Medication Reconciliation: A Qualitative Analysis of Healthcare Professionals' Perceptions

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Abstract

Introduction: Medication discrepancies occur intentionally or unintentionally between a patient's medication list and medication administration. Medication reconciliation (MedRec) is a process to attain a complete patient's medication list with the aim of reducing the occurrence of drug discrepancies.

Objective: This study sought to explore healthcare professionals' perceptions and perceived barriers and facilitators of MedRec at Hospital Tuanku Ampuan Najihah (HTAN), as well as their feedback on a proposed MedRec Form.

Methods: This qualitative study used a purposive sampling method. Semi-structured interviews were conducted. The interview guide consisted of three domains: (1) perceptions on MedRec, (2) barriers and facilitators to the implementation of MedRec, and (3) feedback on the proposed MedRec Form. Interviews were recorded and transcribed verbatim. Data were analysed using thematic analysis approach.

Results: Five medical officers and five pharmacists were interviewed. The interview data yielded 62 codes and seven themes. The themes were (1) Perceptions of the MedRec process, (2) Challenges and barriers, (3) Safety and drug management, (4) Technology and documentation, (5) Medication review and accuracy, (6) Collaboration and responsibility, (7) Awareness, education, and experience. All respondents agreed that MedRec is beneficial for patients as it could reduce medication error, increase medication safety and optimise treatment regimen. The respondents suggested that time, poor medication history taking and workloads were the barriers in conducting MedRec. Overall, the respondents had contrasting views on the proposed MedRec form.

Conclusion: The implementation of MedRec remains challenging. Healthcare professionals in HTAN had mutual understanding on the benefits and barriers of MedRec, but with different views on the implementation of the new MedRec tool. Hence, addressing these barriers might improve MedRec implementation and clinical outcomes.

Keywords: Medication Reconciliation, Perceptions, Barrier, Facilitators

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Introduction

The World Health Organization (WHO) recognised medication reconciliation (MedRec) as a solution to reducing the occurrence of drug discrepancies. Many medication errors and adverse drug events can be prevented and facilitated by implementing MedRec in the healthcare systems (1). MedRec can be described as the process of creating a comprehensive and accurate list of a patient's current medications. The list is then compared with the medication orders prescribed by physicians during each transition of care, from admission to discharge. The primary objectives of MedRec are to ensure that the patient receives the correct medications and to prevent any discrepancies or errors in drug administration (2).

A systematic review and meta-analysis study by Choi & Kim (3) reported that MedRec reduced the proportion of patients with medication discrepancies and the number of medication discrepancy events by 68% and 88%, respectively. An unpublished clinical audit was done at Hospital Tuanku Ampuan Najihah (HTAN) to identify the prevalence of medication discrepancies before hospital discharge in 2020 (4). The study reported that four of the total 50 patients had discrepancies in their medication orders. In particular, 20% of the medication discrepancies were unintentional with omissions being the most common form.

Collectively, these findings indicated the potential benefits that effective implementation of MedRec could contribute in medication discrepancies and medication error prevention, and improving patient safety.
The implementation of MedRec in Malaysia, however, was observed to be relatively low pertaining to challenges such as interprofessional collaboration, increased workload for healthcare professionals, and the need for significant resource allocation for workflow redesign. Moreover, there were lack of standardised MedRec tools and protocol within the Ministry of Health Malaysia (MOH) healthcare facilities to streamline the MedRec process, from patient admission to discharge. Therefore, this study aimed to explore the insights from healthcare professionals in HTAN on their perceptions and the perceived barriers and facilitators to implement MedRec service in public hospitals. Additionally, it sought to explore the feedback on a proposed Medication Reconciliation Form that was created to be implemented in HTAN.

Method

Study design

This qualitative exploratory study was conducted over a four-month period from May to September 2022 at Hospital Tuanku Ampuan Najihah (HTAN). It is a major specialist hospital and the second largest public hospital in Negeri Sembilan, located in the Kuala Pilah district. HTAN is equipped with 314 beds and provides outpatient services, inpatient wards and up to 13 specialist services.

This study was registered with the National Medical Research Register (NMRR) and approval from the MOH Medical Research and Ethics Committee (MREC) was obtained.

