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DOI:

[10.1108/heswbl-07-2018-0071](https://doi.org/10.1108/heswbl-07-2018-0071)

Document Version

Accepted author manuscript

[Link to publication record in Manchester Research Explorer](#)

Citation for published version (APA):

Jee, S., Schafheutle, E., & Noyce, P. (2019). Is pharmacist pre-registration training equitable and robust? *Higher Education, Skills and Work-Based Learning*. <https://doi.org/10.1108/heswbl-07-2018-0071>

Published in:

Higher Education, Skills and Work-Based Learning

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Is pharmacist pre-registration training equitable and robust?

Journal:	<i>Higher Education, Skills and Work-Based Learning</i>
Manuscript ID	HESWBL-07-2018-0071.R1
Manuscript Type:	Research Paper
Keywords:	pharmacy pre-registration training, pharmacy education, trainee pharmacist, pharmacy work based learning

Is pharmacist pre-registration training equitable and robust?

Purpose

Against a backdrop of concerns regarding the quality and equity of the final practice-based pre-registration training year, this paper examines how robust and equitable current education and training arrangements in Great Britain are in preparing newly qualified pharmacists for practice.

Design/methodology/approach

In addition to considering relevant regulator, policy and research literature, this paper presents findings from a longitudinal qualitative study that tracked 20 pharmacy trainees and their tutors during pre-registration training and early registered practice. Trainees were interviewed 4 times over a 12-month period; tutors were interviewed twice. Semi-structured interviews explored learning and development, work environment and support received. Interview transcripts were analysed thematically using template analysis.

Findings

Currently, there are no requirements for training pre-registration tutors, or for accreditation or quality assurance of training sites. Longitudinal interview findings showed that community trainees developed knowledge of over-the-counter, and less complex, medicines whereas hospital trainees learnt about specialist medicines on ward rotations. Hospital trainees received support from a range of pharmacists, overseen by their tutor, and other healthcare professionals. Community trainees generally worked within a small pharmacy team, closely supervised by their tutor, who was usually the sole pharmacist. Newly qualified pharmacists were challenged by having full responsibility and accountability as independent practitioners, without formal support mechanisms.

Originality/value

The variability in trainee experience and exposure across settings raises concerns over the robustness and equity of pre-registration training. The lack of formal

31 support mechanisms post-registration may pose risks to patient safety and
32 pharmacists' wellbeing.

33 **1 Introduction**

34 Ensuring healthcare education and training is fit for purpose and quality assured
35 supports the development of learners and allows them to perform their roles safely
36 and effectively upon professional registration (Greiner et al. 2003). The role of
37 healthcare professionals has changed over the years as patients have become more
38 empowered and have played a more integral role in their own care (Adams and
39 Grieder 2014). The role of the pharmacy profession, in particular, has evolved, with
40 pharmacists in Great Britain (GB) being increasingly clinically trained and playing an
41 integral part in patient care (Toklu and Hussain 2013). In hospitals, pharmacists
42 provide ward-based, clinical services to patients as part of multidisciplinary teams.
43 In community pharmacy, pharmacists provide minor ailment, public health and
44 medicines services, supporting patients with long-term conditions and helping in the
45 detection of serious illnesses. Pharmacists are also practising increasingly more
46 clinically in primary care services, such as General (Family) Practice (GP), care
47 homes and urgent care (Anon 2016).

48 Healthcare education curricula have progressed to support the development of skills
49 necessary for safe and effective practice. Medicine, for example, began adopting
50 different methods of teaching (e.g. problem-based/ blended learning) about 20 years
51 ago, moving away from predominantly didactic methods (Burge 2003;Lloyd-Jones
52 2005). More recently in GB, undergraduate pharmacy curricula have been reformed
53 to achieve the move to outcome-focussed education and training regulatory
54 standards (General Pharmaceutical Council 2011). Evidence is beginning to emerge
55 to show that these reforms have desirable effects in better preparing graduates
56 for practice (Parmar et al. 2016;Parmar 2016). The introduction of outcomes-
57 focussed standards by the General Pharmaceutical Council (GPhC), the pharmacy
58 regulator in GB, has led to significant curricular reform of the 4-year undergraduate
59 Master of Pharmacy (MPharm). However, comparable changes do not appear to
60 have taken place in the 5th year of pharmacy pre-registration training (Greiner,
61 Knebel, Committee on the Health Professions Education Summit, & Board on Health
62 Care Services 2003;Toklu & Hussain 2013). It is, therefore, important to consider

63 how this final in-practice year is supporting the development of appropriate
64 competences necessary for safe and effective practice.

