

# *Education and training to become a prescriber*

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## Chapter 15 Education and training to become a prescriber

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### **Abstract**

In the United Kingdom (UK), the education and training landscape for healthcare students has changed considerably in the last few years. This is largely because of key governmental policies introduced in response to the wider workforce issue in the National Health Service (NHS). In this chapter, we discuss recent UK policies and standards relevant to non-medical prescribing and reflect on the potential implications they may have on the provision of future education and training for undergraduate and prescribing course providers and students. We also highlight opportunities for providers that will help future-proof programmes.

## Chapter 15 Education and training to become a prescriber

In the United Kingdom (UK), the education and training landscape for healthcare students has changed considerably in the last few years. This is largely because of key governmental policies introduced in response to the wider workforce issue in the National Health Service (NHS). Chapter 1 provided a historical overview of non-medical prescribing and a brief introduction to the educational preparation required to become a prescriber. In this chapter, we discuss recent UK policies and standards relevant to non-medical prescribing and reflect on the potential implications they may have on the provision of future education and training for undergraduate and prescribing course providers and students. We also highlight opportunities for education and training providers that will help future-proof programmes.

### 15.1 Key policy changes

People are living longer, and many are now living with multiple health conditions. This has increased demand for healthcare services, and provided opportunities for some healthcare practitioners, to rethink the potential and scope of their practice. Within the last twenty-five years there has been a number of changes in NHS legislation, regulation and policy at a governmental level and by professional bodies around prescribing. Some of the recent policy changes are highlighted below (it is acknowledged that the implementation of these policies within NHS structures across England, Scotland, Wales and Northern Ireland may differ):

- The adoption of a single Competency Framework for all Prescribers (Royal Pharmaceutical Society (RPS) 2016) by professional bodies, and Higher Education Institutions. This National Institute for Health and Care Excellence (NICE)-accredited generic framework was developed across professional groups and reflects the key competencies required by all prescribers upon completion of their prescribing training, and which they must continue to meet in ongoing practice. The framework clearly demonstrates that the core competences needed by all prescribers are similar, resulting in the delivery of most current education for independent and supplementary prescribing as multi-professional, generic education programmes.

- A change in regulation in 2018/19 meant that non-medical prescribers (NMPs) can now take on the role as the designated prescribing practitioner (DPP) for the 'period of learning in practice' component of the prescribing course. These practitioners must be a qualified prescriber, on the register of their statutory regulator with annotation(s) for prescribing, and possess the relevant skills, knowledge and experience to support safe and effective learning. A Competency Framework for DPP (RPS 2019) has now been developed for prescribing courses.
- As part of the delivery of the NHS Long Term Plan, the Interim NHS People Plan (NHS 2019a) highlights the need for Physician Associates (generalist healthcare professionals who are medically trained), to be able to prescribe within 24 months of registration.

### Nursing

Nurses are by far the largest group of NMPs in the UK and there are plans to prepare nurses for the prescribing role earlier, for example

- the inclusion of prescribing knowledge and skills within nurse undergraduate healthcare professional education programmes (Nursing and Midwifery Council (NMC) 2018)
- the requirement of one year qualified experience by nurse applicants to the independent/supplementary prescribing programme (NMC 2018). No qualified experience is required by community nurses accessing training to prescribe from the Nurse Prescribers Formulary (NPF) for community practitioners (NMC 2018).

### Pharmacy

The pharmacy profession is currently undergoing changes. Pharmacist as prescribers are now high on the government agenda (Department of Health (DoH) 2016, NHS 2014, NHS 2016,) to modernise the profession (Smith and Darracott 2011). Plans to reform the initial education and training of pharmacists and the expansion of pharmacy roles in general practices have also been proposed (General Pharmaceutical Council (GPhC) 2020).

- The RPS (RPS 2018) has recommended the inclusion of prescribing knowledge in the Master of Pharmacy (undergraduate Pharmacy courses) degree and preregistration training so that pharmacists are 'prescriber ready'.
- The Interim NHS People Plan: the future pharmacy workforce (NHS 2019b) emphasises the role of clinical pharmacist prescribers in delivering clinical care to patients.

