



Barriers and facilitators experienced by migrants and refugees when accessing pharmaceutical care: A scoping review

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ABSTRACT

Background: Pharmacists in the community are often among the first health professionals encountered by new arrivals. Their accessibility and the longevity of the relationship gives pharmacy staff unique opportunities to work with migrants and refugees to meet their health needs. While the language, cultural and health literacy barriers that cause poorer health outcomes are well documented in medical literature, there is a need to validate the barriers to accessing pharmaceutical care and to identify facilitators for efficient care in the migrant/refugee patient-pharmacy staff interaction.

Objective: The purpose of this scoping review was to investigate the barriers and facilitators that migrant and refugee populations experience when accessing pharmaceutical care in host countries.

Methods: A comprehensive search of Medline, Emcare on Ovid, CINAHL and SCOPUS databases, guided by the PRISMA-ScR statement, was undertaken to identify the original research published in English between 1990 and December 2021. The studies were screened based on inclusion and exclusion criteria.

Results: A total of 52 articles from around the world were included in this review. The studies revealed that the barriers to migrants and refugees accessing pharmaceutical care are well documented and include language, health literacy, unfamiliarity with health systems, and cultural beliefs and practises. Empirical evidence was less robust for facilitators, but suggested strategies included improvement of communication, medication review, community education and relationship building.

Conclusions: While barriers experienced are known, there is a lack of evidence for facilitators for provision of pharmaceutical care to refugees and migrants and poor uptake of available tools and resources. There is a need for further research to identify facilitators that are effective in improving access to pharmaceutical care and practical for implementation by pharmacies..

1. Introduction

Globally there are over 270 million people living in a country where they were not born.¹ These people can have unique health needs arising from their country of origin and their experiences of persecution, deprivation, psychological trauma, unhealthy environments, and disruption of access to health care.^{2–6} Additionally, noncommunicable diseases, such as heart disease, stroke, cancer, diabetes and chronic lung conditions, are responsible for almost 70% of deaths worldwide, with almost three quarters of these deaths occurring in low- and middle-income countries, which are often the migrant or refugees' country of origin.⁷ This translates to growing rates of non-communicable diseases among migrant and refugee populations in host countries.^{8,9}

Challenges to accessing healthcare in their new environment compounds the health care needs of migrants and refugees, as they navigate unfamiliar health systems across language and cultural barriers,^{10–13} often resulting in disparity in health outcomes compared to native residents.^{14,15} While these barriers are common across health services, particular problems may occur when migrants and refugees access pharmaceutical care.

Pharmaceutical care is “the responsible provision of the drug therapy for the purpose of achieving definite outcomes that improve a patient’s quality of life”.¹⁶ This involves a relationship where the patient puts trust in the pharmacist, who makes a commitment to provide competent care to the patient.¹⁶ As pharmacists are one of the most accessible health professionals, they have a unique role to play in meeting the health care needs of migrants and refugees.^{17,18} Pharmacists’

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responsibilities towards migrants, as detailed by the International Pharmaceutical Federation, include informing, educating, counselling, referring, and promoting disease prevention, infection control, self-care and disease management.¹⁹ These services should be provided in a patient-centred, culturally responsive way to culturally and linguistically diverse patients.²⁰

Pharmacists are often among the first health professionals encountered by new arrivals and their accessibility, and the longevity of the relationship gives pharmacy staff unique opportunities to work with migrants and refugees to meet these health needs.^{21–24} While the barriers that cause poorer health outcomes are well documented in medical literature, research regarding barriers to accessing pharmaceutical care is limited.^{25–27} There is a need to validate the barriers to accessing pharmaceutical care in the patient-pharmacy staff interaction. Therefore, the objective of this scoping review was to investigate the barriers and facilitators that migrant and refugee populations experience when accessing pharmaceutical care from pharmacies.

2. Methods

A scoping review was chosen to explore a range of barriers and facilitators to access pharmaceutical care by migrants and refugees due to its ability to map a heterogeneous body of literature and thus convey the breadth and depth of the field.^{28,29} This scoping review was guided by the PRISMA-ScR statement and followed the steps of Arksey and O'Malley methodology; identifying the research question, searching for relevant studies, selecting studies, charting the data, collating, summarizing, and reporting the results.^{29,30}

2.1. Search strategy

A search strategy was developed in consultation with a senior liaison librarian and the initial search was conducted by the first author. The following databases: Medline, Emcare on Ovid, CINAHL and SCOPUS were searched for publications from 1990 until the last search in December 2021 with language restricted to English. Search terms included emigrants or immigrants, migrants, refugees, alien, foreigner, emigration and immigration, pharmaceutical services, pharmacists, pharmacies, pharmaceutical care. The search strategy used for Medline is given as an example in [Appendix 1](#). Additional articles were identified through hand-searching the reference lists of relevant articles and reviews.

2.2. Study selection

Articles were included if they related to pharmacy as a service provider, referenced refugees and/or migrants as the patients, and discussed barriers and/or facilitators to pharmaceutical care and pharmacy services. The search was not limited by migrant-type or other designations of culturally and linguistically diverse groups. Pharmacy services could include access to medicines, counselling and healthcare advice, medication review or reconciliation, and other services for improving adherence and clinical outcomes.¹⁹ 'Barriers' included any issues that inhibited or prevented the delivery of effective pharmaceutical care to migrants and refugees in the pharmacy setting. As the purpose of this review was to identify barriers that could be addressed in local pharmacies, barriers relating to national structures, such as workforce issues, cost of medicines including availability of insurance, were excluded. 'Facilitators' included any strategies to overcome barriers and improve the efficacy of pharmaceutical care by pharmacy staff to migrant and refugee clients. Original research, practice reviews, opinion pieces and commentaries in English were included. There were no restrictions on the country of origin of the author or the study population. Articles were excluded if they reported evidence of discrepancy in health outcomes or access to pharmacy services but did not investigate the reasons for the poorer outcomes. Articles older than 1990 were excluded, as this date

signified a paradigm shift in pharmacy with the idea of pharmaceutical care gaining significance.¹⁶ Systematic reviews, news articles, conference presentation abstracts, clinical updates were also not included.

Articles identified in the initial database search and those found by hand-searching were imported into an Excel spreadsheet. Duplicates were removed, titles and abstracts screened and articles that didn't meet the article type, age, and language criteria or for which full, free text was not available, were removed. The inclusion/exclusion criteria as related to the research question were then applied (see [Fig. 1](#)). Full text versions of the remaining articles were reviewed by the first author. Two co-authors reviewed articles and verified inclusion or exclusion. A quality assessment of articles was not undertaken, as the nature of this scoping review was to include all articles that discussed the barriers and facilitators to migrants and refugees accessing pharmaceutical care. A preference was given to empirical research and opinion pieces were only included when they offered new information.

