



Royal College of
General Practitioners

SAPC Heads of
Teaching

TEACHING GENERAL PRACTICE

Guiding principles for undergraduate GP Curricula
in UK Medical Schools

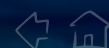
(SECOND EDITION 2021)

Professor Alex Harding, Co-Chair SAPC Heads of Teaching

Professor Joe Rosenthal, Co-Chair SAPC Heads of GP Teaching

Professor Kamila Hawthorne, Head of Graduate Entry Medicine, University of Swansea

rcgp.org.uk
sapc.ac.uk



FOREWORD

UK medical schools in the 21st century have embraced GP inputs to their qualifying programmes – through placements in practices, through campus-based teaching, and through supporting students in many ways. We are hugely grateful to all GPs, their patients, and their teams for their ongoing commitment and we wish to support them to achieve the highest possible impact.

But sometimes, general practice is used as a setting, or an access route to patients, rather than a speciality with its own exceptional potential. So, I am delighted to see this updated resource, which has taken its authors a lot of effort and energy to create - thanks to them too!

What this resource emphasises is how to introduce students to the broader context and the key components of general practice – and it offers ideas, ways to enhance your current teaching, and demonstrate the value of integrated personal care across the lifespan. We hope that you will read it and get new ideas, use it with colleagues to reflect on where it may add value, and potentially to educate non-GP colleagues in what general practice can actually offer to the curriculum. I found it refreshing and inspiring to read and hope it will do the same for you.

With thanks again to all involved.

Amanda Howe, RCGP President 2019-2021,
Professor of Primary Care, Norwich Medical
School, University of East Anglia



INTRODUCTION

All professions must define the knowledge for which they take public responsibility, and which they must therefore impart to those entering their profession. In undergraduate medicine, this task is particularly important as students need to understand the intellectual heritage underpinning each of the major medical disciplines to inform their eventual career decisions. In general practice, the task of defining the professional knowledge base for undergraduates has arguably not been fully achieved.¹

General practice is now well established as an ideal setting in which to learn clinical skills and the principles of clinical medicine. However, a lack of signposting to intellectually stimulating undergraduate experiences is likely to be one of the reasons why lower numbers of students choose general practice than are required to sustain the profession or fulfil government mandates.²⁻⁴

In order to address these issues, the Society for Academic Primary Care (SAPC) and the Royal College of General Practitioners (RCGP) have collaborated to produce this guidance on the design and delivery of general practice learning and teaching in UK medical schools.

The guidance is based on published evidence and current best practice in UK medical schools and has been refined through consultation with the Medical Schools Council (MSC), General Medical Council (GMC) and the MRCGP Curriculum Development Group. It aims to support implementation of the By Choice – Not by Chance report on raising the profile of general practice at medical schools.⁵

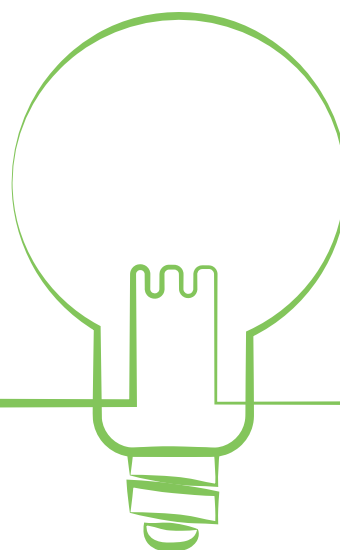
It does not propose a one-size-fits-all curriculum, but rather, a set of guiding principles providing ample space for individual undergraduate programmes to adapt and innovate. **We recommend that medical schools use this document to inform thinking around the quantity, content, and process of general practice teaching, both on placements and on campus. This process should integrate with local medical school curricula and also broader GMC curriculum outcomes.**⁶

This document therefore provides an outline of:

1. The processes that support teaching undergraduates about general practice. **pg5**
2. Teaching content on placements and on campus. **pg7**
3. Teaching methods on placements and on campus. **pg9**

The teaching content outlined in this document is supported by an online textbook, **Learning General Practice**, which outlines the content in more detail and provides signposting to teaching activities and further resources. In addition, each of the core principles of general practice is demonstrated in **Virtual Primary Care**, a video library of GP consultations available to all UK and Irish medical schools.

Together, Teaching General Practice, Learning General Practice, and Virtual Primary Care provide a comprehensive guide to contemporary general practice. Whilst the emphasis is on undergraduate learning, we hope that postgraduate trainees, practising clinicians, and GP educators will also find the content useful.



DEFINITIONS

CURRICULUM

We use the term 'curriculum' to describe guidance as to both what should be taught (content) and how it should be taught (process). This is in contrast to the term 'syllabus', which refers to content only.

This document proposes a different way of delivering curriculum in general practice. Instead of viewing curriculum as a detailed list of specialities and conditions, we suggest that clinical learning is organised around principles. We propose that these principles are delivered firstly through understanding

the context and research evidence underpinning the principle and secondly by applying these principles through 'doing' various relevant learning activities. Both **Learning General Practice** and **Virtual Primary Care** resources have been developed to support this process. By discovering the breadth and depth of these principles through appropriate activities, students will gain a deeper understanding of their developing clinical knowledge and how it is integrated and used in practice.

