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What are the priorities for improving quality for community pharmacy professional services? Nominal group technique discussions with multiple stakeholders

Ali M. K. Hindi[1*], Ellen I. Schafheutle[1] and Stephen M. Campbell[2,3]

Abstract

Background Healthcare systems globally are expanding community pharmacy services to meet patient needs and reduce healthcare costs. In England this includes helping community pharmacies to provide integrated professional services but concerns persist over quality of care. This study aimed to identify priorities from key stakeholders for improving the quality of professional community pharmacy services.

Methods Six homogenous nominal group (NG) discussions (face-to-face and online) involved 36 participants from diverse stakeholder backgrounds. Participants included patients ($n=10$), community pharmacists ($n=7$), general practitioners, a general practice-based pharmacist ($n=4$), community pharmacy service regulators ($n=5$), Community Pharmacy England members ($n=4$), and Local Pharmaceutical Committee members ($n=6$), both responsible for negotiating services. Delbecq's NG technique included silent idea generation, round-robin feedback, discussion, and ranking for consensus building. Discussions were audio-recorded and verbatim transcripts analysed thematically using NVivo12. Emerging themes across all NGDs were analysed by thematic analyses. Individual discrete ranking within each NGD were then combined by summing the mean scores of the categories within each theme.

Results Five key themes emerged from qualitative analysis across all NGDs: quality service design, sustained funding, integration with the wider healthcare system, positioning community pharmacy as a hub for patient needs, and adequate workforce training, optimising staffing and retention. Participants emphasised the need for long-term commitment to quality service design centred on addressing local patient need, sustained and predictable funding. Community pharmacy staff having some access to patient records for making informed clinical decisions was discussed. Scoring priorities ranked as follows (highest to lowest): ensuring quality service design, sustained funding, integration with healthcare systems, community pharmacy as patient hubs, and workforce training and retention, reflecting different stakeholder priorities in these areas.

Conclusion This study highlighted core priority areas for a framework to improve the quality of community pharmacy professional services within a more responsive and integrated primary care led healthcare system.

*Correspondence:
Ali M. K. Hindi
ali.hindi@manchester.ac.uk

Full list of author information is available at the end of the article

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Introduction

Healthcare systems worldwide are facing immense strain to meet growing patient demands and reduce healthcare costs, adversely affecting patient experience, workforce management and access to care [1]. In response to these challenges, health policy in recent decades has focused on assessing and enhancing the quality and safety of healthcare services. This has led to the advocacy of comprehensive workforce and service delivery strategies, distributing clinical responsibilities among various professions to optimise care delivery [2]. The focus has been on the quality of the healthcare system and fostering collaboration in the planning, commissioning, and delivery of services aiming for an integrated, healthcare system that promptly and effectively meets people's needs [3].

Community pharmacies are the most frequently used primary care services globally and are often more accessible than medical care [4]. In a conventional UK community pharmacy, commonly one pharmacist is supported by a range of pharmacy support staff, including medicines counter assistants, dispensers, and pharmacy technicians. Roles within the team are often divided between the dispensary, where prescriptions are processed, and the counter, where simple inquiries are addressed, and over-the-counter sales are facilitated. English community pharmacies must include private consultation areas within pharmacy premises. Currently, medicines can be dispensed in the absence of a pharmacist, but they can only be handed out in the presence of a pharmacist.

The National Health Service England (NHSE) has invested in expanding the range of professional services offered to meet patients' needs and alleviate some of the workload pressures [3]. While this strategy aims to relieve pressures in primary care and other healthcare areas, it has had the opposite effect in community pharmacy—a sector that remains overstretched and underfunded [3]. Although initiatives are underway to enhance the provision of integrated and high-quality services in community pharmacies, ongoing concerns persist regarding the consistent delivery of high-quality care that is responsive to patient needs in English community pharmacies [5–8]. This is primarily attributed to closures, understaffing and limited integration with the wider healthcare system [5–8]. As the range and volume of services offered by community pharmacy in England continue to expand, there is a need to explore ways to enable quality of care while ensuring timely access.

Whilst different definitions of quality in healthcare have been developed, quality is still not well defined in community pharmacy, with a lack of clarity regarding what the term encompasses or how to measure quality [9]. This lack of conceptual clarity hinders any efforts to design, deliver, manage, and evaluate high-quality services [10]. The dimensions of quality proposed in previous studies were mainly related to community pharmacies' more traditional role of medicines supply and focussed on pharmacy rather than looking at services as part of a wider, more integrated, system [9, 11].