2.3. Data extraction and synthesis of results

For included articles, data were extracted on source characteristics (authors, publication year, study design, sample size, clinical setting and country of study), participant demographics (refugee/migrant status or role in pharmacy, ethnicity), and aim of the research and its findings.

Data were collated in Excel and summarized with a numerical summary and qualitative thematic analysis guided by Braun and Clarke's approach.^{28,29,31} The analysis looked for themes related to barriers and facilitators to the provision of pharmaceutical care during the interaction between pharmacy staff and culturally and linguistically diverse patients.

3. Results

A total of 52 articles were included in the scoping review (see [Table 1](#)). 46 (88%) were empirical research.^{6,15,21,23,25–27,32–71} 24 (52%) were qualitative research,^{15,21,23,25–27,34,37,40–42,44,45,51–53,55,57,59,60,65,68,70,71} 22 (48%) were quantitative,^{6,10,32,33,35,36,38,39,46–48,50,54,56,58,61–64,66,67,69} 1 (2%) was a practice brief,⁷² 3 (6%) were commentary pieces,^{10,73,74} and 2 (4%) were editorials/letters to the editor.^{24,75} A third (n = 17, 33%) of the articles had participants from the United States,^{10,24,33,36,39,41,43,47,48,51,64,66–69,73,74} and just over a fifth (n = 12, 23%) were from Australia,^{15,21,26,27,35,42,44,57,59,70,75} with other articles set in Europe (n = 13, 25%), Canada (n = 3, 12%), the Middle East (n = 3, 12%), New Zealand (n = 2, 4%), Mexico (n = 1, 2%), and Taiwan (n = 1, 2%) Within the date range searched (1990–2021) the majority of the articles were published between 2011 and 2020; six articles were published in 2020,^{6,33–37} 2019,^{10,15,38–41} and 2014,^{26,52–56} and between three and five articles each other year from 2011 to 2018. Of the 46 empirical research articles, 25 (54%) interviewed migrant and refugee participants in a community setting,^{6,23,25,26,32,35,37,38,41,42,44–48,50,55–57,59,62,64,65,70,71} and 6 (13%) interviewed migrant and refugee participants in medical clinics.^{33,43,51,54,68,69} 8 (17%) studies had community pharmacy staff as participants,^{15,39,52,58,60,61,63,66} and 1 (2%) had hospital pharmacists.⁴⁰ 5 (%) studies included both migrants and health professionals as participants,^{21,27,34,53,67} and 1 (2%) study was set in a university as it looked at training of students in refugee health.³⁶

About 40% (n = 20, 43%) of the empirical articles exclusively researched the barriers to migrants and refugees accessing pharmacy services,^{15,25,26,32–34,37,41,42,44–46,50,59–62,65,68,70} whereas only half that many articles (n = 10, 22%) focused on solutions (or facilitators) to these barriers experienced by migrants and refugees.^{6,35,36,39,43,47,54,56,66,69} These barriers and facilitators and their frequencies will be described in more detail below.

3.1. Barriers

Themes that were barriers inhibiting migrant and refugees

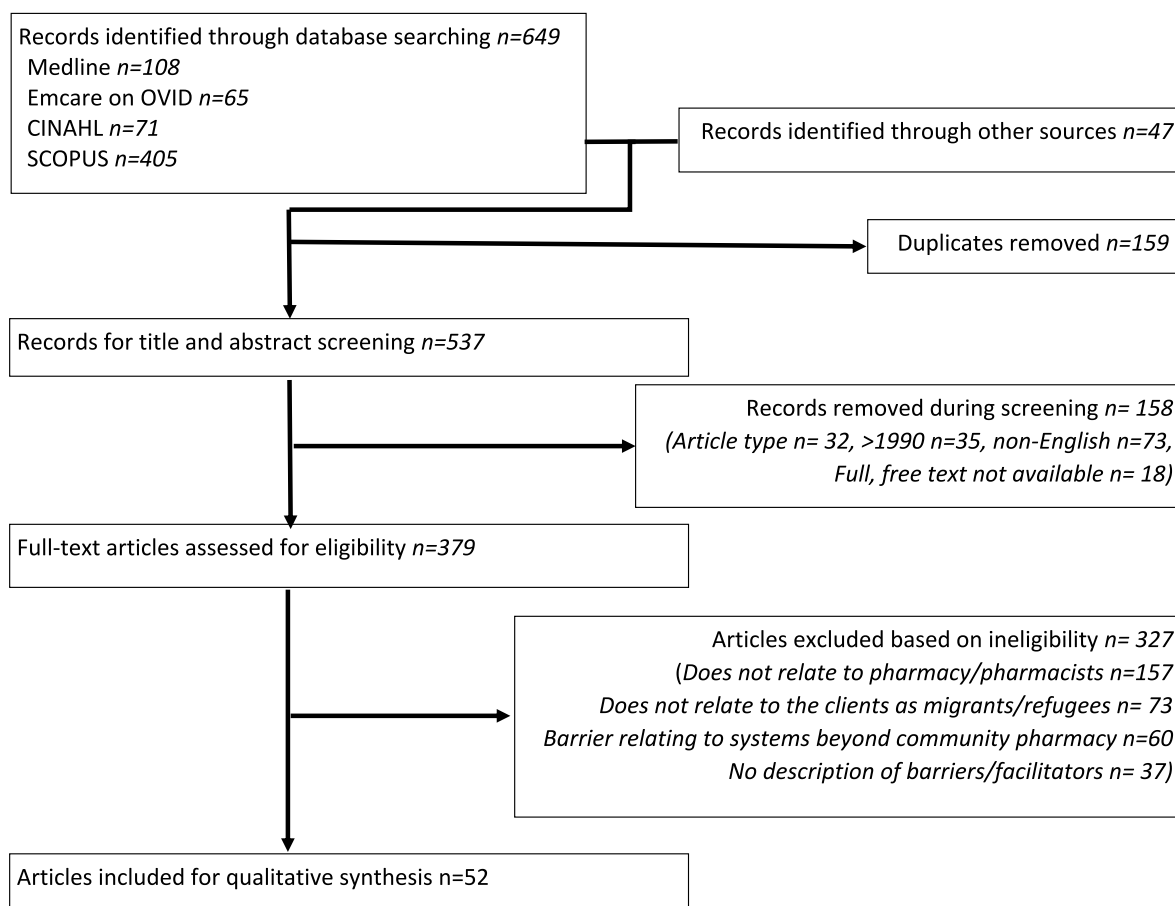


Fig. 1. PRISMA flow diagram of study selection and inclusion process.

populations from accessing pharmaceutical care during interactions with pharmacy staff identified in the literature included language, health literacy, navigation of an unfamiliar health system, cultural beliefs and practises, finance, and logistics.

