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Pharmacists and patients sharing decisions about medicines: Development and feasibility of a conversation guide

Abstract

Background: In Australia, the Home Medicines Review (HMR) is a nationally-funded program, led by pharmacists to optimize medication use for older people. A Medicines Conversation Guide was developed for pharmacists to use in the context of a HMR. The Guide aims to increase patient involvement and support discussions about: general health understanding, decision-making and information preferences, health priorities related to medicines, patient goals and fears, views on important activities and trade-offs.

Objective: This study describes the development and feasibility testing of a Medicines Conversation Guide in HMRs with pharmacists and older patients.

Methods: The Guide was developed using a systematic and iterative process, followed by testing in clinical practice with 11 pharmacists, 17 patients (aged 65+) and their companions. A researcher observed HMRs, surveyed and qualitatively interviewed patients and pharmacists to discuss feasibility. Transcribed recordings of the interviews were thematically coded and a Framework Analysis method used.

Results: Pharmacists found the Guide to be an acceptable and useful component to the HMR, especially among patients with limited knowledge of their medicines. The Guide seemed most effective when integrated with the HMR and tailored to suit the individual patient. Some questions were difficult for patients to grasp (e.g. trade-offs) or sounded formal. Most patients found the Guide focused the HMR on their perspective and encouraged a more holistic approach to the HMR. From the quantitative survey, pharmacists found the Guide easy to implement, balanced and understandable.

Conclusions: Pharmacists and patients reported the Guide fits with the HMR encounter relatively easily and promoted communication about goals and preferences in relation to medications. This study highlighted some key challenges for communication about medicines and how the Guide may help support the process of involving patients more in the HMR.

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Pharmacists and patients sharing decisions about medicines: Development and feasibility of a conversation guide

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Abstract

Background

In Australia, the Home Medicines Review (HMR) is a nationally-funded program, led by pharmacists to optimize medication use for older people. A *Medicines Conversation Guide* was developed for pharmacists to use in the context of a HMR. The *Guide* aims to increase patient involvement and support discussions about: general health understanding, decision-making and information preferences, health priorities related to medicines, patient goals and fears, views on important activities and trade-offs.

Objective

This study describes the development and feasibility testing of a *Medicines Conversation Guide* in HMRs with pharmacists and older patients.

Methods

The *Guide* was developed using a systematic and iterative process, followed by testing in clinical practice with 11 pharmacists, 17 patients (aged 65+) and their companions. A researcher observed HMRs, surveyed and qualitatively interviewed patients and pharmacists to discuss feasibility. Transcribed recordings of the interviews were thematically coded and a Framework Analysis method used.

Results

Pharmacists found the *Guide* to be an acceptable and useful component to the HMR, especially among patients with limited knowledge of their medicines. The *Guide* seemed most effective when integrated with the HMR and tailored to suit the individual patient. Some questions were difficult for

patients to grasp (e.g. trade-offs) or sounded formal. Most patients found the *Guide* focused the HMR on their perspective and encouraged a more holistic approach to the HMR. From the quantitative survey, pharmacists found the *Guide* easy to implement, balanced and understandable.

Conclusions

Pharmacists and patients reported the *Guide* fits with the HMR encounter relatively easily and promoted communication about goals and preferences in relation to medications. This study highlighted some key challenges for communication about medicines and how the *Guide* may help support the process of involving patients more in the HMR.

Keywords

Polypharmacy; Older people; Patient involvement; Goals; Preferences

1. Introduction

Medicines reviews are a structured approach to ensure the medicines an older person is taking are appropriate. Similar pharmacy services and interventions exist internationally, for example, the UK's [medicines management](#) services¹ and the USA's medication therapy management,² although these services differ in several ways. In Australia, Home Medicines Reviews (HMRs) are government-funded and conducted by an accredited pharmacist in the patient's home. HMRs must be requested by a general practitioner (GP) and pharmacists receive a service fee of \$219 upon completion of the HMR.³ In order to fulfill HMR remuneration requirements, the pharmacist writes a report to the referring GP based on which the GP formulates a medication plan. Comparatively, medication review services in the UK and USA differ in the following ways: location of the review is most often a pharmacy, review is requested by the dispensing pharmacist (UK), patient or other health care provider (USA), and the patient's GP is only included when there is a problem or it is considered necessary by the pharmacist (UK and USA).

[Polypharmacy](#) (taking 5 or more regular medications) is one of the main reasons an older person is referred for a HMR.⁴ HMRs aim to resolve medication-related problems, encourage collaboration between the patient, pharmacist and GP, and promote patient wellbeing.^{5,6} According to the HMR Guidelines,⁷ the patient should be the main focus of the review reflecting the importance placed in the literature on a patient-centred approach to medicines use.^{9,11} Depending on the individual older patient's needs, this may lead to discussions about starting a medication, reducing the dose or stopping medications. However, there is currently no formal structure embedding this into clinical practice and the extent to which a patient is involved may vary considerably.

