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General practice pharmacists' implementation of advanced clinical assessment skills: a qualitative study of behavioural determinants.

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1 **General Practice Pharmacists' implementation of Advanced Clinical**
2 **Assessment skills: a qualitative study of behavioural determinants**

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52 **General Practice Pharmacists' implementation of Advanced Clinical**
53 **Assessment skills: a qualitative study of behavioural determinants**

54

55 **ABSTRACT**

56 **BACKGROUND:** The role of General Practice Clinical Pharmacists is becoming
57 more clinically complex. Some are undertaking courses to develop their skillsets.

58 **AIM** To explore potential behavioural determinants influencing the
59 implementation of skills gained from Advanced Clinical Examination and
60 Assessment courses by General Practice Clinical Pharmacists.

61 **METHOD:** This study used a qualitative methodology with theoretical
62 underpinning. General Practice Clinical Pharmacists in the Scottish National
63 Health Service, having completed an Advanced Clinical Examination and
64 Assessment course, were invited for online dyadic (paired) interviews. Informed
65 written consent was obtained. The interview schedule was developed using the
66 Theoretical Domains Framework and piloted. Interviews were recorded,
67 transcribed verbatim and analysed using a framework analysis. Ethics approval
68 was obtained.

69 **RESULTS:** Seven dyadic interviews were conducted. These included fourteen
70 pharmacist participants from eight Health Boards. Three main themes were
71 identified: 1. Factors influencing implementation of advanced clinical skills by
72 pharmacists; 2. Social and environmental influences affecting opportunities for
73 pharmacists in advanced clinical roles; 3. Perceptions of pharmacist professional
74 identity for advanced practice roles. Nine sub-themes provided a depth of insight
75 including; participants reporting courses allowed clinically autonomous practice;
76 participants shared frustration around social and environmental factors limiting
77 implementation opportunities; participants expressed a need for clarification of
78 professional identify/roles within current contractual mechanisms to allow them
79 to fully implement the skills gained.

80 **CONCLUSION:** This work identified numerous behavioural determinants related
81 to implementation of advanced clinical skills by pharmacists in general practice.
82 Policy, and review of implementation strategies are urgently required to best
83 utilise pharmacists with these skills.

84

85 **Keywords** – advanced practice, pharmacy, general practice, advanced
86 pharmacist practitioner, behaviours

87

88 **IMPACTS ON PRACTICE**

89 • Advanced Clinical Examination & Assessment (ACE) courses and the skills
90 gained increase General Practice Clinical Pharmacist (GPCPs) confidence in
91 relation to implementation of knowledge, skills and behaviours required to
92 deliver advanced pharmacist practice.

93 • ACE courses would seem key to development of a versatile Advanced
94 Pharmacist Practitioner (APP) workforce in General Practice with
95 potentially significant impacts for delivery of primary care services.

96 • While ACE courses provide skills acquisition for advanced clinical
97 assessment, training programmes are needed to triangulate and embed
98 these skills and so support transition to autonomous APP-level practice.

99 • Policy, and review of implementation strategies are urgently required to
100 ensure pharmacists that have gained advanced clinical assessment skills
101 can provide advanced clinical care to patients in support of existing
102 healthcare services.

103

104 **General Practice Pharmacists' implementation of Advanced Clinical**
105 **Assessment skills: a qualitative study of behavioural determinants**

106

107 **INTRODUCTION**

108 The role of qualified pharmacists continues to evolve and expand. To support
109 and sustain progression of practice there is an obvious need to simultaneously
110 develop educational programmes and governance structures to ensure safe and
111 effective care delivery. A recent global survey of country members of the
112 International Pharmaceutical Federation (FIP) reported that advanced pharmacy
113 practice frameworks were in use, or are being developed, in 58% (28/48) of
114 those countries [1]. Despite this, there continues to be high levels of variance as
115 to what would constitute advanced pharmacist practice, even within individual
116 countries [2].

