that teaching can potentially be stressful and tiring. Working patterns were highlighted as an issue including several GPs identifying part-time or locum working as a barrier. A number of GPs mentioned career stage (early and late) as a potential barrier to taking on teaching commitments.

Respondents to the GP Capacity Survey were asked what would allow their practice to take on a role in medical education or increase current capacity to do so. The proposal which respondents felt would make the most difference to capacity was the backfill of GP time with locum provision, with 82% of respondents agreeing that this would be “highly likely” or “likely” to help. This was closely followed by 79% of respondents citing increased financial compensation for time lost to teaching.

Figure 4: Proposals to increase current capacity



The proposal which was felt would have least impact was the provision of more relevant induction of students prior to time in practice. Only 41% of respondents felt that this would make a difference to capacity.

These views were common across all types of practice, although small practices (list size of less than 2,000 patients) were generally more likely to say that the proposals would make no difference to their capacity. Practices which had declared a GP vacancy were less positive about the suggestion of increased financial compensation

than those which were at full complement and they had a stronger preference for the proposal to backfill GP time with locum provision.

A recent review (Barber et al 2019) of undergraduate educators from four medical schools in England found very similar barriers to general practice UG teaching. In addition, they cite lack of support from the medical school, patient fatigue and the development of different models of employment of GP (salaried/ sessional/ locum) as barriers.

CHAPTER THREE: FUNDING AND INFRASTRUCTURE

Medical ACT

Scottish Government financially supports the delivery of undergraduate medical education in three ways: by support to universities via the Scottish Funding Council, to the NHS Boards via ACT (additional cost of teaching) funding which is currently administered and allocated by NHS Education for Scotland (“NES”), and via the Students Awards Agency Scotland (SAAS).

ACT is provided by the Scottish Government to cover the additional costs of teaching medical undergraduate students within the NHS in both primary and secondary care. ACT funds are distributed using an allocation model which is based on student numbers (stage one) and on the amount of teaching activity (stage two). The allocation of funds to primary care is based on a cost reimbursement model whereby GPs are paid for what they specifically do, which is ring-fenced within the ACT budget. For secondary care teaching, Boards receive a ‘share’ of the available funding relative to amount of teaching they deliver, the latter being calculated using a Measurement of teaching (MoT) tool. ACT funds are also used to support student travel, accommodation and subsistence costs in relation to undergraduate placements and this amount is also ring-fenced within the annual budget.

The ACT budget set by NES for 2018-19 was £77.2m and within this the contribution towards GP ACT was £7.1m (around 9% of total).

Brief history of ACT – “direct” and “indirect” ACT

ACT was originally introduced in 1977 and was based on an English formula (which was called the Service Increment for Teaching - SIFT). ACT was based on the difference in costs between teaching hospitals and a sample of 45 District General Hospitals (in England and Wales). The total level of ACT funding in Scotland at that time was £86.6m pa.

Prior to the transfer of responsibility for ACT to NES in 2005, a review undertaken under the auspices of the Standing Committee on Resource Allocation (SCRA) identified 2 funding streams: (i) Direct Costs – equivalent to £57m (66%) and (ii) Indirect Costs – equivalent to £29m (34%). The direct cost element subsequently came to NES for management, and has risen over time (mainly as a consequence of passing on annual uplift) to the current level of circa £77m.

The indirect cost element was baselined to Health Boards around the same time. This section will focus only on direct cost element of ACT administered by NES. Similar support for the clinical placement costs of undergraduate medical students exists in other parts of the UK, where the direct and indirect cost elements have been kept in one ‘pot’ and managed by the relevant statutory body. As a consequence, identifiable ‘SIFT’ funding per student is significantly higher than direct ACT funding in Scotland.

Current GP ACT

Historically, primary care services were initially excluded from ACT funding until the early 1990s. The first allocation of ACT monies was made to primary care in 1992. GP ACT, like the hospital counterpart, is split into Category A and Category B costs. In general, Category A weeks are spent in placement in practice with a GP, usually for 1:1 teaching which currently attracts a sessional rate of £40 per student across Scotland. This payment amount was agreed by stakeholders, although the rate has not been subject to revision since 2010 and as such is due for review.

Category B costs relate to formal teaching or other teaching-related activities which take place outwith clinical placements, often on campus but also within a General Practice setting. There is variation between the type of activity and rates of remuneration provided by medical programmes.

NES Primary Care ACT Review and Work of Group

The key aims underpinning the management of Medical ACT are to deliver the highest possible quality of undergraduate medical education within the NHS to support the teaching of medical students in Scotland; to ensure a transparent and equitable approach to the distribution of ACT funding; to achieve best value through robust performance management of the use of ACT funding. NES commissioned a review of the costs of primary care ACT, which began in April 2018. The NES Review was necessary for a number of reasons namely:

- the increasing difficulties in providing teaching by GPs in primary care
- the emergence of new modes of delivery of undergraduate medical training in primary care, including the launch of ScotGEM in 2018 and new models with NHS Boards for which costs were not fully quantified
- the aspiration to increase the proportion of undergraduate medical teaching that is delivered in primary care.

The intention of the review was to quantify the current actual contribution and costs of Primary Care teaching and to describe the total contribution GPs make to the curriculum for each programme. A detailed exercise was conducted by the Medical ACT team to collate data from each medical programme relating to GP teaching, placement and support costs, along with the costs associated with travel and subsistence. In addition data was sought on activities delivered by GPs outwith these areas including those that were unfunded. The results confirmed that GPs contribute to medical undergraduate teaching in a variety of different ways and an important goal of this review was to reflect that diversity and to devise a means of capturing the actual impact on GPs' time.

There were close working relationships between the NES Primary Care ACT Review team and the undergraduate group (including joint group membership). The ACT Review is due to be published imminently and key findings from the review have helped shape the recommendations made in this report. The findings from the NES ACT review are attached in Appendix C.

Implications of current levels of ACT funding in general practice

Chapter 1, current context, sets out some of the difficulties experienced by Scottish medical schools in recruiting practices and delivering placements, resulting in declining numbers of practices taking part in teaching. We have detailed large falls in the number of practices teaching in Glasgow and St Andrews over the past three years, and a failure to recruit for expansion of GP teaching in Dundee in 2018. A specific example for a practice in Lanarkshire which gave up GP teaching due to multiple factors is given on page 28. We are aware that these difficulties in providing placements has triggered at least one medical school to ask the relevant Health Board to offer higher rates of remuneration than the historical rate of £40 per session.

Chapter 2 sets out in detail the evidence from the capacity survey. When asked what would make the most difference to capacity, 82 per cent of respondents said the backfill of GP time with locum provision, closely followed by increased financial compensation of time lost to teaching (with 79 per cent of respondents agreeing). There is no doubt that issues with recruitment and space within premises are all limiting factors. However, it seems clear from the context and the evidence of the capacity survey that the current level of reimbursement of £40 per session is inadequate to maintain current levels, and that undergraduate education in primary care will not increase at this level, and is likely to decline. Lack of resourcing for undergraduate education is also specifically mentioned as a barrier by Barber et al (2019).

What does it actually cost a GP practice to teach an undergraduate medical student?

A review of the costs of teaching in primary care was undertaken in 2017 by Professors Rosenthal, McKinley and Campbell for the Department of Health and Social Care (England), in association with Health Education England (HEE). The study methodology considered the various direct and indirect costs associated with teaching undergraduates in primary care and examined data collated from a sample of 50 practices, approximately 2 per medical programme. The study is currently in press but the authors have shared in personal communication their finding of an average cost per half-day student placement in general practice of £111, which is in stark contrast to the current payment rate in Scotland of £40. Publication of this study is due in 2019.

In late 2018, a similar exercise was undertaken in Scotland, using the algorithm employed by Rosenthal, McKinley and Campbell, which was shared by kind permission. The Scottish study, led by Dr Amjad Khan of NES, examined a sample of 8 GP Practices in association with 5 Medical Programmes (excluding ScotGEM) and was conducted using a combination of face to face visits to practices and by telephone conversation with the GP and/or Practice Manager. Given the small sample size, variations in the way that teaching was delivered and the size of the groups attending for education sessions, it was not possible to subject the data to the same detailed statistical analysis employed by the English study. However, a median cost of £85/student per 4 hour session, was calculated, which is broadly comparable to the English data.

Of note, the primary unit of analysis recognises the difference between single student placements and those placements where a group of students attends at the same time. This is important as the average number of students per placement varies between practices with values ranging from 1 student per placement to almost 10 (median = 2 students per placement), depending on the year of study and the type of activity being delivered. It is not assumed that groups with multiple students would attract a sum of £85 for an infinite number of students, but rather a ceiling payment per session would be applied, based on a value agreed by stakeholders.

Raising the ACT tariff for GP education

The strategic direction of travel as set out in the 2020 Vision and Health and Social Care Delivery Plan is to shift the balance of care from secondary to primary care. It is important to remember that 90% of healthcare contact happens in community settings and not hospital and it is important that we educate the doctors of the future accordingly. Currently 27% of doctors in Scotland are GPs. In addition, experience in general practice and primary care is important for *all* doctors, whether or not they choose to become GPs, as an understanding of the social determinants and cultural context of how people become ill is largely gained outside hospitals.

This substantiates the need to increase the amount of education that takes place in primary care and is taught by GPs. While it has been a longstanding principle that GP teaching should be treated on an equitable basis with hospital teaching, there is good evidence from the current decline in UG teaching practice numbers and the capacity survey that this principle will not support an increase undergraduate education in primary care. To increase from a baseline where 9% of teaching currently takes place in primary care, it will be necessary, as part of a package of measures, to urgently raise the ACT tariff for GP education.

It was agreed by the Group that there are three important principles that require to be considered in the context of potentially raising the tariff for GP ACT. These are that GP ACT should:

- (i) adequately compensate those educating and training our future doctors and be attractive enough to allow new practices to come on board as demand for training in primary care settings increases;
- (ii) be affordable to the public purse;
- (iii) not destabilise secondary care ACT.

Modelling a tariff of £85 for Category A costs

- Based on the Khan data, NES have, at the request of the Group, modelled the financial implications of uplifting the £40 tariff for Category A costs to £85 on the basis of the status quo level of GP teaching for each of the programmes.
- Appendix D provides the financial implications of uplifting the rate to £85 for Category A costs based on current levels of activity. The calculations are based on curriculum data for Category A costs obtained from 5 Medical Programmes (Aberdeen, Dundee, Edinburgh, Glasgow and St Andrews).

- The financial impact of increasing the tariff from £40 to £85 for Category A teaching (no change to amount of GP teaching delivered) would be to increase costs for GP ACT by just over £2.5m.

What about rates for multiple students attending for group teaching?

The primary unit of analysis used in the survey by Khan was the cost per student session. This recognises the difference between single student placements and those placements where there is a group of multiple students attending at the same time. This is important as the average number of students per placement varied between practices in the sample with values ranging from 1 student per placement to almost 10 (median = 2 students per placement). In considering the scenario of multiple students attending for teaching, the cost of backfilling a GP's time may be the more appropriate figure to adopt where more than two students are attending, as the GP is unlikely to be able to run a surgery in that scenario. For example, the proposed payment for teaching 3 students would attract a rate of £255 per session (3x£85). This amount is comparable to a current reasonable market rate for a GP to attend an external meeting or to obtain a locum at standard costs. The group therefore agreed that a ceiling tariff value should be adopted at the level of 3 or more students.

Category B costs

The question of altering the rates for Category B teaching, as defined above, is considerably more complex. In contrast to the common rate for Category A teaching adopted by all medical programmes, there is wide variation between the type of activity and rates of remuneration provided by each of the medical programmes for Category B activities. Some examples for this (academic year 2017/18) are listed below and illustrate the heterogeneity that exists currently between programmes:

- **Aberdeen** – 15 GP practices deliver the Years 1 – 3 Foundation of Primary Care sessions. These are each remunerated via Service Level Agreement worth £13,149, which is the equivalent of 10% FTE Senior Clinical Lecturer contract for 1 session along with a £2016 practice fee. All practices deliver 2 out of 3 FPC years in any one academic year. In practice due to the remuneration method and timetable, the SLA cost for teaching is difficult to break down into a cost per teaching session.
- **Dundee** – A range of payments are in operation with rates of £40 per 2.5 hour session for a compulsory “experience” session in primary care to £40.19 per tutor per hour for small group sessions that generally last 2.5 hours. Each group has 40 students and involves two tutors, giving an approximate cost of £200 per session.
- **Edinburgh** – GP practices are paid a fixed rate per semester in year 1 (£1,257.60) or by quarter in year 2 (£3,795). The year 2 payment includes some funding for teaching facilities costs.