An important part of optimizing medications in an older person is to evaluate the evidence on potential benefits and harms of medicines in light of his or her values, overall health and goals, and to prioritize medicines accordingly.^{8, 9, 10, 11, 12} This is part of a shift towards goal-concordant care for older patients and people with [multi-morbidity](#), relying less on disease-specific

guidelines/treatment in decisions about health.¹³ When evaluating medications, clinicians and patients face complex trade-offs which can lead to an emphasis on preference-sensitive decisions.^{14,15} There is evidence that taking into account patient goals and preferences improves outcomes¹⁶ and this seems particularly important for optimizing medicines for older patients.¹⁴ Even though patients vary in their preference for involvement in health decisions, most older people want their perspectives to be heard,¹⁷ so it is important for health care professionals to support communication and create opportunities for this.

Tools to increase [patient involvement](#) in medical decisions have been developed, such as decision aids and question prompt lists. Reviews have found that decision aids can increase value concordant care¹⁸ and question prompt lists can support difficult discussions between clinician and patient (e.g. regarding prognosis).¹⁹ As most of these tools are single-disease focused, none support the complex decisions faced by an older person with comorbidities taking multiple medicines.¹⁴ Furthermore, it is unlikely a single decision aid could incorporate the relevant evidence for multiple chronic conditions, medicines and combinations thereof,²⁰ so a more flexible approach is needed. Emerging work in the context of serious illness and chronic conditions demonstrates promising results for clinical encounter discussion aids and conversation guides. They engage patients and clinicians in conversations about preferences and priorities to increase patient involvement, support health decisions and create a quality interaction tailored to meet the needs of an individual.^{18,21}

This research group developed the *Medicines Conversation Guide*, a tool designed to support discussions about patient goals and preferences, and to improve the appropriate use of medicines. This is particularly relevant in the context of inappropriate polypharmacy. A feasibility study was performed to determine whether the *Medicines Conversation Guide* is suitable for further testing and focused on the following: acceptability, practicality and implementation.

2. Methods

2.1. Overview of development and testing

Stage 1 of the development and testing of the *Medicines Conversation Guide* ([Figure 1](#)) consisted of a literature review, identification and adaption of an existing tool, iterative testing and critical review by experts in pharmacy, general practice, geriatric medicine and health communication/decision making. This was followed by a formal feasibility study in the context of the Home Medicines Review program (Stage 2) with accredited pharmacists (n = 11), older patients (n = 17) and their companions.

Fig 1. Flow chart of development and feasibility study

2.2. Project team

A multidisciplinary team guided the literature review, development and feasibility study. The team included experts in psychology (JJ, KMcC, CB), pharmacy (AM, DR), general practice (JD, LT), geriatric medicine (VN), [epidemiology](#) (LI), ethics (SC), statistics (KMcG) and representatives for [consumers](#) (JC) and NPS MedicineWise (AH).

2.3. Ethical approval

Ethical approval for the feasibility study was obtained through the Human Research Ethics Committee of the University of Sydney (Project No. 2015/935).

2.4. Stage 1

2.4.1. Literature review

A narrative review of the literature into the challenges of [shared decision making](#) and older [patient involvement](#) in decisions about [polypharmacy](#) and deprescribing (careful and supervised withdrawal of unnecessary or potentially harmful medications)²² was conducted.⁸ A framework was developed, describing the key steps of shared decision making for this context that draws together knowledge from the psychology, communication and decision-making literature. A systematic review of the literature was also conducted by authors of this paper to identify decision support tools (n = 22) for older people.²⁰ Many of the tools were not considered appropriate for the aims of this study, as the

majority were not developed specifically for older people, and tended to focus on a single condition, rather than accounting for comorbidities.

2.4.2. Medicines Conversation Guide

In the search for existing tools, one was identified as suitable for adaptation in the context of this study. This tool was the *Serious Illness Conversation Guide*²³ (created by Ariadne Labs), developed to support patient-clinician communication at the end-of-life where goal-concordant care and communication about values and preferences is important. It was designed for older people and encourages discussions around broader topics related to health, and what is most important for the individual, which is very relevant to the context of polypharmacy and deprescribing. *The Serious Illness Conversation Guide* was adapted for this study by removing any specific reference to prognosis and end-of-life care, changed the instructions for clinicians and revised some content to focus on medicines. The resulting *Medicines Conversation Guide* is a structured one-page tool designed to guide clinicians in conducting values and goals conversations around medicines. The wording is based on the original guide, which was tested in a patient population (patient/family advisory group and focus groups with patients, family members and clinicians). The key elements that are addressed include: general health understanding, decision-making and information preferences, health priorities related to medicines, patient goals and fears, views on important activities and making trade-offs for benefit/harm and quality/quantity of life. This intervention is intentionally designed not to influence people either towards or away from medicines, rather it aims to support goal-concordant care which could include well-informed decisions about stopping or reducing their medicines.

2.4.3. Iterative testing and review process

The first version was reviewed by GPs recruited through professional contacts and accredited pharmacists recruited from the Society of Hospital Pharmacists of Australia (accredited pharmacists specialist interest group) and the Australian Deprescribing Network (n = 8). They provided written or verbal feedback by email, phone or in person. The tool was tested informally in the context of the Home Medicines Review by an accredited pharmacist/researcher with 6 older patients who provided feedback over the phone to a researcher.

The feedback from this iterative testing and review process was incorporated into version two of the *Medicines Conversation Guide* (referred to hereon as the *Guide*). The main revisions ([Table 1](#)) were: redesigning the format and structure, simplifying concepts such as quality of life and benefit/harm trade-offs, and rewording questions so they were easier to understand. Previous and current versions of the *Guide* can be accessed here: <http://hdl.handle.net/2123/18330>.

