

Stakeholders' Acceptability of Pharmacist-Led Screening in Community Pharmacies: A Systematic Review

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Introduction: Community pharmacists are among the most accessible healthcare providers. Community pharmacist-led screening may facilitate the early detection of illnesses/medical risk factors, optimizing health outcomes. However, it is important to assess the acceptability of screening services to ensure uptake by key stakeholders. The aim of this review was to explore the acceptability of community pharmacist-led screening by all stakeholders (i.e., patients, pharmacists, and other healthcare professionals) and identify the methods used to evaluate the acceptability of screening.

Methods: A systematic search was conducted in Embase, MEDLINE, International Pharmaceutical Abstracts, and Scopus in April 2020 since inception. Studies that explored the acceptability of pharmacist-led screening for any risk factor/medical condition(s) within community pharmacies were included.

Results: A total of 44 studies met the inclusion criteria. A total of 17 studies identified community pharmacies as appropriate screening locations. Seven studies reported that patients were comfortable with participating in pharmacist-led screening. Eight studies explored acceptability from the perspective of medical practitioners and other healthcare professionals, with 6 reporting high recommendation acceptance rates and/or acceptability of pharmacist-led screening. Barriers to pharmacist-led screening included time and privacy constraints, whereas adequate remuneration was considered an important enabler.

Discussion: Community pharmacist-led screening appears to be acceptable to patients, pharmacists, and other healthcare professionals. However, no uniform psychometrically sound measure of acceptability was used consistently across studies, rendering comparisons difficult and showing the need for future research exploring the psychometric properties of acceptability measures. Findings, including barriers and enablers to pharmacist-led screening, are important to consider when providing screening services in community pharmacies.

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INTRODUCTION

Community pharmacists are among the most accessible and trusted healthcare professionals (HCPs) with expanding roles in the provision of professional services.¹ Patients are up to 10 times more likely to visit a pharmacy than a primary care physician,² averaging 18 visits per year.³ Patients may frequent community pharmacies to obtain a prescription or over-the-counter medications.⁴ Hence, pharmacists constantly communicate with patients, fostering the

provision of pharmacy-based screening services. Primary care settings, including general practitioners' (GPs) clinics and community pharmacies, are often the

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first point of contact in the healthcare system.⁵ Owing to their accessibility, community pharmacies may be appropriate locations for pharmacist-led screening for diseases and risk factors, allowing for early detection and intervention.⁶ Studies have shown that patients are willing to participate in pharmacist-led screening for various risk factors/medical conditions⁷ and reported such services are feasible.⁸ Pharmacist-led screening can be time consuming so it is important that these services are revenue generating, which can be achieved through remuneration.

Community pharmacists are well-placed to deliver screening services, particularly for medical conditions that may not be routinely screened for by other HCPs, such as asthma, and chronic obstructive pulmonary disease.⁹ Furthermore, these services may be especially important in rural/remote areas, where there is a significantly smaller number of healthcare providers than in urban areas.¹⁰ Pharmacists employed in rural/remote areas may have a wider scope of practice owing to being the only accessible HCP, resulting in greater service provision.¹¹

Acceptability has been defined as “the perception among implementation stakeholders that a given treatment, service, practice, or innovation is agreeable, palatable, or satisfactory.”¹² Exploration of acceptability is essential for the adoption and sustainability of screening interventions.^{12,13} The social validity and clinical impact of interventions may be compromised if they are not acceptable to stakeholders.¹⁴ Ayorinde et al.¹⁵'s systematic review explored the acceptability and feasibility of pharmacist-led screening services. They concluded that pharmacist-led screening is acceptable to patients, pharmacists, and physicians. However, this review only included studies from 1990 to 2012 and focused solely on WHO major diseases, including cardiovascular disease (CVD) and cancer.¹⁵ Hence, there is not only a need for a comprehensive review of the acceptability of pharmacist-led screening in the last decade but also a need to identify all studies exploring the acceptability of pharmacist-led screening for any medical condition/risk factor. In addition, this previous review did not explore acceptability specifically and had a much broader scope. Furthermore, no previous review has included the perspectives of other HCPs toward pharmacist-led screening. Hence, the aim of this systematic review was to explore the acceptability of pharmacist-led screening in community pharmacies. Specifically, our objectives were to (1) determine whether community pharmacist-led screening is acceptable to all stakeholders (i.e., patients, pharmacists, and other HCPs), (2) identify all medical conditions/risk factors evaluated in studies

