Hospital Pharmacists’ Perceptions of Medication Counselling: A Focus Group Study

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Abstract

Background
Medication counselling sessions are key times for a pharmacist to speak to patients about their medications and the changes made to their therapies during their hospital stay.

Objectives
To explore hospital pharmacists’ perceptions of their roles and goals in patient medication counselling, and perceived barriers and facilitators to achieving their goals.

Methods
Hospital pharmacist focus groups were held in two tertiary referral hospitals. Eligible pharmacists had provided medication counselling within the previous six months in inpatient and/or outpatient settings. Interested pharmacists attended a focus group designed to elicit their opinions and perceptions of patient medication counselling. Focus groups were audio recorded and transcribed verbatim. Inductive thematic analysis was applied to the data to identify initial patterns (codes) which were then organized into common overarching themes using NVivo® software. The codes were reviewed for reliability by pharmacists independent of the focus groups.

Results
Six, one-hour focus groups were conducted with a total of 24 pharmacists participating. Saturation of information was determined after four focus groups. Greater than 80% consensus was achieved for reliability of the identified codes. A number of themes emerged from these codes around the goals, roles, and the barriers and facilitators to meeting these goals. Pharmacists’ patient-centred goals in medication counselling were to build rapport, to empower patients and to improve patients’ experience, health and safety. These goals would be accomplished through specific roles such as being an assessor, educator and problem-solver. Pharmacists frequently cited time pressures caused by systemic (hospital), and pharmacy specific processes as key challenges to achieving their goals. Factors that enabled pharmacists to meet their goals were those related to effective interprofessional collaboration and the quality of professional practice (such as training, expanded roles and advanced planning for discharge).

Conclusions
Hospital pharmacists emphasised patient-centred goals in medication counselling and outlined the challenges to meet those goals. The findings from this study will be used to develop strategies for effective communication and inform pharmacy practice changes to improve patient care.

Key Words
Hospital pharmacist  Focus group  Goal  Role  Communication
Introduction
Discharge from hospital to community or to other healthcare facilities marks an important transition in care for patients. Discharge and other transitions such as admission to hospital or transfers within a hospital have been identified as particular times when patients may be at risk of experiencing medication errors and adverse events.\(^1\)\(^-\)\(^3\) Medication counselling opportunities are key times for pharmacists to speak to patients about their medications and the changes made to their therapies during their hospital stay.\(^2\)\(^,\)\(^4\)\(^-\)\(^7\) Failure by a hospital pharmacist to communicate effectively with patients may negatively impact a patient’s ability to understand medication issues contributing to medication non-adherence.\(^8\)\(^\text{-}\)\(^11\)

The literature indicates patient benefits with hospital pharmacist involvement in discharge counselling and the practice has been incorporated into national pharmacy professional standards.\(^12\) However, little has been published about hospital pharmacists’ perceptions about their role in this process and how they believe their practice impacts patients.\(^13\)\(^\text{-}\)\(^17\) The authors were interested in exploring how hospital pharmacists view their professional role and their individual goals in medication counselling as well as the factors that enable and prevent them from meeting these goals.

Learning more about how hospital pharmacists perceive their roles and goals in interacting with patients at discharge will provide a better understanding of the current practice followed by pharmacists working in Australian hospitals. This may also help identify gaps in professional practice on which to focus pharmacist education and training as well as some potential areas for expanded professional scope.

Objectives
To explore hospital pharmacists’ perceptions of their roles and goals in patient medication counselling, and perceived barriers and facilitators to achieving their goals.

Methods

Study Type, Design and Tools
This was a qualitative study using a focus group approach to obtain rich detail and an in-depth understanding of how hospital pharmacists perceive their role and its value in counselling patients at discharge about their medications.

A focus group guide of questions and prompts was developed and piloted with input received from hospital pharmacists independent of the study.

Research ethics approval for the study was received from the Human Research Ethics Committee (HREC/14/QRBW/546), participating hospitals, and The University of Queensland.
Inclusion criteria
Eligible participants were hospital pharmacists who had provided discharge or medication counselling in the previous 6 months in either an acute ward or ambulatory clinic.

Enrolment
Interested pharmacists responded electronically to an expression of interest email, completed a demographic questionnaire and consent forms, and returned these to the first author (BC). Two reminder emails were sent out at two week intervals to recruit pharmacy staff.

Data Collection
Focus groups included pharmacists from two teaching hospitals in Brisbane. A purposive sampling of participants was utilised to ensure inclusion of pharmacists from different levels of training, experience and practice areas.

One-hour, audio recorded, focus group discussions were led by BC who followed the prepared guide of questions and prompts. At the conclusion of each focus group, a member check was conducted in which participants’ discussion points were summarised and their feedback was requested to ensure appropriate interpretation. Participants were encouraged to contact BC electronically with any further input.

Coding
Audio recordings were transcribed verbatim. Focus group transcriptions were verified by comparing writing documents with original audio recordings to reconcile the contents of the two data formats wherever possible.

To ensure an appropriate and consistent methodology in coding and theming, the first focus group transcript was coded manually by BC, and then checked by the investigator’s advisors (WNC and BW). The remaining five focus group transcripts were then coded using NVivo® software to assist in their organisation.

