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Exploring pharmacists' perceptions of integrating pharmacists into the general practice setting

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ABSTRACT

Background: In several countries worldwide, pharmacists have integrated into the general practice setting. This has resulted in enhanced medication management, a reduction in patients' appointments with general practitioners (GPs), and decreased medication costs. However, there is a paucity of research that has focused on exploring pharmacists' views of this emerging role prior to its implementation in countries where it is not yet commonplace.
Objective: To explore pharmacsists' perceptions of integrating pharmacists into the general practice setting, the proposed roles for such pharmacists, and the factors affecting integration.
Methods: Semi-structured interviews were conducted with pharmacists in Ireland, who were sampled based on years of experience in community pharmacy and work location using convenience and snowball sampling. The interviews were audio-recorded and transcribed *verbatim*, which subsequently underwent thematic analysis.
Results: Twelve pharmacists – with a median of six years' experience as a community pharmacist – were interviewed between September and October 2019. Four main themes were generated:
(i) expectations of integrated role (including the importance of role definition, pharmacist experience, and increased job satisfaction);
(ii) altered pharmacist-patient dynamic in primary care (including patient trust, patient safety, and the impact on community pharmacist roles);
(iii) GP-pharmacist relationship (including pre-existing relationships, autonomy, reducing GP workload, and individual GP attributes);
(iv) logistical issues and financial implications (including practice characteristics, co-location time, and supporting evidence-based implementation).
Conclusion: This study is unique as it has focused solely on exploring pharmacists' perceptions of integrating into general practice in a country where such roles are mostly non-existent. The attitudes of pharmacists in this study were primarily positive, for reasons such as intrinsic motivation, reducing GP workload, and improving patient health outcomes. However, the routine implementation of these roles will require funding and support from key stakeholders (other than pharmacists) and should be guided by the evidence from other countries.

1. Introduction

With a rising global life expectancy contributing to larger population sizes and the increased burden of chronic disease with advancing age, healthcare systems worldwide are under significant pressure.[1] In primary care, general practitioners (GPs) are facing intense difficulties to meet the demands of this increased workload,[2] which is exacerbated by already-strained primary care resources and an alarming decline in the number of GPs.[3] With the growing prevalence of multimorbidity, GPs often find that they have increasingly limited time to thoroughly review patients' complex medication regimens.[2,4] Therefore, one possible strategy to ease the pressure on GPs is the integration of pharmacists into the general practice setting – an initiative already implemented in countries such as Canada, the United States of America, Australia, and the United Kingdom.[5,6] In general practice, pharmacists have been providing patient counselling and assessments, comprehensive medication management (which may include prescribing), clinical audits, and the delivery of education and drug information to practice staff.[7] In this setting, pharmacists have been shown to reduce medication costs, improve medication adherence, as well as reduce patients' GP appointments, emergency department attendances, and medication-related hospitalisations.[5,8,9]

However, in Ireland, as with many other countries, there has not yet been any formal implementation of pharmacists into general practice.

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The majority of pharmacists work in community pharmacies (approximately 75%),[10] who provide a variety of professional services that includes the dispensing of medications, management of minor ailments (albeit no formal minor ailments scheme like some countries), and provision of vaccination services. In this setting, pharmacists do not typically have access to full patient health records. Like community pharmacies, general practices are mostly privately-owned businesses in Ireland – with the exception of primary care centres, which are operated by the Health Service Executive (HSE), the national public provider of healthcare services. The downward trend in GP numbers has also been observed in Ireland, which is primarily due to a reduction in physicians pursuing careers in general practice and increased emigration rates of newly qualified GPs. These changes do not adequately compensate for the retirement rate of these practitioners.[11–13] The inability of practices to take on new patients due to reaching maximum capacity and associated appointment scheduling delays emphasises the need for a solution to combat this significant issue in primary healthcare services.[13] Therefore, this gives greater impetus to investigate the possibility of integrating pharmacist roles into general practice to potentially alleviate an overburdened GP workforce and improve patient care.