reporting on the acceptability of pharmacist-led screening, and (3) explore the measurement methods used to evaluate the acceptability of pharmacist-led screening.

METHODS

Systematic Search

The PRISMA statement guided this systematic review.¹⁶ Systematic literature searches were conducted through Embase, MEDLINE, International Pharmaceutical Abstracts, and Scopus on April 16, 2020 since inception, by author YLEL. An academic librarian was consulted during the development and refinement of the search keywords and strategies and when deciding which databases to use. [Appendix Tables 1 and 2](#) (available online) present the sample search strategies conducted in Embase and MEDLINE. The search strategy was piloted and reviewed with 2 authors (CLO and SED), included both keywords and medical subject headings (when available), and was based on the following concepts and related terms (depending on the database):

- screen* or screening or screening tool* or screening test or clinical assessment or risk assessment or community pharmacy services AND
- pharmac* or pharmacist* or community pharmacist* AND
- accept* or attitude* or satisf* or patient satisfaction or program acceptability or patient acceptance of health care or pharmacist attitude or pharmacist-patient relationship.

Inclusion and Exclusion Criteria

This systematic review specifically explores the evidence pertaining to the acceptability of community pharmacist-led screening, hence it only includes studies reporting on screening services conducted by community pharmacists. Studies involving other HCPs performing a major role in screening were excluded if the results relating to the acceptability of pharmacists' roles could not be extracted. Studies that mentioned acceptability or its derivatives (e.g., acceptance, accept) in the title, abstract, objectives, methods, or results sections of the manuscript were included. Therefore, studies that investigated related constructs, such as satisfaction or comfort, pertaining to screening but did not explicitly mention acceptability (or its derivatives) in the sections mentioned earlier were excluded. Studies that explored the psychometric properties of screening tools without measuring or reporting on acceptability were excluded. However, studies that met other inclusion criteria and

Table 1. Inclusion and Exclusion Criteria

Inclusion criteria	Exclusion criteria
<p>Citations were included if they reported on primary research studies whereby:</p> <ul style="list-style-type: none"> • Screening services were conducted within a community pharmacy setting. • Screening services were conducted for any illness or medical risk factor (e.g., early depression symptoms, potential risk of obesity). • Screening services were conducted by pharmacists. • Acceptability or its derivatives (e.g., accept, acceptance) was specifically mentioned in the title, abstract, objectives, methods, or results of the manuscript. 	<p>Citations were excluded if they:</p> <ul style="list-style-type: none"> • were published in languages other than English and • reported on the psychometric properties of screening tools but did not explore the acceptability of screening.

investigated the properties and acceptability of screening tools were eligible for inclusion. Provided the inclusion and exclusion criteria were met, all primary research studies, regardless of study design, were eligible.

Study Selection

YLEL conducted searches in all databases and exported records to Endnote (X9.3.1)¹⁷ for automatic and manual deduplication. Records were screened against the inclusion and exclusion criteria by title and then by abstract. The full texts of the remaining publications were then screened on the basis of the inclusion and exclusion criteria (Table 1) and were classified as included, excluded, or to be discussed because of uncertainty, whereby articles were reviewed by coauthors CLO and SED to reach consensus by YLEL, CLO, and SED.

Data Extraction and Synthesis

Data were initially extracted by YLEL in consultation with SED and CLO and then reviewed and refined independently by DNG in consultation with SED and CLO. Data relating to the study aim, population, risk factor(s)/medical condition(s) being screened, and screening tool used were extracted. Data relating to the acceptability of pharmacist-led screening were extracted in detail and synthesized to identify data pertaining to the population whose acceptability was ascertained, method of acceptability measurement, key outcomes relating to acceptability, and terms used to measure/describe acceptability.