This was confirmed in a recent systematic review which identified the defining features of quality in community pharmacy and synthesised these into an evidence-based quality framework [12]. This multi-dimensional framework of quality consists of six dimensions (patient experience, access, environment, safety, competence, integration). However, this systematic review definition is mainly based on traditional services focused on dispensing of medicines. There is a need to define quality more specifically in relation to professional community pharmacy services, which are defined as:

> *"A professional pharmacy service is an action or set of actions undertaken in or organized by a pharmacy, delivered by a pharmacist or other health practitioner, who applies their specialized health knowledge personally or via an intermediary, with a patient/client, population or other health professional, to optimize the process of care, with the aim to improve health outcomes and the value of healthcare" [13].*

Defining quality varies among stakeholders [14, 15], so defining what it means in community pharmacy from perspectives of patients, providers, and policymakers is essential for accurately measuring service quality. Key stakeholders in community pharmacy encompass various facets of healthcare provision and regulation. Patients, as the recipients of care and users of healthcare services, offer invaluable perspectives on their experiences and needs. Community pharmacy (CP) teams play a vital role in delivering professional pharmacy services. General Practitioners (GPs) and general practice teams occupy a central role in primary care, serving as gatekeepers and primary points of contact for patients.

In terms of policymakers, NHSE commission services and have the authority to and incentivise quality, such as via the Pharmacy Quality Scheme (PQS) since 2017 [16]. The PQS is an initiative aimed at enhancing the quality of services provided by community pharmacies through meeting specified criteria, with successful participants eligible for financial incentives. Community Pharmacy

England (CPE) [17] acts as the representative body negotiating the community pharmacy contractual framework with the national commissioners NHS England (NHSE), thereby advocating for the interests of community pharmacies. Local Pharmaceutical Committees (LPCs) [18] collaborate with CPE and support community pharmacies, offering guidance and expertise about the local pharmacy landscape. Lastly, the General Pharmaceutical Council (GPhC) regulate pharmacists [19], pharmacy technicians and pharmacy premises in Great Britain, contributing to the enhancement of quality through regulation, including premises inspections.

This study considers quality of care from a societal level examining systemic issues, policies, and overall healthcare outcomes influenced by community pharmacy practices. To generate a multi-perspective understanding of quality in professional community pharmacy services at societal level, this study aimed to explore key stakeholders' views to identify core priority areas for improving the quality of professional community pharmacy services.

Methodology

The Nominal Group Technique (NGT) was employed as both a consensus method due to its time efficiency and adaptability, making it well-suited to the aim of this research [20]. This method fosters idea generation, individual discussion, equal participation and priority ranking. It enables the comparison of priorities across diverse groups [21].

Patients, CPs, GPs, GPhC inspectors, CPE and LPC members were identified through networks, charity organisations, and databases. The lead author (AH) emailed invitation letters and participation information sheets to community pharmacy and GP teams. A member of CPE sent materials to CPE staff. The lead researcher contacted the GPhC and charities directly for distribution. Interested participants contacted the lead researcher directly to arrange nominal group discussions and participated after providing consent.

The nominal groups were homogeneous, each comprising representatives from a single stakeholder group. This structure helped minimise the potential for any one stakeholder group to disproportionately influence the discussions [20]. Six nominal group discussions were held (September – November 2023) to engage participants nationwide. Two were face-to-face in Manchester and London, and four were conducted online via MS Teams for broader accessibility. The online adaptation of the NGT process involved using Miro for a virtual whiteboard [22], digital note flipcharts, and sticky notes. MS Teams utilised a ranking add-on for the ranking process.

In line with using the NGT, participants are asked the question: "*What do you think are the priorities for ensuring high quality community pharmacy services*?" Facilitators elaborated to focus on professional pharmacy services.

Each NGT then consisted of a four-step process (Delbecq) [23]:

(1) Silent idea generation: Participants were given up to 15 min to silently reflect or record their individual ideas in response to the question. Participants wrote each idea on individual 'sticky notes'.
(2) Round-robin feedback: The facilitator asked one participant at a time to state a single idea to the group in a 'round robin' fashion. Participants were able to think of new ideas during this process. Ideas/sticky notes were handed to the second facilitator who grouped them under what we will refer to as 'initial NGT themes'.
(3) Discussion: Facilitators guided, audio-recorded discussion using the 'initial NGT themes', asking participants to elaborate what they meant and how they related to quality.
(4) Voting: At the end of the discussions, participants were given a brief break while the first author collated the 'initial NGT themes' into a ranking sheet (or an online poll. Participants were asked to select their top 5 most important themes impacting quality from these lists, choosing 1 for the lowest priority to 5 for the highest. Any 'initial NGT theme' not included in a participant's top five received a score of 0. Individual scoring was confidential.

Each NGD was managed by two facilitators (first author AH and one co-author (ES, SC)), allowing the initial NGT theming of ideas and guiding discussions. Discussions were audio-recorded, with consent, and transcribed verbatim. Using NVivo12, anonymised verbatim transcripts were analysed iteratively, using thematic analysis. This involved: (i) coding of the raw data generated from discussions, (ii) thematic analysis of the raw data. The initial NGT theming created following round robin helped organise and interpret textual data, shaping the subsequent in-depth thematic analysis. Emerging themes, analysis and interpretation were discussed iteratively by the co-authors in regular meetings.