Study instrument

A semi-structured interview guide in English was developed based on the existing literature and a monograph entitled “The Physician's Role in Medication Reconciliation” (5). It was further refined through discussion with the research team. Each participant was interviewed alone by two interviewers. The interview questions focused on three main domains: (1) Perceptions on medication reconciliation, (2) Barriers and facilitators to the implementation of medication reconciliation, and (3) Feedback on the MedRec Form.

At the point when this study was carried out, MedRec was generally conducted at the point of discharge by ward pharmacists in MOH hospitals. It was usually based on three separate documents used by the ward pharmacists, namely the Medication History Assessment Form (CP1), Pharmacotherapy Review Form (CP2) and Patient Referral Note (CP4). To streamline and facilitate the MedRec process in HTAN, a MedRec Form was created by our research team. The form differs from CP1 as it gathers data on the patient’s medications in the Emergency and Trauma Department (ETD), ward, and at discharge, whereas CP1 solely collects information about the patient’s previous medications. The proposed MedRec Form was intended to focus on the reduction of medication discrepancies from the point of hospital admission to discharge. The form was adapted from the UMass Memorial Medical Centre Medication Reconciliation Project led by Professor Dr. Eric Alper with permission from the authors (6). Some parts of the original form that were deemed not applicable in our setting were removed, such as “last dose date/time”. Subsequently, a section on "withhold" was added to the form, as this information is crucial throughout the patient's course of treatment.

A pilot study was conducted to ensure mutual understanding of the interview questions and identify any potential issues before actual data collection. Two participants were recruited for a pilot study, which involved a clinical pharmacist and a MO from the medical ward. A repetitive question was identified in the interview guide whereby the question was removed. The finalised list of interview questions was then constructed. The result from the pilot study was excluded from the results of this study.

Data collection

The targeted respondents were pharmacists and physicians working in HTAN. This study used a purposive sampling technique which is often employed in qualitative research when there is a limited number of people with experience or expertise in the research area and to ensure variation in participants' professions (7). An individual, face-to-face interview session was conducted in the Medication Therapy Adherence Clinic (MTAC) room for each participant to discuss their perceptions on MedRec in HTAN. This approach facilitated open and candid discussions, allowing participants to express their opinions freely and without hesitation.

The researchers set an appointment with each participant to conduct the interview session. All interview sessions were conducted face-to-face and audio recorded using an electronic recorder. All participants were interviewed alone by two interviewers. Written consent was given by the participants before the interview. The interviews lasted between 10 and 30 minutes.

The audio recording was de-identified, and there was no mention of personal identifying information during the interview, such as names and IC numbers. The audio recording was only for transcription purposes and was neither copied nor sent to any other individual. After the transcription of each interview session was done, the audio recording was disposed of securely.

A total of 10 interviews were conducted, as data analysis indicated thematic saturation—no new themes, perspectives, or insights emerged from additional responses. This decision was based on a thorough review of recurring patterns across the dataset, ensuring that further interviews were unlikely to contribute novel information. Guest, Bunce, & Johnson's Saturation Model (2006) suggested that saturation often occurs within 6–12 interviews in studies with a homogeneous sample (8).

Data analysis

The interviews were transcribed verbatim, producing 29 pages of 1.5-spaced text. Content analysis began with the interviewer carefully listening to the recordings and extracting raw-data quotes. Common themes were identified, coded, and grouped into categories, which were then organised into overarching themes. These themes were further synthesised into broader conceptual frameworks, offering a comprehensive view of the participants' collective experiences. Data analysis was conducted manually.

Results

Demographic characteristics of interviewed participants

A total of 10 participants were included in this study, comprising two medical officers (MOs) from the medical ward, three MOs from ETD and five clinical pharmacists. Half of the participants had five to 10 years of working experience in their current position, followed by less than five years of experience (n=4) while one participant had over 10 years of working experience. Table 1 below summarised the demographic characteristics of participants.

Table 1: Demographic characteristics of interviewed participants (n=10)

Characteristics	n (%)
Gender	
Male	2 (20)
Female	8 (80)
Age group	
<30 years old	6 (60)
31-40 years old	4 (40)
Profession	
Specialist	0 (0)
Medical Officer	5 (50)
Clinical Pharmacist	5 50)
Years of experience	
< 5 years	4 (40)
5-10 years	5 (50)
> 10 years	1 (10)

C*odes, categories and themes*

The interview data yielded 62 distinct raw-data codes, which were abstracted into 7 themes. The themes were (1) Perceptions of the MedRec process, (2) Challenges and barriers, (3) Safety and drug management, (4) Technology and documentation, (5) Medication review and accuracy, (6) Collaboration and responsibility, (7) Awareness, education, and experience.

