

EDUCATION AND TRAINING

Primary care in the world of integrated care systems: education and training for general practice

Authors: Roaa Al-Bedaery,^A Joe Rosenthal,^B Joanne Protheroe,^C Joanne Reeve^D and Judith Ibison^E

ABSTRACT

Here, we discuss the required education and training for the emergent and evolving roles of GPs and other healthcare professionals within Integrated Care Systems (ICSs). We underscore the importance of collaborative skills for all medical specialties, and the need for interprofessional education and leadership development in undergraduate and postgraduate medical training. We also argue for a paradigm shift in medical education, away from traditional siloed approaches and toward comprehensive training that prepares practitioners to excel in integrated and multidisciplinary healthcare environments, within which expert generalists (GPs) and specialists collaborate in individual patient care and concurrently co-develop innovative system pathways for chronic medical conditions, including complexity and frailty. We highlight the need to align workforce development with evolving healthcare systems and the existing obstacles hindering this alignment.

KEYWORDS: integrated care system, primary care, education and training, medical education

DOI: 10.7861/fhj.2023-0073

Introduction

The landscape of healthcare in the UK is undergoing seismic shifts as we navigate the evolving working conditions in primary care, with a rapidly ageing and expanding population, coupled with an increasing prevalence of chronic diseases and clinically complex patient cases.¹ Developing a system that prioritises efficiency and value in healthcare delivery, while simultaneously enhancing patient experiences and outcomes, has become crucial. In

response, governing bodies have adopted integrated care as a fundamental principle to enhance coordination and continuity within and between health sectors.¹ However, with over 175 documented definitions of integrated care, and no single model proven to suit all circumstances, grasping the precise meaning of 'integrated care' and how to operationalise it is problematic. Integrated care systems (ICSs), a key component of the NHS Long Term Plan,² offer a vehicle for delivering integrated care, aiming to unite primary, secondary, social care and local government.³

Coming from the perspective of a group of GP educators, we describe here an aspirational integrated healthcare service for patients (Fig 1), current educational initiatives supporting the required skills, and considerations for additional educational measures to meet the evolving roles of GPs and other clinicians within ICSs.

What is the current system?

Contractually, all general practices are obligated to offer essential services, and some extend their offerings to include commissioned specialist services with variability across localities and across time in response to local and national policies, community needs and funding availability, such as provision of smoking cessation services. Within this landscape, there is a distinct separation of ownership and responsibility for services provided by community, secondary and primary care healthcare professionals. Although all sectors face workforce and funding challenges, the community sector is a particular pressure point, as seen in the provision of psychiatric, nursing and therapy services as well as social care.

Structurally, statutory ICSs comprise two key connections; integrated care boards (ICBs) and integrated care partnerships (ICPs).³ ICBs have a pivotal role within ICSs as the architects of healthcare plans to meet the needs of the population, whereas ICPs comprise statutory advisory committees, which unite broader systems (eg local government and NHS organisations). Although the literature broadly explores the principles and structure of ICSs,³ there is no blueprint for defining the specific operational responsibilities of individuals and providers working within these, or the mechanisms that enable effective connectivity. As such, in its current state, the intended connectivity of ICSs is not yet apparent and primary and secondary care sectors continue to work in silos. This disjoint extends to the intended link with local government and, as such, inequity of patient

Authors: ^Aclinical teaching fellow in primary care, St George's, University of London, London, UK; ^Bprofessor of primary care education, University College London, London, UK; ^Cprofessor of general practice, Keele University, Newcastle, UK; ^Dprofessor of general practice research, Hull York Medical School, Heslington, York; ^Eprofessor of practice in primary care education, St George's, University of London, London, UK.