- At the end of July 2020, the GPhC announced reforms to the initial education and training of pharmacists. These reforms are to take place in July 2021. If they go ahead, the one-year pre-registration training (which takes place after graduation from the four-year Master of Pharmacy degree), will be replaced with a foundation period of 12-months. This foundation period will adopt a “work-based approach”, with the aim that new pharmacist registrants are independent prescribers (GPhC 2020). At the time of writing this chapter, details of the “work-based approach” were unavailable.
- At the end of July 2020, the Pharmacy Schools Council (PhSC), which represents 30 pharmacy schools in the UK, released a position statement advocating the role of pharmacists as scientist practitioners (PhSC 2020). The Council highlighted independent prescribing as a “highly significant component” of the scientist practitioner role.

### **Allied Health Professionals**

Allied Health Professionals (AHPs) are the third largest clinical workforce in the NHS. They comprise 14 diverse professions, each contributing their unique skills across a wide variety of clinical pathways (NHS Improvement 2019). Legislative changes have enabled an increasing number of AHPs to become independent and/or supplementary prescribers:

- In 2013, physiotherapists, podiatrists/chiropractors, were given independent prescribing rights. They had been able to prescribe as supplementary prescribers from 2005.
- Therapeutic radiographers were able to qualify as independent prescribers from 2016.
- Dietitians could qualify as supplementary prescribers in 2016
- In 2019, paramedics were given independent/supplementary prescribing rights
- Health policy for professions allied to health includes prescribing as a key skillset for the future allied health workforce. In 2020, the Chief Allied Health Professions Officer in NHS England commissioned a medicines project to scope the potential for independent prescribing for speech and language therapists, dietitians and orthoptists, and supplementary prescribing for occupational therapists.

## **15.2 Implications for education and training providers**

The extent of the impact of these new changes will differ across professions. Here, we reflect primarily on the potential impact on the undergraduate and prescribing programmes.

### **15.2.1 Undergraduate programmes**

#### **Nurse undergraduate education and training**

The pre-requisite for independent/supplementary prescribing training has changed from three years (NMC 2006) to one year as a qualified nurse. For community staff nurses wishing to train to prescribe from the NPF for community practitioners, no qualified experience is required (previously applicants needed two years qualified experience). This reduction in required experience, has meant that undergraduate education now provides an important opportunity to begin to prepare students for the adoption of the prescribing role once qualified. Guided by the single competency framework (RPS 2016), which describes the activity or outcomes that prescribers should be able to demonstrate, this could include preparation in clinical assessment skills and pharmacology.

As well as undergraduate education providing an opportunity to prepare students in prescribing knowledge and skills, it is also important that educators raise their awareness of the different modes of prescribing and associated training (see Table 1 for a description of the different modes of prescribing for each healthcare professional group). For example, undergraduate students keen to work in the community, can undertake training to prescribe from the NPF for community practitioners (see chapter 1 for a list of products in this formulary). Training to prescribe from this formulary has been incorporated into the qualifying programme for specialist practitioners, which enables district nurses and specialist community public health nurses – including health visitors and school nurses – to prescribe (the V100 qualification). However, community staff without a specialist qualification in community nursing, are also able to prescribe from the NPF (2015-2017) after completing the V150 qualification, which is a 10-day stand-alone course (NMC 2009). Furthermore, rather than undertake training to prescribe from the NPF for community

practitioners, community nurses with one-year qualified experience can apply to undertake the independent/supplementary prescribing course. Although it is important for students to appreciate that choice of prescribing programme available, it is also important that they are guided by the role they adopt in practice once qualified.

### **Pharmacy undergraduate education and training**

The proposed reforms in the initial education and training of pharmacists signals strong support for pharmacists to become prescribers at a Foundation Pharmacist level, rather than at an Advanced level. There are no details (as of end of July 2020) of what the 12-month foundation year post-MPharm will comprise, but it will take a “work-based approach” (GPhC 2020). Whatever form the foundation year takes, it is important to consider whether the current MPharm degree provides the required underpinning knowledge, skills and experience to prepare graduates to become a prescriber.

Over the years, there has been strong support for the MPharm degree to train students to become ‘prescriber ready’ (RPS 2018). The MPharm degree is accredited by the GPhC meaning that it must meet the standards set out by the GPhC. A broad range of subject areas, from anatomy and physiology, chemistry, pharmacology, pharmaceuticals and pharmacy practice are taught in a broadly integrated manner. Key elements within the course are multidisciplinary working (for example through interprofessional education) and experiential learning largely undertaken as placements/work-based learning. In some courses, traditional pharmacy roles such as dispensing are still emphasised. Teaching primarily takes place at Universities and although experiential learning is emphasised, it makes up a very small part of the course (typically a few weeks over the course of the four-year MPharm degree). This contrasts with training in other professions e.g. medicine, nursing and the AHPs where a substantial part of the student’s learning takes place in the workplace.