- **Glasgow** – Rates vary depending on type of teaching activity of which there are 4 different categories: Communication skills, Vocational studies, Clinical visit and GP visit. The sessional rates for these activities vary from £140 upwards. For some activities a fixed amount is paid by annual contract to a salaried tutor. Teaching facilities costs are also made if activities are based in a Practice.
- **St Andrews** (BSc Hons) – has the most straightforward rate of £161.81 which was paid across all sessions until late 2018 when it was increased to £180 per session

As each medical school uses a different method or methods of reimbursing practices or individual GPs for Category B activities, the group agreed that harmonisation of costing and reimbursement would be desirable to achieve a common rate or range of rates for category B teaching across all medical schools. This would also simplify the administrative procedures for Medical ACT within Universities and NES. However further work is required with input from relevant stakeholders in collaboration with NES to take this aspect further. Beyond that, it is likely that as the amount of teaching in primary care is increased towards 25%, according to aspirations of Scottish Government and Scottish Funding Council, ACT support costs could also be expected to increase further. Similarly, increasing teaching capacity to include more remote placements could also impact on travel and support costs for students who are placed outwith central areas. Currently it is difficult to predict the exact quantum of increase that would be required for the ACT budget to support both of these aspects. It is therefore essential that each of the medical programmes has a robust understanding of their current Primary Care support costs so that this amount may be captured accurately following any proposed change in policy.

Looking to the future

One criticism that may be made of the approach outlined in this report is that it looks at Primary Care ACT costs in isolation. Currently primary and secondary care work on the basis of different models - ACT is distributed through measurement of teaching in secondary care as opposed to cost reimbursement which applies in primary care. These differences reflect that the majority of GPs remain independent contractors, as opposed to consultants who are employees. GPs therefore do not have teaching in their job plans as can exist in secondary care.

While it is recommended that in order to encourage the changes we want to see that the category A tariff is raised to £85, it is arguable that more fundamental changes are required. While it is beyond the scope of this report, it is considered that, in the medium term, there would be merit in considering whether the current ACT model across both primary care and secondary care requires to be reviewed in a more fundamental manner. It could be further argued that such a review should not be limited to ACT but rather consider the overall approach to the funding of undergraduate medical education. Either way consideration should be given to alternative models of distributing monies to support undergraduate teaching, particularly against a background of changing models of delivering undergraduate education, different career pathways in general practice and constrained public finances.

Physical Infrastructure

Discussions with key stakeholders and analysis of the capacity survey show clearly that lack of physical space is seen as a major factor in limiting expansion of undergraduate education in primary care. This is particularly significant given not only the commitment to increase GP numbers but the growing need for training and clinical supervision of the wider MDT, including ANPs, pharmacists, paramedics and MSK physiotherapy practitioners.

Currently approximately 40% of GP premises are privately owned, 25% leased and the rest (35%) in health centres. It should be noted that it is difficult to provide completely accurate figures due to the number of branch sites and overlapping forms of ownership (a GP may own a building which the health board is operating another practice in without a lease for example).

As far as privately owned premises are concerned, the Scottish Government has already announced £50 million of GP Premises Sustainability Loans. These loans are available to an amount of up to 20% of the premises value as a GP surgery, except in exceptional circumstances where more may be provided. The Scheme aims to ease the financial risk associated with GPs owning their practice in turn helping to improve GP recruitment and retention.

As far as those premises owned by Health Boards are concerned, the Scottish Capital Investment Manual (SCIM) provides guidance to be applied in the development of all infrastructure and investment programmes and projects within NHS Scotland. Depending on the level of investment, investment decisions are either made at Health Board level or nationally by the Capital Investment Group (CIG). The CIG reviews all business cases for capital investment projects which are above a Board's delegated limit. In practice the vast majority of infrastructure investment comes through the CIG. All capital investment cases must include a strategic assessment of the need for service change. It is recommended that in future there should be a specific requirement for future training and clinical supervision requirements to be considered in all business cases that come before the CIG.

It should also be noted that the Scottish Government has asked NHS National Services Scotland to prepare a business case for digitising GP patient records. This will focus on the benefits of releasing space for clinical and teaching use. It will use information provided by a survey of GP premises funded by Scottish Government. The survey, to be completed by the end of May 2019, will provide information on the condition of properties as well as the use and size of rooms. Digitising GP patient records would incur significant costs but have the potential to increase physical capacity. It seems likely that the effectiveness, and cost-effectiveness of undertaking digitisation will often depend on the physical layout of each practice.

The biggest strategic issue however is that further capital investment in primary and community services is required. As care is increasingly shifted towards primary and community care settings, it is inevitable that space to educate and accommodate the workforce of the future, particularly the expanding multi-disciplinary team, will be required. A new NHS Scotland Capital Investment Strategy is due to be published

shortly. It is recommended that this should make the case for investment in primary and community care facilities recognising specifically the need for that to include purpose specific facilities in which to train the workforce of the future.

Biggar Medical Practice and medical students

Biggar Medical Practice has enjoyed a successful partnership with University of Glasgow Medical School for many years. Reports from students are always suggestive of an enjoyable rural placement offering a wide variety of experience. Sadly in the past year we have encountered numerous difficulties which has forced us to remove our support for students. We face challenges in areas such as IT, accommodation, physical working space and GP cover for student clinic.

Having recently lost a GP to early retirement we cannot justify reducing appointment numbers for student led clinics. We have also seen an increase in the MDT use of our practice which means we can no longer offer our students regular working space within our practice building. We have no library space or meeting rooms. Difficulties regarding accommodation are ongoing and we have offered subsidised accommodation to our students. Often the grant from the university is not enough to cover the cost of local accommodation. Being a rural practice students often note the broadband connectivity in poor and this in turn forces them to travel home at weekends to do course work. The sad impact of this being the students don't stay over the weekends to enjoy the richness of rural living.

We are hopeful of supporting medical students in the future, however there are numerous challenges to manage first, the most challenging being physical space.

Digital infrastructure

The Scottish Government Digital Health & Care Strategy 2018 in combination with ever more digital based education services, and indeed the more general move to digital services in our everyday life, is predicated upon connectivity. This issue is most pressing in remote and rural areas and significant focus and resource needs to be brought to bear. Families who move to remote and rural areas, whether they are health, social care or education professionals, expect high quality broadband connectivity. Absence of this is a barrier to recruitment. Access to university e-portfolios and educational material in general practice is very variable and tends to be worse in remote and rural areas and in independently owned GP premises.

The 'once for Scotland' approach to digital development will increasingly bring this into sharp relief if connectivity in these remote and independent locations is not significantly improved. The roll out of fibre-optic cable to cabinet through the Scotland Wide Area Network (SWAN) initiative is intended to offer high quality broadband to all general practices. Of the nearly 800 premises in the programme 60 remain unconnected, almost all of these in remote and rural areas with complex and challenging topography. This last single digital percentage will take a significant and

disproportionate amount of resource to connect and timescales are unclear. On a positive note, the SWAN / Capita team have recently announced that the bandwidth restriction on fibre connections is being lifted and speeds for those practice premises will double over the course of the next few months. In addition, a recent bid to the European Space agency (in collaboration with NHS Cornwall) to develop a proof of concept for health services in remote and rural using satellite connectivity was approved. It is hoped this work will provide connectivity for the hard to reach practices and augmented connectivity (with much improved speeds) for those who have some connection.

This is a Scottish Government issue more generally; a lack of connectivity will increasingly exacerbate potential inequalities, social as well as health specific ones, if not fully addressed. Efforts to coordinate SWAN with the R100 project, which recently received an additional £600m, should be undertaken. This would allow for a better understanding of the timeframes for the remaining very hard to reach locations, and influence decisions on R100 priority areas, such as those places with GP surgeries without connectivity that urgently require access to be accelerated.

CHAPTER FOUR: INNOVATIVE APPROACHES TO INCREASING PRIMARY CARE EDUCATION

Introduction

Whilst appropriate funding and infrastructure to promote General Practice as a positive career destination is vital, consideration must also be given to what changes can feasibly be made alongside this to capitalise on this investment. As noted previously, research by McDonald, Jackson, Alberti and Rosenthal (2016) suggests that medical schools with greater proportions of curriculum time in general practice produce more future general practitioners. This suggests an imperative to increase this percentage, if a meaningful positive impact is going to be made to future GP recruitment.

However, increasing GP contribution to medical school curricula is not simply a matter of moving teaching from secondary to primary care. GP capacity is already stretched and limited, as was evident in the teaching capacity survey undertaken as part of this review. Therefore, there will not be only one solution to increase the proportion of undergraduate medical education in primary care, but a range of innovative approaches which can be tailored to local circumstances.

Cross-institutional discussions through the GP Heads of Teaching, and the expert workshop, have highlighted a range of existing and developing innovative approaches to teaching. This chapter highlights these innovations, as well as some from further afield, which could provide models for future primary care-based and delivered education.

These innovations can be considered on a number of levels and include campus-based and placement-based components of medical school curricula. Medical school curriculum innovations can be further divided into those directed towards the broader undergraduate curriculum and those which are targeted at the GP-focused curriculum content.

1. External Innovations

External Partnerships

Traditionally, medical students have undertaken clinical placements in secondary care, general practice, and sometimes the voluntary sector. Over time, the diversity of placements at some medical schools has increased and this diversification should continue.

Diverse placements not only provide a pragmatic solution to capacity issues, but may also facilitate students' development as holistic practitioners. This approach is in keeping with *Realistic Medicine*, (Scottish Government, 2016) and supports the 2020 workforce vision of a multi-professional, team-based, integrated model for primary care (Scottish Government, 2015).

Examples of creative placements outlined below indicate settings outwith GP surgeries where students can also get primary care experience and exposure to the principles of General Practice.

Community hospitals

Teaching sessions in community hospitals expose students to caring for patients with a focus on rehabilitation or palliative care. These placements provide an opportunity to teach students generalist principles at a “bridging” point between primary and secondary care.

St Andrew’s students undertake day long placements in community hospitals where they benefit from clinical mentoring and opportunities to work with, and learn from, their peers in a clinical environment. GPs are paid a sessional rate to facilitate these sessions, which is at a preferential rate compared with having a student in a practice. The teaching GPs do not have the pressure of service commitment which allows them to focus on teaching. These placements aim to provide students with positive GP role models, identified as essential in promoting General Practice as a career destination within the Health Education England/Medical Schools Council (HEE/MSC, 2016) document “*By choice - not by chance*”.

Third sector

The third sector is currently under utilised for placements and could provide a wealth of holistic, first patient contact community-based education. Many third sector bodies provide health and social care support for patients with a range of physical and mental health conditions. As well as the advantage of avoiding the need for clinically-trained teaching staff when capacity is tight, students are exposed to the breadth of the health and social care system in Scotland, highlighting the vital role of the third sector. There are many such organisations; for example, Grampian has over 700 organisations listed in which students could potentially learn.

Working with other community-based partners

In all Scottish medical programmes, students spend time with a range of providers of community-based health services, reflecting the multi-professional, team-based approach to primary care. These placements facilitate development of holistic medical practitioners and could be expanded with appropriate funding and support. Although many sectors face capacity challenges, learning from and with colleagues such as pharmacists, occupational therapists, physiotherapists and health visitors can create more informed and effective future members of primary care teams.

Out of Hours

The Out of Hours (OOH) service is another valuable learning environment, which, whilst clinically stretched, is currently under-utilised for undergraduate medical education. Variety and challenge are highlighted through the Wass report

(HEE/MSC, 2016) as essential to promote General Practice; both of which are readily visible within the urgent care services.

Cross-institutional collaboration

The process of undertaking this has facilitated further productive collaboration between Scottish Heads of GP Teaching, for example the shared development of curriculum innovations and management of teaching capacity.

While the GP HOTS group will need to provide the main leadership for delivery of expansion and innovation in undergraduate general practice teaching across Scotland, it is not a formally recognised group. In order to support delivery of the desired outcomes, further development and recognition of this group and its role will be required.

Potential future collaborative developments could include:

Shared learning resources

Investment in the development of new teaching resources and sharing of existing local resources provides opportunities to share good practice and facilitates innovation. For example, GP Live (an innovation from Aberdeen) is now being introduced at Dundee. GP Live uses technology-enhanced learning; streaming GP consultations in real time from practices to campus-based groups of students, facilitated by GP tutors. Development could enable these consultations to be sent to multiple sites simultaneously.

Building on this, investment in the creation of a secure shared library of teaching consultations and other online resources could be explored. While creation of significant new resources requires investment, these could be utilised both across institutions and healthcare professions to provide economies of scale.

Placement swaps

Strategies to increase diversity in each medical school's placements might involve sharing learning environments. For example, the Universities of Glasgow and Aberdeen plan student swaps between 'deep end' and remote and rural practices so that students experience GP environments that may not be readily available from their own institution. This will support students keen to explore a diverse range of primary care placements, and may prompt students to consider future practice in underserved areas (Sen Gupta *et al.*, 2014). Shared "accreditation" and student skills/experience passports would facilitate this initiative.

