



VICTORIA UNIVERSITY
MELBOURNE AUSTRALIA

*Implementing Electronic Health Records in
Community Pharmacy Practice: Insights from
developed health systems*

This is the Published version of the following publication

Hareem, Amina, Stevens, Julie E, Park, Joon Soo, Stupans, Ieva, Gilmartin-Thomas, Julia and Wang, Kate (2025) Implementing Electronic Health Records in Community Pharmacy Practice: Insights from developed health systems. *Asia Pacific Journal of Health Management*, 20 (3). pp. 1-9. ISSN 1833-3818

The publisher's official version can be found at
<https://journal.achsm.org.au/index.php/achsm/article/view/4695>
Note that access to this version may require subscription.

Downloaded from VU Research Repository <https://vuir.vu.edu.au/49968/>

IMPLEMENTING ELECTRONIC HEALTH RECORDS IN COMMUNITY PHARMACY PRACTICE: INSIGHTS FROM DEVELOPED HEALTH SYSTEMS

Amina Hareem*¹, Julie E. Stevens ^{1,2,3}, Joon Soo Park ⁴, Ieva Stupans ¹, Julia Gilmartin-Thomas ^{5,6,7,8,9}, and Kate Wang ¹

1. Pharmacy, School of Health and Biomedical Sciences, RMIT University, Bundoora, Victoria, Australia
2. Adelaide Medical School, Faculty of Health & Medical Sciences, University of Adelaide, Adelaide, South Australia, Australia
3. Clinical & Health Sciences, University of South Australia, Adelaide, South Australia, Australia
4. University of Western Australia: Perth, Australia
5. School of Allied Health, Human Services & Sport, La Trobe University, Victoria, Australia
6. Department of Allied Health, Alfred Health, Victoria, Australia
7. School of Public Health and Preventive Medicine, Monash University, Victoria, Australia
8. Institute for Health and Sport, Victoria University, Australia
9. Department of Medicine, Western Health (University of Melbourne), Victoria, Australia

Correspondence: s3929854@student.rmit.edu.au

ABSTRACT

Community pharmacists play a critical role in medication management, patient education, and chronic disease support. Yet their ability to provide safe, coordinated, and efficient care is often hindered by limited access to essential clinical information such as medication histories, allergy records, laboratory results, and chronic condition details. Electronic Health Records (EHRs), comprehensive digital systems that enable information sharing across healthcare providers, offer a promising solution. This analysis explores how EHRs can empower community pharmacists to deliver more informed, integrated, and patient-centred care. It also identifies key barriers to pharmacist engagement, including restricted system access, fragmented digital infrastructure, limited interoperability, and insufficient training in digital health tools. To address these challenges, system-level reforms are needed such as investment in digital connectivity, policy changes to formally recognise pharmacists as core members of multidisciplinary care teams, and practical strategies for EHR integration into community pharmacy practice.

KEYWORDS

Community pharmacy, Electronic health records (EHR), Medication reconciliation, Digital health, Care transitions, Health information exchange (HIE)

INTRODUCTION

Community pharmacists are among the most accessible healthcare providers, with the potential to significantly influence patient health-related outcomes [1, 2]. However, their clinical impact is often limited by inadequate access to comprehensive digital health records. Evidence shows that when pharmacists have access to the same comprehensive health records as the rest of the healthcare team (i.e., nurses, medical practitioners), the quality of care improve [3, 4]. Studies consistently highlight that EHR integration in pharmacy systems leads to better medication safety, improved continuity of care, and increased efficiency in healthcare delivery [3, 5, 6].

This commentary critically examines the current state of electronic health record (EHR) use in community pharmacy practice, drawing on international experience and selected evidence to explore key barriers, enablers, and policy considerations. Its purpose is to stimulate reflection on how EHR integration can support the evolving clinical role of pharmacists and inform future directions for system-level reform. While not intended as a systematic review, this commentary is informed by a narrative synthesis of relevant empirical studies and policy literature to explore the practical, systemic, and professional factors influencing EHR implementation in community pharmacy.

While we focus on developed health systems, it is important to acknowledge the contrasting realities in lower-resource Southeast Asian countries. A systematic review identifies a growing role for community pharmacists in public health initiatives across countries such as Indonesia, the Philippines, Vietnam, and Cambodia [7]. These services include smoking cessation, health promotion, and screening for infectious diseases. However, pharmacist integration into national health systems remains limited, and formal documentation systems are often absent or inconsistent [7]. In Indonesia specifically, despite government initiatives that aim to expand the pharmacist's role in primary care, the adoption of EHR in community pharmacies is extremely limited [8]. This study describe multi-level barriers to EHR implementation, including policy and regulatory gaps (macro-level), weak information-sharing systems (meso-level), and limited pharmacist training in digital tools (micro-level) [8]. Together, these structural issues contribute to the digital divide between resource-constrained and high-income pharmacy systems.

