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SKILLS DEVELOPMENT FOR PATIENT FACING WORK IN PRIMARY CARE: FINDINGS FROM A QUALITATIVE LONGITUDINAL COHORT STUDY OF CLINICAL PHARMACISTS

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SKILLS DEVELOPMENT FOR PATIENT FACING WORK IN PRIMARY CARE: FINDINGS FROM A QUALITATIVE LONGITUDINAL COHORT STUDY OF CLINICAL PHARMACISTS

10 Dr Mary Madden (Associate Professor), University of York, York, YO10 5DD

11 Professor Duncan Stewart, London Metropolitan University, 166-220 Holloway Rd, London N7 8DB

12 Dr Thomas Mills, University of York, York, YO10 5DD

13 Jim McCambridge, University of York, York, YO10 5DD

14
15
16
17
18
19
20 Corresponding author details:

21 Dr Mary Madden

22 Department of Health Sciences

23 University of York,

24 York, YO10 5DD

25 Email: mary.madden@york.ac.uk

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Abstract

Objective

The new Structured Medication Review (SMR) service was introduced into the National Health Service (NHS) alongside a major expansion of clinical pharmacists within new organisations known as Primary Care Networks (PCNs) in England during the COVID-19 pandemic. The aim of the SMR is to tackle problematic polypharmacy through comprehensive, personalised medication reviews involving shared decision-making. Investigation of clinical pharmacists' perceptions of training needs and skills acquisition issues for person-centred consultation practice will help better understand their readiness for these new roles.

Design

A longitudinal interview and observational study in general practice.

Setting and participants

A longitudinal study of 10 newly recruited clinical pharmacists interviewed three times and a single interview with 10 pharmacists already established in GP practice across 20 PCNs in England. Observation of a compulsory two-day history taking and consultation skills workshop.

Analysis

A modified framework method supported a constructionist thematic analysis.

Results

Remote working during the pandemic limited opportunities for patient-facing contact. Pharmacists new to their role in primary care were predominantly concerned with improving their clinical knowledge and competence. Most said they already practiced person-centred care, using this terminology to describe transactional medicines-focused practice. Pharmacists rarely received direct feedback on consultation practice to calibrate perceptions of their own competence in person-centred communication practice, including shared decision-making skills.

Conclusion

Pharmacists had difficulty in translating abstract consultation principles into specific consultation practices. Training provided knowledge delivery with limited opportunities for actual skills acquisition. The development of person-centred communication skills to prepare for shared decision making in practice requires much more substantial support.

Strengths and Limitations

- This study provides a rigorous, in-depth, qualitative investigation of the views of clinical pharmacists on their training needs and person-centred skills development for patient-facing work in primary care
- The sampling approach captured perspectives from pharmacists new to and familiar with working in a GP practice setting across 20 diverse PCNs in England
- The study has limitations common to exploratory qualitative studies
- Comparison with observation of actual rather than reported consultation practice is needed to further ground the findings in the empirical realities of practice
- Studies of this nature could be complemented by investigations of the perspectives of patients receiving observed SMRs

For peer review only

Background

In the UK, the pharmacy profession has been increasingly encouraged to take on more patient-facing roles, thus extending the traditional dispensing role involving short, instrumental, transactional, patient interactions [1]. Standards and professional organisation for a growing role in primary care pharmacy have been slowly emerging [2, 3]. A new clinical pharmacist role and a contractually required Structured Medication Review (SMR) service were introduced in England during the COVID-19 pandemic as a new Primary Care Network (PCN) structure was forming [4, 5]. The aim of the National Health Service Additional Roles Reimbursement Scheme (ARRS) was to, “grow additional capacity through new roles” to help solve the workforce shortage in general practice [6]. Early research indicates huge variation in how the new ARRS roles are being implemented and integrated into primary care teams and a lack of agreement about whether staff should prioritise the requirements of the PCN contract or the ‘core’ work of general practice [7, 8].

New ARRS PCN clinical pharmacists must enrol in or have qualified from an accredited training pathway [9]. The 18-month ‘Primary Care Pharmacy Education Pathway’ (PCPEP), run by the Centre for Pharmacy Postgraduate Education (CPPE), provides a combination of 28 study days, peer learning sets, assessments and access to three support functions - an education supervisor (offering individualised educational support), a GP clinical supervisor (based in practice, offering day-to-day clinical support), and a clinical mentor (an experienced clinical pharmacist). This is followed by 6-month independent prescriber training. The Clinical Pharmacists in General Practice scheme (GPPTP) launched by NHSE in 2015 piloted the newer, patient-facing pharmacist role [10]. Wide variability in the understanding of the role and a mismatch between what GPs expected of pharmacists and what pharmacists said they felt ready and able to do was found in an evaluation study [11]. Pharmacists recognised gaps in their knowledge and skills for the role but were not always able to identify their own specific learning needs [11].

Problematic polypharmacy has been identified as a ‘wicked’ problem adding to the treatment burden experienced by patients [12, 13], and as a relational challenge involving decision-making under circumstances of complexity and uncertainty [14]. A review into the extent of NHS overprescribing, particularly in primary care, and ways to reduce this, has identified the SMR as, “an ideal tool to help people with problematic polypharmacy” [15]. The contract specification for the new SMR service described a patient-centred, outcome-focused approach to medicines optimisation comprising an invited, personalised, holistic review of all medicines for people at risk of medicines-related harm, lasting 30 minutes or more [16]. Target groups include those taking 10 or more medicines; using potentially addictive pain management medication; on medicines commonly associated with medication errors; living in care homes; or with severe frailty and recent hospital admissions or falls. SMRs were required to be attentive to health literacy and conducted in line with the principles of shared decision-making by pharmacists who have, or are in training for, a prescribing qualification and have advanced assessment and history-taking skills [16].

Interchangeable use of the terms patient- and person-centred occurs within pharmacy, as in other health care professions [17], with some preferring ‘person-centred’ because it connotes broader identities and social contexts than a recipient in a health care encounter [18]. “Health literacy” is another concept which invites multiple interpretations beyond a focus on access to information [19]. Different conceptualizations of person-centred care concur on the importance of communication and relationships between patients and healthcare professionals [17]. Shared decision-making is recognised as a core component of NHS personalised, patient-centred care [20]. This requires effective engagement between health professionals who possess expertise in the effectiveness, probable benefits and potential harms of treatment options and patients willing to share ‘expertise’

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3 in their social circumstances, values, preferences and attitudes to illness and risk. Guidelines on
4 shared decision-making are published by the National Institute for Health and Care Excellence [21].
5 The aim is to replace unwarranted variation with warranted variation arising from the goals and
6 preferences of informed patients [22].
7

8
9 Research outside of pharmacy shows the practical and ethical tensions inherent in translating
10 rhetoric about person-centred support and shared decision-making into actual health care practice
11 [23-25]. Similarly, there is little evidence to show that the specific standards and guidance available
12 on pharmacy consultation skills support pharmacists' delivery of person-centred care in practice
13 [26]. Studies of pharmacist medication review services have shown a pragmatic medication focus
14 rather than a person-centred approach, with reviews simplified and adapted to facilitate delivery
15 within time-pressured organisational constraints, largely with pharmacist-led information provision
16 [27-31].
17
18

19 This study explores PCN clinical pharmacist perspectives on consultation training provision and skills
20 acquisition for SMRs, with a particular focus on person-centred consultation practice. It forms part of
21 a research programme on including alcohol within pharmacist medication reviews [32]. Findings on
22 early implementation of the SMR have been reported elsewhere [33]. These showed that while
23 some PCNs with more established pharmacists were making progress in developing a distinct SMR
24 service, others were mainly fulfilling a variety of routine medicines-related tasks in response to
25 backlogs [33].
26
27

28 **Methods**

29
30 A compulsory two-day history-taking and consultation skills workshop conducted by video
31 conference in 2020 was observed with permission from CPPE providers and participants.
32 Contemporaneous notes were taken. Ten newly appointed ARRS pharmacists in 10 PCNs in Northern
33 England were interviewed three times between September 2020 and February 2022 (n=30
34 interviews). In addition, 10 pharmacists in 10 other PCNs across England already established in GP
35 practices, were interviewed once between February and May 2021 (total interviews n=40).
36 Interviews lasting between 35 and 70 minutes were conducted via video call by one of two
37 researchers (MM, TM) using a semi-structured topic guide. Observation notes informed topic guides.
38 Audio-recordings were professionally transcribed and pseudonymised.
39
40

41 A modified framework method was used to organise and present data from transcripts and field
42 notes [34]. This supported a constructionist thematic analysis [35]. With the topic guide forming the
43 initial framework, interview transcripts were coded in NVivo 1.0 to produce a list of initial descriptive
44 themes identifying current perspectives on person-centred practice and consultation skills
45 development and training and noting changes in these over the course of the interviews.
46 Comparative analyses identified common, recurring and conflicting perspectives within and between
47 individual participants and recruited groups, paying attention to the ways in which accounts were
48 constructed. Preliminary analysis of sample scripts, sub-themes and the final analytic narrative were
49 discussed with co-investigators. Reporting follows SRQR guidelines [36].
50
51
52

53 All pharmacists in the sample were working with patients remotely, by telephone, with most of the
54 new ARRS pharmacists yet to meet a patient face-to-face other than at a vaccine clinic. All 10
55 established GP practice pharmacists were prescribers, and most were in or taking on senior and
56 leadership roles in PCNs and Integrated Care Systems (new structures of partnership developed after
57 PCNs with a view to integrating health and care services[37]). Nine had completed the GPPTP pilot
58 scheme, launched in 2016-17 [11]. One, working half time in community pharmacy and a prescriber,
59
60

was on the new PCPEP pathway along with pharmacists she was supervising. Prior to coming into GP practice, five had worked in hospital pharmacy and three at commissioning level.

Three of the 10 newly employed ARRS pharmacists were appointed at senior or lead pharmacist level, two of these had been qualified for four years and one for 30 years. Two of the 10 ARRS pharmacists were prescribers. One was provisionally registered, completing registration as a pharmacist by the third interview. One continued to study for a clinical pharmacy diploma while on the PCPEP pathway; another had completed this while in hospital pharmacy. Eight had applied for their PCN position from community pharmacy, one from hospital pharmacy and one from a GP practice pharmacist position. Of the eight from community pharmacy, the pharmacist with 30 years' experience had also worked in industry and at commissioning level; two others had some pre-registration experience in hospital, and one had worked in a private clinical services company. Some were working within one GP practice, while others split their time across the PCN. Most had pharmacist colleagues within the PCN, but others were the sole pharmacist. Two moved to a different PCN during the study, one of these had three different posts during the life of the study. Further participant characteristics are in Table 1.

Table 1: Self-described participant characteristics

Pharmacists	ARRS	GPPTP
Age range	25-52 mean 35.2 median 29.5 mode 28	35-53 mean 41.8 median 41.5 mode 35,36,43
Sex		
Female	7	8
Male	3	2
Ethnicity		
White British	8	7
British Pakistani	1	0
British Persian	1	0
British Indian	0	2
British Bangladeshi	0	1

GP practice pharmacists are designated by an X before their identifier number in the results to differentiate them from the ARRS cohort.

Patient and public involvement

The study sits within a research programme working with an experienced Patient and Public Involvement (PPI) group who were consulted throughout the research process. Programme co-production and PPI practices have been reported at length elsewhere [38]. PPI members on the project steering group took part in discussions about these findings.

Results

Connecting pathway to practice

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3 There was wide variation in levels of engagement and in how pharmacists thought the training
4 aligned with the contexts in which they were working. The COVID-19 pandemic meant that PCEP
5 training planned for in-person delivery had to be redesigned for remote delivery and some
6 interviewees and their colleagues were experiencing delays or were on waiting lists. Course content
7 continued to be focused on in-person practice rather than the current mode of telephone practice,
8 much of which was conducted through cold calling and was perceived by most pharmacists as a
9 barrier to person-centred practice because it inhibited signalling and picking up on social cues.
10
11

12 All ARRS pharmacists had access to advice or clinical supervision from GPs, much of this in the form
13 of GPs reacting to queries as they arose. Not all ARRS pharmacists, however, had access to senior
14 pharmacist mentorship. Most were trying to minimise taking up the time of busy colleagues. Those
15 working on the vaccine programme or medication-related administration were finding it difficult to
16 complete other tasks. Some felt overburdened at times and others under-used. Early on, an
17 experienced pharmacist coming from community pharmacy said she felt she was in education,
18 rather than work and training, mode:
19
20

21 I don't feel like I've got a job particularly, it's just a bit learning this and learning that ... I'm
22 learning clinical stuff; I'm not learning any clinical skills ... Because it's all remote ... I think
23 the clinical skills development has to be when you are actually going to use it ... I could train
24 now and not use it for six-months and I would need training again ... reflective essays and
25 writing ... about difference you've made to practice ... that's laborious and you don't get a lot
26 out of it ... (5).
27
28

29 Even the most highly motivated talked about the difficulty in being able to link and consolidate their
30 learning during the pandemic, "because there's so many events going on ... sometimes I feel like I
31 forget" (7).
32

33 Shifting the PCPEP online limited the opportunities for peer interaction. Those ARRS pharmacist who
34 had attended the pathway pre-lockdown said the residential study days provided them with a very
35 useful and supportive peer network. This contrasted with groups formed online via social media,
36 which were described as more instrumental than social; people only contacted each other when
37 there was an issue. Online attendees reported frustrations with the amount of reading, navigating
38 multiple websites and colleagues keeping silent and opting out of group activities in video
39 workshops. Many thought that doing the pathway as originally designed would be less, "laborious
40 and lonely ... I think everybody feels pretty much the same ... that while it's worthwhile, it does feel
41 like a chore" (5).
42
43
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47 *Lack of 'hands on' preparation for a challenging and complex role*

48 More experienced primary care pharmacists said the best use of the pathway was to complement
49 learning in practice and pharmacists had to be proactive to get the most out of it. In terms of
50 preparation for patient-facing work, some interviewees in both cohorts compared their professional
51 pharmacy training negatively to the much more "hands on" training of doctors, dentists and nurses:
52
53

54 I never saw a patient in my whole degree really and then you get taught, oh well you need to
55 do these concepts ... too much talk about concepts and not enough hands-on (9).
56

57 ... certainly when I was at university, we weren't taught ... what's bread and butter for nurses
58 and doctors ... we haven't got quite the hands-on skills ... I think people hoped that GPs
59 would take you under their wing a bit and teach you as you went ... like they would a
60

1
2
3 registrar, or something. My experience has been, although they're very supportive and very
4 nice, they don't want to do that bit ... they almost expected you to drop in fully formed ...
5 (X7).
6

7
8 There were examples of senior pharmacists attempting to take those new to the role, "under their
9 wing" and one ARRS pharmacist, who quickly took on a senior role after working in a GP practice
10 with a "brilliant training culture", received training which mirrored that of a GP registrar:

11
12 I got really good input from the GPs in training ... what pharmacists lack is that hands on
13 face-to-face clinical skills ... I think it takes a lot more input than some people think (9).
14

15 Another experienced GP pharmacist said her own learning had been "sink or swim" on the job and
16 she saw her current supervisees struggling with, "the softer skills like how do you negotiate things
17 with a GP, if you've got tension between staff? ... if you've got a patient being really difficult and you
18 then run late in clinic, how do you manage that?" (X5).
19

20 21 22 *Acquiring clinically relevant skills* 23

24
25 Becoming a prescriber and improving clinical knowledge were the key priorities for ARRS
26 pharmacists and there was a perceived lack of clinical focus to the training. Most pharmacists said
27 they preferred the elements of both the GPPTP and the PCPEP pathways that were led by a GP
28 training company to other content which they described as more, "wishy-washy" (3, 5), "fluffy" (9)
29 or "box-ticky" (3, X7). Some struggled with the reflective style of learning on the pathway but
30 appreciated the chance to have some thinking time outside of the usual routine.
31

32
33 Some pharmacists in both cohorts said the clinical content of the pathway was "too basic" for those
34 with experience in general practice or a clinical diploma (e.g., X4, X3, 8) and that some pharmacists
35 on the PCEP were not gaining enough actual clinical experience. An ARRS interviewee coming from
36 hospital pharmacy wanted more "clinical information", categorising material on interaction with
37 patients as "non-clinical" and better learned in practice:
38

39
40 I just ... wanted ... what you need to know for general practice, here's how you deal with ... X
41 disease, here's how you deal with this medicine ... because I feel quite confident on how to
42 interact with patients and all the non-clinical things ... I learned more by just having practise
43 of it rather than reading models (8).
44

45
46 Most of the more recently qualified pharmacists had received some communication and
47 consultation skills training at university level and had experienced objective structured clinical
48 examinations (OSCEs). Some of these said this provided an essential foundation and considered
49 learning about consultation models from PCEP as more relevant for those who lacked confidence or
50 did not have this in their university background.