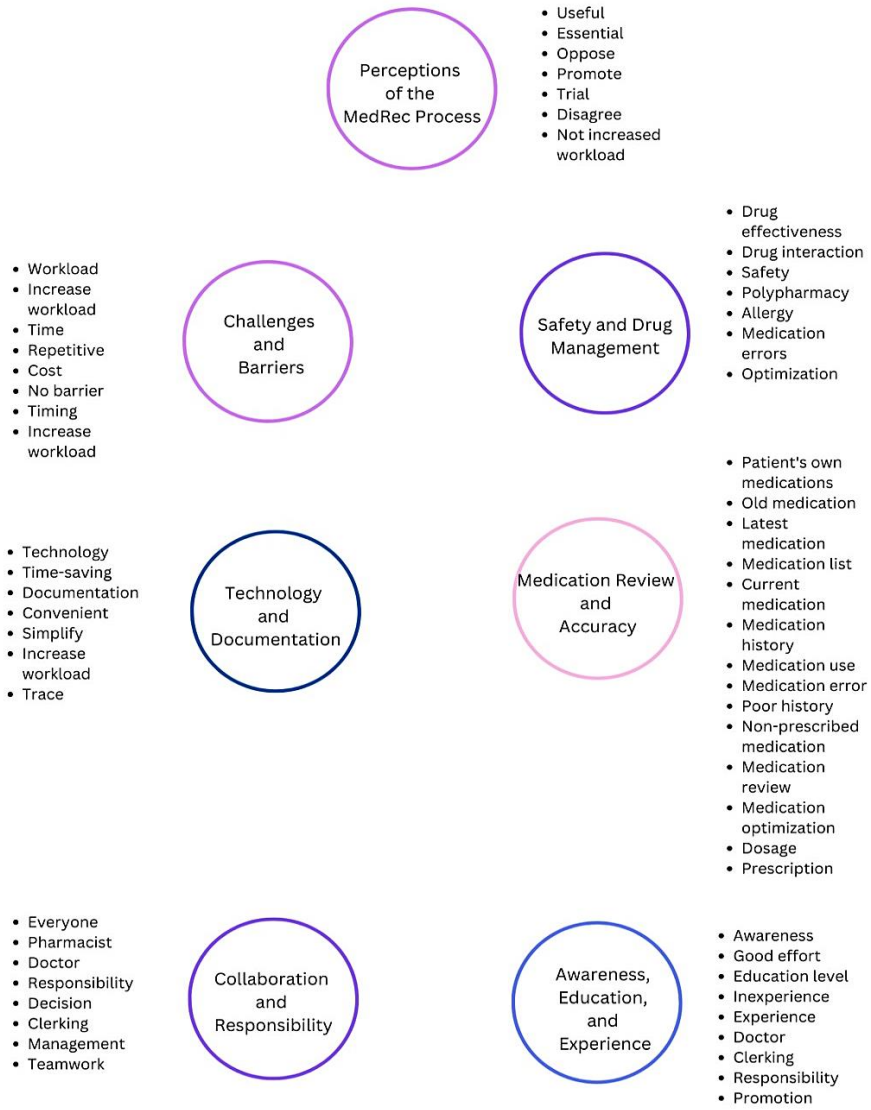

Figure 1: Codes that generate themes

Theme 1: Perceptions of the MedRec process

This theme captured healthcare providers' perception towards the MedRec process. Although the participants were from different professions, they had similar ideas and perspectives on MedRec. Most participants mentioned that MedRec is a process to ensure the updated list of patient's medications.

> "*… Medication reconciliation is a process to get the up-to-date patient's medication list. Usually when a patient admitted to ward, we will try to find patient's latest medication."* (Pharmacist A)

> *"... Medication reconciliation is a process to ensure the latest medication list for every transition of care when patient admitted to ward ...*" (Doctor E)

Theme 2: Challenges and barriers

This theme reflected the challenges faced by healthcare professionals during the MedRec process. These included the pressure of workload, time constraints, and additional tasks that could lead to barriers in performing MedRec properly. Both doctors and pharmacists think that the main barriers to implementing MedRec were time restrictions and heavy workloads in their workplaces.