RESULTS

Literature Search

The systematic searches yielded 3,930 potentially relevant citations, of which 767 were duplicates. A systematic screening process was used (Figure 1) to screen titles, abstracts, and full-text publications, resulting in 44 eligible studies. Reasons for exclusion of full texts included that acceptability (or its derivatives) was not

explicitly mentioned in the title, abstract, objectives, methods, or results section(s) of the manuscript; pharmacist-led screening services were not provided; or the study only reported on screening tool properties.

General Characteristics

A total of 44 publications published between 2002 and 2020 were included in this systematic review. Detailed information pertaining to the data extracted from each study is presented in Appendix Table 3 (available online). Most studies took place in high-income countries ($n=37$), including the U.S. ($n=10$), Australia ($n=9$), and the United Kingdom ($n=8$). Studies explored the perspectives of patients ($n=19$); pharmacists ($n=10$); and other HCPs, including medical practitioners ($n=3$), lung function experts ($n=1$), and physicians and nurse practitioners ($n=1$). Some studies explored the perspectives of multiple stakeholders, namely patients and pharmacists ($n=7$), medical practitioners and pharmacists ($n=2$), and medical practitioners and patients ($n=1$).

Studies investigated the acceptability of pharmacist-led screening for various risk factors/medical conditions. Nine studies explored the acceptability of pharmacist-led screening for CVDs,^{18–26} such as hypertension,^{19,24,26} atrial fibrillation,^{18,22} and hyperlipidemia.²⁵ Seven studies reported on the acceptability of pharmacist-led screening for excessive alcohol consumption.^{27–33} Four studies reported on the acceptability of pharmacist-led screening for chlamydia,^{34–37} and 3 studies reported on the acceptability of pharmacist-led screening for HIV,^{38–40} chronic obstructive pulmonary disease,^{9,41,42} and osteoporosis.^{43–45} Three studies explored the acceptability of pharmacist-led screening for multiple conditions, namely diabetes and CVD⁴⁶; anemia, diabetes, and hypertension⁴⁷; and opioid misuse, HIV, and hepatitis C.⁴⁸