51
52 An ARRS pharmacist in a senior role spoke about the limitations of "counselling" training in
53 pharmacy and why he had subsequently developed his own consultation skills by taking a level two
54 counselling course, "I actually think it's something everyone should do" (9):
55

56
57 ... [W]hen ... pharmacists get trained, they do a lot of counselling patients ... which is just
58 really telling the patient something. They don't do a lot of ... consultation skills where ... you
59 ... open up that idea of the patient has the choice, you need to give them the options and
60 they can decide ... that style of consultation is really important ... because it becomes less of
you're telling them off ... Pharmacy school is, right or wrong, this or that ... it's almost like

1
2
3 the guideline is the law ... whereas the GPs don't have that view ... I think it makes
4 pharmacists feel uncomfortable, the lack of certainty ... They want it to be, this is the
5 answer, right or wrong ... the other thing pharmacists don't get a lot of ... is that sort of
6 debrief style of reflection on their own work (9).
7

8
9 He and others had sought out opportunities for peer review and shadowing in order to improve their
10 own practice:

11
12 I don't know how many times I've done consultation skills and role-play and I still hate it. I
13 think the biggest change for consultation skills is when you're at work. And I think even
14 though I absolutely detest it, having my clinical supervisor sit with me when I do some phone
15 calls, listening to the conversation and feedback is much more worthwhile (5).
16

17
18 Experienced ARRS pharmacists with little opportunity to work with patients in their university
19 courses felt they had developed their skills on the job, "without ... realising", but were aware that,
20 "... all sorts of theory comes into it" (10):
21

22 ... there are things which get covered now in the undergraduate course which probably
23 weren't even thought of back 30 years ago and in particular things like communication skills,
24 patient-centred consultations ... any skills I have in that respect have been based on dealing
25 with people, finding what works well, what doesn't work so well and building it up myself
26 rather than ever being taught it ... it is common sense, really (10).
27

28
29 Many shared the idea that communication skills development was "common sense", and some were
30 ambivalent about the extent to which skills, often assumed to be inherent, could be taught on
31 courses:

32 ... consultation skills ... either you have them inherently or you need to practise them, and I
33 don't feel like they're something that responds particularly well to classroom teaching ... you
34 can't role play consultation skills ... 'cause you'll always be aware that the other person isn't
35 a patient ... they're not going to lash out at you, they're not going to go off on one, they're
36 not going to take things the wrong way (3).
37
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41 *Consultation skills workshop*

42
43 Pharmacists at a PCEP workshop on how to practically apply consultation skills (passing an online
44 assessment was a pre-requisite of attendance), build confidence and put the patient at the centre of
45 consultation said they felt confident or fairly confident in their skills, though less so for working with
46 older people, children, people with dementia or people with learning disabilities. As anticipated, in
47 exercises aimed to show that, "medicines are like catnip to pharmacists" and, "... the patient's
48 agenda ... should not be the last thing we think about", pharmacists focused in on medication.
49

50
51 Facilitators explained practice expectations had shifted from, "a product centred to person-centred
52 approach" and that this meant challenging the assumption, "we know best", understanding patient
53 illness beliefs, "although these may not make sense to you" and recognising patients, "are the
54 experts in themselves". Pharmacists were introduced to consultation models to provide a structure
55 to put the patient at the centre. Small groups discussed how they would implement each stage of
56 the Calgary Cambridge model. During the debrief, facilitators gave examples for content and
57 possible phrasing, stressing the importance of clinical empathy, non-verbal language and building
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3 rapport with appropriate body language and good eye contact. The Calgary Cambridge model was
4 described as very structured but “you learn to adapt it”.

5
6 Other consultation models and the 4Es model of coaching: Engage, Explore, Evaluate, End were then
7 briefly introduced as alternatives. The mnemonics TED: Tell, Explain, Describe and ICE Ideas,
8 Concerns, Expectations were recommended for eliciting patient concerns, with the option of adding
9 Lifestyle factors and Feeling to the latter (L)ICE(F). The concept of ‘the golden minute’ was used to
10 stress the importance of allowing time for a patient to speak uninterrupted. Small groups then
11 suggested what they would do differently with five different groups – older people, people with
12 dementia, children and young people, people with learning disabilities and people with physical
13 disabilities. The debrief stressed consent issues and treating people as individuals.

14
15 The second part of the workshop gave each of the 32 attendees a chance to try out some of this in
16 consultation scenarios with one of four actors. Pharmacists were encouraged by facilitators to, “try
17 something new”. Each consultation was observed by a peer who used a checklist to offer feedback,
18 “... the learning here is in feedback from peers”. Actors also gave feedback. Pharmacists had two
19 minutes for preparation, five minutes of role play and eight minutes feedback. Feedback from both
20 peers and actors featured lots of generic praise. Pharmacists were polite and interested but none of
21 the actor patients was given a golden minute by a pharmacist, very little time was spent building
22 rapport and little attention was paid to establishing the patient’s concerns.

23
24 Pharmacists again focused in on medications, asking lots of questions to identify opportunities to
25 give information, with many offering to go through all the person’s medicines with them. The form
26 of questioning assumed patients would readily know and provide the medical names of their drugs
27 and doses. Feedback from some actors provided more specific constructive feedback:

28
29 ... deal with the patient. When you get someone closed don’t try and direct us to go through
30 the medications, say what you see hear in front of you. ‘You are sounding as if your mood is
31 quite low.’ Get the bull by the horns very sensitively. Don’t be scared of the answers you
32 might get (Actor).

33
34 Discussions among the pharmacists showed that, despite the person-centred aims of the exercise,
35 they were looking for the ‘catch’ and the correct answer, so approached the people in the scenarios
36 as a medication problem or puzzle to be solved.

37 38 *History taking workshop*

39
40 A second workshop on history taking and record keeping featured content by a retired GP who
41 described his first slide on the golden minute as the most important of the day. Throughout the
42 workshop he stressed the importance of listening and trying to look beyond a presenting symptom
43 to understand what is going on for people. He advised pharmacists to, “listen to the answers and
44 respond, don’t default to the next question”. He said throwing lots of questions at people, “clips
45 their wings” and health professionals often interrupt. He described consultations as, “a process, they
46 flow” and cautioned against templates that, although helpful, can turn everything into a yes, no
47 binary and might miss things coming from the patient. He said it had taken him 27 years so far to
48 become confident with consultation skills; it was always frightening because of gaps in knowledge
49 and because it was interaction with humans.

50
51 The workshop introduced mnemonics to help diagnose pain and red flag symptoms to look out for.
52 Exercises included scenarios acted by a facilitator followed by a debrief. One featured an urgent call
53 from a mother with a child with rash. This had pharmacists asking lots of closed questions to see if it
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3 was meningitis. When asked what they would do differently after this workshop answers included,
4 “try to be less robotic with questions; give patients the golden minute; be more open with
5 questions; listen more; give preference to patient's story - let them talk to gain info.”
6

7 *Takeaways from consultation skills training*

8
9 Receiving feedback from patients and peers in practice and working with actors in the workshop
10 were identified by most interviewees as the most affecting part of consultation skills training on the
11 pathway:
12

13 ... we did a face-to-face session where we had actors and we had to do a consultation ...and
14 ... be observed doing it. And then we got real time feedback from the actor themselves and
15 said how we made them feel, and from other people who were looking on, and that was one
16 of the best days I've had through the entire CPPE ... Because it's really hard to know how
17 you're making people feel (4).
18
19

20 Large groups in training meant that most of the time in this workshop was spent observing others.
21 Most remembered the point of the exercise was that they were missing important information and
22 the concerns of the patient:
23

24 ... they actually did put a bit of sort of real world into it ... remembering not to just go into a
25 consultation with what I want to talk about ... let the patient have their time ... Everyone
26 likes to think they do shared decision making but ... there's ... a difference between telling
27 someone that this is the guidance and this is what you should be doing ... I think for me the
28 training's just, sort of, highlighted other ways of ... approaching that conversation (6).
29
30

31 A pharmacist who found roleplay very uncomfortable did not feel he had benefitted from the
32 exercise because it was hard to 'play' himself (3). A pharmacist who had recently attended the
33 workshop said she handled a call with a patient differently afterwards:
34

35 I think it's the listening thing. So although I feel like I listen and give them time, I was more
36 aware of consciously doing that (5).
37
38

39 There was widespread endorsement of the idea of listening, though acquisition of listening skills was
40 work in process.
41
42

43 *Achieving person-centredness*

44
45 Pharmacists on the pathway inevitably engaged with patient-centred discourse: “... it's always
46 holistic and patient focused” (5). Some felt they were actually changing their practice to embrace
47 more listening but it was easy to slip into old habits and giving advice in a person-centred manner
48 was recognised as challenging:
49

50
51 I think I'm getting there ... even yesterday I was on the phone to a patient ... and I was on the
52 brink of saying to her, you know you really should be using inhalers and they'd be much
53 better for you ... you do think that you're one of these people who puts the patient first but
54 then when you're actually in the situation you sort of think, actually, I'm not sure I am. I
55 need to really think again about how I'm doing this (10).
56
57

58 ...because it's more difficult to do that ... I'll tick the box and we'll move on ... you see people
59 doing reviews like that, because it's just much easier, you've got to make a real conscious
60 decision to do the other thing really and it's difficult (9).

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3 ... I know that I should be doing less [talking] now, I'll try ... but ... unfortunately, I completely
4 struggle to put that into practice and to make that change (6).
5

6 Most pharmacists were much less confident about handling complex cases or sensitive subjects like
7 alcohol and opioid deprescribing and some were aware in retrospect that their earlier perceived
8 confidence did not match their skill-level:
9

10 ... I think with more knowledge, you ... become consciously incompetent because you realise
11 what you don't know ... which I guess is better than being unconsciously incompetent (4).
12

13 Some still focused on achieving "compliance" and perceived giving a recommendation and asking if
14 the patient was OK with that as fulfilling the shared decision-making brief:
15

16 I give them my recommendation ... but at the end of the day, it's their own health and I let
17 them decide what they want to do ... it's better to be shared decision-making ... because
18 then you're going to get good compliance (1)
19
20

21 More inexperienced pharmacists were waiting for a template to be developed for SMRs and were
22 unsure how it would work with recommended consultation models. A pharmacist who was very
23 keen to adopt a person-centred approach was aware that she found it hard to have confidence in
24 what she was doing without feedback, especially from patients:
25

26 I can't help people if I'm thinking they're a target. I need to think of them as a person ... and
27 I think it's really crucial that shared decision making is kind of like the pivotal backbone of a
28 consultation because without that communication and decision making from the patient
29 side ... how do we know they're going to comply? ... so I was talking to a patient. I thought I
30 was doing a really good consultation ... and doing shared decision-making. I put the phone
31 down. One of the pharmacists she said, oh no, you sounded a bit harsh ... I thought ... I
32 worded it really well ... And only when that pharmacist said that did, I think, oh what if
33 they're thinking that? ... it's the patient that you need to engage with ... and that can only be
34 done by getting patient feedback (7).
35
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38 Some pharmacists thought shared decision-making was more relevant for medications like statins
39 but not for others where there was "no choice" about treatment recommendations (5), or more
40 relevant for initial prescribing rather than reviewing medication (8). In contrast, an ARRS pharmacist
41 more advanced in doing SMRs spoke about her experience of its importance for deprescribing:
42

43 I think approaching it in the right way is key to deprescribing ... And people scoff at it ... oh
44 it's just woolly pharmacy practice stuff but actually, shared decision-making makes my life
45 easier as a pharmacist, and it puts the patient in control as well (4).
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50 Discussion

51 It may be true that, "the single most powerful tool in medicine remains the conversation between
52 patient and physician" [39] but models of medical communication remain aspirational for
53 pharmacists as well as doctors. In spite of its strong policy push, shared decision-making has not
54 been adopted widely into healthcare practice [24], and acknowledgement of patient preferences
55 continues to be positioned as at odds with, rather than integral to, evidence informed practice [40,
56 41]. Few studies have focused on health professionals' perceptions of specific communication
57 behaviours necessary for shared decision-making [42], and little is known about the effectiveness of
58 strategies for communicating uncertainties in clinical practice [43]. Educational interventions have
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3 focused on the self-reflection of the individual practitioner, although it is not clear how or if this
4 works to disrupt the repetitive habits encouraged within organisational routines [44].
5 Overestimation of treatment effects [45], incentives to prescribe [46, 47] and ever closer ties
6 between pharmaceutical companies and organisations that regulate and sanction the use of their
7 products [48, 49], are all implicated in the problematic polypharmacy for which the SMR is proposed
8 as a remedy in primary care.
9

10
11 Expectations that all health professionals will engage empathetically with patients have proliferated
12 in an era when systemic problems inhibit such practice [50]. The PCEP communicated norms and
13 highlighted areas for change in pharmacy consultation practice, but pharmacists had little
14 opportunity to practice the skills that would improve their levels of proficiency. Feedback at
15 workshops was mostly from peers who were not proficient or expert themselves and training was
16 pitched at novice and advanced beginner stages, reliant on reflective decision making and applying
17 rules [51]. Observation by peers with limited skills focusing on a list of requirements for assessment,
18 may have inadvertently introduced a tick list that could draw focus away from the patient[52]. The
19 workshop learning was somewhat disconnected from experiences of practice and 'hard' clinical
20 knowledge was prized by trainees over 'soft' communication skills, despite the presentation of these
21 by trainers as central to history taking and diagnosis.
22
23