> *"I feel like time factor because we do see a lot of patients but we are restricted in time. So, in order to rush the time, we would actually not do certain things. So, I think one of it is this medication reconciliation, because I think it takes up more time."* (Doctor B)

> *"I think time and heavy workload. I work in medical ward, so we have many things to do in wards. So, I think that would be barrier for us to do this process. That is why we usually ask helps from pharmacist to trace patient's medication list."* (Doctor D)

> *"I think time. In ward there is only one to two ward pharmacists. Sometimes it is impossible to complete the CP one for every patient before round started. ... Heavy workload also could be a barrier for me."* (Pharmacist A)

Other than that, poor history given by patients was also identified as one of the barriers to conducting MedRec which may be due to the patient's poor health literacy level and old age.

> *"... We have patients who come in with no documentation or no memory of what they are on. So, in that way, we can't really guess the medication because that's going to be harmful."* (Doctor B)

> *"… If let's say the patient's old or the patient cannot explain well of himself and in nowadays if the family support not so good, like nobody bring the medication come to the ward then it will be hard for the for everyone in the ward to know the medication."* (Pharmacist C)

> *"… Different educational level. If you ask patient what are the medications they took, they only tell you they took diabetes and hypertension medication, round and white in shape. Patients don't know what is the drug they took, the name of the drug."* (Pharmacist E)

Nevertheless, some participants highlighted that there were no barriers to conducting the MedRec process.

> *"Basically, basically, it's not an issue because nowadays, okay, if last time it was hard a bit, because you have to depends on patients, whether they bring their KK book, their prescriptions, their POMS. And also, certain patients if let's say they cannot take care of themselves, you need to base on caretaker and all that. But because nowadays most facility actually using computerised system, so actually, it's not a big problem. anytime, as long as you know where the patients follow up, actually, you can just call up and then you get a history, or else you just call up the caretakers. ... So, in overall is not a problem."* (Pharmacist B)

Theme 3: Safety and drug management

This theme highlighted the role of MedRec in ensuring patient safety, preventing drug interactions, managing polypharmacy, and addressing allergies or other risks in the medication regimen. In conducting MedRec, doctors and pharmacists shared the same opinions about the importance of conducting MedRec, which included ensuring patient's safety and to ensure that their treatments were effective.

> *"… For a better patient management. From the medication list, we can manage patient better based on the patient condition."* (Doctor E)

> *"It's to know the patients, it's to relate to the patient's current medication of course. Okay, and it's for us to also know what kind of medication they're on? We cannot just simply treat a patient merely on their symptoms that they're presented with."* (Doctor C)

> *"For patient's benefit. To reduce error and to ensure patient's safety like to prevent polypharmacy and to take extra cautious if patient has any allergy. Patient's safety purpose and to save medication."* (Pharmacist E)

> *"Probably to ease the treatment, to reduce medication error, to ensure medication safety, to optimise treatment regimen, something like that*." (Pharmacist B)

Theme 4: Technology and documentation

This theme reflected some possible concerns regarding the complexity or redundancy of the new documentation tool. Pharmacists and doctors had distinct views on the MedRec form and its process due to their individual experiences in clerking patient cases. Most doctors mentioned that the new form would be helpful and might help to save time.

> *"Okay, if you look at the form as a full thing, okay, it has patients' credentials, name, diagnosis, IC number, okay, which is the identity confirmation, okay. And then there's the source of medication list. Okay, so it also very well divided into certain categories, which will make us you know, like patient medication list, patient's own medication pharmacy records, I mean, if you're going to take on pharmacy records, we can say for sure that okay, this is the current medication that they're on, okay? Or if you're gonna see the patient OTC, we can be like, okay, is this right? Is this a correct one getting in that sense of medication is gonna help? Medication name, dose, frequencies is very important. And then there's this term C for continue, discontinue, newly started, I guess this is gonna be very helpful medication history recorded. Now it's going to be very helpful for us to know what are the exact medication that they own. And it will be easy for us to decide whether we need to continue the medication, withhold, or discontinue and there's also an option which is newly started."* (Doctor C)

> *"… It will make jobs easier. First, we do it at ED and then when patient admitted to the ward. Okay, the medical officer in the ward we refer back to this list. It will shorten the time."* (Doctor A)

> *"I think this form is useful."* (Doctors D and E)

> *"I think this form helps physician to monitor patient's medication from each transition of care until patient is discharge."* (Pharmacist A)

In contrary, some pharmacists had different views on the MedRec form as it was perceived to be similar to the existing CP1 form for medication history taking upon admission.

