

## **Successful implementation and provision of enhanced and extended pharmacy services**

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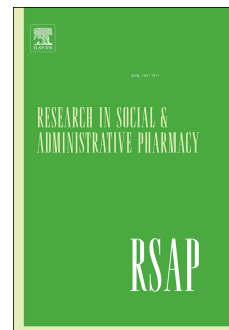
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## Successful implementation and provision of enhanced and extended pharmacy services: A qualitative study of pharmacists

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### Declarations of Interest

None.

**ABSTRACT****Background:**

Careful planning is important for successful implementation and ongoing provision of enhanced and extended pharmacy services.

**Objective:**

To explore the factors that contributed to the successful implementation and ongoing provision of enhanced and extended services in Western Australian community pharmacies.

**Methods:**

In-depth semi-structured telephone interviews were conducted with purposively selected pharmacists from various practice settings. Interviews explored experiences and perspectives on the provision of enhanced and extended professional services and continued until saturation was achieved. Analysis focused on prior investigation before implementation of services, perceptions of the impact of the services and factors to be considered. The COM-B (Capability, Opportunity, Motivation and Behaviour) model was applied *post hoc* to the thematic analysis to explore whether there was an overlap between themes and the model.

**Results:**

In total 26 pharmacists (16 males, 10 females) participated in semi-structured interviews during October 2017 and February 2018. They classified as 20 community, 13 accredited and 7 specialist pharmacists and 11 pharmacist immunisers (some classified as more than one). Interview duration was 55 minutes (minimum 22, maximum 91 minutes). Responses regarding prior investigation/research conducted varied in approach followed and level of enquiry. Opinions about services were overall positive such as enhanced collaboration with other healthcare professionals, positive patient outcomes, increased staff satisfaction and acceptance of pharmacists as primary care providers. New services did not always provide direct financial benefit. Three major themes emerged as factors that impacted on provision of services: 1) pharmacist characteristics, 2) local needs, structures and support, and 3) an enabling practice framework.

**Conclusions:**

Pharmacists who were successful in the implementation and maintenance of new professional services were familiar with local needs. Both pharmacy and pharmacist aspects should be considered during implementation and maintenance of new professional services. An enabling practice framework is crucial in facilitating new pharmacy services.

**Keywords**

Community pharmacy; pharmacists; primary care; professional services; service framework

## INTRODUCTION

Internationally, governments are promoting disease state and medication management services at primary health care level.<sup>1, 2</sup> This has facilitated the pharmacy profession accepting an increased medication management responsibility, originally defined as the provision of pharmaceutical care.<sup>3, 4</sup> At an international level community pharmacy practice in many countries has changed over recent years to address primary health care needs through increased provision of medication management services.<sup>5-7</sup> Australian community pharmacy practice reflects these changes and during the past two decades has moved towards a focus on the provision of professional services to improve consumers' medication management.<sup>8</sup> A recent narrative review of clinical services provided by Australian community pharmacies found a comprehensive range of services offered with overall positive impacts.<sup>9</sup>

Community pharmacists are accessible, have frequent and regular interaction with patients through dispensing of repeat prescriptions and are often the first point of contact for patients who need health advice and access to the health care system.<sup>6, 10</sup> Pharmacists are therefore well placed to provide medication management services, reduce medication-related incidents and problems, improve medication safety and facilitate medication information transfer during episodes of care. In the Australian context, there is a need to improve medication management services as up to 250,000 medication-related hospital admissions occur annually, an estimated 2-3% of all admissions and costs in excess of \$1.4 billion.<sup>11, 12</sup> Medication-related incidents indeed remain the second most common type of event reported within Australian hospitals.<sup>11</sup>

Pharmacists are in a position to assist patients with the management of chronic health conditions<sup>13</sup> and community pharmacy is an ideal setting for individual pharmacists to apply professional duties in the delivery of health care.<sup>14</sup> Various literature reviews outline the international impact of community pharmacy-based disease state interventions for example in addressing risk factors for coronary heart disease<sup>15</sup> and medication adherence in patients with asthma, diabetes and cardiovascular disease.<sup>16</sup> There is international<sup>15, 17, 18</sup> and Australian evidence supporting community pharmacy services for consumers with asthma,

diabetes and cardiovascular conditions, opioid substitution and preventative health (i.e. weight management, smoking cessation).<sup>19-24</sup> Pharmacists are increasingly also more involved in public health services such as the provision of pharmacist-administered vaccination services<sup>25-27</sup> with pharmacists in the United States already providing this service since 1995.<sup>28</sup> A 2013 review highlighted that many studies have demonstrated the beneficial effects of professional services provided by pharmacists that resulted in positive patient health outcomes.<sup>17</sup> Indeed, health systems increasingly rely on community pharmacists to provide services in addition to traditional dispensing services.<sup>1</sup>

Although the dispensing of prescription medicines and provision of non-prescription medicines (medicines that may be supplied without a prescription) still remain core community pharmacy functions pharmacists in many countries offer a range of other professional services.<sup>5-7</sup> Competence to provide most of these professional services fall within pharmacists' general scope of practice whereas some services require additional competence and credentialing. Those services that fall within pharmacists' general scope of practice<sup>29</sup> are commonly referred to as advanced or enhanced services whereas those that require additional credentialing are referred to as extended services.<sup>30, 31</sup> Examples of enhanced services in the Australian context are blood pressure and weight monitoring, asthma management, dispensing of opioid substitution therapies, provision of needles and syringes and in-pharmacy medication reviews, referred to as MedsCheck services.<sup>8, 32</sup> Extended services involve activities such as conducting Home Medicines Reviews (HMRs), Residential Medication Management Reviews (RMMRs) or the relatively recently introduced pharmacist-administered immunisation services.<sup>30</sup> Under the Sixth Community Pharmacy Agreement the Australian government provides financial support for the provision of certain enhanced and extended services.<sup>33</sup>

Research highlighted that pharmacists need to carefully plan the implementation of new professional services.<sup>34-36</sup> Issues identified that assisted in introducing new services and practice change included relationships with physicians, remuneration, pharmacy layout, patient expectation, staffing, communication skills and teamwork, and external support/assistance, all of which impact on a community pharmacy's ability to implement change.<sup>37</sup> Studies that explored pharmacists' self-reported facilitators and barriers showed

that successful implementation of any new pharmacy service should incorporate change management strategies.<sup>38-41</sup> Change-management principles and frameworks have hence been used with positive outcomes in assisting pharmacy staff in the implementation of new professional services.<sup>38, 42</sup>

The Behaviour Change Wheel provides a synthesis of a number of behaviour change frameworks and has been used in the development and implementation of various existing and new professional pharmacy services.<sup>43-45</sup> The Wheel has the COM-B model of behaviour at the centre, representing three essential components namely Capability, Opportunity and Motivation (COM), to provide a framework for understanding Behaviour (B).<sup>46</sup> The COM-B model provides a framework for understanding behaviour and incorporates the practice context, namely the 'opportunity' component, as well as the more internal aspects, namely the 'motivation' and 'capability' components. This model highlights the need to consider both pharmacy staff capabilities and motivation as well as local opportunities and the policy framework in planning to introduce and deliver new services.