COMMUNICATION BARRIERS AND HOW EHRS HELP

Traditional communication methods, such as phone calls, text messages, and faxes, can disrupt workflow, inundate the workplace with paper, hinder information sharing among healthcare professionals, and subsequently delay timely patient treatment [9]. Instead of a fully integrated care ecosystem, many community pharmacies remain digitally siloed. This isolation prevents timely communication between pharmacists, physicians, and hospitals hindering transitions of care and medication reconciliation efforts.

Current technology and informatics can be utilised to address such challenges. EHRs aim to streamline various components of the healthcare system to improve overall safety, efficiency, and effectiveness [10]. For community pharmacists, EHR integration enables more informed clinical decision-making through access to comprehensive medical histories. This includes selecting appropriate medications, adjusting dosages, recommending alternatives, and offering personalised counselling based on real-time data [5].

EHR access also strengthens interprofessional collaboration by enabling pharmacists and prescribers to coordinate care using real-time clinical data such as laboratory results, medication histories, and discharge summaries which helps reduce medication errors [3, 5]. Studies have demonstrated that when pharmacists gain access to medical records in community pharmacy settings, they are able to make timely clinical interventions, improve adherence to clinical guidelines, and enhance communication with prescribers [11]. Evidence also suggests that pharmacist participation in health information exchange platforms, supported by targeted training and system integration, further enhances the safety and effectiveness of medication management [12]. Collectively, these findings align with broader literature showing that shared access to patient data facilitates collaborative decision-making, reduces duplication of therapies, and improves

overall care coordination in both rural and urban contexts [3, 11, 12]. Importantly, it broadens pharmacists' roles beyond dispensing. With access to laboratory results, such as renal and liver function tests, pharmacists can evaluate therapy suitability, detect contraindications, and make clinical recommendations particularly for patients with chronic illnesses. These capabilities support the evolving role of community pharmacists as integral members of the healthcare team and contribute to safer, more effective medication management [3, 9].

MODELS OF COMMUNITY PHARMACIST ACCESS TO EHRs

Community pharmacists' access to EHRs varies considerably across countries, both in terms of system design and level of access. A useful way to compare these international models is by the degree of pharmacist access: two-way (read-write), read-only, or fragmented. A comparative summary of pharmacist EHR access models across Australia, the UK, and the US is presented in Appendix Table 1.

In Australia, the My Health Record (MyHR) system which is governed by the Australian Digital Health Agency and offers patients control over access to their health information provides community pharmacists with two-way access, allowing them not only to view but also to contribute information such as dispense records. Community pharmacists have been permitted to view and contribute to this national system [5]. Pharmacists can access clinical documents including pathology reports, immunisation histories, discharge summaries, and imaging results. This level of integration supports a broader clinical role in chronic disease management, medication reviews, and public health services [6]. However, the system's effectiveness depends on contributions from multiple healthcare providers and patient consent, which can affect data completeness [6]. However, these capabilities have not yet been consistently realised in practice due to limited engagement by providers, technical integration issues, and incomplete data factors [13, 14].

In the United Kingdom, the National Health Service (NHS) Summary Care Record (SCR) has provided community pharmacists with read-only access since 2015 [6]. Unlike Australia's broader model, the SCR draws primarily from general practice records and includes essential information such as prescribed medications and allergy histories. Though more limited in scope, the SCR has proven valuable in clinical, including urgent and emergency care, where its use has been associated with improved medication reconciliation and enhanced patient safety [15]. While the SCR offers clear benefits for emergency supply and medication reconciliation, its limited scope excluding lab results or clinical notes and lack of write access restrict pharmacists' ability to contribute to or act on broader clinical information [6]. These limitations, alongside integration and training barriers, have contributed to low uptake in routine pharmacy practice.