Several MPharm providers have explicitly incorporated some of the prescribing competencies described in the generic prescribing framework (RPS 2016) into curricula. Others have taken a more nuanced approach to teach prescribing. This disparity in the



teaching of 'prescribing' in the MPharm programme will likely only be aligned when the GPhC (accreditors of the MPharm course), revise their standards. To prepare pharmacy graduates to become 'prescriber ready' prior to the foundation year, the new GPhC standards could be aligned with the generic prescribing competencies framework. Also, key, is a strong emphasis on increasing work-based learning. Although some undergraduate courses effectively use teaching and learning methods (e.g. patient simulations, problem-based learning and cadavers (Rathbone et al. 2019)), there may be scope to further increase both the quality and quantity of time spent in the work-place where non-technical skills (e.g. decision-making skills, communication, teamworking and situation awareness) are required.

The 'period of learning in practice', required as part of the current prescribing course, aligns with the RPS Foundation Pharmacist Framework (2019). This framework emphasises a work-based approach to training because "such practitioners are more confident in adopting extended clinical roles and more adaptable in working across sectors." Whether or not an increase in work-based learning and a "work-based approach" adopted in the foundation year, will be equivalent or comparable to the current entry requirements to a pharmacist prescribing course, is unclear. Nevertheless, an increase in work-based learning will require further funding to attract placement providers. This will be challenging given that many higher education institutions (HEIs) are currently undergoing financial constraints. There are broader implications on who will provide such funding or, whether HEIs will bear the cost themselves. These structural and financial implications will not be easily solved in the short term and will require effective engagement and investment from a range of stakeholders.

There may also be implications with regards to the current minimum entry requirements for the MPharm programme. If requirements become higher, this may impact on student recruitment within HEIs. Nevertheless, the proposals for reform provides a valuable opportunity for pharmacy programmes to reflect on the current curriculum and begin to prepare students for a prescribing role.

### **AHP undergraduate education and training**

The current pre-requisite for AHPs to access independent or supplementary prescribing as a postgraduate qualification is three years post-registration. Prescribing demonstrates

advanced practice. Therefore, this three-year post registration period provides AHPs with the opportunity to develop valuable skills including clinical reasoning and complex decision making skills, each of which are pre-requisites for the prescribing course.

Although there are currently no plans to include the prescribing qualifications within undergraduate AHP programmes, there is recognition that current undergraduate AHP programmes should be adapted to support AHPs to prescribe (J Coughtrey 2020, personal communication, September). This aligns with the Health Care Professions Council's (HCPC) aspiration for AHP pre-registration programmes to be 'prescriber ready' (Borthwick *et al.* 2017). This presents AHP undergraduate programmes with an opportunity, over the next few revaluation cycles, to incorporate the required underpinning knowledge of pharmacology and medicine management skills, as well as the theoretical components of prescriber training. This will allow AHP programmes to support graduates into postgraduate prescribing programmes and could mean that the requirement of three years post-registration experience, can be reduced.

AHP undergraduate entry qualifications usually require basic sciences. This enables AHPs, during their undergraduate training, to build their understanding of biochemistry and pharmacology, within the context of medical pathology. Each AHP profession, however, produces graduates with significantly differing levels of medicine management and pharmacological knowledge. Therefore, the opportunities available within current undergraduate AHP programmes to build in knowledge and skills relevant to prescribing, will vary. Below an overview is provided of the pre-registration competencies for each of the AHP professions who can prescribe, that include significant learning outcomes in medicines and pharmacology.