Although there are established frameworks for the introduction of new services the principles and factors applied by pharmacists involved in introducing these services are poorly documented and analysed. This study aimed to explore the factors that contributed to the successful implementation and ongoing provision/maintenance of enhanced and extended services in Australian community pharmacies.

## **METHODS**

This qualitative study comprised Stage 2 of a project that involved mixed methodology to explore Western Australian (WA) pharmacists' perspectives and experiences in relation to provision of enhanced and extended professional services. Stage 2 involved in-depth semi-structured telephone interviews with a wide range of pharmacists from various practice settings and was informed by the Stage 1 results which were surveys of WA community<sup>47</sup> and accredited pharmacists.<sup>48</sup> Qualitative research criteria were followed in the development, analysis and reporting of the study.<sup>49, 50</sup> The project received ethics approval from the Curtin University Human Research Ethics Committee (HRE2017-0036-02).



Facilitators and barriers to the provision of extended and enhanced services discussed by the participants are reported separately. The focus of this paper is on the prior investigation conducted by the participants before implementation of enhanced and extended services, their perceptions of the impact of the services and the thematic analysis of data. The COM-B model was applied *post hoc* to the analysis to explore whether there was an overlap between the themes and the model. This involved comparing the emerging themes to the COM-B behaviour components.<sup>46</sup>

### Participant Selection

A range of pharmacists working in WA who were providing enhanced and/or extended professional services were purposively selected to represent those working as:

- community pharmacists,
- accredited pharmacists – pharmacists accredited with the Australian Association of Consultant Pharmacy (AACP)<sup>51</sup> or Society of Hospital Pharmacists of Australia (SHPA)<sup>52</sup> to conduct paid medication review services namely HMRs and RMMRs,
- pharmacist immunisers – pharmacists who completed a WA Department of Health approved education program to provide services in pharmacies compliant with the Department's *Structured Administration and Supply Arrangement (SASA)* for vaccine administration and patient care,<sup>53</sup>
- diabetes educators – pharmacists who completed a Graduate Certificate in Diabetes Education, and
- other specialised services (e.g. specialised wound care).

Potential participants were selected to include both those who regularly provided enhanced and extended services as well as those who had previously investigated offering these services but decided to not proceed. Purposive selection of potential participants allowed for maximum variation in the sampling whilst enabling in-depth inquiry into a range of enhanced and extended services provided by pharmacists with different experiences and practice backgrounds. In accordance with qualitative methodology, this approach was

followed to obtain information rich data and improve the reliability and credibility of the research findings.<sup>54</sup> Taking into account similar pharmacy practice qualitative studies and the research team's expertise, a decision was made to recruit between 20 and 30 pharmacists, dependent on when data saturation was reached.<sup>55</sup>

A list of potential participants was developed through the researchers' network, consultation with professional pharmacy organisations and using of a snowball effect (participants themselves identified potential other interview pharmacists). Potential participants were approached between September 2017 and February 2018 via telephone or email. Interested pharmacists were provided with an information sheet and consent form. Consenting participants were telephone interviewed by an independent interviewer who was a pharmacist with experience working in several practice settings and skills in conducting semi-structured interviews. The interviews were conducted by the same interviewer to ensure consistency between the interviews. Participants were offered a gift card as a token of appreciation.

### **Interview tool**

A tool to guide the semi-structured interviews was developed considering the literature on development of qualitative interview tools,<sup>54, 56</sup> professional pharmacy services,<sup>51, 57, 58</sup> the Australian community pharmacy context,<sup>33, 59</sup> Stage 1 results and team members' expertise. The tool covered a description of professional role(s), collaboration with health professionals, strategies to implement the service(s), facilitators and barriers as well as funding and collaborative models. It consisted of open-ended questions with specific prompts and consisted of six parts:

- Part A: Pharmacist Demographic Data
- Part B: Current Professional Roles
- Part C: Community Pharmacists
- Part D: Accredited Pharmacists (pharmacists accredited with the AACP or SHPA)
- Part E: Diabetes Educators and Pharmacists Working in Other Specialities

- Part F: General Opinions

Parts A, B and F questions applied to all participants whereas Parts C, D and E applied dependent on each individual participant's role (refer to the Supplementary file for a schematic flow diagram of the interview process).

The interview tool was face and content validated with four academic pharmacists; comments were incorporated, and it was subsequently trialled through interviews with two practicing pharmacists. Information obtained through the trial interviews were not included as part of the data analysis.

### **Data analysis**

Interviews were audio-recorded, transcribed verbatim and de-identified. NVivo version 11 (QSR International Pty Ltd) was used to organise the data. The data were analysed thematically through an inductive approach<sup>60, 61</sup> by two members of the research team (LH and TFS). This process involved reading of transcripts repeatedly to gain an in-depth understanding of the topics that emerged from the interviews. Initial codes or ideas were generated and then grouped into categories to form subthemes. Coding disagreements were discussed until consensus was reached. The subthemes were then rearranged to represent emerging topics. The factors that impacted on service implementation and maintenance were *post hoc* compared with the COM-B model to provide insight into the findings.

### **RESULTS**

A total of 32 pharmacists were approached and 26 (16 males, 10 females) participated in semi-structured interviews between October 2017 and February 2018 after which the researchers were confident that data saturation had been reached, which was that no new themes emerged. The remaining six pharmacists did not return a signed consent form. All

six were male (five from metropolitan and one from rural pharmacies). Mean interview duration was 55 minutes (minimum 22, maximum 91 minutes).

All participants were registered pharmacists practising in WA at the time of the interview. Two participants qualified in England whereas the others all qualified in Australia and they worked as pharmacists for between six and 37 years with the average being 18 years. Participants were classified according to the category/categories that they represented, with those classified under specialist services or who provided pharmacist immunisation services forming sub-categories. Of the 26 participants, 20 were practising community pharmacists, 13 were accredited pharmacists, 11 were pharmacist immunisers and seven provided specialist services. Many practised in more than one category with four classifying as community, accredited and specialist pharmacists as well as pharmacist immunisers.