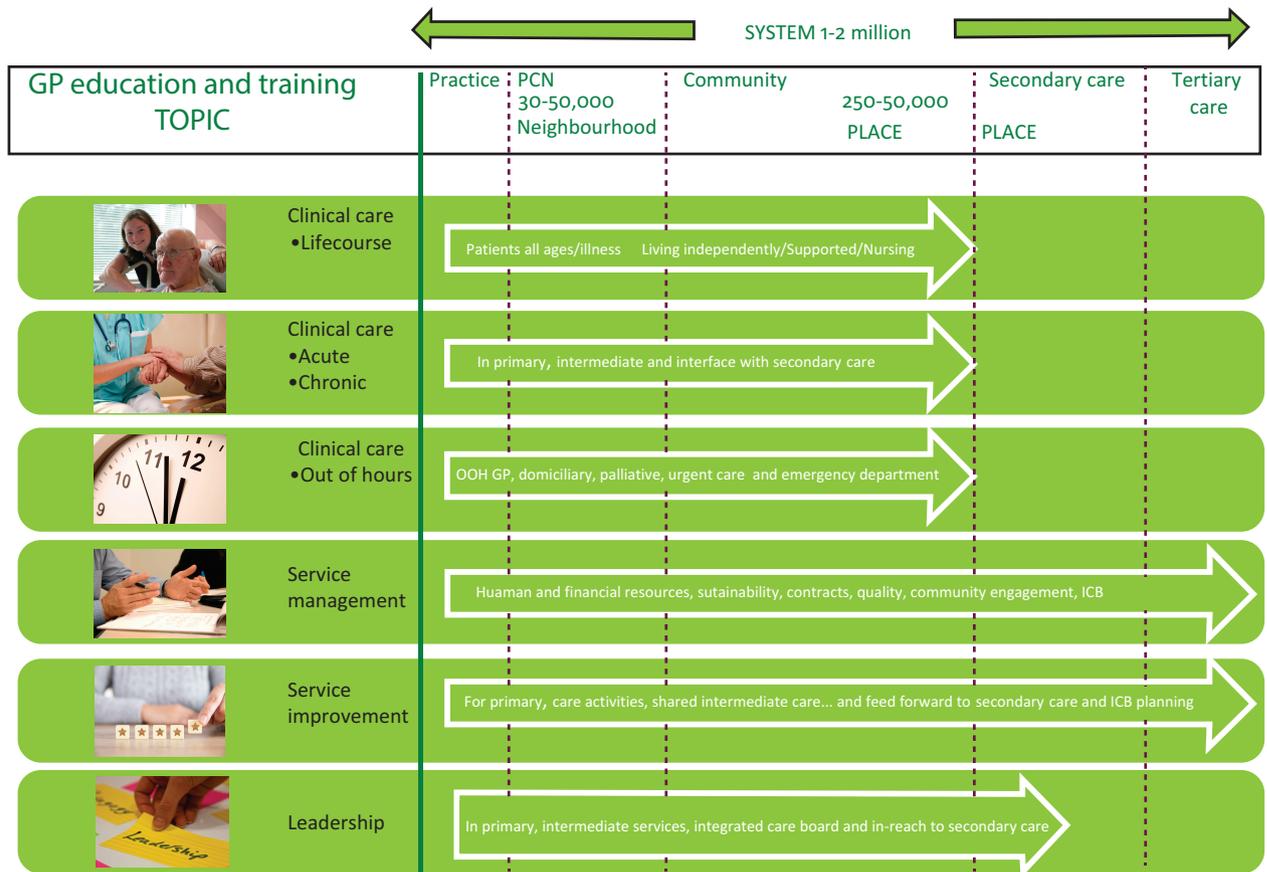


Fig 1. Aspirational integrated healthcare service for patients. ICB = integrated care board; OOH = out of hours; PCN = primary care network.

access remains apparent, as well as the inadequate initiatives to promote sustainable practice. Establishing this connectivity within integrated care systems and collaborative leadership become pivotal aspects when assessing the training requirements necessary to meet the demands of the system.⁴

What needs to change because of integrated care service needs?