If these general practice pharmacist (GPP) roles are to become successfully established in regions where they are not yet commonplace, it will be crucial to explore the perceptions of stakeholders in advance to identify some of the potential facilitators and barriers to the integration of such roles. In particular, ascertaining pharmacists' perceptions will help gain a greater understanding if pharmacists would be interested in and prepared for such roles. When looking at the literature, studies that have examined the views of pharmacists on GPP roles have primarily done so when investigating the opinions of multiple stakeholders concurrently.[6,14–20] Those that have focused solely on assessing pharmacists' views have more commonly done so after the role has been implemented.[21,22] To the authors' knowledge, other than one study from Malaysia which assessed pharmacists' views on integrating pharmacists into private GP clinics using focus groups and interviews,[23] there appears to be a paucity of research which has explored pharmacists' perceptions of these general practice-based roles in countries where they have not already been implemented. Therefore, the aim of this study was to explore pharmacists' perceptions of pharmacists integrating into the general practice setting in Ireland, the proposed roles for GPPs, and the factors affecting integration.

2. Methods

2.1. Study approval, design, and recruitment

Ethics approval to conduct this study was granted by the Social Research Ethics Committee, University College Cork, Cork, Ireland. The Consolidated Criteria for Reporting Qualitative Research (COREQ) statement guided reporting in this study (Appendix 1).[24]

Semi-structured one-to-one interviews were chosen as the preferred method of data collection for this study as they tend to allow for more in-depth explorations of individual perceptions, whilst avoiding the social pressure or similar biases encountered with focus groups.[25,26] Participant eligibility for inclusion was limited to pharmacists registered with the Pharmaceutical Society of Ireland who had experience, previous or current, of working as a pharmacist in community pharmacy settings in Ireland. A sampling matrix was designed to ensure that an initial sample of nine semi-structured interviews were conducted with pharmacists with various levels of community pharmacy-based experience in different locations, as these factors have been previously suggested in the literature to affect integration into general practice settings.[6,27–29] In this sample, there was an even distribution of pharmacists across experience (three each with ≤ 5 years' experience, $>5–\leq 10$ years' experience, and >10 years' experience) and location (three each from a rural/semi-rural location, a city centre location, and an urban location other than city centre).

It was planned *a priori* that at least three additional interviews would be conducted after the sampling matrix had been filled; when three consecutive additional interviews were completed without the identification of any new major themes, this would confirm that the topic had been adequately explored, and that no further interviews were required.[30] Potentially eligible participants were identified via a combination of convenience sampling (i.e. pharmacists known to the authors) and snowball sampling from the Munster region of Ireland, and were contacted via email or telephone to determine if they were willing to be interviewed. The study's information sheet and consent form were provided to potential participants via email in advance of the interview.

2.2. Data collection

A topic guide for the semi-structured interviews was developed based on a review of the literature[6,21,23,28,29] and the authors' knowledge of the research area. The original topic guide was pilot tested with one pharmacist based in academia with <5 years' experience in community pharmacy, and it was planned in advance not to include this interview. The topic guide was refined throughout the data collection process to ensure that preliminary themes were explored in subsequent interviews. The finalised topic guide can be found in Appendix 2.

All semi-structured interviews were conducted with the primary researcher (PM), a final year Master of Pharmacy (MPharm) student with experience of working in a community pharmacy setting. Before the commencement of the interview, participants were given time to read the information sheet and sign the consent form. Thereafter, demographic details were also collected from each participant prior to interview commencement. The interviews were audio-recorded using a digital voice recorder, and thereafter transcribed *verbatim*.

2.3. Data analysis

All transcripts were entered into NVivo® Version 12 to facilitate analysis, which was conducted in tandem with data collection to facilitate the iterative refinement of the interview topic guides. The data were analysed according to Braun and Clarke's six-phase method of thematic analysis.[31] Both authors read all transcripts to become familiar with the data (phase 1). Open coding was undertaken by one author (PM) to create initial non-hierarchical codes (phase 2). These codes were subsequently categorised by both authors and collated into potential themes (phase 3), which were then reviewed and discussed in depth to define the themes and subthemes (phases 4 and 5), followed by further refinement of the thematic descriptions and selection of appropriate supporting quotations for the write-up (phase 6).

3. Results

A total of twelve interviews were conducted with pharmacists based in the Munster region of Ireland, with participant details displayed in Table 1. None of the interviewees had any experience of working as GPPs, whilst the median number of years of experience of working as a community pharmacist was six years (range: 2–23 years). All interviews took place between September and October 2019 in a private room at a location most convenient for the participant; six interviews were conducted at University College Cork, five at the interviewee's workplace, and one at an educational institution near to where one participant worked. The interview length ranged between 18 and 50 minutes, with an average of 29 minutes.