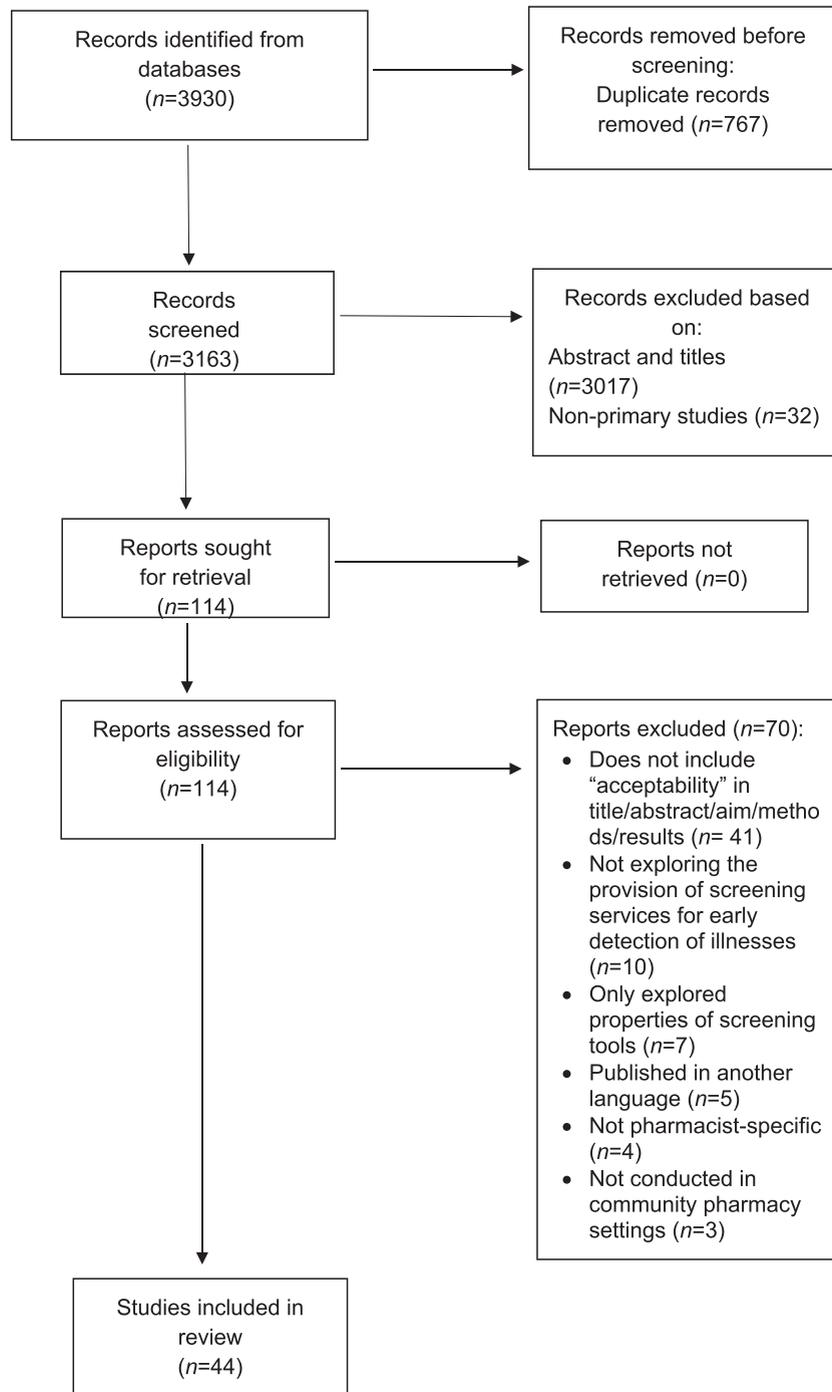


Figure 1. PRISMA flowchart of the article selection process.¹⁶

Methods of Acceptability Measurement

A total of 29 studies used quantitative methods,^{9, 21–25,27,29,32,33,36,39–56} 12 studies used qualitative methods,^{18–20,26,28,31,35,38,57–60} and 3 studies used mixed methods (i.e., both quantitative and qualitative methods) to measure acceptability.^{30,34,37} Acceptability measurements ranged from 1 to 34 questions; however, most studies did not specify the number of questions included

in the surveys or interviews. Quantitative studies were mostly answered on a 5-point Likert scale, and qualitative studies mostly consisted of open-ended questions.

All quantitative studies involved surveys to measure acceptability. Most surveys were developed by research team members. Although some studies described the development of survey instruments, the psychometric properties, including the validity and reliability, of most

surveys were not explored, with some exceptions. For example, the 34-item computer-assisted telephone interview questionnaire developed by Gudka and colleagues³⁵ was piloted among 5 pharmacy students and further revised. Similarly, Chaiyakunapruk et al.⁴⁵ validated survey items using an expert panel and then piloted among 10 patients and refined items accordingly, thereby exploring both content and face validity. Other studies also reported conducting validation using experts⁴⁸ and piloting items.^{33,48} Brown and colleagues²⁷ adapted survey questions from previous studies investigating attitudes toward dentist-led alcohol screening, whereas Ryder et al.³⁸ developed survey questions on the basis of a previous literature review.

Among the 12 qualitative studies included in this review, 11 studies involved the use of semistructured interviews, either face to face ($n=8$),^{18,26,31,38,57–60} or by telephone ($n=3$).^{19,20,28} One study combined semistructured telephone interviews with patients and focus groups with patients and pharmacists.³⁰

Concepts Used to Assess Acceptability

There were no universal tools identified in included studies that assessed the acceptability of screening. However, common terms used to describe or assess acceptability were identified, including appropriateness of pharmacist-led screening, comfort in delivering or participating in screening, satisfaction with screening, confidence in delivering screening, and usefulness of screening.