Student "Passporting"

Student "passports" are being introduced at Dundee. Passporting facilitates transitioning between health board areas and can provide reassurance that core requirements have been met regardless of which medical school students are from. For example, a passport could document requirements such as an up-to-date immunisation record, CPR certification, hand washing and occupational health

assessment. Potentially, this could be extended to a competency based 'skills passport', as long as it did not detract from individual programmes' curricula, nor become too onerous for students and staff.

Shared practice accreditation

Each Higher Education Institution (HEI) has its own accreditation process for teaching practices. This involves a combination of paperwork and practice visits which may be duplicated for the small number of practices which teach for more than one medical school. Sharing HEI accreditation would create ease and efficiency of systems which could be linked with accreditation for postgraduate training or teaching of other healthcare professionals in conjunction with NHS Education for Scotland (NES).

Although shared accreditation would be less burdensome to practices and HEI staff, it is acknowledged that relationships between medical schools and practices are important (Alberti and Atkinson, 2018). Relational continuity keeps tutors and practices up to date with curriculum changes and facilitates support if student or practice issues should arise which impact on teaching capacity or capability. Consideration would also need to be given to how each medical programme would ensure its individual quality assurance processes were met through development of a formal process for sharing concerns across institutions.

Placement innovations

The traditional apprenticeship GP placement model of one student per practice gives students the opportunity for individual supervision and mentoring. This is often highly valued by students. However, this model is costly in time and resource and may inadvertently add to students' perceptions that general practice can be a lonely place to work (RCGP/MSc, 2017).

Alternative models are given below, all of which focus on maintaining the quality of the placements. Some involve a greater number of students per practice, whilst others focus on promoting general practice as a positive career destination.

Hub and spoke model / GP teaching centres

A hub and spoke model involves a practice functioning as a GP teaching centre. The hub is a GP practice in which "academic"/teaching GPs have protected time for teaching activities. The hub supports neighbouring practices (spokes) to teach, with students rotating around the hub and the range of spokes available at that locality. This model has the potential to support teaching in traditionally hard to recruit areas (e.g. remote and rural practice) by giving students experience of a variety of practices.

Cell structure

Many medical programmes have or are developing a cell structure approach to GP attachments e.g. in remote and rural or deprived areas (Dundee, Edinburgh, Aberdeen and ScotGEM). Using this model, Aberdeen organises teaching and

attachments in geographically related practices and incorporates weekly day-release programmes in which locality tutors take turns to facilitate small groups of students (typically 4-6). The cell structure fosters students' independence and self-direction, and they benefit from peer support in their small groups.

Shared / group-based placements

Related to the cell approach, some programmes send multiples of students to individual placement sites. This reduces the number of clinical tutors required and facilitates peer support/peer learning, within small groups. It has potential financial benefits at practice level as funding is per student rather than per session. It is relatively simple to set up where space allows. As students are based at one placement location, rather than rotating through different sites, arrangements can often be built on existing teaching practices and infrastructure.

Glasgow sends 3rd year students to practices in groups of two or three for a total of seven days across a four month period. This model works well and is particularly attractive to part-time GPs who may feel unable to commit to a 'block' of teaching due to their working pattern. It has facilitated teaching 'on days off' for some part-time GPs keen to be involved in teaching as part of a portfolio career. Where this has worked well, individual GPs and their practices have agreed various models of payment or 'time back in lieu' (Pope, 2018).

This model benefits the service as additional appointments are provided via student led surgeries and benefits the students as GPs can focus on their learning needs rather than trying to juggle teaching with their own daily clinical workload. GPs are paid on a per student basis and traditionally have been able to choose the group size. However, due to recent capacity issues, tutors who traditionally preferred taking two students have been asked to host three students.

In addition, to meet recent capacity pressures, Glasgow has sent several pairs of students to year 4/5 placements which have historically always been one to one. During a curriculum transition, to manage placement capacity Edinburgh has allocated pairs of students to placements for a one year period.

Longitudinal Integrated Clerkships

Longitudinal Integrated Clerkships (LICs) are defined as placements where students participate in the comprehensive care of patients over time, and are an evidence-based innovation that demonstrably promotes General Practice as a career (O'Donoghue, McGrath and Cullen, 2015) and leads to increased recruitment to rural and community based careers (Walters *et al.*, 2012). This model of teaching and learning has been used for many years in North America and Australia and is now taking off in the UK and Scotland, with the University of Dundee and ScotGEM programmes at the forefront. At Dundee up to ten self-selected students are placed singly or in pairs in a practice for a whole academic year (40 weeks) and all ScotGEM students, in year 3 of their programme, will participate in a LIC.

However, it is noted that if all students in Scotland were to be given the opportunity to undertake a LIC, every practice in Scotland would have to take a medical student and targeting interested students and practices may be a more viable option. Self-selection, in itself, demonstrably increases the positive impact of a placement (Pfarrwaller *et al.*, 2015).

While 40-week LICs require more placement capacity, it is possible for practices to host a LIC student alongside students on shorter placements. International evidence suggests LIC students make a positive contribution to the work of the practice leading to more economic sustainability (Worley and Kitto, 2001) and do not impact on GPs' consultation lengths (Walters *et al.*, 2008).

Interprofessional education (IPE) placements

There are now more formal learners in general practice, undergraduate and postgraduate, and across health care and allied professions. Although this could be a potentially crowded environment, it allows great opportunities for interprofessional learning. Learners can be supported by a wide range of professional teachers, leading to better use of limited learning time in the clinical setting.

IPE is widely promoted and further development and roll outs of these models will need greater cross-organisational collaboration. Recent examples include a pilot of 5 different IPE models involving pharmacy and medical students from Aberdeen, Dundee and Robert Gordon Universities. Their team has undertaken work to identify common outcomes expected across healthcare professional programmes to start to inform further development of such initiatives (Steven *et al.*, 2017). Funding for these more complex teaching models needs to be considered as currently different funding streams exist to support different learners with some learners coming with no or little funding. At a time of teaching capacity pressures, an educational hierarchy based on differential funding levels could be detrimental.

One Foundation Year doctor interviewed as part of this review noted:

One thing we did have in med school which I thought was great was that we had some things with nursing staff, student nurses, which was great; meeting with physios and stuff... Having those multidisciplinary sims was great, which we never had for GP actually and GP is just as much an MDT thing really... Maybe that would have been a helpful thing to realise GP is not just about you sat in a room seeing one person.

Near Peer learning in the clinical environment

A strong theme from the expert workshop was around trainee or junior GPs becoming more involved in teaching, both in clinical practice and in universities. Evidence of teaching is a curriculum requirement of GP trainees and Foundation doctors (RCGP, 2012; UKFPO, Academy of Medical Royal Colleges Foundation Programme Committee and UKFPO, 2016). In contrast to hospitals, where teaching

by doctors in training is ubiquitous (Bindal, Wall and Goodyear, 2009; Hill *et al.*, 2009), teaching by junior doctors in general practice is somewhat limited.

Teaching by trainees was thought to not only be a way to not only aid teaching capacity, but also to expose students to positive near peer role models. Previous work has highlighted an enthusiasm for teaching amongst GP trainees (Halestrap and Leeder, 2011) and interviews with FY doctors have echoed this:

I think it is quite valuable having more junior people doing the teaching because we know what is expected of medical students, whereas I think the more senior you get, you kind of forget what's important to pass exams and be a good foundation doctor.

However, there are a number of barriers to expansion of near peer teaching. These include matching learners needs with near peer teachers' expertise, trainers' perceptions of trainees' ability to teach, lack of formal training programmes for trainees teaching and practicalities such as learner overlap (Dodd *et al.*, 2009; Silberberg, Ahern and van de Mortel, 2013; Kirby *et al.*, 2014; Pope, 2018). A 2016 survey of Glasgow University undergraduate teaching practices identified that only 39% were also postgraduate training practices. This is similar to the figure of 45% from an England-wide study (Rees, Gay and McKinley, 2016). To ensure that all students have opportunities to have contact with GP trainees, campus-based near peer teaching needs to be further developed alongside practice-based initiatives.

Showcasing General Practice

The Unique Selling Points (USPs) of General Practice are often assumed to be implicit within clinical teaching and on placement, but have been described as unclear to some undergraduate medical students (RCGP/MSc, 2017). All programmes are working towards actively promoting General Practice's USPs and St Andrews have designed an innovative GP showcase day to achieve this. In this initiative, multiple students are sent for a day to a teaching practice identified as 'high performing' from student feedback. On these visits, General Practice is actively promoted via group discussions and learning experiences.

2. Curriculum innovations

Integration of General Practice in Broader Medical School Curriculum

The integration of general practice within overall medical school curricula sends a powerful message to students that general practice is of equal status to hospital medicine. This equality is highlighted through a number of current curriculum innovations utilised to varying extent within Scottish medical schools, addressing both the formal and informal curriculum as recommended in *By Choice, not by Chance* (HEE/MSc, 2016).

Contribution to systems-based learning

GPs lead on the management of most common chronic diseases in clinical practice, yet teaching on these topics is often delivered by secondary care colleagues who

care for the most complex minority of patients and in a setting where the complications and inter-connectedness of multi-morbidity is not always addressed. Formats such as joint specialist and GP lectures demonstrates the equal importance of both doctors in managing common diseases, provides students with a more authentic understanding of the patient journey and care delivery within the NHS as well as exposing students to role modelling of interprofessional respect. Through a raised profile of GPs across a range of curriculum content, the breadth of a generalist's knowledge can be showcased and be seen as equally valued as a specialist's narrower yet deeper knowledge.

Case based learning

Medical schools use a combination of purpose-written and real life cases to facilitate students' learning in clinical practice. Consideration should be given to how general practice is represented within purpose-written cases. GPs should contribute to ensure cases represent the breadth of clinical presentations across primary and secondary care. For example, ScotGEM utilises a case-based learning approach, with learning centred around a case of the week in years 1 and 2 of study. Each clinical case is displayed to students on a web-based platform ("Kuracloud"), with specific linkage to student learning outcomes.

In Sheffield University, students discuss real life cases from their hospital placements in GP-led small group learning sessions. Utilising GPs to lead these sessions highlights the breadth of knowledge of general practitioners as they are able to discuss cases from a wide range of specialties and across the continuum of presentation, management, disease progression and patient experience.

Careers Days contribution

Representation of General Practice in medical school Career Days is vital. Destination GP (RCGP/MSc, 2017) highlighted that many students were unaware of possible career trajectories within general practice. Careers events should take place across all years of medical schools' curricula and should showcase the diversity of career opportunities available to GPs, including academic general practice and portfolio careers.

BMedSci in Health Sciences – Primary Care

A recent innovation has been the creation of BMedSci Health Sciences – Primary Care option for students at Edinburgh University. This has proven popular with 15 students choosing to undertake this course in academic year 2018-19. It highlights that general practice is an intellectually and clinically stimulating discipline, and aims to foster GP academics. (see details below) Although this option may help promote a variety of careers in general practice, this or any similar courses which might be developed are not currently eligible for GP ACT funding as they are considered 'out of programme' opportunities.

The BMedSci – primary care course comprises:

- A compulsory 'Research Skills in Health Sciences' course (20 credits)
- A Primary Care Course (20 credits)
- A Clinical Placement (10 credits)
- A taught elective course (20 credits)
- A Literature Evaluation and Review (10 credits) undertaken prior to a research project
- A 10-week research project. (40 credits) - Projects will include preparation of a dissertation and an oral presentation.

New curriculum models

New curriculum models, such as LICs and ScotGEM aim to create new and exciting opportunities for students to learn in general practice. More recently, 3 further Scottish medical schools have been awarded additional student places from 2019, each aiming to promote general practice in differing ways:

- 30 additional places at the University of Aberdeen: all students will undertake an enhanced GP programme, with a set minimum of teaching time and an additional range of GP options. This is a multi-pronged approach, integrating GPs into the formal teaching curriculum at the Medical School within clinical blocks alongside secondary care colleagues, and implementing a number of new experiences, including embedding students in the Third Sector and Out of Hours care. Alongside these changes they are developing the role of existing GP tutors in the community and expanding opportunities for GP mentorship. Clinical teaching is transferring from traditional ward based settings into Primary Care, including community hospital teaching and case based learning.
- The University of Edinburgh is developing a new MBChB programme for existing healthcare professionals aimed at training graduates who will be more likely to enter general practice postgraduate training. Commencing in September 2020 for 25 students, it is unique in that its target students are existing healthcare professionals, who will study part-time (for the first 3 years), and most of the time they will be learning remotely. Their clinical contact in the first 3 years will be almost exclusively in general practice, then they will join the mainstream programme for the final 2 years.
- Glasgow is taking a two-pronged approach to strengthening the role of general practice in their curriculum. Firstly, there is expansion of contribution from general practice and GPs throughout the 5 years of the course for all students e.g. via the New Year 3 GP teaching week (see below). Secondly, the creation of the new COMET (Community Orientated Medical Experience

Track) offers 30 students the opportunity to participate in a GP focused stream within the MBChB programme. Successful applicants will experience an enriched programme of immersive primary care in a range of practices with the aim of inspiring the GPs of the future.