Much like a coastline, external forces create constant shifts in the shape, map and content of any integrated healthcare system. With every shift, healthcare practitioners within and across sectors are also expected to adapt their skillset. Thus, with the introduction of ICSs across England in July 2022, there is a pressing need to ensure that GPs and other healthcare professionals are well prepared, at both undergraduate and postgraduate levels, to be competent to deliver the evolving integrative working practices.

Overcoming the barriers that currently hinder the connection between primary and secondary healthcare requires more than simply increasing the supply of GPs and other healthcare professionals, a key aim of the NHS Workforce Plan.⁵ A paradigm shift is required, moving toward not only incorporating secondary care specialists into community roles, but also instilling the necessary mindset and skills in all healthcare professionals to embrace actively, and contribute to, integrative healthcare practice. Fostering this collaboration between primary and secondary care also relies on cultivating mutual respect.

Historically and currently, achieving parity of esteem poses a particular challenge for GPs, whereby their roles and competence might not be fully understood and, thus, are susceptible to undermining in secondary care,⁶ damagingly witnessed by undergraduate and postgraduate learners.

The Royal College of General Practitioners (RCGP) is in the process of agreeing a new definition of general practice (currently going through the RCGP Council),⁷ which encompasses the extended role of general practice envisioned in an ICS, importantly emphasising the parity of esteem required between different specialities through renaming GPs as consultants in general practice. Ideally, ICSs would facilitate the seamless provision of medical care for patients across and between primary (providing expert generalist care)⁸ and secondary care (providing expert system-specific care). To achieve this, hospital consultants would deliver care in the community, collaboratively with general practice consultants and other practitioners. This enhanced advanced generalist role is championed by recently qualified GPs, who advocate for population health, sustainability and leadership as key tenets of a reformed postgraduate training curriculum.⁹

The role of medical generalism is becoming increasingly crucial in meeting the changing demands of an ageing population dealing with multiple chronic conditions. Medical generalism in primary care represents an approach to healthcare delivery that goes beyond the actions and thought processes of healthcare professionals; it encompasses their broader perspective on the world.¹⁰ Furthermore, medical generalists view their patients and

their health concerns through the holistic lens of the individual patient's life, acknowledging, respecting and embracing the diverse ways in which these lives unfold, while ensuring that interventions that could lead to valued health gains remain equitably available to all. Instilling the values and competencies of medical generalism into both undergraduate and postgraduate GP training is an important consideration, particularly to provide students with a profound understanding of patients' experiences with illness, the influence of social determinants on health, the spectrum of diseases and their natural progression, as well as a deeper appreciation of the biopsychosocial dimensions of health issues and the art of clinical consultation, in which generalists excel.

In addition to adapting their scope of clinical practice within ICSs, GPs are well placed to utilise their expert generalist clinical skills and take on leadership roles, collaborating closely with their secondary care colleagues to share clinical accountability and copilot ICBS to shape comprehensive care strategies and lead initiatives that transcend organisational boundaries. Effective leadership in the multilayer environment of an ICS,⁴ and the involvement of experts in continuous care, are paramount to steer the system toward success, and GPs, being expert providers of generalist continuous care, are well positioned for this responsibility.

The characteristics of GPs desired by patients is an important consideration within ICSs and can vary significantly depending on the patient demographics. When investigating patient consultation behaviour,¹¹ it becomes apparent that patients seek a GP whom they can see rapidly and conveniently. However, most patients, especially older patients or those with chronic conditions, express a preference for consulting with a GP of their choice, even if this entails a longer wait.¹² It is evident that the interpersonal aspect of continuous care takes precedence¹³ and correlates with person-centred care, quality of care, patient empowerment and a reduction in secondary care admissions.¹⁴⁻¹⁶ Therefore an emphasis on continuous, patient-centred care is a further pivotal training consideration.

What would a new integrated care GP-training programme look like?