3.2. Language

The language barrier was the most frequently ($n = 48$, 92%) identified obstacle to accessing pharmacy services.^{6,10,15,21,23–27,32–37,39,41–48,50–75} Participants in these studies also commonly identified it as the largest impediment to receiving and giving pharmaceutical care. Inability to speak a common language resulted in misunderstanding on both sides. Migrant participants in these studies reported frustration with not being able to make themselves understood, feeling like their conditions were left untreated, their questions unanswered, and as a result feeling less valued.^{23,25–27,32,37,41,44,46,52,53,55,62,68,70,74} In two studies (Germany, Australia), participants reported having serious concerns dismissed by health professionals.^{27,32} Assumptions of not being understood prevented migrants from even trying to communicate with the pharmacist.^{15,23,25,42,44,55,59,70} Lower proficiency in the host country's main language also left refugees and migrants unable to read instructions or medication labels.^{37,56,59,64,67} Five studies reported participants having to take medication to family members to explain dosing instructions to them.^{26,41,53,59,73}

The language barrier also resulted in pharmacists offering unsatisfactory counselling, inadequate medication review and reconciliation.^{33,37,45,52,55,58,60–63,73} For migrants and refugees, this meant lower adherence and an increase in adverse affects.^{25,33,41,45,57,61,62,73} Further complicating the language barrier, pharmacists who had access to telephone interpreting services (such as in Australia) often did not avail themselves of this

resource, citing lack of awareness, lack of time or not being able to find the 'appropriate' interpreters when they did use the service.^{15,26,27,42,44,60,70} Migrants and refugees in Australia were not often aware that pharmacy staff could offer interpretive services,^{26,59,70} nor that translated material was often available from consumer advocacy organizations or information agencies.^{42,57} Pharmacies rarely offered translated medicine labels and information, despite availability in New Zealand and the USA.^{63,66} Pharmacists also mistrusted translated materials, citing concern that the translation may not be culturally appropriate or accurate.^{51,66} They also expressed concern about the effectiveness of written materials, when literacy, even in patient's main language, was low.^{21,26,51,52}

3.3. Health literacy

Low health literacy is a further barrier for refugees and migrants receiving pharmaceutical care, as identified in 24 (46%) articles.^{15,21,25–27,34,37,41–44,46,47,50–54,56,57,59,70,71,74} Studies reported that migrants and refugees struggled to describe their symptoms and understand medical terminology.^{41,42,56,73} Limited health literacy has also made it difficult for patients to understand generic substitution; eight studies reported patient confusion when brands were switched.^{25,27,44,52,59,65,70,71} This also presented a challenge in understanding differences in condition management, particularly when compared to their home country. For example, two studies reported patients not understanding chronic disease management, as they had come from countries in South East Asia and East Africa where it was more common to cure acute diseases with short-course treatments.^{41,51} Another study suggested that a lack of understanding of mental illness and cancer led to confusion, fear and avoidance of healthcare.¹⁵

Table 1
Included articles.

Author; Publication Year	Study design; participants; setting (country)	Aim	Main findings
Empirical studies			
Aljadeeah et al. ³² ; 2021	Quantitative, surveys; Syrian asylum seekers and refugees (n = 1641); community (Germany)	To explore the barriers to accessing medicines among Syrian asylum seekers and refugees in Germany, and to provide an understanding of their perspectives towards taking medicines that contain alcohol or pork products.	Language the strongest barrier to accessing medicines, greater for women, >50-year-olds, chronic disease sufferers. Children used as interpreters. Participants' perspectives ignored due to language difficulties. Frustration with needing a prescription for antibiotics, financial barrier, and unavailability of desired medicines. Concerns with medicines containing pork.
Higgins et al. ³³ ; 2020	Quantitative, retrospective review of medical records; refugee patients (n = 80); clinic (USA)	To characterize interventions made by a clinical pharmacist working in a medical clinic with refugees and give evidence for this role for pharmacists.	Interventions: intensive counselling, dose administration aid commencement, glucometer provision, referral, ordering laboratory work, dosage adjustment. Clinically significant drop in HbA1c levels. Barriers to refugee health care: unfamiliarity with health system, inadequate counselling, cost issues, medication reconciliation, adverse effects.
Westerling et al. ³⁴ ; 2020	Qualitative, focus groups; patients, doctors, and pharmacists (n = 130); community, clinic (Turkey, Germany, Netherlands, Sweden)	To compare drug policy related to rational antibiotic use in Turkey and in three other European countries where Turkish migrants reside.	Differences in implementation of regulations and recommendations, access to antibiotics. Need to improve the clinician-patient interaction and medicines knowledge among migrants.
Bellamy et al. ³⁵ ; 2020	Quantitative, surveys; refugees (n = 142 including Africans (n = 81) and non-Africans (n = 61)); community (Australia)	To assess and compare the preferences of different refugee groups for various pictograms.	Preference for culturally adapted pictograms.
Al Alawneh et al. ⁶ ; 2020	Quantitative, single-blinded intervention-control study; Syrian refugees in Jordan (n = 106); community (Jordan)	To assess the effect of a medication review service on quality of life and anxiety scores for Syrian refugees living in Jordan.	Decrease in drug-related problems, no change in Quality-of-Life indicators, reduction in anxiety.
Pechak et al. ³⁶ ; 2020	Quantitative, Pre/post intervention; students (n = 203); university (USA)	To describe the development and assessment of an interprofessional education training to help prepare health professions students to address health needs of refugees.	Post-training improvement in identification of health conditions, recognize trauma, and appropriate referral.
Latif et al. ³⁷ ; 2020	Qualitative, interviews; marginalized people (n = 20); community (England)	To explore the views of patients from marginalized groups on how access to pharmacy services could be improved and their experiences of receiving a medication review service.	Low perception of need for pharmacy services, and low awareness of available services. Barriers: language, the complexity of medication issues.
Bellamy et al. ¹⁵ ; 2019	Qualitative, interviews; pharmacists (n = 9), general practitioners (GPs) (n = 2), nurse practitioners (n = 3), resettlement workers (n = 10); community (Australia)	To explore the barriers to accessing medicines and pharmacy services among African refugees.	Barriers: communication (English language skills among refugees, minimal uptake of the telephone translation service in pharmacies), navigating the health system (paying for medicines, understanding pharmacy system), belief systems and culture (health beliefs of the refugees including stigma, fear, preference for same-gender health professional, not seeking preventative health care, lack of cultural awareness by pharmacy staff).
Al Alawneh et al. ³⁸ ; 2019	Quantitative, reports and questionnaires, pre- and post-intervention; Syrian refugees (n = 109); community (Jordan)	To assess the impact of the Home Medication Management Review (HMMR) service on the type and frequency of treatment-related problems among Syrian refugees living in Jordan.	Treatment-related problems: unnecessary drug therapy, untreated conditions, inadequate efficacy, safety, inappropriate knowledge, and low adherence. At follow-up 66.8% of treatment-related problems were resolved in the group that had an HMMR review compared to 1.5% in the control group. 70% of patients were either strongly satisfied or satisfied with the HMMR service and all physicians believed it helped their patients.
Weiss et al. ³⁹ ; 2019	Quantitative, surveys, pre- and post-intervention; pharmacists (pre-intervention n = 48, post-intervention n = 77); community (USA)	To assess the impact of newly introduced regulations that mandated the provision of translated prescription labels and other language services to clients with limited English.	Capacity to assist culturally and linguistically diverse clients increased. Higher proportion printing translated labels, using phone translation service, multilingual signage, documentation of language needs in patient records.
David et al. ⁴⁰ ; 2019	Qualitative, interviews, patients and healthcare providers (including pharmacists) (n = 16); hospital (Canada)	To explore the pharmaceutical services provided to asylum seekers during times of crisis in service provision, particularly regarding access to treatment.	Provision of pharmaceutical care includes consideration of the patients' cultural background, assisting with navigation of the health system including active assistance and patient education, and advocacy.
Yalim et al. ⁴¹ ; 2019	Qualitative, interviews, leaders from Burmese and Karen ethnic communities (n = 11); community (USA)	To explore the barriers to health-care access among refugees from Burma.	Difficulties after a doctor appointment included not understanding the health system (need to go to a pharmacy), cultural beliefs and low health literacy influencing compliance (e.g., concern about effects of medications, need for long-term therapy).
Murray et al. ²¹ ; 2018	Qualitative, participatory, focus groups; Bhutanese former refugees (n = 17) and service providers: nurses, hospital pharmacists,	To explore barriers to managing medications and potential solutions to such barriers among refugees from Bhutan.	Barriers: language, low health literacy, and culturally unresponsive interactions with services. Solutions: adaptation of communication methods, creating supportive health care environments with