CURRICULUM DEVELOPMENT

Curriculum development is an ongoing process, involving meaningful interaction between teachers and students in a continuous cycle of quality improvement. Therefore, in generating this guidance, we have:

1. Undertaken an extensive review of the literature relevant to curriculum development in classroom and work-based learning context.⁷
2. Consulted and debated widely within the general practice teaching and learning community,^{8,9} with regular meetings at a national level where curriculum is discussed to gain consensus of content and delivery methods.
3. Reviewed curriculum documents from all UK medical schools, outlining what is currently taught in or about general practice and how it is taught.
4. Consulted with medical students and recently qualified doctors to understand better their perceived needs and to gain their feedback on draft resources.

This document does not address assessment. However, it is fully amenable to mapping onto assessment criteria. The document has been fully mapped to GMC Outcomes for Graduates⁶ in order to assist assessment and curriculum planning in medical schools (see Appendix).

CURRICULUM PRINCIPLES

Modern work-based learning literatures, together with contemporary curriculum and knowledge transfer literatures, all suggest that guidance regarding work-based learning should be sufficiently adaptable to allow work-based teachers to teach on the job. General practice clinical placements are a case in point. It is not possible to predict what clinical cases will present and so curriculum outcomes must be able to encompass a wide variation of clinical conditions in order to be sufficiently adaptable. In addition, curricular outcomes must provide practical relevance and intellectual rigour to drive student interest.

As a result, this guide moves away from the conventional medical curriculum approach of listing 'conditions to see', and instead highlights key principles of general practice, that encompass multiple conditions and themes, allowing adaptation to differing contexts and clinical presentations.

The document firstly outlines three central themes of modern general practice: patient-centred care, population-centred care and effective delivery of care. Each theme consists of several principles that are listed in a manner that reveals their inter-relatedness, allowing learners to see at a glance an overview of modern general practice. This approach provides the intellectual scaffolding for more detailed clinical learning which we feel is essential in a field as diverse as general practice. As such, this document moves away from the scatter-gun approach of listing curriculum outcomes, to present a unified approach that allows readers to see general practice in terms of intellectual principles.

The principles do not replace clinical knowledge, which remains as the bedrock of clinical practice. Instead, they provide a way of marshalling clinical learning into something deliverable, interesting, and intellectually rigorous.

PART 1 – SUPPORTING GENERAL PRACTICE TEACHING

We hope that all medical schools will consider this guidance and decide how it might inform their own individual curricula. This will be influenced by the existing shape of local curricula, their individual ethos, local NHS service configuration, and broader GMC curricular objectives as set out in Outcomes for Graduates.⁶ General practice teaching takes place in three main contexts: on placements, on campus, and and via digital means. This guidance can be adapted for use in any such context, but medical schools should not underestimate the level of resources needed to support high-quality GP teaching in all settings.¹⁰

The financial resources that support undergraduate GP teaching are known by various terms in different countries (for instance, SIFT, Tariff, or ACT) and it is important these funds are allocated consistently and transparently in support of high-quality primary care education.¹⁰ **To this end, RCGP and SAPC policy (also that of HEE in England) states that each medical school's Head of GP Teaching (GP HoT) must be directly involved in all matters relating to the distribution of teaching resources and be a member of all relevant national, regional and local medical school finance committees.**

PLACEMENT BASED TEACHING

There is a direct relationship between the percentage of clinical curriculum devoted to authentic general practice experience and subsequent career choice.⁴ Based on this evidence, we recommend that a minimum of 25% of clinical placements at medical schools should be in general practice, and this figure has already been adopted as policy by the Scottish Government without destabilising any pre-existing healthcare institutions. This is partly to ensure that enough undergraduates opt for a career in general

practice to maintain the profession, but also to ensure that all future doctors have a good understanding of the role and value of primary healthcare in the NHS. The UK Government has advised that 50% of medical graduates should enter general practice. **The recently reported overall reduction in general practice placements in many undergraduate medical curricula⁴⁰ is something all medical schools should carefully consider and address.**

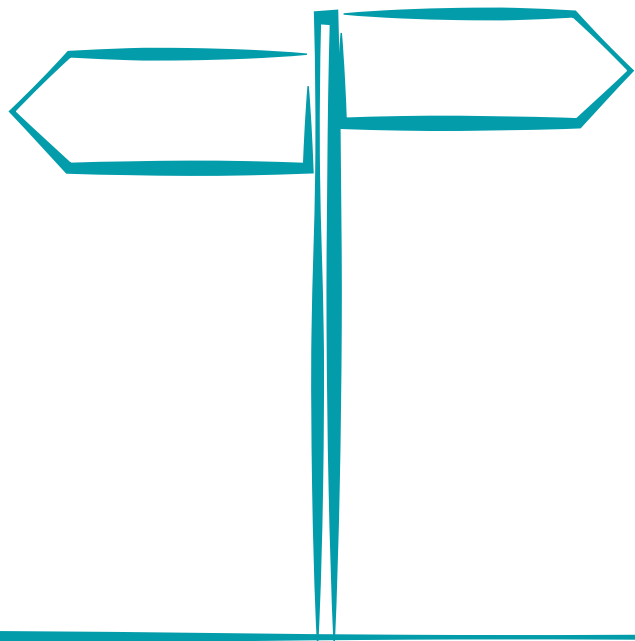
ON CAMPUS TEACHING AT MEDICAL SCHOOLS

Whilst there is much to be said for integrated medical school curricula, consensus suggests that teaching about general practice at medical schools should be delivered mainly by general practitioners, and be clearly signposted as general practice in curriculum documents. A range of general practice teachers is preferable, demonstrating the diverse nature of career options open to GPs (including partner, salaried, sessional, portfolio, and trainees). Academic GPs and primary care scientists should be visible to medical students to demonstrate the breadth and depth of primary care research and scholarship and their important contribution to individual and population healthcare.