Four main themes were generated from the data, as described in detail below. The associated subthemes and illustrative quotations from participants are shown under each of the main themes to help explain these findings. Supplementary quotations are available in Appendix 3 to provide additional evidence that the findings are representative of participants' perceptions.

3.1. Theme 1: expectations of integrated role

3.1.1. Role definition

Participants described a diverse array of roles for GPPs, which may depend on the needs of the individual practice. Whilst it was acknowledged that GPPs could engage in some activities commonly delivered by

Table 1
Characteristics of interview participants.

	Number	Pharmacist Descriptor
Gender		
Male	4	**Pharmacist 1:** >10 years; Supervising; Urban.
Female	8	**Pharmacist 2:** ≥5 – ≤10 years; Support; Rural/Semi-rural.
Years of post-qualification experience in community pharmacy	3	**Pharmacist 3:** ≥5 – ≤10 years; Supervising; City Centre.
<5 years	5	**Pharmacist 4:** ≥5 – ≤10 years; Support; Urban.
≥5 – ≤10 years	4	**Pharmacist 5:** <5 years; Supervising; Rural/Semi-rural.
>10 years	6	**Pharmacist 6:** ≥5 – ≤10 years; Support; Urban.
Position	4	**Pharmacist 7:** >10 years; Superintendent, Owner; Rural/Semi-rural.
Support Pharmacist[Δ]	2	**Pharmacist 8:** >10 years; Owner; City Centre.
Supervising Pharmacist[*]	3	**Pharmacist 9:** >10 years; Supervising; Superintendent, Owner; Rural/Semi-rural.
Superintendent Pharmacist[†]	4	**Pharmacist 10:** <5 years; Support; City Centre.
Pharmacy Owner	4	**Pharmacist 11:** <5 years; Support; Urban.
Location	4	**Pharmacist 12:** ≥5 – ≤10 years; Support; Urban.
City Centre		
Urban area		
Rural/Semi-rural area		

[Δ] A support pharmacist works under the supervising pharmacist and may be responsible for the safe and effective running of the pharmacy in the supervising pharmacist's absence.

[*] The supervising pharmacist is the person responsible for the day-to-day management and operation of the pharmacy. A supervising pharmacist can only act in respect of one pharmacy premises and must have a minimum of three years' post-registration experience.[32]

[†] The superintendent pharmacist is in overall control of the management of a pharmacy, including its professional and clinical management and management of the administration of the sale and supply of medicines. A superintendent pharmacist can act in respect of more than one pharmacy (i.e. all pharmacies within a company/chain), and must have a minimum of three years' post-registration experience.[33]

community pharmacists, such as patient counselling and demonstrating the use of medication delivery devices, it was envisaged that these roles may be more focused on providing medication information to practice staff, conducting audits, reviewing patients and their pharmacotherapy, and the potential for pharmacist prescribing.

> *"…chronic disease management, medicines use reviews. And possibly, depending on the scope of practice, something along the lines of a formulary – a prescribing formulary within the practice."*
>
> [Pharmacist 9]

However, with no clear consensus on what the roles would entail, there was some apprehension expressed due to its novelty in the country. Consequently, interviewees emphasised the importance of defining the GPP role, having a clear job description to minimise overlap with other healthcare professionals, in GPPs recognising their limitations, and knowing when to refer.

> *"I would feel like slightly apprehensive, because nobody had done this before. And I suppose there's no blueprint for it, you know."*
>
> [Pharmacist 11]

> "*…you have to know what you know, and you have to know what you don't know, and not to practise outside your sphere of competence. And being able to refer is very important*".
>
> [Pharmacist 7]

3.1.2. Pharmacist skills, training, and attributes

Various pharmacist attributes were deemed important to facilitate GPPs' integration and becoming accomplished in their roles – notably: having good communication skills, assertiveness, working well in a team, confidence, and resilience.

> "*They need to be communicative, they can't be on their high horse, as such. They have to be empathetic, and just be a team player.*"
>
> [Pharmacist 5]

Participants declared that there would be no significant difficulty for pharmacists to engage in most of the envisaged roles in the general practice setting. However, it was stated that extra training would be essential for some potential GPP responsibilities – such as completing pharmacist prescribing courses, which are not currently available in the country.

> "*…definitely there'd be some level of training depending on what you're going in to do. Whether it was prescribing, I suppose you would need the prescribing course they offer across the water. If it was anything to do with reviewing prescriptions, I don't really think I'd need too much.*"
>
> [Pharmacist 10]

Interviewees' perceptions were diverse on how the pharmacists' degree of post-registration experience could affect GPP roles. It was noted that pharmacists with more years after registration may have lost certain clinical skills and knowledge over time if underutilised, which may necessitate further training.