Reliability testing of codes
To minimise investigator bias affecting the selection and application of codes, reliability testing of the coding assignment was conducted. A process previously described by other qualitative researchers was followed where evaluators coded the same 20% sample of data and achieved greater than 80% agreement through consensus.\textsuperscript{18,19}

Three hospital pharmacists independent of the focus groups were involved in the reliability testing. Each pharmacist was supplied with transcript samples and instructed to apply codes using a code description guide. Results were entered into an Excel spreadsheet for ease of comparison and to identify areas of discrepancy that were later discussed at a consensus meeting.
Analyses
Demographic questionnaire results were descriptively analysed. Pseudonyms were assigned to all focus group participants and appear in exemplars provided. A process of inductive thematic analysis as described in the literature was applied to the focus group data.\textsuperscript{20,21}

Field notes and reflexive journaling were undertaken throughout the study. Having been practising as a hospital pharmacist for more than 20 years, BC felt invested in the study topic with strong opinions about best practice and professionalism. As a researcher, BC is aware of the potential influence her experience and professional goals may have on her perception and interpretation of data. Pharmacist participants knowing that BC is an experienced pharmacist may also potentially influence their responses in the focus groups. Some may feel a professional connection or comradery and be more comfortable to contribute openly in the discussions while others may feel as their actions are being judged or scrutinised.

Results
The Focus Groups
A total of 24 pharmacists participated in six, one-hour audio recorded focus groups in February and March 2015. No new ideas or concepts were introduced by the fourth focus group and it was determined that saturation of information had occurred.

The pharmacists’ demographic characteristics (Table 1) are generally representative of the majority of those working in Australian hospitals.\textsuperscript{22} Pharmacists in this study had more postgraduate training compared to those reported by O’Leary (54% versus 26%), but fewer pharmacists had greater than 10 years’ hospital experience (33% versus 44%).\textsuperscript{22}
Table 1. Hospital Pharmacist Demographics

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>Number (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>19 (79)</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>11 (46)</td>
</tr>
<tr>
<td>31-50</td>
<td>11 (46)</td>
</tr>
<tr>
<td>&gt;50</td>
<td>2 (8)</td>
</tr>
<tr>
<td>Highest level education (Pharm)</td>
<td></td>
</tr>
<tr>
<td>B Pharm</td>
<td>10 (42)</td>
</tr>
<tr>
<td>B Pharm (Hon)</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Graduate Diploma (Clinical Pharm)</td>
<td>9 (38)</td>
</tr>
<tr>
<td>Masters (Clinical Pharm)</td>
<td>3 (12)</td>
</tr>
<tr>
<td>PhD</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Years’ experience as pharmacist</td>
<td></td>
</tr>
<tr>
<td>1 to 5</td>
<td>5 (21)</td>
</tr>
<tr>
<td>6 to 10</td>
<td>8 (33)</td>
</tr>
<tr>
<td>11 to 15</td>
<td>6 (25)</td>
</tr>
<tr>
<td>16 to 20</td>
<td>3 (13)</td>
</tr>
<tr>
<td>&gt;21</td>
<td>2 (8)</td>
</tr>
<tr>
<td>Years’ experience clinical pharmacist&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>&lt;1</td>
<td>1 (4)</td>
</tr>
<tr>
<td>1 to 5</td>
<td>6 (25)</td>
</tr>
<tr>
<td>6 to 10</td>
<td>9 (38)</td>
</tr>
<tr>
<td>11 to 15</td>
<td>6 (25)</td>
</tr>
<tr>
<td>16 to 20</td>
<td>1 (4)</td>
</tr>
<tr>
<td>&gt;21</td>
<td>1 (4)</td>
</tr>
<tr>
<td>Clinical practice area</td>
<td></td>
</tr>
<tr>
<td>Inpatient</td>
<td>18 (75)</td>
</tr>
<tr>
<td>Outpatient</td>
<td>2 (8)</td>
</tr>
<tr>
<td>Both</td>
<td>4 (17)</td>
</tr>
</tbody>
</table>

<sup>a</sup>“Clinical pharmacist” refers to a pharmacist assigned to a specific patient care area (s) who provided clinical pharmacy services as part of an interprofessional team.

Coding
A total of 25 codes were assigned to the six transcripts (Table 2).
Table 2. Final 25 codes applied to all transcripts

<table>
<thead>
<tr>
<th>Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles</td>
<td>Assessor, Educator, Information Resource, Liaison, Interpreter, Transition Enabler, Problem-solver</td>
</tr>
<tr>
<td>Goals</td>
<td>Build rapport with patients, Empower patients, Improve patients’ experience and health, Establishing/ maintaining effective relationships (healthcare team)</td>
</tr>
<tr>
<td>Barriers</td>
<td>Interprofessional collaboration challenges, No formal follow-up process, Poor communication skills, Financial issues, Cultural /language issues, Drug procurement logistics, Patient-related factors, Hospital system related factors, Pharmacy system related factors</td>
</tr>
<tr>
<td>Facilitators</td>
<td>Effective interprofessional collaboration, Professionalism, Effective counselling/ communication training, Recommend expansion of professional scope, Advanced planning</td>
</tr>
</tbody>
</table>

Reliability testing of coding conducted
Greater than 80% agreement among the raters and investigator (BC) was achieved for all “barrier”, “facilitator” and “goal” codes prior to the meeting whereas only three of seven of the “role” codes exceeded 80% agreement. These were resolved in the consensus meeting with greater than 80% agreement on all remaining code assignments.