There were some commonalities between 'initial NGT themes' created during NGTs. In order to enable some comparison across different stakeholder NGs, similar such themes were combined. After completing the thematic analysis, initial themes with commonalities were combined under these broader themes. Initial themes not relevant to professional services or not discussed by a stakeholder group were excluded from the scoring. Each theme's mean score was determined using a weighted score, which was calculated by multiplying the mean

score of each initial theme by the number of stakeholder groups that mentioned it.

Patient and Public Involvement (PPI)

In order to ensure that the patient voice was central to analyses, an online event was organised involving patients and members of the public who use community pharmacies, recruited through patient charity organisations. The PPI group discussion was developed for this study. The event took place in March 2024, comprising of four individuals. The lead author presented early insights into findings and invited participants to comment on how these findings aligning with their perceptions and needs of quality community pharmacy professional services. This additional step helped refine final themes and interpretation (Additional file 1).

In this study, attendees at this final event will be referred to as PPI contributors, thus clearly distinguishing them from patient NGD participants.

Results

Thirty-six participants took part in 6 nominal group discussions, conducted with patients (n-10), community pharmacists (n-7), Community Pharmacy England members (n-4), Local Pharmaceutical Committee members (n-6), general practice (3 GPs and 1 general practice-based pharmacist from 4 practices, and GPhC inspectors (n-5).

Most community pharmacists (5/7) and CPE (3/4) members were male, while in the GP (3/4) and GPhC (4/5) discussions, most were female. Patient (6/10) and LPC (4/6) discussions had a slight overrepresentation of males.

Qualitative findings

Five key themes, emerged as needing to underpin quality professional services in community pharmacy:

- Quality service design,
- sustained funding,
- integration with the wider healthcare system,
- positioning community pharmacy as a hub for patient needs, and
- adequate workforce training, optimising staffing and retention.

Quality service design

This theme focuses on elements of improving quality service design, which are well-planned and co-designing with all key stakeholders, enhance consistency in services, whilst allowing for local variations guided by identified need. Some need for service refinement was seen as needing to be built in, through evaluation and monitoring, thus generating much needed evidence on effectiveness.

Clear national service framework

A focal point of discussion among LPC, CP and GP teams was the importance of clear framework when designing services. These stakeholders collectively observed a lack of clarity and structure in many service specifications. LPC members emphasised on the importance of a continuous collaborative approach involving various stakeholders to set specific guidance before a service is introduced.

> *"I said about there needs to be clear guidance on the service. Quite a lot of the time services are missions and not be clear, it's all a bit wishy-washy, it's not really very straightforward as to how you're supposed to be doing things or how it's supposed to be working. It can just be kind of a bit hit and miss. It needs to be a bit clearer in how it's coming through and it needs to be more structured". (LPC 5)*

> *"Just about consistency of process, so having a clear process, guidance that everybody understands and follows, you know? And I think there's something about making sure that before we implement a service that there is that clear understanding of what's expected". (CP 6)*

GPs recognised the value of allowing pharmacists to exercise professional judgment and independence within a framework that ensures consistency and quality of care, thereby highlighting the balance between professional autonomy and following service specifications.

Community pharmacists, GPhC inspectors, CPE, and LPC members emphasised significant variations in the offering of services across different local areas. To maximise responsiveness to local needs, LPC members expressed a desire for a more structured approach in which a minimum specification for professional pharmacy services is clearly defined, allowing for local variations to fill specific gaps while addressing key issues in a national framework responsively to meet local need.

> *"But I suspect in the future, and if I ruled the world what I would do is go, here is the minimum spec that will allow you to deploy this service. That is at the core of what the national is. We have deliberately left a couple of gaps in it, and you will need to actively determine how you fill that gap at a local level, but the obligation is on you as an ICS to go yes, we have*

filled that gap, this is what we are doing locally..." (LPC 5).

Evidence informed service development

Both LPC and CPE members discussed the importance of evidence-informed service development, given the interconnectedness of their roles. LPC members stressed the need for improved documentation, data utilisation, and research to demonstrate the quality and value of pharmacy services. All LPC members highlighted that services should evolve based on feedback and changing needs to prevent the loss of services.

"It's about continuous development of the service. If a service is launched and it's just left then, we just keep doing the same thing, even if we get feedback from providers saying it can be done better this way or there's challenges to providing the service in a particular way. There's no continuous development of service; it's just kind of set in stone, you can't change it." (LPC 6).