> "*I'm working in community and I would be doing things that I haven't had to do in a very long time or haven't – I think, me just being me, I think I would love some like sort of upskilling or training or something like that, to equip you better for the role.*"
>
> [Pharmacist 11]

Some interviewees foresaw no significant issue with newly qualified pharmacists having GPP positions, particularly when the roles would be similar to those in other settings. Conversely, others affirmed that multiple years of experience as a pharmacist in a clinical setting should be mandatory prior to integration into general practice. Nonetheless, the importance of having sufficient experience in a patient-facing setting was emphasised in order to perform better in the role.

> "*Maybe a case of having, you know, a minimum two years' post-qualification experience in the community setting or something like that, or a clinical setting somewhere, would be beneficial. I think it would be… I think it might be…difficult, but not impossible, to do it straight out of college, because there's a lot of practical elements that you don't get.*"
>
> [Pharmacist 12]

3.1.3. Job satisfaction

Increased job satisfaction was discussed as one of the major benefits to GPP roles. The participants linked this to their misgivings of the structure of community pharmacy work, disclosing that their training and expertise are

often underutilised and overlooked, with too much of an emphasis on paperwork, retail sales, or managerial duties – i.e. tasks that are less focused on patient care.

"…from myself and a lot of my friends who are pharmacists, it's the clinical part that we enjoy. You know, nobody went to college to sell shampoo."

[Pharmacist 12]

This underutilisation of clinical skills in community pharmacy was perceived to result in a loss of that expertise, but interviewees viewed integration into general practice as a potential solution for pharmacists to feel more fulfilled in their jobs.

"…it's very much a 'use it or lose it' scenario, where if you're not practising or learning something on a daily basis, while you maintain some of the general information, you do lose the detail which is important and that can be significant."

[Pharmacist 6]

It was mentioned that the GPP working hours would likely be more favourable compared to community pharmacy hours, and interviewees were enthusiastic about working more closely as a multi-disciplinary team in general practice settings.

"I think the idea of working as part of a team would be fantastic. I know in a pharmacy, if you're working in a busy pharmacy – which I have done – there is your team, but if you're in a rural setting, often it's you and one other person. There'd be something about being in there with the doctors as their peers, with the nurses, just working as a healthcare team".

[Pharmacist 2]

3.2. Theme 2: altered pharmacist-patient dynamic in primary care

3.2.1. Access to healthcare and patient safety

Interviewees perceived that GPPs would provide an alternative route to care, whereby patients may be more easily able to be reviewed by a GPP and avoid long waiting lists for GP appointments. This, in turn, may free up GPs' time to facilitate other patients in accessing a GP.

"I suppose convenience for them as well – sometimes they might not have to see the doctor, depending on the role the pharmacist would take in the GP setting. They might be able to get an appointment quicker maybe and see somebody quicker."

[Pharmacist 10]

Additionally, integration of GPPs was predicted to increase the quality of patient treatment – by reviewing and optimising pharmacotherapy, reducing delays in correcting errors, and providing increased education to patients on their medication regimens – as well as improve patient safety and enhance patient health outcomes.

"*I think the patient care would definitely be improved. I think someone would be keeping a closer eye on their medication.*"

[Pharmacist 11]

3.2.2. Patients' trust and awareness of pharmacists' role

The interviewees believed that patients would not have any significant problem with the development of GPP roles. This receptiveness was linked to patients' trust in their community pharmacist's skills – this trust was perceived to have increased in recent years, may have been facilitated by public awareness campaigns, and has been reflected by patients often going to their community pharmacist first with their health problems. Therefore, interviewees alluded to the need to also ensure that GPP roles were explained to patients in future so that they utilise their services.

"*…we're often the first person that they come to with any queries, they'd often come to us before the doctor.*"

[Pharmacist 2]

"*It seems to me that patients wouldn't really mind… I don't know that they'd necessarily see a value to it until they experienced it or it was explained to them*".

[Pharmacist 8]

Conversely, it was highlighted that some patients may have a narrower perspective on what tasks fall within pharmacists' remit beyond traditional dispensing duties, and therefore may not be as agreeable with pharmacists undertaking roles in general practice, particularly given the trust and position some hold for GPs in their hierarchy of healthcare professionals.