### *Podiatry*

The pre-registration podiatry curriculum is currently under review, with a view to implementation from 2021. It has been designed to incorporate knowledge and skills commensurate with prescriber readiness. Currently, podiatrists assimilate a thorough and detailed knowledge of the pharmacology of medicines commonly encountered within podiatric practice. Students gain the underpinning knowledge and skills to safely and

effectively utilise their Prescription Only Medicines (POM) qualifications in administration (POM-A) and sale/supply' (POM-S) during their undergraduate training. This means that a podiatrist may sell, supply and administer certain medicines in the course of their professional practice. POM-A allows podiatrists to administer certain prescription only medicines. They cannot mix medicines and must use pre-combined preparations if required. POM-S allows podiatrists to sell and supply certain POMs, pharmacy (P) medicines and all the General Sale List (GSL) medicines (HCPC 2018). This gives them access to a range of medicines, as detailed within the podiatry exemption list, immediately upon registration. The exemption list is a limited list of specified medicines which podiatrists can supply, sell or administer but not prescribe. It is referred to colloquially as the 'exemption' list because it exempts podiatrists from the provisions of the original Medicines Act (1968) which state that only doctors, dentists and vets can access, supply, administer and prescribe POM or pharmacy medicines (Borthwick 2017). These competencies require well developed clinical reasoning and decision-making skills integrated into podiatric practice at the point of registration. Podiatry undergraduates are taught a broad consideration of pathology, enabling a depth of theoretical understanding around good practice in pharmacological management of complex multi-morbid patient groups, including medicines management and reconciliation.

### *Radiography*

Radiography undergraduate programmes also include pharmacological and medicines competencies. Qualifying radiographers are not expected to have prescribing skills or knowledge, but they are expected to understand the legal framework surrounding the use of medicines including the pharmacology and use of drugs commonly encountered within radiotherapy and chemotherapy.

### *Paramedics*

The undergraduate paramedic programme includes physical sciences, life sciences, social, health and behavioural sciences, clinical sciences, pharmacology and the administration of therapeutic medicines, together with associated ethics and law. Paramedics assess patients with a view to identifying and differentiating the critically ill and injured patient - including those with an exacerbation of existing illness. During pre-registration education, student

paramedics do not administer parenteral medicines, but observe the preparation and administration of medicines.

On graduation, paramedics have access to a range of medicines included in an exemption list, as detailed within Schedule 17 and 19 Human Medicines (2012) regulations. These exemptions provide paramedics with access to 23 medicines (from Schedule 17), and a further 18 (from Schedule 19) for administration only. Paramedics also have access to injectable drugs under patient group directions (PGDs). Using PGDs, registered paramedics can administer a range of parenteral medicines - on their own initiative - for the immediate, necessary treatment of sick or injured persons without the usual requirement for a prescription or following the directions of a prescriber.

### *Physiotherapy*

Physiotherapy undergraduate programmes provide students with a basic knowledge of pharmacology covering a limited range of medicines specific to their use with physiotherapy interventions.

### *Dietitians*

Dietitian undergraduate programmes include integrated applied knowledge and understanding of clinical medicine, disease processes and pharmacology, with respect to dietetic and nutritional interventions. Dietetic curricula include pharmacological education relating to mode of action, side effects, interactions and contraindications of key nutritionally related drugs such as sip feeds, enteral feeds and energy modules (Kellie 2009). Graduate dietitians are required to demonstrate an understanding of the different classifications of medicines and their role within medicines management, including the potential evidence for, and use of, complementary and alternative medicines.

The general support for undergraduate AHP programmes to be 'prescriber ready' provide HEIs with the opportunity to review their curricula. Clinical placement education provides AHP students with opportunities to develop communication and consultation skills, including medical history taking. With structured support from clinical educators, students on clinical placement can share clinical practice sessions and develop their application of

pharmaceutical knowledge. Practice educators working alone and as members of the multidisciplinary teams can help students to develop their critical evaluation and decision-making skills including decisions related to prescribing. This is essential to prepare graduate AHPs for early entry into postgraduate prescribing roles and fulfil the workforce needs of the NHS.

### **15.2.2 Prescribing programmes**

Most prescribing programmes are taught within a multi-professional context, whereby different professionals learn together in a single cohort. One of the key changes in recent years is the introduction of the DPP. Here, we reflect on the implications first within specific professions then within the context of the overall prescribing programme.

#### **Nurse prescribing**

Standards for prescribing programmes (NMC 2018) include the need for students to be assigned to a practice assessor. This assessor must be a registered healthcare professional and an experienced prescriber with prescribing experience within the area the student will prescribe (NMC 2018). Previous standards (NMC 2006) required the practice assessor to be a medical prescriber. Once qualified as a prescriber, NMPs can adopt the role of assessor. Therefore, the non-medical prescribing programme could provide a valuable opportunity to begin to prepare students for this role.