LPC and CPE members emphasised the critical role of research and evaluation in establishing a robust evidence base, including assessing health economic impact and value to the NHS. CPE members particularly highlighted the importance of data collection for driving research, understanding patient needs, economic justifications, influencing commissioners, and facilitating auditing. However, they noted that while many data are already collected (e.g. through service and reimbursement), they are often not gathered with evaluation in mind, or not subsequently analysed and meaningfully interpreted.

"Well, I think data that convinces commissioners to commission services tends not to be about quality, it tends to be about health economics... So, patient satisfaction, we don't do a lot of that in terms of capturing community pharmacy these days... But I do think that, assessment of patients, with services, understanding their experience of them, is really important. But it needs to be structured in a way which derives insights to help improve service provision, and that is, as you know, harder to do, because you're getting more into qualitative than quantitative analysis, which is more expensive, and complicated to undertake". (CPE 3)

Sustained funding

This theme highlights the need for predictable and sustained funding to ensure long-term planning/assurance, which can then secure employer investment in staff training and premises. Sustained funding primarily supports quality service design (theme 1) and is linked to adequate workforce training, optimising staffing, and retention (theme 5).

Except patients, all stakeholders acknowledged the prevalent budget constraints faced by community pharmacies. They highlighted the vital role of funding in supporting quality improvement initiatives, spanning staff training, equipment, infrastructure, and services. There was a shared understanding that consistent funding is essential for pharmacy owners to confidently invest in various elements required to deliver changing/ advancing services, including premises, equipment and staff development.

"it takes time, you know, to get to that place where everybody is trained and the investment that you need to put into that training, and it does go back to funding, because it's a chicken and egg, what comes first? Do I spend my money to invest in bringing in new people, training them up so I can then create capacity to deliver more services or actually do we get funding appropriately where I can say, right, I've got funding to get the staff member in, train them up, you know? (CP 6)

"Processes, you can speed up, so a unit base is reasonable, you speed it up and you do well. When it's your time, the only thing you can speed up is the consultation, which affects quality. So, if it's not paid well, it's not going to be a decent quality, because you can't, unless you get a cheaper person doing it, how do you make the profit in this, if you squeeze as a commissioner". (CPE 1)

Community pharmacists, LPC members and CPE members voiced concerns about the declining total national funding for community pharmacies in recent years. They mentioned that this reduction, coupled with rising workloads and prescription volumes, posed significant challenges for maintaining high-quality services and advancing quality improvement efforts. Community pharmacists, CPE, and LPC members also highlighted the need for pharmacy owners to evaluate the financial viability of new services and assess their worthiness of investment. These stakeholders pointed out that financial viability plays an important role in influencing the willingness to explore and invest in innovative services.

"There is a need to fund pharmacies appropriately, to provide the services the NHS wants for them to provide. But that does include some element of

establishment funding, which I think we've tended to lose over recent years. And it's that funding that, generally, has been, it's that that allows the pharmacy teams to have a bit of time to do some of the clinical governance, and other quality improvement work. And hence, as the money disappears, and as the workload increases, with prescription volume increasing, which then may not be matched by an increase in staff levels… It just becomes harder to deliver that high quality service, and do some of those quality focused elements beyond just getting the day job done, of providing the dispensing, and the associated services". (CPE 3)

Linked to funding and its predictability and sustainability were services (e.g. pharmacy first) which rely on referrals from external entities such as GP practice, as illustrated by Community pharmacists, GP teams, CPE and LPC members. Such referrals were out of community pharmacy's control and could lead to uncertainties in footfall and hence income.

Integration with the wider healthcare system

This theme on integration helps achieve the quality service design (theme 1) and positions community pharmacy as a hub for patient needs (theme 4). All stakeholders discussed the importance of integrating community pharmacy services into the wider healthcare system through better collaboration, primarily with GP practices and interactive/ two-way access to medical records.

Collaboration with GPs and secondary care

Patients, GP teams, CPs and GPhC inspectors particularly highlighted the need for better collaboration between community pharmacy and general practice, and indeed a wider integrated primary care system, without any prompting or probing. Benefits of collaboration between these sectors were discussed, particularly in terms of providing timely access to healthcare. There was a uniform agreement amongst these stakeholders on the necessity to foster stronger relationships between CPs and GPs.

Community pharmacists emphasised the need to build trust within Primary Care Networks (PCNs) which are groups of GP practices working together with community, mental health, social care, pharmacy, hospital, and voluntary services in their local areas, to foster collaboration. GPhC inspectors also suggested more involvement of community pharmacies in PCNs to facilitate collaboration with GP surgeries and address specific population needs, such as tailoring services for different populations.