Thematic Analysis and Discussion
Hospital pharmacists identified a number of patient-centred goals in participating in medication counselling with patients. Their goals were to build rapport with patients, to empower patients and to improve patients’ experience, health and safety. These goals could be accomplished through specific roles described by the pharmacists such as assessor, educator and problem-solver. Pharmacists frequently cited time pressures caused by systemic hospital as well as
pharmacy and patient-related issues as key challenges to achieving their goals. While factors that enabled pharmacists to meet their goals were those related to effective interprofessional collaboration, advanced preparation for discharge and professional practice changes (such as training and expanded roles).

Table 3. Themes and subthemes by category

<table>
<thead>
<tr>
<th>Category</th>
<th>Theme</th>
<th>Subtheme(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roles</td>
<td>Assessor</td>
<td>Information resource</td>
</tr>
<tr>
<td></td>
<td>Educator</td>
<td>Liaison, Interpreter, Transition</td>
</tr>
<tr>
<td></td>
<td>Problem-solver</td>
<td>Enabler</td>
</tr>
<tr>
<td>Goals</td>
<td>Build rapport with patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Empower patients</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Improve patients’ experience, health and safety</td>
<td></td>
</tr>
<tr>
<td>Barriers</td>
<td>Systemic (hospital) related</td>
<td>Interprofessional challenges</td>
</tr>
<tr>
<td></td>
<td>Pharmacy related</td>
<td>Financial issues, Language/Cultural barriers</td>
</tr>
<tr>
<td></td>
<td>Patient-related</td>
<td></td>
</tr>
<tr>
<td>Facilitators</td>
<td>Effective interprofessional collaboration</td>
<td>Communication skills training, Expanded pharmacist roles</td>
</tr>
<tr>
<td></td>
<td>Advanced preparation for discharge</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional Practice Changes</td>
<td></td>
</tr>
</tbody>
</table>

Roles

Pharmacists’ roles in medication counselling tended to mirror those described within standards of practice and held collectively by the profession. By fulfilling these roles, participating pharmacists aimed to help patients better understand their medications. The three themes around pharmacists’ roles in medication counselling emerged were the role of assessor, educator and problem-solver (Table 3). Additional subthemes were associated within the educator and problem-solver roles.

Assessor

The role of assessor included information gathering by pharmacists to help them prepare for upcoming medication counselling sessions with patients and caregivers. Pharmacists assessed patients’ ability to understand their medications either directly or by consulting with nursing or medical staff to ascertain their mental or cognitive status or hearing or sight issues. Pharmacists’ decisions to include caregivers in medication counselling sessions was based on patients’ ability to communicate, understand and manage their medications at home.
This pharmacist role in determining patients’ ability to understand information about their medications was assessing aspects of a patient’s health literacy. Patients with poor health literacy have difficulties understanding written or spoken information about their medications, especially if the information is provided as complicated medical jargon or at a level requiring high comprehension. Many patients are challenged in trying to understand their medication therapies and navigate the healthcare systems to manage their own health. Therefore, the role of assessor is a valuable activity for hospital pharmacists to assume.

**Educator**

The role of educator was the primary activity identified for pharmacists participating in medication counselling sessions. This role encompassed a wide range of educational points to ensure patients understood their medication plan: purpose for medication, length of treatment, how and when to take their medications, what to expect, when to expect changes, how to manage side effects, how to obtain new supplies and where to store medications.

It is not surprising that the focus group pharmacists recited these points as these are included in the computer generated medication lists (eLMS) given to patients by pharmacists when providing discharge counselling. Ensuring the transfer of this information to patients in medication counselling sessions is also reinforced in most pharmacy schools’ curriculum. In addition, most pharmacists working within Australian hospitals follow the Society of Hospital Pharmacists of Australia (SHPA) recommendations for annual clinical assessment using the SHPA clinCAT tool. This tool aids the assessment of the clinical pharmacy competencies of pharmacist practitioners and includes criteria in which to evaluate patient consultation skills.

Interestingly, in most focus groups, pharmacists emphasised the importance of patients having understood the rationale or reason for the medication over many of the other educational points. Anna repeats the educational point of having patients understand “why” they are prescribed a medication three times in her response.

“Understanding of what they're taking, why they're taking it...Why they're taking it... otherwise if they don't know that, they go home, it's not working, stop taking it. So it's a thorough understanding of medicines and why they're taking it...”

Pharmacists often connected the outcome of improved medication adherence with patients having a good understanding of their medication’s rationale. Beth makes this link:

“...I would hope that they would understand why they’re needed... there’s some pretty startling evidence around low rates of adherence for our patients...if we can have that conversation and increase their belief of the need of the medicine, then that might help...”

The literature supports this pharmacist’s suggested association between patients’ medication adherence and their beliefs about the need and value of their medication. The Beliefs about Medication Questionnaire (BMQ), an instrument to assess patients’ beliefs about the necessity of prescribed medication as well as their concerns about potential effects about their
medications, has been used in studying medication adherence in many chronic disease settings.\textsuperscript{31-36} Patients with strong beliefs about the value of their medications and few concerns about their medicines are more likely to be adherent.\textsuperscript{31,36}

\textit{Information Resource}

The educator role also included the subtheme role of information resource in which pharmacists apply their medication knowledge expertise in researching medication information as well as in the provision of written materials or tools to aid patients’ understanding of their medications.