ScotGEM: Generalist Clinical Mentors

ScotGEM offers a four-year MBChB training focused on 'rural generalists' for graduate entrants. The course is therefore atypical in that it has licence to select students from the outset interested in this more community-based approach with an explicit emphasis on general practice.

Based upon the need to offer a truly generalist experience that aligned with a Case Based Learning curriculum it was concluded that the only clinicians who could do so, including accessing a full range of patients for teaching, were GP's. The programme thus prioritised expenditure on a GP led clinical programme throughout years one to three. Though this aligns extremely well with many aspirations within the Wass report it also necessitated a new approach of sufficient appeal to recruit portfolio career GP educators

Generalist Clinical Mentors (GCM) teach the Clinical Interaction Course (all consultation, clinical and procedural skills) for half a day within the medical school, have groups of 6-8 students in practice for a day each week and have half a day preparation time. The aim being to provide core teaching by enthusiastic role models based in community practice demonstrating a clear bridge with more structured aspects of their learning. The CLIC teaching is structured and focused with a two-year competency-based learning outcomes plan. The 'GCM Days' are designed with local opportunities in mind (e.g. access to a community hospital ward or not) and blend the weekly CBL start/wrap up with a broad range of GP based learning.

Glasgow's Year 3 GP teaching week

Phase 3 of course is based on a specialty week structure (e.g. cardiology, respiratory). From 18/19 a new GP 'week' has been added to this phase of the curriculum. This 'week' is comprised of 3 GP led teaching days, the content of which has been based on 3 key documents: SAPC and RCGP Curriculum Guide 'Teaching General Practice'; GMC Guidance 'Outcomes for Graduates'; and Realistic Medicine

The content aims to highlight key principles of good quality primary care at the heart of which is working in partnership with patients and generalist principles. The format includes:

- Inspirational talk from a carer and presentations from leading academic GPs on topics such as social determinants of health, multi-morbidity, treatment burden, polypharmacy and self-management.
- Case focused lightning talks from early career academic GPs – to promote academic GP as a career and also to demonstrate how we use evidence to inform decision making
- GP ST delivered Case Based Learning Sessions to highlight key principles of primary care
- Student presentations feeding back learning from multi-morbidity Case Studies
- Senior GP academic revision GP surgery – highlighting GPs use learning from all the other specialty weeks in their daily work.

GP Teaching Fellows

In recent years, there has been a large increase in the number of hospital-based clinical teaching fellows (Furmedge et al., 2013). The current separate funding streams for postgraduate and undergraduate training and teaching make creation of a similar scheme in primary care challenging. These roles are beginning to appear in England and have been positively evaluated (Thampy et al., 2018). It is proposed that their cognitive and social congruence with medical students not only makes them effective teachers but also positive role models for choosing a career in general practice.

ScotGEM GP Teaching Fellows: a potential catalyst for increasing capacity

ScotGEM is generating excitement and enthusiasm, offering options to innovate with many GPs considering the programme a strong prospect for building the workforce. There is an urgent need for new solutions as more of the same will not suffice and this might include a policy of growing our future educators. The suggestion of creating UG Teaching Hubs has particular resonance in rural areas where there is no nearby university department and are typically 'hard to recruit' Consequently, ScotGEM is exploring ways of supporting such developments with their particular boards as a means of developing new capacity and future educators.

The proposed model could involve strategically sited early career GP Teaching Fellows, co-funded with boards, as part of a Teaching Hub supporting a small number of 'spoke' practices or teaching delivered within health centres or community hospitals in specific geographical locations. For instance, supporting a group of Longitudinal Integrated Clerkship students via a local GCM tutor. The aim is to aid rural recruitment and free more experienced local GPs to teach as well as aligning ScotGEM with the national goal of increasing capacity and enabling it to play a key role in catalysing innovation at a local level. These one-two year appointments would include a mix of clinical service, teaching and personal development opportunities.

GP-focused curriculum content

Consideration also needs to be given to GP-focused curriculum content. This includes both core curriculum content and the variety of options available for additional GP exposure. There is significant variation across UK medical schools in the quantity of their curriculum which is GP-focused (Alberti *et al.*, 2017). Creation and delivery of new content should be informed by 'Teaching General Practice', a joint SAPC and RCGP guidance document, and should aim to highlight the evidence base underpinning general practice as well as generalist principles (Harding, Hawthorne and Rosenthal, 2018).

Curriculum options/ electives/ student selected components

All medical school curricula include a degree of 'self-selected' content i.e. opportunities for students to choose areas they are interested in studying while demonstrating the learning outcomes required of them (GMC, 2015). This includes, but is not limited to, electives, student selected components (SSCs) and intercalated degrees.

Historically, in some medical schools, general practice has been underrepresented within these options due to minimal or absent funding. These options are often

popular with students e.g. SSC focusing on Remote and Rural Practice (Aberdeen). The greater flexibility this teaching format can afford facilitates creation of engaging and relevant student learning experiences such as undertaking BASICS training, mountain rescue and coast guard experience. Opportunities such as this can excite students about a career in remote and rural general practice.

The role of Student GP Societies

A key recent development has been the establishment of student GP societies across all Scottish medical schools. Supported by both RCGP and the HEIs, a factor in the success of these groups has been that they are student-led. Planning, managing and delivering a range of activities, students' enthusiasm for general practice can be harnessed. Working in partnership with medical schools, these students can help inform curriculum innovations going forward and can provide useful insights into the perceptions of general practice in the wider student body.

GP Societies in Scotland

The Wass recommendation (10) taken forward in Scotland in the shape of a *Discover GP* conference in Aberdeen in February 2019. There were plenary sessions delivered by prominent GPs, including Carey Lunan, Chair of RCGP Scotland. There 109 attendees, including 92 students, 14 foundation doctors and 3 physicians associates.

- Collaborative effort from all Scottish GP societies, supported by the RCGP Discover GP team and the local faculty.
- 34 GPs who volunteered their time to run sessions and inspire the next generation of general practitioners
- Part of an annual programme of seven regional conferences bid for by GP
- Feedback was excellent with many people saying that they were 'inspired' and 'excited' by the 'diversity', 'flexibility' and 'breadth' the specialty offers.
- 95% of attendees stated that the event had quite positively or really positively changed their perception of what a GP does
- 90% stated that the event had quite positively or really positively changed their perception of the future of general practice
- 100% stated that the event had quite positively or really positively changed their perception of becoming a GP

This successful event demonstrated the real value of raising the profile of GP societies through well publicised events for students and FY doctors. Such events are likely to be of value in increasing numbers of medical students who pursue a career in general practice.

3. Innovations in developing GP teaching workforce

Diversity of teaching opportunities

The GP workforce is changing – fewer GPs are becoming partners and more GPs are working part time or seeking portfolio careers (NHS NSS, 2018b). To increase teaching capacity, teaching opportunities must be available to all GPs. New models such as the creation of the Generalist Clinical Mentor model (GCM) are one way of doing this. The options of fixed commitment or flexible teaching involvement is another.

Developing the GP academic workforce

GP academics play a crucial role in promoting a career in general practice to students. The decline in the number of GP academics within Scottish medical schools over the past six years is a cause for serious concern. GP academics provide profile for the discipline within medical schools as well as being role models for future GPs and GP careers. They undertake much needed research in primary care for the rapidly changing and ageing population of Scotland and focus on evidence-based solutions to problems. Perhaps most importantly, in the face of recent evidence (RCGP/MSc, 2017) of the impact of denigration of general practice on students' career choices (destination GP), GP educators can challenge prevalent negative attitudes to general practice careers held by many students and clinical academics. In Holland, recruitment to general practice is good, and there are strong links between academic departments and provision of primary care. Raising the visibility of academic general practice may be important in encouraging curiosity and improving recruitment (Wass, 2019; Mulla, 2018).

Strengthening primary care educational leadership

Throughout the duration of the working group, the GP Heads of Teaching group (GP HoTs) has demonstrated the value of sharing ideas around undergraduate education and working collaboratively to innovate. Working in partnership with their medical school teams, they are forging the future of undergraduate GP education in Scotland. This aims not only to produce more future general practitioners but also to create a future medical workforce with a greater understanding and respect for the pivotal role of general practice in the NHS.

GP Champions in NHS Tayside

NHS Tayside has recently created a post of “GP Champion”. The overall purpose of the role is to support GP-based learners in the secondary care setting. In particular, the GP Champion will support undergraduate learners who are on Dundee School of Medicine’s Longitudinal Integrated Clerkship (DLIC) programme (year 4 Dundee students and ScotGEM year 3 students), by facilitating access to learning in secondary care settings, contributing to planned teaching sessions and assessment within the programme. DLIC students self-direct their learning, linked to the patients they see and attend services individually to meet their self-identified learning needs. As this is often with short notice, or none at all if a patient is admitted with an acute illness, this kind of support will greatly ease their access to secondary care learning environments. The Champion will also raise awareness and understanding in secondary care of the DLIC and its requirements.

A secondary aspect of the role is to support GP Specialty Trainees working in the hospital. This group have individual educational needs which are different from those of hospital based specialty trainees. The post holder will liaise with the GP TPDs/APGD in the deanery to define GP Trainees' learning needs in secondary care, and identify and facilitate relevant educational opportunities. We expect that this initiative will enhance the learning of both undergraduate and postgraduate GP based learners by making it easier for them to access relevant secondary care experience and teaching.

CHAPTER FIVE: MEDICAL SCHOOL PLANS TO INCREASE UNDERGRADUATE EDUCATIONAL CAPACITY IN PRIMARY CARE

Introduction

The previous chapter on innovations developed by the GP HoTs indicates the potential to substantially increase undergraduate education in primary care. While that chapter covers a great many different approaches, this chapter contains the current commitments to change from all Scottish medical schools.

The following summarises potential early gains:

- Developing GP Teaching Centres in which GPs support multiple learners in clinical practice concurrently
- Using live streamed consultations in group teaching sessions
- Making more clinical teaching sessions in the Medical Schools jointly designed and delivered by primary and secondary care faculty
- Establishing GP led small group sessions to discuss cases encountered in all clinical settings
- Establishing 'near peer' teaching to include working with the Scottish Deanery to facilitate involvement of FY doctors and GP Specialty Trainees
- Considering how to extend GP led teaching into community hospitals and other community healthcare settings including the Third Sector

It is recognised that increasing undergraduate education in primary care is challenging and will take time. 'Quick wins' are limited and many of the initiatives required to develop increased capacity across the whole primary care system (including increasing the number of GPs) cannot be achieved by medical schools alone.

A summary of the current plans from each medical school is set out below.

Aberdeen

The University of Aberdeen is taking a multi-pronged approach to developing a GP enhanced programme for its students which offers them multiple additional opportunities to develop their understanding of general practice, in addition to excellent experience relating to other medical specialties. They are doing this by further strengthening the role of general practice in the curriculum, with GPs teaching alongside secondary care colleagues across clinical blocks and implementing a number of new experiences referenced earlier. These include embedding students in the Third Sector and Out of Hours care. Alongside these changes they are developing the role of existing GP tutors in the community, expanding opportunities for GP mentorship and expanding the clinical teaching time in Primary care, including community hospitals and using case based learning. An additional 30 student places is facilitating the development of multiple opportunities across the curriculum for students to select further GP experience during their studies. Further details below:

GP Enhanced MBChB Programme Curriculum Model

The University of Aberdeen GP Enhanced MBChB Programme will follow a core and options curriculum model. To reduce the risk of potential reinforcement of negative views and divisions between hospital-based disciplines and general practice, we have made a positive decision to adopt a core and options model for our GP Enhanced MBChB Programme. In this *all* students will experience a GP Enhanced programme where ultimately a minimum 28% of clinical teaching is experienced in a GP context. The figure for community-based placements would be significantly higher than this and is steadily increasing as care moves to the community. These additional placements in the community context feature widely in the curriculum and would include some which are hospital based clinician led and others where there is a combined GP / hospital based clinician activity e.g. diabetic care in North East, mental health (72 sessions in Year 4), child health and care of the elderly.

Dundee

The overall curricular time for students in GP focused or placement based teaching varies between 8% to 12.5% across Years 1 to 5 (with an option in Year 5 to increase to 25% via an immersive clinical placement in rural practice).