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Table 1 (continued)

Author; Publication Year	Study design; participants; setting (country)	Aim	Main findings
	counsellors, migrant support workers, general practitioners (n = 13); community (Australia)		involvement of support networks, culturally responsive care, assistance navigating services, use of interpreters.
Alzayer et al. ⁴² ; 2018	Qualitative, interviews; Arabic-speaking women who had asthma or cared for a child with asthma (n = 25); community (Australia)	To explore the experiences regarding asthma management in Arabic speakers.	Participants described feeling stigmatized, low health literacy, non-adherence (because of cultural and other beliefs e.g., alternative therapies being safer, fear of side effects), unmet expectations of health personnel, and feelings of fatalism, self-blame and denial.
Carter et al. ⁴³ ; 2017	Quantitative, pre/post intervention; refugees (n = 103); clinic (USA)	To assess the effect of a clinical pharmacist-run clinic on latent tuberculous infection treatment completion rates in refugee patients.	Pharmacist-run clinic more than tripled TB treatment completion rates. 40% of the participants who completed therapy had needed at least one intervention from the pharmacist.
Bellamy et al. ⁴⁴ ; 2017	Qualitative, focus groups, African community members and leaders living in Australia (n = 16); community (Australia)	To explore the barriers to accessing medicines and pharmacy services from the perspectives of African refugees in Australia.	Barriers: difficulty navigating the health system, communication, cultural beliefs affecting health behaviours. Minimal use of professional translators by pharmacy staff and lack of effort in ensuring patient understanding.
Hoffman et al. ⁴⁵ ; 2017	Qualitative, interviews; retired migrants (n = 26); community (Mexico)	To explore the experiences of north American retirees/migrants of the local pharmaceutical sector on Cozumel Island, Mexico.	Barriers: Accessibility, quality of medicines, and communication within the pharmaceutical sector. Comparison of health services with country-of-origin.
Abuelmagd et al. ⁴⁶ ; 2017	Quantitative, questionnaire-based surveys, Pakistani women living in Norway (n = 120); community (Norway)	To explore how Pakistani migrants living in Norway manage their diabetes and their experiences with seeking health information.	Low adherence to dietary recommendations, altering medications during fasting, 30% couldn't measure their BGL themselves. Sources of medicines information were commonly doctor or family members and rarely a pharmacist.
Kay et al. ²⁷ ; 2016	Qualitative, semi-structured interviews; refugee health leaders, pharmacists, practice nurses, and GPs (n = 12); community (Australia)	To explore the barriers and facilitators of quality use of medicines in refugee communities from the perspective of refugees and health care professionals.	Barriers: language, cultural beliefs, limited health literacy, financial cost, and navigation of the health system. Facilitators: coordination between healthcare providers, community engagement, healthcare provider training, and provision of medicines information.
Goldsmith et al. ⁴⁷ ; 2016	Quantitative, Pre/post intervention study; refugees from Bhutan, Nepal, Iraq, Guatemala, Ukraine, Sudan (n = 63); institute (USA)	To assess refugees' understanding of their host country's pharmacy system and to determine whether a workshop improved understanding.	Significant improvement in negotiating the pharmacy system, how to find repeat information, the availability of interpreters, and where pharmacists work.
Lee, Riley ⁴⁸ ; 2015	Quantitative, Pre/post intervention, survey-based; Korean Americans >50 years of age (n = 68); community (USA)	To determine if elderly Korean migrants' understanding of medication directions improved when explained in their native language.	"Trust" was a stronger factor than "knowledge" when deciding where to seek medication advice. Understanding medication and trust of pharmacists improved post-intervention.
Huang, Yeh ⁵⁰ ; 2015	Quantitative, questionnaire; young immigrant parents (n = 643); community (Taiwan)	To compare immigrant (Southeast Asian and Chinese) and non-immigrant (Taiwanese) mothers' knowledge of medication safety and administration for children, and to investigate the effect of accessibility to healthcare on medication management.	Barriers: Language, health literacy, cultural beliefs impacted health seeking behaviour, distance to clinic.
Mohammad et al. ⁷¹ ; 2015	Qualitative, interviews; people with low- or negligible English proficiency (n = 31); community (Australia)	To investigate the needs of people with low- or negligible English proficiency regarding understanding of health and medicines, and the role of community pharmacy in quality medicines use for this population.	Facilitators: simpler English in counselling, translation (verbal and written), use of pictograms, use of children and other family as interpreters. Barriers: Lack of awareness of pharmacists' role, availability of services, cultural beliefs affecting health behaviour.
Hakonsen et al. ⁵² ; 2014	Qualitative, focus groups; pharmacists (n = 19); community (Norway)	To identify the cultural barriers encountered by Norwegian community pharmacists in providing service to non-Western immigrant patients and to outline how they are being addressed.	Barriers: language, family (including children) acting as interpreters, health literacy, dress of migrants, gelatine in medicine, non-Western gender roles, fasting. Facilitators: Modification of language, use of Google translate, use of a phone interpreter service, and translated medicine leaflets.
Ens et al. ⁵³ ; 2014	Qualitative, ethnography observations and interviews; patients (n = 8), doctors (n = 3), pharmacists (n = 2); medical clinic and community pharmacies (Canada)	To explore key factors associated with adherence to cardiac medications among South Asian people with cardiac disease.	Barriers: unsupportive relationships, language, and use of complementary or alternative medicine, low health literacy. Facilitators: relationships with family, with health professionals (including pharmacists), inter-professional relationships (e.g., doctor-pharmacist), the use of memory aids (usually low-technology ones), and a greater understanding regarding medicines.
Kheir et al. ⁵⁴ ; 2014	Quantitative; interview and survey with patients; participants (n = 123); primary health care facility (Qatar)	To develop and test the use of pictograms to aid understanding of medicine dosing instructions for migrants.	Use of pictograms with verbal counselling achieved the best understanding. Some pictograms were inadequately understood, and need to be piloted among target populations. Use of bilingual staff.
Cantarero-Arévalo et al. ⁵⁵ ; 2014	Qualitative, focus groups, pre-post intervention; Arabic speakers (n = 30); community (Denmark)	To explore the perceptions, barriers and needs of Arabic-speaking ethnic minorities regarding medicine use, and to assess the effectiveness of	Barriers: mistrust, alienation, language, frustration with different health system. Participants expressed need for more medicines information.