24
25 SMRs require knowledge of treatments for multiple conditions and the communication skills to
26 address the complexity of patients' clinical and social situations, discuss the balance of different
27 potential harms, and know when and how to raise possibilities for de-prescribing or changing
28 prescriptions. Limited opportunities to experiment and receive feedback on consultation skills in
29 practice has left it to pharmacists to link the rather abstract knowledge gained on the pathway with
30 their own tacit, experiential knowledge of medication reviews. Although these are complex
31 interactions, medication reviews are often performed mechanically as mundane tasks by GPs, as well
32 as pharmacists [14]. Long established habits in pharmacy medication review practice, prompted by
33 concerns for patient safety, now combine with new local incentives and contextual cues, producing
34 quick-fix information-giving with minimal deliberative decision making, and some attempts to
35 transcend these limitations[33]. Pharmacy medication reviews have involved little continuity of care
36 and telephone-only contacts during the pandemic may have intensified short, transactional
37 interactions aimed at a generic rather than specific patients.
38
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40
41 The ARRS clinical pharmacist role and how it fits with others as part of a multi-disciplinary team is
42 still emergent and relies on developing interpersonal and interprofessional relationships in the midst
43 of a workforce crisis with pressured GPs. Material derived from GP training on consultation skills and
44 history-taking on the PCEP paid little attention to the possible differences between doctor-patient
45 and pharmacist-patient roles. For example, patients were yet to have a clear sense of what their
46 relationship might be with a clinical pharmacist and thus what to expect from the consultation.
47 Patient clarity and trust in the GP role may help secure good communication.
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51 The pathway facilitated familiarity with person-centred ideas and a language for describing practice,
52 the effects of which may be challenging to observe. Confidence in consultation skills did not
53 translate readily into competence and such confidence was challenged when tackling subjects
54 considered difficult or sensitive, or with a patient who did not conform easily to the usual question-
55 and-answer format. Pharmacists were encouraged to adapt the Calgary Cambridge and other
56 models to their own style. Without practice-based guidance, however, this carried the danger of
57 inadvertently diluting important characteristics through pragmatic adaptation to usual practice.
58 While speaking about practice in person-centred terms and recognising that patients have
59 preferences, pharmacists mostly described a traditional paternalistic communication style with a
60

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3 passive patient and the pharmacist controlling information and decision-making [53]. Pharmacists
4 still used the language of “compliance” which is out of keeping with contemporary person-centred
5 discourse. For example, the concept of ‘concordance’ originated with a review of medicine-taking by
6 the Royal Pharmaceutical Society of Great Britain [54]. This interprets consent to treatment not as
7 an end in itself but an ongoing process which recognises people as resistant to instruction where it
8 seems contrary or irrelevant and where their own perspectives go unacknowledged. [55] However, a
9 “dominant compliance paradigm” in pharmacy practice persists [56]. The initial presumption is that
10 patients lack information rather than, for example, have unmet needs or poorly co-ordinated care.
11
12

13 **Conclusion**

14
15 SMRs were introduced while pharmacists were new and in training, without time to secure solid
16 foundations for practice. Consultation training introduced participants to expectations and
17 principles, but further practice development support is needed to develop grounded skills for
18 patient-facing medication reviews. Addressing problematic polypharmacy requires healthcare
19 structural and organisational changes which include enhancing the communication skills of health
20 professionals, and how such skills are actually used in practice.
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24

25 **Additional information**

26 *Ethics approval*

27
28 The study received research ethics approval from NHS Health Research Authority (REC reference
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30
31

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38
39

40 *Patient consent for publication*

41
42 None required
43

44 *Author contributions*

45
46 JM, MM and DS designed the study. MM and TM conducted the interviews. MM led the analysis of
47 the data. All authors made substantial contributions to theorisation through group discussions and
48 paper development. MM conceptualised and led the write up of the paper; all authors contributed
49 to refining the themes and editing drafts.
50

51 *Competing interests*

52
53 The Authors declare that there is no conflict of interest.
54

55 *Data availability statement*

56
57 No data are available. This study has not received ethical approval to share confidential data with
58 any third party other than the study research team.
59
60

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Reporting checklist for ‘Skills development for patient facing work in primary care: Findings from a qualitative longitudinal cohort study of Clinical Pharmacists’.

Based on the SRQR guidelines.

	Reporting Item	Page Number
	#1 Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	5-6
	#2 Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Problem formulation	#3 Description and significance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	4-5
Purpose or research question	#4 Purpose of the study and specific objectives or questions	2,5
Qualitative approach and research paradigm	#5 Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenology, narrative research) and	5

guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.

14	Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
26	Context	#7	Setting / site and salient contextual factors; rationale	4-5
28	Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5-6
34	Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	14
40	Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	5-6
50	Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5

1	Units of study	#12 Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	5-6
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5	Data processing	#13 Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5-6
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12	Data analysis	#14 Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5-6
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19	Techniques to enhance trustworthiness	#15 Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5-6
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24	Syntheses and interpretation	#16 Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6-12
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30	Links to empirical data	#17 Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	7-12
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34	Intergration with prior work, implications, transferability and contribution(s) to the field	#18 Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application / generalizability; identification of unique contributions(s) to scholarship in a discipline or field	12-14
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44	Limitations	#19 Trustworthiness and limitations of findings	3
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46	Conflicts of interest	#20 Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	14
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51	Funding	#21 Sources of funding and other support; role of funders in data collection, interpretation and reporting	14
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BMJ Open

SKILLS DEVELOPMENT FOR PATIENT FACING WORK IN PRIMARY CARE: FINDINGS FROM A QUALITATIVE STUDY OF CLINICAL PHARMACIST ROLE EXPANSION DURING THE COVID-19 PANDEMIC

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Keywords:	QUALITATIVE RESEARCH, PRIMARY CARE, EDUCATION & TRAINING (see Medical Education & Training), Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT

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3 **SKILLS DEVELOPMENT FOR PATIENT FACING WORK IN PRIMARY CARE:**
4 **FINDINGS FROM A QUALITATIVE STUDY OF CLINICAL PHARMACIST ROLE**
5 **EXPANSION DURING THE COVID-19 PANDEMIC**
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10 Dr Mary Madden (Associate Professor), University of York, York, YO10 5DD

11 Professor Duncan Stewart, London Metropolitan University, 166-220 Holloway Rd, London N7 8DB

12
13 Dr Thomas Mills, University of York, York, YO10 5DD

14
15 Jim McCambridge, University of York, York, YO10 5DD
16
17

18
19
20 Corresponding author details:

21 Dr Mary Madden

22 Department of Health Sciences

23 University of York,

24 York, YO10 5DD

25 Email: mary.madden@york.ac.uk
26
27
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29
30
31
32

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37 Word count: 6651
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Abstract

Objective

The new Structured Medication Review (SMR) service was introduced into the National Health Service (NHS) in England during the COVID-19 pandemic, alongside a major expansion of clinical pharmacists within new formations known as Primary Care Networks (PCNs). The aim of the SMR is to tackle problematic polypharmacy through comprehensive, personalised medication reviews involving shared decision-making. Investigation of clinical pharmacists' perceptions of training needs and skills acquisition issues for person-centred consultation practice will help better understand their readiness for these new roles.

Design

A longitudinal interview and observational study in general practice.

Setting and participants

A longitudinal study of 10 newly recruited clinical pharmacists interviewed three times and a single interview with 10 pharmacists recruited earlier and already established in GP practices, across 20 newly forming PCNs in England. Observation of a compulsory two-day history taking and consultation skills workshop.

Analysis

A modified framework method supported a constructionist thematic analysis.

Results

Remote working during the pandemic limited opportunities for patient-facing contact. Pharmacists new to their role in primary care were predominantly concerned with improving clinical knowledge and competence. Most said they already practiced person-centred care, using this terminology to describe transactional medicines-focused practice. Pharmacists rarely received direct feedback on consultation practice to calibrate perceptions of their own competence in person-centred communication, including shared decision-making skills. Training thus provided knowledge delivery with limited opportunities for actual skills acquisition. Pharmacists had difficulty translating abstract consultation principles into specific consultation practices.

Conclusion

SMRs were introduced when the dedicated workforce was largely new and being trained. Addressing problematic polypharmacy requires structural and organisational interventions to enhance the communication skills of clinical pharmacists (and other health professionals), and their use in practice. The development of person-centred consultation skills requires much more substantial support than has so far been provided for clinical pharmacists.

Strengths and Limitations

- This study provides a rigorous, in-depth, qualitative investigation of the views of clinical pharmacists on their training needs and person-centred skills development for patient-facing work in primary care
- The sampling approach captured perspectives from pharmacists new to and familiar with working in a GP practice setting across 20 diverse PCNs in England
- The study has limitations common to exploratory qualitative studies and the COVID-19 pandemic placed limitations on pharmacists' capacity for patient-facing work, training delivery, and data collection in primary care
- Comparison with observation of actual rather than reported consultation practice is needed to further ground the findings in the empirical realities of practice
- Studies of this nature could be complemented by investigations of the perspectives of patients receiving observed SMRs

Background

In the UK, the pharmacy profession has been increasingly encouraged to take on more patient-facing roles, thus extending the traditional dispensing role involving short, instrumental, transactional, patient interactions [1]. Standards and professional organisation for a growing role in primary care pharmacy have been slowly emerging [2, 3]. Building on an earlier pilot [4], a new clinical patient-facing pharmacist role was introduced in England during the COVID-19 pandemic, this was followed by a contractually required Structured Medication Review (SMR) service, both while a new Primary Care Network (PCN) structure was forming [5-7]. PCNs comprised General Practitioners (GPs) collaborating with neighbouring practices in order to access additional funding to improve population health locally.

The aim of the National Health Service (NHS) Additional Roles Reimbursement Scheme (ARRS) was to, “grow additional capacity through new roles” to help solve the workforce shortage in general practice [8]. There was disquiet about the level of funding to meet the expected PCN workload prior to the pandemic [9]. Early research indicates huge variation in how ARRS roles were being implemented and integrated into primary care teams and a lack of agreement about whether clinical pharmacists should prioritise the requirements of the PCN contract or the ‘core’ work of general practice [7, 10].

Evaluation of the Clinical Pharmacists in General Practice pilot scheme (GPPTP), launched by NHS England in 2015, found wide variability in the understanding of this role and a mismatch between what GPs expected of pharmacists and what pharmacists said they felt ready and able to do [11]. Pharmacists recognised gaps in their knowledge and skills for this particular role, but were not always able to identify specific learning needs [11].

New ARRS PCN clinical pharmacists must enrol in or have qualified from an accredited training pathway, a revised version of the training provided on the GPPTP pilot [12]. This 18-month ‘Primary Care Pharmacy Education Pathway’ (PCPEP), run by the Centre for Pharmacy Postgraduate Education (CPPE), provides a combination of 28 study days, peer learning sets, assessments and access to three support functions - an education supervisor (offering individualised educational support), a GP clinical supervisor (based in practice, offering day-to-day clinical support), and a clinical mentor (an experienced clinical pharmacist). After the PCPEP is completed, those pharmacists who are not already prescribers undertake 6-month independent prescriber training, totalling two years to complete the pathway and become a prescriber.

A review into the extent of NHS overprescribing, particularly in primary care, and ways to reduce this, has identified the SMR as, “an ideal tool to help people with problematic polypharmacy” [13]. Problematic polypharmacy has been identified as a ‘wicked’ problem adding to the treatment burden experienced by patients [14, 15], and as a relational challenge involving decision-making under circumstances of complexity and uncertainty [16]. The contract specification for the new PCN SMR service described a patient-centred, outcome-focused approach to medicines optimisation comprising an invited, personalised, holistic review of all medicines for people at risk of medicines-related harm, lasting 30 minutes or more [17]. Target groups included those taking 10 or more medicines; using potentially addictive pain management medication; on medicines commonly associated with medication errors; living in care homes; or with severe frailty and recent hospital admissions or falls. SMRs were required to be attentive to health literacy and conducted in line with the principles of shared decision-making by pharmacists who have, or are in training for, a prescribing qualification and have advanced assessment and history-taking skills [17].

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3 Interchangeable use of the terms patient- and person-centred occurs within pharmacy, as in other
4 health care professions [18], with some preferring 'person-centred' because it connotes broader
5 identities and social contexts than a recipient in a health care encounter [19]. "Health literacy" is
6 another concept used in the SMR specification which invites multiple interpretations [20]. Different
7 conceptualizations of person-centred care concur on the importance of communication and
8 relationships between patients and healthcare professionals [18]. Shared decision-making is
9 recognised as a core component of NHS personalised, patient-centred care [21]. This requires
10 effective engagement between health professionals who possess expertise in the effectiveness,
11 probable benefits and potential harms of treatment options and patients willing to share 'expertise'
12 in their social circumstances, values, preferences and attitudes to illness and risk. Guidelines on
13 shared decision-making are published by the National Institute for Health and Care Excellence [22].
14 The aim is to replace unwarranted variation with warranted variation arising from the goals and
15 preferences of informed patients [23].
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20 Research outside of pharmacy shows the practical and ethical tensions inherent in translating
21 rhetoric about person-centred support and shared decision-making into actual health care practice
22 [24-26]. Few studies have focused on health professionals' perceptions of specific communication
23 behaviours necessary for shared decision-making [27], and little is known about the effectiveness of
24 strategies for communicating uncertainties in clinical practice [28]. Similarly, there is little evidence
25 to show that the specific standards and guidance available on pharmacy consultation skills support
26 pharmacists' delivery of person-centred care in practice [29]. Studies of pharmacist medication
27 review services, including those described in person-centred terms, have shown a pragmatic
28 medication focus rather than a person-centred approach, with reviews simplified and adapted to
29 facilitate delivery within time-pressured organisational constraints, largely comprising pharmacist-
30 led information provision [30-34].
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34 This study explores PCN clinical pharmacist perspectives on consultation training provision and skills
35 acquisition for SMRs, with a particular focus on person-centred consultation practice. It forms part of
36 a research programme to develop and evaluate person-centred and clinically appropriate ways of
37 highlighting alcohol within pharmacist reviews of medications [35]. It is one of a number of studies
38 seeking to understand pharmacist medication review practice and skills as a potential site for
39 intervention [30, 36, 37] and find better ways to manage alcohol in general practice [38-40]. Findings
40 on early implementation of the SMR have been reported elsewhere [41]. These showed that while
41 some PCNs with more established pharmacists were making progress in developing a distinct SMR
42 service, others were mainly fulfilling a variety of routine medicines-related tasks in response to
43 backlogs [41]. Findings on clinical pharmacists' experience of and confidence in discussing alcohol
44 with patients in their new role are being reported elsewhere.
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48 **Methods**