Dundee would ideally increase the clinical placement time across all five years, however, teaching capacity in general practice means this is unlikely to be feasible in the near future. They therefore propose to look at sustainable alternatives that give students opportunities to experience the breadth, complexity and intellectual challenge of general practice, to work with positive role models. This could include, for instance, in Years 1 to 3, introducing a series of either one GP day per fortnight or a half day every week, plus two GP weeks per year for a mixture of classroom based learning activities and half day placement in local practices. This might involve:

- Case based student led clinical reasoning focused sessions – mixture of prepared cases progressing to real cases from clinical experiences over years 1-3. Small group format: 8-10 students max (currently in development) with continuity of tutor
- GP Live (GP facilitated discussion of live streamed real consultations – currently in pilot phase)
- 'Experiences' in a mixture of clinical, campus and Third Sector organisations, includes Interprofessional Education (IPE). These currently exist but need refining and expanding.
- GP led small group sessions with continuity of tutor (already exist but to be expanded significantly)
- Formal involvement of GP-STs in teaching
- Whole consultation simulation
- Continue patient journey sessions

In Year 4 and 5, planned or aspirational activities include a continuation of four week immersive GP placements and LIC option for 10 students in Year Four; development of GP Teaching Centres to address capacity issues; whole consultation simulation in Year 4; and student-led clinics for real patients in Year 5.

Edinburgh

Edinburgh are currently reviewing arrangements for delivery of the MBChB programme from 2020 onwards. This will involve changes mostly in years 1 and 2 and year 4. A number of these proposed changes are described below:

Year 1

- The innovative Health, Ethics and Society module will continue with patient case studies delivered through GP practices focusing on the patient's experience of illness, and role and importance of family in promoting and maintaining health.
- Introduction of "live-streamed" GP consultations. This will occur in semester 1 to introduce the students to the nature of GP consultations and communication.
- Patient stories: Interview older patients about their life. The cases will be selected by GP practice. This will include care home residents. The focus will be on talking to patients and becoming comfortable in writing narrative accounts. Students will produce a biography of the patient (not only health focused)
- Introduction to Clinical Practice to start in Year 1 delivered through local GPs. This component will focus on history taking and communication.

Year 2

- Introduction to Clinical Practice will continue through Year 2 with further teaching on history taking and clinical examination of all the major systems. This will be taught through local GPs as in Year 1.

Year 4

- GP placements will expand from four weeks currently to 10 weeks, with a focus on an embedded experience where the GP tutor will be able to provide detailed feedback on students' clinical ability. It is likely that practices will be required to take additional 2-3 students. This will also include out of hours shifts in GP. This component will also focus on the interface between GP and hospital by for example following patients to outpatient appointments or acute admission to hospital. This will also include a strand through the year called "Team" where students will need to work or meet with all the members of the team both in GP (e.g. Practice Manager, District Nurse, Pharmacist etc.) and provide a written report on their role. The same process will also run through Year 4 in hospital based placements. There will also be tutorials developed by GPs to groups of students in local practice placements. These will be case based and co-created with hospital specialists.

This is the most practically challenging aspect of the plan. It is already clear from multiple discussions with GP partners that this plan cannot be delivered without an increase in funding.

Year 6

- Aim for students to have a 4-6 week GP placement, which will be similar to current provision. The emphasis will be acting as a senior student and seeing patients as first point of contact.
- Edinburgh is aiming to bring clinical exams forward to December, at the end of semester 1. This will allow us to develop semester into a Preparation in Practice module. This will have an assistantship and a local elective in either GP or hospital medicine. They will look to find partners in remote and rural locations for these.

Edinburgh's aspirations are for teaching in primary care settings to represent around 10% of the year one and year two curriculum by 2021; in year four 30% of clinical placement would be in primary care (a 150% increase on current levels) from 2021 onwards; while for year six the aspiration is 25% from 2023 onwards.

Glasgow

Glasgow intends to employ a multifaceted approach to increasing the profile of general practice in the curriculum. Alongside the introduction of the new COMET programme (see point 3 below), they are reviewing the curriculum experienced by all students. Future plans are underpinned by the current evidence base for effective interventions supporting medical students considering a career in general practice. Proposed or potential initiatives include:

- Enhancing Quantity and Profile of GP during Specialty Placements – in Phase 4 of the curriculum Glasgow are looking at a number of potential options, including amending timetables to provide a GP-delivered section of scheduled specialty teaching within their Integral teaching week and, with additional funding, a placement of students in GP for one half-day during each of the Specialty Blocks in ENT / Ophthalmology, Obstetrics, Gynaecology, Neurology / Cardiology, Musculoskeletal medicine, Paediatrics, and Psychiatry.
- Establishment of the COMET Programme to showcase and develop GP Leadership – in 2019 Glasgow will select its first cohort of students who have expressed an interest in taking on a career in General Practice. Over the remainder of the 4 years in the undergraduate curriculum they will roll out an enhanced exposure to the clinical and leadership challenges presented in primary care settings.
- Promotion of near-peer teaching – following a pilot of Near Peer Teaching by GP Specialty Trainees in third year, Glasgow will be exploring development of practice-based near peer teaching.
- Integration of GP throughout the broader curriculum – general practice lends itself to spanning across the medical school curriculum. In recognition of this, Glasgow have already started to explore promotion of the role of the GP as

the 'Expert Medical Generalist'. This includes the proposed creation of a new 'Expert Medical Generalist slot' in year 3 specialty weeks from 2019 and a review of representation of general practice in teaching material used across the curriculum.

- Utilisation of Technology Enhanced Learning and Teaching (TELT) – development of online resources such as GP Live and Online Case Resources will enable greater numbers of students to experience the diversity of experiences available across the West and Scotland as a whole.
- Creation of attractive teaching opportunities for GP teachers in all capacities – investment in GP teaching has the potential to facilitate creation of innovative posts which have been employed successfully in other areas e.g. GP teaching fellow posts for GPSTs, hybrid service and teaching posts, academic and portfolio career opportunities. As a first step, we are in process of employing GPs as Heads of Senior Years (4 and 5) to provide role models for General Practice.

St Andrews

Currently approximately 20% of the BSc Hons clinical curriculum is within primary care. Their short term goal is therefore to increase this to 25% (in line with the SFC target). However, recognising the shortage in primary care physicians and problems within GP retention and recruitment, over the longer term they aspire to a greater shift towards primary care teaching.

Spanning short to long-term plans, St Andrews aims to cross fertilise ideas and innovations with the ScotGEM programme; for example, adoption of a more case-based approach to learning, alongside prominent positive GP role models.

Short-term (0 to 12 months)

- Increase the proportion of simulated scenarios and case-based discussions set in primary care
- Ensure resources that support learning events are relevant to primary care; for example, referencing primary care journals and guidelines
- Introduce joint teaching on placement, delivered by both primary and secondary care physicians
- Introduce joint lectures, delivered by both primary and secondary care physicians
- Directly address and discuss concept of “badmouthing” within lecture theatre event
- Recruit GP registrars for future GP careers events and near peer learning experiences
- Strengthen existing GP society, building on membership and provision of educational events

Mid-term (1 to 2 years)

- Provide Out of Hours (OOH) learning opportunities for students, with placements supported by GP tutors

- Introduce further community-based placement in year 1 of course
- Introduce community-based placements in year 3 of the curriculum (currently secondary care based)
- Provision of third sector placements in early years
- Share Quality Assurance visits of GP practices across institutions to reduce administrative load
- Build on existing GP Showcase day model, sending multiples of students to single sites, promoting “USPs” of General Practice

Over the longer term (two years plus) St Andrews will seek to build a bank of shared primary care learning resource between institutions, including placement sites for “swaps”. They also have an aspiration to build on community hospital teaching model, towards a teaching hub/centre but note that this would require significant additional resource.

Facilitating Innovation

The submissions by the GP Heads of Teaching and discussions at the Working Group emphasise that there are significant barriers to delivering increased capacity. In particular, GP HoTs have been clear that the implementation of many of the innovations noted in this chapter will require a significant uplift in the Category A tariff. They feel that a static tariff will not only prevent innovation but risks a decline in the number of practices taking students due to on-going workload issues. In addition campus-based teaching is also dependent on appropriate funding streams, GP tutor and team capacity, physical infrastructure, competing demands on curricular time and professional support staff.

GP HoTs further highlight that clinical placements are very changeable and dynamic, dependent on staffing on the ground, and wider pressures on clinical service provision. Flexibility is therefore essential within medical school plans, with a need to take a longer term view. While it is clear that an increase in the category A tariff is essential to increasing the GP tutor workforce, that in itself will not deliver an increase in education in primary care. That will require the implementation of all the recommendations in chapter 6.

CHAPTER SIX: SUMMARY AND RECOMMENDATIONS

Summary

Chapter two highlighted the range of barriers and facilitators to increasing undergraduate education in primary care. Chapters three to five outline the wide ranging systemic action that is required if we are to progress towards the goal of significantly increasing medical students' exposure to primary care placements and to GP educators. Individual initiatives, no matter how evidenced-based or innovative in nature, are unlikely to be sufficient. It is important to state that all curricula will have to ensure that students are prepared for the forthcoming GMC Medical Licensing Assessment (said to represent the minimum standard expected of a student graduating from a GMC approved programme). This will apply to teaching in general practice and other community settings as well as all other clinical contexts.

The breadth of membership of the working group indicates the complexity of the issues involved in increasing undergraduate education in primary care. The high attendance, joint working and engagement of group members has been impressive and has enabled clear recommendations. It is also very apparent that as we move forward to implementation, developing and sustaining improved working across and between many of these organisations will be necessary for an increase to be achieved and maintained. In particular, the output of this group offers an opportunity to strengthen existing links between undergraduate and postgraduate medical education, and between Universities and Health Boards. An example of this is given in the box on page 52.

RCGP Scotland has a significant role in many areas, but especially in supporting undergraduate GP societies, advocacy for strengthening education in primary care and providing independent feedback from GP educators in the profession. The recently published RCGP Scotland document 'From the Frontline' recognises the importance of increasing general practice based teaching for undergraduates (RCGP Scotland 2019)..The role of SGPC in advocacy for resourcing of GP education is also important. The principle set out in Sir Lewis Ritchie's 2015 report on primary care OOH services, that of pulling together to achieve a common aim, also applies strongly to all partners involved in increasing undergraduate education in primary care. A consistent and demonstrable approach by medical schools, and the wider profession, to address tribalism and negativism about general practice will also be necessary.

Throughout the life of this group, it has become clear from many sources that many GPs are stimulated and even 'rejuvenated' by undergraduate teaching if the time, space and financial support can be found to address the tension that currently exists between service provision and teaching. That is the purpose of these recommendations.

Health Boards and Universities: moving from cooperation to collaboration

As part of a structured approach to supporting Medical Education Delivery in NHS Highland, across several universities and in particular to support the growth in delivery in primary care the board established two groups to bring partners together- the NHS Highland Medical Education Strategic Board. This Board provides an opportunity for partners (UofA, UofD, ScotGEM, NES, NHHSH) to share openly on changes and challenges regarding local, regional and national development in medical education and service delivery, particularly if one will have an impact on the other, and to then provide advice and support to each other as necessary. This Board also has a remit to share at a strategic level how, where and by who medical education is being delivered, good practice and successes for the Local Education Provider, Educational Organiser, students, clinicians and patients.

This group is informed by the Undergraduate Medical Education Committee (UMEC) which has responsibility for the oversight of the operational delivery of undergraduate medical training across NHS Highland. UMEC has a remit to support an increase in the capacity for providing medical undergraduate education teaching in both primary and secondary care and to support the development of local medical staff to be effective teachers and role models by providing educational opportunities and relevant CPD that meet their needs. UMEC has an important communications role ensuring communication to the local medical education faculty regarding local, regional and national developments in undergraduate medical education across primary and secondary care.

Developing the GP educator workforce

It is clear that in developing the necessary workforce, a 'more of the same' approach will fail. There is a real opportunity here for medical schools to develop teaching faculty in innovative ways, such as the Generalist Clinical Mentor model initiated by ScotGEM, which offer a diversity of teaching opportunities to GPs who may be partners, salaried or sessional employees. Innovative ways of delivering '**near-peer**' teaching by FY and GP trainees will also be important. The joint initiative between NES and University of Glasgow on utilising GP trainees in UG teaching sets out a model that could be applied with local adaptation across Scotland. (see Glasgow's year 3 teaching week on page 40) Recent evidence (Allsopp, 2019) also suggests that near peer teaching has a positive effect on GP trainees as well as on medical students. Among other positive findings they found 'increased resilience, increased desire to work as a GP, increased interest in medical education and an increased desire to stay and work locally.' These are potentially important findings for recruitment and retention in practices.