\textit{Problem-Solver}

The problem-solver role in medication counselling encompassed a broad range of activities undertaken by pharmacists to optimise patients’ medication therapy, facilitate medication adherence and enable a smooth transition from hospital to home. This required pharmacists to work collaboratively with members of the healthcare team to provide patient care.

Pharmacists helped optimise patients’ medication therapy by clarifying the medication plan and clearing up confusion or ambiguity around medication issues, and preventing medication misadventures. Ava described how overwhelmed oncology patients can miss important information such as using anti-emetics to prevent nausea and vomiting and how this could have been prevented by having pharmacists speak to patients.

“…people that haven’t coped …come in because they’ve had vomiting post-chemo… when you sit and talk to them, they’ll pull their bag out and all their anti-emetics are still in the boxes that they got given!...That’s really the best possible thing of being counselled by pharmacists... “

Pharmacists provided a number of examples where they supported patients’ medication adherence through the use of administration aids or Webster-Paks\textsuperscript{®}, by simplifying patients’ medication regimens, by working with patients to find solutions that better fit the patient’s life schedule, and through the use of technological devices. Brianna explained how she supported a patient’s adherence to key therapy by using technology:

“...he’s going home on nimodipine. He’s had a subarachnoid haemorrhage and that’s every four hours religiously, so I’ve just been sitting in the transit lounge with him programming his iPhone with an alarm system...to go off for the next six days to help him to take his nimodipine...every four hours.”

At times, pharmacists would negotiate with patients about which medications should be given priority. These pharmacists recognised that many patients with chronic illnesses prescribed multiple medications had difficulty in remembering to take all their medications as directed. A pharmacist working with renal patients described her approach:
“A lot of it is negotiating—what the patient will and won't take. Renal patients are on a gazillion meds. They're expensive and they're unpleasant and taste yucky. So we bargain—so this is the size of the tablet. It's going to taste minty, I need you to chew it. But if you take this one, we will save you from having to take the other one that you don't like that makes you constipated…”

A number of additional subthemes within the Problem-solver role include Liaison, Interpreter and Transition Enabler.

Liaison
The pharmacist may seek to problem-solve medication issues that arise in medication counselling by acting as a liaison between the patient and other healthcare professionals. Sometimes patients raised concerns about their medications that needed to be addressed with the team prior to discharge. Anna provided an example where this occurred in a conversation she had with a patient about their medications:

“…it has happened where you talk to a patient and finally something will click and then, yes, you're like, hang on a minute... Go and talk to the prescriber again and get them to fix it…”

Ethan described how pharmacist and patient conversations offers the opportunity for pharmacists to act as a liaison between patients and the healthcare team:

“… You spend time counselling...sitting down and communicate with a patient, there’s an awful lot of information comes back the other way as well. So you get a better understanding of where they're at and what's bothering them and that in some ways, you can act as a bit of a liaison between the patient and the rest of the medical team.”

Interpreter
A number of pharmacists made reference to occasions when they helped patients understand their diagnosis in order to comprehend the rationale for their prescribed medications. In these situations, the diagnoses may have been poorly explained where the healthcare professional used medical terminology the patient could not understand or the information had been misinterpreted by patients. In some medication counselling sessions, the pharmacist became an interpreter for the patient.

A pharmacist working in cardiology provided an example where a patient had not been told their diagnosis in terms they could easily understand.

“[Patient asks] “Have I had a heart attack? When did that [happen]?” … No one has said to them the words, heart attack. They've heard they've had a non-STEMI. They don't know what a non-STEMI is…”

Effective communication between healthcare providers and patients has been associated with positive health outcomes for patients. Conversely, misunderstandings about their health
conditions and treatment has negative health implications for patients.\textsuperscript{37} How well healthcare providers communicate with each other and with patients is imperative for quality patient care.

\textit{Transition Enabler}

Pharmacists described their role of transition enabler in medication counselling as preparing patients for a smooth transition from hospital to home. To achieve this, pharmacists were required to work collaboratively with other healthcare professionals in both the hospital and community. In this example, an acute care pharmacist explained the process to ensure the patient had appropriate follow up and tests.

“…Like warfarin for example, you go and talk to a patient and say, “Your dose for this afternoon is this. Has the doctor spoken to you about when your next blood test is or when to go and see your GP?” Often times they haven’t and then we go back to the [hospital] doctor and say, “You need to call [pathology] or you need to call their GP and make sure they have an appointment tomorrow…”

Pharmacists routinely dispensed a one month supply of medications or less to patients upon discharge and expressed the need for patients to understand next steps in their care and the procurement of their ongoing medication supply.

“… to remind us of the importance to explain [to patients]… “We’re only giving you a month and we’re doing that for a reason, because we want you go back to your primary health care provider and link in with them. That’s where you can arrange further supply…” (Beth)

Some pharmacists asked patients to act as messengers to ensure that patients’ GP received information about the changes made to patients’ medication while in hospital. Pharmacists explained that the transfer of discharge summaries from hospital to community did not always occur in a timely manner and they were concerned that the primary care physician may not be aware of medication changes made in hospital. This is critical as poor communication and inadequate transfer of patient information after discharge from hospital can have serious implications to patients’ health.\textsuperscript{38-42} The pharmacist’s role as a transition enabler is well described in the literature. Hospital pharmacists have been key players in providing continuity of care from hospital to community settings communicating with and transferring information to community pharmacists and primary care physicians about patients’ medications.\textsuperscript{5,43,40,42,44-49}

\textbf{Goals}

Unlike the pharmacists’ defined roles which reflected a more collective and understood professional perspective, the goals described by pharmacists represented an individualised or personal glimpse into what they hoped to achieve professionally by engaging with patients in medication counselling.