Medical schools should take steps to ensure that GP lecturers have similar honorary and substantive appointments to lecturers from other disciplines – evidence suggests a disparity. **Perceptions of imbalances in career prospects and status between disciplines can adversely affect recruitment and medical schools need to ensure that general practice is perceived in equal ways to other disciplines.**

We also recommend that undergraduate GP teachers are based in integrated academic departments of general practice that incorporate teaching and research. The recent 50% decline in integrated departments of general practice is something all medical schools should address as evidence suggests this leads to disenfranchisement of general practice teaching.

Finally, medical schools should be aware that teaching about cross-cutting topics such as medical ethics, medical sociology, and communication skills, whilst vitally important, should not be considered as solely the domain of the general practice curriculum.



PART 2 – A FRAMEWORK FOR GENERAL PRACTICE UNDERGRADUATE TEACHING CONTENT

For the purpose of undergraduate learning and teaching we define general practice as follows:

General practice comprises the practical and scholarly aspects of delivering highly effective personalised care to individuals, families, and populations in primary care and community settings.

This simple, working definition encompasses three broad themes that can be used to structure delivery in both university and work-based placement contexts:

1. Person-centred care

The discipline of general practice is fundamentally based on person-centred care. This involves caring for patients beyond their immediate condition and tailoring services to suit their individual wants and needs. It links to concepts of clinical generalism and the biopsychosocial model of health and illness. This approach requires a specific set of knowledge and skills particularly including consultation, physical examination, clinical reasoning, and clinical management (including investigation, prescribing, and referral skills). All of these involve adapting best evidence to suit individual patients who may have a range of acute or chronic conditions, life experiences, and health beliefs. The biopsychosocial approach acknowledges that psychosocial factors are key predictors of clinical outcomes and therefore trust between clinician and patient is essential to build and maintain doctor/patient/family relationships over time.

2. Population-centre care

GPs work with and lead multidisciplinary teams that together provide care to their local population. To improve the health of their practice population, GPs are responsible for planning and executing health promotion, screening, and prevention of infectious and chronic diseases for large groups of people in their local communities. Groups of practices are increasingly working together in networks or federations in order to coordinate efficient, cost-effective, and high-quality care.

3. Effective delivery of care

General practices in the UK operate as independent businesses that contract with the NHS. They provide 90% of healthcare episodes for less than 10% of NHS budget. Countries with well-developed primary healthcare systems are known to have better health outcomes than countries that do not.^{11,12} GPs are well placed to combine medical expertise, local community awareness, and understanding of cost-effective practice to provide highly effective and efficient delivery of care.

THEMES AND PRINCIPLES

Theme 1: Person-centred Care

- A. The generalist clinical method
- B. Holistic care (the biopsychosocial model)
- C. The doctor-patient relationship
- D. Continuity of care
- E. Long term conditions
- F. Emergency conditions
- G. Multi-morbidity and complexity

Theme 3: Effective Delivery of Care

- A. The generalist approach
- B. The history of UK general practice
- C. The current structure of UK general practice
- D. The funding of UK general practice
- E. The role of general practice in other countries
- F. Sustainable healthcare

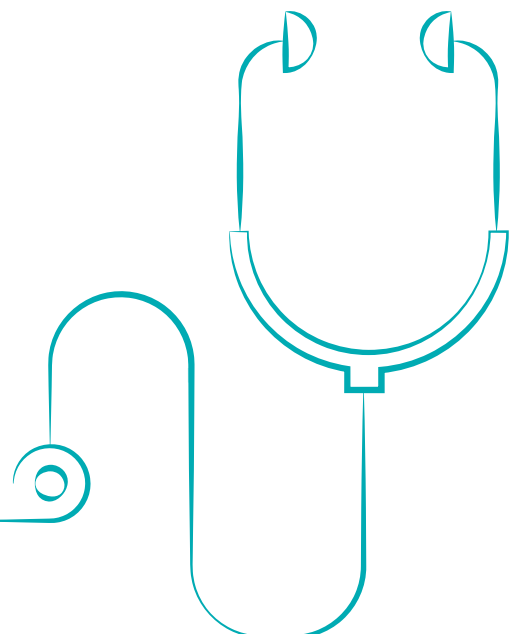
Theme 2: Population-centred Care

- A. The social determinants of health
- B. Preventing disease and promoting health
- C. Quality of care
- D. Information technology
- E. Teamwork and leadership
- F. Medical ethics

Scholarly General Practice

- A. Learning in primary care settings
- B. Teaching in primary care settings
- C. Research in primary care

Each principle is explained in detail in the accompanying online textbook [Learning General Practice](#) and is demonstrated in practice in the accompanying video resource [Virtual Primary Care](#)