Table 1. Summary of changes to the *Medicines Conversation Guide*^a.

Trigger for the change	How the issue has been addressed	Rationale/Justification
<p>TRADE-OFFS QUESTION V1: <i>Would you be willing to accept a small increase in risk to your future health for less side effects or reducing your number of medicines?</i></p> <ul style="list-style-type: none"> Trade-offs question difficult for patients to understand: <i>“maybe could be simplified from a daughter's point of view to an oldie”</i> (ID8, patient, female, age 89, daughter) Pharmacists found the question awkward and clunky: <i>“It is a mouthful and I reckon for some patients by the time you got to the end of the sentence they would've forgotten what it is.”</i> (ID8, pharmacist) 	<p>TRADE-OFFS QUESTION V2 (truncated): <i>Now we are going to work out what matters most to you, because different people value different things.</i></p> <p>PROMPT: <i>If patient has unwanted side effects:</i></p> <ul style="list-style-type: none"> - <i>Some people think side effects such as aching muscles aren't a big deal</i> - <i>Some people hate having even mild side effects</i> • <p>In Version 2 the Trade-Offs question was modified to make it clearer for patients to <i>understand</i> and easier for pharmacists to ask and tailor to individuals. A preamble has been added to give context and the question is staged with options for the pharmacist to use at their discretion.</p>	<p>FEASIBILITY STUDY Pharmacists and patients recognised the importance of the Trade-offs concept but needed a more effective way of discussing it: <i>“what's the patient's objective?”. They could die of old age tomorrow. So to them, quality is probably more important than, um, longevity, but not always”</i> (ID8, pharmacist).</p> <p>LITERATURE/THEORY Consumer theory: patients need to recognise trade-offs between different options to clarify values and priorities, and link to preferences.</p>
<ul style="list-style-type: none"> Important to involve patients in discussions about changes to their medicines Pharmacists were concerned older patients may be unused to being involved in decisions about their health: <i>“I find that they can't comprehend that kind of concept yet ... they are very elderly patients who are so used to getting told by the doctors or pharmacists</i> 	<p>Question has been added to Version 2 that encourages patient involvement, explores attitudes towards medicines and openness to deprescribing:</p> <p>MAKING CHANGES QUESTION: <i>How do you feel about making changes to your medications?</i></p> <p>PROMPT/ALTERNATIVE PHRASE: To give pharmacists options, so questions sound less formal and natural.</p>	<p>FEASIBILITY STUDY According to some pharmacists, this questioned supported patient involvement: <i>“How do you feel about making changes to your medication? So by that stage I had summarised some of the information with him that I was going to suggest with the doctor ... he said he was happy to discuss ... them with the doctor, and that they'd be a shared decision”</i> (ID5, pharmacist).</p> <p>LITERATURE/THEORY Previous study by our team [14] showed the importance of exploring patients' attitudes towards medicines and their openness to deprescribing.</p>

Trigger for the change	How the issue has been addressed	Rationale/Justification
<p><i>what to do</i>" (ID4, pharmacist).</p> <ul style="list-style-type: none"> <p><i>Guide</i> questions could sound too formal or scripted for patients: "<i>sounding like you're sort of interrogating them</i>" (ID1, pharmacist).</p> 	<p>Modifications have been made so the <i>Guide</i> can sound more informal and natural. An introduction has been added for pharmacists to introduce the discussion to patients.</p> <p>INTRODUCTION <i>This guide is designed to facilitate an engaged discussion with older patients taking multiple medicines about their goals, preferences and priorities in relation to their medicines.</i></p> <ul style="list-style-type: none"> <p>Prompts and alternative phrases have been provided as options to <i>Guide</i> questions, in the <i>Guide</i> itself and additional intervention components (training module, strategies for common scenarios/barriers)</p> 	<p>FEASIBILITY STUDY <i>"Overall the Guide needs contextual guidance to remind clinicians what it's for."</i> (informal feedback, GP/researcher)</p> <p>LITERATURE/THEORY A Delphi panel on a consensus definition of Advanced Care Planning [30] reported the need to prepare patients for goals and values discussions by stating the purpose and providing context.</p>
<p>Training module will consolidate feasibility study findings to instruct pharmacists to use the <i>Guide</i> effectively.</p> <ul style="list-style-type: none"> <p><i>Guide</i> questions could be too broad or tangential: "<i>some of the questions I found took us off the track from medicines</i>." (ID8, pharmacist)</p> <p><i>Guide</i> asked separately from the HMR: "<i>I just did my HMR as I would normally do it and then I left the conversation guide to the end</i>" (ID5, pharmacist).</p> 	<p>Training module is being developed to give strategies and instructions to pharmacists:</p> <ul style="list-style-type: none"> <p>To relate broad responses to the patient's medicines or to bring the discussion back on track,</p> <p>To integrate the <i>Guide</i> questions with the HMR or ask questions when it's most relevant.</p> 	<p>FEASIBILITY STUDY To integrate the <i>Guide</i> with HMR use a checklist/bullet points: "<i>Added [Guide] questions to my information collection sheet I use for HMR's</i>" (ID8, pharmacist). Older patients preferred the <i>Guide</i> questions interspersed with the HMR: "<i>she didn't specify that those particular questions were from [Guide]. She just asked a series of questions in relation to what I was, ... you know, when she was talking. And I answered it</i>" (ID14, patient, female, age 77).</p> <p>LITERATURE/THEORY: The importance of training clinicians in communication, shared decision making and practical application of clinical encounter tools is well established [17, 19].</p>

a Original *Serious Illness Conversation Guide* created by Ariadne Labs: A Joint Center for Health Systems Innovation (www.ariadnelabs.org) between Brigham and Women's Hospital and the Harvard T.H. Chan School of Public Health, in collaboration with Dana-Farber Cancer Institute.