65 By focussing on the pre-registration year, this paper aims to examine how robust
66 current education and training arrangements for pharmacists in GB are and whether
67 they adequately prepare newly qualified pharmacists (NQPs) for practice as
68 independent practitioners in any sector. This paper draws on pharmacy education
69 and training policy and publications to describe current pre-registration training
70 context and arrangements. It then draws in particular on a recent multi-methods,
71 longitudinal research study undertaken by the authors to illustrate how trainee
72 pharmacists develop into pharmacists.

73 **1.1 Education and training requirements prior to registration in GB**

74 In order to register as a pharmacist in Great Britain, individuals must undertake 4
75 years of university based education and 1 year of pre-registration training. At the
76 end of this final year, pre-registration trainees must sit and pass a national GPhC-set
77 registration assessment, which tests that they can demonstrate the appropriate
78 application of knowledge and understanding to make professional judgements in
79 practice (General Pharmaceutical Council 2018b).

80 The registration assessment takes place in June and September every year, with
81 most trainees sitting their first attempt in June. Due to an increase in the number of
82 schools of pharmacy – and thus increasing numbers of MPharm graduates over
83 recent years – the number of trainees sitting the assessment has also increased.
84 Pass rates for the first attempt have been variable and there has been notable drops
85 in pass rates, such as from 2016-2017 (Figure 1) (General Pharmaceutical Council
86 2018a).

87 *[Insert Figure 1 about here]*

88 Inconsistencies in registration assessment pass rates are a cause for concern and
89 have increased the debate about its utility. Changes to the registration assessment
90 were introduced from June 2016, using a new format and methodology announced in
91 December 2014, with the aim of assessment better reflecting patient-facing
92 pharmacy practice (General Pharmaceutical Council 2018a). Nevertheless, despite
93 a pass rate of 95% in June 2016, this dropped back down to 78% and 79% in June
94 2017 and 2018 respectively.

A further point of contention surrounding the registration assessment was the GPhC's decision in 2015 to publish, for the first time, assessment pass rates for 2011-2014 associated with individual schools of pharmacy (General Pharmaceutical Council 2015b). This showed that pass rates, depending on the MPharm awarding university, ranged between 54% and 90%. Furthermore, the GPhC also published assessment success rates depending on the sector of pre-registration training for 2015 (General Pharmaceutical Council 2015a). This showed that 91% of those who had completed their pre-registration training year in hospital passed, compared to only 71% of those who had trained in community pharmacy (Andalo 2015; General Pharmaceutical Council 2015a; Torjesen 2015). This raises questions as to whether there are differences in pre-registration training between these settings that support the likelihood of passing the assessment, the calibre of trainees that end up training in these sectors and potential biases in the assessment that favour a particular sector.

1.2 Overview of the pre-registration year

The pre-registration year typically follows the completion of a 4-year (full-time) university-based MPharm degree, which provides pharmacy students with relatively little practice exposure, (Schafheutle et al. 2012; Schafheutle et al. 2013) and trainees holding the view that the MPharm lacks a focus on clinical and practice subjects (McAteer et al. 2004). Despite recent changes to MPharm curricula, a lot of emphasis continues to be placed on the pre-registration year to support the professional development of pharmacy graduates prior to registration.

The pre-registration year is 52 weeks of practice-based training where at least 26 weeks must be in a patient-facing sector (General Pharmaceutical Council 2011). There are different modes of training (General Pharmaceutical Council 2011), but the majority of trainees undertake a full year of training in either community or hospital pharmacy. Trainees are salaried during their pre-registration training and funding comes from NHS England (Pharmacist Support 2018), NHS Scotland (NHS Education for Scotland 2018), and NHS Wales (Pharmacist Support 2018). Hospital trainees are typically paid more than those in community (Pharmacist Support 2018).