"I'm thinking, potentially could have already started with the primary care networks, and the idea was to try and integrate things a bit further, so by say, building on that, having community pharmacy, you know, at the table, that would help identify any unmet needs, for example, and it would help collaborate between what the GP surgeries are doing, or make…for example, if you think about the blood pressure, hypertension finding service, how the GP services wish to receive that information, what can the pharmacy do with the patient before that referral is made, you know, counselling and lifestyle advice. Different populations will be different, yeah, and requirements for that population, so I think potentially building on that. I don't know how we do it, because integrated care systems already have pharmacy integration leads, so maybe they just need a bit more time to run it in, I don't know. But I think definitely properly integrating community pharmacy and the services it offers into the wider NHS landscape, that's going to pull up the quality, one would imagine". (GPhC 4)

The presence of a pharmacist within a GP practice was mentioned by GPhC inspectors and GP teams as a potential facilitator for improved communication between CP and GP teams. Pharmacists working in GP practice were seen as a bridge that can help develop relationships and enhance collaboration between community pharmacy and GP practice.

Integrated IT systems and confidential information sharing

All stakeholders discussed the importance of having IT infrastructure integrated with other healthcare providers from the outset of a CP service, emphasising the need for interoperability. The consensus was that interoperability would facilitate effective collaboration for the best/ most appropriate patient care pathway. These systems are required to operationalise integration, through the seamless exchange of information among CP and other healthcare providers, with the patient at the centre. Appropriate access to information, where required for patient care, was viewed as important, whilst guarding against inappropriate access. Some read-write access may also be required to facilitate sharing of information to underpin collaborative care.

" …I'm the same person, I was working in community pharmacy, what was different? And it was the access to clinical records that was different. You have a wealth of clinical information at your fingertips in hospital. I could log into the system, I could… everything I wanted to see about a patient and that would help me make those clinical decisions, so for me there's something about appropriate access to

clinical information and records, but also the ability to write into the clinical records as well". (CP 6)

"In pharmacy we're doing more and more services and we're so grateful to have access to a summary care record, but no one trusts us to write on it, so if we've given out a medication on a PGD or if we've done a service, we're not allowed to write anything on there, so it's like where is that trust thing? We are part of primary care. We also want to update records". (CP4)

I think a pharmacy should have access to GP records, because I think there's a lot of issues that would be quite dangerous if they didn't. But I mean, the big issue is, who gets access to the GP records, is the computer on all day, will other people be able to look at it, what will the access be?". (Patient 2)

Patients also emphasised the necessity of appropriate facilities within community pharmacy environments to ensure that discussions and the disclosure of personal information remain private.

Collaborative leadership and sector alignment

LPC members advocated for leadership within the CP sector at all levels, emphasising collaborative efforts to enhance service quality. Some CPs highlighted the diversity of voices within the sector, urging for a unified voice to drive progress. The fragmented representation within CP was identified as an obstacle, even though some felt this was improving.

"I think there are too many voices in community pharmacy currently and they can't agree on what they want, so you've got the NPA [National Pharmacy Association] getting involved, you've got CCA [Company Chemists' Association], then you've got local pharmaceutical committees, and actually what we really need is just one voice to really move this forward?" (CP4).

Positioning community pharmacy as a hub for patient needs

This theme builds on quality service design (theme 1) and focuses on designing services around patient needs and ensuring public awareness of services to increase patient responsiveness.

PPI contributors, GPhC inspectors, LPC and CPE members emphasised the importance of public involvement in pharmacy decisions and operations to ensure a services framework addresses the needs of the local population. Our PPI group also confirmed this. They suggested structured meetings for the public to provide input and feedback, highlighting that active engagement with regular pharmacy service users could lead to better-tailored services and increased community ownership of initiatives. PPI contributors also commented on the value of patient feedback/ satisfaction surveys, which had been discontinued.

Conducting local needs assessments, which include patient and public involvement, was deemed essential by LPC members and GPhC inspectors to ensure that services align with the patient needs. Moreover, patients and PPI contributors highlighted the importance of tailoring pharmacy services to the requirements of communities, considering factors such as demographics, vulnerable groups' socioeconomic status, and healthcare access.

"the last one [NGT idea] for me is around making sure that the pharmacies understand the needs of the local area…so, as an example, if there's a traveller population, are the pharmacies aware of that, and the different needs that they might have, as an example… And to me, that's really key, but engaging with patients, so not just seeing patients as, oh, here's another few prescriptions or anything like that, but actually seeing…peer reviewing or working together to say, well, what's the feedback we're getting from our local patient population, and how can we address that". (GPhC 2)

Adequate workforce training, optimising staffing and retention

This theme highlights the importance of investing in workforce development and ensuring appropriate staffing levels to enhance service capacity and quality.

All stakeholders discussed the importance of having a well-trained, competent and experienced team to increase quality service offer. They highlighted the multifaceted nature of team development, encompassing initial training, ongoing learning, and the potential for team staff to take on new roles to meet the evolving needs of community pharmacy.