2.4.4. Other intervention components

Additional components to applying the *Guide* were developed including a summary table of recommendations from the HMR for the GP and the patient which included topics from the *Guide*. Strategies for pharmacists to use the *Guide* and to overcome any challenges in the conversation were developed in written form. These intervention components were developed in conjunction with the feasibility study based on what made the *Guide* more or less effective to implement.

2.5. Stage 2

2.5.1. Design

The feasibility study design^{24,25} used mixed methods including observation, surveys and interviews with 11 pharmacists, 17 older patients and 4 of their companions through 17 HMR consultations. Besides a brief introduction to the overall purpose of the *Guide*, pharmacists were given minimal instructions on how to incorporate the *Guide* into the HMR to assess how flexible it was in real consultations. Pharmacists chose how to implement the *Guide* and which patients to use it with.

Box 1

Where the *Medicines Conversation Guide* fits in the HMR process.

-
Step 1	Individuals are identified based on “clinical need” by their GP. This includes but is not limited to: a recent stay in hospital; significant change in medical condition, ability or medications; complex medication regimen
Step 2	Referral of the patient is made to an HMR-accredited pharmacist
Step 3	Pharmacist visits patient's home and conducts the medicines review and the pharmacist incorporates the <i>Medicines Conversation Guide</i> into their usual HMR practice
Step 4	Pharmacist documents findings and recommendations in a report for the patient's GP
Step 5	A medication plan is formulated by the GP and patient based on the pharmacist's HMR report. This step is at the discretion of the GP and may not always occur i.e. if no changes are needed
-

2.5.2. Participants and recruitment

Accredited pharmacists were recruited through two advertisements in the Australian Association of Consultant Pharmacy e-newsletter. Thirteen pharmacists completed the expression of interest form but 2 were unavailable during the data collection period.

Older patients were referred for a HMR by their GP in the usual manner (see [Box 1](#)) and informed about the study by the accredited pharmacist who received the referral. If interested, patients were contacted by a researcher to explain the study and obtain consent. The HMRs were conducted as usual

in the patients' homes, if companions were present during the HMR they were interviewed over the phone together with the patient.

2.5.3. Data collection

A semi-structured interview schedule and quantitative survey was developed by a multidisciplinary team of experts (see Project team). The questions related to wording, clarity and appropriateness of questions were asked (e.g. “How did you find the wording of the *Guide*?”). The quantitative survey for pharmacists was based on previous work by this research group and asked about feasibility issues such as acceptability, content and ease of use.

Basic demographic information was collected for pharmacists including years of experience with HMRs and number of HMRs in the past 12 months. To protect the confidentiality of older patients, only their information about age and gender were recorded.

The researcher (KW) took notes during the HMR and added more detail and reflections afterwards. The telephone interviews with patients and pharmacists were conducted between 1 day and 2 weeks after the HMR and lasted 7–34 min. Interviews were audio recorded and transcribed verbatim with any identifying details removed. Pharmacists were followed up 6 months later to see they were still using the *Guide*.

2.5.4. Data analysis

Framework Analysis²⁶ was used to organize the interview data and identify themes, with participants as rows and themes as columns. This thematic framework development involved a five-step process. First, upon completion of the interviews one researcher (KW) read through a subset of transcripts to identify salient themes. These themes along with the interview schedule formed the basis for the initial coding framework which was discussed and reviewed by a group of qualitative researchers (KW, JJ, CB, SCoh). Two researchers (KW, JJ) then independently reviewed another subset of transcripts, developed codes, and compared the data for similarities and differences in the data and coding. Researchers then discussed and established categories and overarching themes. Two researchers (KW, SCoh) independently summarised the themes and supporting quotes from each transcript with continuous discussion with other researchers. The observation notes were analyzed in the same way as the qualitative interview data and incorporated into the excel spreadsheet.

When all of the data were coded, the framework was examined within and across themes and participants to identify relationships and themes. Rigour was addressed throughout by ensuring a detailed documentation of the analysis process; independent coding of a subset of transcripts, constant comparison of new and existing data; and regular discussion of emerging and final themes.

3. Results

The majority of pharmacists (n = 11) were female (10/11) with an average age of 51, and most had been performing HMRs for 10 or more years (see [Table 2](#)). The older patients (n = 17) were a mix of male and female, ranging in age from 66 to 96 years old.

Table 2. Characteristics of pharmacists and patients.