PART 3 – TEACHING DELIVERY

Each one of the principles comprises:

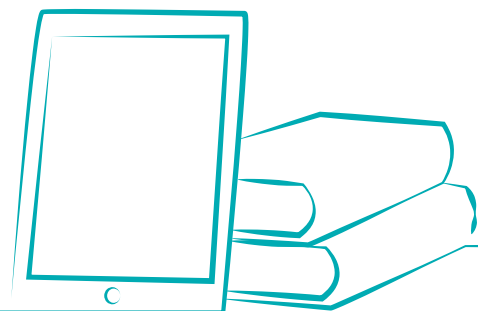
- 1. A theoretical base**
For example, what is 'continuity'?
- 2. A research base**
For example, what is the evidence base that outlines the advantages and disadvantages of continuity?
- 3. Practical elements of delivery**
For example, how is continuity delivered in practice? How does it differ from the theory? What skills are necessary to deliver continuity? How might students best learn about continuity on placements?

The theoretical and research elements may lend themselves to GP-led on-campus or online teaching at medical schools, whereas the practical elements lend themselves to delivery on general practice placements. In this way an academic programme of general practice at the medical school complements and support learning on placements.

CAMPUS-BASED AND ONLINE LEARNING AND TEACHING

In order to contextualise learning and present positive role models for students, it is important that the content outlined above is delivered as far as possible by practising GPs, including those with academic roles. The involvement of academic departments/units of general practice and primary care in undergraduate education is vital to build bridges between the medical school and local services and between teaching and research. By making academic general practice more visible to students they will recognise the intellectual challenges of general practice and that scholarship lies at its heart.

Even before the COVID-19 pandemic, the traditional lecture format of content delivery at medical schools was in decline, with balance shifting to small group teaching and online learning. The pandemic catalysed change that was probably overdue in forcing all medical schools to adopt new learning technologies at speed. Hopefully, over time, we will return to a balance which provides an interesting and varied blend of campus based, online and placement based learning, each relating to the others and playing to its own particular strengths.



PLACEMENT-BASED LEARNING AND TEACHING

Various iterations of the GMC's Outcomes for Graduates emphasise the importance of graduating competent generalist physicians. General practice is an ideal setting for students to see a wide range of patients and problems, to learn clinical skills and the principles of clinical medicine.¹³ The GMC gives detailed guidance on the relevant basic, clinical, and social sciences necessary for undergraduates to learn.¹⁴ These detailed outcomes can and should be integrated and delivered through broad discipline themes developed in collaboration with specialist colleagues, and delivered using a range of methods including joint teaching by primary and secondary care specialists in hospital and community settings.

GPs who teach students on practice placements should be kept informed of teaching taking place on campus, online, and in hospital, and be able to use examples from their practice to consolidate the students' previous theoretical and clinical learning. Faculty development and continuing professional development (CPD) programmes will help to ensure that GPs feel comfortable teaching some of the above content. Medical schools may want to give thought to how faculty development of its teaching staff can integrate with wider GP CPD structures. SAPC, RCGP, and local primary care networks can provide guidance and support in this respect.

When planning placement learning, the following factors should be considered:

- General practice is the branch of healthcare where the majority of diagnostic and management decisions are taken regarding the care of acute and chronic medical conditions. Opportunities to learn and teach fundamental skills such as diagnostic reasoning, management of uncertainty, and therapeutics are particularly rich.
- Opportunities for students to see and examine patients regularly may be far easier in general practice settings due to challenges in the acute sector.⁷ However, the context is different. Students may need specific teaching regarding how to adapt the 'clerking model' to shorter and more focussed consultations and examinations.^{15,16}
- Electronic portfolios may help to bridge communication between practice tutors and the medical school and ensure appropriate clinical experience for each student. Use of tablets or smart phones can enable work-based assessments to be collated and standardised to demonstrate student progression.
- Students in different years of training will have differing needs. For example, general practice placements in early years may be more concerned with demonstrating relevance of basic sciences to clinical practice. Middle years, it may be on acquiring core consultation and clinical skills, and later years on more advanced diagnosis and management, teamwork, and integration of clinical knowledge.



TEACHING ON PLACEMENTS: TEACHING METHODS

Whilst a wide range of teaching methods are employed during GP placements, the majority of medical schools promote one-to-one or small group teaching that involves students observing GP consultations and seeing/assessing patients on their own before or after their supervisor. We strongly recommend students being encouraged to consult with patients one-to-one from an early stage in training.