Patient-centred goals identified by the hospital pharmacists for medication counselling included the following themes: to \textit{build rapport with patients}, to \textit{empower patients} and to \textit{improve patients’ experience, health and safety} (Table 3).
Building rapport

Building rapport with patients was a goal that many pharmacists named as an essential part in engaging effectively with patients. Many pharmacists demonstrated awareness of the need and value to build rapport and make patients feel comfortable in conversations through their communication style, careful listening, and nonverbal communication such as the posture they assumed during conversations. Building rapport with patients requires healthcare professionals to be attentive listeners in order to understand the patient’s perspective.\textsuperscript{24,50,51} Ethan provides an example of the importance of taking the time to hear patients’ views.

“...There's all sorts of things that come out of the woodwork when you actually seek to understand from the patient’s perspective... you sit down and you ask them what the problem is. You've got to listen to them and work through it, it takes time. Then they understand things better...”

Anna described how she made adjustments in the language she used to accommodate the particular patient.

“So ... you pick your people who you talk differently to. There's the patients who you say, “Oh, hello, sir,”...Then there's the patients who you say, “Gidday, how's it going?” You just have to adjust. I think if you can relate to them a bit better, it can get through to them.”

Pharmacists indicated that building rapport with patients included the need for establishing a trusting relationship. This required pharmacists to be able to show an appropriate level of caring and compassion in their communication exchanges. In conversations with patients around their medication use including illicit or recreational drugs, Cathy emphasised the need for having patients’ trust in order to obtain honest and accurate information from them.

“...Because you're trying to build a relationship of trust and if you go, like the police, the first day, then they won't talk to you again.”

The value of building rapport between patients and healthcare professionals has been well studied, particularly between physicians and patients and nurses and patients.\textsuperscript{52-59} Few researchers have studied the effects of rapport building between pharmacists and patient.\textsuperscript{60-62}

Empowering patients

The goal of empowering patients to improve their medication and overall health experience was expressed by many pharmacists participating in the focus groups. Strategies described to enable patient autonomy and give patients agency included: providing them with knowledge and tools to allow them to make decisions about their medications, encouraging patients to be active participants in their healthcare, and assisting patients in navigating the healthcare system.
Healthcare research often represents patient empowerment as an outcome related to self-efficacy or self-management. Patient empowerment arising from interactions between a healthcare professional and a patient is thought to be the result of effective communication and information exchange co-created within a partnership. Empowering patients by ensuring they take part in making decisions about their healthcare is consistent with the philosophy of patient-centred care.

Ella illustrated a patient-centred approach in her description of a desirable patient-pharmacist partnership that included effective communication and the provision of medication information to allow patients to make important healthcare choices.

“...you illicit their problems and their concerns and you talk through them... you've equipped them with the information that they require to make decisions about their own healthcare... and what they then choose to do with their medications and their health is an informed choice.”

Several pharmacists raised examples of where they had encouraged patients to have conversations with their GPs to seek alternative treatment options should they experience problems with medication side effects. Amy called this an example of “empowering the patient” in following excerpt.

“...it's saying to the patient, “These are what we use [in hospital], but if you're getting any side effects, just go discuss it with your GP. There's more than one option out there...they can tweak and make things best for you.”

**Improving patients' experiences, health and safety**

Another goal in medication counselling expressed by many pharmacists was improving patients’ experiences, health and safety. They described their desire to make a positive difference in patients’ lives through increased understanding of their medications. They also witnessed improved patient outcomes and avoided adverse drug events resulting from pharmacist initiated changes. The beneficial effects of patient discharge counselling on patient outcomes include decreased adverse drug events and 30 day readmission rates.

Amy, relayed an incident of helping a patient understand the rationale for their medication and the patient’s appreciation of this knowledge.

“I like the lightbulb moment when patients finally understand... They're like, “What? I've been on that for five years and I didn't know why!” ...and it's just fantastic seeing the final understanding... I love that. I feel so good afterwards.”

Anna provided an example of how she was able to relate an unwanted side effect to a patient’s medication and initiate changes to their therapy.
“...like also when we see patients when they come in and ...they might say, “Oh, I've been taking this medicine and I've been getting this awful rash,”...They don't know why and it's really - it's nice when you can tell them, “Actually that could be from this medicine.” You'll get it reviewed and fixed and then... They'll be like, “I feel great now that I'm not taking that!””

Concern about patient safety in the context of their medication taking behaviour was raised by many pharmacists. Pharmacists often expressed a hope that the medication counselling conversation and information provided would help prevent any medication misadventures at home. This was summarised in Frieda’s desire to improve patients’ outcome and ensure safe medication taking practices.

“I just would hope that I'm improving the safety of the patient at home- so that they know...what to take and when to take and how to do it safely and understand the importance of what they're on...You feel like you’ve achieved something and improved the outcome.”