Pharmacist characteristics	No. of Pharmacists n = 11
Age (years)	
25–44	4
45–64	5
≥65	2
Sex	
Female	10
Male	1
Years performing HMRs (yrs)	
0–9	4
10–20	3
>20	4
Number of HMRs in past 12 months	
0–99	5
≥100	6
Patient characteristics	No. of Older Adults n = 17
Age (years)	
65–74	1
75–84	8
≥85	9
Sex	
Male	8
Female	9

Themes have been broadly categorized as ‘positive’ or ‘negative’ in relation to key areas of acceptability, implementation and usability/practicality of the *Guide*. The main positive themes related to the *Guide's* format and content, integration of the questions with the HMR, and potential positive outcomes that it may improve the HMR. The negative themes pertained to how

the *Guide* was delivered, understandability of some questions and concerns that the HMR was an unsuitable setting for these types of discussions. Pharmacists differed in their approach to HMRs: some conducted more patient-centred and less structured, conversational reviews while others were more medicines-focused and very structured in their HMR interview. This influenced how useful pharmacists found the *Guide* and perceived barriers to implementation.

3.1. Quantitative survey results

From the quantitative survey results ([Table 3](#)), most of the pharmacists thought the tone of the *Guide* was neutral or positive (11/11), easy to understand (9/11) and completely balanced (9/11). The majority of the pharmacists also found the format of the *Guide* was simple (8/11) and easy to use (7/11).

Table 3. Pharmacists' responses to quantitative survey.

Question	No. of Pharmacists n = 11
The tone of the <i>Guide</i> was:	
Positive	4
Neutral	7
Negative	0
The <i>Guide</i> was balanced:	
Slanted towards <i>more</i> medications	0
Completely balanced	9
Slanted towards <i>less</i> medications	2
Using the <i>Guide</i> was:	
Difficult	2
Undecided	2
Easy	7
The format of the <i>Guide</i> was simple:	
Agree	8

Question	No. of Pharmacists n = 11
Neither agree or disagree	2
Disagree	1
The <i>Guide</i> was easy to understand:	
Agree	9
Neither agree or disagree	1
Disagree	1
Will continue to use the <i>Guide</i> in the future:^a	
1–2 (not at all – slightly)	3
3 (a medium amount)	3
4–5 (a good deal – a great deal)	5

a 1 = not at all, 2 = slightly, 3 = a medium amount, 4 = a good deal, 5 = a great deal.

3.2. Positive

3.2.1. Acceptability of the format and content

Pharmacists generally found the *Guide* easy to use, the format was acceptable, flexible and of the right length (Table 3): *"It's not lengthy, but it's relevant and it's practical"* (ID6, pharmacist). Most of the older patients were comfortable answering the *Guide* questions and found them *"easy to understand, I think I answered all the questions honestly and how I felt about it"* (ID1, patient, female, age 84). Most patients found the *Guide* to be an appropriate addition to the HMR: *"it all seemed to be part and parcel of the proper routine. I didn't think there was anything that didn't seem to fit in with the rest of it"* (ID17, patient, male, age 88).

3.2.2. Implementation of the Guide

Based on the observations, how pharmacists delivered the *Guide* was an important indicator of its effectiveness and how useful pharmacists and patients perceived it to be, *"works best if you can incorporate it with your [HMR] checklist"* (ID8, pharmacist). Implementation was most successful when pharmacists introduced topics at relevant times and tailored questions to suit the patient and specific HMR (Table 4).

Table 4. Summary of key findings with illustrative quotes.

	Main finding	Selected quotes
Strengths	The <i>Guide</i> was understandable and made sense to pharmacists and patients	<p>“They understood what I was asking, but also why” (ID3, pharmacist)</p> <p>“Shared decision making. I did so like that particular phrase.” (ID14, patient, female, age 77)</p> <p>“What [pharmacist] asked is 100% pertinent” (ID7, patient, male, age 82)</p> <p>“They seemed to ... cover all aspects, and they seemed to be ... relevant” (ID10, patient, male, age 96)</p>
	Integrating with the HMR enabled the <i>Guide</i> to be more effective	<p>“So doing it in the body of my HMR, was good because ... it followed through, you know, I tried to use it as I would normally do and just change the way I asked questions a little bit” (ID9, pharmacist)</p> <p>“Use it as a guide but just tailor it to the needs of the patient” (ID1, pharmacist)</p> <p>“I have modified it and incorporated it into my own interview guide” (ID11 pharmacist)</p> <p>“I was interspersing quite a bit of it. It probably added about ... maybe 10 min to the complicated person” (ID3, pharmacist)</p>
	The <i>Guide</i> introduced new concepts (goals and preferences) that focused the HMR on the patient's experience	<p>“Everyone's an individual and I think zeroing back on, what that person is going through is very important and I think those questions address that” (ID6, pharmacist)</p> <p>“What's the patient's objective? You know, they could die of old age tomorrow. So to them, quality is probably more important than, um, longevity, but not always” (ID8, pharmacist)</p> <p>“It was good to tell her what my main concerns, what was worrying me the most about my health. You know? Just to talk to someone about it. ‘Cos when you go to the doctor, they're so busy and ... you're in and out, and ... you can't, I can't open up to doctors properly”(ID12, patient, female, age 66)</p>
Limitations	The <i>Guide</i> format was too structured and restrictive for some pharmacists	<p>“[HMRs] flow according, to their own riverbed, as it were. And every one of them's different. And trying to put a easy flowing conversation within the strictures of a scripted sort of ... can have a little bit of a jarring tone” (ID11, pharmacist)</p> <p>“Maybe the bullet point is just ‘doctor awareness’. And that means, I've got to ask the person, do you think the doctor's aware of ... the fact that your gout's not getting any better?” (ID11, pharmacist)</p>