Stakeholder Perspectives on the Acceptability of Pharmacist-Led Screening

A total of 19 studies explored patients' acceptability of pharmacist-led screening.^{19–21,23–25,27,29,31–33,37,39,40,46,47,50,53,56} Ten studies assessed the acceptability of pharmacist-led screening from the perspective of community pharmacists conducting screening.^{18,22,26,38,48,54,55,57,58,60} Patient and pharmacist perspectives were most commonly assessed for CVD screening.^{18–26,46,47} Five studies reported on the acceptance of screening results by other HCPs,^{9,41,44,49,59} with most focusing on respiratory/musculoskeletal conditions.^{9,41,44,49} Seven studies explored the perspectives of both pharmacists and patients,^{28,30,34–36,51,52} 2 studies explored the perspectives of both medical practitioners and pharmacists,^{42,43} and 1 study explored the perspectives of both medical practitioners and patients.⁴⁵

Patients' perspectives. Among patients who participated in screening and follow-up interviews/surveys, 81%–97% of respondents were satisfied with pharmacist-led screening.^{34,45,46,50,53,56} Community pharmacy was perceived to be an appropriate location for

screening,^{21,23,26,28,29,31,34,36,37,40,45–47,50,51,53,56} and most patients stated that they were comfortable discussing health-related issues with pharmacists.^{23,29,30,33,34,37,39}

Patients perceived the information provided by pharmacists to be helpful and useful^{27,29,44,52}; however, Peterson and colleagues²⁰ found that most respondents were more likely to participate in screening services for conditions such as diabetes, high cholesterol, and CVD if delivered by GPs as opposed to being delivered by pharmacists. Encouragingly, most patients would recommend pharmacist-led screening services to others^{19,32,37,40,50,51}; however, potential barriers to screening in community pharmacies were identified, including lack of privacy/confidentiality,^{23,31,32,34,37} limited time,^{31,48} and difficulty in communicating with pharmacists because of an unfriendly or unapproachable attitude.³¹ Factors including pharmacists' nonjudgmental communication styles were also noted as enablers of patient participation in screening.²⁸

Pharmacists' perspectives. Outcomes among pharmacists included their confidence and comfort in providing screening. For example, Dong et al.,⁶⁰ Gudka and colleagues,³⁵ and Nielsen et al.⁵² reported that pharmacists were confident in providing screening services. Pharmacists also indicated that they were comfortable performing screening.^{18,42,54} However, these findings may be disease specific because Krska and colleagues³⁰ identified that pharmacists were uncomfortable in proactively raising alcohol-related issues and preferred patients to actively ask for advice. In addition, Nielsen et al.⁵² identified a decrease in comfort levels after screening among some pharmacists who reported high levels of comfort at baseline, potentially because of pharmacists overestimating their comfort level before delivering screening. Pharmacists also noted barriers, such as time and documentation associated with screening,³⁵ and enablers, such as training⁵⁴ and remuneration,¹⁸ to their involvement in screening.

Other HCPs' perspectives. Acceptability was also assessed from the perspective of other HCPs. Castillo and colleagues^{9,41} reported that 69% and Fuller et al.⁴² reported that 99% of spirometry measurement results obtained and interpreted during community pharmacist-led screening were accepted by other HCPs, including lung function experts and pulmonologists. In addition, no difference in results was reported when spirometry was conducted by expert nurses in hospital settings and pharmacists in community pharmacy settings for the same individual.⁹ Lata and colleagues⁴⁴ concluded that clinicians found results obtained from pharmacy-based bone density screening useful and indicated