#### **Pharmacist prescribing**

Regardless of the education reforms in pharmacy, there are still qualified pharmacists who may want to undertake the prescribing course as a post-graduate qualification. The introduction of non-medical professionals acting as DPPs provides opportunity for course providers to consider their provision of training and education. There is caution amongst some prescribing courses with regards to DPPs, with plans by some courses, to vet potential DPPs to ensure they have the necessary requirements specific to a prescribing student's scope of practice. This caution suggests the potential need and opportunity for the preparation of prescribers for the responsibilities of the DPP role. This preparation may (or

may not) be provided within the prescribing programme and would need to be guided by the competency framework for DPP (RPS 2019).

### **AHP Prescribing**

As with other non-medical healthcare professional prescribing students, a key challenge is the need for the student to secure a DPP ie a trained 'practice educator' who is responsible for their education during their practice-based learning. For any AHP registered with the HCPC who is undertaking non-medical prescribing training, the practice educator should be a registered prescriber who is able to demonstrate the competencies described in the competency framework for Designated Prescribing Practitioner (RPS 2019).

### **Overall reflections**

The DPP role presents both opportunities and challenges for NMPs. NMPs can extend and advance their clinical practice to benefit patient care. In the same token, the challenges of ensuring that NMPs have the necessary skills, knowledge, experience and confidence to take on the DPP role has to be taken into account. Is it feasible to include DPP competencies within the current prescribing curricula? Could preparation or training to become a DPP be part of further learning? Is additional training and vetting of potential DPPs required or desirable? This is a challenge that providers of NMP programmes, and the regulators, will require to address to ensure that NMPs are appropriately qualified and that any potential clinical risks are effectively mitigated.

The entry requirements, academic content, assessment and governance requirements for the prescribing programme are specified in the Outline Curricular Framework documents (Allied Health Professions Federation 2018) and are the same for each allied health profession. Any redesign of the prescribing programme needs to consider the background expertise, experience and existing skill sets of the individual professions, which will differ depending on the nature of their practice and length of practitioners' experience. Mapping the curricula to the RPS standards (RPS 2016) may allow for standardization of prescribing competencies, however, the scope and level of clinical responsibility of each profession at undergraduate level is different at the point of registration. Education programmes teach

the general principles of prescribing and how to apply these principles safely, but it is up to the individual profession to apply this relevantly to their own scope of practice, including their personal clinical decision making, supporting decisions around when to prescribe, when not to prescribe or when to deprescribe.

### **15.3 Implications for healthcare students**

#### **Undergraduate students**

With the extension of prescribing rights to other healthcare professions, current and future healthcare students will have access to a wider range of career opportunities. Table 1 provides an overview of the current entry requirements for UK prescribing programmes. Most healthcare students can access prescribing courses within one to three years after qualification. Those who want to become a prescriber can take the opportunity whilst they are undergraduates to experience a wider range of career options for example, through placements. For prospective students, they can be made aware of the wide range of possible career choices post qualification, beyond the traditional healthcare roles.

Specific to pharmacy, the proposed reform to the initial education and training of pharmacist will represent a significant change to the career trajectory of pharmacists. Students will undertake a course that is designed to equip them to be ready for a prescribing career, with a likely larger component of practice-based learning. They will graduate and enter a structured foundation year focused on a “work-based approach”. If healthcare students can access prescribing courses earlier post-qualification, is it plausible that there could be changes to the entry requirements for healthcare programmes? This is something that future students may want to take note of.

The future of AHP training programmes might dovetail with nursing by introducing “prescriber ready” elements at undergraduate level, which will involve the theoretical components of independent prescribing training, but none of the practical elements. Whilst there are currently no formal plans within AHP programmes, nursing’s plans to move to this position are likely to be followed in due course by AHPs, particularly in HEIs where learning

is shared between AHP and nursing students. This will allow the continuing alignment of AHP, nursing and pharmacy education and training at undergraduate level.

### **Post-graduate prescribing students**

It is important that prescribing students, particularly those working as a 'lone' practitioner (such as paramedics or nurse practitioners), carefully consider who is best placed to act as their practice assessor and/or DPP. It is important that the practice assessor's work-based experience or qualifications helps them to understand and assess what the student is aiming to achieve in their field of practice.

Once qualified as a prescriber, an individual may wish to expand their prescribing competencies or, move into another field of practice. In these situations, the generic prescribing framework (RPS 2016) can be used to identify continuing professional development (CPD) requirements. Similarly, when returning to a prescribing role following a career break, this framework can be used to refresh competencies and build confidence.