	Main finding	Selected quotes
	Some of the <i>Guide</i> concepts/wording were difficult for patients to understand or unsuitable for a HMR	<p><i>"I find that they can't comprehend that kind of concept yet ... because they are usually these are very elderly patient who are so used to getting told by the doctors or pharmacists what to do"</i> (ID4, pharmacist)</p> <p><i>"the Sydney University questions were a bit academic and idealistic"</i> (ID11, patient, male, age 88)</p> <p><i>"Cause I work in some, probably quite low socio-economic areas of [Sydney] and probably areas ... there's a lot of Australian but it's a more down-to-earth English"</i> (ID8, pharmacist)</p>
Pharmacist HMR style	Some pharmacists conducted HMRs that were more structured, time-conscious and focused on practical aspects of medicines	<p><i>"So my questions are often very ... direct, like, you know, what difficulties are you having swallowing your medicines? Can you swallow them all whole? Or are there any that you need to crunch or chew up?"</i> (ID5, pharmacist)</p> <p><i>"We don't have enough time to cover stuff that doesn't—that's not going to have any influence on the actual report in the end"</i> (ID8, pharmacist)</p>
	Some pharmacists conducted HMRs that were less structured, more conversational and patient-focused	<p><i>"Like I've always thought that I'm patient focused. I'm not drug focused particularly, which might sort of sound strange"</i> (ID3, pharmacist)</p> <p><i>"So people may do more structured interviews than I do, but I try to get an empathy with them. But, um ... you know, it helps. They give you more information"</i> (ID2, pharmacist)</p> <p><i>"You can't ask them, oh tell me your pain score. They can, but I guess it doesn't ... sit well. That rapport is not as good by asking ... like the really formal ... very health professional based question. And personally I prefer, the informal way"</i> (ID4, pharmacist)</p>

Pharmacists reported the *Guide* could be naturally integrated with the HMR interview, and that this tended to be a more effective approach than asking the two sets of questions separately. Delivering the *Guide* flexibly and drawing upon relevant questions when the opportunity arose enabled the *Guide* to be more effective: *"it wasn't in the order. I try to make it as natural as possible. So I, you know, while we're talking about this, how do you feel about that"* (ID10, pharmacist). Another condition in which the *Guide* seemed more effectively implemented was when pharmacists modified questions to suit their language and communication style, *"I didn't have to change it a lot. But I would*

change it to fit in to my conversation” (ID2, pharmacist). Pharmacists discussed modifying the questions to meet the patient's needs and level of understanding. Pharmacists that conducted more patient-centred (rather than structured) HMRs reported finding it easier to adapt the *Guide* and incorporate it with their own HMR interview.

Some of the older patients interviewed reflected the importance of interspersing the *Guide* questions with the pharmacist's HMR interview: *“I think she was slipping them in I think a lot of the questions she asked were actually hidden through the whole thing”* (ID15, patient, female, age 74). This also added to the perceived relevance of the *Guide* and contributed to how comfortable a patient was to answer.

3.2.3. Practicality and usability

Pharmacists discussed how the *Guide* was more suitable for certain patient characteristics or HMRs, with mixed responses. Some said it was most useful with patients who had less complex medicines reviews (i.e. no problems with their medicines), (n)one chronic conditions: *“She just had such a simple regiment that, that I could use the Guide”* (ID3, pharmacist). Others found it was especially beneficial for patients with [multi-morbidities](#) or complex chronic conditions on a high number of medicines: *“the tool's definitely useful but to what extent the usefulness depends on the complexity of the case. It will be very useful for people who suffer from, for example, pain. Or depression. That type of chronic condition”* (ID4, pharmacist). Some pharmacists noted the *Guide* may be useful in other contexts such as general practice with an integrated pharmacist, in primary care or multi-disciplinary setting delivered by a GP, [nurse](#) or allied health professional.

Pharmacists reported the *Guide* was an acceptable addition in terms of timing and this was also reflected in the quantitative survey ([Table 3](#)) and observations. The majority of pharmacists said they would continue using at least some questions from the *Guide*, with some continuing to use the *Guide* when followed up 6 months later.

3.2.4. Potential impact of the Guide and added value

The findings from this study suggest that the *Guide* added value to the HMR process by introducing new concepts that [facilitated communication](#) between the patient, pharmacist and GP ([Table 4](#)). Pharmacists found the introduction of the concepts goals and preferences focused the HMR on the patient's experience not just the referring GP: *“It puts you, more mindful of the patient's point of view, which is really what we're there for. Not just for GPs ...”* (ID10, pharmacist). This structured approach to facilitating [patient involvement](#) seemed to lead to a more collaborative HMR process, for instance fortifying recommendations with patient priorities: *“then you can recommend that to the GP in your report to say Mr and Mrs Smith think that they would like to cut down on the number of medications”* (ID1, pharmacist). Similarly, the ‘Trade-offs’ question facilitated discussion about

priorities around discontinuing medications, quality of life and [longevity](#) and importantly, communicating this to the GP: “*opening the door ... is your GP actually aware of what's important to you to see whether or not they've had that conversation with the GP*” (ID1, pharmacist).