There are also other ways in which GP faculty could be developed and strengthened. **GP teaching fellows** (see SCOTGEM proposal on page 41) have

considerable potential for expanding undergraduate education while also helping to develop and train the future GP educator workforce. Another potential development is on the basis of the post CCT positions being developed following the Shape of Training Review (Greenaway D. Shape of Training, 2013). These currently under development offer a blend of clinical experience in general practice for 4 to 6 sessions per week with the remainder of time spent in other clinical activities of relevance to general practice. However, the model also easily lends itself to post CCT educational models combining clinical work in a practice with delivery of UG education on a 'near-peer' basis such as is seen in the OOH Development Fellowship. They could also be developed rapidly, and may help to address the current workforce crisis in general practice in Scotland. Such a development also offers the opportunity for further collaborative working between NES, Health Boards and medical schools.

Looking forward, the contribution of **academic general practice** to the support and visibility of GP education and to providing role models for medical undergraduates is vital, as recognised in the RCGP Scotland 'Securing the Future' report, chaired by Sir Lewis Ritchie (RCGP Scotland 2009.) The short life working group on the Academic Training Pathway for General Practice in Scotland established under the chairmanship of Professor Frank Sullivan (Scottish School of Primary Care 2019) should provide much needed momentum for GP academic careers to counteract the current concerning decline in academic GP numbers in Scotland. It will provide an initial report to the Board for Academic Medicine in September 2019.

GP tutors are the core resource in all undergraduate GP education, yet it is clear that the role does not have the same profile and status as that of GP educational supervisor for postgraduate trainees. A Scottish Tutor of the Year award by Universities and/or RCGP Scotland may help to raise the profile. Support for postgraduate education certificates and diplomas could help to grow the educational workforce of the future. Forging links between undergraduate tutors and GP postgraduate educational supervisors could benefit both. A specific targeted recruitment drive for GP tutors, possibly organised collaboratively by all medical schools and relevant territorial health boards with RCGP Scotland support should be considered. Recent evidence from four medical schools in England (Barber et al 2019) suggested that a perceived lack of support from medical schools was a barrier to GP teaching. While Scottish medical schools engage effectively with GP tutors, some comments in the capacity survey suggest this is an area worth further examination.

Ensuring a variety of placements

By Choice not by Chance (HEE/MSc 2016) suggests that a *variety* of placements is important so that students are exposed to a wide range of general practices and understand the adaptive nature of generalist practice to local settings.

Out of Hours (OOH) services

GP OOH services across Scotland are generally not funded through NES ACT to provide undergraduate teaching but most provide postgraduate training for GP trainees. The most frequently seen age groups are the under 5s and the over 80s, which suggests that OOH services are a relatively untapped resource for good clinical GP experience and a great breadth of presentations. They potentially provide an excellent training environment for medical students seeing urgent primary care problems in a clinical setting led by GPs. The OOH setting requires staff to be confident working in isolation, deal with complexity and uncertainty and to be able to manage a wide variety of conditions. There is now a range of practitioners involved within Out of Hours services; this would allow students to experience how different practitioners work and how the team works together for the benefit of patients.

Current OOH staffing pressures are considerable and may limit expansion of teaching in the short term. However, due to the substantial clinical teaching potential and wide geographical spread, as staffing improves, OOH services should be included in plans for expansion of undergraduate education. OOH services could also contribute to some of the digitally supported tutorial methods as described in the report, e.g. supplying video consultations for the shared library that could be part of teaching in day time hours.

Remote and rural Scotland

Using Scotland's unique remote and rural geography and population for teaching is vital as they provide different clinical and organisational challenges to urban populations. Despite provision for transport and accommodation within NES GP ACT, some students and practices (see Biggar practice vignette and findings from capacity survey) report that these support arrangements do not work sufficiently well and that some practices have to subsidise accommodation costs and students' travel costs in some Health Boards. This situation represents a disincentive for both students and practices and limits practice engagement. As part of the development of general practice teaching, this issue should be addressed over the next 12 months through a collaborative approach between NES ACT, medical schools and relevant health boards.

There is also strong evidence (see, for example. Jones et al., 2014; WHO, 2010) that establishing a 'rural pipeline' which runs from encouraging rural school students into medicine, exposing undergraduates to rural general practice, and ensuring good quality rural postgraduate training and CPD will increase the supply of remote and rural GPs. As people in remote and rural Scotland suffer disproportionately from GP shortages at the moment, it is especially important that Universities and territorial Health Boards covering remote and rural parts of Scotland use these recommendations to increase remote and rural placements for students. An example of the breadth and depth of undergraduate teaching possible in remote areas is given below.

Welcoming Undergraduates to Benbecula Medical Practice: A Remote and Rural Experience

Our practice provides placements for undergraduate electives, with preference given to students who have a clear idea of what they want to learn while they are here. We pride ourselves on the support we give to students, who often say coming to us has been a high point in their undergraduate experience. All of our teaching is 1:1 and we try to give students as much patient contact as possible to help them develop their consulting skills. This is usually the highlight of their time with us.

We used to provide formal undergraduate placements for Dundee, but when the designated tutor retired, we were not able to sustain this. We still keep in touch with many of the students who came here; one has even come back to train us as part of a Scottish Core Obstetrics Teaching and Training in Emergencies Course (SCOTTIE) team.

As an example, our next undergraduate is coming for two weeks. She has already indicated that she is interested in palliative care, and wants to see how we can deliver this in a rural setting. Our practice covers the community hospital, which has a palliative care room, so she will spend some time there. We have organised a trip to Barra on the ferry with the MacMillan team, a VC with a hospice on another island, and a session with medical researcher with an interest in palliative care.

SCOTTIE: Scottish Obstetric teaching and training in emergencies course:
<https://www.scottishmaternity.org/scottie.htm>

Areas of socio-economic deprivation

Scotland has also been a pioneer in exploring the needs of general practices and patients in the most deprived parts of Scotland – “GPs at the Deep End”. Placements in these practices offer undergraduates exposure to and an understanding of the importance of social determinants of health and adverse childhood experiences (ACE), as well as what is now called ‘deprivation medicine’. If we are to understand and address these challenges for the future, it is essential that many of our undergraduate students gain an understanding of the complex issues involved. In North Dublin, exposure to GP training specifically aims at training GPs with the capacity and desire to work in areas of social deprivation (Health Equity 2019). It is possible that undergraduate SSCs such as taught in Glasgow (see below) can have similar positive effects through role modelling and demonstration of authentic, quality general practice. Medical schools should aim to ensure that as GP placements increase, there is at least a proportionate increase in placements in areas of deprivation.

Special Study Component (SSC) in social determinants of health at the University of Glasgow

The SSC in Social determinants of health and health inequalities has been offered to Year 2 medical students at the University of Glasgow since 2014. The aim of the SSC is to develop understanding of the concepts of health inequalities and the social determinants of health within Scotland and their impact on health and health care provision.

Students spend time in a range of health and community settings, meeting patients, service users, volunteers and professionals. Placements include: Addictions team, Personality Disorder Team, Deep End GPs and Freedom from Torture. This is complemented by weekly academic learning on a range of health inequalities topics, including: adverse childhood experiences (ACEs), multiple exclusion homelessness, the inverse care law, LGBTQ+ health inequalities, and the social model of disability. There is an ongoing evaluation of the SSC aiming to assess if students have gained the intended learning as set out in the SSC ILOs and if so how this is achieved.

Student feedback on a community placement:

“When I become a doctor, I don’t want prescriptions and medications to be the only solution I provide to my patients. [This placement] has really inspired me to want to use social prescribing in my own practice and provide my patients with sources of support from the community to improve their health and wellbeing.” (Student from 2019 class)

Recommendations

Recommendations one to six, on physical space, digital access and educational tariffs follow directly from the findings of the capacity survey and collated evidence in this report.

Recommendations seven and eight cover growing the necessary GP educator workforce.

Recommendations nine and ten address monitoring and evaluation of the changes as they are implemented.

It was the view of the group that to achieve a well-managed increase in undergraduate education in primary care, these recommendations required to be implemented as a package rather than singly, recognising that timescales for implementation will be much longer for some than for others. Failure to address each of the areas covered by the recommendations is likely to prove a rate limiting step for many of the others.

Physical space for teaching

As shown by the general practice capacity survey and through discussions with stakeholders, it is clear that physical space is currently a major factor in limiting expansion of undergraduate education. This is likely to become more acute given existing Scottish Government commitments to increase the GP and wider MDT workforce.

Recommendation 1 (Scottish Government and Health Boards)

Capital investment in primary care by Health Boards must include provision of fit for purpose space that can be used for educating the primary care workforce of the future.

Recommendation 2 (Scottish Government)

The new NHS Scotland Capital Investment Strategy is due to be published shortly. It is recommended that this should make the case for investment in primary and community care facilities recognising specifically the need to include facilities to train the workforce of the future.

Digital infrastructure

Access to high quality broadband throughout the NHS in Scotland, and easy access to educational e-portfolios and educational material in all primary care premises are absolutely essential to maintaining and developing high quality undergraduate education in primary care and for assessment of students by Faculty.

It is significant that in its National Training Survey for postgraduate trainees in 2019, the GMC specifically asks about access to Wi-Fi on the basis that poor Wi-Fi '*can really affect the ability of trainees to learn and trainers to teach.*' This is also true for undergraduates.

Recommendation 3 (Scottish Government)

The SWAN programme should develop direct ties and representation with the R100 delivery team in Scottish Government both better to understand the timeframes for the remaining very hard to reach locations and to influence decisions on how the R100 priorities are decided about which locations should be prioritised i.e. those where GP surgeries are without connectivity and could therefore have access accelerated.

Recommendation 4 (Universities and Health Boards)

Universities currently have information on problems with broadband and Wi-Fi access for their students. To provide a national picture, Universities and Health Boards should survey digital access for undergraduate teaching practices and premises across Scotland and plan to address access difficulties where this is possible, over the next 12 months.

Funding for undergraduate medical education

The level of ACT funding was repeatedly identified as being too low currently. It was clear that many practices consider that they are effectively subsidising undergraduate education. Falling numbers of practices engaging in undergraduate education supports that view. Tariffs at their current levels are leading to a substantial reduction in availability of GPs for teaching and hence a negative feedback loop resulting in fewer GPs in future. The extensive work of the NES Primary ACT group and the NES validation of the HEE work on actual costs of teaching has suggested that the tariff for a student in practice in years three to six (category A) should be £85 per session. However, GPs are also required for category B educational activity (lectures, campus based teaching and assessment, admissions procedures etc.). It will be important that any increase does not destabilise a system which currently has limited capacity, but instead contributes to increasing capacity across the system. A variety of different tariffs and rates are used across medical schools for category B activities. While flexibility will be needed to address differing conditions across Scotland, there is a need to reduce the complexity that arises from this.

As discussed in chapter three, there would be merit in considering whether the current ACT model across both primary care and secondary care requires a more fundamental review. It could be further argued that such a review should not be limited to ACT but rather consider the overall approach to the funding of undergraduate medical education. Consideration should be given to alternative models of distributing monies to support undergraduate clinical teaching, particularly against a background of innovative models of delivering undergraduate education, different career pathways in general practice and constrained public finances.

Recommendation 5 (Universities/ NES ACT)

The tariff for clinical teaching in primary care (category A) should rise from £40 per student per session to £85. A ceiling value of £255 for three or more students should apply. Current falls in practice teaching capacity across Scotland suggest that this should be implemented as quickly as possible.

Recommendation 6 (Universities/ NES ACT)

Further work needs to be done by NES together with relevant stakeholders to streamline the current range of category B tariffs in Primary Care ACT. This should produce a simplified range of tariffs applicable to all medical schools within 12 months.

Developing the GP educator workforce

Increasing undergraduate education in primary care over the next few years will challenge current capacity, not just for teaching but for educational management and administrative support for delivery. The GP Heads of Teaching group has, during the period of the working group and in this report, demonstrated the value of sharing ideas around innovation in undergraduate education but has no formal recognition. There are also variations across medical schools in roles and status of GP educators.

Recommendation 7 (Universities/ BfAM/ Universities Scotland/ Scottish Funding Council)

As part of progressing UG education in primary care, each medical school should develop over the next 12 months the outline implementation plans that they have submitted (chapter 5) for increasing teaching in primary care, as well as a strategy to develop and grow the GP educator workforce to increase teaching capacity. This should ensure that GP educators have a strong and effective voice within school decision making structures

Recommendation 8 (Universities/ BfAM/ Universities Scotland/ Scottish Funding Council)

A national level group for GP Heads of Teaching or equivalent in Scotland reporting to the Scottish Deans Medical Education Group should be formally established. The aims of this should be to strengthen educational leadership, build on the implementation plans referred to in recommendation 7, and share innovations to increase capacity and further curricular development.

Monitoring and evaluation

Monitoring and evaluation of the wider reform of primary care, of which this work is part, is vital to understand progress being made and to indicate where additional action may be required. The Scottish Government has recently published a 10-year National Monitoring and Evaluation Strategy for Primary Care in Scotland (Scottish Government, 2019).