**Barriers and facilitators to pharmacists achieving their goals**

For many of the barriers identified by pharmacists in meeting their medication counselling goals, there were related and opposing facilitators to potentially overcome them, and therefore barriers and facilitators will be discussed together. The availability of time to conduct an education session often determined whether the same issues factors were perceived by pharmacists to be barriers or facilitators. For example, not having sufficient notice about a pending discharge was related to ineffective interprofessional collaboration and left pharmacists frustrated and obliged to hastily prepare for and deliver patient counselling. Whereas time to engage in effective communication and collaboration with other healthcare professionals allowed pharmacists to be proactive and better plan for discharge medication counselling. With time in their favour, pharmacists described many processes that successfully facilitated their goals; however, they were also adamant about the negative consequences when the same processes did not work well. These time dependant themes were grouped as systemic (hospital), patient or pharmacy related factors.

The concept of time constraints and feeling under pressure was a common thread throughout the dialogue of most focus groups. Pharmacists often expressed concerns that they were not able to meet their own professional goals, felt rushed to fulfill departmental or pharmacy practice expectations and feared patients might be at risk due to misunderstandings about their medications. Lack of time is frequently cited in the literature as a major barrier to pharmacists conducting medication counselling to hospitalised patients.\(^{16,17,68}\)

One pharmacist explained how time pressures have redefined the concept of discharge medication counselling.
“...we’re so pushed for time that we consider discharge counselling to be talking about medication to the patient - going through it quickly with them. What they’re meant to be taking and how they’re meant to be taking it. Off you go... discharge counselling has [been] almost redefined, I think, by time pressures.” (Ewan)

**Systemic (hospital) related issues**

A number of systemic issues affected pharmacists’ ability to meet their medication counselling goals. These issues interfered with effective medication counselling and caused pharmacists to feel rushed and concerned about errors and omissions made in the process. Examples included pressures to free up hospital beds, competition with other healthcare professionals to see patients at discharge and interprofessional collaboration challenges such as not understanding pharmacists’ roles, miscommunication, insufficient notice about pending discharge. However, pharmacists also provided examples of effective interprofessional collaboration that enabled them to meet their medication counselling goals.

**System pressures to free up beds**

Several pharmacists described feeling hurried during counselling as a result of pressure to free up hospital beds. Decreasing hospital length of stay is driven by the need to address rising healthcare costs and long waiting lists for surgical procedures. However, unintended consequences of early discharges include poor patient outcomes and increased readmission rates while coordinated discharge planning has been shown to decrease these effects.69,70

“We see a lot of bounce-backs and I think particularly with bed pressure. But it's pushing patients out perhaps before they're a 100 per cent...” (Cathy)

**Competing for patient’s time at discharge**

The process of discharge planning including patient education has been criticised in the literature as typically being provider-centric and driven by the needs of the system rather than being patient-centred and directed by patients’ needs.65,71 Knier and colleagues suggested that healthcare providers often inundate patients with information at discharge “in a rushed last minute method without careful planning...” or without consideration of individual patient’s needs.65 (Page 31) Pharmacists remarked that it was not unusual to face competition for patients’ time and attention at the time of discharge by many different healthcare professionals who also needed to discuss post discharge care with patients.

“...I saw one [patient] yesterday - all these people wanted to see him...He's sitting in his four-bed bay and he goes [to me], “The waiting room's out there, take a card.” (Danielle)

**Interprofessional collaboration**

The quality of interprofessional collaboration experienced by pharmacists was varied and was affected by multiple factors such as the type and acuity of the ward or medical service, the ward’s interprofessional culture, and the individual pharmacist’s interpersonal and communication skills.
Pharmacists in the focus groups often pointed to ineffective communication with other healthcare professionals about upcoming discharges as a barrier to allowing them to prepare adequately for medication counselling. Uncertainty about the timing of discharge has been named as a barrier to medication counselling by other researchers.

“[Patient’s nurse says]’There’s an ambulance booked in five minutes. Can you please make this all happen right now?’ You’re like, “But they’ve started on 10 new medications. How can we do all this in five minutes!?!’”…” (Anna)

Conversely, good communication taking place between pharmacists and other healthcare team members such as discharge planners or coordinators enabled pharmacists to organise and prepare for patient’s discharge medication counselling.

“…the nurse unit managers or day coordinators are so great …She’ll tell me three that are definitely going home and four that are potentially going home... so I’ll start preparing the eLMS [medication list]...print it as a draft and stick it in the chart.” (Beth)

Pharmacists gave examples of how good working relationships with other healthcare team members assisted them in meeting their counselling goals through information sharing, the team’s demonstrated support and an understanding of pharmacists’ role in medication counselling. Literature supports the need for healthcare professionals to understand each other’s roles for effective interprofessional collaboration to take place.

“I think the other thing that might impact…is whether the doctors have… verbally supported- the discharge counselling that a pharmacist might then do. So the team might come along and prescribe warfarin… and they’ll say [to the patient], “Look, John [the pharmacist]… is going to come and chat to you later about your warfarin.” So that, kind of endorses what's about to happen…” (Ethan)

Pharmacists also experienced challenging situations working with other healthcare professionals based on the belief that other healthcare providers lacked sufficient awareness of pharmacists’ professional roles and practice. Cathy explained how she needed to assert her role as a pharmacist in the discharge process.

“I have to be quite proactive and push the nurses to include [pharmacists]...I feel we, always as pharmacists, have to push for our inclusion in that process.” (Cathy)

Without understanding pharmacists’ role in discharge planning and medication counselling, other healthcare professionals may not appreciate the complexity involved and time required by pharmacy staff to prepare patients for transition to the community. In addition, pharmacists explained how other healthcare professional’s lack of understanding about the pharmacist’s role led to patient frustration.