Although there are no details yet, there could be an expectation for foundation year pharmacists to decide on an area of practice in which they wish to prescribe. Foundation year pharmacists will need to ensure that they gain the most of the 12-month work-based training and learning, especially if there are key competencies not covered in sufficient depth in their MPharm degree. Building prescribing confidence is also key during this time. Work-based placement providers and foundation pharmacists will need to make sure a comprehensive support structure is in place e.g. provision of workspace, time for study, resources, DPP/pre-registration tutor. It is currently unclear whether DPPs will supervise Foundation year pharmacists or pre-registration tutors, many of whom may not be pharmacist prescribers. There may also be pharmacy graduates who may not want to become prescribers for example, a career in the pharmaceutical industry. This presents a training issue that will need to be addressed at a higher level. Nevertheless, the importance of Revalidation and thus Continuing Professional Development will remain for all pharmacists.

Prescribing students who may not have a defined prescribing role once qualified, may want to consider in advance how they will utilise their prescribing skills. Current issues



encountered by pharmacist prescribers include a lack of acknowledgement of the competencies of prescribing pharmacists within a GP practice, ambiguity as to who is accountable for patients within a hospital setting where the consultant doctor usually takes charge, and how prescribing could be undertaken within a community pharmacy setting. These are not insurmountable issues but with potentially thousands of pharmacists qualifying as prescribers every year as the proposed reforms go ahead, there will need to be structural changes within the current NHS to enable pharmacists to use their skills to the fullest potential to modernize services and benefit patients.

AHPs have no foundation year following graduation. A three-year post-qualifying period is recommended prior to commencing a prescribing programme. This period of time is important to allow AHPs to work towards advanced clinical practice roles and to decide their specialty area. Therefore, any reduction in this time period is unlikely in the short term. However, in future, should prescriber readiness become part of AHPs' undergraduate curricula, the three-year post-registration period may be reduced in line with the pharmacy model.

## **15.4 Conclusion**

In this chapter, we have highlighted the recent UK policy changes relating to non-medical prescribing and reflected on their potential implications for educators and students. The extension of prescribing roles to a wider range of healthcare professionals are to be welcomed. Specialised skills can be better utilised across the health service to benefit patients, and prescribers themselves, can experience a higher level of job satisfaction. We have highlighted opportunities for educators and current/potential healthcare students in light of current and proposed changes. Given that prescribing is a multidisciplinary activity, some of these opportunities have the potential to be extended to medical prescribers for whom prescribing training is currently integrated within undergraduate training. Training and learning to prescribe could take place within a multi-professional context. Such shared learning might facilitate a mutual understanding of professional roles and enhanced multi-disciplinary team-working. Although we write from a UK pharmacy, nursing and AHP (podiatry) undergraduate and prescribing course educator/practitioner/researcher

perspective, we hope our reflections will stimulate discussions and enable reflections amongst those educating, training or practicing in an international context.

**Table 1: Entry requirements to undertake a prescribing course**

Healthcare professional group	Date prescribing legislation passed	Qualification	Pre-requisites	Prescribing setting
Community nurse or midwife with a specialist practitioner qualification	1994 - Medicinal Products: Prescription by Nurses etc. Act 1992 - NMC (2005) V100 nurse prescribers. Circular 30/2005	V100	Registered nurse registered midwife Specialist Community Public Health Nurses <a href="https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf">https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf</a>	Community
Community nurse or midwife without a specialist qualification	- NMC (2007) Standards of educational preparation for prescribing from the community NPF for nurses without a specialist practice qualification v150	V150	Registered nurse Registered midwife <a href="https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf">https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf</a>	Community
Nurse or midwife independent prescriber	2002 DoH (2001). Patients to get Quicker Access to Medicines (Press Release). London: DoH.	V200 (now discontinued)	<a href="https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf">https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf</a>	Any within scope of practice/competence