During training, each trainee is allocated a pre-registration tutor by the employing pharmacy who is responsible for their supervision and assessment which involves

127 carrying out, and signing off, 3 13-weekly appraisals and 1 final declaration
128 confirming the trainee is deemed fit to join the register. Trainees have to
129 demonstrate competence in 76 performance standards that cover areas of personal
130 effectiveness, interpersonal skills, and medicines and health (General
131 Pharmaceutical Council 2018c).

132 Regulatory requirements for pre-registration training sites and tutors are limited and
133 lack specificity (General Pharmaceutical Council 2018d; Mills et al. 2013). Other than
134 demonstrating in an application form that the site is suitable for trainees to develop
135 competence and complete performances standards, there is no system of
136 accreditation, assessment or quality assurance of training sites/ premises. To
137 become a pre-registration tutor, the only requirements are that one must be a
138 registered pharmacist who has been practising in the sector of pharmacy in which
139 the tutor wishes to supervise for 3 years or more and must not be under investigation
140 by the GPhC (General Pharmaceutical Council 2018d).

141 There has been a dearth of evidence on whether the current arrangements for pre-
142 registration training and assessment support the development of appropriate
143 competences necessary for practice as a newly qualified pharmacist. In 2013/14,
144 the GPhC surveyed trainees and tutors to collect feedback about pre-registration
145 training experiences (Blenkinsopp et al. 2015; Marshall et al. 2016). Findings from
146 the survey of trainees (Marshall, Roberts, & Wisner 2016) showed that those who
147 trained in the hospital sector were more likely to report that pre-registration training
148 prepared them to be a pharmacist than community trainees (83% vs. 77%), that the
149 training experience was of good/ very good quality (89% vs. 74%) and that they
150 received good/ excellent supervision (72% vs. 56%) (Marshall, Roberts, & Wisner
151 2016).

152 The survey of pre-registration tutors showed that the majority of respondents (76%)
153 agreed they had access to sufficient support, 16% neither agreed or disagreed and
154 8% disagreed or strongly disagreed, impacting in turn on the quality of the trainee
155 experience (Marshall, Roberts, & Wisner 2016). However, very little research has
156 been conducted to unravel what happens during pre-registration to shape the
157 development of trainees; it has remained a 'black-box'.

158 The aim of this paper, therefore, is to present findings from a longitudinal study into
159 how pre-registration training supports the development of pharmacy trainees prior to
160 registered practice, thus offering possible explanations for the differences in
161 outcomes. This paper focuses on the qualitative findings which capture issues in
162 the equity and robustness of the pre-registration year.

163 2 Methods

164 A longitudinal mixed methods study tracked a group of 20 trainees and their tutors
165 throughout pre-registration training and early practice in 2011/12 (Jee 2014;Jee et al.
166 2016a;Jee et al. 2016b). Participants were purposely sampled to capture a diverse
167 range of community pharmacies (supermarkets; independents; large chains) and
168 hospitals (district general hospitals; teaching hospitals), male and females and
169 geography (rural; urban).Six trainee-tutor pairs were recruited from hospital and 14
170 from a range of community pharmacy settings. Each trainee was interviewed at 4
171 time points: the beginning of the training year, at months 4 and 9 during training, and
172 at 3 months post-registration; tutors were interviewed twice: at months 4 and 9.
173 Interview schedules focused on learning and development, work environment,
174 support structures (including tutor), assessment and feedback mechanisms.
175 Questions were developed through literature on professional development /
176 socialisation in the health professions and piloting questions with several trainees
177 and tutors. Research bias was mitigated through sampling, avoiding leading
178 questions and encouraging honest conversations in private. Interviews were audio-
179 recorded, transcribed verbatim and transcripts were analysed thematically using
180 template analysis (King 2004). University ethics committee approval was granted;
181 more detail on the methods has been published elsewhere (Jee, Schafheutle, &
182 Noyce 2016a;Jee, Schafheutle, & Noyce 2016b).

183 3 Results

184 Of the twenty trainees, 11 were female; 21 tutors were involved (1 was replaced), 11
185 were female. They were purposively recruited in North-West England. The findings
186 from this study are presented to offer insights into the environment of pre-registration
187 training sectors and settings, the support trainees received and their assessment.

188 Quotes from all four rounds of interviews are used for illustration, identifying tutor vs.
189 trainee, and sector of training.

190 **3.1.1 Training settings**

191 The study highlighted key differences between the pre-registration training
192 experience between settings (size of setting, services offered, patient mix) and
193 particularly sector, i.e. community vs. hospital.