All participants were either community or accredited pharmacists and in addition most of them also provided immunisation and/or specialist services, including diabetes education, integrated healthcare, wound management and specialist compounding. One pharmacist provided services to an Aboriginal Health centre. Seventeen participants worked in metropolitan areas, seven in rural areas whilst one participant worked as a manager in the Head Office of a banner (franchise) group of pharmacies and one provided medication review services across WA.

The results will focus on the investigation conducted before implementation of enhanced and/or extended services, participants' perceptions of the impact of the services and the thematic analysis of the data to explore the factors that impacted on service implementation and ongoing delivery. Throughout the paper quotations are labelled as 'C', 'I', 'A' or 'S' with 'C' indicating community pharmacist, 'A' accredited pharmacist, 'I' pharmacist immuniser and 'S' other specialist pharmacist. Combinations such as 'CAI' indicate the participant was a community and accredited pharmacist as well as a pharmacist immuniser.

### **Pre-implementation investigation or research**

Participants' responses regarding the prior investigation or research conducted before implementing a new service varied in approach followed and level of enquiry, as shown in Figure 1.

>Insert Figure 1 here<

Several strategies were followed ranging between informal investigations, such as the casual testing of ideas, whereas others followed a much more structured approach. Examples of these included full financial evaluations and data analysis of hospital admission rates related to specific chronic diseases e.g. diabetes. There was, however, a common sub-theme namely to address community needs. Participants highlighted the importance of knowing and understanding the needs of local communities to be able to identify opportunities.

Prior understanding of the health sector, funding issues and regulatory aspects were also highlighted:

*"That was a combination of research. So understanding of the sector. Understanding of the funding mechanisms, both through the public and private sector. Key stakeholder engagement. ... reading the tea leaves of the regulatory and statutory environment in which they operate. And, also, identifying the gaps in service delivery and trying to present solutions for that." P06 C*

Approaches followed to explore ideas included:

- Talking to fellow colleagues to obtain information about successes and failures, service models and payment structures,
- Exploring professional and training requirements, specific standards and guidelines,
- Obtaining data about local community demographics to identify gaps and opportunities,
- Discussing service initiatives with other health professionals, specifically general practitioners, to explore opportunities for collaboration, and

- Informally talking to pharmacy consumers about service needs and their perceptions of current and potential future pharmacy services.

Pharmacies independent from banner groups followed flexibility in exploring new initiatives whereas pharmacies belonging to banner groups mostly relied on research conducted by the group management:

*“Because we're independent we just come up with an idea and we sort of nut out how we're going to promote it, and then we just do it, and we refine it as we go along.”* P20

C

*“Obviously through the brand. The brand, [name of banner group], has a professional services pharmacist ... which provides or facilitates the service if you choose to take it on.”* P02 CI

### **Impact of services**

Participants' opinions about whether it was worthwhile to implement and continue the enhanced and/or extended service and the impact of the service(s) were overall positive. Several commented that services improved customers' loyalty and build rapport, goodwill and trust with pharmacy staff which in turn provided financial benefits as it generated more footprint and business as it *“...made our pharmacy more known to doctors and to the community.”* P23 CAIS. Some commented that the service(s) generated referrals from doctors as the doctors saw it as an opportunity to focus on other more complicated cases:

*“Certainly we get a lot more walk-in people. .... they [the doctors] will refer to us. So we've got the doctor actually sending people to see us ... They'll try and push back to us so that they can work on the diagnostic part ... and ... concentrate on the real problem patients have.”* P15 CI

However, some participants mentioned that new services may not always provide direct financial benefit but they decided to offer it regardless as their focus was on patients' outcomes:

*"The impact is great from an interaction and loyalty of customer base. Does that always translate into more business? Not every time. But that's not really why I implemented it. It's not all about making money. It's just good practice. And I think that's paramount, and that will lead to better patient outcomes down the track. So that's probably more my driver than most."* P07 C

A main message was that service(s) had positive impacts on patients' health and wellbeing and understanding of health issues and disease conditions. Participants mentioned how services improved medication compliance and lifestyle issues.

*"We've had many patients improve their health and well-being. If they feel good with themselves, and obviously, improve their health outcomes, which is our biggest, main driver of the service, the motivation of the service. Our patients are losing up to 20, 25 kilos. We have about 5 patients who have done that."* P02 CI

Of interest was that many commented on the positive impact the service(s) had on staff motivation and satisfaction:

*"On reflection, it's also the development of my staff and my pharmacists to become clinicians in the community."* P02 CI

*"For a lot of the pharmacists, they've felt that it's very fulfilling for them when they help the patient. And you can see in the outcome from that to the patient's healed, or improved, or haven't had to go to the doctors for antibiotics, things like that."* P14 CAS

Many highlighted that provision of enhanced and extended services facilitated acceptance of pharmacists as primary care providers with expertise in medication management and community pharmacy as a health destination and a point of primary care support:

*"... enhances the overall image of pharmacies as a health destination as opposed to a place where you just buy stuff." P16 C1*

*"... we got a better footprint, better good will. So I earned the trust of the patients as well and their families. I'm able to basically embed myself into the community as well. So we're seen as someone that is not just peddling medicine or drugs. But just seen as actually someone that they'll go to for help, for their health care needs, or anything really. So become a bit of a community support." P20 C*

Some participants commented that the positive impacts of implementing and maintaining a new service subsequently facilitated the introduction of other services in the future.

### **Main factors impacting service implementation and maintenance**

Although participants' views varied, three major themes emerged as they described the factors that impacted on the implementation and ongoing provision of enhanced or extended services: 1) pharmacist characteristics, 2) local needs, structures and support, and 3) an enabling practice framework. Figure 2 provides a schematic representation of these factors.

>Insert Figure 2 here<

#### **1) Pharmacist characteristics**

It was evident that the characteristics and mindset of the pharmacists were major factors influencing the success of service implementation and provision, summarised in Figure 3.

>Insert Figure 3 here<



Determination and perseverance to address barriers and an acceptance that they often had to overcome complex issues to make a success of new services featured throughout interviews. Some participants raised challenges around inadequate, or in some instances a total lack of direct remuneration for new services, but they decided to rather focus on patients' needs. There was acceptance of an increased responsibility and complexity of roles. Although initial and ongoing training in the aspects required for the specific service was required, it was evident that many also undertook training beyond that and on an ongoing basis to improve their clinical knowledge in a range of other topics.

Overall, participants appreciated and supported a multidisciplinary approach to health care and identified the importance of building rapport with other health professionals. Various forms of communication were mentioned beyond face-to-face contact, such as through mobile phones. An understanding and appreciation of scopes of practice were identified as important in building ongoing relationships.