117 Legislation offers qualified pharmacists the opportunity to function as prescribers
118 in certain parts of the world – in particular; some provinces of Canada [3],
119 United Kingdom (UK), some states of the United States of America (USA) [4]
120 and South Africa [5]. The degree of prescribing autonomy and independence
121 which pharmacists are offered across the world varies in the extreme – from no
122 prescribing rights, through supplementary/complementary prescribing, to
123 independent autonomous prescribing. Within the UK, from 2026 onwards, all
124 newly qualified pharmacists will have legal independent prescribing rights at
125 point of registration [6]. Therefore, in the UK, the right to prescribe itself will not
126 be considered advanced practice. Supporting this concept, the Royal
127 Pharmaceutical Society (RPS) have included independent prescribing in their
128 recently published Post-Registration Foundation Curriculum which sets the
129 standard for entry-level pharmacists in the UK [7].

130 Advanced pharmacist practice, therefore, is something different, expanding
131 beyond prescribing. Forsyth & Rushworth have set out an opinion of what
132 constitutes an advanced pharmacist role [8]. Central to this is the ability to
133 make autonomous prescribing decisions where there is risk and uncertainty and
134 where there is a limited evidence base. They go on to note that the advanced
135 pharmacist should be able to act upon their own clinical assessment findings and
136 investigate, diagnose, prescribe (where necessary) and manage patients through

137 full episodes of care. The standards expected at this level of practice are set out
138 within the RPS Core Advanced [9] and Consultant [10] Curricula.

139

140 If patients and the public are to be assured of the quality of the prescribing
141 pharmacist clinician workforce, then Governments, Regulators, service providers
142 and educational bodies need to consider how to equip pharmacists with the
143 necessary additional clinical skillsets. The Chief Nursing Officer for the Scottish
144 Government has written policy to support the requirements for working as an
145 Advanced Nurse Practitioner (ANP) in a variety of care settings [11, 12]. As part
146 of the educational governance for these roles, all ANPs are required to complete
147 a Master's level advanced course [13]. Advanced Clinical Examination &
148 Assessment (ACE) courses are taught as modules within these MSc programmes
149 and teach advanced clinical history taking and clinical examination of various
150 physiological systems i.e.: cardiovascular; respiratory; gastrointestinal;
151 musculoskeletal; neurological; ear, nose & throat; and ophthalmology. ACE
152 courses also teach advanced clinical decision-making, such that practitioners can
153 act on the finding of their clinical history and examination. ACE courses are
154 available from numerous Higher Education Institutions.

155

156 At present, advanced clinical assessment skills training is absent from most
157 Scottish undergraduate and postgraduate pharmacy curricula and currently
158 limited to ad hoc pharmacist experiences. Therefore, the effect of exposure to
159 this type of training is currently poorly understood within pharmacy. The style of
160 patient interaction within the general practice setting lends itself to autonomous
161 clinical practice. Consultations tend to be had on a one-to-one basis, and while
162 the wider team opinion can always be sought, it is imperative that clinicians
163 working in primary care are able to function autonomously within this
164 environment. General Practice Clinical Pharmacists (GPCPs) have been rolled out
165 across the National Health Service (NHS) in Scotland to support clinical care
166 delivery [14]. Some of these GPCPs have opted to undertake the ACE courses
167 described above to support their transition to advanced level practice but, as
168 yet, there has been no formal exploration of the potential behavioural
169 determinants influencing implementation of advanced skills.

170

171 **Aim**

172 To explore potential behavioural determinants influencing the implementation of
173 skills gained from ACE courses by GPCPs.

174

175 **Ethics Approval**

176 Ethics approval was granted by the Robert Gordon University School of
177 Pharmacy and Life Sciences ethics review committee (Approval Number: S283;
178 23/Nov/2020). West of Scotland NHS Research Ethics Committee confirmed
179 NHS ethics was not required.