Older patients appreciated how the *Guide* encouraged a more holistic view on health: “*it helped to focus the mind, in regards to health in general*” (ID7, patient, male, age 82, partner), and provided the space to open up “*other avenues for things ... that are at the back of my mind*” (ID14, patient, female, age 77). Some older patients reported they found it valuable to vocalize their concerns and to have the opportunity to do so.

3.3. Negative

3.3.1. Acceptability of the wording and understandability

Some pharmacists highlighted problems with the wording of the *Guide* questions as sounding too formal when read out loud: “*they look good but I think when I went to say them they weren't quite right*” (ID8, pharmacist); “*they're 65, they're not used to the formal way of questioning*” (ID4, pharmacist) ([Table 4](#)). Pharmacists who had a less structured approach to HMRs found the *Guide* too restrictive.

Some of the older patients stated that a few of the *Guide* questions were difficult to grasp the meaning of ([Table 4](#)). One patient who had a health background noted, “*I suppose considering our age and education level it's probably easier for us than it might have been for someone else*” (ID7, patient, male, age 82). Some older patients suggested the questions were too academic or complicated: “*maybe could be simplified from a daughter's point of view to an oldie*” (ID8, patient, female, age 89, daughter).

Some pharmacists stated that the *Guide* questions were less suitable for patients who speak [English as a second language](#) or from a lower socio-economic background: “*I can't ask these to most of the people ... I deal with ... They wouldn't understand it because, I do a lot of first generation immigrants ...*” (ID2, pharmacist).

3.3.2. Implementation and perceived appropriateness of the Guide

Some pharmacists reported asking the *Guide* questions separately at the beginning or end of the HMR interview. This often meant it didn't flow with the pattern of the HMR, issues weren't addressed when they came up and the questions were disconnected. These barriers were more often experienced by pharmacists that conducted more medicines-focused reviews, “*I realized that it would have been a better experience for the patient if I kind of integrated the questions*” (ID4, pharmacist). When asked at the beginning, it seemed too direct or upfront for older patients: “*I just think as a whole, more of a general conversation. I know with Mum, it's easier to get information ... if you're just talking, rather*

than firing questions” (ID8, patient, female, age 89, daughter). One pharmacist suggested key words rather than questions may help integrate the *Guide*.

Pharmacists suggested that concepts raised by the *Guide* were difficult for older patients to grasp because they were unfamiliar with being involved in health decisions. Similarly, pharmacists queried whether a GP should discuss goals and preferences with their patient instead: *"If they're not used to having those discussions, are we the people during an HMR to start having these discussions or do the GPs need to be re-educated and then we need to re-introduce that question"* (ID7, pharmacist).

3.3.3. Practicality and usability

Some pharmacists reported that some of the *Guide* questions were not suitable for the context of a HMR. Some pharmacists were tentative to use the terms ‘fears’ and ‘worries’ if the patient had not raised any themselves, due to concern the patient might become upset: *"I think it could become a bit, ... intimidating. 'Cause there's lot of words that ... might sound a bit scary"* (ID10, pharmacist). A few pharmacists felt the *Guide* could lead the patient on tangents unrelated to medicines: *"some of the questions I found took us off the track from medicines. And on to things like social or physio, and while I can give advice on dietary and stuff like that, I haven't got time ... "* (ID8, pharmacist). This could be difficult for pharmacists who were very medicines-focused and led structured HMRs without many open-ended questions.

Although the *Guide* appeared to combine well with the HMR logistically, some older patients noticed the HMR seemed like a long time, but this varied depending on the pharmacists' HMR style and complexity of patient characteristics or medications. Some older patients stated the *Guide* questions were difficult to answer because of the high cognitive burden or because the problem felt too big to address: *"I could have not answered more anything because, ...I'm just in pain and somehow I feel that ... I can't have any help. First of all I'm old also and, and I can't explain ... properly"* (ID6, patient, female, age 89). One patient felt the purpose of the *Guide* was not relevant to him: *"I'm nearly 88 ... I concentrate on survival. I'm not looking for, I can't afford to look at, ... picking up extra benefits out of life. I'm just a survivor"* (ID11, patient, male, age 88).

4. Discussion

This paper describes the development and investigates the feasibility of the *Medicines Conversation Guide* as an additional component of HMRs for older people taking multiple medicines. The acceptability and implementation of the *Guide* was assessed from the perspective of pharmacists, older patients and their companion or carer (if present at the HMR).

Findings from the quantitative survey indicated the *Guide* was simple to implement, understandable, balanced and generally positive in tone. Feedback from pharmacists and older patients from the qualitative interviews showed the *Guide* to be an overall acceptable addition to the HMR. A few challenges were identified in terms of implementation and the *Guide* questions were difficult for some patients to understand. Some of the pharmacists thought a few of the questions in the *Guide* should not be asked in a HMR rather should be addressed by the patient's GP.