Effective leadership and communication skills meant that pharmacists involved a team of driven staff members that facilitated continuity of service delivery. The importance of being involved in the day-to-day business was highlighted by several pharmacy owners, therefore being an example for other staff members and leading through participation. Participants overall had a proactive approach and several mentioned that success was the result of multifaceted and continuing efforts.

## **2) *Local needs and support structures***

Several local factors that contributed towards the successful implementation of enhanced and extended services were raised, as summarised in Table 1. These factors involved the need for the service and the subsequent development of support structures to implement the service. The need for the service and the support structure complemented each other and both seemed to be equally important for successful service delivery.

>Insert Table 1 here<

Lack of access to general practitioners and other health care providers and a need to “... *take a burden off country health service*” P24 CAS were issues considered to indicate local demand and need for services. The fact that most community pharmacies are open for extended hours with access to a pharmacist without having to make an appointment were also mentioned, specifically regarding pharmacist-administered immunisation services. Several participants mentioned appropriate marketing of the service as being important in emphasising support of local needs and highlighted that promotion included the scope of the service in order to “... *understand that we'll refer to the doctors if necessary.*” P14 CAS. Promotion strategies used to implement enhanced and extended services included sending of text messages and use of social media. Positive patient outcomes and benefits reinforced the need for the service and supported acceptance from both consumers as well as health professionals.

Having trusting relationships with local health professionals was raised by most participants as a key aspect. Collaborating with other health professionals was needed in setting up of a new service, especially with general practitioners “*to avoid the whole turf war thing that seems to be going on at the moment.*” P12 CI. It seemed that once services were established the services then facilitated the building of ongoing relationships and various participants mentioned that doctors started to refer patients to them once the service was established and the doctors realised the benefits. The importance of healthy communication with general practitioners was also to reassure that “... *they have the primary control of the patient. My suggestions are simply suggestions.*” P11 CAI. Pharmacists’ role in contacting doctors to make appointments for patients when patients are quite unwell and stressing to the doctors that the patients needed to be seen urgently, was also highlighted.

Innovative and proactive approaches used to address regulatory aspects included contacting stakeholders and government organisations and developing tools to share patient information. Indeed, the need to be able to share patient information with other health professionals to facilitate care was raised by various participants. Strategies used to comply with privacy legislation included asking patients to sign a document to allow “... *the pharmacy, the nurse, the case manager, the doctor, everyone, to share information.*” P04 C

Organisational support was raised by most participants which included a supportive manager, staff training, appropriate equipment and other resources, development of policy and procedure manuals and a booking or appointment system. This was often taken care of by the Head Office for pharmacies that were part of a banner group structure. The support of service companies was also raised by some. Participants who provided their services in community pharmacies stressed the need to be able to provide the service without distractions and hence having sufficient numbers of staff. Staff training included the training of other pharmacists to ensure ongoing service delivery and support staff to support pharmacists in service delivery. Participants who provided services in other locations such as aged care facilities stressed the need for the facility managers to support the services and to enable the pharmacist to attend relevant meetings.

### **3) *Enabling practice framework***

Participants acknowledged the impact of the changing landscape of the Australian health system on pharmacists' practice with supporting practice framework subthemes represented in Figure 4.

>Insert Figure 4 here<

Facilitating issues raised included pharmacists being part of the healthcare team with access to medical notes, an understanding and appreciation for each other's skill sets and referral processes. The convenience of community pharmacies as health hubs for local communities was mentioned by various participants. Provision of multiple services is ideal although it was stressed that staff need to be appropriately trained to support pharmacists in the provision of services.

Although changes in pharmacist practice seemed inevitable as being driven by needs and demand, some participants expressed frustration about price struggles as certain services involve competition in price rather than the services themselves. Remuneration structures

were raised as a prominent issue that needed to be considered by stakeholders in the context of the viability and sustainability of services.

Responses from participants providing extended services varied. Those involved with pharmacist-administered immunisation services commented on the positive impact of their services through policy and subsequent legislative changes to allow pharmacists to immunise. However, other regulatory changes such as the limitation on the monthly number of HMRs were seen as limiting the growth of services and pharmacists' roles. The need for a medication review referral pathway from hospitals was raised by a number of participants as well as the need to have more formalised continuity of care processes between hospitals and pharmacies:

*"But at the moment there is no pathway in referral from the hospital pharmacy to an accredited pharmacist. I think that's an area that needs to be explored."* P09 A

*"I think there's a big scope for pharmacists to basically be able to provide some kind of continuity. So there is actually one big gap that I've found, and that is there doesn't seem to be any continuity between patients that have come out of hospital-- and they're just kind of left there and there's a bit of a gap where they're told, 'You can go and see a GP' and the first point of contact always seems to be the pharmacy, where they come in and they need pain relief or something .... So I think having a pharmacy ... nominated, upon discharge of the hospital, will be quite useful because then that pharmacist would know and be aware that this patient is going to get received by them and ensure that there's enough medication or enough drugs, script supply, or anything that's needed for them before they get a chance to go and see their GP. ..., that would just reduce the amount of things like misadventures happening as a result."*  
P20 C

### **Comparison with COM-B model**

The subsequent comparison of the themes showed some overlap with the COM-B model mostly in terms of:

- **Pharmacist characteristics** overlapped with **Capability (C)**, the skill or knowledge to engage in the behaviour and **Motivation (M)**, the person's attitudes and beliefs components, and
- **Local needs and support structures** and the **Enabling practice framework** overlapped with **Opportunity (O)**, the environmental component.

These components were integrated and equally played a role in enabling participants to implement new professional services, therefore implement **Behaviour Change**. Although the themes were categorised differently and the focus of the study was not on behaviour change, the analysis revealed participants' capabilities, opportunities and motivations relating to the provision of enhanced and extended services.

## DISCUSSION

This qualitative study explored WA pharmacists' experiences and perspectives on the provision of enhanced and extended professional services. The results provide evidence that careful planning and preparation of facilities and processes are needed as well as staff training, motivation and support to facilitate new professional service delivery. Pharmacists varied in their approaches to conduct prior investigations or research before implementation of a new professional pharmacy service. As expected, those belonging to a banner group received support through the group's management structure whereas individual pharmacies conducted this themselves. However, a common message was the need to be familiar with and consider local needs when introducing any new professional service. This finding supports the increased requirement for community pharmacies to be health hubs for local communities and take up an increased role in primary health care. The participants' perceptions were that the provision of professional pharmacy services provided a wide range of positive patient outcomes and improved collaboration with doctors and other healthcare professionals. Of interest were comments that the successful implementation and ongoing provision of the services also resulted in staff members' professional satisfaction and motivation.