“Sometimes they [patients] can be at the end of their tether by the time you see them. They've been told at 7:30 when the doctors were round, “You can go home today”, but then
the script hasn't been written until about midday, you don't get it sorted till maybe one or two. You go round to finally see the patient and they're just up in arms. They're just like, “I've been waiting since 7:30 this morning!” (Amy)

**Patient-related factors**

Pharmacists made reference to a number of patient-related factors that interfered with effective medication counselling or patients’ receptivity to having discussions about their medications. These included situations where patients were focussed on logistics about getting home from hospital and when pharmacists experienced difficulties coordinating medication consultation times with patients. Additional patient barriers to meeting medication counselling goals were cultural or language barriers and financial issues.

**Focussed on logistics**

Pharmacists recognised that the timing of discharge medication counselling was not always an opportune moment for patients preoccupied with leaving the hospital and found patients less open to having a conversation about their medications.

“...their son's downstairs and...you can't carpark here for very long, so they might be doing laps. There's something else on their mind...they're in a rush ...” (Alex)

**Coordinating counselling times difficult**

Some pharmacists encountered challenges coordinating mutually convenient times for medication counselling sessions with patients. This difficulty has also been cited in the literature. Pharmacists often felt pulled between a desire to meet the needs of the patient and pressures from other workload demands.

**Cultural or language barriers**

Pharmacists described situations where cultural or language barriers posed challenges in being able to communicate effectively with patients and their access to interpreters varied across the hospitals. The lack of available interpreters for medication counselling was also problematic for hospital pharmacists participating in a recently published Australian study. It is anticipated that the current trend of growing multiculturalism in developed countries will continue to increase. More and more healthcare professionals will be caring for people whose cultural backgrounds and perspectives are different from their own. Cultural competency is a skill that healthcare providers including pharmacists will need to possess in order to interact effectively with patients.

**Financial barriers**

Pharmacists included medication costs and patients' ability to pay as key financial barriers that arise in medication counselling. Newly diagnosed patients are often apprehensive about what to expect in terms of changes to their health and lifestyle after discharge, and how to pay for lifelong medications.
Recognising that for some patients their decision to be adherent with their medications may depend on their affordability, pharmacists described strategies they shared with patients to decrease costs such as having their prescriptions filled at one pharmacy to assist them in tracking costs for insurance thresholds and investigating eligibility for the Safety Net Scheme.

**Pharmacy system issues**
Pharmacy specific factors felt to interfere with effective medication counselling included limited hours of clinical pharmacy service and heavy workload. However, factors that enabled pharmacists to meet their medication counselling goals included advanced planning for discharge, effective communication skills training and expanding pharmacists’ roles and responsibilities.

**Limited hours of clinical pharmacy service**
Not having evening and weekend clinical pharmacy services was cited as a barrier to providing consistent and effective medication counselling. Pharmacists were also concerned about the potential safety risks to patients who were discharged after hours without having received medication counselling from a pharmacist.

“This weekend ...they sent another [patient on] warfarin home without involving pharmacy. So we were involved as much as we can be, eight-to-five Monday-to-Friday. They get to the weekend and it's like weekend rules or evening rules…” (Claire)

**Workload**

*Heavy pharmacist/pharmacy technician workload*
Hospital system pressures to free up beds also contributed to pharmacy workload issues affecting both ward pharmacists and pharmacy technicians in the dispensary trying to keep pace with the incoming discharge prescriptions needing to be dispensed.

“It's just the fact that you want to finish everything by the time you leave to go home...you've got 10 or eight of these to do and you need see them...And they're trying to get home...And the ward's trying to get them out by 10 o'clock!” (David and Dianne)

**Advanced planning for discharge**
The ability to plan in advance for upcoming patient discharges was cited by many pharmacists as an enabler to meeting their medication counselling goals. This would usually involve assessing patients’ needs for home management and adherence of their medications close to the time of admission or an early medication history using technological devices and computer based documentation to facilitate automation of information, providing patients with written materials for new medications in advance, and prioritising high risk patients who required additional medication counselling.

Haynes and colleagues interviewed hospital pharmacists about medication counselling and reported that pharmacists found it helpful to have conversations with patients early in their stay to prepare for discharge counselling. In an Australian study of hospital pharmacists’
communication at admission and discharge, the authors recommended pharmacists speak to patients at multiple times during their stay to increase the effectiveness of the communication.\textsuperscript{17} Pharmacists in this study attempted to speak to patients about their medications earlier in their stay and when medication changes occurred.

“…starting it as early in the admission as you can. Just, introducing the idea of what tablets they’re on and why …” (Denise)

**Effective communication skills training**

Some pharmacists expressed concerns that their undergraduate communication skill training did not prepare them sufficiently for medication counselling and recommended more advanced communication skills training.