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50 Protracted implementation of SMRs during the pandemic, and the intrinsic nature of the acquisition
51 of complex skills, called for a longitudinal approach; this followed ARRS clinical pharmacists over
52 time as they undertook PCPEP training and became established in the role. Recruitment procedures
53 were informed by consultation with CPPE and the research programme's Pharmacy Practitioner
54 group. A purposive sample of general practices across PCNs in Northern England was established
55 using pharmacist workforce and SMR activity data, and researchers telephoned existing and new
56 PCN contacts to recruit pharmacists into the study. Ten newly appointed ARRS pharmacists in 10
57 PCNs in Northern England were interviewed three times between September 2020 and February
58 2022 (n=30 interviews). Final interviews took place during the spread of the Omicron variant. A
59 compulsory PCPEP two-day history-taking and consultation skills workshop conducted by video
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3 conference in 2020 was observed with permission from CPPE providers and the attending group of
4 ARRS participants. Contemporaneous notes were taken. Direct observation of consultation training
5 informed interview topic guides and provided empirical data on content and pharmacist
6 participation in the workshop for triangulation with reports of consultation training in interviews.
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9 In addition, 10 clinical pharmacists in 10 other PCNs across England already established in GP
10 practices, were interviewed once between February and May 2021 (total interviews n=40).
11 Recruitment here used opportunistic sampling and snowballing recruitment techniques. A leaflet
12 describing the study and inviting pharmacists to contact the research team was distributed via
13 national pharmacy organisations and on social media. This group provided further data on SMR
14 implementation and skills development from pharmacists who were employed in primary care by
15 individual GP practices pre-pandemic. Interviews lasting between 35 and 70 minutes were
16 conducted via video call by one of two researchers (MM, TM) using a semi-structured topic guide
17 (available as an appendix). This was developed iteratively and individually tailored in follow-up ARRS
18 interviews. Audio-recordings were professionally transcribed and pseudonymised.
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21 A modified framework method was used to organise and present data from transcripts and field
22 notes [42]. This supported a constructionist thematic analysis [43]. With the topic guide forming the
23 initial framework, interview transcripts were coded in NVivo 1.0 to produce a list of initial descriptive
24 themes identifying current perspectives on person-centred practice and consultation skills
25 development and training and noting changes in these over the course of the interviews.
26 Comparative analyses identified common, recurring, and conflicting perspectives, paying attention
27 to the ways in which accounts were constructed. Rather than being a comparative study of two
28 distinct cohorts (ARRS and GPPTP recruits), the key analytic focus was on understanding factors
29 impacting individual skills development for SMRs within the dynamic and emerging primary care
30 landscape. This focus also reflected the extent of observed heterogeneity within the two groups, and
31 we make some comparisons between the groups within the elaboration of study findings.
32 Preliminary analysis of sample scripts, sub-themes and the final analytic narrative were discussed
33 with co-investigators. Reporting follows SRQR guidelines [44]. Findings will inform further
34 development of a complex intervention [30].
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39 *Patient and public involvement*

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41 The study sits within a research programme working with an experienced Patient and Public
42 Involvement (PPI) group who were consulted throughout the research process. Programme co-
43 production and PPI practices have been reported at length elsewhere [45]. PPI members on the
44 project steering group took part in discussions about these findings.
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48 **Results**

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50 Implementation of the SMR service was slow, and often delegated to ARRS pharmacists in training
51 on the PCPEP i.e. mostly without a prescribing qualification or advanced assessment and history-
52 taking skills [41]. All pharmacists in the study were working with patients remotely, by telephone,
53 with most of the new ARRS pharmacists yet to meet a patient face-to-face other than at a Covid-19
54 vaccine clinic. Pharmacist experience and training prior to working in primary care was varied within
55 and between the cohorts. All 10 established GP practice pharmacists were prescribers, and most
56 were in or taking on senior and leadership roles in PCNs and Integrated Care Systems (new
57 structures of partnership developed after PCNs with a view to integrating health and care services
58 [46]). Nine had completed the GPPTP pilot scheme, launched in 2016-17 [11]. One, working half time
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in community pharmacy and a prescriber, was currently on the new PCPEP pathway along with pharmacists she was supervising. Others had indirect contact with the PCPEP through working with or supporting new ARRS colleagues. Prior to coming into GP practice, five had worked in hospital pharmacy and three at commissioning level (i.e., assessing needs, planning, prioritising, purchasing and monitoring health services rather than providing them [47]).

Three of the 10 newly employed ARRS pharmacists were appointed at senior or lead pharmacist level, two of these had been qualified for four years and one for 30 years. Two of these, including the one qualified for 30 years, were on the PCPEP pathway, one had completed it. Two out of the 10 ARRS pharmacists were prescribers. One was provisionally registered, completing registration as a pharmacist by the third interview. One continued to study for a clinical pharmacy diploma while on the PCPEP pathway; another had completed this while in hospital pharmacy. Eight had applied for their PCN position from community pharmacy, one from hospital pharmacy and one (senior) from a GP practice pharmacist position. Of the eight from community pharmacy, the pharmacist with 30 years' experience had also worked in industry and at commissioning level; two others had some pre-registration experience in hospital, and one had worked in a private clinical services company. Some were working within one GP practice, while others split their time across the PCN. Most had pharmacist colleagues within the PCN, but others were the sole pharmacist. Two moved to a different PCN during the study, one of these had three different posts during the life of the study, starting at senior PCN level and moving to a more autonomous post within a specific GP practice. Further participant characteristics are in Table 1.

Table 1: Self-described participant characteristics

Pharmacists	ARRS	Already established in GP practices
Age range	25-52 mean 35.2	35-53 mean 41.8
Sex		
Female	7	8
Male	3	2
Ethnicity		
White British	8	7
British Pakistani	1	0
British Persian	1	0
British Indian	0	2
British Bangladeshi	0	1

Those employed and established pre-PCNs as GP practice pharmacists are designated by an X before their identifier number in the results to differentiate them from the more recent ARRS PCN recruits.

Connecting pathway to practice

There was wide variation in levels of reported engagement with the PCEP pathway and in how pharmacists thought the training aligned with the contexts in which they were working. The COVID-

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3 19 pandemic meant that PCPEP training, planned for in-person delivery, had to be redesigned for
4 remote delivery and some interviewees and their colleagues were experiencing delays or were on
5 waiting lists. Observed and reported course content continued to be focused on in-person practice
6 rather than the current mode of telephone practice, much of which was conducted through cold
7 calling and was perceived by most pharmacists as a barrier to person-centred practice because it
8 inhibited signalling and picking up on social cues.
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11 All ARRS pharmacists had access to advice or clinical supervision from GPs, most of this in the form
12 of GPs reacting to queries as they arose. Not all ARRS pharmacists, however, had access to senior
13 pharmacist mentorship. Most were trying to minimise taking up the time of busy colleagues. Those
14 working on the vaccine programme or medication-related administration were finding it difficult to
15 complete other tasks. Some felt overburdened at times and others under-used. Early on, an
16 experienced pharmacist coming from community pharmacy said she felt she was in education,
17 rather than work and training, mode:
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20 I don't feel like I've got a job particularly, it's just a bit learning this and learning that ... I'm
21 learning clinical stuff; I'm not learning any clinical skills ... Because it's all remote ... I think
22 the clinical skills development has to be when you are actually going to use it ... I could train
23 now and not use it for six-months and I would need training again ... reflective essays and
24 writing ... about difference you've made to practice ... that's laborious and you don't get a lot
25 out of it ... (5).
26
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28 Even the most highly motivated talked about the difficulty in being able to link and consolidate their
29 learning during the pandemic, "because there's so many events going on ... sometimes I feel like I
30 forget" (7).
31

32 Shifting the PCPEP online limited the opportunities for peer interaction. Those pharmacists who had
33 attended one of the pathways pre-pandemic said the residential study days provided them with a
34 very useful and supportive peer network. This contrasted with groups formed online via social
35 media, which were described as more instrumental than social; people only contacted each other
36 when there was an issue. Online attendees reported frustrations with the amount of reading,
37 navigating multiple websites and colleagues keeping silent and opting out of group activities in video
38 workshops. Many thought that doing the pathway as originally designed would be less, "laborious
39 and lonely ... I think everybody feels pretty much the same ... that while it's worthwhile, it does feel
40 like a chore" (5).
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46 *Lack of 'hands on' preparation for a challenging and complex role*

47 Pharmacists with longer experience in primary care said the best use of their primary care training
48 pathway was to complement learning in practice and pharmacists had to be proactive to get the
49 most out of it. In terms of preparation for patient-facing work, some interviewees in both ARRS and
50 prior GPPTP cohorts compared their professional pharmacy training negatively to the much more
51 "hands on" training of doctors, dentists and nurses:
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54 I never saw a patient in my whole degree really and then you get taught, oh well you need to
55 do these concepts ... too much talk about concepts and not enough hands-on (9).
56

57 ... certainly when I was at university, we weren't taught ... what's bread and butter for nurses
58 and doctors ... we haven't got quite the hands-on skills ... I think people hoped that GPs
59 would take you under their wing a bit and teach you as you went ... like they would a
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3 registrar, or something. My experience has been, although they're very supportive and very
4 nice, they don't want to do that bit ... they almost expected you to drop in fully formed ...
5 (X7).
6

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8 There were examples of senior pharmacists attempting to take those new to the role, "under their
9 wing" and one ARRS pharmacist, who quickly took on a senior role after working in a GP practice
10 with a "brilliant training culture", received training which mirrored that of a GP registrar:

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12 I got really good input from the GPs in training ... what pharmacists lack is that hands on
13 face-to-face clinical skills ... I think it takes a lot more input than some people think (9).
14

15 Another pharmacist with longer experience in primary care said her own learning had been "sink or
16 swim" on the job and she saw her current supervisees struggling with, "the softer skills like how do
17 you negotiate things with a GP, if you've got tension between staff? ... if you've got a patient being
18 really difficult and you then run late in clinic, how do you manage that?" (X5).
19

20 21 22 *Acquiring clinically relevant skills* 23

24 Becoming a prescriber and improving clinical knowledge were the key priorities for pharmacists new
25 to a general practice primary care role and there was a perceived lack of "clinical" focus to the
26 training offered. Most pharmacists said they preferred the elements of both the GPPTP and the
27 PCPEP pathways that were led by a GP training company to other content which they described as
28 more, "wishy-washy" (3, 5), "fluffy" (9) or "box-ticky" (3, X7). Some said they struggled with the
29 reflective style of learning on the pathways but appreciated the chance to have some thinking time
30 outside of the usual routine.
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33 Some interviewees in both cohorts said the clinical content of their pathway was "too basic" for
34 those with experience in general practice or a clinical diploma (e.g., X4, X3, 8) and that some
35 pharmacists now on the PCPEP were not gaining enough actual clinical experience. An ARRS
36 interviewee coming from hospital pharmacy wanted more "clinical information", categorising
37 material on interaction with patients as "non-clinical" and better learned in practice:
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40 I just ... wanted ... what you need to know for general practice, here's how you deal with ... X
41 disease, here's how you deal with this medicine ... because I feel quite confident on how to
42 interact with patients and all the non-clinical things ... I learned more by just having practise
43 of it rather than reading models (8).
44

45 Most of the more recently qualified pharmacists had received some communication and
46 consultation skills training at university level and had experienced objective structured clinical
47 examinations (OSCEs). Some of these said this provided an essential foundation and considered
48 learning about consultation models from PCPEP as more relevant for others, those who lacked
49 confidence or did not have this in their university background.
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52 An ARRS pharmacist with prior GP practice experience, now in a senior role, spoke about the
53 limitations of "counselling" training in pharmacy and why he had subsequently developed his own
54 consultation skills by taking a level two counselling course, "I actually think it's something everyone
55 should do" (9):
56

57 ... [W]hen ... pharmacists get trained, they do a lot of counselling patients ... which is just
58 really telling the patient something. They don't do a lot of ... consultation skills where ... you
59 ... open up that idea of the patient has the choice, you need to give them the options and
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3 they can decide ... that style of consultation is really important ... because it becomes less of
4 you're telling them off ... Pharmacy school is, right or wrong, this or that ... it's almost like
5 the guideline is the law ... whereas the GPs don't have that view ... I think it makes
6 pharmacists feel uncomfortable, the lack of certainty ... They want it to be, this is the
7 answer, right or wrong ... the other thing pharmacists don't get a lot of ... is that sort of
8 debrief style of reflection on their own work (9).
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11 He and a few others had sought out opportunities for peer review and shadowing in order to
12 improve their own practice:
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14 I don't know how many times I've done consultation skills and role-play and I still hate it. I
15 think the biggest change for consultation skills is when you're at work. And I think even
16 though I absolutely detest it, having my clinical supervisor sit with me when I do some phone
17 calls, listening to the conversation and feedback is much more worthwhile (5).
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20 Pharmacists with prior community pharmacy experience but little opportunity to work with patients
21 in their university courses felt they had developed their communication skills on the job, "without ...
22 realising", but were aware that, "... all sorts of theory comes into it" (10):
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24 ... there are things which get covered now in the undergraduate course which probably
25 weren't even thought of back 30 years ago and in particular things like communication skills,
26 patient-centred consultations ... any skills I have in that respect have been based on dealing
27 with people, finding what works well, what doesn't work so well and building it up myself
28 rather than ever being taught it ... it is common sense, really (10).
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31 Many ARRS interviewees shared the idea that communication skills development was "common
32 sense", and some were ambivalent about the extent to which skills, often assumed to be inherent,
33 could be taught on courses:
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35 ... consultation skills ... either you have them inherently or you need to practise them, and I
36 don't feel like they're something that responds particularly well to classroom teaching ... you
37 can't role play consultation skills ... 'cause you'll always be aware that the other person isn't
38 a patient ... they're not going to lash out at you, they're not going to go off on one, they're
39 not going to take things the wrong way (3).
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42 43 *Consultation skills workshop observation*

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45 ARRS pharmacists at an observed PCPEP workshop on how to practically apply consultation skills
46 (passing an online assessment was a pre-requisite of attendance), build confidence and put the
47 patient at the centre of consultation, said they felt confident or fairly confident in their skills, though
48 less so for working with older people, children, people with dementia or people with learning
49 disabilities. As anticipated by CPPE facilitators, in exercises aimed to show that, "medicines are like
50 catnip to pharmacists" and, "... the patient's agenda ... should not be the last thing we think about",
51 pharmacists focused in on medication.
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54 Facilitators explained practice expectations had shifted from, "a product centred to person-centred
55 approach" and that this meant challenging the assumption, "we know best", understanding patient
56 illness beliefs, "although these may not make sense to you" and recognising patients, "are the
57 experts in themselves". Pharmacists were introduced to consultation models to provide a structure
58 to put the patient at the centre. Small groups discussed how they would implement each stage of
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3 the Calgary Cambridge model. This model for structuring medical interviews was developed by
4 Silverman and colleagues and is used widely in GP training [48]. During the debrief, facilitators gave
5 examples for content and possible phrasing, stressing the importance of clinical empathy, non-verbal
6 language and building rapport with appropriate body language and good eye contact. The Calgary
7 Cambridge model was described as very structured but “you learn to adapt it”.

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10 Other consultation models and the 4Es model of coaching: Engage, Explore, Evaluate, End were then
11 briefly introduced as alternatives. The mnemonics TED: Tell, Explain, Describe and ICE Ideas,
12 Concerns, Expectations were recommended for eliciting patient concerns, with the option of adding
13 Lifestyle factors and Feeling to the latter (L)ICE(F). The concept of ‘the golden minute’ was used to
14 stress the importance of allowing time for a patient to speak uninterrupted. Small groups then
15 suggested what they would do differently with five different groups – older people, people with
16 dementia, children and young people, people with learning disabilities and people with physical
17 disabilities. The debrief stressed consent issues and treating people as individuals.

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20 The second section of this workshop gave each of the 32 attendees a chance to try out some of this
21 in consultation scenarios with one of four actors. Pharmacists were encouraged by facilitators to,
22 “try something new”. Each consultation was observed by a peer who used a checklist to offer
23 feedback; “... the learning here is in feedback from peers”. Actors also gave feedback. Pharmacists
24 had two minutes for preparation, five minutes of role play and eight minutes feedback. Feedback
25 from both peers and actors featured lots of generic praise. Pharmacists were polite and interested
26 but none of the actor patients was given a ‘golden minute’ by a pharmacist, very little time was
27 spent building rapport and little attention was paid to establishing the patient’s concerns.

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29
30 Pharmacists again focused in on medications, asking lots of questions to identify opportunities to
31 give information, with many offering to go through all the person’s medicines with them. The form
32 of questioning assumed patients would readily know and provide the medical names of their drugs
33 and doses. Feedback from some actors provided more specific constructive feedback:

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36 ... deal with the patient. When you get someone closed don’t try and direct us to go through
37 the medications, say what you see hear in front of you. ‘You are sounding as if your mood is
38 quite low.’ Get the bull by the horns very sensitively. Don’t be scared of the answers you
39 might get (Actor).