There were two main positive findings that highlight how the *Guide* could be successfully implemented in the context of HMRs. Firstly, delivery of the *Guide* questions was most effective when pharmacists integrated questions with their usual HMR interview. Pharmacists who tended to conduct less structured HMRs in a naturally conversational style found the *Guide* easier to implement by adapting it to suit their communication style and the needs of the patient. Secondly, the *Guide* was found to support communication about preferences and goals which was achieved by focusing the HMR and recommendations to the GP on the patient's priorities. This is significant, as recent findings from systematic reviews of [polypharmacy](#) interventions and medicines reviews have highlighted limited [patient involvement](#). Patient-reported outcomes were not a priority for most RCTs of medicines reviews²⁷ and few studies of pharmacist-led interventions discussed medication changes with the patient or provided sufficient information about patient involvement.²⁸

There were two main barriers to implementation of the *Guide* reported by some pharmacists and patients. Some pharmacists delivered the *Guide* separately from the rest of the HMR. Pharmacists differed in relation to this barrier, with pharmacists that conducted less structured reviews struggling to adjust to the [strictures](#) of the *Guide* layout/content. Pharmacists with a more structured HMR style had difficulty incorporating the *Guide*, so delivery could sound too formal or stilted. Patients reported the questions sounded interrogatory and appeared less comfortable answering questions when they were not integrated in the HMR interview. This barrier may be overcome by training and skill development which has improved the use of other tools such as clinical encounter guides and decision aids.^{18,29} Another possible way to overcome this barrier would be to integrate the *Guide* with the clinical environment by linking it with an [electronic medical record](#) or other digital system. However, this would require system level changes as HMRs are currently conducted in the patient's home with no standard process for conducting or reporting HMRs.³⁰

The second negative aspect related to perceptions of some pharmacists that the *Guide* was not suitable for a HMR context because certain topics such as changing medications and trade-offs should be

raised by a GP instead. For these pharmacists and patients, the acceptability of the *Guide* was lower. Even though pharmacists may have the opportunity during HMRs to discuss topics such as goals and preferences and make recommendations accordingly, this is not without challenges in clinical practice. Although the *Guide* was tested in the context of the existing HMR program, pharmacist participants recognized the applicability of the tool in other contexts – which may be explored in the future – delivered by GPs or practice [nurses](#) in the clinic setting or by staff in residential [aged care](#) facilities. Studies have found that discussions about goals and preferences are not embedded in routine care and clinicians may not be comfortable having these conversations for a number of reasons: being wary of overstepping professional boundaries, devolved responsibility, lack of communication between health professionals, and competing priorities.^{31,32} Although the difficulties should not be overlooked, starting this conversation is important.

Furthermore, discussing patient goals and preferences comes naturally for some clinicians but can be difficult and counter-intuitive for others. HMRs are conducted heterogeneously and understanding how pharmacists are using the *Guide* in practice is helpful for implementation and further development of the intervention. Although the pharmacist HMR styles differed, all found the *Guide* useful to some extent and the majority stated they would continue to use the *Guide* in some form. These findings are informative as there are no guidelines available for developing or testing this type of intervention. To improve implementation of the *Guide*, these findings will inform a training module including components such as a flexible format, strategies for practical use/common barriers, role-play activities, guidance for prioritizing questions so as not to overburden any patients and suggestions for prompts or question alternatives that bring the conversation back to medications. This study is rare in that few other reported studies focus on older patients' preferences, goals and values in the context of medicines. The *Medicines Conversation Guide* is the first intervention to focus on optimizing medicines in older people and the role of preferences and goals in this context. It demonstrates the importance of beginning a meaningful conversation and creating the space to hear the patient's perspective. What follows after the HMR may involve iterative conversations that take place over multiple consultations, [coordinated care](#) with all health care providers,³³ clinical tools (algorithms or decision aids) to prioritize specific medications that can be safely reduced or stopped,²² and involving companions/family member(s) if preferred by the patient.³⁴ Limitations of this study include the small sample size and a predominantly female sample of pharmacists – although this gender ratio reflects the workforce population of accredited pharmacists to some extent.³⁵ Pharmacists used the *Guide* with an average of two patients so depending on the patient/HMR not all questions may have been asked. It was difficult for older patients to distinguish the *Medicines Conversation Guide* questions from the regular HMR interview and for many of the

patients it was their first HMR so they were unable to compare it to anything else. Lastly, recommendations made by the pharmacists were not followed through to the GP, meaning decisions made subsequently to the HMR are not known to us.

Moving forward, showing that using the *Guide* in HMRs can effectively influence how GP's manage medication in older people, and results in better patient outcomes is the ultimate aim of this research program. The next steps are to focus on the GP's perspective to determine if the information from the *Guide* would improve the HMR report and help inform GP's management of their older patients. Following this, it would be useful to assess the impact of the *Guide* in a larger scale research project that captures rich data at each step of the HMR process involving the patient (and carer/family member), pharmacist and GP.

5. Conclusions

This research group developed the *Medicines Conversation Guide* designed to support discussions about patient priorities and goals in the context of medicines. The findings of the study described in this paper look promising in terms of increasing [patient involvement](#) and engaging older people in discussions about their medicines. To improve the value of the *Guide*, further consideration should be given to training clinicians about how to use the *Guide* with their patients and supporting pharmacists to tailor the *Guide* so that it is relevant and meets the needs of individual patients. The importance of follow-up with the patient's GP cannot be underestimated as well as promoting the patient's perspective in any decision about medicines.

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The authors declare that no competing interests exist.

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