Similarly, community pharmacists with access to health information exchanges (HIEs) can support safer care transitions by reconciling hospital-initiated medication changes. In one United States-based study, integrating a health information exchange into a community pharmacy service enabled pharmacists to ensure that medication changes made during hospital stays were accurately followed when patients returned home reducing medication errors, and therapy gaps [16]. A 2023 evaluation of an HIE prototype reported moderate usability scores and identified several interface and integration barriers that disrupted pharmacy workflow [12]. In a 2022 mixed-methods study within the Community Pharmacy Enhanced Services Network, pharmacists acknowledged the potential of HIEs but noted that lack of seamless system integration, insufficient training, and workflow misalignment limited their routine use [17]. These findings suggest that while the value of HIEs in community pharmacy remains recognised, practical and contextual barriers continue to constrain widespread adoption.

These international examples highlight the value of EHR access for pharmacists, whether through fully interactive systems like MyHR or read-only records like the SCR. They also demonstrate that even partial access can enhance medication safety and support collaborative care. This is supported by both objective and subjective evidence where studies have shown that EHR access enables pharmacists to identify clinically significant medication discrepancies during transitions of care, while also improving workflow efficiency and confidence in clinical decision-making [18, 19]. As countries differ in EHR design and governance, these models offer important insights into how pharmacist access can be structured and

scaled. It is essential to recognise that the type and breadth of EHR data accessible to community pharmacists vary significantly across jurisdictions. In the United States, access remains fragmented while state-based tools such as Prescription Drug Monitoring Programs (PDMPs) and immunisation registries are widely used, there is no unified national EHR system providing pharmacists with comprehensive clinical information [17, 20]. By contrast, Australia's My Health Record offers two-way access to a wide range of clinical documents, while the UK's Summary Care Record provides more limited, read-only data such as current medications and allergy histories [6]. The effectiveness of EHR access depends not only on system availability but also on the scope, accuracy, and completeness of shared data particularly the inclusion of clinical notes, laboratory results, and discharge summaries. These contextual differences must be considered when evaluating the broader applicability and scalability of international EHR access models for pharmacy practice.

IMPLEMENTATION BARRIERS TO EHRs USE IN COMMUNITY PHARMACIES

Although not a formal implementation study, this commentary draws on key concepts from the Consolidated Framework for Implementation Research to inform its analysis [21]. Factors such as intervention complexity, organisational context, individual readiness, and external policy levers are considered in our discussion of barriers related to interoperability, workflow integration, reimbursement, and training.

Pharmacists often face restricted access to critical patient information. While pharmacists can utilise tools such as state-level Prescription Drug Monitoring Programs electronic databases used in the United States to monitor controlled substance prescriptions and identify potential misuse [20] and immunisation registries, these resources provide only a limited snapshot of a patient's health. Community pharmacists often lack access to essential data such as laboratory test results (important for monitoring drug safety), physician progress notes (which provide clinical context), and cross-pharmacy medication dispensing histories, which are crucial for assessing medication adherence and preventing medication duplication.

This information gap significantly limits pharmacists' ability to deliver optimised medication therapy management. For example, a study by Sethman et al. found that 100% of pharmacists would use a health information exchange (a secure electronic sharing of patient health information across different healthcare organisations to support coordinated care) if available, with 28.1% indicating they would use it for every patient [17]. Beyond therapy-related problems, limited access to health records also restricts pharmacists' capacity for early identification of adverse drug events, undermines contributions to pharmacovigilance activities, and hinders safe pharmacotherapeutic decision-making. Similarly, lack of access to medication dispensing histories is a known barrier to identifying therapy-related problems and delivering targeted interventions [22]. Improved data sharing across care settings supported by shared responsibility among all healthcare professionals is therefore essential.

In some countries, such as Australia, community pharmacists have access to national EHR systems, enabling them to monitor patient therapy [13]. However, this potential is often undermined by inconsistent use of the system and incomplete data entry across healthcare providers, including pharmacists themselves [14]. As a result, it remains difficult to obtain a comprehensive view of a patient's medical history, reducing the ability to assess treatment plans, avoid interactions, and support medication adherence [22].

Interoperability issues across healthcare settings including differences in clinical systems, digital infrastructure, and health IT platforms further exacerbate this problem. These limitations contribute to pharmacists' restricted access to patient records, thereby hindering seamless information exchange and coordinated care [23,24]. Many community pharmacy management systems are not fully integrated with the EHRs used by general practitioners, hospitals, or other healthcare facilities, limiting real time sharing of prescriptions, diagnosis and lab results [24]. Although systems like Australia's MyHR and the UK's SCR demonstrate that interoperability between pharmacies and broader healthcare systems is possible, such integration is not yet universal. Many community pharmacies remain digitally isolated, particularly where technical infrastructure, policy frameworks, or local system compatibility are lacking [24]. Many pharmacists report limited

functionality or incomplete data in EHR systems, stemming from inconsistent data entry, varying levels of engagement across provider groups, including pharmacy and persistent software limitations.