194 **Community**

195 Community pharmacies offering pre-registration training included smaller
196 independent pharmacies through to larger chain and supermarket pharmacies. The
197 provision of services delivered to patients was not consistent across community
198 training sites, so all trainees may not have experienced delivery of a comprehensive
199 or comparable range of services during pre-registration training. The different types
200 of patients and their respective clinical presentations also differed across training
201 sites.

202 *"In this store - the scope of what we do here is quite limited ... we're not next to*
203 *the surgery or anything. So, as I say, there aren't that many clinical problems to*
204 *deal with."* (Trainee 8, community – large multiple, round 2)

205 Community trainees would usually deal with patients themselves as well as 'proxy
206 customers' (i.e. carers; family members etc.), many of whom were regular visitors
207 allowing longer term rapport and relationships to be built. Community trainees
208 became more accustomed to drugs used in the long-term management of chronic
209 conditions, as well as over-the-counter medicines used for the treatment of minor
210 ailments.

211 *"In community you have a more limited range. You've got you know the same*
212 *drugs, wider strengths. Here you've got all the injections and all the hospital-*
213 *specific things so you do get a much wider range in hospital pharmacy."* (Trainee
214 *10, hospital – district general, round 1)*

215 **Hospital**

216 Hospital pre-registration training was undertaken in large university teaching
217 hospitals or smaller district general hospitals. Trainees in hospital were exposed to
218 different specialisms on ward rotations (e.g. intensive care; renal; cardiac). Trainees

in teaching hospitals were more likely to encounter patients with rare health conditions and high numbers of patients in comparison to those in district general hospitals. Unlike in community settings, hospital patients may have been critically ill or bed-bound, and their stays were often time-limited, so established rapport was short-term. Additionally, hospital trainees learnt about drugs used in acute care and a wide range of clinical specialties.

I've done a rotation on a children's ward and that improved my knowledge of prescribing in children, the doses that the regular prescribed medications are given in children and what would be normal doses and what would be abnormal. And then I did a rotation in palliative care, so I gained an insight into end of life care there and the doses and kind of drugs that they used." (Trainee 11, hospital – district general, round 2)

3.1.2 Support and development systems

Analysis showed that the way in which trainees were supported by staff, both formally and informally (e.g. through role modelling) differed across settings and particularly between community and hospital sectors.

Community

In community pharmacy, trainees worked within a smaller team, usually consisting of just 1 pharmacist, their pre-registration tutor, and a range of other pharmacy support staff. Community trainees worked closely with their tutors, who also served as the main role model and key source of support. However, they also acted as assessors, as they were responsible for signing off trainees' achievement of performance standards, captured in a portfolio and satisfactory performance during 13-weekly appraisals.

"[Tutor]'s been the most helpful 'cos she knows most of the stuff and she's the one, I've got to liaise with her more than I have anyone else." (Trainee 3, community – large multiple, round 1)

Community trainees received the majority of feedback from their tutor, and commonly this would take place during formal 13-weekly appraisals. In the main this was based on direct observation due to close working in a small team.

249 *"She [My pre-reg tutor] said that she's seen me do a lot of things in the pharmacy*
250 *which, just based on [that], she'll be able to sign me off on some performance*
251 *standards." (Trainee 12, community – supermarket, round 2)*

252 More informal feedback (received both from their tutor and other staff) was only
253 occasional and, if received, this tended to be following trainees' lapses in
254 performance or errors, rather than being constructive or praising good performance.

255 *"I mean, it's always difficult because, especially being a busy pharmacy, there's*
256 *always so many other things going on that it's difficult to spend as much time as*
257 *you want to with the trainee. You know, I would have ideally liked to have spent*
258 *more time with him - and I probably don't give as much positive feedback as I*
259 *should." (Tutor 4, community – supermarket, round 3)*

260 In community pharmacy, trainees were typically supervised by 1 pharmacist (their
261 tutor), though some larger community pharmacies had a second pharmacist.
262 Particularly in the early stages of the pre-registration year, trainees cited non-
263 pharmacist staff, such as pharmacy technicians, dispensers and counter assistants,
264 as playing a significant role in supporting them in the work setting. They supported
265 trainees' learning, particularly in gaining proficiency in dispensing and adjusting to
266 the working processes. As tutors, these support staff were seen as role models.