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42 Discussions among the pharmacists showed that, despite the person-centred aims of the exercise,
43 they were looking for the ‘catch’ and the correct answer, so approached the people in the scenarios
44 as a medication problem or puzzle to be solved.

45 46 *History taking workshop*

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48 The second part of the workshop, on history taking and record keeping, took place the following
49 week and featured content by a retired GP who described his first slide on the golden minute as the
50 most important of the day. Throughout the workshop he stressed the importance of listening and
51 trying to look beyond a presenting symptom to understand what is going on for people. He advised
52 pharmacists to, “listen to the answers and respond, don’t default to the next question”. He said
53 throwing lots of questions at people, “clips their wings” and health professionals often interrupt. He
54 described consultations as, “a process, they flow” and cautioned against templates that, although
55 helpful, can turn everything into a yes, no binary and might miss things coming from the patient. He
56 said it had taken him 27 years so far to become confident with consultation skills; it was always
57 frightening because of gaps in knowledge and because it was interaction with humans.
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3 The workshop introduced mnemonics to help diagnose pain and red flag symptoms to look out for.
4 Exercises included scenarios acted by a facilitator followed by a debrief. One featured an urgent call
5 from a mother of a child with a rash. This had pharmacists asking lots of closed questions to see if it
6 was meningitis. When asked what they would do differently after this workshop answers included,
7 “try to be less robotic with questions; give patients the golden minute; be more open with
8 questions; listen more; give preference to patient's story – let them talk to gain info.”
9

10 11 *Takeaways from consultation skills training*

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13 Recall of the detail of their training pathways receded for interviewees with time. Receiving
14 feedback from patients and peers in practice and working with actors in the PCPEP training
15 workshop were identified by most ARRS interviewees as the most affecting part of their consultation
16 skills training:
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18 ... we did a face-to-face session where we had actors and we had to do a consultation ... and
19 ... be observed doing it. And then we got real time feedback from the actor themselves and
20 said how we made them feel, and from other people who were looking on, and that was one
21 of the best days I've had through the entire CPPE [PCPEP] ... Because it's really hard to know
22 how you're making people feel (4).
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25 Large groups in training meant that most of the time in a PCPEP consultation workshop was spent
26 observing others. Most interviewees remembered the point of the exercise was that they were
27 missing important information and the concerns of the patient:
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29 ... they actually did put a bit of sort of real world into it ... remembering not to just go into a
30 consultation with what I want to talk about ... let the patient have their time ... Everyone
31 likes to think they do shared decision making but ... there's ... a difference between telling
32 someone that this is the guidance and this is what you should be doing ... I think for me the
33 training's just, sort of, highlighted other ways of ... approaching that conversation (6).
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36 A pharmacist who found roleplay very uncomfortable did not feel he had benefitted from the
37 exercise because it was hard to 'play' himself (3). A pharmacist who had recently attended the
38 workshop said she handled a call with a patient differently afterwards:
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40 I think it's the listening thing. So although I feel like I listen and give them time, I was more
41 aware of consciously doing that (5).
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43 There was widespread endorsement of the idea of listening, though acquisition of listening skills was
44 work in process.
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48 49 *Achieving person-centredness*

50 Pharmacists on both pathways inevitably engaged with patient-centred discourse: “... it's always
51 holistic and patient focused” (5). Some currently on the PCPEP pathway felt they were actually
52 changing their practice to embrace more listening, but it was easy to slip into old habits. Giving
53 advice in a person-centred manner was recognised as challenging:
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55 I think I'm getting there ... even yesterday I was on the phone to a patient ... and I was on the
56 brink of saying to her, you know you really should be using inhalers and they'd be much
57 better for you ... you do think that you're one of these people who puts the patient first but
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2
3 then when you're actually in the situation you sort of think, actually, I'm not sure I am. I
4 need to really think again about how I'm doing this (10).

5
6 ... it's more difficult to do ... I'll tick the box and we'll move on ... you see people
7 [supervisees] doing reviews like that, because it's just much easier, you've got to make a real
8 conscious decision to do the other thing really and it's difficult (9).

9
10 ... I know that I should be doing less [talking] now, I'll try ... but ... unfortunately, I completely
11 struggle to put that into practice and to make that change (6).

12
13 Most pharmacists across the sample were much less confident about handling complex cases or
14 sensitive subjects like alcohol and opioid deprescribing and those with longer experience were more
15 aware of the complexity of SMR consultations [41]. One ARRS pharmacist was aware in retrospect
16 that their earlier perceived confidence did not match their skill-level:

17
18
19 ... I think with more knowledge, you ... become consciously incompetent because you realise
20 what you don't know ... which I guess is better than being unconsciously incompetent (4).

21
22 Many in both groups still focused on achieving "compliance" and perceived giving a
23 recommendation and asking if the patient was OK with that as fulfilling the shared decision-making
24 brief:

25
26 I give them my recommendation ... but at the end of the day, it's their own health and I let
27 them decide what they want to do ... it's better to be shared decision-making ... because
28 then you're going to get good compliance (1).

29
30
31 Pharmacists with less experience in primary care were waiting for a template to be developed for
32 SMRs and were unsure how this would fit with the consultation models recommended in PCPEP
33 training. An ARRS pharmacist who was very keen to adopt a person-centred approach was aware
34 that she found it hard to have confidence in what she was doing without feedback, especially from
35 patients:

36
37 I can't help people if I'm thinking they're a target. I need to think of them as a person ... and
38 I think it's really crucial that shared decision making is kind of like the pivotal backbone of a
39 consultation because without that communication and decision making from the patient
40 side ... how do we know they're going to comply? ... so I was talking to a patient. I thought I
41 was doing a really good consultation ... and doing shared decision-making. I put the phone
42 down. One of the pharmacists she said, oh no, you sounded a bit harsh ... I thought ... I
43 worded it really well ... And only when that pharmacist said that did, I think, oh what if
44 they're thinking that? ... it's the patient that you need to engage with ... and that can only be
45 done by getting patient feedback (7).

46
47
48 Some ARRS pharmacists thought shared decision-making was more relevant for medications like
49 statins but not for others where there was "no choice" about treatment recommendations (5), or
50 more relevant for initial prescribing rather than reviewing medication (8). In contrast, an ARRS
51 pharmacist more advanced in doing SMRs spoke about her experience of its importance for
52 deprescribing:

53
54 I think approaching it in the right way is key to deprescribing ... And people scoff at it ... oh
55 it's just woolly pharmacy practice stuff but actually, shared decision-making makes my life
56 easier as a pharmacist, and it puts the patient in control as well (4).

Discussion

Expectations that all health professionals will engage empathetically with patients have proliferated in an era when systemic problems inhibit such practice [49]. ARRS pharmacists appointed during the pandemic had few opportunities to practice their skills or to receive the feedback required to improve their levels of proficiency. Thus, we found almost no change in terms of interviewee responses to person-centred practice to report over the time of this study. Pharmacist-delivered medication reviews have to date involved little continuity of care and telephone-only contacts during the pandemic may have intensified pressures for short, transactional interactions. While speaking about their existing practice in person-centred terms and recognising that patients have preferences, pharmacists mostly described a traditional paternalistic communication style with a passive patient, and the pharmacist controlling information flow and decision-making [50].

SMRs require a step change in communication skills from the medication reviews with which new ARRS pharmacists were more familiar. As well as knowledge of treatments for multiple conditions, this involves developing requisite skills to conceptualise the complexity of patients' clinical and social situations, discuss the balances between different potential harms and benefits, and to know when and how to raise possibilities for de-prescribing or changing prescriptions. Pharmacists coming into primary care brought limited consultation experience and many took the skills involved in talking to patients somewhat for granted. Limited opportunities to experiment and receive feedback on consultation skills in practice left it to ARRS pharmacists to link the rather abstract knowledge gained on the PCPEP pathway with their own tacit, experiential knowledge of medication reviews. GP clinical supervision was mostly reactive, and the availability of senior pharmacist mentorship was patchy. This undermined opportunities for more pro-active consultation skills development in and through clinical practice. Long established habits in pharmacy medication review practice, prompted by concerns for patient safety, combined with new local incentives and contextual cues, were producing quick-fix information-giving practices in SMRs with minimal deliberative decision making, and some attempts to transcend these limitations [41].

The PCPEP facilitated familiarity with person-centred ideas and a language for describing practice, the effects of which may be challenging to observe. ARRS pharmacist's confidence in person-centred consultation skills did not translate readily into competence and was challenged when describing tackling subjects considered difficult or sensitive. This theory to practice translation challenge was also observed in the consultation workshop when actors playing patients did not conform easily to the usual question-and-answer format. Feedback given during the workshop was mostly from peers who were not proficient or expert themselves, and observation by peers with limited skills focusing on a list of requirements for assessment, may have inadvertently introduced a tick list that could draw focus away from the patient [51]. The workshop learning was somewhat disconnected from experiences of practice and 'hard' clinical knowledge was prized by interviewees over 'soft' communication skills, despite the presentation of these by trainers as central to history taking and diagnosis. Workshop facilitators encouraged pharmacists to adapt the Calgary Cambridge and other models to their own style. Without practice-based guidance, however, this carried the danger of inadvertently diluting important content.

Although medication reviews are complex interactions, these are often performed mechanically as mundane tasks by pharmacists, as well as GPs [16]. The ARRS clinical pharmacist role and how it fits with others as part of a multi-disciplinary team is still emerging. It relies on developing interpersonal and interprofessional relationships in the midst of a workforce crisis with pressured GPs. Material derived from GP training on consultation skills and history-taking on the PCPEP paid little attention to the possible differences between doctor-patient and pharmacist-patient roles. For example,

1
2
3 patients were yet to have a clear sense of what their relationship might be with a clinical pharmacist
4 and thus what to expect from the consultation. Patient clarity and trust in the GP role may help
5 secure good communication, with implications for how clinical pharmacists introduce their own
6 roles, and the SMR service, when providing information on how primary care services are organised.
7

8
9 While it might be true that, “the single most powerful tool in medicine remains the conversation
10 between patient and physician” [52], models of person-centred communication remain aspirational
11 for pharmacists as well as doctors. This study echoes others pre-pandemic that find that in spite of
12 its strong policy push, person-centred interventions such as shared decision-making have not been
13 adopted widely into healthcare practice [25], the importance of shared decision making as a method
14 of care is underestimated [53], and acknowledgement of patient preferences continues to be
15 positioned as at odds with, rather than integral to, evidence informed practice [54, 55]. Pharmacists
16 in both ARRS and earlier cohorts still used the language of “compliance” which is out of keeping with
17 contemporary person-centred discourse. The concept of ‘concordance’, which originated with a
18 review of medicine-taking by the Royal Pharmaceutical Society of Great Britain [56], interprets
19 consent to treatment not as an end in itself but an ongoing process and recognises people as
20 resistant to instruction where this seems contrary or irrelevant and where their own perspectives go
21 unacknowledged [57]. However, a “dominant compliance paradigm” in pharmacy practice persists
22 [58]. The initial presumption is that patients lack information rather than, for example, have unmet
23 needs or poorly co-ordinated care. Educational interventions to improve person-centred practice
24 have focused on the self-reflection of the individual practitioner, although it is not clear how or if
25 this works to disrupt the repetitive habits encouraged within organisational routines [59].
26 Overestimation of treatment effects [60], incentives to prescribe [61, 62] and ever closer ties
27 between pharmaceutical companies and organisations that regulate and sanction the use of their
28 products [63, 64], are all also implicated in the problematic polypharmacy for which the SMR is
29 proposed as a remedy in primary care. This is thus a complex issue requiring systems of care and
30 training to be organised such that SMRs can optimally contribute to reducing problematic
31 polypharmacy and improving population health.
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37 **Conclusion**

38
39 SMRs were introduced while ARRS pharmacists were new and in training, without time to secure
40 solid foundations for practice in the primary care general practice setting. Remote practice during
41 the COVID-19 pandemic had a major impact on training pathway provision, SMR implementation
42 and conduct. PCPEP consultation training introduced participants to expectations and principles, but
43 further practice development support, (and evaluation of this) is needed to develop grounded skills
44 for person-centred medication reviews. Addressing problematic polypharmacy requires healthcare
45 structural and organisational changes which include enhancing the communication skills of health
46 professionals, and how such skills are actually used in practice.
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51 **Additional information**

52 *Ethics approval*

53
54
55 The study received research ethics approval from NHS Health Research Authority (REC reference
56 20/HRA/1482). Written informed consent was obtained from pharmacists to participate in the
57 study. CPPE consented for the workshops to be observed subject to the consent of participants. This
58 was granted at the start of each workshop.
59
60

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Patient consent for publication

None required

Author contributions

JM, MM and DS designed the study. MM and TM conducted the interviews. MM led the analysis of the data. All authors made substantial contributions to theorisation through group discussions and paper development. MM conceptualised and led the write up of the paper; all authors contributed to refining the themes and editing drafts.

Competing interests

The Authors declare that there is no conflict of interest.

Data availability statement

No data are available. This study has not received ethical approval to share confidential data with any third party other than the study research team.

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Topic guide - Skills Development for Patient-facing Work in Primary Care

- Details of PCN role – job title, when took up current post (or first worked in general practice setting), overview of current roles, brief career history
- PCN experience – views and experiences of PCN, relationship with colleagues during transition to general practice setting, local arrangements for integrating, managing and supervising clinical pharmacists, PCN level of maturity, pros and cons of working within particular operational model, any role in the integration of new clinical pharmacists, autonomy to shape PCN direction
- Patient facing practice – current and past, what “person-centredness” means in own practice
- Training for person-centred consultation practice – experience and suitability of training to become a person-centred practitioner (incl. most valued and gaps), experience of current or prior CPPE pathway, views on current PCPEP via direct experience and supervising others
- Medication reviews – understanding of the new Structured Medication Review (SMR), local implementation of SMRs, personal approach to medication reviews, alcohol within medication reviews

Reporting checklist for ‘Skills development for patient facing work in primary care: Findings from a qualitative longitudinal cohort study of Clinical Pharmacists’.

Based on the SRQR guidelines.

	Reporting Item	Page Number
	#1 Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	5-6
	#2 Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Problem formulation	#3 Description and significance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	4-5
Purpose or research question	#4 Purpose of the study and specific objectives or questions	2,5
Qualitative approach and research paradigm	#5 Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenology, narrative research) and	5

guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.