A number of issues were identified that impacted on the successful implementation and ongoing provision of professional pharmacy services. The thematic analysis of the data showed three main factors namely 1) pharmacist characteristics, 2) local needs, structures and support, and 3) an enabling practice framework. These factors correlate with the behaviour change wheel described through the COM-B model<sup>46</sup> and showed that the model is applicable to the introduction of new professional pharmacy services. The COM-B behavioural analysis guides the choice of intervention functions (or strategies) most likely to achieve behavioural change and will be useful to consider in the planning and delivery of enhanced and extended services. The identified factors also highlight that success is multifaceted and needs a continuing effort by competent and motivated staff within an enabling practice framework. It is therefore crucial to consider all of these factors in the introduction and expansion of pharmacy services.

#### **Pharmacist characteristics and motivation**

The results suggest that pharmacists' characteristics and motivation play a major role in implementing practice change initiatives. Various Canadian studies explored the relationships between pharmacists' characteristics and self-perceptions of their professional roles and practice change. One was a qualitative study with 115 community pharmacists and suggested that it could be a barrier if pharmacists viewed themselves as 'dispensers of medication' rather than patient-centred practitioners.<sup>62</sup> Another Canadian study that involved a cross-sectional survey of 945 pharmacists showed correlations between pharmacists' personality traits and the provision of advanced services as well as the professional culture of the pharmacy.<sup>14</sup>

It has been suggested that there is a need to address pharmacists' self-confidence and understanding of their changed professional roles and responsibilities as these could act as barriers in the provision of advanced professional services.<sup>63</sup> An Australian study that involved the implementation of a community pharmacy mental health medication management intervention showed success in training and mentoring pharmacists who volunteered to lead a new service, provided they had support from management.<sup>41, 64</sup> Community pharmacists should appreciate the requirements to take on new professional roles, recognise their local community needs and accept responsibility to provide holistic

patient care. However, previous research suggested that some pharmacists had low awareness of Australia's health care reforms and were not well prepared for the potential future roles expected of pharmacists in the health care reform agenda.<sup>65</sup> An Australian qualitative study that involved interviewing 27 key informants found that although community pharmacy has untapped potential in primary care, it has been slow to change.<sup>66</sup> It therefore seems crucial that the professional organisations and education providers, on an ongoing basis, should highlight the need for community pharmacists to take on new professional roles and prepare the profession for these roles. This is particularly important considering the recent data on the extent of Australian medication-related problems.<sup>12</sup>

A qualitative study that involved 20 in-depth qualitative interviews with community and hospital pharmacists in England showed ambiguities about being professionals: some pharmacists were of the opinion that other healthcare professionals and patients believed they were 'just dispensing' and some highlighted challenges with conflicting roles between community pharmacy as a retail shop as well as a place where healthcare is provided.<sup>67</sup> A focus group study in Wales involving consumers found a lack of awareness of public health services available through community pharmacies.<sup>68</sup> Several of the pharmacists in our study commented on the positive impact the professional services had on the image of the profession and community pharmacy and how it increased collaboration with other healthcare providers. This outcome shows that the provision of enhanced and extended services provided an opportunity for those pharmacists to be recognised as being more than dispensers and assisted them in moving towards newer models of care.

### **Enabling practice framework**

Some pharmacists highlighted the need for better financial incentives and remuneration structures for the provision of enhanced and extended services. This finding correlates with previous studies and a review of the role expansion of community pharmacists in Australia, Canada, England, the Netherlands, Scotland, and the United States that recommended that policy makers should focus on devising incentive mechanisms to support the effective integration of community pharmacists into primary care.<sup>69</sup> Much work is still needed regarding the payment of community pharmacy professional services as the current remuneration model is focused on the dispensing of medicines with limited payment for

professional services. Pharmacy consumers also need a shift in their understanding of the value of professional services with a recent review suggesting a need for studies to explore consumers' willingness to pay for pharmacy services.<sup>70</sup>

Accredited pharmacists commented on the Government's 2014 policy regarding the capping of HMR services<sup>71</sup> and the negative impact on the services. Previous research with WA general practitioners reported that they found HMRs beneficial;<sup>72</sup> it is unfortunate that the capping was introduced as it limited the growth of the services. Some accredited pharmacists also expressed a need for an HMR referral process from hospitals to improve continuity of care. On the other hand, the legislative changes that were introduced by the WA Government to allow pharmacist-administered immunisation services<sup>53</sup> were seen as positive developments in the provision of extended services. Our findings support those of a mixed methods study on the impact of community pharmacy pharmacist-administered influenza vaccination services in WA that showed that the services were safe and increased access to vaccinations.<sup>73</sup> A subsequent survey of 343 consumers showed high satisfaction with the services with the majority of the consumers supporting expansion to a wider range of vaccines.<sup>74</sup> In the case of pharmacist-administered immunisation services, the policy and subsequent legislative changes enabled the introduction of a new extended service. A mixed methods Canadian study following legislative changes to permit expansion of pharmacists' scope of practice similarly showed that the changes assisted the profession in shifting towards patient care.<sup>75</sup> The positive impact of pharmacists' involvement in immunisation services has been highlighted by a recent systematic review of 36 international studies with recommendations to increase public funding for services.<sup>27</sup>

Individual pharmacies followed flexibility in exploring and implementing new initiatives whereas pharmacies belonging to banner groups mostly relied on support provided by the group management. An Australian qualitative study on the implementation of professional pharmacy services showed potential advantage being part of a banner group compared to working individually in the implementation of new services.<sup>36</sup> The Stage 1 results of this project that involved a survey of 421 WA community pharmacies on the provision of enhanced and extended services showed that banner group pharmacies were more likely to



be service providers.<sup>47</sup> It seems that support provided through banner groups could be an enabler for service provision and warrants further investigation.

This qualitative study did not collect data on the frequency and impact of extended and enhanced pharmacy services or evaluation of the services but explored pharmacists' opinions on factors that contributed to the successful implementation and ongoing provision of enhanced and extended services. As with all qualitative research, the background and perspectives of the interviewer and researchers may have had an impact on the interviews and the analysis of the findings.<sup>54</sup> However, the interviewer was independent from the research team. Participating pharmacists were purposively selected as they had experience in the implementation and maintenance of enhanced or extended services. Thus, they had an interest in the topic and their experiences and opinions may not represent those of all Australian pharmacists. Also, some enhanced and extended services were provided by a small number of participants. As all participants of the study were pharmacists from WA, findings of the study may only be limited to those practising in Australia, as the roles and extent of enhanced and extended services may differ in other countries.