Non-updated or incomplete EHRs also pose serious risks to patient safety. A study conducted in Dutch community pharmacies revealed that interoperability issues led to missed drug therapy alerts due to incomplete electronic records. The study found that prescription drugs were missing from 14% of records, nonprescription drugs from 44%, comorbidities from 83%, and intolerances from 16% [25]. While these findings highlight the potential safety consequences of incomplete records, the Dutch context reflects a relatively mature but highly fragmented primary care EHR environment, where interoperability is influenced by decentralised data ownership and varied software vendors. Similar risks are likely to occur in other jurisdictions with fragmented systems unless consistent national data-sharing standards and sustainable funding models are established.

Many pharmacists face barriers related to reimbursement policies, time constraints, increased professional responsibilities, patient consent requirements, and liability concerns [13, 14]. Pharmacists also face personal and operational challenges. For example, some pharmacists express concern that EHR usage may disrupt dispensing workflows by introducing additional steps into daily operations [5]. Others feel underprepared to navigate these systems, citing a lack of confidence and formal training [6]. This under-preparedness can discourage the full integration of EHR usage into daily practice. Ownership structure may itself influence EHR implementation. In corporatised pharmacy settings, centralised IT infrastructure, access to technical support, and standardised workflows can significantly ease the rollout of digital systems. In contrast, independent pharmacy models often lack such infrastructure, which can impede adoption. A recent qualitative evaluation found that technology-enabled community pharmacies benefit from enhanced organisational support, suggesting that corporatised models may be better equipped to implement new ICT solutions effectively [26].

BENEFITS OF EHR ACCESS IN COMMUNITY PHARMACY PRACTICE

While barriers to EHR uptake in community pharmacy are well-documented, several enablers operate at system, policy, organisational, and individual levels.

In Australia, most community pharmacists surveyed (90%) believed that access to a shared EHR system, such as MyHR, would enhance continuity of care, and over 70% indicated it would improve both the safety and quality of the care they provide. These findings, while drawn from a cross-sectional survey and therefore subject to potential response bias and limited generalisability [5], reinforce that when systems are aligned with pharmacy dispensing workflows and embedded into everyday practice, they reduce duplication, enhance medication safety, and facilitate coordinated care. Such systems represent strong examples of intervention characteristics particularly compatibility and design quality that facilitate adoption.

Policy incentives and national mandates have been powerful drivers of adoption. In the United States, the HITECH Act accelerated uptake in primary care by offsetting initial costs and signalling a national priority, though its benefits for community pharmacies have been limited and uneven [27]. Similar government-led efforts in Australia and the UK have helped embed EHR use across primary and community care. Funding models, policy direction, and interoperability strongly influence pharmacy-level adoption and sustainability. However, the question of who pays remains largely unresolved. In publicly funded systems (UK, Australia), EHR investment for pharmacists competes with other health priorities, while in mixed models (United States), costs may fall to pharmacies posing challenges for smaller, independent operators. Without stable, long-term funding arrangements, even well-designed programs risk patchy uptake and inconsistent integration. Expanding financial incentive programs, such as those under HITECH, to explicitly include community pharmacists could significantly accelerate adoption and integration. Comparable mechanisms could be adapted in Asia-Pacific health systems, for example, by providing time-limited incentive payments tied to demonstrable EHR use in community pharmacies, or subsidising integration for smaller independent operators to avoid widening digital inequities.

At the organisational and individual levels, building pharmacists' digital capability is essential. Structured training programs that enhance health IT literacy, clinical decision-support skills, and confidence with EHR systems increase readiness for adoption. Corporate or group pharmacy settings, with centralised IT infrastructure and leadership engagement, may be better placed to implement such systems, while independent pharmacies may require targeted support to achieve similar outcomes.

The clinical value of EHR access is clear. In one study involving an independent pharmacy located in the rural area in the Midwest region of the United States, pharmacists reviewed 263 patient profiles, of which 164 (62.4%) were deemed suitable for EHR-based clinical assessment [3]. This access to the EHR resulted in many clinical interventions, particularly in managing chronic diseases such as cardiovascular and endocrine disorders, including identifying inappropriate medication regimens, adjusting dosages based on renal function, detecting therapeutic duplications, and recommending changes to improve safety and effectiveness [3]. This expanded view significantly improved medication therapy management and patient adherence.