14	Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
26	Context	#7	Setting / site and salient contextual factors; rationale	4-5
28	Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5-6
34	Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	14
40	Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	5-6
50	Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5

1	Units of study	#12 Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	5-6
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5	Data processing	#13 Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5-6
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12	Data analysis	#14 Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5-6
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19	Techniques to enhance trustworthiness	#15 Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5-6
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24	Syntheses and interpretation	#16 Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6-12
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30	Links to empirical data	#17 Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	7-12
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34	Intergration with prior work, implications, transferability and contribution(s) to the field	#18 Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application / generalizability; identification of unique contributions(s) to scholarship in a discipline or field	12-14
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44	Limitations	#19 Trustworthiness and limitations of findings	3
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46	Conflicts of interest	#20 Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	14
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51	Funding	#21 Sources of funding and other support; role of funders in data collection, interpretation and reporting	14
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The SRQR checklist is distributed with permission of Wolters Kluwer © 2014 by the Association of American Medical Colleges. This checklist can be completed online using <https://www.goodreports.org/>, a tool made by the [EQUATOR Network](#) in collaboration with [Penelope.ai](#)

BMJ Open

CONSULTATION SKILLS DEVELOPMENT IN GENERAL PRACTICE: FINDINGS FROM A QUALITATIVE STUDY OF NEWLY RECRUITED AND MORE EXPERIENCED CLINICAL PHARMACISTS DURING THE COVID-19 PANDEMIC

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Secondary Subject Heading:	Patient-centred medicine, Communication, Medical education and training, Qualitative research
Keywords:	QUALITATIVE RESEARCH, PRIMARY CARE, EDUCATION & TRAINING (see Medical Education & Training), Quality in health care < HEALTH SERVICES ADMINISTRATION & MANAGEMENT

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CONSULTATION SKILLS DEVELOPMENT IN GENERAL PRACTICE: FINDINGS FROM A QUALITATIVE STUDY OF NEWLY RECRUITED AND MORE EXPERIENCED CLINICAL PHARMACISTS DURING THE COVID-19 PANDEMIC

10 Dr Mary Madden (Associate Professor), University of York, York, YO10 5DD

11 Professor Duncan Stewart, London Metropolitan University, 166-220 Holloway Rd, London N7 8DB

12
13
14 Dr Thomas Mills, University of York, York, YO10 5DD

15
16 Jim McCambridge, University of York, York, YO10 5DD

17
18
19
20 Corresponding author details:

21 Dr Mary Madden

22
23 Department of Health Sciences

24
25 University of York,

26
27 York, YO10 5DD

28
29 Email: mary.madden@york.ac.uk

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Abstract

Objective

The new Structured Medication Review (SMR) service was introduced into the National Health Service (NHS) in England during the COVID-19 pandemic, following a major expansion of clinical pharmacists within new formations known as Primary Care Networks (PCNs). The aim of the SMR is to tackle problematic polypharmacy through comprehensive, personalised medication reviews involving shared decision-making. Investigation of clinical pharmacists' perceptions of training needs and skills acquisition issues for person-centred consultation practice will help better understand their readiness for these new roles.

Design

A longitudinal interview and observational study in general practice.

Setting and participants

A longitudinal study of 10 newly recruited clinical pharmacists interviewed three times, plus a single interview with 10 pharmacists recruited earlier and already established in general practice, across 20 newly forming PCNs in England. Observation of a compulsory two-day history taking and consultation skills workshop.

Analysis

A modified framework method supported a constructionist thematic analysis.

Results

Remote working during the pandemic limited opportunities for patient-facing contact. Pharmacists new to their role in general practice were predominantly concerned with improving clinical knowledge and competence. Most said they already practiced person-centred care, using this terminology to describe transactional medicines-focused practice. Pharmacists rarely received direct feedback on consultation practice to calibrate perceptions of their own competence in person-centred communication, including shared decision-making skills. Training thus provided knowledge delivery with limited opportunities for actual skills acquisition. Pharmacists had difficulty translating abstract consultation principles into specific consultation practices.

Conclusion

SMRs were introduced when the dedicated workforce was largely new and being trained. Addressing problematic polypharmacy requires structural and organisational interventions to enhance the communication skills of clinical pharmacists (and other health professionals), and their use in practice. The development of person-centred consultation skills requires much more substantial support than has so far been provided for clinical pharmacists.

Strengths and Limitations

- This study provides a rigorous, in-depth, qualitative investigation of the views of clinical pharmacists on their training needs and person-centred skills development for patient-facing work in primary care
- The sampling approach captured perspectives from pharmacists new to and familiar with working in a GP practice setting across 20 diverse PCNs in England
- The study has limitations common to exploratory qualitative studies and the COVID-19 pandemic placed limitations on pharmacists' capacity for patient-facing work, training delivery, and data collection in primary care
- Comparison with observation of actual rather than reported consultation practice is needed to further ground the findings in the empirical realities of practice
- Studies of this nature could be complemented by investigations of the perspectives of patients receiving observed SMRs

Background

In the UK, the pharmacy profession has been increasingly encouraged to take on more patient-facing roles, thus extending the traditional dispensing role involving short, instrumental, transactional, patient interactions [1]. Standards and other forms of professional organisation for a growing pharmacy role in General Practitioner (GP) practices have been slowly emerging [2, 3]. The move towards these more clinically focused primary care pharmacist roles, involving consulting with and treating patients directly, co-exists with a longer tradition of pharmacists employed by some individual GP practices for a range of medicines optimisation work. Evaluation of the 2015 pilot scheme, 'Clinical Pharmacists in General Practice', launched by National Health Service (NHS) England, found wide variability in the understanding of the clinical role and a mismatch between what GPs expected of pharmacists and what pharmacists said they felt ready and able to do [4]. Pharmacists recognised gaps in their knowledge and skills for this particular role, but were not always able to identify specific learning needs [4].

Building on this earlier clinical pharmacy pilot [5], a clinical patient-facing pharmacist role has been introduced into GP practices in England while new Primary Care Network (PCN) structures were forming [6-8]. This coincided with the COVID-19 pandemic. PCNs comprised a group of GP practices collaborating locally, which allowed them to access additional funding distributed at PCN level for extra staff under the NHS Additional Roles Reimbursement Scheme (ARRS). The purpose was to deliver enhanced services to improve population health locally. The clinical pharmacist role was one of the first ARRS roles funded in this way and was soon followed by a contractually required PCN Structured Medication Review (SMR) service.

The aim of the ARRS scheme was to, "grow additional capacity through new roles" to help solve the workforce shortage in general practice [9]. There was disquiet about the level of funding to meet the expected PCN workload prior to the pandemic [10]. Early research indicates huge variation in how ARRS roles, including the new clinical pharmacist role, were being implemented and integrated into primary care teams [11] and a lack of agreement about whether clinical pharmacists should prioritise the requirements of the PCN contract or the 'core' work of general practice [8]. As unincorporated networks of practices, PCNs were not legal entities and so could not employ staff themselves [8]. This resulted in a range of operational models; some ARRS pharmacists were working in teams shared across practices in a PCN, some were based solely in individual GP practices while others were contracted through third party agencies [8].

New ARRS PCN clinical pharmacists must enrol in or have qualified from an accredited training pathway, a revised version of the training provided on the 'General Practice Pharmacist Training Pathway' (GPPTP) in the 2015 pilot scheme [12]. The 18-month 'Primary Care Pharmacy Education Pathway' (PCPEP), run by the Centre for Pharmacy Postgraduate Education (CPPE), provides a combination of 28 study days, peer learning sets, assessments, and access to three support functions - an education supervisor (offering individualised educational support), a GP clinical supervisor (based in practice, offering day-to-day clinical support), and a clinical mentor (an experienced clinical pharmacist). After the PCPEP is completed, those pharmacists who are not already prescribers undertake 6-month independent prescriber training, totalling two years to complete the pathway and become a prescriber.

A review into the extent of NHS overprescribing, particularly in primary care, and ways to reduce this, has identified the SMR as, "an ideal tool to help people with problematic polypharmacy" [13]. Problematic polypharmacy has been identified as a 'wicked' problem adding to the treatment burden experienced by patients [14, 15], and as a relational challenge involving decision-making

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3 under circumstances of complexity and uncertainty [16]. The contract specification for the new PCN
4 SMR service described a patient-centred, outcome-focused approach to medicines optimisation
5 comprising an invited, personalised, holistic review of all medicines for people at risk of medicines-
6 related harm, lasting 30 minutes or more [17]. Target groups included those taking 10 or more
7 medicines; using potentially addictive pain management medication; on medicines commonly
8 associated with medication errors; living in care homes; or with severe frailty and recent hospital
9 admissions or falls. SMRs were required to be attentive to health literacy and conducted in line with
10 the principles of shared decision-making by pharmacists who have, or are in training for, a
11 prescribing qualification and have advanced assessment and history-taking skills [17].
12

13
14 Interchangeable use of the terms patient- and person-centred occurs within pharmacy, as in other
15 health care professions [18], with some preferring 'person-centred' because it connotes broader
16 identities and social contexts than a recipient in a health care encounter [19]. "Health literacy" is
17 another concept used in the SMR specification which invites multiple interpretations [20]. Different
18 conceptualizations of person-centred care concur on the importance of communication and
19 relationships between patients and healthcare professionals [18]. Shared decision-making is
20 recognised as a core component of NHS personalised, patient-centred care [21]. This requires
21 effective engagement between health professionals who possess expertise in the effectiveness,
22 probable benefits and potential harms of treatment options and patients willing to share 'expertise'
23 in their social circumstances, values, preferences and attitudes to illness and risk. Guidelines on
24 shared decision-making are published by the National Institute for Health and Care Excellence [22].
25 The aim is to replace unwarranted variation with warranted variation arising from the goals and
26 preferences of informed patients [23].
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31 Research outside of pharmacy shows the practical and ethical tensions inherent in translating
32 rhetoric about person-centred support and shared decision-making into actual health care practice
33 [24-26]. Few studies have focused on health professionals' perceptions of specific communication
34 behaviours necessary for shared decision-making [27], and little is known about the effectiveness of
35 strategies for communicating uncertainties in clinical practice [28]. Similarly, there is little evidence
36 to show that the specific standards and guidance available on pharmacy consultation skills support
37 pharmacists' delivery of person-centred care in practice [29]. Studies of pharmacist medication
38 review services, including those described in person-centred terms, have shown a pragmatic
39 medication focus rather than a person-centred approach, with reviews simplified and adapted to
40 facilitate delivery within time-pressured organisational constraints, largely comprising pharmacist-
41 led information provision [30-34].
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45 This study explores the perspectives of clinical pharmacist working in forming PCNs on consultation
46 training provision and skills acquisition for the new SMR service, with a particular focus on person-
47 centred consultation practice. It forms part of a research programme to develop and evaluate
48 person-centred and clinically appropriate ways of highlighting alcohol within pharmacist reviews of
49 medications [35]. It is one of a number of studies seeking to understand pharmacist medication
50 review practice and skills as a potential site for intervention [30, 36, 37] and find better ways to
51 manage alcohol in general practice [38-40]. Findings on early implementation of the SMR have been
52 reported elsewhere [41]. These showed that while some PCNs with more established pharmacists
53 were making progress in developing a distinct SMR service, others were mainly fulfilling a variety of
54 routine medicines-related tasks in response to backlogs, some of which were labelled as SMRs, if
55 they were with patients in the SMR target groups [41]. Findings on clinical pharmacists' experience
56 of and confidence in discussing alcohol with patients in their new role are being reported elsewhere
57 [42].
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Methods

The intrinsic nature of the acquisition of complex skills required for person-centred medication review practice called for a longitudinal design; the study therefore followed ARRS clinical pharmacists over time as they undertook PCPEP training and became established in the role. Study recruitment procedures were informed by consultation with CPPE and the research programme's Pharmacy Practitioner group. A purposive sample of general practices across PCNs in Northern England was established using pharmacist workforce and SMR activity data, and researchers telephoned existing and new PCN contacts to recruit pharmacists into the study. Ten newly appointed ARRS pharmacists in 10 PCNs in Northern England were interviewed three times between September 2020 and February 2022 (n=30 interviews). Final interviews took place during the spread of the Omicron variant. A compulsory PCPEP two-day history-taking and consultation skills workshop conducted by video conference in 2020 was observed with permission from CPPE providers and the attending group of ARRS participants. Contemporaneous notes were taken. Direct observation of consultation training informed interview topic guides and provided empirical data on content and pharmacist participation in the workshop for triangulation with reports of consultation training in interviews.

In addition, 10 clinical pharmacists in 10 other PCNs across England already established in GP practices, were interviewed once between February and May 2021 (total interviews n=40). Interviews sought perspectives on the skills and training required for the new SMR service and how their role fitted with new ARRS colleagues. Recruitment here used opportunistic sampling and snowballing recruitment techniques. A leaflet describing the study and inviting pharmacists to contact the research team was distributed via national pharmacy organisations and on social media. This group provided further data on SMR implementation and skills development from pharmacists already employed by individual GP practices pre-ARRS and pre-pandemic who were now working with or adjacent to new ARRS pharmacists in the PCN environment. Interviews lasting between 35 and 70 minutes were conducted via video call by one of two researchers (MM, TM) using a semi-structured topic guide (available as an appendix). This was developed iteratively and individually tailored in follow-up ARRS interviews. Audio-recordings were professionally transcribed and pseudonymised.

A modified framework method was used to organise and present data from transcripts and field notes [43]. This supported a constructionist thematic analysis [44]. With the topic guide forming the initial framework, interview transcripts were coded in NVivo 1.0 to produce a list of initial descriptive themes identifying current perspectives on person-centred practice and consultation skills development and training and noting changes in these over the course of the interviews. Comparative analyses identified common, recurring, and conflicting perspectives, paying attention to the ways in which accounts were constructed. Rather than being a comparative study of two distinct cohorts (ARRS and GPPTP recruits), the key analytic focus was on understanding factors impacting individual skills development for SMRs within the dynamic and emerging primary care landscape. This focus also reflected the extent of observed heterogeneity within the two groups, and we make some comparisons between the groups within the elaboration of study findings. Preliminary analysis of sample scripts, sub-themes and the final analytic narrative were discussed with co-investigators. Reporting follows SRQR guidelines [45]. Findings will inform further development of a complex intervention [30].

Patient and public involvement

The study sits within a research programme working with an experienced Patient and Public Involvement (PPI) group who were consulted throughout the research process. Programme co-production and PPI practices have been reported at length elsewhere [46]. PPI members on the project steering group took part in discussions about these findings.

Results

The pandemic entailed changes to anticipated patient facing services and working practices. Implementation of the SMR service during the course of the study was slow, and often delegated to ARRS pharmacists in training on the PCPEP i.e. mostly without a prescribing qualification or advanced assessment and history-taking skills [41]. All pharmacists in the study were currently working with patients remotely, by telephone, with most of the new ARRS pharmacists yet to meet a patient face-to-face other than at a Covid-19 vaccine clinic. Pharmacist experience and training prior to working in the new PCN setting was varied within and between the cohorts, as were current PCN working conditions. Individual GP practices were in the process of determining any distinctions between the role of ARRS clinical pharmacists and existing GP practice pharmacists.

Only one of the 10 pharmacists newly employed into an ARRS clinical pharmacy role had prior experience in a GP practice. Three were appointed at senior or lead pharmacist level, two of these had been qualified for four years and one for 30 years. Two of these, including the one qualified for 30 years, were on the PCPEP pathway, and the one with prior GP experience had completed it. Two out of the 10 ARRS pharmacists were prescribers. One was provisionally registered as a pharmacist, completing this by the third interview. One continued to study for a clinical pharmacy diploma while on the PCPEP pathway; another had completed this while in hospital pharmacy. Eight had applied for their PCN position from community pharmacy, one from hospital pharmacy and the one from a GP practice pharmacist position. Some were working within one GP practice, while others split their time across the PCN. Most had pharmacist colleagues within the PCN, but others were the sole pharmacist. Two moved to a different PCN during the study, one of these had three different posts during the life of the study, starting at senior PCN level and moving to a more autonomous post within a specific GP practice.