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Table 1 (continued)

Author; Publication Year	Study design; participants; setting (country)	Aim	Main findings
		community education in enhancing the knowledge about the appropriate use of medicines.	Education session achieved 70–80% increase in new information. Very helpful for medication management, improving communication skills, and increased trust of health professionals.
Koster et al. ⁵⁶ ; 2014	Quantitative, surveys; first-generation immigrants from the Antilles (n = 168), Iran (n = 180), Surinam (n = 155), and Turkey (n = 188); community (The Netherlands)	To assess understanding of medication labels by migrants.	Two out of five presented instructions were interpreted correctly. Higher levels of education, longer residency in host country and native ethnicity were positively associated with correct interpretation of drug labels.
Clark et al. ²⁶ ; 2014	Qualitative, focus groups; refugees and migrants (n = 36); community (Australia)	To identify the barriers to accessing primary health care services and explore medicine-related issues as experienced by refugee women.	Barriers: language, lack of use of interpreter services, differing understanding of illness and unmet expectations of the health system, low education levels and health literacy, lack of awareness of available services.
Barbara, Krass ⁵⁷ ; 2013	Qualitative, interviews, Maltese community members (n = 24); community (Australia)	To identify issues in diabetes self-management in migrants with Type 2 diabetes and identify opportunities for pharmacies to offer support.	Cultural influences on attitudes to practitioners, treatment, and peer experiences. Enablers: attitudes towards financial independence and social integration, family, and community support.
Mygind et al. ⁵⁸ ; 2013	Quantitative, Questionnaire; pharmacists and pharmacy assistants (n = 84); community (The Netherlands)	To explore the challenges that Danish community pharmacy staff encounter when serving non-Western immigrant customers.	65% of pharmacists reported less than ideal interactions with culturally and linguistically diverse clients, 86% experienced having their counselling not understood within the last 2 weeks, 79% used children as interpreters in the last month. Solutions: community education, translated medicines leaflets and cultural training for staff.
Babar et al. ²⁵ ; 2013	Qualitative, interviews; Indians (n = 7), Chinese (n = 4); community (New Zealand)	To explore attitudes, beliefs, and perceptions of a cohort of migrants about medicines access and use.	Barriers: financial (cost of doctor plus pharmacy, cost of OTC medicines), language (variability in counselling given by pharmacy, lack of ability to self-medicate), navigation of an unfamiliar health system (frustration with needing prescriptions), health literacy (lack of compliance in symptom-free disease, non-disclosure of traditional medicine use). Sharing medicines common.
White, Klinner ⁵⁹ ; 2012	Qualitative, focus groups; Home Medicines Review (HMR) eligible patients (n = 17); community (Australia)	To investigate issues with medicine use by elderly Chinese and Vietnamese migrants and the interaction with doctors and pharmacists and to explore their views on a medicines review program offered by pharmacists.	Barriers: low health literacy (confusion about need for medications, generic medications, where to seek information), language, lack of awareness of HMRs. Chinese participants expressed lack of support from GP.
Cleland et al. ⁶⁰ ; 2012	Qualitative, interviews; pharmacists (n = 14); community (Scotland)	To explore community pharmacists' perceptions of barriers during the provision of pharmaceutical care to migrants.	Barriers: communication, confidentiality (use of family as interpreters), patient expectations. Time burden on pharmacy.
Schwappach et al. ⁶¹ ; 2012	Quantitative, cross-sectional survey; pharmacists (n = 498); community (Switzerland)	To explore pharmacists' experiences and current practices in counselling migrant patients and identify areas for improvement.	55% of pharmacists had at least weekly encounters where they could not provide good medication counselling due to the language barrier. 26.5% used children as interpreters at least weekly. Language barrier increased the risk of adverse events for their patients for 80%.
Hakonsen, Toverud ⁶² ; 2012	Quantitative, interviews; first-generation Pakistani immigrants (n = 82); community (Norway)	To explore medicine use among first generation immigrants, with an emphasis on cultural influences, language barriers and sociodemographic variables.	51% percent lacked essential knowledge of their drug therapy. 50% are not told in the pharmacy how to use the medication, and 31% do not understand the language used in the pharmacy. 50% altered their drug taking during Ramadan. 78% used bi-lingual staff. 72% used family members as interpreters. 19% gave translated information sheets. No pharmacists used professional interpreters. 89% reported counselling patients with limited English was an obstacle to pharmaceutical care. Telephone interpretive service would be their preferred method.
Chang et al. ⁶³ ; 2011	Quantitative, cross-sectional survey; community pharmacies (n = 46); community (New Zealand)	To identify obstacles and coping strategies of community pharmacists when counselling patients with limited English.	Barriers to medication understanding: Language, disability, low education, low income, recent immigration. Facilitators: Bilingual health professionals.
Masland et al. ⁶⁴ ; 2011	Quantitative, analysis of data from state-wide health survey; respondents to Health Survey (n = 48,968); community (USA)	To assess the effect of limited English on medication understanding.	Generic substitution increased misunderstanding and lowered adherence. Expensive medications seen as better quality. Misunderstanding secondary to language barrier and cultural beliefs.
Hakonsen, Toverud ⁶⁵ ; 2011	Qualitative, semi-structured interviews; Pakistani migrants living in Norway (n = 83), community (Norway)	To explore the perceptions and experiences of migrants regarding generic substitution and its effect on medication adherence.	81% participants satisfied with pharmacy services, 66% dissatisfaction with communication. Language barrier poses a safety risk (e.g., not getting sufficient counselling, unable to communicate needs/concerns or ask questions of pharmacy staff).
Väänänen et al. ²³ ; 2008	Qualitative, exploratory, Finnish immigrants living in Spain (n = 1000); community (Spain)	To examine migrants' experiences with community pharmacy services.	88% of pharmacy staff have patients with low-level English daily, 38.6% translated labels daily. 22.7%
Weiss et al. ⁶⁶ ; 2007	Quantitative, phone surveys, pharmacies (n = 200); community (USA)	To assess the need for, capacity, and practice of use of translated labels on medicines.	