Access to community pharmacy dispensing records can be critical during care transitions. When hospitals can view this data, pharmacists' entries become actionable, helping to identify and correct medication errors at admission and discharge [28]. A systematic review and meta-analysis found that pharmacists conducting medication reconciliation in the community identify at least one discrepancy in 19-23% of patients reviewed after discharge [18]. Common issues included omitted medications or unexplained changes. In a separate independent community pharmacy study, pharmacists performed medication reconciliation for 60 discharged patients and detected an average of 3.85 discrepancies per patient, encompassing dosage errors, duplications, and omissions [19]. These consistent findings highlight how pharmacist-led reconciliation supports continuity of care and significantly improves patient safety in the hospital-to-home transition.

With better interoperability, supportive regulation, and targeted training, pharmacists are moving beyond dispensing to active clinical decision-making [12]. Pharmacists can interpret lab results, such as renal function, to recommend tailored medication dosing and identify potential contraindications. In doing so, pharmacists are repositioned from dispensers to active clinical collaborators supporting chronic disease management, immunisation efforts, and overall patient safety.

CONCLUSION

Community pharmacists' integration into EHR systems is essential for safer, more coordinated, and patient-centred care. To strengthen adoption, targeted policy and practice changes are needed. Expanding financial incentive programs modelled on initiatives such as the US HITECH Act would help both independent and corporate pharmacies invest in the necessary infrastructure. Establishing and enforcing national interoperability standards would ensure pharmacy systems can seamlessly exchange clinical data with hospitals, general practices, and other care providers. Equally important is embedding structured digital health training and clinical decision-support modules into pre-registration curricula and ongoing professional development, building pharmacists' confidence and capability in using EHRs. Implemented together, these measures would position pharmacists as active clinical collaborators, elevate the quality use of medicines, and improve therapeutic outcomes across health systems.

DECLARATION OF COMPETING INTEREST

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

FUNDING

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

ETHICS

Ethics approval was not required for this commentary.

AUTHOR CONTRIBUTIONS

AH: Data curation; Investigation; Project administration; Resources; Validation; Writing original draft; Writing – review & editing.

JS: Conceptualisation; Investigation; Project administration; Supervision; Resources; Validation; Writing – review & editing.

JSP: Conceptualisation; Investigation; Project administration; Supervision; Resources; Validation; Writing – review & editing.

IS: Conceptualisation; Investigation; Project administration; Supervision; Resources; Validation; Writing – review & editing.

JGT: Writing – review & editing; Visualisation.

KW: Conceptualisation; Data curation; Investigation; Project administration; Supervision; Resources; Validation; Writing – review & editing.

References:

1. Rajiah K, Sivarasa S, Maharajan MK. Impact of pharmacists' interventions and patients' decision on health outcomes in terms of medication adherence and quality use of medicines among patients attending community pharmacies: a systematic review. *International journal of environmental research and public health*. 2021;18(9):4392.
2. Agomo CO. The role of community pharmacists in public health: a scoping review of the literature. *Journal of Pharmaceutical Health Services Research*. 2012;3(1):25-33.
3. Krauss ZJ, Abraham M, Coby J. Clinical pharmacy services enhanced by electronic health record (EHR) access: an innovation narrative. *Pharmacy*. 2022;10(6):170.
4. Nelson SD, Poikonen J, Reese T, El Haila D, Weir C. The pharmacist and the EHR. *Journal of the American Medical Informatics Association*. 2017;24(1):193-7.
5. Kosari S, Yee KC, Mulhall S, Thomas J, Jackson SL, Peterson GM, et al. Pharmacists' perspectives on the use of My Health Record. *Pharmacy*. 2020;8(4):190.
6. Pires C. Medical records in community pharmacies: the cases of UK and Australia. *Foundations*. 2022;2(2):399-408.
7. Hermansyah A, Sainsbury E, Krass I. Community pharmacy and emerging public health initiatives in developing Southeast Asian countries: a systematic review. *Health & Social Care in the Community*. 2016;24(5):e11-e22.
8. Hermansyah A, Wulandari L, Kristina SA, Meilianti S. Primary health care policy and vision for community pharmacy and pharmacists in Indonesia. *Pharmacy Practice (Granada)*. 2020;18(3).
9. Keller ME, Kelling SE, Cornelius DC, Oni HA, Bright DR. Enhancing practice efficiency and patient care by sharing electronic health records. *Perspectives in health information management*. 2015;12(Fall):1b.
10. Blumenthal D, Tavenner M. The "meaningful use" regulation for electronic health records. *New England Journal of Medicine*. 2010;363(6):501-4.
11. Snyder JM, Ahmed-Sarwar N, Gardiner C, Burke ES. Community pharmacist collaboration with a primary care clinic to improve diabetes care. *Journal of the American Pharmacists Association*. 2020;60(3):S84-S90.
12. Hettinger KN, Adeoye-Olatunde OA, Russ-Jara AL, Riley EG, Kepley KL, Snyder ME. Preparing community pharmacy teams for health information exchange (HIE). *Journal of the American Pharmacists Association*. 2024;64(2):429-36. e2.
13. Mooranian A, Emmerton L, Hattingh L. The introduction of the national e-health record into Australian community pharmacy practice: pharmacists' perceptions. *International Journal of Pharmacy Practice*. 2013;21(6):405-12.
14. Hareem A, Stupans I, Park JS, Stevens JE, Wang K. Electronic health records and e-prescribing in Australia: An exploration of technological utilisation in Australian community pharmacies. *International Journal of Medical Informatics*. 2024;187:105472.
15. Jones E. Summary Care Records in urgent and emergency care in England. *Acute Med*. 2013;12:178-80.
16. Fanizza FA, Ruisinger JF, Prohaska ES, Melton BL. Integrating a health information exchange into a community pharmacy transitions of care service. *Journal of the American Pharmacists Association*. 2018;58(4):442-9.
17. Sethman NC, Hettinger KN, Snyder ME. Planning for health information exchange: Perspectives of community pharmacists in the Community Pharmacy Enhanced Services Network of Indiana. *Journal of the American Pharmacists Association*. 2022;62(5):1615-22.