In addition to one-to-one supervised clinical teaching, the provision of a range of additional experience on placements is important to support delivery of the principles described above. Further examples include:

1. Students attending practices in small groups for protected time, themed teaching involving selected patients (including Expert Patients).
2. Student involvement in practice-based audit and research opportunities through authentic enquiries that benefit the practice and its population.
3. Students assuming appropriately supervised practical roles contributing to healthcare delivery for part of their time on placement. For example, undertaking routine health checks, assisting in phlebotomy, vaccination, screening, and health promotion clinics.
4. Students following a group or 'panel' of patients on longitudinal attachments to promote understanding of the principle of continuity of care.^{17,18}
5. Students engaging in appropriately supported self-directed-learning (SDL) during placements. There is evidence to suggest that unstructured SDL in clinical environments is, by and large, ineffective. Structured SDL may include activities such as:
 - Follow up of patient cases in the notes after a surgery
 - Follow up of panel patients; face-to-face, telephone, or review of notes
 - Preparing presentations on patients or clinical topics
 - Working on previously prepared index cases
 - Working on problem-based learning type cases specific to general practice
- Viewing remotely transmitted live surgeries in groups
- Dedicated time to watch recorded consultations (for example, **Virtual Primary Care**, or similar web-based learning activities).
6. Involving suitably prepared senior medical students, foundation doctors, or GP trainees to teach medical students during clinical placements. Such 'near-peer teaching' can provide valuable learning opportunities for all involved and appropriate role models for students.
7. Involving sessional/portfolio GPs as clinical teachers. Current placement provision sees students predominantly placed in a traditional GP setting. Involving sessional GPs, GPs with Extended Roles, and GPs working in urgent care centres can both diversify the GP experience for students and give them opportunities to explore the wide range of primary care services and career opportunities.
8. Authentic experiences of practice and NHS management and organisation; practices might consider students taking part in partners' meetings, practice clinical meetings, local network/federation, and multi-disciplinary meetings. They should have the opportunity to see how primary care services are organised and relate this to their learning on leadership and team working.

Employing a variety of these methods will provide an interesting and rewarding experience for students on GP placements and support learning across the range of themes and principles described above.

CONCLUSIONS AND RECOMMENDATIONS

This document provides guidance on the design and delivery of general practice learning and teaching at UK medical schools. It is based on best available evidence and wide consultation. Whilst each school must have freedom to develop its own GP curriculum, we urge all schools to include the themes and principles presented here. The need to provide sufficient quantity and

quality of GP teaching must be addressed in order to 1) promote general practice as compelling a career choice, 2) enhance patient care, and 3) ensure future hospital specialists are equipped to work in an increasingly community-based NHS. To this end we make the following overall recommendations:

Quantity of teaching

- Evidence shows that recruitment to general practice is directly related to the amount of experience at medical school. Based on this evidence, we recommend all medical schools review the balance of clinical placements, working towards delivering a minimum of 25% of placements in general practice.

Quality of teaching

- Teaching should be developed and delivered by a dedicated Primary Care Education Team (PCET), led by a named Head of GP Teaching (HoT). PCETs should preferably be part of an integrated and co-located university department of academic primary care, delivering and connecting GP teaching and research.
- Teaching about general practice should be clearly labelled and directly linked to relevant assessments. Teaching should involve a range of GPs, reflecting the diversity of the discipline and cover both generalist medicine as outlined in the GMC's Outcomes for Graduates, and GP disciplinary knowledge as outlined in this document. At the medical school, GP teachers should have similar job titles, promotion criteria and academic status as other clinical academic staff at the university. Eligible GPs should be employed on the Senior Academic GP contract.

- GP placements should incorporate a range of teaching methods including one-to-one, small group and remote teaching. Students should be encouraged to consult with patients from an early stage in training, and this should be the predominant activity in later years. All placement experiences should be balanced with appropriate preparation beforehand and reflection afterwards through guided self-directed learning. Learning General Practice and Virtual Primary Care are two resources that can guide this and are explicitly based on the content of this document.

Support for GP teaching

The quantity and quality of GP education depends on adequate resources. HoTs and PCETs therefore need direct oversight of teaching quality, quantity and finance. All medical schools should work on the principle of equity between hospital and community-based disciplines in terms of resource allocation and support, this includes:

- Rates of resource allocation for placement teaching being equal across general practice and hospital settings, including overheads and facilities costs. There is no evidence that this destabilises healthcare institutions.
- HoTs being part of all relevant resource allocation and finance committees, including both regional and local groups, with access to all relevant financial information.

ACKNOWLEDGEMENTS

The authors wish to thank RCGP and SAPC for commissioning and supporting the development of this document. Particular thanks to all members of the SAPC UK Heads of Teaching Group for their individual and collective contributions.

We should also like to acknowledge individual contributions from Professor Amanda Howe, Professor Sir Denis Pereira-Gray, Dr Andrew Blythe, Professor John Campbell, Professor Joanne Reeve, Professor Deborah Gill, Professor Roger Jones, Dr Euan Lawson, and Professor Val Wass.

In addition, we would also like to acknowledge the help of many medical students in formulating this document, and specifically the help of Dr Jenna Hussain, who proofread this document from the student perspective.

Finally, enormous thanks to Chris Bull and Bryn Wilkes at the RCGP for supporting the process of development of this document from start to finish.

APPENDIX: OUTCOMES FOR GRADUATES (OFG) MAPPED TO TEACHING GENERAL PRACTICE

SAPC and RCGP recommend that a minimum of 25% of the clinical curriculum is spent in general practice or the community. This recommendation has been adopted by the Scottish Parliament as policy. Medical Schools and Health Departments in the other nations should work towards this figure. There is no evidence that this amount of curricular time destabilises other healthcare environments and the education of medical students and its funding should reflect where care is carried out and workforce priorities (OFG 20c).

A quarter of the clinical curriculum is a significant proportion of clinical learning time and it is essential that this is reflected in adequate coverage of GMC learning outcomes as outlined in Outcomes for Graduates (OFG).