"Some see us as just putting labels on boxes, unfortunately that is still out there, and others think we're shopkeepers."

[Pharmacist 10]

"*…you're always going to have those kind people who just…who always… the doctor is God, almost – that they might not trust you.*"

[Pharmacist 12]

3.2.3. Impact on community pharmacists' roles

Time saving was expected to be a major benefit for community pharmacists – with an expected increase in prescribing optimisation and a reduction in errors, and having a GPP as a key liaison between the community pharmacist and general practice, participants could foresee less time spent on the phone by community pharmacists rectifying medication-related problems.

"…for the community pharmacist, I think there may be benefits there in terms of less errors creeping through, less mistakes, more clarity as to what the prescribing reason is."

[Pharmacist 7]

It was envisioned that some roles undertaken by GPPs may encroach on the roles of community pharmacists, and that the emergence of new GPP roles would place an even further strain on community pharmacies to meet staffing demands.

"…it could come back on community pharmacists as well, because I suppose a lot of the things that they might be doing in a GP setting might then take away from some of the stuff you might be doing in the community. So, there could actually be resistance on both sides…".

[Pharmacist 11]

"You will have one less pharmacist who is free to work in a community pharmacy."

[Pharmacist 9]

Two interviewees in particular – one pharmacy owner and one supervising pharmacist – expressed that they would be less in favour of the development of GPP roles, and that the greater focus should be on expanding the roles of community pharmacists.

"I can understand the value of some of the projects that a GP pharmacist will undertake. However, I would stand in favour of expanding services within community pharmacy itself."

[Pharmacist 9]

"I think it just undermines what's already going on at community pharmacy level. And I think that if there is extra funding available, then that funding

should go into community pharmacy. So, if we were funded to have more double cover, then those services could be done every day, much easier…"

[Pharmacist 1]

3.3. Theme 3: GP-pharmacist relationship

3.3.1. GP workload and encroachment

It was believed that having a GPP's expertise available would ease GPs' work in resolving medication-related issues and optimising prescribing.

"They have someone that they can run in next door to and ask to check an interaction or ask their advice on prescribing things…"

[Pharmacist 2]

Interviewees noted the heavy workloads experienced by GPs, and it was almost unanimously perceived that GPPs could alleviate some of the pressure on GPs. In particular, it was emphasised that GPPs would save GPs' time by undertaking roles currently performed by GPs and reducing the number of phone calls for GPs from community pharmacists, allowing GPs to focus more time on other patients or other tasks.

"…if you feel that you are strained in terms of your time as a GP, I think that you would be very happy to allow somebody else to come in and share the load."

[Pharmacist 4]

Pharmacists feared that encroachment on some GP roles may be perceived as a threat to GPs in future. Participants recounted previous GP opposition to the approval of community pharmacists administering vaccinations in the country – however, it was acknowledged that this opposition may have been primarily linked to financial remuneration rather than role expansion.

"*I think there would definitely be resistance. Just from, I think nobody likes to feel like their…anything is being taken away from their role.*"

[Pharmacist 11]

3.3.2. Individual GP attributes

It was perceived that GPs' receptiveness to pharmacists having roles in general practice may vary significantly between individuals. However, participants strongly indicated that older GPs would likely be more resistant to GPP input compared to younger GPs.

"It would probably depend on the attitude of the GPs. Some of them would probably have a more traditional outlook on general practice. Maybe the younger, more newly qualified ones mightn't have the same, you know, mental blocks to that…"

[Pharmacist 1]

It was noted that although there has been greater awareness and respect for pharmacists' roles in recent years, two interviewees specified that the increasing proportion of interdisciplinary learning in the training of healthcare professionals would facilitate GPs' recognition of the benefits of integrated GPP roles in the future.

"…this interdisciplinary learning which has gone very popular in the school with the medics and stuff like that – by increasing the amount of that that goes on…that will immediately prepare you for that type of integrative approach."

[Pharmacist 4]

3.3.3. Pre-existing relationships and trust

Pharmacists highlighted that a positive pre-existing relationship would be a significant facilitator to integration as the GPs would already trust the integrating GPPs' competence. It was believed that by working together over time, GPPs could demonstrate their competence and how their skills would complement GPs' work, thus facilitating integration and the development of a trusting relationship.

"…you gradually build – you prove, you build up a track record, and you prove that you are able to do these things, and then over time you gain their respect."