> *"… This form is almost similar to CP1. I don't see any extra things. It is almost similar to CP1."* (Pharmacist B)

> *"Disagree, because I think this form & CP1 is the same."* (Pharmacist C)

The two professions had different perspectives on the implementation of the form. Most doctors were supportive to utilise the MedRec form in daily routine.

> *"I think is a good effort … because I think it can make things easier. … I think that's a very good idea to go about."* (Doctor A)

> *"… I think it is useful actually… because from here (form) we can compare, because when we admit patient maybe got some acute issue then not all the medication can be restarted back at that moment. So, when patient already stabilised, already fit to be discharged, it's a good way that, because our BHT is so thick. So, this page/form is already simplified. So, we can recall back what is the medication that can be prescribed back or restarted after patient fit to be discharged. So that we won't forget what are the medications patient needs but we don't restart back. I think it is useful actually."* (Doctor D)

However, the pharmacists were not agreeable to implementing the MedRec form due to redundancy with current form.

> *"No, you only need one. You only need the baseline. Then upon discharge, you just use the prescription. After review the medication you just use prescription discharge. And you don't need to do reconciliation using this form anymore".* (Pharmacist D)

> *"No to me is no. Very obvious my answer. Because like the current one, one CP1 is enough, because we only cut the medication history. But if you are going to use this one, you need to update every change. So, for sure there is workload one and second one, for sure there will be error when someone's going to update this thing. And the existing system I think is already much sufficient. No need to do another form."* (Pharmacist B)

Theme 5: Medication review and accuracy

This theme focused on the importance of reviewing and maintaining a patient's medication list accurately, thereby ensuring the correct medications and dosages were documented to avoid errors and discrepancies. All doctors and pharmacists concurred with the necessity to conduct MedRec in all healthcare facilities to support precise decision making in the final discharge medications list.

> "*Actually it is important to conduct this process. We want to review the medication and ensure the medication is safe and indicated to be used based on patient's current condition. Apart from that, we want to avoid polypharmacy. From this medication list we also can continue the medication in ward. … When a complete and correct medication history is obtained, we can reduce medication error by not prescribe unnecessary medication thus ensure patient safety."* (Dr E)

Theme 6: Collaboration and responsibility

This theme centred on the collaborative nature of MedRec and highlighting the involvement of various healthcare providers, such as physicians, pharmacists, and nurses, and the distribution of responsibilities to promote patient safety. Most participants agreed that both pharmacists and doctors played a significant role in conducting MedRec.

> *"... By right is both doctor and pharmacist for confirmation from, to make sure that all the medication has been checked properly for all including the traditional and also the medication prescribed by hospital or KK."* (Doctor D)

> *"… As a clinical pharmacist, we are responsible to do medication reconciliation for every patient admitted in ward. We usually use CP one to conduct this process. Which mean this our job to conduct medication reconciliation. … I think doctor also responsible in this process. If the ward has no clinical pharmacist, or patient admitted to ward during weekend or after office hours, doctor also need to trace patient's latest medication. So, from this, they are also responsible to do medication reconciliation."* (Pharmacist A)

On the other hand, two participants expressed that MedRec should be considered a shared responsibility among patients, caregivers and all providers.