OFG makes several references to having appropriate clinical methods for use in community and general practice settings. A generalist clinical method is essential if students to practice effectively in community settings and adaptations need to be made to the clinical method used in acute settings. This is outlined in TGP outcome 1A which is referred to extensively in this document.

The document maps OFG to TGP at three levels:

1. Overarching OFG outcomes (for example, outcome 2; professional and ethical responsibilities)
2. Detailed OFG outcomes (for example 2a; clinical responsibilities of the doctor)
3. Detailed OFG outcomes sometimes contain several outcomes (for example 2k includes person-centred care and shared decision-making). Where this happens, each outcome is underlined and the corresponding TGP outcome follows the order in which the OFG outcomes are underlined.

This mapping document therefore covers both overarching and detailed OFG outcomes.

Outcomes for graduates (General and detailed outcomes)	TGP Theme / Principle
Overall outcome	
1 Medical students are tomorrow's doctors. In accordance with Good medical practice, newly qualified doctors must make the care of patients their first concern, applying their knowledge and skills in a competent, ethical and professional manner and taking responsibility for their own actions in complex and uncertain situations.	Theme 1 - Person-centred care
Outcomes 1 - Professional values and behaviours	
Professional and ethical responsibilities	2f - Ethics
2 Behave according to ethical and professional principles.	2f - Ethics
2a Demonstrate the clinical responsibilities and role of the doctor 2b Demonstrate compassionate professional behaviour and their professional responsibilities in making sure the fundamental needs of patients are addressed 2c Summarise the current ethical dilemmas in medical science and healthcare practice 2d Maintain confidentiality and respect patients' dignity and privacy 2k demonstrate the principles of person-centred care and include patients and, where appropriate, their relatives, carers or other advocates in decisions 2l seeking patient consent 2l providing information about options for investigations, treatment and care in a way that enables patients to make decisions about their own care 2 p,q,r,s,t	3a - Generalist clinical method 1c - Doctor-patient relationship 2f - Ethics 2f - Ethics Person-centred care; 1a,b,c,d Inclusive decisions; 1di 2f - Ethics 1ci - Communicating with patients from all backgrounds Scholarship in primary care - Teaching in community settings
3 Awareness of the importance of personal physical and mental wellbeing incorporating compassionate self-care into personal and professional life.	2e - Teamwork and leadership
Legal responsibilities	Not covered in TGP
4 Demonstrate knowledge of the principles of the legal framework in which medicine is practised.	Not covered in TGP
Patient safety and quality improvement	2c - Quality of care
5 Demonstrate that they can practise safely. They must participate in and promote activity to improve the quality and safety of patient care and clinical outcomes.	Not covered in TGP
5a Place patients' needs and safety at the centre of the care process 5c Recognise how errors can happen in practice and that errors should be shared openly and be able to learn from their own and others' errors to promote a culture of safety 5e Describe the principles of quality assurance, quality improvement, quality planning and quality control 5f Describe basic human factors principles and practice at individual, team, organisational and system levels 5g Apply the principles and methods of quality improvement to improve practice, including seeking ways to continually improve the use and prioritisation of resources 5h Describe the value of national surveys and audits for measuring the quality of care.	1a - Generalist clinical method 1a iii - Prescribing 2c - Quality of care 2e - Teamwork and leadership Quality improvement - 2c Resource prioritisation - 3a,c 2c - Quality in primary care

Outcomes for graduates (General and detailed outcomes)	TGP Theme / Principle
Dealing with complexity and uncertainty	1g – Multi-morbidity and complexity
6 The nature of illness is complex and therefore the health and care of many patients is complicated and uncertain.	Complexity – 1g Uncertainty – 1aii
6a Recognise the complex medical needs, goals and priorities of patients, the factors that can affect a patient’s health and wellbeing and how these interact. These include psychological and sociological considerations that can also affect patients’ health	Complexity – 1g Psychological and sociological considerations – 1b, 1bi, 3a
6b Identify the need to adapt management proposals and strategies for dealing with health problems to take into consideration patients’ preferences, social needs, multiple morbidities, frailty and long term physical and mental conditions	Management – 1a 1di, 1b, 1g respectively Long-term conditions – 1eii
6c Demonstrate working collaboratively with patients, their relatives, carers or other advocates, in planning their care, negotiating and sharing information appropriately and supporting patient self-care	Working collaboratively – 1ci
6d Demonstrate working collaboratively with other health and care professionals and organisations when working with patients, particularly those with multiple morbidities, frailty and long term physical and mental conditions	Supporting self-care – 1eii Working collaboratively – 1ci
6f Manage the uncertainty of diagnosis and treatment success or failure and communicate this openly and sensitively with patients, their relatives, carers or other advocates	Multiple morbidities – 1g Long-term conditions – 1e Uncertainty – 1aii Communication 1a
6g Evaluate the clinical complexities, uncertainties and emotional challenges involved in caring for patients who are approaching the end of their lives	1eiii – Chronic conditions; end of life care
Safeguarding vulnerable patients	Not covered in TGP
7 Recognise and identify factors that suggest patient vulnerability and take action in response.	Not covered in TGP
Leadership and team working	2e – Teamwork and leadership 1cii – Seeing patients in different settings
8(a-d) Recognise the role of doctors in contributing to the management and leadership of the health service.	2e – Teamwork and leadership 3c & d – Structure and funding of UK general practice
9(a-c) Learn and work effectively within a multi-professional and multi-disciplinary team and across multiple care settings. This includes working face to face and through written and electronic means, and in a range of settings.	Learning - Scholarship in primary care Working in range of settings - 1cii
Outcomes 2 – Professional skills	1a – Generalist Clinical Method
Communication and interpersonal skills	1a – Generalist clinical method
10 Communicate effectively, openly and honestly with patients, their relatives, carers or other advocates and with colleagues, applying patient confidentiality appropriately.	1a – Generalist clinical method
10a Communicate clearly, sensitively and effectively with patients, their relatives, carers or other advocates, and colleagues from medical and other professions	1a – Generalist clinical method
10b Communicate by spoken, written and electronic methods	2d – Information technology
10c Use methods of communication used by patients and colleagues such as technology-enabled communication platforms	2d – Information technology
11 Carry out an effective consultation with a patient.	1a – Generalist clinical method
Diagnosis and medical management	1a – Generalist clinical method
12 Work collaboratively with patients and colleagues to diagnose and manage clinical presentations safely in community, primary and secondary care settings and in patients’ homes..	1a – Generalist clinical method
13 Perform a range of diagnostic, therapeutic and practical procedures safely and effectively.	As outlined in OFG