[Pharmacist 2]

3.3.4. Autonomy

Interviewees emphasised the importance of autonomy in their practice, and that it would be key that pharmacists do not simply play a subservient role if co-located with GPs. It was noted that there may be ethical issues if a GPP worked in a pharmacy near the general practice, particularly if the GPP was also a pharmacy owner. To ensure objectivity and to avoid any potential conflicts of interest, it was recommended that the GPP would ideally have a stand-alone role – e.g. not affiliated with a nearby pharmacy and not simply subservient to a GP who owned the practice they work in.

"*I value my independence. I see pharmacy as a stand-alone professional role. I don't see myself as an 'aide' in any way to a GP…I think it would be a step backwards."*

[Pharmacist 9]

3.4. Theme 4: logistical issues and financial implications

3.4.1. Supporting evidence-based implementation

Participants could foresee these roles in the future but recognised that this would not be easy to set up initially due to obstacles in the country's current healthcare structure. Interviewees affirmed the importance of investigating how integration was accomplished in other countries, and then using these as models to guide the implementation in Ireland.

"I think they need to see some cold hard facts from these other countries. It's obviously working in these other countries. And, as I said, I think there's way more positives than negatives to it. It's just a matter of figuring out how to make it work."

[Pharmacist 11]

Interviewees recognised that a push would be required to "*get the ball rolling*" in developing GPP positions, and considered the possibility of a pilot to show it can work. However, there were conflicting opinions on what would be the main driving force to support the implementation of these roles – whether it would be expedited by augmenting pressure on primary care services or due to advocacy from key stakeholders such as GPs, patients, the government, or pharmacists themselves.

"*So, there's a huge appetite for change, both from the public and from the pharmacist perspective, and there is a window there now because of health services being under so much pressure, and we're a potential solution. I think hopefully all these things will align and change will happen. But it needs to happen very much from the top.*"

[Pharmacist 7]

"So, I don't think that drive is there. I feel like that drive would need to come from prescribers and from GPs, as opposed to government or from pharmacists."

[Pharmacist 6]

3.5. Practice characteristics

Lack of office space was perceived as a barrier to integration, noting that many practices are already at capacity with their existing staff, so the addition of GPPs would place further strain on their limited space and resources.

"…a lot of the surgeries are in older buildings, there's no scope for a room for anybody in there, never mind a nurse or adding a pharmacist in there..."

[Pharmacist 3]

It was affirmed that established relationships with pharmacists and practice staff prior to integration would be more common in rural settings. Additionally, whilst practices in rural settings were noted to more likely be smaller, it was pointed out that it may be easier for GPPs to get to know patients in practices with a smaller number of patients.

"…you do have the advantage in smaller surgeries, like smaller pharmacies, of getting to know patients better."

[Pharmacist 6]

Interviewees expressed that urban practices – which are likely to be larger and have a wider range of staff – would be easier to integrate into, with increased demand for pharmacist expertise and the possibility of working within a larger multidisciplinary team acting as important facilitators. The staff of urban practices were perceived to be more amenable to the development of new roles compared to smaller, more rural practices.

"…in a bigger surgery, you'd be more likely to have a lot more…kind of more involvement, more to do, you might integrate slightly easier… I could see how a bigger surgery might be easier to integrate into, and I suppose people would be used to, probably, a bigger multidisciplinary staff in a setting like that as well."

[Pharmacist 11]

3.5.1. Co-location time

There was no clear consensus regarding the hours that pharmacists should be available in the practice. It was acknowledged that the time may be constrained by funding and that the working hours per practice would depend on the workload requirements. Whilst having a full-time GPP role was viewed as a facilitator to integration, a part-time or sessional role may be deemed sufficient depending on the tasks that the GPPs would assume – which could then be expanded if required.

"*…maybe one or two days a week, or a couple of hours here and there, you know. Maybe two hours a day, depending on surgery opening hours, pharmacy opening hours, staff cover. If it was well received, potentially in the future, it could be expanded to a full-time role.*"

[Pharmacist 12]

It was suggested that GPPs could split their time between different general practices, and that one of the benefits of continuing to work "*at the coalface*" of community pharmacy would be that it allows the pharmacist to remain up to date with any relevant medication supply issues.