(continued on next page)

Table 1 (continued)

Author; Publication Year	Study design; participants; setting (country)	Aim	Main findings
Westberg, Sorensen ⁶⁷ ; 2005	Quantitative, pre/post study, pharmacies (n = 40), 91 patients (n = 91), (including CALD clients n = 38); community (USA)	To identify the availability of foreign language services in community pharmacies serving a migrant population and compare the type of medication-related problems migrants experienced to host-nationals.	never used translated labels. 55.5% had access to resources for language services. 54% of the treatment-related problems among migrants were identified as "Adherence- does not understand instructions". Pharmacist on clinical team improved drug therapy outcomes by 24%.
Lai ⁵¹ ; 2005	Qualitative, interview; pharmacist in migrant health centre (n = 1); health centre (USA)	To describe the challenges and opportunities for pharmacists in providing services for culturally and linguistically diverse clients.	Limited understanding of preventative health and chronic disease management. Facilitators: translated medication labels, modified verbal communication adapted to address cultural factors.
Brown et al. ⁶⁸ ; 2003	Qualitative, surveys; pharmacists in community health centres and migrant health centres (n = 94); health centres (USA)	To identify barriers to provision of pharmacy services in community and migrant health centres.	Structural barriers: lack of space/privacy for counselling and lack of time. Equipment barrier: inadequate computer software. Patient-related barriers: language, socioeconomic status and culture, Personnel-related barriers: inadequate staffing and lack of managerial support.
Kalister et al. ⁶⁹ ; 1999	Quantitative, pre-post intervention; patients (n = 191, 70% immigrants); community pharmacy clinic (USA)	To evaluate a pilot service for a mobile paediatric clinic in an area with a large migrant population that is staffed by pharmacists and aims to treat children and with minor acute illnesses and to provide bilingual education materials.	93% of patients had medicine dispensed and 15% were referred to a doctor. Patients indicated 100% confidence in pharmacists, 50% seen in <15 min by pharmacist (cf. 19% for doctors) and 90% received written information from a pharmacist (cf. 52% from a doctor).
Quine ⁷⁰ ; 1999	Qualitative, focus groups; migrants (n = 55); community (Australia)	To identify variation in health concerns and expectations of older Australians from non-English-speaking backgrounds, with the aim of informing the development of culturally appropriate services.	Inadequate medication information, labelling and instructions. Points of difference between Caucasian participants and other ethnicities: use of herbal remedies, language, relationship with pharmacist and doctor and awareness of health rights. Cultural background led to some specific concerns (e.g., gender of health professional for Arabic background participants)
Opinion articles			
Carter, Bonanni ¹⁰ ; 2019	Commentary (USA)	To make a case for the role of the pharmacist in caring for refugees.	Pharmacists' services: infectious and noncommunicable diseases including treatment, monitoring, identify drug interactions, adverse effect management, adherence, health promotion. Facilitators: counselling, use of interpreters and pictograms.
Philbrick ²⁴ ; 2018	Letter to the Editor (USA)	To encourage community pharmacists to offer services to refugees and help them overcome barriers.	Community pharmacists can assist refugees when they meet refugees early on and have longevity.
Procter ⁷⁵ ; 2016	Editorial (Australia)	To encourage pharmacists to take the cultural background of refugees into account.	Refugees have experienced trauma. Facilitators: Person-centred approach and taking refugees' cultural beliefs into account.
Ingar et al. ⁷² ; 2013	Practice Brief (Canada)	To present the challenges for pharmacists in working with migrants and refugees, and to offer facilitators for addressing these challenges.	Facilitators: demonstration of technique with devices, use of simpler English, pictograms, translated medication labels, help with navigation of health system and advocating for migrants and refugees.
Bailey et al. ⁷³ ; 2011	Commentary (USA)	To detail how language is a barrier for low-English proficiency clients. To give an overview of USA policy around providing labelling and counselling in language.	Lack of clear legislation leaves practitioners uncertain. Use of software to translate labels and use of translators to provide counselling in language encouraged.
Cuellar and Fitzsimmons ⁷⁴ ; 2003	Commentary (USA)	To respond to American Society of Health-System Pharmacists raising health literacy as an issue to be addressed.	Facilitator: cultural competency of pharmacists

3.4. Unfamiliarity with the health system

Authors (n = 33, 63%) reported refugees and migrants having difficulty navigating the health system,^{10,15,21,23,25–27,32–34,37,41,42,44–48,50–53,55,58–60,62,65,70–72} often due to differences between their country of origin and their host country.^{25,32,44,45,47,53,55} Some studies suggested the differences led to expectations of doctors, the health system or the medications themselves that were unmet, causing frustration.^{25,26,41,42,44,52,57} Three studies (Germany, Norway, New Zealand) reported participants' frustration with restricted access to antibiotics,^{25,32,52} though two others (Germany, Mexico) noted that migrants and refugees had come to understand the need for restrictions on antibiotic supply and had adjusted their expectations.^{34,45}

Typically, refugees and migrants expected very little of pharmacists

and were unaware of the services pharmacies could offer them.^{15,26,37,42,46,48,57,59,70,71}