180

181 **METHOD**

182 The research was undertaken according to an interpretivist philosophy using
183 qualitative research methodology.

184

185 **Setting**

186 General [Family] Practice (GP) within NHS Scotland.

187

188 **Sampling and recruitment**

189 Pharmacists working in Scottish GP practices providing patient facing/clinical
190 services as independent prescribers, having at any time previously undertaken
191 an ACE course, were eligible to participate and included in the study. Secondary
192 care-based pharmacists providing 'outreach' services to GP practices were
193 excluded.

194

195 There is, to the knowledge of the project team, no single collated source of
196 pharmacists that have completed an ACE course in Scotland. To identify GPCPs
197 who have completed an ACE course and to ensure as many eligible participants
198 as possible were included, Chairs or Leads for key groups representing service,
199 education and academia in Scotland [Directors of Pharmacy; Primary Care
200 Pharmacists Leads (SP3A); Schools of Pharmacy; NHS Education for Scotland]
201 were asked to email their groups with study invite. Those interested in
202 participating were asked to respond via email. All eligible respondents were then
203 emailed the participant information leaflet and consent form to their work emails
204 (TJ). If no response was received within two weeks, a reminder email was sent.
205 If agreeing to participate, a convenient date and time for the interview was set
206 and informed consent obtained (TJ).

207

208 **Development of interview schedule**

209 This work was underpinned by the Theoretical Domains Framework (TDF) [15].
210 This summarises key elements of 33 theories and proposes that determinants of
211 behaviour cluster into 14 domains. It was initially developed for implementation
212 research to explore behaviours related to evidence-based medicine

213 implementation [16]. The interview schedule was developed using the TDF [15]
214 with those domains most relevant to the research aim and questions included
215 (see supplementary material). The TDF was employed in all stages of the
216 research including developing the interview schedule, analysis, and reporting of
217 findings. The interview schedule was reviewed for face and content validity by
218 all research team members including: pharmacists, GPs, academics and
219 educationalists and then piloted prior to use. No changes were made so the
220 results from the pilot were included in the final dataset.

221

222 **Data collection**

223 Dyadic interviews were conducted by a trained researcher (TJ) using video
224 conferencing (Zoom Meeting), digitally recorded then transcribed verbatim and
225 checked for accuracy by the research team using repeated listening and review
226 of transcripts to ensure dependability. Data collection ran in the period of June-
227 August 2021. Dyadic interviews were chosen over individual interviews since
228 they allow participants to share and discuss ideas or issues [17]. They also offer
229 more opportunity than focus groups for in-depth exploration of participant
230 experiences, opinions and recommendations, thus enriching the data generated
231 [18]. Participants were allocated at random to dyads – the principal link between
232 participants was their interest in the research topic [19].

233

234 **Data Analysis**

235 Framework analysis was undertaken using the TDF as the thematic framework
236 following the steps outlined by Ritchie and Spencer [20]. All interviews were
237 coded based on the domains of the TDF before being examined for further sub-
238 themes within each domain. The analysis was performed by at least two
239 independent team members (TJ and either AT, GR, or SC), with any
240 disagreements resolved through discussion. Illustrative quotes were selected
241 through team discussion. Data saturation was tested using the principals of the
242 approach described by Francis et al [21]. Initially, six interviews were completed
243 and analysed thematically. An additional interview was then conducted and
244 analysed to ensure that no further themes emerged. Data were managed using
245 NVivo software [version 20, QSR International]. The Consolidated Criteria for

246 Reporting Qualitative Studies (COREQ) was followed in reporting findings of this
247 study [22].

248

249 **RESULTS**

250 Seven dyadic interviews containing two participants each were conducted with
251 14 GPCPs. Participants practiced in eight of the 14 Scottish Health Boards
252 covering approximately 74% of the Scottish population including: Greater
253 Glasgow & Clyde; Grampian; Highland; Lanarkshire; Lothian; Orkney; Shetland;
254 and Tayside. The mean age was 41.14 years old, 57% (n=8) were female, and
255 74% (n=10) were >10 years post-registration. Each dyadic interview was
256 approximately 60 minutes long. All pharmacists who responded to the invite
257 were interviewed.