"So, yeah, mine [NGT idea] was about having well-trained experienced team members, but not only, sort of, the initial training, but giving them opportunities to develop further into roles, and take on new roles and responsibilities. So, I mentioned about accuracy checking, pharmacy technicians or dis-

pensers, but there's other roles that pharmacy team members can be trained into, such as vaccinators". (GPhC 1)

Community pharmacists and CPE members both stressed the importance of protected learning time in ensuring continuous education, skill enhancement, and team building. Both CPs and CPE members emphasised the significance of such time in preventing staff burnout, maintaining service quality, and driving continuous improvement, and adapting to the expanding array of services.

"Yeah, I was just thinking about, you know, the protected training time, and the pressures on the teams to do training, and things. And also, sort of, the risk of burnout, and staff just being so tired, and worn out, that actually, that then impacts on the kind of, quality of service that they provide as well if they're, you know, so busy, expected to do more training in their own time, because they don't have any protected time. You know, it all just has an impact, and then, that impacts on the quality of service that they can provide. So, they just don't have the energy, and they're burnt out, so it's kind of like, yeah, it's just a vicious circle, really, yeah". (CPE 2)

The inclusion of locum pharmacists in training was discussed by CPs, patients, and CPE members. They stressed the importance of all those involved in professional services to be both required and enabled to access training and other support in order to ensure quality and safety of services.

"A lot of my polite frustrations of my day jobs, so when we phone the contractor and ask them about something I'm chasing, the blame is put on the locum or the lack of training of a locum, so I think that's a population we need to include more to improve quality, because especially in this day and age, we were talking about work ethics and priorities of the workforce. A lot of people are working hybrid roles, they work as a locum, and for some pharmacies, a large percentage of their working week is covered by locums. And then they're almost taken out, so that, from a quality perspective, then we're missing a massive chunk…" (CP3).

Quantitative findings (rankings)

The paper now returns to the scoring of initial NGT themes, which – in combination with the detailed qualitative analysis – allows the identification of what participants considered as most important. Mean scores can be seen in Table 1:

1) Quality service design: with clear, and consistent service design, particularly valued by CPs compared to GP teams and LPC members. Evidence informed service development and evaluation received a considerably higher score from LPC and GPhC inspectors compared to CPE members.
2) Sustained funding: Except for patients, funding which is predictable and sustainable was discussed by all and received considerably higher scores from CPE members, LPC members, and GP teams compared to CPs and GPhC inspectors. GPhC inspectors and CPE members categorised investment in infrastructure to increase service offerings, but the ranking was moderate.
3) Integration with the wider healthcare system: The importance of collaboration between CPs and general practice was rated highest by GP teams, followed by patients, and CPs. However, GPhC inspectors rated it considerably lower compared to these groups. The importance of Integrated IT systems and confidential information sharing was mentioned by all stakeholders and ranked considerably higher by GP teams, patients, CPE members and CPs compared to LPC members.
4) Positioning community pharmacy as a hub for patient needs – Patients, LPC, CPE members and GPhC inspectors perceived designing services around patient needs as important. Ensuring services are accessible and inclusive was considered important by patients.
5) Adequate workforce training, optimising staffing, and retention: pharmacy staff training to increase service offer was mentioned by all stakeholders and was considerably a higher priority for CP teams, GPhC inspectors and patients. Workforce retention and staffing to increase service offer was considerably higher for CPs compared to patients and CPE members.

Based on the quantitative and qualitative finding of the NGT, we propose a framework of core elements for consideration for quality professional services (Table 2).

Discussion

This study used NGT discussions to explore key stakeholders' views on priority areas, and to identify core elements of a framework for high-quality community pharmacy professional services.

The highest priority across all NGDs was placed on having quality service design, particularly co-designing services with all stakeholders. Indeed, previous findings

Table 1 Themes generated for ensuring high quality services ranked by importance*

	Patients[a, b]	CP	GP teams[a]	LPC	CPE	GPhC	Mean score for themes
Quality service design							
Clear and consistent service design	-	✓ 3.1	✓ 1.8	✓ 2.2	-	-	
Evidence informed service development and evaluation	-	-	-	✓ 4.3	✓2.5	✓ 4.0	
							3.0
Sustained funding							
Funding which is predictable and sustainable	-	✓ 0.9	✓ 3.3	✓ 4.0	✓ 4.8	✓ 1.8	
Investment in infrastructure to increase service offer		-	-	-	✓ 1.0	✓ 2.6	
							2.6
Integration with the wider healthcare system							
Collaboration between CP and general practice	✓ 2.3	✓ 2.0	✓ 4.8	-	-	✓ 0.6	
Integrated IT systems and confidential information sharing	✓ 3.2	✓ 2.3	✓ 3.0	✓ 1.5	✓ 2.8	✓ 0.0	
Collaborative leadership and sector alignment	-	✓ 0.1	-	✓ 0.5	-	-	
							1.9
Positioning community pharmacy as a hub for patient needs							
Designing services around patient needs	✓ 1.8	-	-	✓ 2.0	✓ 1.8	✓ 2.2	
Ensuring services are accessible and inclusive	✓ 2.0	✓ 0.0	-	-	-	✓ 1.2	
							1.6
Adequate workforce training, optimising staffing and retention							
Pharmacy staff training to increase service offer	✓ 2.2	✓ 3.0	✓ 1.0	✓ 0.5	✓ 1.3	✓ 2.6	
Workforce retention	-	✓ 1.9	-	-	✓ 1.0	-	
Staffing to increase service offer	✓ 0.8	✓ 1.9	-	-	-	-	
							1.6