a willingness to incorporate the results in decision making. However, Brown et al.⁴⁹ reported on medical practitioners' acceptance of pharmacists' recommendations after screening the risk for falls, showing that the median acceptance rate of recommendations was 33% and that 79% of participating pharmacies had acceptance rates $\leq 50\%$. Despite this, pharmacists may play a large role in the prevention of falls through the management of fall risk-increasing drugs.⁴⁹ Moreover, Hatah and colleagues⁵⁹ reported that pharmacist-led screening requires collaboration between pharmacists and GPs and results in additional information pertaining to patients' conditions being provided to GPs because patients' screening results are often sent to GPs.^{44,49} Chaiyakunapruk et al.⁴⁵ explored the views of 6 medical practitioners regarding osteoporosis screening in community pharmacies, with all medical practitioners strongly agreeing/agreeing with the role of community pharmacists in osteoporosis screening and 5 of 6 medical practitioners finding the screening tool useful. Hence, other HCPs were generally accepting of pharmacist-led screening for respiratory and musculoskeletal risk factors/medical conditions.

DISCUSSION

To the authors' knowledge, this systematic review is the first to comprehensively explore the evidence pertaining to the acceptability of community pharmacist-led screening for any risk factor/medical condition, from the perspective of all stakeholders. Pharmacist-led screening was generally acceptable to patients, pharmacists, and other HCPs; however, there is no uniform, standardized, psychometrically tested measure of screening acceptability used among studies, despite the identification of 44 studies reporting on acceptability, specifically. Considering the variations across acceptability measures, it is difficult to conduct accurate comparisons across studies. Nonetheless, this systematic review presents and synthesizes the literature, identifying that a broad range of terms and constructs are often used when measuring acceptability, which can facilitate the measurement of acceptability and the development of a valid and reliable acceptability measure in future studies.

The overall findings of this systematic review support those reported by Ayorinde and colleagues¹⁵ because most stakeholders are accepting of pharmacist-led screening. Because patients are the target population for screening services, their perceptions of pharmacist-led screening are important to ensure uptake of services. This review shows that community pharmacist-led screening is acceptable to patients and that patients are willing to recommend pharmacist-led screening to

others. However, time influences patients' participation in screening because services with shorter waiting times for appointments were easier for patients to access,^{29,34,37} and the perception that screening was time-consuming deterred patients' participation.³⁵ Similarly, studies exploring HIV testing and cervical cancer screening show that long waiting times discourage patients from accessing these services.^{61,62} Pharmacists also highlighted the time required for documentation and communication with patients during busy hours.^{32,35,48,54,60} Thus, future studies can provide crucial information by reporting on screening time because this is important to consider when assessing the acceptability and feasibility of screening.

Strategies to overcome barriers included simplifying the paperwork involved and providing incentives.³⁵ Houle et al.⁶³ described variability in remuneration for current pharmacist-delivered clinical services, whereby most remuneration for clinical services was provided through government funding, with the remainder being covered by private insurance plans. They suggested that pharmacists assess the time required to deliver these services to ensure adequate remuneration.⁶³ Hence, it is important to consider time constraints from the perspective of patients and pharmacists.

Privacy and confidentiality were also noted as potential barriers to screening because of the lack of private areas and consulting rooms in some pharmacies.^{18,23,29,30,37} Agurto and colleagues⁶² reported that lack of privacy during cervical cancer screening may cause discomfort in patients. Furthermore, private counseling areas were found to enhance the professional image of pharmacists performing atrial fibrillation screening and encouraged the recruitment of participants.¹⁸ Pharmacies that lacked a consultation room often had to improvise to provide a counseling area.¹⁸ The need for private counseling areas in pharmacies has been recognized as essential, with an RCT of diabetes screening in community pharmacies rendering a private counseling area an eligibility requirement for participation.⁶⁴ Therefore, it is crucial to consider environmental aspects when establishing community pharmacy-based screening.