As we consider the changing roles of GPs within ICSs, there arises a question about the sufficiency of current undergraduate and postgraduate education provision for the anticipated responsibilities demanded by these new care systems. Traditionally, medical training for GPs followed a 'trickle-down' model, assuming that secondary care experience will be valuable for generalists in the community, mirroring traditional, but increasingly outdated, models of healthcare practice. Although exposure to the sizeable volume of cases and pathophysiology of patients being cared for in hospital does develop confidence in disease recognition and management,¹⁷ care needs to be taken to ensure that too many hours are not spent in traditional secondary care specialist posts that would be of limited value to generalist doctors in the community, such as 'theatre' hours and delivering interventions not used in primary care.

In our efforts to train the workforce for working in ICSs, we can draw valuable insights from past organisational integrations, such as primary care Trust clustering.¹⁸ These experiences highlight effective leadership and professional relationships as fundamental factors in achieving success. Thus, to prepare GPs (and specialists) adequately for operating within ICSs, it is crucial to prioritise the

development of collaborative skills,¹⁹ an area that currently lacks sufficient emphasis in medical education.²⁰ The foundation of collaborative practices in the workplace relies on health workers who have undergone comprehensive training in interprofessional working, including education. Collaborative training also offers the opportunity to develop a new mutual understanding of the complexity, value and impact of all roles within a multidisciplinary complex healthcare community, including a route toward successful collaborative leadership negotiating the shared leadership paradoxes found of identity, place, change and purpose.⁴

Integrated care in undergraduate medical education

Over the past two decades, there has been a notable shift away from isolated, late-onset and observational primary care placements to expanded, early, integrated and learner-centred community healthcare experiences. The collaborative efforts to integrate community-based teaching into undergraduate medical education have yielded considerable success,²¹ not only in providing early exposure to primary care, but also in offering substantial educational value and fostering opportunities for interprofessional learning.²² One example of this is the development of longitudinal integrated clerkship (LICs),²³ where students follow patients across the healthcare system, developing learning relationships with patients and clinicians across multiple disciplines. LICs expose students to continuous and patient-centred care, while also meeting core clinical competencies outside of learning within speciality silos.

However, despite these endeavours, existing medical school training programmes have yet to adapt fully to the evolving healthcare agenda. They fall short in adequately preparing future doctors for effective collaboration, lacking emphasis on cross-organisational and crossdisciplinary training and an understanding of population health, with uncertainty on how best to implement this.²⁴ As we continue to navigate the landscape of ICSs and role changes for GPs and other healthcare professionals, it becomes evident that a paradigm shift in primary care undergraduate education is necessary. We must move away from the traditional model of training undergraduates to deliver transactional care and shift toward embracing collaborative and advanced generalist medicine,²⁵ disrupting the educational juggernaut.

Obstacles also exist that hinder integrated working practice in undergraduate training, including a curricular focus on disease/system-specific aspects of patient care, reinforced by the content of undergraduate assessment, including the new National Medical Licensing Assessment,²⁶ which, in its current format, fails to represent primary care adequately. In addition, there remains a heavy emphasis on specialist teaching in secondary care environments, and minimal opportunities for collective teaching as a multidisciplinary team. Community training hubs for non-medical professionals are evolving strong interdisciplinary training in the community,²⁷ and facilitative work needs to support medical undergraduate engagement with this. Apprentice-type medical training might be shown to strengthen these aspects of undergraduate training, but, if focused within secondary care, these could simply replicate the problems of more traditional Bachelor of Medicine, Bachelor of Surgery (MBBS) courses.

Consequently, curricular innovations involving authentic collaborative experiences are essential, such as experiential

learning through designing and implementing authentic workplace-based integrated care projects that cross the primary and secondary care boundaries. Students can gain valuable clinical experience and an early introduction to leadership skills while enhancing their understanding of integrated care principles. It is also essential to enhance students' exposure to authentic primary care experiences, including opportunities to explore the dynamic, flexible and attractive range of career options available in general practice, and to the unique primary care skills often overlooked within undergraduate training, such as holism, leadership, service improvement and continuous care. By incorporating dynamic and innovative primary care placements, such as those within ICSs and academic primary care roles, students can develop a comprehensive understanding of the complexities and diversity of primary care beyond managing unfiltered need, now triaged to alternate sources of advice and management, both digital and clinical. This first-hand experience allows students to witness the leadership, management, sustainability, quality improvement and population health considerations associated with primary care roles within integrated care, such as hospital at home or intermediate care services. However, challenges arise because of the current instability and funding limitations of these roles, leading to a restricted capacity to accommodate the required numbers of students.