258 Three main themes were identified with a total of nine sub-themes. These are
259 considered in turn below, with provision of illustrative quotes.

260 **Theme 1: Factors influencing implementation of advanced clinical skills**
261 **by pharmacists**

262 Key sub-themes presented below are linked to the following TDF domains:
263 Knowledge; Skills; Memory attention and decision process; Beliefs about
264 consequences; Behavioural Regulation.

265 ***Continuum of development:*** the ACE course allowed participants to build on
266 the knowledge and skills from their prescribing course and increased their self-
267 perceived capability and confidence in implementation of autonomous clinical
268 decision-making.

269 "I didn't really feel when I came out of independent prescribing qualification
270 that I was anywhere near as confident as I am now." – P4

271

272 ***Advanced clinical skills gained:*** Participants noted the course completely
273 changed their decision-making matrix in relation to clinical problems.

274 “Instead of seeing them as their tablets, you see them much more as a
275 person [...] just even having started the course, I’m already thinking
276 completely differently.” – **P9**

277 As a consequence, participants believed that it enabled them to adopt a holistic
278 approach when reviewing patients, allowing them to provide safer care.

279 “[ACE skills] will allow me to manage patients more autonomously in a more
280 holistic fashion [...] will allow me to prescribe in a safer manner as I will be
281 more aware of red flags and differential diagnosis.” – **P9**

282

283 **Boundaries of practice:** Participants believed another consequence was that
284 completing an ACE course highlighted their need for continued preceptored
285 multidisciplinary (MDT) support after the course to embed the skills gained in
286 clinical practice.

287 “The risk of it is that you kind of feel that I’ve done this now [ACE course],
288 I shouldn’t be asking any questions, or I shouldn’t be utilising other people’s
289 knowledge, when actually that’s absolutely not the way to be going.” – **P10**

290

291 **Vision for integration:** Participants articulated a factor aligned to regulation of
292 behaviours through describing the need for a clear vision to encourage greater
293 integration of pharmacists with advanced clinical skills to capitalise on the
294 learning and aid implementation in practice.

295 “[We need] clear vision of how this will be useful to others so we can get
296 support, get buy in.” – **P9**

297

298 **Theme 2: Social and environmental influences affecting opportunities** 299 **for pharmacists in advanced clinical roles**

300 Key sub-themes presented below are linked to the following TDF domains:
301 Environmental context & resources; Social influences.

302 **Limited number of pharmacists in advanced practice roles:** participants
303 described an environment and expressed concern around limited numbers of
304 pharmacists undertaking the course and how this might affect personal and
305 wider professional opportunities for implementation of these skills.

306 "We still aren't seeing enough pharmacists through it. It's quite
307 disappointing [...] the value is clearly obvious to people who've done it, but
308 it's not permeating through the workforce." – **P13**

309 "Nothing's changed since we've completed it so we're trying to forge our
310 role." – **P4**

311 **Course delivery modality:** in relation to resources available, most participants
312 expressed a preference for face-to-face multidisciplinary courses to aid the
313 acquisition of practical skill, which was thought to aid implementation in practice.

314 "I found the mix quite good [...] to learn from each other." – **P8**

315 "It's a course that you're looking to gain the actual clinical examination skills
316 and that's something that's crucial to be doing in a face-to-face capacity."
317 – **P14**

318

319 **Macro, meso, and micro-level socio-institutional influences:** most
320 participants highlighted influences at a wide range of social-institutional levels
321 describing the limited opportunities to utilise the skills learnt as obstructing the
322 implementation. There was an indication that the reasons for this were
323 complicated and multifarious.