267 *"The counter assistant I think she knows how to deal with the patients. Her*
268 *knowledge of over the counter products is very good." (Trainee 12, community –*
269 *supermarket, round 1)*

270 Some trainees also worked collaboratively with local General Practitioners (GPs)
271 depending on the proximity of, and working relationship with, the GP practice.

272 *"I think people have been working with each other for so long that they're just*
273 *accustomed to each other so it's like they're a family, so obviously now I'm here I*
274 *am fitting in as well." (Trainee 16, community – large multiple, round 1)*

275 *In hospital pharmacy, trainees commonly worked with a range of different*
276 *pharmacists. Whilst each trainee was assigned their own pre-registration tutor,*
277 *responsibility for supervising trainees was often shared amongst multiple*
278 *pharmacists. Trainees also worked alongside a wide range and large number of*
279 *pharmacy support staff, such as pharmacy technicians and assistant technical*
280 *officers. Furthermore, whilst on different ward rotations, trainees were exposed*

281 *to multidisciplinary teams and a range of other healthcare professionals, such as*
 282 *doctors and nurses.*

283 *"I've had more experience sort of speaking to doctors and nursing staff and other*
 284 *staff on ward level. So I'd say communication skills and sort of confidence and*
 285 *things has developed." (Trainee 11, hospital – district general, round 3)*

286 Hospital

287 Hospital tutors commonly delegated some teaching and feedback functions to
 288 others, particularly pharmacist colleagues, and collated information on trainees'
 289 development from different sources prior to conducting appraisals and signing off
 290 trainees' performance standards. Whilst many individuals were involved in
 291 supervising and supporting trainees in hospital pharmacy, they did not always
 292 provide feedback. It appeared that tutors would ask to receive feedback from the
 293 trainees' rotations, so that this could feed into trainees' 13-weekly appraisals, but this
 294 did not always occur. Most formal feedback for trainees was provided by tutors in
 295 13-weekly appraisals. Informal feedback was generally considered to be lacking and
 296 would often focus on anything below standards, there was not much about praise or
 297 aspiring to excellence.

298 *"I've not actually been witness to what he's been doing on the wards. But, again,*
 299 *we have had evidence that he is doing that on the wards because that's been*
 300 *signed off by another pharmacist." (Tutor 11, hospital – district general, round 3)*

301 It was notable that trainees in both hospital and community pharmacy focussed
 302 much of their time and attention on preparing for the registration assessment, which
 303 was towards the end of the pre-registration year in June. This probably took
 304 trainees' focus away from making the most of the in-practice learning opportunities,
 305 in favour of a more traditional model of revision and exam preparation.

306 **3.1.3 After pre-registration training: Practice as a newly qualified pharmacist**

307 Findings relating to the 4th set of interviews with newly qualified pharmacists (NQPs)
 308 showed how NQPs faced challenges with holding full accountability as registered
 309 pharmacists. Trainees had no experience of taking full responsibility during the pre-
 310 registration year, when they were supervised and deferred to their tutor.

311 Community

312 As most NQPs in community practised as sole pharmacists, they often referred to
313 other support staff, who tended to have considerable pharmacy experience, if they
314 were unsure. Support staff could also be a resource for learning how to deliver
315 unfamiliar services. Interview findings showed that some NQPs talked about
316 referring to a more senior manager within the organisation for help and support.

317 *"Yeah, I mean because now I'm a pharmacist, like I'm sort of on top of like in the*
318 *chain of command, if you get me, so they're supposed to listen to me, whereas*
319 *as a pre-reg it was the other way round. So that's definitely changed."* (Trainee
320 *1, community – large multiple, round 4)*

321 Hospital

322 None of the NQPs working in hospital felt isolated in their working practices, as they
323 worked within a large team of pharmacists, pharmacy support staff and other
324 healthcare professionals. Two NQPs, working as residents, pointed out that
325 pharmacists positioned slightly above them, such as the second year resident
326 pharmacists were particularly helpful to them. Nevertheless, there was still a feeling
327 of lack of preparedness for full responsibility and accountability.