Integrated care in postgraduate GP training

The literature, although limited, highlights postgraduate medical training as an effective platform for the inclusion of integrated care.^{28–31} 'Training the future GP',³² an extensive blueprint, encompasses various strategies for achieving this, such as extended time spent in primary care, the introduction of integrated posts and the provision of targeted knowledge and skills training to meet the demands of ICSs. This also includes roles beyond traditional GP practice, such as GPs with special clinical interests (GPSCI), rapid response services and chronic disease intermediate care teams.

Integrated training posts (ITPs) have already been introduced to provide a more comprehensive approach. Through ITPs, GP trainees divide their time between general practice and other clinical specialties in diverse settings, including community and hospital settings, as well as opportunities for education, research and leadership. This integrated approach better prepares GP trainees for general practice in the wider career setting and for integrated roles.^{33,34}

The 'Learning Together' programme is an educational intervention offering to facilitate joint learning among doctors. As part of this, GP registrars conduct joint clinics in primary care with speciality registrars, such as paediatrics and psychiatry, embodying the mantra, 'those who learn together, work better together'. This aims to enhance generalist and specialist trainees' understanding of the principles and benefits of integrated care, while fostering teamwork, communication and a patient-centred approach. This collaborative working experience, although not currently widespread (56 GP practices across London and surrounding areas),³⁵ has proven to be cost-effective,³⁶ and positively impactful to trainees' learning and patient satisfaction.³⁷

As we envisage GPs leading change within ICBs, developing leadership skills is crucial. 'The Big GP Consultation' with current

trainees also emphasised the value that GP trainees place on developing these skills,⁹ particularly to have a meaningful voice to shape ICS delivery. While the current GP training programme lacks capacity to fully address this, The General Practice Fellowship Programme introduced as part of the NHS Long Term Plan aims to equip newly qualified GPs with the necessary skills,² knowledge and leadership capabilities to work effectively within ICSs. The fellowship programme emphasises continuous professional development and provides opportunities for GPs to contribute to strategic planning and decision making. However, the capacity of the programme, logistics of commitment time and career structures remain uncertain. Clinical leadership and other commitments for GPs, although necessary, reduce capacity for direct patient care, exacerbating the existing workforce crisis. This can impede meeting the clinical needs of the community, especially for patients with multiple health conditions in need of continuous care.

The future of integrated care within postgraduate GP training

While many of the emerging postgraduate GP training activities described garner collaborative working and leadership skills in preparation for ICS working, the traditional training programme has been driven by the ongoing recruitment and retention crisis for general practice.³⁸ With one of the shortest GP training programmes among advanced economies, 3 years (whole-time equivalent) is no longer sufficient to cover the breadth of skills, experience and knowledge required for a new GP. The RCGP presented a proposal to extend training in 2012,³⁹ but this has not materialised owing to financial and organisational barriers highlighted in the Greenaway report 'Shape of Training'.⁴⁰ The aspiration to longer training now appears more important than ever to meet the additional demands of ICSs. Newly qualified GPs have expressed their concerns with feeling underprepared for the increasing complexity of patients⁴¹ and new roles within ICSs.⁹ By extending the training duration, trainees could gain both generalist and enhanced skills (eg leadership and management), rendering this a long-term investment. However, investment in GP training remains a large barrier, particularly during a time of deep austerity.