324 "I think the new [primary care - GMS 2018 [23]] contract has probably
325 taken us a slight step backwards because we were really moving into the
326 clinical patient-facing sphere in general practice, and then
327 pharmacotherapy came forward." – **P2**

328 "I work in three different practices, one of them is extremely supportive,
329 [...] At another one, I have to go and seek out support, but if I seek it out,
330 they are willing to give it to me. And the third one isn't supportive. It's very
331 stressful [...] I'm keen and I want to do this." – **P9**

332

333 Limited understanding of what pharmacists' offer in terms of clinical service
334 delivery following course completion was a commonly reported perception at
335 practice, line management, Health Board and Government level.

336 "I think health boards have a responsibility [...] to try and work [...] to get
337 that message out around 'we have pharmacists with these skills, they are
338 going to be able to do this'." – **P10**

339 "I think that is what's needed, something from higher up, from Scottish
340 Government level to promote pharmacists extended roles and what the
341 benefits will be." – **P11**

342

343 Participants were hopeful that future changes to Government Policy would create
344 a supportive environment for the implementation and embedding of advanced
345 skills.

346 "Our work is very much aligned with the GP practice contracts. They will be
347 influenced by Scottish Government [...] I'd be quite confident that in another
348 two/three years' time, people be working at more advanced roles." – **P12**

349

350 Likewise, participants felt that the RPS Advanced and Consultant Curricula may
351 influence the implementation of advanced roles in practice.

352 "The RPS advanced practice and consultant practice frameworks are coming
353 along so that can be hopefully utilised to help grow that image [...] There
354 are lots of people out there that didn't really know what a pharmacist can
355 do." – **P10**

356

357 Some had concerns about matters related to organisational governance with
358 articulation of concerns around higher clinical risk and higher indemnity costs
359 which could act as a barrier to implementation.

360 "We need to pay for indemnity and that comes out of the pharmacist's
361 pay, it's not paid for by anybody else." – **P10**

362

363 At the micro level, participants indicated that patients were thought to be
364 broadly supportive of new roles and so could potentially act as advocates
365 influencing implementation.

366 "As long as you can deliver what they need; assessment, history-taking,
367 plan, reassurance, they take that as they would take it from another
368 professional." – **P13**

369

370 **Theme 3: Perceptions of pharmacist professional identity for advanced**
371 **practice roles**

372 Key sub-themes presented below are linked to the following TDF domains:
373 Social/professional role and identity; Beliefs about capabilities; Emotions.

374 ***Pharmacists' professional identity in advanced practice roles:*** most
375 participants expressed frustration over the currently available career options for
376 GPCPs, which did not cater for integration of ACE course skills leaving
377 pharmacists feeling deflated about the future and alienated.

378 "We've also got a service direction that isn't necessarily pushing people into
379 a patient-facing clinical role." – **P13**

380 "You don't want to be sitting all day doing acutes and med rec [...] you do
381 want to be managing [...] complicated, complex patients and using your
382 prescribing skills in a much more patient focused kind of way." – **P9**

383

384 They noted a lack of understanding of their new advanced roles by other
385 healthcare professionals and management, some of which was attributed to the
386 lack of clearly defined roles for advanced pharmacists but affected their ability to
387 implement.

388 "I've completed the course and I know what it means, but I don't
389 necessarily think that [GPs] know what it means [...] They don't have an
390 appreciation of how they could use me." – **P6**

391 "I feel I didn't have support from immediate line management because they
392 just didn't understand." – **P3**

393 "I feel definitions of what different pharmacists at different levels in the
394 primary care team do hasn't really been drawn." – **P4**

395

396 Participants felt senior leadership need to define these roles to optimise
397 utilisation of these pharmacist advanced skills.

398 "There was no definition of what I was supposed to be doing. I was
399 supposed to have a clinical case load, I hadn't." – **P1**

400 "It needs a little bit of drive from the top, and it needs more in the way of
401 organisation." – **P5**

402

403 ***Pharmacists' self-perceptions of advanced practice role:*** Linking to TDF
404 domains emotions and beliefs about capabilities - the course was considered to
405 increase pharmacists' competence and confidence. However, some participants
406 expressed frustration about deskilling and erosion of capability, especially if they
407 were unable to implement skills in a timely manner once qualified.