> *"If you ask me, I would say actually, it's like apart from everybody, including the patient itself. Because if I was a patient, and if I am started on any medication, I would want to know the use of the medication. And I want to know what medication I'm on. So, I think I should remember my medications. If I'm unable to remember, maybe my family members. Second, there should be documentation from the hospital side doesn't matter from doctors, pharmacist, staff nurse, anyone, but I think there should be documentation in order to make it easier for them to have the medication."* (Doctor B)

> *"I guess, everyone, starting from the medical assistants, staff nurse, doctors, pharmacists. Everyone plays a role in that."* (Doctor C)

Theme 7: Awareness, education and experience

This theme examined the significance of education, clinical experience, and awareness in the effective implementation of MedRec. While all doctors and pharmacists reported different levels of experience in conducting MedRec, not all doctors were actively involved in the process. Conversely, all ward pharmacists carried out MedRec as part of their daily routine. Generally, they would review the patients' old medications upon admission, often referencing to previous prescriptions or the treatment record books from health clinics.

> "*Actually, from my experience so far for my clerking patient, usually, I tend to see both the prescription and also the medication brought by the patient to the hospital. And also when clerking we tend to ask regarding the social. So we tend to also ask whether patients taking any extra medication other than prescribed by hospital."* (Doctor B)

> "*It is my practice when I do clerking for new admission, I will check the medication that patient brought and prescription. So from that we can list out the medication that patient currently on. Sometimes we also will ask if patient consume any extra medication or supplement."* (Dr E)

The importance of elevating patients' awareness and effort in managing their own medications without relying fully on caregivers or healthcare professionals was also highlighted.

> "*Most of the time, some patients are very well aware what kind of medication took, you know, some, they might not remember the name, but they can at least recall the dosing, whether they took BD dosing or TDS dosing. And, you know, certain, some, some of them, they could barely remember anything. You know, they will just say, Oh, I pergi klinik, the Doctor gave me the medicine and I took that. You know, I feel like there's also lack of what's the interest in them to know what kind of medications they're on?*". (Doctor C)

Discussion

Healthcare providers in HTAN demonstrated a shared understanding of MedRec and they were in agreement that the process is beneficial for enhancing patient safety and minimising medication errors. Healthcare providers' perceptions are vital in determining the successful implementation of MedRec (9). The state of being neglectful in the understanding of MedRec process can present challenges such as disengagement or underutilisation of the process, inaccurate reconciliation, poor interdisciplinary collaborations, and fragmented implementation. Therefore, there is a need to receive routine feedback on the challenges perceived by health providers regarding MedRec process. In reality, the difficulties commonly faced by providers are heavy workload, time constraint, insufficient manpower, and repetitive work that render the process tiresome. To illustrate, MedRec was believed to add on extra burden on the existing hectic work routine in the wards as the process requires comprehensive and thorough medication review of patients (10). The process becomes even more time-consuming when the patients present with multiple comorbidities that necessitate the use of a wide range of medications. Repetitive tasks, such as verifying medications and continuously updating records, contribute to stress and burnout among healthcare providers. These factors contribute significantly to the resistance to adopt MedRec as part of patient care and superficial implementation of MedRec.

Reducing resistance among healthcare professionals toward MedRec requires a multifaceted approach. A key challenge lies in balancing direct patient care with administrative responsibilities and enhancing acceptance of providers to adopt MedRec. For example, solving staffing shortages, allocating dedicated time for medication review, and streamlining work procedures should be considered (11). Essentially, a standardised MedRec workflow would lead to a more effective process with clear delineation of responsibility among the healthcare professionals. Other potential strategies to reduce resistance include staged implementation with constant feedback for system improvements, providing real-world data on its benefits as well as targeted education or training. The successful implementation of MedRec is largely dependent on the education, experience, and awareness of health professionals (12). Through continuous education and training, the benefits of having a standardised MedRec process could be emphasised, such as how it impacts patient safety and reduces medication errors. These efforts could help to shift perceptions and encourage integration of the MedRec process into the routine workflow. By addressing both practical and perceptual barriers, healthcare institutions can enhance acceptance on MedRec, promote consistent and effective implementation of MedRec, and ultimately improving patient outcomes and reducing medication-related errors.