All 10 established GP practice pharmacists were prescribers, and most were in or taking on senior and leadership roles in PCNs and Integrated Care Systems (new structures of partnership developed after PCNs with a view to integrating health and care services [47]). Nine had completed the GPPTP pilot training scheme, launched in 2016-17 [4]. One, working half time in community pharmacy and a prescriber, was currently on the new PCPEP pathway along with pharmacists she was supervising. Others had indirect contact with the PCPEP through working with or supporting new ARRS colleagues. Prior to coming into GP practice, five had worked in hospital pharmacy, two in community pharmacy and three at commissioning level (i.e., assessing needs, planning, prioritising, purchasing and monitoring health services rather than providing them [48]). Further participant characteristics are in Table 1.

Table 1: Self-described participant characteristics

Pharmacists	ARRS	Already established in GP practices
Age range	25-52	35-53

	mean 35.2	mean 41.8
Sex		
Female	7	8
Male	3	2
Ethnicity		
White British	8	7
British Pakistani	1	0
British Persian	1	0
British Indian	0	2
British Bangladeshi	0	1

Those who were employed and established as GP practice pharmacists pre-PCN are designated by an X before their identifier number in the results to differentiate them from the more recent ARRS PCN recruits, the key focus of this study.

Connecting pathway to practice

There was wide variation in levels of reported engagement with the PCPEP pathway and in how pharmacists thought the training aligned with the contexts in which they were working. Ongoing COVID-19 pandemic induced limitations to patient contact in practice meant that there was limited opportunity for practising new skills with patients. PCPEP training, planned for in-person delivery, had to be redesigned for remote delivery and some interviewees and their colleagues were experiencing delays or were on waiting lists. Observed and reported course content continued to be focused on in-person practice rather than the current mode of telephone practice, much of which was conducted through cold calling and was perceived by most pharmacists as a potential barrier to person-centred practice development because it inhibited signalling and picking up on social cues.

All ARRS pharmacists had access to advice or clinical supervision from GPs, most of this in the form of GPs reacting to queries as they arose. Not all ARRS pharmacists, however, had access to senior pharmacist mentorship. Most were trying to minimise taking up the time of busy colleagues. Those working on the vaccine programme or medication-related administration were finding it difficult to complete other tasks. Some felt overburdened at times and others under-used. Early on, an experienced pharmacist coming from community pharmacy said she felt she was in education, rather than work and training, mode:

I don't feel like I've got a job particularly, it's just a bit learning this and learning that ... I'm learning clinical stuff; I'm not learning any clinical skills ... Because it's all remote ... I think the clinical skills development has to be when you are actually going to use it ... I could train now and not use it for six-months and I would need training again ... reflective essays and writing ... about difference you've made to practice ... that's laborious and you don't get a lot out of it ... (5).

Even the most highly motivated talked about the difficulty in being able to link and consolidate their learning during the pandemic, "because there's so many events going on ... sometimes I feel like I forget" (7).

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3 Shifting the PCPEP online limited the opportunities for peer interaction. Those pharmacists who had
4 attended one of the iterations of the pathway pre-pandemic said the residential study days provided
5 them with a very useful and supportive peer network. This contrasted with groups formed online via
6 social media, which were described as more instrumental than social; people only contacted each
7 other when there was an issue. Online attendees reported frustrations with the amount of reading,
8 navigating multiple websites and colleagues keeping silent and opting out of group activities in video
9 workshops. Many thought that doing the pathway as originally designed would be less, “laborious
10 and lonely ... I think everybody feels pretty much the same ... that while it’s worthwhile, it does feel
11 like a chore” (5).
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16 *Lack of ‘hands on’ preparation for a challenging and complex role*

17
18 Pharmacists with longer experience in primary care said the best use of their primary care training
19 pathway was to complement learning in practice and pharmacists had to be proactive to get the
20 most out of it. In terms of preparation for patient-facing work, some interviewees in both ARRS and
21 prior GPPTP cohorts compared their prior professional pharmacy training negatively to the much
22 more “hands on” training of doctors, dentists and nurses:
23
24

25 I never saw a patient in my whole degree really and then you get taught, oh well you need to
26 do these concepts ... too much talk about concepts and not enough hands-on (9).
27

28 ... certainly when I was at university, we weren’t taught ... what’s bread and butter for nurses
29 and doctors ... we haven’t got quite the hands-on skills ... I think people hoped that GPs
30 would take you under their wing a bit and teach you as you went ... like they would a
31 registrar, or something. My experience has been, although they’re very supportive and very
32 nice, they don’t want to do that bit ... they almost expected you to drop in fully formed ...
33 (X7).
34
35

36 There were examples of more senior pharmacists attempting to take those new to the role, “under
37 their wing”. One ARRS pharmacist, who quickly took on a senior role after working in a GP practice
38 with a “brilliant training culture”, received training which mirrored that of a GP registrar:
39

40 I got really good input from the GPs in training ... what pharmacists lack is that hands on
41 face-to-face clinical skills ... I think it takes a lot more input than some people think (9).
42
43

44 Another pharmacist with longer experience in primary care said her own learning had been “sink or
45 swim” on the job and she saw her current supervisees struggling with, “the softer skills like how do
46 you negotiate things with a GP, if you’ve got tension between staff? ... if you’ve got a patient being
47 really difficult and you then run late in clinic, how do you manage that?” (X5).
48
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51 *Acquiring clinically relevant skills*

52
53 Becoming a prescriber and improving clinical knowledge were the key priorities for pharmacists new
54 to a general practice primary care role and there was a perceived lack of “clinical” focus to the
55 training offered. Most pharmacists said they preferred the specific clinically focused elements of
56 both the GPPTP and the PCPEP pathways that were delivered by a GP training company to other
57 content which they described as more, “wishy-washy” (3, 5), “fluffy” (9) or “box-ticky” (3, X7). Some
58 said they struggled with the reflective style of learning on the pathways but appreciated the chance
59 to have some thinking time outside of the usual routine.
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3 Some interviewees in both cohorts said the clinical content of their pathway was “too basic” for
4 those with experience in general practice or a clinical diploma (e.g., X4, X3, 8) and that some
5 pharmacists now on the PCPEP were not gaining enough actual clinical experience. An ARRS
6 interviewee coming from hospital pharmacy wanted more “clinical information”, categorising
7 material on interaction with patients as “non-clinical” and better learned in practice:
8
9

10 I just ... wanted ... what you need to know for general practice, here’s how you deal with ... X
11 disease, here’s how you deal with this medicine ... because I feel quite confident on how to
12 interact with patients and all the non-clinical things ... I learned more by just having practise
13 of it rather than reading models (8).
14

15 Most of the more recently qualified pharmacists had received some communication and
16 consultation skills training at university level and had experienced objective structured clinical
17 examinations (OSCEs). Some of these said this provided an essential foundation and considered
18 learning about consultation models from PCPEP as more relevant for others, those who lacked
19 confidence or did not have this in their university background.
20
21

22 An ARRS pharmacist with prior GP practice experience, now in a senior role which, during the time of
23 the study, was focused more on supporting new pharmacists than directly delivering patient-facing
24 practice, spoke about the limitations of “counselling” training in pharmacy and why he had
25 subsequently developed his own consultation skills by taking a level two counselling course, “I
26 actually think it’s something everyone should do” (9):
27
28

29 ... [W]hen ... pharmacists get trained, they do a lot of counselling patients ... which is just
30 really telling the patient something. They don’t do a lot of ... consultation skills where ... you
31 ... open up that idea of the patient has the choice, you need to give them the options and
32 they can decide ... that style of consultation is really important ... because it becomes less of
33 you’re telling them off ... Pharmacy school is, right or wrong, this or that ... it’s almost like
34 the guideline is the law ... whereas the GPs don’t have that view ... I think it makes
35 pharmacists feel uncomfortable, the lack of certainty ... They want it to be, this is the
36 answer, right or wrong ... the other thing pharmacists don’t get a lot of ... is that sort of
37 debrief style of reflection on their own work (9).
38
39

40 He and a few others had sought out opportunities for peer review and shadowing in order to
41 improve their own practice:
42
43

44 I don’t know how many times I’ve done consultation skills and role-play and I still hate it. I
45 think the biggest change for consultation skills is when you’re at work. And I think even
46 though I absolutely detest it, having my clinical supervisor sit with me when I do some phone
47 calls, listening to the conversation and feedback is much more worthwhile (5).
48

49 Pharmacists with prior community pharmacy experience but little opportunity to work with patients
50 in their university courses felt they had developed their communication skills on the job, “without ...
51 realising”, but were aware that, “... all sorts of theory comes into it” (10):
52
53

54 ... there are things which get covered now in the undergraduate course which probably
55 weren’t even thought of back 30 years ago and in particular things like communication skills,
56 patient-centred consultations ... any skills I have in that respect have been based on dealing
57 with people, finding what works well, what doesn’t work so well and building it up myself
58 rather than ever being taught it ... it is common sense, really (10).
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3 Many ARRS interviewees and some of those with longer experience in GP settings shared the idea
4 that communication skills development was “common sense”, and some were ambivalent about the
5 extent to which skills, often assumed to be inherent, or acquired on the job, could be taught on
6 courses:
7

8 ... consultation skills ... either you have them inherently or you need to practise them, and I
9 don't feel like they're something that responds particularly well to classroom teaching ... you
10 can't role play consultation skills ... 'cause you'll always be aware that the other person isn't
11 a patient ... they're not going to lash out at you, they're not going to go off on one, they're
12 not going to take things the wrong way (3).
13
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16

17 *Consultation skills workshop observation*

18
19 ARRS pharmacists at an observed PCPEP workshop on how to practically apply consultation skills
20 (passing an online assessment was a pre-requisite of attendance), build confidence and put the
21 patient at the centre of consultation, said they felt confident or fairly confident in their skills, though
22 less so for working with older people, children, people with dementia or people with learning
23 disabilities. As anticipated by CPPE facilitators, in exercises aimed to show that, “medicines are like
24 catnip to pharmacists” and, “... the patient's agenda ... should not be the last thing we think about”,
25 pharmacists focused in on medication.
26
27

28 Facilitators explained practice expectations had shifted from, “a product centred to person-centred
29 approach” and that this meant challenging the assumption, “we know best”, understanding patient
30 illness beliefs, “although these may not make sense to you” and recognising patients, “are the
31 experts in themselves”. Pharmacists were introduced to consultation models to provide a structure
32 to put the patient at the centre. Small groups discussed how they would implement each stage of
33 the Calgary Cambridge model. This model for structuring medical interviews was developed by
34 Silverman and colleagues and is used widely in GP training [49]. During the debrief, facilitators gave
35 examples for content and possible phrasing, stressing the importance of clinical empathy, non-verbal
36 language and building rapport with appropriate body language and good eye contact. The Calgary
37 Cambridge model was described as very structured but “you learn to adapt it”.
38
39

40
41 Other consultation models and the 4Es model of coaching: Engage, Explore, Evaluate, End were then
42 briefly introduced as alternatives. The mnemonics TED: Tell, Explain, Describe and ICE Ideas,
43 Concerns, Expectations were recommended for eliciting patient concerns, with the option of adding
44 Lifestyle factors and Feeling to the latter (L)ICE(F). The concept of ‘the golden minute’ was used to
45 stress the importance of allowing time for a patient to speak uninterrupted. Small groups then
46 suggested what they would do differently with five different groups – older people, people with
47 dementia, children and young people, people with learning disabilities and people with physical
48 disabilities. The debrief stressed consent issues and treating people as individuals.
49
50

51 The second section of this workshop gave each of the 32 attendees a chance to try out some of this
52 in consultation scenarios with one of four actors. Pharmacists were encouraged by facilitators to,
53 “try something new”. Each consultation was observed by a peer who used a checklist to offer
54 feedback; “... the learning here is in feedback from peers”. Actors also gave feedback. Pharmacists
55 had two minutes for preparation, five minutes of role play and eight minutes feedback. Feedback
56 from both peers and actors featured lots of generic praise. Pharmacists were polite and interested
57 but none of the actor patients was given a ‘golden minute’ by a pharmacist, very little time was
58 spent building rapport and little attention was paid to establishing the patient's concerns.
59
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3 Pharmacists again focused in on medications, asking lots of questions to identify opportunities to
4 give information, with many offering to go through all the person's medicines with them. The form
5 of questioning assumed patients would readily know and provide the medical names of their drugs
6 and doses. Feedback from some actors provided more specific constructive feedback:
7

8
9 ... deal with the patient. When you get someone closed don't try and direct us to go through
10 the medications, say what you see hear in front of you. 'You are sounding as if your mood is
11 quite low.' Get the bull by the horns very sensitively. Don't be scared of the answers you
12 might get (Actor).
13

14 Discussions among the pharmacists showed that, despite the person-centred aims of the exercise,
15 they were looking for the 'catch' and the correct answer, so approached the people in the scenarios
16 as a medication problem or puzzle to be solved.
17

18 *History taking workshop*

19
20 The second part of the workshop, on history taking and record keeping, took place the following
21 week and featured content by a retired GP who described his first slide on the golden minute as the
22 most important of the day. Throughout the workshop he stressed the importance of listening and
23 trying to look beyond a presenting symptom to understand what is going on for people. He advised
24 pharmacists to, "listen to the answers and respond, don't default to the next question". He said
25 throwing lots of questions at people, "clips their wings" and health professionals often interrupt. He
26 described consultations as, "a process, they flow" and cautioned against templates that, although
27 helpful, can turn everything into a yes, no binary and might miss things coming from the patient. He
28 said it had taken him 27 years so far to become confident with consultation skills; it was always
29 frightening because of gaps in knowledge and because it was interaction with humans.
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33 The workshop introduced mnemonics to help diagnose pain and red flag symptoms to look out for.
34 Exercises included scenarios acted by a facilitator followed by a debrief. One featured an urgent call
35 from a mother of a child with a rash. This had pharmacists asking lots of closed questions to see if
36 it was meningitis. When asked what they would do differently after this workshop, answers included:
37 "try to be less robotic with questions; give patients the golden minute; be more open with
38 questions; listen more; give preference to patient's story – let them talk to gain info."
39
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41 *Takeaways from consultation skills training*

42
43 Recall of the detail of their training pathways receded for all interviewees with time. Receiving
44 feedback from patients and peers in practice and working with actors in the PCPEP training
45 workshop, while limited, were identified by most ARRS interviewees as the most affecting part of
46 their consultation skills training:
47

48 ... we did a face-to-face session where we had actors and we had to do a consultation ... and
49 ... be observed doing it. And then we got real time feedback from the actor themselves and
50 said how we made them feel, and from other people who were looking on, and that was one
51 of the best days I've had through the entire CPPE [PCPEP] ... Because it's really hard to know
52 how you're making people feel (4).
53
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55 Large groups in training meant that most of the time in a PCPEP consultation workshop was spent
56 observing others. Most interviewees remembered the point of the exercise was that they were
57 missing important information and the concerns of the patient:
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3 ... they actually did put a bit of sort of real world into it ... remembering not to just go into a
4 consultation with what I want to talk about ... let the patient have their time ... Everyone
5 likes to think they do shared decision making but ... there's ... a difference between telling
6 someone that this is the guidance and this is what you should be doing ... I think for me the
7 training's just, sort of, highlighted other ways of ... approaching that conversation (6).
8
9

10 A pharmacist who found roleplay very uncomfortable did not feel he had benefitted from the
11 exercise because it was hard to 'play' himself (3). A pharmacist who had recently attended the
12 workshop said she handled a call with a patient differently afterwards:
13

14 I think it's the listening thing. So although I feel like I listen and give them time, I was more
15 aware of consciously doing that (5).
16

17 There was widespread endorsement of the idea of listening, though acquisition of listening skills for
18 person-centred practice was work in process.
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22 *Achieving person-centredness*

23
24 Pharmacists on both pathways inevitably engaged with patient-centred discourse: "... it's always
25 holistic and patient focused" (5). Some currently on the PCPEP pathway felt they were actually
26 changing their practice to embrace more listening, but it was easy to slip into old habits. Giving
27 advice in a person-centred manner was recognised as challenging:
28

29 I think I'm getting there ... even yesterday I was on the phone to a patient ... and I was on the
30 brink of saying to her, you know you really should be using inhalers and they'd be much
31 better for you ... you do think that you're one of these people who puts the patient first but
32 then when you're actually in the situation you sort of think, actually, I'm not sure I am. I
33 need to really think again about how I'm doing this (10).
34
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36 ... it's more difficult to do ... I'll tick the box and we'll move on ... you see people
37 [supervisees] doing reviews like that, because it's just much easier, you've got to make a real
38 conscious decision to do the other thing really and it's difficult (9).
39

40 ... I know that I should be doing less [talking] now, I'll try ... but ... unfortunately, I completely
41 struggle to put that into practice and to make that change (6).
42
43

44 Most pharmacists across the sample said they were much less confident about handling complex
45 cases or sensitive subjects like alcohol and opioid deprescribing, and those with longer experience in
46 the GP practice setting were more aware of the complexity of SMR consultations [41]. One ARRS
47 pharmacist, employed early enough to have had some face-to-face contact with patients, was aware
48 in retrospect that their earlier perceived confidence did not match their skill-level:
49

50 ... I think with more knowledge, you ... become consciously incompetent because you realise
51 what you don't know ... which I guess is better than being unconsciously incompetent (4).
52
53

54 This pharmacist, who changed post three times during the study, was the only one to articulate a
55 clear sense of practice development in terms of patient-facing practice while in an ARRS role.