3.5. Cultural beliefs and practises

Cultural beliefs affected how migrants and refugees sought pharmaceutical care and how they managed their medicines (n = 25, 48%).^{15,25–27,32,34,37,40–44,46,47,50,52,53,55,57–59,62,68,70,74} Three studies (Norway, Australia, Canada) revealed participants showing greater faith in God or Allah than in western medicine,^{15,40,62} with four studies (Australia, New Zealand, Taiwan) indicating a preference for traditional medicine, reducing the uptake of recommended treatment.^{25,42,50,70} Further, another study described migrants as having a worldview where ill-health was unavoidable or deserved and this led to a drop in

willingness to partake in treatment,⁴² while four studies related shame or stigma regarding certain diseases to avoiding seeking health care.^{15,42,57,75} Some of the articles discussed the communal nature of origin cultures compared with western cultures and its impact on medicine use in refugees and migrants.^{21,53,57,74} This was reported to be both beneficial (see *Relationships* in facilitators) and as having a negative impact on medicine use. Three studies reported participants sharing their medicines,^{25,27,70} and two studies reported participants seeking health advice from trusted family and friends rather than health professionals.^{55,57} Lack of cultural awareness by pharmacy staff was given as a barrier to refugees and migrants accessing pharmaceutical services in five articles.^{15,25,37,57,68} In one study, participants felt discriminated against, particularly by posters in the pharmacy being unrepresentative.³⁷ The gender of the health professional was sometimes reported as a barrier to pharmaceutical care,^{25,52,70} and in one study pharmacists said that traditional Muslim garments hampered communication when women had their faces covered.⁵² Specific religious beliefs can affect medication management and hinder migrants and refugees from being open with pharmacy staff, such as the need for periods of fasting⁶² and concern about medicines containing gelatine.^{46,52}

3.6. Additional barriers

Migrants and refugees found medicines unaffordable and cost a barrier to accessing necessary medicines (n = 8, 15%).^{15,25,27,32,33,68,70,74} One study found low income to be a risk factor for understanding instructions for medicines.⁶⁴ Increased financial costs to the pharmacy and lack of remuneration for the extra time required for servicing migrants and refugees was mentioned in some studies.^{27,40,58,60}

Pharmacies themselves gave practical considerations as barriers to providing pharmaceutical care to refugees and migrants, such as lack of a private area for counselling, limited space, being time-poor, and inadequate computer systems (for written translation).^{66,68,71}

3.7. Facilitators

There is less empirical evidence for facilitators compared to the barriers faced by refugees and migrants in accessing pharmaceutical care. Themes about facilitators identified by the scoping review were often suggestions of the authors rather than endpoints in the research. They included communication improvement, review of medication, community education, and use of and development of relationships.

3.8. Improving communication

A range of facilitators for overcoming the language barrier were suggested, fitting with the weight of evidence that language is the largest barrier facing refugees and migrants in accessing pharmaceutical services. These included the use of family members as interpreters (n = 9, 17%),^{26,32,52,58,61–63,71,73} the use of professional interpreters (n = 14, 27%),^{10,21,25,39,44,48,51,52,59,63,66,71–73} employment of multilingual staff (n = 8, 15%),^{25,39,54,59,63,64,66,71} modification of language by pharmacy staff to improve counselling (n = 10, 19%),^{21,25,27,34,54,71–75} using “teach-back” to ensure understanding (n = 2, 4%),^{21,73} and demonstrating use of devices to aid understanding (n = 1, 2%).⁷² The use of translated medication information sheets was suggested in six studies (12%, Germany, The Netherlands, Australia, New Zealand),^{32,34,57,58,63,71} and five studies (10%) reported on the use of translated labels as a way to overcome language barriers.^{39,66,71,72} Pictograms were found to aid understanding of medicine use (n = 7, 13%),^{10,15,35,43,54,71,72} with one Australian study finding pictograms that had been adapted to the target cultural group were preferred over generically designed pictograms.³⁵

Both migrants and refugees and pharmacy staff reported the use of children as interpreters in the pharmacy/patient interaction. Patients presented this as a positive option as it aided their understanding,^{26,32} but pharmacy staff and community workers found it less than ideal as

they felt it breached confidentiality and exposed children to sensitive issues.^{52,61,73} Fourteen articles (27%) suggested having pharmacy staff trained in cultural competence was one solution towards overcoming language and cultural barriers for migrants and refugees in accessing pharmacy services.^{10,21,25,27,36,40,51,53,58–60,71,72,74}

Six articles (12%, Australia, Canada, Norway) discussed the use of technology to enhance communication with migrants and refugees, including QR codes for accessing medicines information, SMS reminders, use of Google translate, apps on phones with medicines information, and use of audio-visual resources to teach medicines information.^{15,21,27,52,71,72} Two studies (4%) found migrant participants used the internet as a medicines information source, but this was limited to young participants and those with computer skills.^{34,71}

One American study described a significant increase in pharmacies’ ability to meet the communication needs of their linguistically diverse clients when the government passed a series of regulations requiring pharmacies to provide translated prescription labels and other language services to clients with low-level English.³⁹ Another American author suggested mandating language services was necessary to compel pharmacies to adequately meet the needs of migrants and refugees.⁷³

3.8.1. Medication review

A third of articles (n = 17, 33%) reported that having pharmacists intentionally and thoroughly review medications for refugees and migrants resulted in identification of treatment related problems, addressed misunderstandings, improved adherence to therapy, improved patient safety, and ultimately improved clinical outcomes.^{6,10,25,27,33,36–38,43,53,66,67,69,70,72,74,75} Medication reconciliation, the process of ensuring appropriate continuation of therapy through identifying what patients should be prescribed versus what they are being prescribed, is a specialty service offered by pharmacists and was shown to reduce treatment related problems and identify use of medication, traditional or allopathic, from their home countries.^{25,43,72}

3.9. Community education

Three studies (6%, USA, Australia) found community education sessions improved migrants’ understanding of how to take medications.^{48,51,57} One of these American studies found group education was beneficial in some patient groups, as participants shared information and helped one another reach understanding.⁵¹

Some authors (n = 8, 15%) suggested education of newly arrived migrants and refugees could help with understanding the pharmacy system.^{10,21,44,47,50,55,58,71} Migrant participants in one English study looking at improving the uptake of a medication review service suggested increased community engagement,³⁷ and another Australian study suggested using community leaders as mediators in the delivery of medicines education.²⁷

3.10. Relationships

Support from family, friends and community was a key facilitator in assisting migrant and refugee patients to access pharmaceutical care and manage their conditions and treatment (n = 10, 19%).^{21,25,34,37,46,48,53,57,71,74} Specifically, migrant participants in these studies wanted greater involvement of carers and patient advocates in pharmacy service provision.³⁷ This was often noted as an outworking of collectivist cultural values.^{21,53,57}

The development of relationships between pharmacists and their migrant and refugee clients built trust and enabled patients to seek and receive pharmaceutical care (n = 14, 27%).^{10,15,21,24,27,34,40,44,48,53,55,70,72,75}

The accessibility of pharmacists was a key to the initiation and maintenance of this relationship.^{10,69,72} Gaining a deeper understanding of the patient’s story helped the pharmacist be compassionate and understanding, leading to cultural competence and better care, particularly over the long term.^{27,40} Five articles (10%, USA, Australia,

Canada) showed collaboration with other health professionals improved pharmaceutical care for the migrants and refugees by enabling sharing of information between the doctor and pharmacist and coordination of medication education.^{21,24,27,53,69}

4. Discussion

This scoping review has investigated the barriers and facilitators migrants and refugees experience when needing pharmaceutical care from pharmacy staff. Of the empirical studies, most identified barriers for migrants and refugees, but less gave evidence for what facilitates migrants and refugees in receiving pharmaceutical care.