Nurse or midwife independent/supplementary prescriber	2003 DoH (2002). <i>Supplementary Prescribing</i> . London: DoH.	V300	Registered nurse or midwife for a minimum of one year <a href="https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf">https://www.nmc.org.uk/globalassets/sitedocuments/standards-of-proficiency/prescribing/programme-standards-prescribing.pdf</a>	Any within scope of practice/competence
Pharmacist supplementary prescriber	2003 DoH (2002). <i>Supplementary Prescribing</i> . London: DoH.	PGCert	GPhC or PSNI registered pharmacist with at least two years' appropriate patient-oriented experience <a href="https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-education-and-training-of-pharmacist-independent-prescribers-january-19.pdf">https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-education-and-training-of-pharmacist-independent-prescribers-january-19.pdf</a>	Any within scope of practice/competence
Pharmacist independent/supplementary prescriber	2006 DoH (2005). <i>Written ministerial statement on the expansion of independent nurse prescribing and introduction of pharmacists independent prescribing</i> . London: DoH.	PGCert	GPhC or PSNI registered pharmacist with at least two years' appropriate patient-oriented experience <a href="https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-education-and-training-of-pharmacist-independent-prescribers-january-19.pdf">https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-education-and-training-of-pharmacist-independent-prescribers-january-19.pdf</a>	Any within scope of practice/competence

Supplementary prescribing by optometrists and allied health professionals (chiropodist/podiatrists, physiotherapists, diagnostic radiographers)	2005 Department of Health (2005) Supplementary Prescribing. The Stationery Office, London.	PGCert	Health and Care Professions Council registered, at least 3-years post-qualification <a href="https://www.hcpc-uk.org/standards/standards-relevant-to-education-and-training/standards-for-prescribing/">https://www.hcpc-uk.org/standards/standards-relevant-to-education-and-training/standards-for-prescribing/</a>	Any within scope of practice/competence
Optometrist independent prescriber	2007 DoH (2007). <i>Optometrists to get Independent Prescribing Rights (Press Release)</i> . London: DoH.	PGCert	Registered optometrist, minimum 2 years in practice <a href="https://www.optical.org/en/Education/Specialty_qualifications/independent-prescribing.cfm">https://www.optical.org/en/Education/Specialty_qualifications/independent-prescribing.cfm</a>	Within scope of practice/competence
Independent prescribing by allied health professionals (physiotherapists, podiatrists/chiropodists radiographers)	2013 Department of Health (2013) Press Release: Millions of Patients to Benefit from Easier Access to Medication and Fewer Trips to Hospitals.	PGCert	Health and Care Professions Council registered, at least 3-years post-qualification <a href="http://www.gov.uk/government/news/millionsof-patients-to-benefit-from-easier-access-to-medication-and-fewer-trips-to-hospitals">www.gov.uk/government/news/millionsof-patients-to-benefit-from-easier-access-to-medication-and-fewer-trips-to-hospitals</a>	Any within scope of practice/competence (Controlled drug restrictions)
Independent prescribing by therapeutic radiographers	2016 NHS (2016). Changes in medicines legislation for Dietitians, Orthoptists and Therapeutic Radiographers.	PGCert	Health and Care Professions Council registered, at least 3-years post-qualification <a href="https://www.england.nhs.uk/2016/02/medicines-legislation/">https://www.england.nhs.uk/2016/02/medicines-legislation/</a> (Last accessed 6th June 2020)	Any within scope of practice/competence (Controlled drug restrictions)

Independent/supplementary prescribing by paramedics	2019 NHS (2019). Paramedic prescribing.	PGCert	Health and Care Professions Council registered, at least 3-years post-qualification <a href="https://www.england.nhs.uk/ahp/med-project/paramedics/">https://www.england.nhs.uk/ahp/med-project/paramedics/</a>	Any within scope of practice/competence (Controlled drug restrictions)
Supplementary prescribing by dieticians	2016 NHS (2016). Changes in medicines legislation for Dietitians, Orthoptists and Therapeutic Radiographers.	PGCert	Health and Care Professions Council registered, at least 3-years post-qualification <a href="https://www.england.nhs.uk/2016/02/medicines-legislation/">https://www.england.nhs.uk/2016/02/medicines-legislation/</a> (Last accessed 6th June 2020)	Any within scope of practice/competence

## References

Allied Health Professions Federation (2018) Outline Curriculum Framework for Education Programmes to Prepare Physiotherapists, Podiatrists, Therapeutic Radiographers, Paramedics as Independent /Supplementary Prescribers.

<http://www.ahpf.org.uk/files/Joint%20OCF%202018%20update%20College%20of%20Paramedics%20March18%20minor%20error%20corrected.pdf> Accessed 1/10/2020

Borthwick A (2017) Chapter 26: Medicines and Podiatric Practice, in Hayes C and Barbaro-Brown JA (ed.) Textbook of Podiatric Medicine. Keswick: M&K Publishing, pp 539-551.