Academic primary care offers a further valuable avenue to enhance GP training for ICS working, driving system development and evaluation. Initiatives, such as Wise GP and the CATALYST programme, exemplify this approach,^{42,43} providing platforms for GPs to engage in expert knowledge acquisition, research and leadership skill development within primary care. These initiatives champion the integration of scholarship into daily general practice. This is especially relevant when considering the context of secondary care, where clinical scholarship is more commonplace and the pursuit for higher degrees, such as MDs and PhDs, is encouraged to secure competitive training and consultant positions, as seen in fields such as neurology.⁴⁴ Although primary care has made significant strides in academic growth,⁴⁵ its expansion has been hindered by capacity and funding constraints. Compared with other specialties, academic training and employment opportunities for GPs remain relatively limited. Furthermore, the appetite to engage in research experience is not there among GP trainees,⁴⁶ and trainers feel inadequately equipped to provide such opportunities. Wise GP and

the CATALYST programme are examples that pave the way as we work to address this gap, cultivating opportunities for collaborative scholarship in the integrated healthcare workspace.

The NHS workforce plan also outlines strategies to strengthen postgraduate training for integrative practice, such as the inclusion of general practice placements for all foundation doctors,⁵ aiming to shed light on the dynamics of primary care and encourage a culture of collaboration. However, given that additional plans are already underway to implement medical degree apprenticeships, expand the Additional Roles Reimbursement Scheme (ARRS) and allow GP trainees to practise solely in primary care during their 3-year training, the demand for qualified GP supervision is higher than ever before. The prioritisation and availability of placements for medical students, GP trainees and apprentices are unclear especially since the publication of the Workforce Plan.⁵

Conclusion

As we embrace a new era of integration within the NHS, the role of GPs is undergoing significant transformations to align with the demands of ICSs. A key challenge is developing synergies between system innovation, workforce capacity and workforce development. External forces, whether related to specialty shortages, climate, sustainability, disease or economic environments, often drive changes in the system, and these changes can occur far ahead of workforce and system preparedness. The Coronavirus 2019 (COVID-19) pandemic showed the best and worst of how a system can undergo rapid change and innovation, with acute gains and chronic losses, and how the workforce needs to be able to follow the needs of the system. How we can promote and support a workforce with the energy for continuous development and change is not yet clear, although the pandemic and beyond have shown us how to do the opposite. Working conditions, pay and providing a system with sufficient human and fiscal resource to avoid moral distress during care are necessities for attracting learners and retaining highly trained staff, with excellent continuing professional development following close behind these basic provisions.

Importantly, it is crucial to acknowledge that progression toward fully integrated healthcare systems could inadvertently result in fragmentation in other areas.⁴⁷ This concern assumes greater significance as we embark on this transformative journey amid a backdrop of political uncertainty, economic instability, prolonged waiting times for treatment, industrial actions by healthcare professionals and staff shortages. While integration is pursued, patients might well encounter and perceive elements of fragmentation, emphasising the need to collaborate with key stakeholders, including patients, in the co-construction and evaluation of interventions and practice changes that lie ahead. ■