56 Many pharmacists across both new ARRS and existing GP practice groups still articulated their
57 medication review practice in terms of achieving "compliance" and perceived giving a
58 recommendation and asking if the patient was OK with that as fulfilling the shared decision-making
59 brief:
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3 I give them my recommendation ... but at the end of the day, it's their own health and I let
4 them decide what they want to do ... it's better to be shared decision-making ... because
5 then you're going to get good compliance (1).
6

7 I'm also addressing the patient's ideas, what their concerns are. Are they compliant? (X8)
8

9 Pharmacists with less experience in the GP primary care setting were waiting for a template to be
10 developed for SMRs and were unsure how this would fit with the consultation models
11 recommended in PCPEP training. An ARRS pharmacist who was very keen to adopt a person-centred
12 approach was aware that she found it hard to have confidence in what she was doing without
13 feedback, especially from patients:
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16 I can't help people if I'm thinking they're a target. I need to think of them as a person ... and
17 I think it's really crucial that shared decision making is kind of like the pivotal backbone of a
18 consultation because without that communication and decision making from the patient
19 side ... how do we know they're going to comply? ... so I was talking to a patient. I thought I
20 was doing a really good consultation ... and doing shared decision-making. I put the phone
21 down. One of the pharmacists she said, oh no, you sounded a bit harsh ... I thought ... I
22 worded it really well ... And only when that pharmacist said that did, I think, oh what if
23 they're thinking that? ... it's the patient that you need to engage with ... and that can only be
24 done by getting patient feedback (7).
25
26

27 Some ARRS pharmacists thought shared decision-making was more relevant for medications like
28 statins but not for others where there was "no choice" about treatment recommendations (5), or
29 more relevant for initial prescribing rather than reviewing medication (8). In contrast, an ARRS
30 pharmacist more advanced in doing SMRs spoke about her experience of its importance for
31 deprescribing:
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34 I think approaching it in the right way is key to deprescribing ... And people scoff at it ... oh
35 it's just woolly pharmacy practice stuff but actually, shared decision-making makes my life
36 easier as a pharmacist, and it puts the patient in control as well (4).
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40 Discussion

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42 Expectations that all health professionals will engage empathetically with patients have proliferated
43 in an era when systemic problems inhibit such practice [50]. ARRS pharmacists appointed during the
44 pandemic were working in varied circumstances during a period of volatility in which they had few
45 opportunities to practice their patient-facing skills or to receive the feedback required to improve
46 their levels of proficiency. Thus, we found almost no change in terms of interviewee responses to
47 person-centred practice to report over the time of this study beyond recognition that this was a
48 requirement that they continued to try to fulfil. Those employed earlier in GP settings were more
49 aware of the complexity of medication reviews in primary care and were more clinically confident.
50 With notable exceptions, their reported pragmatic, "common-sense" approach to time-constrained
51 medication reviews was also limited in depth of person-centredness, though not to the same extent.
52 Pharmacist-delivered medication reviews have to date involved little continuity of care and
53 telephone-only contacts during the pandemic may have intensified pressures for short, transactional
54 interactions. While speaking about their existing practice in person-centred terms and recognising
55 that patients have preferences, pharmacists in the study mostly continued to describe a traditional
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3 paternalistic communication style with a passive patient, with the pharmacist controlling
4 information flow and therefore decision-making [51].
5

6 SMRs require a step change in communication skills from the medication reviews with which most
7 new ARRS pharmacists were familiar. As well as knowledge of treatments for multiple conditions,
8 this involves developing requisite skills to conceptualise the complexity of patients' clinical and social
9 situations, discuss the balances between different potential harms and benefits, and to know when
10 and how to raise possibilities for de-prescribing or changing prescriptions. Pharmacists coming into
11 the GP practice setting brought limited consultation experience and many took the skills involved in
12 talking to patients somewhat for granted. Limited opportunities to experiment and receive direct
13 feedback on consultation skills left it to ARRS pharmacists to link the rather abstract knowledge
14 gained on the PCPEP pathway with their own tacit, experiential knowledge of medication reviews.
15 GP clinical supervision was mostly reactive, and the availability of experienced senior pharmacist
16 mentorship was patchy. This undermined opportunities for more pro-active consultation skills
17 development in and through clinical practice. Long established habits in pharmacy medication
18 review practice, prompted by concerns for patient safety, combined with new local incentives and
19 contextual cues, were producing quick-fix information-giving practices in SMRs with minimal
20 deliberative decision making, and some attempts to transcend these limitations [41].
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25 The PCPEP facilitated familiarity with person-centred ideas and a language for describing practice,
26 the effects of which may be challenging to observe. ARRS pharmacist's confidence in their person-
27 centred consultation skills did not translate readily into competence and was challenged when
28 describing tackling subjects considered difficult or sensitive. This theory to practice translation
29 challenge was also observed in the consultation workshop when actors playing patients did not
30 conform easily to the usual question-and-answer format. Feedback given during the workshop was
31 mostly from peers who were not proficient or expert themselves, and observation by peers with
32 limited skills focusing on a list of requirements for assessment, may have inadvertently introduced a
33 tick list that could draw focus away from the patient [52]. The workshop learning was somewhat
34 disconnected from experiences of practice and 'hard' clinical knowledge was prized by interviewees
35 over 'soft' communication skills, despite the presentation of these by trainers as central to history
36 taking and diagnosis. Workshop facilitators encouraged pharmacists to adapt the Calgary Cambridge
37 and other models to their own style. Without practice-based guidance, however, this carried the
38 danger of inadvertently diluting important content.
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43 Although medication reviews are complex interactions, these are often performed mechanically as
44 mundane tasks by pharmacists, as well as GPs [16]. The ARRS clinical pharmacist role and how it fits
45 with others as part of a multi-disciplinary team is still emerging. It relies on developing interpersonal
46 and interprofessional relationships in the midst of a workforce crisis with pressured GPs in work
47 settings unexpectedly altered as a result of the COVID-19 pandemic. Material derived from GP
48 training on consultation skills and history-taking on the PCPEP paid little attention to the possible
49 differences between current doctor-patient and pharmacist-patient roles. For example, patients
50 were yet to have a clear sense of what their relationship might be with a clinical pharmacist and thus
51 what to expect from the consultation. Patient clarity and trust in the GP role may help secure good
52 communication, with implications for how clinical pharmacists introduce their own roles, and the
53 SMR service, when providing information on how primary care services are organised. The particular
54 challenges of providing a service that feels person-centred through remote telephone consultations
55 was not directly addressed in observed training [53].
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59 While it might be true that, "the single most powerful tool in medicine remains the conversation
60 between patient and physician" [54], models of person-centred communication remain aspirational

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3 for pharmacists as well as doctors. This study echoes others pre-pandemic that find that in spite of
4 its strong policy push, person-centred interventions such as shared decision-making have not been
5 adopted widely into healthcare practice [25], the importance of shared decision making as a method
6 of care is underestimated [55], and acknowledgement of patient preferences continues to be
7 positioned as at odds with, rather than integral to, evidence informed practice [56, 57]. Pharmacists
8 in both ARRS and earlier cohorts still used the language of “compliance” which is out of keeping with
9 contemporary person-centred discourse. Ironically, the concept of ‘concordance’ originated with a
10 review of medicine-taking by the Royal Pharmaceutical Society of Great Britain [58]. This interprets
11 consent to treatment not as an end in itself but an ongoing process and recognises people as
12 resistant to instruction where this seems contrary or irrelevant and where their own perspectives go
13 unacknowledged [59]. However, a “dominant compliance paradigm” in pharmacy practice persists
14 [60]. The initial presumption is that patients lack information rather than, for example, have unmet
15 needs or poorly co-ordinated care. Educational interventions to improve person-centred practice
16 have focused on the self-reflection of the individual practitioner, although it is not clear how or if
17 this works to disrupt the repetitive habits encouraged within organisational routines [61].
18 Overestimation of treatment effects [62], incentives to prescribe [63, 64] and ever closer ties
19 between pharmaceutical companies and organisations that regulate and sanction the use of their
20 products [65, 66], are all also implicated in the problematic polypharmacy for which the SMR is
21 proposed as a remedy in primary care. This is thus a complex issue requiring systems of care and
22 training to be organised such that SMRs can optimally contribute to reducing problematic
23 polypharmacy and improving population health.

29 **Conclusion**

30
31 SMRs were introduced while ARRS pharmacists were new and in training, without time to secure
32 solid foundations for practice in the primary care general practice setting. Remote practice during
33 the COVID-19 pandemic had a major impact on training pathway provision, SMR implementation
34 and conduct. PCPEP consultation training introduced participants to expectations and principles, but
35 further practice development support, (and evaluation of this) is needed to develop grounded skills
36 for person-centred medication reviews. Addressing problematic polypharmacy requires healthcare
37 structural and organisational changes which include enhancing the communication skills of health
38 professionals, and how such skills are actually used in practice.

43 **Additional information**

45 *Ethics approval*

46
47 The study received research ethics approval from NHS Health Research Authority (REC reference
48 20/HRA/1482). Written informed consent was obtained from pharmacists to participate in the
49 study. CPPE consented for the workshops to be observed subject to the consent of participants. This
50 was granted at the start of each workshop.

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Patient consent for publication

None required

Author contributions

JM, MM and DS designed the study. MM and TM conducted the interviews. MM led the analysis of the data. All authors made substantial contributions to theorisation through group discussions and paper development. MM conceptualised and led the write up of the paper; all authors contributed to refining the themes and editing drafts.

Competing interests

The Authors declare that there is no conflict of interest.

Data availability statement

No data are available. This study has not received ethical approval to share confidential data with any third party other than the study research team.

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3 Topic guide - Skills Development for Patient-facing Work in Primary Care
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- 5 • Details of PCN role – job title, when took up current post (or first worked in general
6 practice setting), overview of current roles, brief career history
 - 7 • PCN experience – views and experiences of PCN, relationship with colleagues during
8 transition to general practice setting, local arrangements for integrating, managing
9 and supervising clinical pharmacists, PCN level of maturity, pros and cons of working
10 within particular operational model, any role in the integration of new clinical
11 pharmacists, autonomy to shape PCN direction
 - 12 • Patient facing practice – current and past, what “person-centredness” means in own
13 practice
 - 14 • Training for person-centred consultation practice – experience and suitability of
15 training to become a person-centred practitioner (incl. most valued and gaps),
16 experience of current or prior CPPE pathway, views on current PCPEP via direct
17 experience and supervising others
 - 18 • Medication reviews – understanding of the new Structured Medication Review
19 (SMR), local implementation of SMRs, personal approach to medication reviews,
20 alcohol within medication reviews
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Reporting checklist for ‘Skills development for patient facing work in primary care: Findings from a qualitative longitudinal cohort study of Clinical Pharmacists’.

Based on the SRQR guidelines.

	Reporting Item	Page Number
	#1 Concise description of the nature and topic of the study identifying the study as qualitative or indicating the approach (e.g. ethnography, grounded theory) or data collection methods (e.g. interview, focus group) is recommended	5-6
	#2 Summary of the key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results and conclusions	2
Problem formulation	#3 Description and significance of the problem / phenomenon studied: review of relevant theory and empirical work; problem statement	4-5
Purpose or research question	#4 Purpose of the study and specific objectives or questions	2,5
Qualitative approach and research paradigm	#5 Qualitative approach (e.g. ethnography, grounded theory, case study, phenomenology, narrative research) and	5

guiding theory if appropriate; identifying the research paradigm (e.g. postpositivist, constructivist / interpretivist) is also recommended; rationale. The rationale should briefly discuss the justification for choosing that theory, approach, method or technique rather than other options available; the assumptions and limitations implicit in those choices and how those choices influence study conclusions and transferability. As appropriate the rationale for several items might be discussed together.

14	Researcher characteristics and reflexivity	#6	Researchers' characteristics that may influence the research, including personal attributes, qualifications / experience, relationship with participants, assumptions and / or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results and / or transferability	5
26	Context	#7	Setting / site and salient contextual factors; rationale	4-5
28	Sampling strategy	#8	How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g. sampling saturation); rationale	5-6
34	Ethical issues pertaining to human subjects	#9	Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues	14
40	Data collection methods	#10	Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources / methods, and modification of procedures in response to evolving study findings; rationale	5-6
50	Data collection instruments and technologies	#11	Description of instruments (e.g. interview guides, questionnaires) and devices (e.g. audio recorders) used for data collection; if / how the instruments(s) changed over the course of the study	5

1	Units of study	#12 Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	5-6
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5	Data processing	#13 Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymisation / deidentification of excerpts	5-6
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12	Data analysis	#14 Process by which inferences, themes, etc. were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale	5-6
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19	Techniques to enhance trustworthiness	#15 Techniques to enhance trustworthiness and credibility of data analysis (e.g. member checking, audit trail, triangulation); rationale	5-6
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24	Syntheses and interpretation	#16 Main findings (e.g. interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	6-12
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30	Links to empirical data	#17 Evidence (e.g. quotes, field notes, text excerpts, photographs) to substantiate analytic findings	7-12
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34	Intergration with prior work, implications, transferability and contribution(s) to the field	#18 Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application / generalizability; identification of unique contributions(s) to scholarship in a discipline or field	12-14
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44	Limitations	#19 Trustworthiness and limitations of findings	3
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46	Conflicts of interest	#20 Potential sources of influence of perceived influence on study conduct and conclusions; how these were managed	14
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51	Funding	#21 Sources of funding and other support; role of funders in data collection, interpretation and reporting	14
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