### **Conclusions**

The analysis showed that the COM-B model provides insights into required attributes for the introduction of new professional pharmacy services. Pharmacists who were successful in the implementation and maintenance of new professional services were familiar with and considered the local needs of their communities so that services could be tailored appropriately. There is a need to consider both pharmacy issues, such as organisational and management support and staff training, as well as pharmacists' aspects such as motivation and skills, during the implementation and maintenance of new professional services. An enabling practice framework that includes legislative changes to reflect developments in pharmacists' scope of practice, for instance the expansion of pharmacist-administered vaccination services, is crucial to facilitate new enhanced and extended pharmacy services.

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### **Declarations of Interest**

None.

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### **Figure captions**

Figure 1: Level of prior investigation or research conducted by participants before implementation of community pharmacy enhanced or extended services with example quotations

Figure 2: Schematic representation of the main factors impacting on community pharmacy enhanced and extended service delivery

Figure 3: Pharmacist characteristics impacting on community pharmacy enhanced and extended service implementation and delivery with example quotations

Figure 4: Enabling practice framework for the provision of community pharmacy enhanced or extended services

Supplementary material: Semi-structured interview process flow diagram to explore pharmacists' opinions on the provision of community pharmacy enhanced and extended services

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Table 1: Local factors impacting on service implementation and maintenance with example quotations

Factor	Example quotations
Local demand	<p><i>"... they have trouble accessing GPs. The psychiatrists could look after their mental health, but no one was looking after their physical health needs." P04 C</i></p> <p><i>"I think our demographic is also quite elderly. So we have a large majority of patients who are older and they have more fragile skin, they have more-- skin tears, and also more chronic venous diseases. So compression therapy's also quite in demand. And also lots of kids and younger workers as well ... and people in the cafe who often have injuries in the kitchen ... patients coming in with wounds, and not having it managed properly. A lot of people were starting on antibiotics when they might not actually have an infection. Or people coming from operations, post-operative wounds, that are not actually followed up by their surgeons or dermatologists. So, yes, it felt like there was a need for it." P14 CAS</i></p>
Consumers' acceptance	<p><i>"... we had such positive feedback and the people have been really happy with our service and the way we do it." P23 CAIS</i></p> <p><i>"It also allows a consumer or customer to realise there's more to pharmacies than just buying products." P25 CI</i></p>
Positive patient outcomes	<p><i>"Well, it is satisfying. I mean, it's satisfying in the sense that you see you can actually offer something that you know is going to help a patient. And prescribers like it because it means that their patients are more likely to take the medicines they prescribe, and so it works for everyone. It works for prescribers, it works for the patients, and it works for the pharmacy.... But you can actually make a difference on another level.... some of the things can be quite life-changing for the patients ... when patients [with sleep apnoea] stop breathing 100 times an hour for seven hours while they sleep, and then you can get them down to under two times an hour while they're breathing. And you see the difference in the way they look, and they tell you they feel like they're jumping out of their skin. It's quite an amazing thing to help them achieve those results." P15 CI</i></p>
Relationship with local health professionals	<p><i>"I do refer a lot of people to podiatrists up here because I've had the opportunity to spend a lot of time with podiatrists, and physiotherapists .... And so I've got a good understanding of what their scope of practice could be. And so, if I see the opportunity that they could offer something that is beyond primary care, then I'll make the suggestions and I'll give them the options of what we have to offer. But I'd also highlight the importance of seeing someone that specialises in that area as well. And that's the things I would do with other health professionals when I talk to them. So it's not uncommon for some of the doctors to call me on my mobile even out of working hours to ask for recommendations." P25 CI</i></p>

Use of innovative strategies	<i>"We actually spoke to the TGA [Therapeutic Goods Administration], I spoke to the health department and I got them to come out and look over what we were doing [specialist compounding] before we'd even started to say, 'This is what we think's the way to do it. Say you've got a benchmark to work from, is there anything you want anyone else to do differently or anything you think we should be doing. P22 CIS</i>
Information sharing	<i>"It's an engagement tool for us to communicate with our other stakeholders, primarily in the area of residential aged care, which is the aged care facilities, the care staff, and also the prescribers. So we have online tools to be able to access information to facilitate the sharing of information from hospital discharge and admission through to the national medication charts and electronic medication charts. And we've had to develop most of that ourselves because the dispensing software vendors just haven't done it. So out of necessity, we've developed the capability in that area." P06 C</i>
Organisational support	<i>"... the supply company and head office detailing doctors and providing advertising material, providing demonstration stock and training as well, mainly refresher training." P13 CAI</i>
Staff skills	<i>"We trained our staff in-store. ... we've sort of given them a very, very basic knowledge ... But the important thing is that they refer to the pharmacist. So, all the pharmacists have done the basic training that Dr [expert in service] offers." P15 CI</i>