References

- Gröne O, Garcia-Barbero M. Integrated care. *Int J Integr Care* 2001;1:e21.
- NHS England. *The NHS long term plan*. NHSE, 2019.
- Charles A. *Integrated care systems explained: making sense of systems, places and neighbourhoods*. London, The King's Fund: 2022.
- Bolden R, Kars-Unluoglu S, Jarvis C, Sheffield R. Paradoxes of multi-level leadership: insights from an integrated care system. *J Change Manag*. Published online 13 July 2023. <http://dx.doi.org/10.1080/14697017.2023.2234388>.
- NHS. *NHS long term workforce plan*. London, NHS: 2023.
- Wass V. *By choice—not by chance: supporting medical students towards future GP careers*. www.medschools.ac.uk/media/2881/by-choice-not-by-chance.pdf 2023 [Accessed 31 October 2023].
- RCGP. *Definition of a GP*. www.rcgp.org.uk/about 2023 [Accessed 31 October 2023].
- RCGP. *Medical generalism- why expertise in whole person medicine matters*. www.rcgp.org.uk/getmedia/828af8c8-65a2-4627-9ef7-7bccd3335b6b/Medical-Generalism-Why_expertise_in_whole_person_medicine_matters.pdf 2023 [Accessed 31 October 2023].
- The Big GP Consultation. *Final Report: A summary of our findings and implications for the future of General Practice in the UK*. https://thebiggpconsultation.co.uk/?page_id=4761 2023 [Accessed 31 October 2023].
- Commission on Generalism. *Guiding Patients through Complexity: modern medical generalism*. https://www.health.org.uk/publications/guiding-patients-through-complexity-modern-medical-generalism?gclid=EA1aIQobChMIoqO0z5igggMVDvDtCh3A8AMzEAYASAAEgKaUvD_BwE 2023 [Accessed 31 October 2023].
- Baker R, Boulton M, Windridge K *et al*. Interpersonal continuity of care: a cross-sectional survey of primary care patients' preferences and their experiences. *Br J Gen Pract* 2007;57:283–90.
- Waibel S, Henao D, Aller MB, Vargas I, Vázquez ML. What do we know about patients' perceptions of continuity of care? A meta-synthesis of qualitative studies. *Int J Qual Health Care* 2012;24:39–48.
- Cowie L, Morgan M, White P, Gulliford M. Experience of continuity of care of patients with multiple long-term conditions in England. *J Health Serv Res Policy* 2009;14:82–7.
- Nowak DA, Sheikhan NY, Naidu SC, Kuluski K, Upshur REG. Why does continuity of care with family doctors matter? Review and qualitative synthesis of patient and physician perspectives. *Can Fam Physician* 2021;67:679–88.
- Barker I, Steventon A, Deeny SR. Association between continuity of care in general practice and hospital admissions for ambulatory care sensitive conditions: cross sectional study of routinely collected, person level data. *BMJ* 2017;356:j84.
- Sandvik H, Hetlevik Ø, Blinkenberg J, Hunskaar S. Continuity in general practice as predictor of mortality, acute hospitalisation, and use of out-of-hours care: a registry-based observational study in Norway. *Br J Gen Pract* 2022;72:e84–90.
- Capewell S, Stewart K, Bowie P, Kelly M. Trainees' experiences of a four-year programme for specialty training in general practice. *Educ Primary Care* 2014;25:18–25.
- Knight M. *Doctors' perspectives of organisational mergers*. <https://docplayer.net/22662173-Doctors-perspectives-of-organisational-mergers.html> [Accessed 22 June 2023].
- NHS England. *Integrated care pioneers: one year on*. www.england.nhs.uk/wp-content/uploads/2015/03/integrtd-care-pionrs-1-yr-on.pdf 2023 [Accessed 31 October 2023].
- Royal College of Physicians. *Integrated care—taking specialist medical care beyond the hospital walls*. www.rcplondon.ac.uk/projects/outputs/review-integrated-care 2023 [Accessed 31 October 2023].
- Lee SWW, Clement N, Tang N, Atiomo W. The current provision of community-based teaching in UK medical schools: an online survey and systematic review. *BMJ Open* 2014;4:e005696.
- Hosny S, Kamel MH, El-Wazir Y, Gilbert J. Integrating interprofessional education in community-based learning activities: case study. *Med Teach* 2013;35(Suppl 1):S68–73.
- Hirsh DA, Holmboe ES, ten Cate O. Time to trust: longitudinal integrated clerkships and entrustable professional activities. *Acad Med* 2014;89:201–4.
- Griffin A, Knight L, McKeown A, Cliffe C, Arora A, Crampton P. A postgraduate curriculum for integrated care: a qualitative exploration of trainee paediatricians and general practitioners' experiences. *BMC Med Educ* 2019;19:8.