328 *So yeah, [pre-registration training] has helped me but at the same time I don't*
329 *think anything can prepare you for the feeling of I'm actually totally responsible*
330 *for everything that I do now. Like, you know, we got told about it but nothing can*
331 *actually prepare you for that feeling."* (Trainee 17, hospital – teaching, round 4)

332 4 Discussion

333 This paper has brought together evidence from the pharmacy regulator in Great
334 Britain, the General Pharmaceutical Council (GPhC), which has shown that pre-
335 registration pharmacists who trained in community pharmacy were less satisfied with
336 their training experience (Marshall, Roberts, & Wisher 2016) and were also less
337 likely to pass the final pre-registration assessment (Andalo 2015; Torjesen 2015) than
338 their hospital colleagues. It used the first in-depth longitudinal study of pre-
339 registration trainees and their tutors to offer possible explanations for these
340 differences. This study highlighted differences in pre-registration trainees' learning
341 and development opportunities and experience across training sites and between
342 sectors (hospital and community), support and assessment mechanisms, and
343 trainees', and particularly newly qualified pharmacists' (NQPs), need for positive and

344 constructive support and transition into independent practice. Ensuring consistency
345 and equity across sectors and settings, assuring quality of the training experience,
346 and having robust formative and summative assessment methods are key areas to
347 focus on improving.

348 The insights from GPhC trainee satisfaction surveys (Marshall, Roberts, & Wisher
349 2016) and analysis of pass rates by sector of training (Andalo 2015;Torjesen 2015),
350 in combination with the detailed findings from this study, call into question the ability
351 for single sector training to offer trainees the range of competencies they require for
352 practice as a day-1 pharmacist (Magola et al. 2018a). This is particularly important
353 as NQPs can practise in any sector upon registration, regardless of previous
354 experience. The GPhC has become more aware of concerns about the range and
355 consistency in training experiences during pre-registration training. Discussions at a
356 2016 event with key stakeholders and the GPhC (General Pharmaceutical Council
357 2016), noted that further actions were needed to improve pre-registration training,
358 including the need to identify gaps in knowledge and training of day-1 pharmacists.

359 Availability and suitability of support structures for pre-registration trainees and
360 NQPs need to be evaluated for their appropriateness. Firstly, the GPhC does not
361 currently monitor or accredit pre-registration training premises, and there is no clear
362 specification about the required training resources these pharmacy sites need to
363 have. In contrast, schools of pharmacy offering MPharm programmes must be
364 accredited by the GPhC, which involves demonstrating how an MPharm curriculum
365 meets revised outcomes-focussed education and training standards (General
366 Pharmaceutical Council 2011). Whilst other regulators, such as the NMC (Nursing &
367 Midwifery Council 2018), have more powers with placements being within the degree
368 and universities face scrutiny as part of this, pharmacist pre-registration is currently
369 disjointed, with pre-registration training following after completion of an MPharm
370 degree. There may be other options though, as the GPhC is unusual, in that it
371 regulates not only pharmacy professionals but also registered premises, so may
372 have opportunity to include additional requirements for training premises, which
373 could then be part of regular GPhC inspections.

374 Approval of neither pre-registration tutors nor training premises is dependent on
375 outcomes, such as trainees' experience or assessment failure. The pre-registration
376 tutor appears fundamental in supporting the development of trainees. However,

tutors do not have to undergo training or demonstrate appropriate competencies to supervise pre-registration training. There is instead guidance (General Pharmaceutical Council 2014) and development resources (General Pharmaceutical Council 2014) available for tutors to access. There may be a need to consider more training and support for tutors, which some appear to find inadequate (Jee, Schafheutle, & Noyce 2016b). The regulator has acknowledged that further actions are needed to support tutors and hold them to account for signing off trainees in appraisals/ reviews (General Pharmaceutical Council 2016).

Recommendations have previously been made to have a system in place for assessing the competence of tutors against defined standards, and the need for tutor training and support networks to be put in place (Cooper et al. 2009; Seston and Hassell 2009). There appears to be a need to support tutors with training and to have a stronger system of quality assurance checking of tutors. Indeed, Health Education England (HEE), who hold responsibility for the delivery of high quality education and training for the healthcare workforce in England, have recognised this need and are working on enhancing the current pre-registration pharmacist training, through, for example, the introduction of an e-portfolio and improved access to tutor training (Bradley et al. 2017; Health Education England 2018).