408 "I'm getting frustrated because, as the months go, the confidence in your
409 own ability diminishes exponentially." – **P6**

410 "Not to be in a position to use [ACE skills] is incredibly frustrating [...] People
411 do this because they want to have that clinical patient facing role." – **P8**

412

413 **DISCUSSION**

414 **Statement of key findings**

415 This work provides data on the potential behavioural determinants influencing
416 implementation of ACE course skills in GPCPs. Key findings relate to the three
417 main themes.

418 *Factors influencing implementation of advanced clinical skills by pharmacists:*

419 The ACE course allowed participants to develop knowledge and advanced clinical
420 skills capabilities beyond the scope of traditional pharmacist roles. Those able to
421 use the skills in practice, post-course, reported managing patients with a higher
422 degree of clinical autonomy. Participants described the need to be embedded in
423 an MDT environment and for supervised triangulation of clinical skills and
424 decision-making in practice to aid implementation.

425 *Social and environmental influences affecting opportunities for pharmacists in*

426 *advanced clinical roles:* Participants expressed frustration about a range of
427 factors that hindered implementation which were out with their control. There
428 was a clear feeling that Government policy was required to support advanced
429 pharmacist practice. To optimise the opportunity for utilisation of pharmacists'
430 augmented advanced clinical skillsets, there is a need for senior leadership at
431 local and national level to define and normalise these roles.

432 *Perceptions of pharmacist professional identity for advanced practice roles: a*

433 widespread limited understanding of advanced pharmacist professional identity
434 was seen as a significant barrier to integration and implementation of these roles
435 into current clinical care teams and demotivating in terms of development of
436 advanced practice roles. This has left some of these innovators feeling a degree
437 of alienation within the profession and wider healthcare team.

438

439 **Strengths and Weaknesses**

440 Strengths of this research included using robust theory-driven qualitative
441 approach at all steps. Similarly, having an MDT research team benefitted

442 development and testing of topic guide, trustworthiness and applicability of the
443 research. GPCP participants came from a spread of diverse geographical areas
444 and health boards, were exposed to different courses and modalities of teaching
445 and were able to give a breadth of views. Multiple techniques were employed to
446 ensure the robustness of the research and enhance its trustworthiness [24]. To
447 address reflexivity in relation to the impact of personal experiences on research
448 outcomes, differing views were reconciled through iterative discussion within the
449 MDT research team and bracketing of views.

450

451 Limitations of this research included the small numbers of participants. However,
452 data saturation was reached using an established method [21]. It is also
453 possible, due to the recruitment methods, that some pharmacists may not have
454 been recruited, missing their views. Some aspects of this research may not be
455 directly transferable to other settings or countries, especially those without
456 pharmacist prescribing rights.

457

458 **Interpretation**

459 ***Factors influencing implementation of advanced clinical skills by*** 460 ***pharmacists***

461 The positive impact of pharmacists developing and implementing advanced
462 clinical skills has been demonstrated in other sectors of practice – notably
463 Emergency Departments (ED). One study found pharmacists with advanced
464 clinical skills training were able to deal with more than seven times the number
465 of ED presentations as pharmacist prescribers without (5202 vs 719,
466 respectively) [25]. The training programme used [26] has broad similarities with
467 the ACE course reported here, allowing pharmacists to operate beyond
468 “traditional” models of care, as “practitioners”; being responsible for whole
469 episodes of holistic care [27]. This blended skillset enables a versatile workforce,
470 optimising what pharmacists can offer patients and the healthcare system in
471 general. Similar to the GPCP cohort, the effectiveness of pharmacists in these
472 advanced roles is positively correlated with the supportiveness of the learning
473 environment [28].