3.5.2. Financial implications

In general, participants were unsure how these GPP roles would be funded in the country. There were some suggestions that practices should contribute funding to these GPP positions as they would be beneficial to the private businesses, more likely for services to patients without a medical card (i.e. which entitles the holder to free GP services and outpatient services in public hospitals, as well as reduced prescription costs). However, it was noted that integration may not be valuable to GPs, particularly when some of the proposed roles are already assumed by community pharmacists at no extra cost; the possibility of the role being patient-funded was deemed unlikely due to similar reasons. In contrast, the viewpoint that GPP positions could be funded by government was pervasive, particularly for medical card patients. These opinions were supported by claims that GPPs would result in significant cost savings to the state, and therefore integration should be viewed as an investment. However, extensive government funding may be hindered due to an already-strained healthcare budget.

"*…if someone could look at the bigger picture and see how this could benefit people, and probably would end up reducing cost overall. I think it would be worth them funding it, but I don't know if they will look at it that way. You know, I think they might just look at it as a bigger burden on state.*"

[Pharmacist 11]

4. Discussion

This study has provided an in-depth exploration of pharmacists' perceptions of pharmacists integrating into the general practice setting in a country where such roles are mostly non-existent. Whilst the concept of having pharmacists integrated into general practice settings is not new for some countries, the insights provided on the potential responsibilities of GPPs and the perceived factors influencing pharmacist integration are valuable to know and can be used as a reference to inform the development of such GPP roles in regions where these are not yet in place.

Although none of the interviewees had any experience of working as a GPP, they were primarily positive regarding the nature of the GPP role and the impact it could have on patients, GPs, community pharmacists, as well as on pharmacists who undertake these roles in this country. The interviewees alluded to evidence of positive influences on patient health outcomes by allowing earlier medication reviews,[34] an improvement in chronic disease management,[35] and a reduction in healthcare costs.[17,36] Easing the workload for GPs and allowing the efficient resolution of medication issues were perceived benefits stated by the interviewees – while these have been noted by practice staff in some studies,[16,17,37] others have perceived that pharmacists may also increase the workload of GPs in trying to resolve medication-related issues.[20,38,39] Overall, it was expected that GPPs would not be dispensing medication and would be able to practise a more clinical role than their community pharmacy colleagues, theoretically increasing job satisfaction. The interviewees were enthusiastic to perform GPP roles, which they perceived as desirable positions that would be professionally rewarding, as has been affirmed by pharmacists who have undertaken such roles previously in many regions.[16,17,20,29] However, the present study also illuminated pharmacists' concerns regarding the knock-on effect that GPP role development may have on community pharmacies, such as the potential shortage of those available to work as community pharmacists.

One of the chief concerns from this study was in relation to role definition. Pharmacists discussed how GPs may be resistant to pharmacists taking on some of their roles in general practice, a concern previously raised by GPs in other regions.[6,16,40] Additionally, participants highlighted the redundancy of the GPP role if it were to substantially overlap with the work of community pharmacists, with many of the perceived GPP roles viewed as analogous to the services that can be offered already by some community pharmacists in the country.[15] Given the hypothetical similarity in roles, this study reaffirmed the possibility of patient confusion in dealing with multiple pharmacists,[6,16] and that patients may be unclear of the benefits of GPPs. Public awareness campaigns would be useful in clarifying some of the roles that GPPs can provide for patients and practice staff. Without role definition, integration is impeded as the relevant stakeholders are not aware of the clinical tasks that GPPs can assume.[29] This barrier could be overcome by having a set job description for the GPP, produced by either the state or individual practices, which could minimise the possibility of role encroachment. Jorgenson et al affirmed that having a job description facilitated pharmacist assimilation into the practice team.[28]

This study provided interesting perceptions on the degree of pharmacist experience. It was felt that more years of clinical experience and working with multi-disciplinary teams would benefit GPP integration and performance in their role, as supported by findings from previous research.[6,16] However, pharmacists in this study recognised that clinical knowledge and skills may be lost over time if underutilised, and that these roles therefore may be suitable for newly qualified pharmacists – particularly if they demonstrate confidence and assertiveness when working in a multidisciplinary team.[28,41,42] Although additional pharmacist training has

been shown to aid integration,[28] this was considered not to be essential by pharmacists in this study, highlighting the similarity between GPP roles and those of pharmacists working in other settings. Nonetheless, pharmacists may wish to upskill prior to undertaking GPP roles. Educational programs have already been initiated in Canada and the United Kingdom for pharmacists interested in expanding their primary care roles[43,44]; therefore, the development of similar training courses may be a consideration for other regions with GPPs.