NQPs can practise in any setting or sector of pharmacy, so it is important that pharmacists begin registered practice with the full range of competences required for safe and effective practice. There is a need to support NQPs as they transition into taking responsibility for their own and their team's – particularly in the case of community pharmacy – practice (Magola, Willis, & Schafheutle 2018a). Many NQPs working in community pharmacy will practise in relative isolation (Cooper, Bissell, & Wingfield 2009) as the sole pharmacist. Hospital pharmacists typically have a network of informal support through working with other pharmacists on a regular basis. Additionally, hospital pharmacists will usually undertake further training in the form of a clinical diploma, typically after 2 years of practice, but community pharmacists – representing the majority of the pharmacy workforce (Phelps et al. 2014) – often do not undertake any further qualifications.

A foundation programme to support pharmacists has been set up by the professional body, the Royal Pharmaceutical Society (RPS). The programme caters to members in their first 1000 days of practice, as well as members returning to work after a

career break or are changing practice environment (Royal Pharmaceutical Society 2018). The need to 'bridge the gap' of transition from pre-registration trainee to pharmacist has, nevertheless, been recognised by the chief pharmaceutical officers of England, Wales and Scotland (Wilkinson 2018). Drawing on systems and evidence from other professions, particularly nursing and medicine, some research is emerging to inform evidence based support interventions (Magola et al. 2017; Magola et al. 2018b).

Whilst other healthcare professions such as medicine and nursing have NHS training contracts for the provision of education and training, the same arrangements are not in place in pharmacy. Although a standard grant is paid as part of the NHS pharmacy contract to owners, the terms and conditions of pre-registration trainees (e.g. salaries, hours, study time, duties) are determined by individual pharmacy employers. For example, in community pharmacy, the training grant is paid to the pharmacy owner, but pharmacy tutors are generally pharmacist employees so there is no direct link between remuneration and incentivisation of tutors. The exception in GB is Scotland, where NHS Scotland manages pre-registration training centrally (NHS Education for Scotland 2018). In Scotland, recruitment for pre-registration training positions in community and hospital is done through NHS Education for Scotland (NES) and there are standardised elements of pre-registration training in pharmacy (NHS Education for Scotland 2018).

This Scottish approach to training governance (i.e. a deanery-type structure as with medicine) or some other responsive monitoring system is needed to provide quality support and control for pharmacist pre-registration training. There are plans to integrate the pre-registration year with the MPharm into a 5-year degree programme, but how this will be operationalised is not yet known (Smith and Darracott 2011). These changes may support quality assurance of training through quality control measure put in place in cooperation with pharmacy employers and Schools of Pharmacy.

There appears to be a lack of awareness of the pattern of changes in professional behaviour that occur within the pre-registration period, though findings from the longitudinal research presented here shed light on this previously under-researched area. The types of assessment that are taking place during training may need to be reviewed to see if they are consistent and measure the full range of skills necessary

for practice as a day-1 pharmacist in any sector. The current use of a competency portfolio used to record progress may have shortcomings itself, particularly as there is a lot of dependence on the pre-registration tutor to deem a trainee satisfactory in the 13-weekly performance reviews. An assessment system that uses a variety of standardised workplace assessment tools throughout the training period to monitor progress, particularly in the development of behavioural skills, should be explored. Furthermore, triangulation of assessments should also be considered, echoing recommendations made by others (Seston & Hassell 2009).

5 Conclusion

Pharmacy pre-registration training is a critical year that paves the way to registration as a pharmacist. Therefore, it is crucial that there is consistency in the development of core knowledge and skills and their application for all pre-registration trainees. Support for trainees, as well as tutors, must be sufficient and support systems for newly qualified pharmacists (NQPs) should be considered to facilitate transitions into practice. NQPs are considered as general pharmacy practitioners, and can practise in any sector of pharmacy. The variability of training provision in pre-registration training, and the absence of formal arrangements for support or supervision immediately post-registration, pose unnecessary systematic risks to patient safety and the wellbeing of the pharmacist workforce. Assessment methodology must also be sufficiently robust and facilitate learning and development in a fair way. Together, this will improve the overall consistency, equity and quality of pre-registration training.

Declaration of conflicting interests

The Authors declare that there is no conflict of interest.

Funding acknowledgement

This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

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