Significant work has already been done by members of the group on proposed measurement of progress on increasing undergraduate education in primary care. This is complex, as there are six different curricula and no existing standard method for measuring and recording GP involvement, some of which is informal and not easily quantifiable. Further work is needed to agree a standard data set for use by all medical schools. This should be mapped onto '*By Choice not by chance*'. The current GP HoTs Measures and Indicators paper is included as Appendix E.

Recommendation 9 (Universities/ Health Boards/ BfAM/ Universities Scotland/ SFC)

Monitoring of these recommendations, supported by the GP Heads of Teaching group, should be undertaken with reports six monthly to the Scottish Deans' Medical Educator Group for review by the Board for Academic Medicine and Scottish Government. There should be an independent review of progress after 12 months.

Recommendation 10 (Universities/ Scottish Government)

The investment involved in increasing undergraduate education in primary care requires rigorous evaluation from the outset. This should include (i) the indexing of all medical students at Scottish Universities at matriculation with a view to linking this data with existing data available through UKMed (ii) further educational research into attitudes of students and graduates in relation to careers in GP, all with a view better to understand the career choices of graduates. A programme of funded educational research will be required.

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Appendix A

Increasing Undergraduate Education in Primary Care Group: Terms of Reference

This Working Group has been set up jointly by the Scottish Government and Board for Academic Medicine (BfAM).

Remit

The purpose of this Group is to consider ways of increasing undergraduate education in primary care settings. There are three aspects to this:

CONTEXT AND BACKGROUND; WHERE WE ARE.

- Putting Undergraduate education in primary care in the context of other initiatives designed to address GP shortages as outlined in the National Workforce Plan for Primary Care;
- Carrying out a literature review;
- Determining the current level of undergraduate teaching in primary care in Scottish Medical Schools;
- Establishing the number of GPs who currently teach, their capacity to increase teaching time and mechanisms to support them do so;
- Identifying GPs who don't teach (including GPSTs) who would like to do so and mechanisms to support them do so.
- Understanding the infrastructure, physical and digital, needed to support an increase in undergraduate teaching;

HOW DO WE INCREASE EDUCATIONAL DELIVERY?

- Investigating factors that have a positive influence, including innovative practice within Scotland and elsewhere;
- Investigating barriers to change;
- With support from NES scope/model the extent to which existing ACT resource could be used to support this agenda;
- With support from NES scope/model/quantify the extent to which new ACT resource is required to support this agenda;
- Model the various impacts on service of (i) GPs spending more time teaching, (ii) some ACT resource being reconfigured from hospitals to community settings
-

OUTPUT

By Spring 2019, develop recommendations to increase education in primary care.

Governance

The Group will provide quarterly updates and a final report to the Board for Academic Medicine and the Scottish Government.

Membership

The Group will be chaired by Professor John Gillies, supported by the Scottish Government's Health Workforce Division and Primary Care Division. From time to time, the Group will also invite participation from other individuals to support the delivery activities. Full membership of the Group is as follows:

Organisation	Representative
Chair	John Gillies
Scottish Government Health Workforce	Stella Smith / Emma Watson
Scottish Government Primary Care	Naureen Ahmad / Lara Cook
Scottish Government Clinical Leadership Fellow	Rob O'Donnell / Kirsten Woolley
Scottish Government Health and Social Care Analysis	Iain MacAllister
University Medical Schools (GP Leads)	Maggie Bartlett, Chair of Community Based Medical Education (University of Dundee) Jon Dowell, Director of ScotGEM, (University of Dundee) Karen Fairhurst (University of Edinburgh) Ken Lawton, Head of GP and Community Teaching (University of Aberdeen) Lindsey Pope, Director of Community based Medical Education (University of Glasgow) Rebecca Walmsley (University of St Andrews)
RCGP (Scotland)	Alastair Forbes
NHS Boards	Dr Kerri Neylon, Medical Director, NHS Lanarkshire

	Lindsay Donaldson, Director of Medical Education, NHS Greater Glasgow & Clyde
Scottish General Practitioners' Committee (SGPC)	Andrew Buist/ Drummond Begg
NES	Geraldine Brennan Moya Kelly Amjad Khan Alastair McLellan
Scottish Deans' Medical Education Group (SDMEG)	Rona Patey
Scottish Funding Council	Helen Raftopoulos
Student Representation	Lekaa Rambabu + members of undergraduate GP societies
Secretariat	Gillian McCallum / Rachael Fairbairn

The Group will meet approximately once every 6 weeks in Edinburgh. Venue tba.

NES Medical ACT and Primary Care Review Group

The Working Group will be supported by the work of the NES Medical ACT and Primary Care Review Group which is working in parallel, reviewing approaches to measuring and resourcing undergraduate teaching in primary care through Medical ACT.

Appendix B

From medical student to GP: primary care leading in medical education delivery workshop notes

Summary

In this workshop, experts and stakeholders were tasked with generating solutions to questions relating to primary care, generalism and undergraduate medical education. Briefly, these were: How can more undergraduate teaching be moved to primary care and how can more general practices be involved in undergraduate education? How can primary care assist in the teaching of generalism and how can healthcare professionals be trained in less siloed ways, with more organisational partnerships?

These notes summarise discussions relating to these questions. Though the discussions were separated by individual questions, the suggestions given were, in many cases, overlapping so have been grouped here by theme.

These themes are as follows, with a brief summary of points in each:

Changing teaching in primary care: A number of examples given of innovative teaching methods; some suggestions for new models of teaching; suggestions that trainee and/ or junior GPs should be more involved in teaching; some cautions about various elements of teaching in primary care; and a discussion about the dynamic between teaching quality and quantity.

Primary and Secondary Care Interface: Suggestions to alter the relationship between primary and secondary care included primary care clinicians practicing and teaching in secondary care (and vice versa); in order to facilitate more teaching, various ways of altering GP practice structure were suggested; there was also some discussion about the advantages of teaching for GP practices.

Alterations to curriculum or placement structure: A common comment was on the importance of GPs being involved in university teaching; there were concerns about possible contradictions in teaching and alignment with the GMC MLA; several calls for increased undergraduate placements in primary care; suggestion that all FY2 doctors should spend time in primary care and that GPST training should be increased to 4 years and involve teaching.

Changing perceptions of general practice: A number of examples of “selling points” of GP were generated, though there was also discussion of negative perceptions of GP; it was suggested that the media and student societies could play a part in improving perceptions.

Contractual changes: Calls for altered or increased ACT payments; arguments that changes to GP contract should make teaching part of the core business of GP.

Theme detail

Changing teaching in primary care

Several examples were given of innovative primary care teaching methods. These included:

- A model in Calgary where one GP was allocated solely to teaching, with 4 undergraduate students in each session and involved additional appointments.
- Another featuring simultaneous student teaching, this time 3 students in separate consultations, monitored by video link
- Teaching taking place in out of hours services. Albany Medical School runs an out of hours clinic which is staffed by medical students
- GP Live, a system where consultations are broadcast in to lectures, was mentioned several times as a system useful for the junior curriculum as it provides insight to a large number of students with minimal extension to consulting times.
- Aberdeen “cell” model, where 6 students have a tutorial once a week, which encourages peer learning
- A consulting lab ‘mastery’ system of joint learning
- Anchoring learning in a patient case, for example as in longitudinal integrated clerkship learning or “following a patient”.

There were also suggestions for new models of teaching, including some teaching roles being taken on by other professionals in primary care, or whole practice based learning. There was a general suggestion to challenge the 1 to 1 learning model to increase capacity and that an educational model could be a lever for change in primary care (but that this would require additional ACT funding).

A recurrent line of comments were about trainee or junior GPs becoming more involved in teaching, both in clinical practice and in universities. Rationale for this were suggestions that this would aid teaching capacity, but also that trainees may be “better” role models and have more up to date knowledge. One GP tutor mentioned that opportunities to teach in universities were not offered to GPs until at partner level. Difficulties for universities to access non-teaching GPs to offer teaching opportunities were discussed, with the idea of a one point of advert suggested as a possible solution, and also that universities should attend GP options events to discuss teaching. Another suggestion was the development of some sort of GP training fellowship, where a GP with a special interest in teaching could have a role where part of their time was spent teaching in university and some of their time spent as a practice mentor.

There were warnings about the finding the right time in students’ training to introduce different types of learning, concerns about the effectiveness of observation as a teaching method, concerns about needing to unify teaching approaches for consistency and differences in language used between professions as well the necessity for “backfill” of GP time to cover additional appointments and administrative tasks and other resource issues including practice space and funding for travel.

A medical student suggested that quality should be prioritised over quantity, or depth, with a move to fewer sessions in GP placements, for example by having Mondays and Fridays off. At another table there was discussion, foregrounded by acknowledgement that placements in primary care are already highly evaluated by students, about increasing teaching in GP potentially lowering average quality of teaching and whether lowering in quality would be acceptable.

GP practice capacity and the relationship between Primary and Secondary Care

Several changes to the relationship between community and hospital settings with regards to teaching and patient care were suggested. These included hospital generalists coming out in to primary care, perhaps through joint clinics; the possibility of primary and secondary care sharing outpatient appointments; the need for acute clinicians to understand general practice better in order for there to be a shift of undergraduate teaching to primary care; that GPs should teach on wards (possibly trainee GPs may have more flexibility to do this); altering the balance between primary care and secondary care in terms of budget for education; that there could be links made to other community facing specialities and that GPs can complement secondary care teaching around topics like hypertension, perspectives about which in secondary care may be limited.

There were a number of suggestions as to ways in which GP practice structure could be altered to facilitate more teaching in primary care. One of these were that practice cluster delivery systems could be developed and another was about how to develop an engagement strategy for non-teaching practices, possibly using a buddy scheme and how a personal connection when making university- practice links is helpful in ensuring practices know what teaching involves. There was opinion that practices should be encouraged to make space available for students to consult on their own but concerns about space required for this. A suggestion to address the space issue was to use empty rooms if GP staff not there at that time and others were about utilising community hospital facilities, for example using rooms when staff were out and using meeting rooms to take patient histories (with an acknowledgement that there may be a cost involved in using these spaces).

Advantages to practices of teaching were also discussed: There was an argument that teaching is seen as a discrete activity and somewhat of a badge of honour and also a presentation of anecdotal evidence that GPs are more likely to want to work in teaching practices as there is an indication that this is better for their career development and progression.

Alterations to curriculum or placement structure

There were general comments about the importance of GPs delivering lectures and being involved in central teaching and teaching of clinical skills, in part to act as role models but also to highlight the GP as a scholar, with broad knowledge. One GP tutor argued that “primary care issues” or “fluffy stuff” should be removed from the GP curriculum, which should instead be about managing complexity/ the day job of GPs. There was also an argument that the medical curriculum should move away from a reductionist model to teach Realistic Medicine. There were some warnings or provisos related to the curriculum. These included a concern students need to get

appropriate exposure to general practice (but there was no expansion as to what this would entail), a warning that there were explicit contradictions in teaching that need to be removed and that exams must be set by a diverse group, including GPs. One person was concerned that the GMC's MLA was becoming increasingly reductionist and that a generalist curricular may be at odds with it and another spoke about GPs being reticent to teach as it may not be aligned to the exams faced by students but that this is a shame as GPs have important, realistic perceptions managing asthma, CVD and diabetes. There was a suggestion that attempts should be made to influence the curriculum at year three as this is when undergraduate students are making choices.

Another general line of comment was that there should be an increase in undergraduate placements in primary care and/ or that placements should be longer and immersive so as to develop a sense of ownership ("my practice"). With regards to generalism, there was an argument that case based learning encouraged generalism, ahead of specialisation, and that exposure to patients' stories of multimorbidity at undergraduate level is key to developing generalist skills. One person commented that understanding multimorbidity and not viewing disease in silos is at the core of generalism, while others warned that there is not a universal, shared understanding of generalism and that medical schools should lead on defining it.

Some argued that all FY2s should spend time in primary care and accident and emergency so they can learn about unscheduled care and related decision making. Another that developing medical training within speciality training should include mentorship skills and there was also a suggestion that GP training should be extended to 4 years and that the extra year could be spent teaching.

Changing perceptions of general practice

There were several comments about how GP is perceived, what needs to be done, some suggestions of how to do that and some comments on the selling points of GP which should be communicated to improve perceptions.

There was some discussion on GP being seen as a back-up or ineffective and that clinicians in the acute sector were disparaging about primary care. There was a suggestion that the media should be used to combat negativity about GP and that medical school societies can be used to increase interest. Some called for general practice to develop a sense of uniqueness and that GP needs a strong set of principles and identity to raise its status. It was reported that Denis Pereira Gray has written about the unique aspects of general practice, including skills, theory and principles.