In line with previous research, pharmacists believed it would be easier to integrate into larger urban surgeries that had more experience with including a variety of healthcare disciplines.[28] Moreover, the presence of pre-existing relationships between pharmacists and practice staff was viewed as a facilitator to integration; however, this may be more common in rural settings.[28] Although barriers like limited physical space and resources were noted,[6,14,15,17,21,28] financial constraints were among the largest impediments in implementing GPP roles.[7,15,16,18] The interviewees flagged that the degree of funding may predominantly determine the pharmacist time spent in the practice. A systematic review has reported that patient-centred clinical pharmacy services with a higher degree of integration in primary care teams were associated with improved health outcomes.[35] If full-time roles are not possible, it has been suggested that a pharmacist's presence should be predictable so that practice staff know when to expect the GPP.[28]

Whilst this study echoed that GPs or patients would be less likely to pay for the GPP services,[23] these stakeholder groups can play a vital part in advocating for the inclusion of pharmacists into the general practice setting. Pharmacists from this study believed, like stakeholders in other countries,[15,45] that one of the primary funding sources would have to be from the government. Although it was acknowledged that the already-strained healthcare budget in Ireland would encounter difficulties to remunerate GPPs, such roles may be one solution to help alleviate the pressures on primary care and the overburdened GP workforce. A robust business model would facilitate the justification of GPP funding,[16] and the interviewees in the present study emphasised the importance of gathering the evidence from other countries that have shown healthcare savings after the initial cost burden.[46]

Interestingly, since the completion of this study's interviews, the results of a non-randomised pilot study by Cardwell et al from Ireland have been published which had pharmacists conducting medication reviews, educational sessions with practice staff, and clinical audits, as well as involvement in the repeat prescribing process.[20,47] The pilot and its process evaluation demonstrated that these GPP roles were feasible, acceptable to patients and practice staff, and would potentially generate both clinical and cost benefits.[20,47] It is worth noting that the pilot took place in four purposively sampled general practices with pharmacists who had an average of 15.7 years' experience working for 10 hours per week for 6 months; in the present study, it was discussed how the pharmacist experience, practice characteristics, time allocations, and a variety of other factors may influence integration – therefore, these should be borne in mind when implementing and analysing future GPP interventions.

A limitation to this study was that the sampling strategy focused on attaining the views of pharmacists with experience from working in community pharmacy, and not explicitly from other areas (e.g. hospital pharmacists), and that the included participants were all working in one geographic region of Ireland. Nonetheless, the interviewee characteristics in this study were diverse in terms of years of experience, the community pharmacist role, and work location (urban versus rural). However, conducting a national survey with a larger sample of pharmacists may identify additional facilitators and barriers to GPP integration.

This study provided unique insights from the perspective of pharmacists who have not worked in general practice settings, but the results were still analogous to other studies from different countries before and after the implementation of such roles[6,14–17,21,23,28,29,40]; this allows for interesting comparisons to be made at an international level and may indicate that the findings are somewhat transferable to other regions, particularly where such GPP roles are not yet commonplace. For countries like Ireland, a careful examination of existing payment models for GPPs is necessary to establish what would work best for each jurisdiction. Furthermore, other issues that warrant further investigation include the training needs for GPPs, the roles that GPPs should undertake and the time requirements to achieve these, along with an extensive assessment of the impact on community pharmacies. The themes generated from this study should be explored with other relevant stakeholders (e.g. practice staff, patients, healthcare organisations) to further inform the future development of such GPP roles in regions like this.

5. Conclusion

To the knowledge of the authors, this is the first semi-structured interview study to focus solely on exploring pharmacists' perceptions of GPP integration in a country where such roles are mostly non-existent. The findings from this research should be useful to pharmacists, general practice staff, and policymakers in helping to inform the development of GPP roles and the integration process; however, the routine implementation of these roles will require funding and support from key stakeholders other than pharmacists, and should be guided by the evidence from other countries, thus allowing to demonstrate further proof of the healthcare benefits in having pharmacists integrated into general practice settings.

Author contributions

Study conceptualisation and design was by KD. Data collection was conducted by PM. Data analysis and preparation of the final manuscript was performed by PM and KD.

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Conflicts of interest

The authors declare no conflict of interest. At the time of the interviewees and study write-up, PM was a final year undergraduate pharmacy student with experience of working in community pharmacy settings, while KD was a lecturer in clinical pharmacy practice who had previously worked in community pharmacy and hospital pharmacy settings. Neither author had any personal experience of working in general practice.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.rcsop.2021.100027.

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