Resonating with other literature on access to health care by migrant and refugee populations,^{76–78} language is the greatest barrier in accessing pharmacy services, both in quantity of evidence and the magnitude of the barrier it poses.^{3,32} The language barrier increases the risk of adverse events.^{23,61,63,79} This review showed migrant and refugee patients felt as if they were receiving lower quality care compared to native speakers because of the language barrier, a finding supported by other authors.^{80–82} A range of facilitators were suggested for overcoming this barrier, including the use of children as interpreters, professional interpreters, multilingual staff, modifying language and communication, translated medicine information, and use of pictograms.^{53,54,64,71,72,77} However, across the studies there was a sense of the inadequacy of pharmacy staff in addressing this issue.^{15,66} After pharmacist-patient interactions, pharmacy staff reported inadequate counselling and frequent instances of misunderstanding.^{34,58,70} In their scoping review, Yehekshel and Rawal found health professionals relied too heavily on interpretation by family members, who were not always available, able to translate the medical terminology or maintain confidentiality.⁷⁸ Studies show use of professional interpreters improves clinical care compared to use of ad-hoc interpreters and was preferred by migrant participants when the health issue was serious or complicated.^{83,84} However, consistent with studies across the health workforce,^{79,85} this review corroborated pharmacists' consistent failure to access professional interpretive services.^{15,26,27,42,44,60,70} Studies showed that policy change mandating use of translation was effective in bringing about use of language services by pharmacies for patients with low levels of the host country's dominant language.^{34,39}

While misunderstanding occurs due to the language barrier, cultural factors are also a significant contributing factor. Differences in beliefs about health, the health system, and the role of health professionals fuels misunderstandings.^{37,41,57,86–88} This is compounded by the migrants and refugees having had different experiences in their countries of origin and coming into a new country with expectations that go unmet.^{45,55} As documented in medical literature, unfamiliarity with the host country health system leads to low levels of trust, exemplified in a Dutch study by migrants travelling back to their country of origin for health care.^{2,49} Medical literature indicates that differences in the beliefs about traditional medicine's role in healthcare leads to misunderstandings between migrants and doctors.^{89,90} Yet this was not reported in pharmacy literature in this review, revealing a need for further research. The impact of religious beliefs on behaviour around medicines is well documented in previous studies,^{81,86,89,91} and is confirmed in Norwegian and Australian literature regarding the pharmacist-patient interaction, particularly concerning medicine excipients meeting Islamic regulations.^{15,44,46,52} Importantly, pharmacists need to be aware of the effect of fasting on medication management and work with patients, respecting their religious practises. Many authors suggest cultural competency training could help pharmacy staff improve their cultural awareness and practise in a culturally safe way.^{10,21,25,27,36,40,51,53,58–60,71,72,74}

Drawing on the medical literature, it is evident that, for migrants and refugees, relationships are essential for their health management. These are relationships with their friends, family and community members, as well as relationships with their health professionals.^{92,93} Despite the importance placed on relationships with family, friends, and peers,

pharmacists are reluctant to involve family members due to concerns around privacy and autonomy of the patient.^{52,61,73} This again is a reflection of a misunderstanding of the cultural background of the patient and could be improved upon with cultural awareness training.^{26,32} The importance of the relationship between the migrant/refugee and the health professional was reflected in this review, with trust being a deciding factor on where to source medicines information.^{48,57} Trusting relationships with pharmacists not only lead to increased access to reliable medicines information, but helped pharmacists bridge the cultural divide, as their understanding of their patients, and subsequently their compassion and care, improved.^{27,40}

Low health literacy in migrants and refugees is a significant barrier to access of pharmaceutical care.⁵³ Medication review and reconciliation by pharmacists helps identify treatment-related problems and is an opportunity to improve patients' medication knowledge.^{6,33,38} Community education sessions, especially in the dominant language of the audience, can address health literacy.^{27,47,88,93}

While some facilitators to improve the provision of pharmaceutical care to migrants and refugees can be recognised in the literature, further research is required to provide empirical evidence. With stronger evidence, pharmacies will have the tools to improve their provision of pharmaceutical care to this under-served patient group. As a priority and foundational need, pharmacy staff should be trained in cultural safety and awareness. In the meantime, pharmacies can utilize existing resources such as translated written materials and professional interpreter services to enhance interactions. Pharmacy staff can facilitate understanding by modifying language and checking understanding, taking extra time to listen to these patients who are reporting feeling unheard. Pharmacists should liaise with migrant and refugee support workers to investigate the needs of their local community and offer community education sessions, increasing capacity in migrant and refugee clients, networking and building trust. Equally, coordination with individual patients' physicians will assist in meeting their health-care needs.

The strengths of this scoping review are that it is a comprehensive search of the literature, and the inclusion of studies with different methodologies gives weight to the themes identified. By limiting the search to English only articles however, some relevant literature could have been missed. Scoping reviews also do not include an assessment of study quality. Additionally, the reviewed literature focused on migrants and refugees in high-income countries and did not include literature on internally displaced people and in-country migration or urbanization.

5. Conclusions

Migrants and refugees can have complex health needs and addressing these needs in pharmacy is made more difficult by the language, culture, and health literacy barriers. With most pharmacists being time-poor and where extra patient counselling comes as a non-billable or reimbursable expense, it is unsurprising that sufficient effort has not been made to meet the needs of these patients. The "pull" of the need is great, but not sufficient to bring about practise change. The "push" for better resourcing, and perhaps policy change to compel pharmacies, is needed to bridge the gap between knowing what to do and doing it. Resourcing and policy change come about because of a weight of evidence of effectiveness. More research into facilitators that are effective in increasing access to pharmaceutical care and practical for implementation by pharmacies is therefore needed.

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Declaration of competing interest

None.

Appendix 1

Search strategy for Medline

1	"emigrants and immigrants"/or refugees/
2	"Emigration and Immigration"/
3	1 or 2
4	exp Pharmaceutical Services/
5	Pharmacists/
6	Pharmacy/
7	Pharmacies/
8	4 or 5 or 6 or 7
9	3 and 8

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