Of the comments that appeared to be various "selling points" of GP, these seem to be largely about the advantages to students. They included:

- That in GP, students see a wide range of things including paediatrics, cardiology and dermatology
- That GP encourages self-directed learning
- That students have a safe space to make mistakes
- That there is power in a 1:1 relationship

- Students can see a “bigger picture” by working with families
- That community centric education is patients centric and therefore promotes generalism
- That in general practice there is an opportunity for independence, too see the patient by themselves and that students’ knowledge can be applied to real world settings
- That general practice teaches about complexity, uncertainty and risk

There was some discussion about GP academia and academic careers with some pushing for the option of portfolio careers to be promoted and others concerned about the separation of teaching and research in medical schools, particularly in light of REF funding.

Contractual changes

The idea that teaching should be part of the core business of general practice was expressed by several people, with some offering that this should be an integral part of new GP contracts and primary care improvement plans. There were calls for clarity over funding for teaching (with some simply saying more funding was required, particularly to pay for “backfill”) and several comments about the need for changes to ACT funding. In discussion about multidisciplinary learning, some were concerned about contractual issues and funding silos acting a barrier. One person suggested that perhaps 10 minute appointment times in GP were simply not long enough. In terms of solutions to issues of capacity, it was suggested that sometimes institutes have underspends even when there is no operational money; that there may be untapped capacity at individual level as well as at practice level, that some GPs working LTFT may want to teach, rather than have more sessions in GP and that possibly NES could play a part in out of programme experiences.

Appendix C

Medical ACT Primary Care Re view: Draft Recommendations

NES' Medical ACT Governance Group triggered a review of the costs of delivering undergraduate medical teaching in primary care with the aim of describing the following areas:

1. An understanding of the provision of undergraduate medical teaching in GP-Primary Care for each of Scotland's medical programmes, including ScotGEM, to create a baseline snapshot of what is being provided currently.
2. An understanding of the costs associated with delivering undergraduate medical teaching in GP-Primary Care for each programme, including ScotGEM.
3. An analysis of whether the existing approach to measurement and reimbursement from Medical ACT funding of the costs of undergraduate teaching in secondary care using the Measurement of Teaching (MoT) Tool could be adapted to support, prospectively, the measurement and reimbursement of the costs of undergraduate teaching in GP - Primary Care.

The NES review describes the current vital and varied contributions of GPs and the wider Primary Care team to undergraduate medical curriculum delivery for all Scotland's Undergraduate Medical Programmes. The group has had input from a number of stakeholders including representatives from all Scottish Medical Programmes and from Prof John Gillies, Chair of the Scottish Government/ Board for Academic Medicine Primary Care Review Group. Outputs from all NES review meetings have been shared with the SG/BfAM group as will the final report on completion of the NES review.

The following draft recommendations have been made based on discussions at the final NES Medical ACT Primary Care Review meeting in February 2019 and following feedback from the SG/BfAM Increasing Undergraduate Education in Primary Care Group.

Measurement of Teaching Activity and Accountability Reporting

- It is clear there is considerable heterogeneity around the detail within the annual accountability reports for undergraduate teaching delivered in primary care that is supported through Medical ACT funding.
- Consistency of information provided from all Boards, including clear headings for all categories relevant to primary and secondary care is required.
- For GP-Primary Care costs, information should provide explicit detail of all GP-related teaching activities including placements, lectures/tutorials, support costs and information on costs associated with student travel and subsistence for all programmes.
- The contribution made by GPs and Primary Care teams to the delivery of SSCs, electives, and other non-core activities for some programmes is not ACT funded and therefore not currently captured within the MoT exercise or annual Medical ACT Accountability process.

- It is apparent that some educational activities within the GP-Primary Care curriculum are being provided *pro bono*. It would be important to understand how changes to student numbers and percentage of curriculum devoted to Primary Care teaching influence that amount
- The current funding models and accountability processes do not reflect the heterogeneity around which healthcare professionals contribute to the delivery of medical education and training in GP-Primary care. In reality, this is likely to be difficult to quantify on an ongoing basis.

Recommendation 1

Revision of the processes of accounting for ACT funding received and reporting of activities funded by ACT must be implemented to ensure a consistent and comprehensive understanding of the contributions to undergraduate medical education and training by GPs and other healthcare professionals in Primary Care, across all undergraduate Medical Programmes.

Recommendation 2

All Medical Programmes should have an understanding of the costs associated with Primary Care teaching, including any elements that are not funded via Medical ACT and those which are currently being provided *pro bono*.

Recommendation 3

The current ACT allocation model is based on use of retrospective data. While the merits or otherwise of this approach were not considered by this review, there is some appetite for exploring whether there may be benefit in moving to a prospective model in the future. The recommendation is therefore to engage with all relevant stakeholders to consider jointly the risks and benefits of adopting a prospective versus retrospective allocation model.

Quality Assurance of UG Teaching in Primary Care

- The approach to quality assurance of UG GP teaching is also heterogeneous across the programmes
- All programmes invite student feedback at least annually and are involved in an annual national Undergraduate Quality Review Panel which includes representation from the NES Quality team.

Recommendation 4

If the amount of undergraduate medical education and teaching increases as seems likely, resulting in an increase to the associated costs – the activities provided must continue to be subject to quality management by the Medical Schools responsible for the curricula. This process should adhere to common principles and have a consistent approach.

Revision of the tariff for GP remuneration (Category A teaching)

- the current rate of remuneration of £40 per placement session for medical undergraduate teaching in GP-Primary Care has been in operation since 2010 and has not altered with inflation over that time
- The group recognizes why the payment rate needs to be increased and the potentially deleterious effects that have occurred already and are likely to persist

if action is not taken. However, any upward revision of the tariff needs to take into account the knock-on effects for funding to Health Boards for undergraduate teaching in secondary care, within the overall Medical ACT funding arrangement.

Recommendation 5

This will be made to Scottish Government based on modelling an uplift to the tariff for clinical placement (Category A) teaching and the amount of GP/Primary Care teaching delivered in line with SG/SFC advice.

If the Medical ACT budget remains the same and the current provision of undergraduate medical education and training in GP and primary care remains the same – we will model the impact of changing the tariff for remuneration, on the distribution of the medical ACT budget across primary and secondary care.

Thereafter if required, we will also assess the impact of any increase to the proportion of undergraduate medical curricula devoted to GP and primary care teaching as advised by SG and SFC – by modelling the impact of that change on the distribution of the Medical ACT budget across primary and secondary care.

Revision of the tariff for GP remuneration (Category B teaching)

Category B teaching refers to formal teaching or other teaching-related activity which occurs outwith clinical placements. This can be delivered on campus and within other settings including in a General Practice setting, by staff employed by a variety of contracts. The review identified significant variation between the type of activity and rates of remuneration provided by each of the medical programmes. As such it was not possible to make meaningful comparisons between programmes or to make recommendations for any changes to the current rate of Category B payments. Further work will be required to investigate the feasibility of doing so.

Recommendation 6

Following feedback received from stakeholders as part of the Scottish Government/Board for Academic Medicine (SG/BfAM) Primary Care review process, the NES Medical ACT team will lead further work on the feasibility of revising Category B payments in collaboration with relevant stakeholders. The remit will be to attempt to streamline the existing diverse range of Category B tariffs in Primary Care ACT, with an aim of agreeing a simplified range of tariffs that are applicable to all medical programmes.

Appendix D

Revised Tariff Implications

Amount of Primary Care Teaching Unchanged

2017/18 GP costs data derived from MoT/actual costs submitted to NES

Total ACT Budget: £77,161,744

(£75 536 744 baseline + £1,625,000 uplift due to “widening access payment” made 2018/19 – see below):

TOTAL ACT BUDGET			
Secondary Care		GP-Primary Care	
Costs	£68,309,094	GP Placement costs (Cat A)	£2,244,044
Travel & Subsistence	£442,113	GP Teaching costs (Cat B + prep)	£2,135,574
		GP Support costs	£2,380,539
		GP Travel & Subsistence	£340,686
Total	£68,751,207	£7,100,843	

Note: The overall total for the two columns is £75,852,050. This may be due to some health boards being unable to use the widening access payment they received at end of 2017/18 financial year. In this context, “widening access payment” refers to 10 contextualised admissions for 5 undergraduate medical programmes per annum currently supported by Scottish Government.

Scenario A - Tariff Increased/ Curriculum unchanged

New Primary Care Amounts	
GP Placement costs (Cat A)	$(£2,244,044 \times 85/40) = £4,768,593.50$
GP Teaching costs (Cat B + prep)	Unchanged = £2,135,574
GP Support costs	Unchanged = £2,380,539
GP Travel & Subsistence	Unchanged = £340,686
Total	£9,625,392.50

Total cost of increasing tariff from £40 to £85 (curriculum unchanged) = £2.5 million

Appendix E

Measuring GP teaching

Scottish GP Heads of Teaching

Nov 2018

Background

Drivers

- Recruitment to GP
- *By Choice - Not by Chance*¹
- Scottish Government aim to increase GP based teaching to 25% of the undergraduate curriculum

Issues

- 6 different curricula some with additional GP enhanced programmes
- No existing standard method for measuring and recording of GP involvement
- Not all GP involvement is easily quantifiable (goodwill, part of infrastructure rather than 'itemisable' tasks)
- Multiple requests for data

Risks

- Counting what can be counted rather than what accurately reflects the value and extent of GP involvement
- Multiple data sets from different perspectives lead to lack of credibility and utility of data overall

Proposal

- To agree a standard data set for use by all 5 Medical Schools as baseline and to measure progress
- Use of a dataset mapped to *By Choice-Not by Chance*¹

GP Heads of Teaching – Proposed measurements

These are based on areas proposed in the literature with each measure (in bold) proposed linking to relevant recommendations underneath from '*By Choice – Not by Chance*¹

- **Actual GP placement time - both absolute (number of sessions/days) and as a proportion of all clinical placement time**

- Recommendation 8: An increase in UG GP placements must address improved quality, content, timing and variety. This should include exposure to a variety of practices.
 - Recommendation 9: Positive and enthusiastic role models should be identified and made visible across all medical schools.
 - Recommendation 15: Existing GPs should champion the vision of the profession as an exciting intellectually challenging and rewarding career.
- **Curriculum time specifically badged as GP led/managed/designed – both absolute and as a proportion of the whole curriculum**
 - Recommendation 6: Students should recognise the breadth and complexity of general practice care and be stimulated by the complex intellectual challenge.
 - Recommendation 15: Existing GPs should champion the vision of the profession as an exciting intellectually challenging and rewarding career.
- **Joint primary /secondary care teaching**
 - Recommendation 5: All medical schools must revise their undergraduate curricula to ensure they develop to reflect the patient journey through different healthcare settings and offer a more integrated less specialty organised approach.
 - Recommendation 6: The formal curriculum must better inform students on NHS management and delivery at the primary-secondary care interface.
- **GP based SSC/elective availability and uptake**
 - Recommendation 8: An increase in UG GP placements must address improved quality, content, timing and variety. This should include exposure to a variety of practices.
 - Recommendation 9: Positive and enthusiastic role models should be identified and made visible across all medical schools.
- **Admissions interviewers who are GPs – both proportion of slots and proportion of overall interviewers**
 - Recommendation 4: All medical schools must ensure that GPs contribute significantly in all selection processes.

- **GP based vacation scholarship availability and uptake**
- Recommendation 8: An increase in UG GP placements must address improved quality, content, timing and variety. This should include exposure to a variety of practices.
- Recommendation 9: Positive and enthusiastic role models should be identified and made visible across all medical schools.

- **Evidence of involvement of GPSTs in teaching and assessment**
- Recommendation 9: Positive and enthusiastic role models should be identified and made visible across all medical schools. This includes enhancing and supporting the role of GPSTs as educators and assessors and interaction in primary care between medical students and near peers.

- **GP contribution to careers events – both as absolute and proportion of overall medical school delivered careers sessions**
- Recommendation 6: The business elements of, and career option within, GP (e.g. partnership v salaried v locum roles) need to be clear to students.
- Recommendation 14: The range of opportunities within GP should be actively promoted within medical schools and students should be offered a far better understanding of what being a GP can offer.
- Recommendation 15: Promotion of GP careers should be carefully considered to ensure students have the ability and flexibility to make informed career decisions without feeling pressurised by market forces.

- **Evidence in curriculum of efforts to tackle undermining of general practice (e.g. teaching about hidden curriculum, improved feedback mechanisms to enable students to report any serious undermining on placement.)**
- Recommendation 11: Work should take place to tackle undermining of GP as a career across all medical school settings including primary care.)

Reference

- [1] Health Education England/ Medical Schools Council. By Choice - Not By Chance. 2016.

Acknowledgements

Professor Gillies would like to acknowledge contributions to this report and recommendations from the following organisations and individuals:

Scottish Rural Medicine Collaborative

<https://www.srmc.scot.nhs.uk>

Rural GPs Association of Scotland

<https://ruralgp.scot>

The Scottish Deep End Project

<https://www.gla.ac.uk/researchinstitutes/healthwellbeing/research/generalpractice/deepend/>

National General Practice Out of Hours Group

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