Borthwick A., Kilmartin T., Wilson N., Freeman C. (2017) Prescribing by Designated Allied Health Professionals: The AHP Experience. In: Franklin P. (eds) Non-medical Prescribing in the United Kingdom. Springer, Cham.

Department of Health (DoH) 2016. Operational productivity and performance in English NHS acute hospitals: Unwarranted variations. London: Department of Health.

General Pharmaceutical Council (2020) Reforms to initial education and training of pharmacists.

[https://www.pharmacyregulation.org/sites/default/files/document/joint\\_letter\\_from\\_cphos\\_and\\_uk\\_pharmacy\\_regulators\\_28\\_july\\_2020.pdf](https://www.pharmacyregulation.org/sites/default/files/document/joint_letter_from_cphos_and_uk_pharmacy_regulators_28_july_2020.pdf) Accessed 28/7/2020

General Pharmaceutical Council (2019) Standards for the education and training of pharmacist independent prescribers.

<https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-education-and-training-of-pharmacist-independent-prescribers-january-19.pdf> Accessed 28/7/2020.

Health and Care Professions Council (2018) Medicine Entitlements. <https://www.hcpc-uk.org/about-us/what-we-do/medicine-entitlements/> Accessed 29/09/2020

Kellie. S (2009) Medicine Management for dietitians.

<https://www.peng.org.uk/pdfs/presentations/2009/meds-management-presentation-sk.pdf> Accessed on 29/9/2020

NHS (2014) Five Year Forward View. London: NHS England.

NHS (2016) General Practice Forward View. London: NHS England.

NHS (2019a) Interim NHS People Plan. [https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan\\_June2019.pdf](https://www.longtermplan.nhs.uk/wp-content/uploads/2019/05/Interim-NHS-People-Plan_June2019.pdf) Accessed 28/7/2020

NHS (2019b) Interim NHS People Plan: the future pharmacy workforce. <https://www.longtermplan.nhs.uk/wp-content/uploads/2019/06/ipp-p-future-workforce.pdf> Accessed 28/7/2020

NHS Improvement (2019) Allied health professionals (AHPs) – professional leadership. <https://improvement.nhs.uk/resources/allied-health-professionals-ahps-leadership/> Accessed 24/9/2020

Nurse Prescribers Formulary for Community Practitioners (2015-2017) Nurse Prescribers' Formulary for Community Practitioners. 2017/2019. British Medical Association and the Royal Pharmaceutical Society, London.

Nursing and Midwifery Council (NMC) (2006) Standards of Proficiency for Nurse and Midwife Prescribers. NMC, London.

NMC (2007) Standards of educational preparation for prescribing from the community NPF for nurses without a specialist practice qualification.

NMC (2009) Standards of Educational Preparation for Prescribing from the Nurse Prescribers Formulary for Community Practitioners for Nurses without a Specialist Practitioner Qualification - Introducing Code V150. NMC, London.

NMC (2018) Standards for prescribing programmes. NMC: London (<https://www.nmc.org.uk/globalassets/sitedocuments/education-standards/programme-standards-prescribing.pdf>)

Pharmacy Schools Council (2020) Position Statement – The Science-Based Therapeutic Practitioner A Vision for the First Five Years of Pharmacy Education. <https://www.pharmacyschoolscouncil.ac.uk/wp-content/uploads/2020/07/PhSC-Position-Statement-The-Science-Based-Therapeutic-Practitioner.pdf> Accessed 28/7/2020

RPS (2016) A Competency Framework for all Prescribers. London: Royal Pharmaceutical Society. <https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/Prescribing%20competency%20framework/prescribing-competency-framework.pdf?ver=2019-02-13-163215-030>



RPS (2018) Pharmacist independent prescribers. London: Royal Pharmaceutical Society.  
<https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/GB%20Prescriber%20Policy%20-FINAL.pdf?ver=2018-08-07-152908-900>

RPS (2019) A Competency Framework for Designated Prescribing Practitioners. London: Royal Pharmaceutical Society.  
<https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Professional%20standards/DPP%20Framework/DPP%20competency%20framework%20Dec%202019.pdf?ver=2019-12-18-150746-160>

Smith A, Darracott R. (2011) Modernising Pharmacy Careers Programme: Review of pharmacist undergraduate education and pre-registration training and proposals for reform. London: Medical Education England.