Outcomes for graduates (General and detailed outcomes)	TGP Theme / Principle
14 Work collaboratively with patients, their relatives, carers or other advocates to make clinical judgements and decisions based on a holistic assessment of the patient and their needs, appreciating the importance of the links between pathophysiological, psychological, spiritual, religious, social and cultural factors for each individual.	Clinical judgements – 1a Holistic assessment – 1b
14a Propose an assessment of a patient's clinical presentation, integrating biological, psychological and social factors 14b-l 14m Support and motivate the patient's self-care by helping them to recognise the benefits of a healthy lifestyle and motivating behaviour change 14n Recognise the potential consequences of over-diagnosis and over-treatment.	1b, 1bi – Holistic care 1a – Generalist clinical method 1eii – Chronic conditions – maintenance phase 1g – Multi-morbidity and complexity
15 Demonstrate making appropriate clinical judgements when considering or providing compassionate interventions or support for patients who are nearing or at the end of life.	1eiii – Chronic conditions – End of life care
16 Give immediate care to adults, children and young people in medical and psychiatric emergencies and seek support from colleagues if necessary.	1f – Emergency conditions
17 Recognise when a patient is deteriorating and take appropriate action.	1f – Emergency conditions
Prescribing medications safely	1aiii – Prescribing in primary care
18 Prescribe medications safely, appropriately, effectively and economically and be aware of the common causes and consequences of prescribing errors.	1aiii – Prescribing in primary care
18 a-n 18o Recognise the risks of over-prescribing and excessive use of medications	1aiii – Prescribing in primary care 1g – Multi-morbidity and complexity
Prescribing medications safely	2d – Information technology
19 Use information effectively and safely in a medical context, and maintain accurate, legible, contemporaneous and comprehensive medical records.	2d – Information technology
19 a-c 19d Discuss the role of doctors in contributing to the collection and analysis of patient data at a population level to identify trends in wellbeing, disease and treatment. 19e Apply the principles of health informatics to medical practice.	2d – Information technology Scholarship in primary care – Research 2d – Information technology
Outcomes 3 – Professional knowledge	
The health service and healthcare systems in the four countries	Theme 3 – Effective delivery of care
20 Demonstrate how patient care is delivered in the health service.	Theme 3 – Effective delivery of care
20a Describe the range of settings in which patients receive care, including in the community, in patients' homes and in primary and secondary care provider settings 20b Explain and illustrate from their own professional experience the importance of integrating patients' care across different settings to ensure person-centred care 20c Describe emerging trends in settings where care is provided, for example the shift for more care to be delivered in the community rather than in secondary care settings	Recommendation – community and general practice placements = 25% of curriculum Recommendation – consideration of longitudinal placements with panel patients 3b,c History and structure of general practice
21 Recognise that there are differences in healthcare systems across the four nations of the UK and know how to access information about the different systems, including the role of private medical services in the UK.	3b,c,d,e History, structure, finance and international comparisons of UK general practice
Applying biomedical scientific principles	1a – Generalist clinical method
22 Apply biomedical scientific principles, methods and knowledge to medical practice and integrate these into patient care. This must include principles and knowledge relating to anatomy, biochemistry, cell biology, genetics, genomics and personalised medicine, immunology, microbiology, molecular biology, nutrition, pathology, pharmacology and clinical pharmacology, and physiology.	Covered by relevant university-based pre-clinical and clinical programmes 1a – Generalist clinical method