474 The GPCP cohort in this study identified the need for a similar “wrap-around”
475 supervised structured training programme to facilitate development. Participants
476 asked for supervision post-ACE qualification so they could undertake their skills
477 with clinical supervision to aid transition to more autonomous practice across the
478 spectrum of presentations they would be expected to cover. Preceptorship
479 models should be explored to affect the clinical supervision of pharmacists in
480 these advanced training roles [29]. Furthermore, participants identified that the
481 RPS Advanced Pharmacist Curriculum may be beneficial in setting the standard
482 for advanced practice and consideration should be made to align any future
483 programmes with this [8, 9].

484

485 ***Social and environmental influences affecting opportunities for***
486 ***pharmacists in advanced clinical roles***

487 There is an obvious opportunity to development a similar model to that
488 described above for ED, but within general practice. An “Advanced Pharmacist
489 Practitioner” (APP) model could equip general practice with a modern, dynamic
490 and responsive generalist clinician that offers versatility to service. In addition to
491 traditional clinical therapeutics, polypharmacy and medicines management
492 systems work, an APP could clinically cover urgent and emergency presentations
493 and lead on the management of patients with long-term conditions. The skills
494 developed on the ACE course form the prerequisite skill-base required for the
495 APP role, including those skills required to assess and manage undifferentiated
496 generalist presentations across the age and acuity spectrum. In doing so, this
497 would address the concerns many participants had regarding the limited
498 opportunities for pharmacists in advanced roles in general practice, while also
499 establishing this type of advanced practice as a social norm.

500 Effectiveness of previous capability frameworks to develop advanced pharmacist
501 practice have been limited [30]. Participants spoke of role suppression under the
502 current GMS 2018 (primary care) contract [23]. Organisational, structural, and
503 cultural barriers to the delivery of advanced pharmacist practice in the general
504 practice setting have been reported in the UK before [31]. Critical to the agency
505 of pharmacists to innovate, must be the inclusion of augmented skillsets, as
506 described here, in subsequent Government policy. It is proposed, therefore, that

507 the role of the APP in general practice be defined in Government policy, funded,
508 and a structured training programme be commissioned for their development.

509

510 ***Perceptions of pharmacist professional identity for advanced practice***
511 ***roles***

512 Globally, there is variation as to what would, could or should constitute an
513 Advanced Pharmacist model [2, 32]. This lack of clarity makes the discussion
514 and common understanding of a generalised and globally relevant professional
515 role and identify with defined skillset difficult, if not impossible [28]. Participants
516 in this research highlighted a demotivating aspect related to concerns about the
517 professional identity and lack of understanding of pharmacists in advanced roles.
518 This seemed to be an inter and intraprofessional issue.

519 Misalignment between innovative advanced practice and the clinical scope of the
520 current GMS 2018 contract has led to policy alienation within this cohort. Policy
521 alienation has been described as a 'disconnection' comprised of two core
522 components: 'powerlessness' – when workers feel they are unable to input
523 based on their experience, or have no flexibility for implementation; and
524 'meaninglessness' – when workers question the value of the policy to [in this
525 case] patients and health services [33]. Policy alienation has been observed
526 within other UK health service contexts too [34].

527

528 **Further Research**

529 Consideration should be given to how best to develop techniques that link to
530 each of the themes identified to support behavioural change.

531 Further research is required to inform the design and evaluation of a training
532 programme for APPs which provides preceptored learning post-ACE course to aid
533 implementation of clinical skills in practice. Delivery and content should map to
534 Government policy to deliver an effective product to meet service need.

535

536 **CONCLUSION**

537 This work has identified a number of TDF-linked behavioural determinants
538 related to implementation of advanced clinical skills by pharmacists in GP. ACE
539 courses would seem to equip pharmacists with the prerequisite skills required for
540 APP-level service. Policy, and review of implementation strategies are urgently
541 required to ensure pharmacists with ACE skills can provide advanced clinical care
542 to patients in support of existing healthcare services.

543

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549

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551

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