Pharmacists also reported that screening in community pharmacies was acceptable. Lowres et al.¹⁸ showed that pharmacists who performed atrial fibrillation screening in community pharmacies gained a sense of professional identity and reported greater job satisfaction because of an increased clinical role. Pharmacists also viewed screening as rewarding, noted an improvement in customer relations, and experienced a greater sense of giving back to the community. In addition, pharmacists felt comfortable providing screening

services,¹⁸ as shown in studies by Meyerson and colleagues⁴⁸ and Gauld et al.,⁵⁴ whereby 60% and 64%–94% of pharmacists reported that they were comfortable, respectively. However, studies have highlighted the importance of adequate training and knowledge to support pharmacists in providing such services⁵¹ and to ensure confidence in conducting screening.^{30,34,48,52,60} For example, Thakur and colleagues⁶⁵ reported that training for pharmacists was essential to build their confidence in communicating with patients when dispensing naloxone. Likewise, O'Reilly et al.⁶⁶ showed that most pharmacists felt that training on how to approach patients about depression screening and participating in role plays to practice counseling skills increased their confidence when screening. Castillo and colleagues⁴¹ also noted the importance of adequate training for pharmacists to perform high-quality spirometry measurements. They reported that pharmacists' skills should be regularly reviewed and evaluated to ensure ongoing quality of service provision,⁴¹ which can be achieved using professional practice standards that guide the provision of high-quality services.⁶⁷ Hence, training may be required before the provision of screening⁶⁶ but should be supplemented with opportunities to maintain and practice skills.

Pharmacist-led screening requires government investment and in some cases the support of policymakers and access to private insurance to ensure that pharmacists are supported through training and remuneration for their role in the early detection of risk factors/medical conditions. The importance of considering how community pharmacist-led screening could be funded in the future was recognized among included studies.^{18,35} Furthermore, there is a need to establish follow-up and referral pathways to facilitate triage of high-risk individuals to medical practitioners for diagnostic and treatment services. For instance, in a study by Alzubaidi et al.,⁴⁶ patients were provided with a referral letter and advised to follow-up with their GP if they were deemed at-risk of diabetes and CVD after screening; however, only 24% of patients followed this recommendation. Hence, there is a need to improve referral pathways to allow for better health outcomes.

This systematic review identified that pharmacist-led screening results were accepted by medical practitioners; however, there was limited research exploring the acceptability of pharmacist-led screening from other stakeholders' perspectives. Two studies by Castillo and colleagues^{9,41} reported that most spirometry measurements conducted in community pharmacies were rated clinically acceptable. Although more data are required, the small body of evidence identified is positive. Screening services require collaboration among multiple

HCPs; hence, the relationship between a pharmacist and medical practitioner, for instance, may influence the referral outcomes. Brown et al.⁴⁹ reported highly variable prescriber acceptance rates of community pharmacists' recommendations relating to fall risks and that the relationship between medical practitioners and pharmacists influenced the decisions of medical practitioners. Strong working relationships between pharmacists and medical practitioners have the potential to improve patient care.⁶⁸ For example, collaborative relationships between pharmacists and other HCPs, including nurses and medical practitioners, were found to optimize drug use and decrease preventable adverse drug reactions.⁶⁹ This reinforces the importance of collaborative communication between HCPs to ensure optimal outcomes for patients. However, a collaborative practice may be hindered by the lack of compensation and time to communicate between multiple HCPs.⁶⁸ Furthermore, the expectations of medical practitioners and nurses toward the role of pharmacists and the development of mutual respect and trust contribute to establishing a collaborative relationship between HCPs.⁶⁹ These aspects should be considered to enhance collaborative communication between HCPs involved in screening.