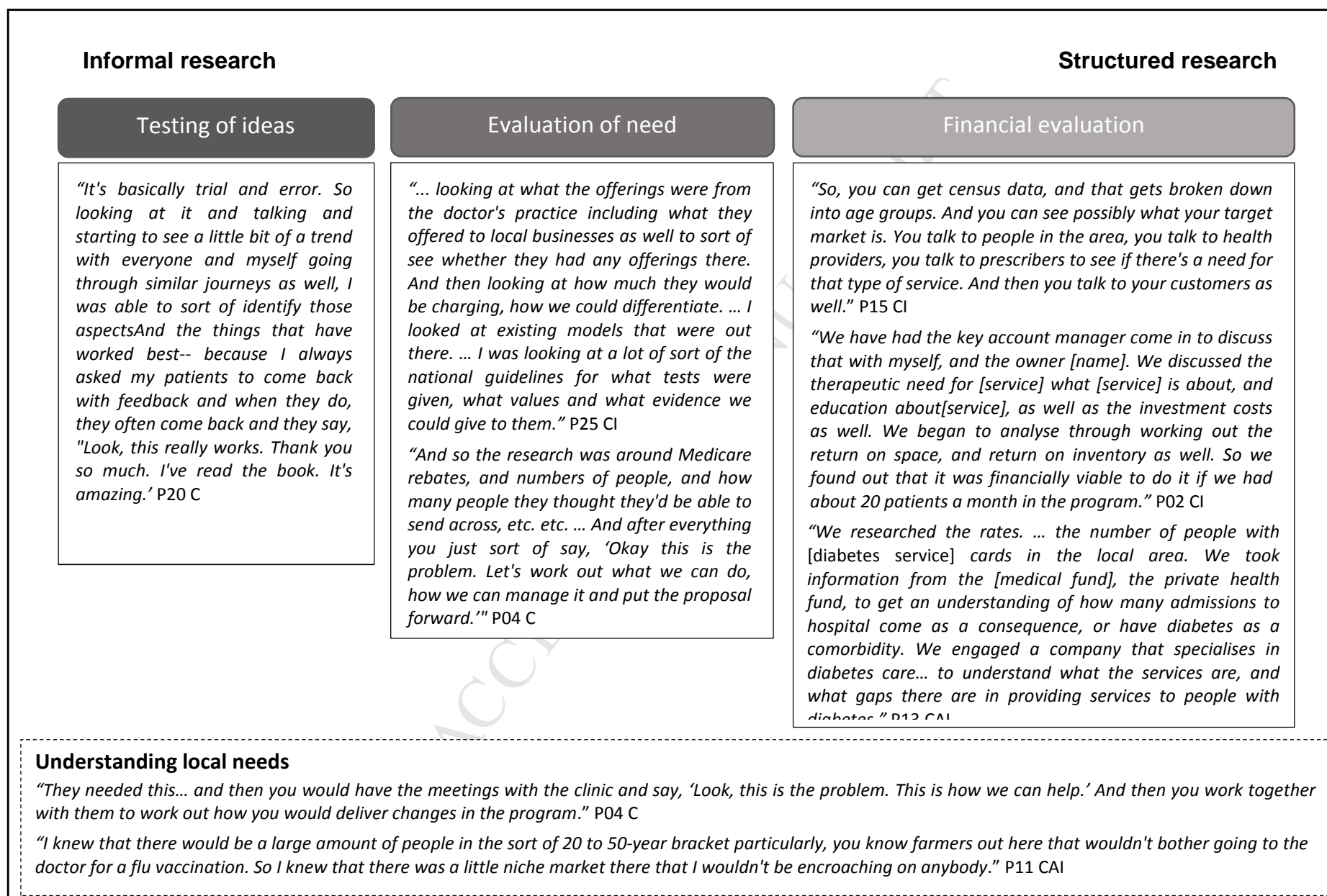


Figure 1

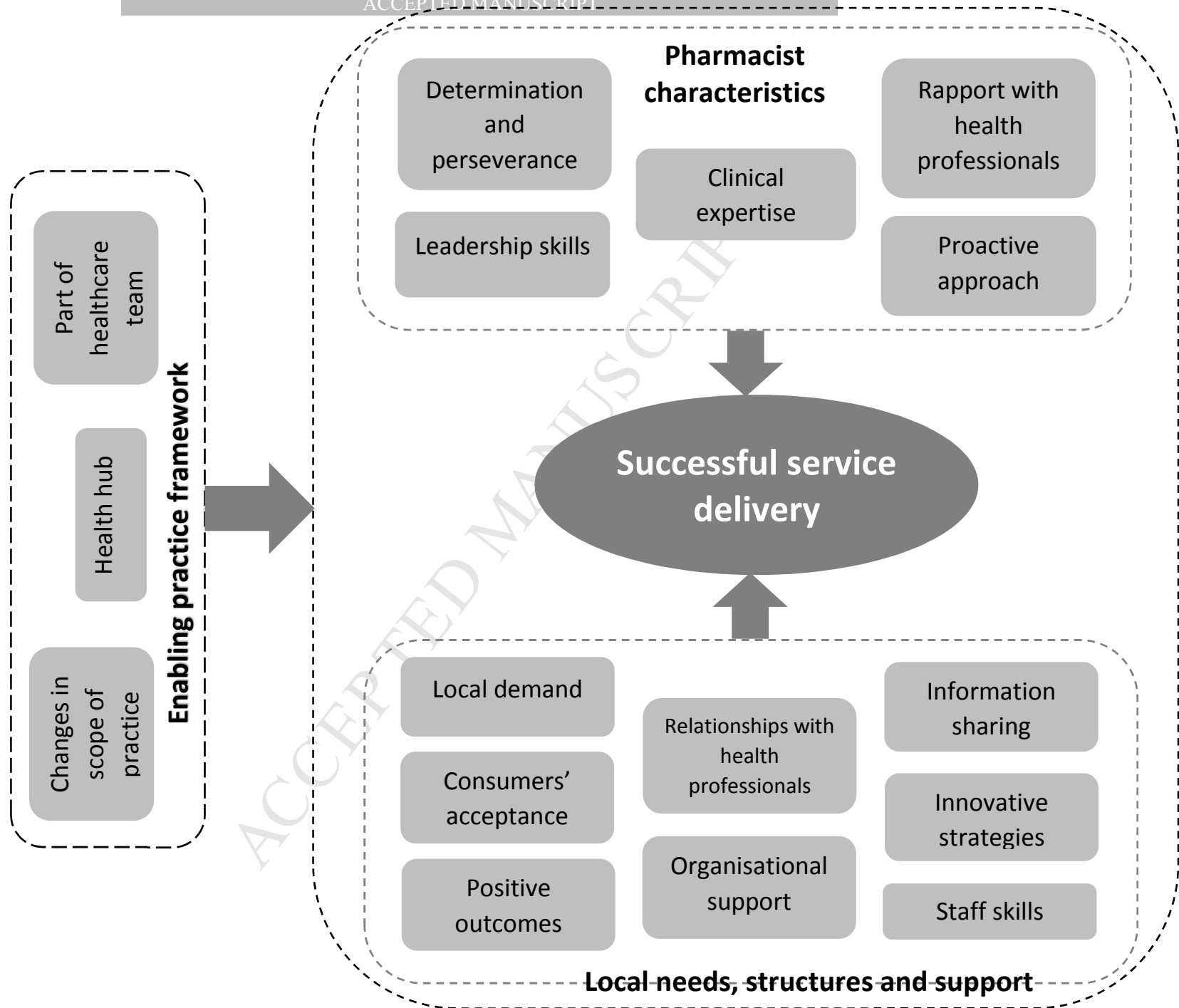


Figure 2