* Participants were only asked to score top 5 initial themes and prioritise them (1 lowest priority – 5 highest priority)

If an initial theme was not selected by a participant in their top 5, it received a 0

Scores in the table represent the mean score for each group

Mean score for theme is calculated by summing the scores and dividing by the number of scores available for that theme

✓ initial theme generated by group, - initial theme not generated by group, 0 initial theme generated by group but received no votes

[a]generated initial themes which are not relevant to professional services which are not included in table

[b]one participant did not vote

indicated that a lack of clarity in service design for professional services impeded quality service implementation [5]. Experience-based co-design (EBCD) is an approach to health service design that engages patients and healthcare staff in partnership to develop and improve health services or care pathways, and could prove valuable in community pharmacy [24]. This study also highlighted the importance of ensuring consistency of service delivery and quality, by designing a clear framework which nevertheless allows for flexibility so that it addresses local needs and variations can be accommodated. Evidence from neuro rehabilitation in a community setting suggests this flexible approach can help achieve service quality across different regions [25].

Evidence informed service design was also highlighted in this study, with participants expressing concerns over planning and capacity for data collection and subsequent analysis. Existing evidence suggests that community pharmacies often face challenges in systematically evaluating the quality and effectiveness of the services they provide [9, 26]. These challenges stem from factors such as limited resources/data, time constraints for collecting data, and a lack of evidence-based indicators for evaluation and assessment tailored to the community pharmacy setting, all of which were highlighted in the nominal group discussions. NHSE have commissioned evaluations of recent community pharmacy services rolled out such as digital minor illness service [27] and hepatitis C antibody testing [28]. However, there is a need to improve capacity to analyse data with a view to informing service design. Moving forward, adopting an evidence-based approach to enhance the quality of patient care, as exemplified by the National Institute for Health and Care Excellence (NICE) [29], requires allocating resources for systematic evaluation and developing evidence-based indicators tailored to enhance service quality and effectiveness.

Sustained funding was the second priority component in the NGT framework. Lack of longer-term and predictable funding over the years has been a key barrier to achieving high quality CP services. Employers can only invest in all elements which underpin quality improvement initiatives, such as premises, equipment, skill mix and staff training, if funding is adequate and predictable [6, 7]. This will be imperative for fostering quality

Table 2 NGT core elements for quality professional services

		Higher	←Priority→	Lower
Higher →	Core elements			
	Ensuring quality service design: *with clear specifications that accommodate local variations and prioritise refinement through evaluation.*	Clear and consistent service design	Evidence informed service development and evaluation	-
Priority	**Sustained funding**: *to support long-term planning, alongside investments in staff training and premises expansion.*	Funding which is predictable and sustainable	Investment in infrastructure to increase service offer	-
	Integration with the wider healthcare system: *through improved collaboration with GPs and interactive access to medical records.*	Integrated IT systems and confidential information sharing	Collaboration between CP and general practice	Collaborative leadership and sector alignment
	Positioning community pharmacy as a hub for patient needs: by *designing patient-centred services which are inclusive to enhance patient responsiveness.*	Designing services around patient needs	Ensuring services are accessible and inclusive	-
Lower ←	**Ensuring adequate workforce training, optimising staffing and retention**: *to improve service capacity and quality.*	Pharmacy staff training to increase service offer	Workforce retention	Staffing to increase service offer

*Weighted score used to determine priorities for each initial theme (mean score for each initial theme x number of stakeholder groups that mentioned each initial theme)

improvements and safeguarding the resilience of community pharmacy services [30].

The third priority component of the NGT quality framework was integration with the wider healthcare system. Previous research has highlighted the lack of community pharmacy integration as a barrier to achieving high-quality service provision at societal level [5, 7]. Indeed, such integration will be imperative to ensure the success of recent initiatives for community pharmacies to relieve pressures in general practice, such as Pharmacy First [31], where pharmacists are able to manage seven common (acute) conditions via patient group directions (PGDs) [32]. Pharmacists' further expansion of services and clinical autonomy is already in the making, with independent prescriber pathfinder sites currently trying different models for integrating independent prescribing, not only for acute but also long-term condition management. This NGT study illustrates the importance of IT system integration being an important element of wider system integration for improved patient care and pathways. Read access will be sufficient for some patient and clinical areas, but when expanding into particularly long-term condition management, effective and efficient communication with read-write access will become fundamental to ensure quality integrated patient care. Our study highlights that work still needs to be done with all stakeholders, to ensure they have trust in information access and sharing.