Despite the lack of a standardized acceptability measure, terms were identified that were used across multiple studies when exploring acceptability, including satisfaction, comfort, and appropriateness. Similar terms have been identified when measuring acceptability across different contexts, including a systematic review exploring the acceptability of perinatal depression screening.⁷⁰ Some patients from studies included in this systematic review recognized the appropriateness of community pharmacies as locations for screening owing to their accessibility and long operating hours. Satisfaction was another common term used to assess the acceptability of community pharmacist-led screening. Acceptability has been shown to be a critical determinant of satisfaction with health services.⁷¹ In this systematic review, most patients who underwent screening were satisfied with the service.^{29,41,49,52} Kjöme and colleagues⁵⁰ reported that 99% of participants who underwent community pharmacist-led screening for skin cancer rated their overall satisfaction as good, very good, or extremely good. Similarly, Alzubaidi et al.⁴⁶ reported that 94.5% of participants were satisfied/very satisfied after pharmacist-led screening for diabetes and cardiovascular risk. Cumulatively, these findings indicate high satisfaction with pharmacist-led screening.

Patients were also highly comfortable with pharmacist-led screening.^{23,29,30,33,34,37,39} Comfort is commonly used as an indicator of acceptability. For example, Chae

and colleagues⁷² used comfort levels to report on the acceptability of telemedicine for patients living with schizophrenia. Similarly, Buist et al.⁷³ reported that women experienced no discomfort when reporting on the acceptability of routine perinatal depression screening. However, it should be noted that because most studies included in this review were conducted on specific population groups, findings may not be generalizable and hence warrant further research on larger representative samples.

The lack of uniform psychometric measures of acceptability has been noted previously in the literature pertaining to screening across a range of settings. El-Den and colleagues⁷⁰'s systematic review on perinatal depression screening acceptability identified that acceptability measures had not been psychometrically tested, rendering comparisons difficult to accurately conduct. Similarly, a review exploring the acceptability of human papillomavirus vaccinations⁷⁴ identified a conceptual overlap, whereby a number of studies used a combination of concepts to address multiple constructs, leading to possible errors in measurement. Furthermore, two thirds of studies did not include an assessment of validity and reliability of acceptability measurements.⁷⁴ This systematic review has identified a similar issue relating to the acceptability of pharmacist-led screening, with most studies not reporting or reporting very little on the development of acceptability measures. Hence, future research focusing on the development and psychometric testing of acceptability measurement instruments is needed

Limitations

The inclusion of studies, regardless of methodologic design, is both a strength and limitation, allowing a comprehensive overview of all the evidence pertaining to the acceptability of pharmacist-led screening while resulting in difficulty in conducting accurate comparisons and synthesizing results across a range of heterogeneous study designs and outcomes. Nonetheless, even among studies with similar study designs, acceptability measures and outcomes were found to be heterogeneous, so limiting inclusion criteria to specific study designs would not have overcome this limitation. Therefore, conducting risk of bias and quality assessments among included studies was deemed unsuitable.

Specific measurement of/reporting on acceptability (or its derivatives) served as an inclusion criterion. However, there may have been different concepts/terms used to assess acceptability in studies excluded from this review. For example, a study on pharmacist-led screening for cognitive memory decline found that 98.6% of respondents who participated in the screening program

were very satisfied/satisfied with the service.⁷⁵ However, because this study did not explicitly refer to acceptability in the title, abstract, objectives, methods, or results sections of the manuscript, it was excluded. Therefore, to meet the aims of the systematic review, a potential limitation may have been that studies exploring similar constructs (but not specifically reporting on acceptability) were excluded. However, this inclusion criterion was essential to ensure that only studies exploring acceptability were included and that no inferences were made on behalf of study authors.

CONCLUSIONS

This systematic review has identified that pharmacist-led screening for various medical conditions/risk factors is acceptable to both patients and pharmacists and that screening results are accepted by other HCPs. Standardization of acceptability measures is required to accurately measure and compare the acceptability of pharmacist-led screening across studies and to measure the construct of acceptability more broadly in the literature, across a range of settings and medical conditions. The barriers and facilitators identified in this systematic review can guide researchers when establishing pharmacist-led screening services in community pharmacies, to ensure acceptability to stakeholders.

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CREDIT AUTHOR STATEMENT

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SUPPLEMENTAL MATERIAL

Supplemental materials associated with this article can be found in the online version at <https://doi.org/10.1016/j.amepre.2022.04.023>.

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