- 25 Reeve J. *Medical generalism, now!: reclaiming the knowledge work of modern practice*. Boca Raton, CRC Press, 2023.
- 26 GMC. MLA content map. www.gmc-uk.org/-/media/documents/mla-content-map_pdf-85707770.pdf 2023 [Accessed 31 October 2023].
- 27 NHS Health Education England. Primary and community care training hubs. <https://work-learn-live-blmk.co.uk/wp-content/uploads/2020/08/Training-hubs-Operating-Guidance-V8.3.pdf> [Accessed 31 October 2023].
- 28 Tresolini CP, Shugars DA, Lee LS. Teaching an integrated approach to health care: lessons from five schools. *Acad Med* 1995;70:665–70.
- 29 Owen D, Lewith GT. Teaching integrated care: CAM familiarisation courses. *Med J Aust* 2004;181:276–8.
- 30 Zoberi K, Niemiec RM, Margolis RB. Teaching integrated behavioral health in a primary care clerkship. *Med Teach* 2008;30:e218–23.
- 31 Hall J, Cohen DJ, Davis M *et al*. Preparing the workforce for behavioral health and primary care integration. *J Am Board Fam Med* 2015;28(Suppl 1):S41–51.
- 32 NHS. *Training the future GP*. www.hee.nhs.uk/our-work/primary-care/training-future-gp 2023 [Accessed 31 October 2023].
- 33 Marshall H, Alberti H, Cope S, Rutt G. Nurturing future academics and leaders: extended integrated training posts in general practice. *BMJ* 2017;356:j1007.
- 34 Wass V. *By choice—not by chance November 2016 Supporting medical students towards future GP careers*. www.medschools.ac.uk/media/2881/by-choice-not-by-chance.pdf 2023 [Accessed 31 October 2023].
- 35 Learning Together. Map of locations. www.learningtogether.org.uk/location-map/ 2023 [Accessed 31 October 2023].
- 36 Cullen K, Riches W, Macaulay C, Spicer J. Learning Together; part 2: training costs and health gain—a cost analysis. *Educ Prim Care* 2017;28:36–44.
- 37 Macaulay C, Spicer J, Riches W, Lakhanpaul M. Learning Together 1: an educational model for training GPs, paediatricians: initial findings. *Educ Prim Care* 2017;28:29–35.
- 38 NHS England. *General practice workforce*. <https://digital.nhs.uk/data-and-information/publications/statistical/general-and-personal-medical-services> 2023 [Accessed 31 October 2023].
- 39 Gerada C, Riley B, Simon C. *Preparing the future GP: The case for enhanced GP training*. www.rcgp.org.uk/getmedia/df28079c-e0f9-41df-8032-bed36762bf87/Case_for_enhanced_GP_training.pdf 2023 [Accessed 31 October 2023].
- 40 Greenaway D. *Shape of training*. www.gmc-uk.org/-/media/documents/Shape_of_training_FINAL_Report.pdf_53977887.pdf 2023 [Accessed 31 October 2023].
- 41 Taylor C, Turnbull C, Sparrow N. Establishing the continuing professional development needs of general practitioners in their first five years after training. *Educ Prim Care* 2010;21:316–9.
- 42 CATALYST. *About us*. www.hyms.ac.uk/about [Accessed 31 October 2023].
- 43 WiseGP. *WiseGP aims*. www.wisegp.co.uk/ [Accessed 31 October 2023].
- 44 Giroud M. Neurology postgraduate training: what is to be done? *J Neurol Neurosurg Psychiatry* 2004;75:1516–16.
- 45 MSC. *Medical Schools Council Clinical academic survey*. <https://www.medschools.ac.uk/clinical-academic-survey> 2023 [Accessed 31 October 2023].
- 46 Stephenson S, Tang EYH, Tang E *et al*. Barriers and facilitators to primary care research: views of GP trainees and trainers. *BJGP Open* 2022;6:BJGPO.2021.0099.
- 47 Leutz WN. Five laws for integrating medical and social services: lessons from the United States and the United Kingdom. *Milbank Q* 1999;77:77–110.

Address for correspondence: Roaa Al-Bedaery, Institute of Medical and Biomedical Education, St George's, University of London, SW17 0RE, UK.
Email: rel-beda@sgul.ac.uk