Positioning community pharmacy as a hub for patient needs was the fourth priority component of the NGT quality framework. Public involvement in service design was perceived to be at the core of this, to ensure better service alignment with patient needs. This included the conduct of needs assessments to inform service design and implementation at one end, and the seeking of regular feedback, such as via annual satisfaction surveys, at the other. Further research has demonstrated that placing patient experience at the centre of quality improvement has positive impacts on both delivery of healthcare services and patient experiences [33, 34].

An adequately trained and competent workforce with appropriate numbers and skill mix was the final component in the proposed quality framework. This theme links closely with funding, as that is what will enable the implementation of, for example, some protected learning for community pharmacists and their teams, to ensure competence. Community pharmacy offers very limited learning opportunities, and indeed, the lack a culture of learning is well documented [35–37]. Implementation of the PQS showed that integrating mandatory training initiatives [16] into routine practice can be effective. This requires adequate funding, investment, and long-term commitment [38]. In addition to training, factors such as skill mix, sufficient staffing levels, staff job satisfaction, and retention are important for improving quality, as highlighted in the NGDs and the wider literature [39, 40].

Successful implementation of the proposed NGT quality framework requires viewing the five components as

interconnected rather than discrete, isolated issues. Professional CP services need to be co-produced by all stakeholders based on patient-centred service design, with appropriate accompanying funding, infrastructure and training and skill mix, that focuses on integrating services responsive to local needs.

The study's strength lies in its exploration of multi-stakeholder perspectives and rank ordering of importance, highlighting priority areas for improving the quality of professional CP services. The sample had diverse representation, including patients, CP teams, GP teams and policymakers. Further grounding of the patient voice, and sense checking of findings was achieved through an additional PPI event discussion. However, it is important to acknowledge limitations. This study represents only the perspectives of those who participated, potentially limiting its generalisability. Moreover, national and regional policy and service design level voices were not included, and should be at NHSE, Department of Health and Social Care, and integrated care board level staff.

Conclusion

This study explored multiple stakeholder views on priority areas for a framework to improve high quality patient responsive community pharmacy professional services as part of a wider, more integrated system. Key areas from a societal level included ensuring quality service design centred on addressing local patient needs, sustained and predictable funding and well-trained staff and integration with other primary healthcare sectors. The priority areas from this study could guide the development of interventions to improve the quality and design of professional community pharmacy services and the core elements of the framework for designing services for improved quality of care.

Abbreviations

CCA	Company Chemists' Association
CPE	Community Pharmacy England
CPs	Community Pharmacies
GPhC	General Pharmaceutical Council
GPs	General Practitioners
LPC	Local Pharmaceutical Committee
NHS	National Health Service
NHSE	National Health Service England
NG	Nominal Group
NGD	Nominal Group Discussion
NGT	Nominal Group Technique
NICE	National Institute for Health and Care Excellence
NPA	National Pharmacy Association
PGDs	Patient Group Directions
PPI	Patient and Public Involvement
PQS	Pharmacy Quality Scheme

Supplementary Information

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Supplementary Material 1.

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Authors' contributions

AH, ES, and SC conceptualised the study. AH was responsible for overseeing recruitment of participants and facilitated all nominal group discussions. ES co-facilitated four nominal group discussions while SC facilitated one nominal group discussion. AH was responsible for coding and analysing the transcripts which was overseen by ES and SC. AH also compiled the rankings, which was overseen by ES and SC. AH drafted the manuscript, which ES and SC commented on and edited. AH led the PPI event, with ES co-facilitating. All authors contributed to developing the quality framework emerging from this study. The final manuscript was read and approved by all authors.

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Data availability

The data sets generated and/or analysed in the current study are not publicly available due to protection of participant confidentiality.

Declarations

Ethics approval and consent to participate

This study involves human participants and received ethics approval from The University of Manchester Research Ethics Committee (ref no: 2023-17417-30341). Participants gave informed consent to participate in the study before taking part.

Consent for publication

Not applicable.

Competing interests

The authors declare no competing interests.

Author details

[1]Centre for Pharmacy Workforce Studies, Division of Pharmacy and Optometry, School of Health Sciences, Faculty of Biology, Medicine and Health, The University of Manchester, Oxford Road, Manchester M13 9PT, UK
[2]School of Health Sciences, Faculty of Biology, Medicine and Health, The University of Manchester, Oxford Road, Manchester M13 9PT, UK
[3]Department of Public Health Pharmacy and Management, School of Pharmacy, Sefako Makgatho Health Sciences University, Molotlegi Street, Pretoria 0208, South Africa

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