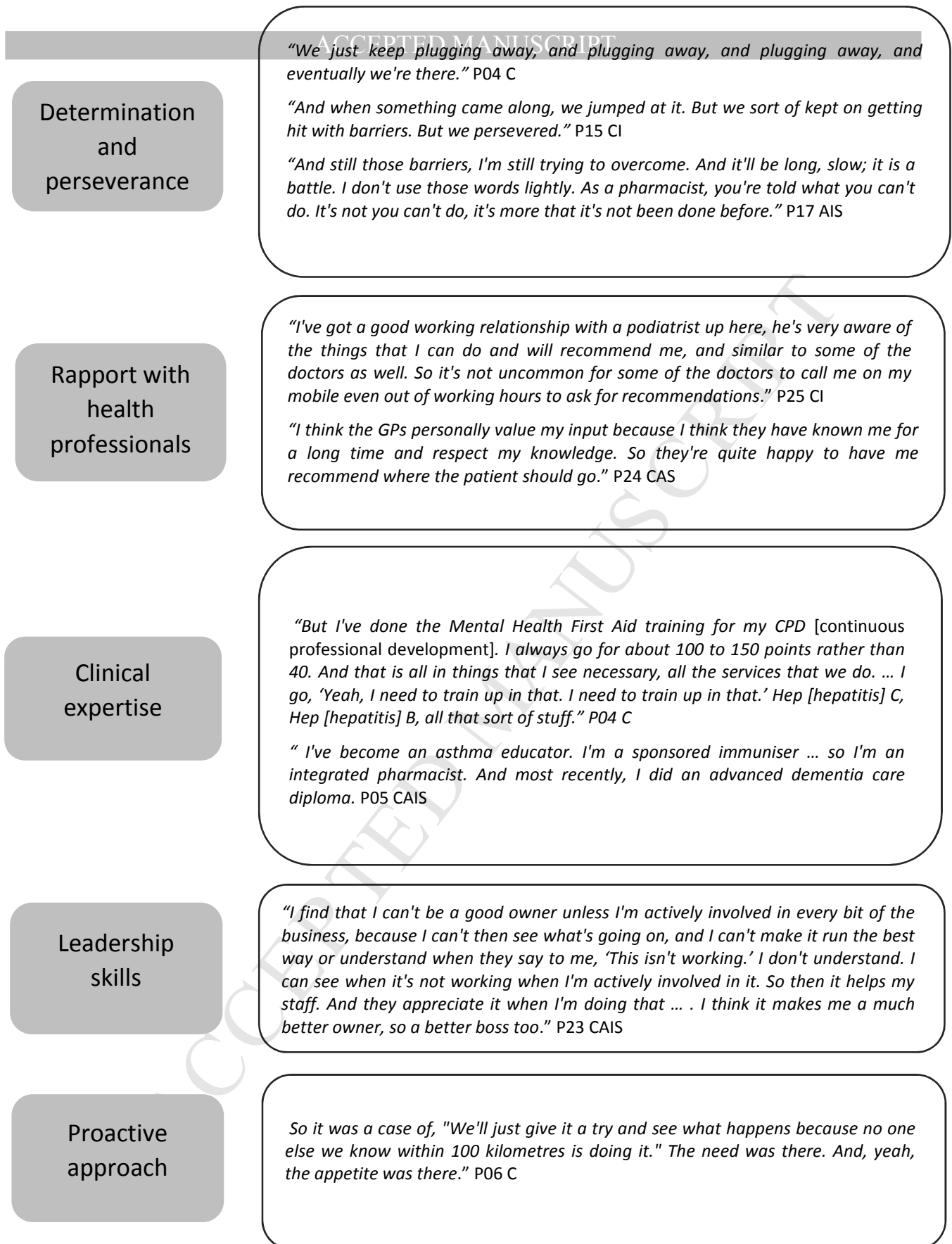


Figure 3

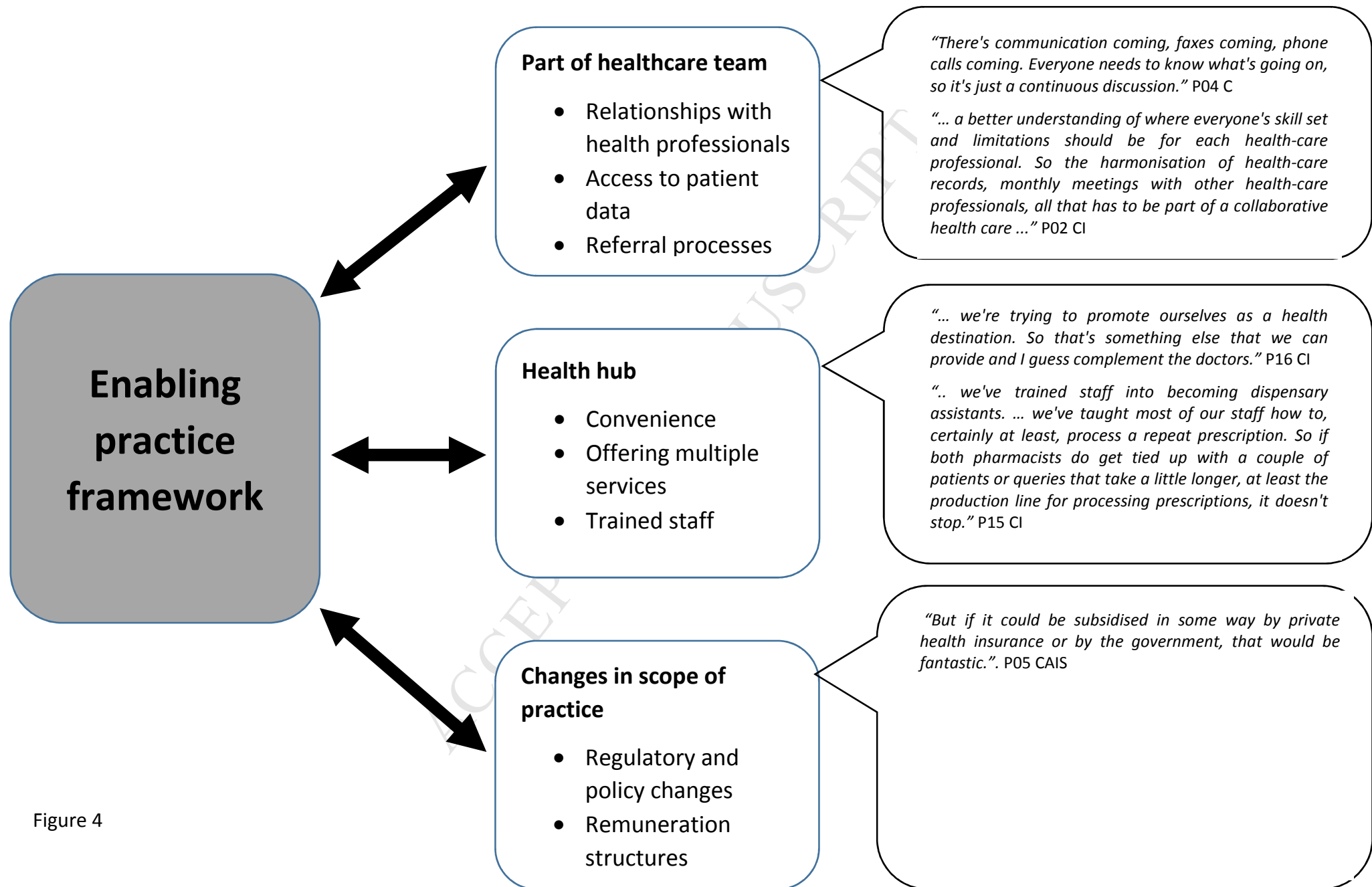


Figure 4