“I think I learnt to counsel not through pharmacy school and not necessarily through work, but through actually doing a counselling course…I learnt how to actually listen and communicate with people and patients.”(Ethan)

This need for advanced communication skills training by pharmacists has been explicitly cited in a number of studies and reviews studying communication taking place between pharmacists and patients.\textsuperscript{17, 81-85} The authors suggested that pharmacists further develop their patient counselling communication skills to be more effective in their communication with patients and to step into more advanced advisory roles. Pharmacists need to consider ongoing communication training as a one of their essential life-long learning skills required for professional development and licensure. As Pilnick pointed out, there is a problematic assumption that “pharmacists’ advice giving is a skill that all pharmacists already possess and which can be automatically utilised when appropriate.”\textsuperscript{81 (Page 1929)}

**Professional Practice Changes**

It is a departmental expectation that medication counselling be conducted by ward pharmacists for all patients being discharged from hospital to home in many Queensland hospitals. However, some participating pharmacists could be experiencing moral distress as a consequence of feeling unable to fulfil the professional expectations placed on them. Moral distress may occur “when one knows the right thing to do, but institutional or other constraints make it difficult to pursue the desired course of action.”\textsuperscript{86 (Page 1077)}

Pharmacists indicated that nurses and physicians often do not provide sufficient notice for discharge and inform patients of pending discharge before their medication issues have been resolved. Pharmacists seem to feel professionally powerless and devalued by their healthcare colleagues as a result. Being prevented from effectively performing their professional role leaves pharmacists with concerns that their action or inaction may compromise patient care leading to poor health outcomes related to patients’ misunderstanding, incorrect medication taking behaviour or a host of other outcomes as a result of medication non-adherence. There is a potential human cost and impact to this. Quality of patient care may suffer, as can pharmacists’ wellbeing as they may experience moral distress, burn out, and professional
dissatisfaction. Potential system and pharmacy specific solutions to ameliorate these challenges were offered by participating pharmacists in a number of focus groups.

Pharmacists from two focus groups recommended a pharmacy practice change formalise a process to authorise pharmacists to delay patient discharge based on medication readiness and potential risk for medication adherence and misadventure. Pharmacist described how this authority to delay discharge already occurred within other allied healthcare professions such as physiotherapy, occupational therapy and social work.

“...So if they're [patient] not safe to mobilise, a physio can say, “They're not safe for discharge” and that can keep a patient in hospital.” (Charlotte and Cathy)

Another possible means to address pharmacists’ concerns about rushed and ineffective medication counselling would be to grant ward pharmacists prescribing authority at discharge. Frequently, medical trainees prescribe the discharge medications, which are then verified by pharmacists before being dispensed. This prescribing process often requires assistance from ward pharmacists.

“...there’s normally issues on a high percentage of the scripts and we get those fixed before we would send the script off for dispensing.” (Beth)

Waiting for discharge prescriptions to be written has been identified as a bottle neck in the discharge process as pharmacists typically rely on having the prescriptions in hand before they arrange for medication counselling. The presence of a script can sometimes be the first indication that a discharge is imminent.

“...we'll wait for a script and then we'll produce a discharge list on eLMS [medication list] - and then I use that to counsel the patients...” (Anna)

Giving ward pharmacists prescribing authority and allowing them to write discharge prescriptions may facilitate a smoother and more efficient medication dispensing and counselling process. Prescribing practices that range from prescribing within dependant or collaborative practice agreements to independent prescribing authority have been granted to pharmacists in the UK, New Zealand and in parts of the US and Canada.

These two examples of expanded scope of pharmacy practice would require additional professional training to ensure pharmacist competency in these areas. However, the clinCAT tool already used by many Australian hospital pharmacy departments to regularly assess their pharmacists’ professional competency, provides an excellent foundation upon which these advanced practices could be built.

Limitations
Limitations for this study are related to self-report data obtained in focus groups. It is possible that the information provided by pharmacists was subject to a number of recall biases such as inaccurate timing, significance or recollection of events. However, pharmacists recounted
experiences and opinions that aligned well with those published in the literature and also resonated well with the investigators’ (BC, WC and MB) professional experiences. Pharmacists’ responses in the focus groups may also have reflected a socially desirable result, for example, to deliberately minimize negative effects or enhance positive effects. Non-response bias may also have occurred, whereby pharmacists interested in expressing their views about communicating to patients in medication counselling sessions would be more likely to volunteer to be part of a focus group than those not interested in doing so.

**Conclusion**
Pharmacists identified patient-centred goals in medication counselling in building rapport, empowering and improving patients’ experience, health and safety. To allow pharmacists to achieve these medication counselling goals, emphasis should be placed on developing skill sets of the individual pharmacist with support from the pharmacy department and from the hospital organisation. These communication skills need to be appropriately evaluated and the provision of advanced communication skills training made available to all practicing pharmacists. Departmental and organisational endorsement would also be required for pharmacy practice changes such as pharmacist authority to delay patient discharge based on medication readiness assessment and to write discharge prescriptions. For pharmacists to meet their medication counselling goals, it is imperative that they are able to communicate effectively with patients, caregivers and other healthcare professionals.

This current focus group study explored hospital pharmacists’ perceptions of their roles and goals in patient medication counselling. Further research studying hospital pharmacist-patient communication is needed to explore its effectiveness. Investigating communication exchanges between hospital pharmacists and patients within a communication framework would provide the necessary theoretical rigour. Invoking theories such as Communication Accommodation Theory are a move in this direction.

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Article Synopsis

Focus group discussions were used to explore hospital pharmacists’ perceptions of their roles and goals in patient medication counselling before discharge from hospital, and perceived barriers and facilitators to achieving their goals. Pharmacists’ patient-centred goals in medication counselling were accomplished through specific professional roles. Time pressures attributed to systemic health facility and pharmacy specific processes acted as barriers. Effective interprofessional collaboration and potential professional practice changes were identified as facilitators. The findings from this study will be used to develop strategies for effective communication and inform pharmacy practice changes to improve patient care.