It is important to constantly validate an updated list of medications to avoid medication discrepancies and medication errors. In fact, the findings from this study illuminate the mutual agreement between doctors and pharmacists that MedRec is crucial for patient safety, as it helps to manage risk factors such as drug interactions, allergies, and polypharmacy. Vira and colleagues reported that the MedRec

process prevented the potential for harm in 75 percent of cases (13). According to the American Academy of Family Physicians, a prominently displayed and up-to-date medication profile in each patient's chart serves as a crucial safety measure in patient care and should be updated at every clinical encounter (9). Poor history-taking, improper recording of medications, and lack of consistency between old and new prescriptions are some of the common factors leading to medication errors. More structured process of drug review, such as focusing on verifying current patient's medications and dose, can help in optimizing patient care and avoiding errors. A detailed and comprehensive MedRec is able to flag the information on allergy and adverse reactions, detect polypharmacy and drug-drug interactions through displaying the most updated medication list (prescribed and non-prescribed medications) to facilitate the identification of all regimen modification across transitions of care that may not be apparent otherwise.

In our study, the pharmacists and doctors had contrasting views on a proposed MedRec form. While the prescribers perceived the new form to be helpful, pharmacists viewed it as a duplication of existing form. Therefore, the work process and tools of MedRec should be carefully considered to avoid redundancy of workflow and adding unnecessary burden to the healthcare providers. On the other hand, technology is potentially an invaluable resource for enhancing the implementation of MedRec, such as with the use of electronic health records (EHR) (14).

EHR system needs to be designed to ensure accuracy, efficiency, and safety throughout the patient care continuum. An optimal EHR system that supports medication reconciliation should provide a comprehensive, accurate, and accessible medication list that integrates data from multiple sources. Specifically, it should have clear distinction between active, withheld, discontinued, and new medications, user-friendly interface, flagged discrepancies for review, automated alerts for allergies, drug-drug interaction and polypharmacy. When effectively implemented, technology can reduce human error, save time, and improve the overall accuracy of MedRec. However, concerns remain regarding the issues of governance regulation, data privacy, poor scalability and cost-effectiveness of electronic documentation (15). Thus, striking a balance between technological integration and practical workflow considerations is essential to optimise the effectiveness of MedRec in current clinical settings.

MedRec is a team effort, with the involvement of different healthcare providers such as pharmacists, physicians, and nurses (1). Successful medication reconciliation relies on the collective action of all the providers. Effective communication and role definition are essential to effective MedRec implementation. Poor coordination or unclear roles can lead to lapses in the process. Specifying the roles of every profession in MedRec implementation can reduce role ambiguity, which often contributes to internal conflicts, stress, and resistance in coordinating among each other (11). Mutual responsibility ensues all professionals contribute towards patient safety. A good relationship among the healthcare providers is the foundation to create a climate of trust to ease communication, thus optimising team work and ensuring better patient outcomes eventually.

There were certain limitations within this focused analysis that must be acknowledged. Firstly, this study was unable to recruit HOs and specialists for the interview session, which may have influenced the comprehensiveness of the findings. Specialists, due to their expertise and decision-making roles, could have provided valuable insights into the clinical and administrative challenges of MedRec. Similarly, HOs, who often serve as the first point of contact in patient clerking, might have had unique perspectives on the practical difficulties and workflow constraints associated with the process. However, their unavailability during the study period, primarily due to time constraints and work schedules, restricted their participation. Future studies should consider strategies such as scheduling flexibility or alternative data collection methods (e.g., online interviews or surveys) to include these key stakeholders. Secondly, the study was exploratory in nature and was only conducted at a single site, limiting the generalisability of the findings to other healthcare settings. Practices, workflows, and challenges related to MedRec may vary across different hospitals, regions, and healthcare systems. A multicentre study would provide a more comprehensive understanding by capturing a broader range of experiences and institutional policies.

Despite these limitations, purposive sampling ensured recruitment of a targeted group of healthcare professionals, representing different roles within the MedRec process. This helped to capture a wide range of perspectives, enhancing the depth of the findings. However, future research should aim for a larger and more diverse group of respondents and include multiple study sites to strengthen the robustness and applicability of the findings.

Conclusion

The MedRec process is pivotal to ensure medication use optimisation and patient safety. The findings from this study suggested that healthcare providers generally had a mutual understanding about MedRec and agreed that MedRec is beneficial in improving health outcomes, reducing medication errors, and ensuring patient safety. Nevertheless, the healthcare providers might have different views on a feasible MedRec tool. Time restraints, suboptimal information gathering with patients and increased workload were the main barriers to conducting MedRec in real clinical practice. Addressing these barriers while increasing providers' self-efficacy might improve medication reconciliation and its outcomes.

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Conflict of interest

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