Outcomes for graduates (General and detailed outcomes)	TGP Theme / Principle
Applying psychological principles	1a – Generalist clinical method
23 Explain and illustrate by professional experience the principles for the identification, safe management and referral of patients with mental health conditions.	1b – Holistic care 1e – Chronic conditions
23 a-d 23e Describe how patients adapt to major life changes, such as bereavement, and the adjustments that might occur in these situations 23 f-g	1b – Holistic care 1ei – Chronic conditions – diagnostic phase – the grief cycle Not covered in TGP
Applying social science principles	2a – Social t of health
24 Apply social science principles, methods and knowledge to medical practice and integrate these into patient care.	1b – Holistic care 1e – Chronic conditions
24 a-d 24e Explain the sociological aspects of behavioural change and treatment concordance and compliance.	2a – Social determinants of health
Health promotion and illness prevention	2b – Preventing disease and promoting health
25 Apply the principles, methods and knowledge of population health and the improvement of health and sustainable healthcare to medical practice.	2b – Preventing disease and promoting health
25a Explain the concept of wellness or wellbeing as well as illness, and be able to help and empower people to achieve the best health possible, including promoting lifestyle changes such as smoking cessation, avoiding substance misuse and maintaining a healthy weight through physical activity and diet 25b Describe the health of a population using basic epidemiological techniques and measurements 25c Evaluate the environmental, social, behavioural and cultural factors which influence health and disease in different populations 25d Assess, by taking a history, the environmental, social, psychological, behavioural and cultural factors influencing a patient’s presentation, and identify options to address these 25e Apply epidemiological data to manage healthcare for the individual and the community and evaluate the clinical and cost effectiveness of interventions 25f Outline the principles underlying the development of health, health service policy, and clinical guidelines, including principles of health economics, equity, and sustainable healthcare 25g Apply the principles of primary, secondary and tertiary prevention of disease, including immunisation and screening 25h Evaluate the role of ecological, environmental and occupational hazards in ill-health and discuss ways to mitigate their effects] 25 i-j 25k Evaluate the determinants of health and disease and variations in healthcare delivery and medical practice from a global perspective and explain the impact that global changes may have on local health and wellbeing.	1eii – Chronic conditions – maintenance phase – motivation and behaviour change Scholarly primary care – Research Cultural factors 1eii (Health beliefs) Different populations – 3e (international comparisons) Psycho-social factors – 1b – Holistic care Cultural factors – 1eiii (Health beliefs) Identifying options – 1a (Clinical method) 3e – International comparisons Guidelines – 1ai (role of evidence) Health economics 3c,d; Equity 2a Sustainable healthcare – 3f 2b – Preventing disease and promoting health 3f – Sustainable healthcare Not covered in TGP Determinants of health – 2a; Variations 3e Impact of global changes – 3f
Clinical research and scholarship	Scholarship in primary care – Research 1ai – The role of evidence
26 Apply scientific method and approaches to medical research and integrate these with a range of sources of information used to make decisions for care.	Scholarship in primary care – Research 1ai – The role of evidence

REFERENCES

1. Blythe A, Hancock J. Time for a national undergraduate curriculum for primary care. *Br J Gen Pract.* 2011;61(591):628-.
2. Department of Health. Delivering high quality, effective, compassionate care: Developing the right people with the right skills and the right values. London: Department of Health; 2013.
3. Health Education England. Investing in people for health and healthcare: Workforce plan for England. London: Health Education England; 2014.
4. Alberti H, Randles HL, Harding A, McKinley RK. Exposure of undergraduates to authentic GP teaching and subsequent entry to GP training: a quantitative study of UK medical schools. *Br J Gen Pract.* 2017;bjgp17X689881.
5. Wass V, Gregory S, Petty-Saphon K. By choice—not by chance: supporting medical students towards future careers in general practice. London: Health Education England and the Medical Schools Council. 2016.
6. GMC. Outcomes For Graduates. London: GMC; 2018.
7. Harding AM. How do medical students learn technical proficiency on hospital placements? The role of Learning Networks. London: University College London; 2017.
8. Boon V, Ridd M, Blythe A. Medical undergraduate primary care teaching across the UK: what is being taught? *Education for Primary Care.* 2017;28(1):23-8.
9. Pereira Gray D. The Barbara Starfield Memorial Lecture; Undergraduate curriculum for General Practice 2017 [Available from: bjgpopen.org/content/early/2017/01/11/bjgpopen17X100569].
10. Harding AM, Rosenthal J, Al-Seaidy M, Pereira-Gray D, McKinley RK. Provision of medical student teaching in UK general practices: a cross-sectional questionnaire study. *British Journal of General Practice.* 2015;65:302-3.
11. Starfield B. Is primary care essential? *The Lancet.* 1994;344(8930):1129-33.
12. Shi L, Starfield B, Politzer R, Regan J. Primary care, self-rated health, and reductions in social disparities in health. *Health services research.* 2002;37(3):529-50.
13. Murray E, Todd C, Modell M. Can general internal medicine be taught in general practice? An evaluation of the University College London model. *Medical Education.* 1997;31(5):369-74.
14. GMC. Outcomes for graduates (Tomorrow's Doctors). Manchester: GMC; 2015.
15. RCGP. The Future General Practitioner; Learning and Teaching. London: BMA; 1972.
16. Byrne P, Long B. Doctors Talking to Patients. RCGP, editor. London: HMSO; 1976.
17. Strasser R, Hirsh D. Longitudinal integrated clerkships: transforming medical education worldwide? *Medical Education.* 2011;45(5):436-7.
18. Hirsh D, Walters L, Poncelet AN. Better learning, better doctors, better delivery system: Possibilities from a case study of longitudinal integrated clerkships. *Medical Teacher.* 2012;34(7):548-54.