18. McNab D, Bowie P, Ross A, MacWalter G, Ryan M, Morrison J. Systematic review and meta-analysis of the effectiveness of pharmacist-led medication reconciliation in the community after hospital discharge. *BMJ quality & safety*. 2018;27(4):308-20.
19. Freund JE, Martin BA, Kieser MA, Williams SM, Sutter SL. Transitions in care: medication reconciliation in the community pharmacy setting after discharge. *Innovations in pharmacy*. 2013;4(2).
20. CDC. Prescription Drug Monitoring Programs (PDMPs). 2024 [Available from: <https://www.cdc.gov/overdose-prevention/hcp/clinical-guidance/prescription-drug-monitoring-programs.html>].
21. Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC. Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implementation science*. 2009;4(1):50.
22. Roberts MF, Reeves K, Divine H. Community pharmacists' lack of access to health records and its impact on targeted MTM interventions. *Journal of the American Pharmacists Association*. 2019;59(4):S81-S4.
23. Adams KT, Howe JL, Fong A, Puthumana JS, Kellogg KM, Gaunt M, et al. An analysis of patient safety incident reports associated with electronic health record interoperability. *Applied clinical informatics*. 2017;8(02):593-602.
24. Ait Gacem S, Huri HZ, Wahab IA, Abduelkarem AR. Investigating digital determinants shaping pharmacists' preparedness for interoperability and health informatics practice evolution: a systematic review. *International Journal of Clinical Pharmacy*. 2025:1-11.
25. Floor-Schreudering A, Heringa M, Buurma H, Bouvy ML, De Smet PA. Missed drug therapy alerts as a consequence of incomplete electronic patient records in Dutch community pharmacies. *Annals of Pharmacotherapy*. 2013;47(10):1272-9.
26. Ogundipe A, Sim TF, Emmerton L. Technology-enabled community pharmacies: qualitative evaluation of a framework for assessing technology solutions. *International Journal of Pharmacy Practice*. 2025;33(3):279-91.
27. Kaiser F, Seitz D. Assessing the outcomes of the HITECH Act—A service-dominant logic perspective. *Crossing borders—Digital transformation and the US health care system*. 2020;255.
28. Tompson AJ, Peterson GM, Jackson SL, Hughes JD, Raymond K. Utilizing community pharmacy dispensing records to disclose errors in hospital admission drug charts. *International Journal of Clinical Pharmacology and Therapeutics*. 2012;50(9):639.

APPENDIX

TABLE 1 COMPARATIVE SUMMARY OF COMMUNITY PHARMACIST ACCESS TO ELECTRONIC HEALTH RECORDS IN AUSTRALIA, THE UNITED KINGDOM, AND THE UNITED STATES.

Country	System	Access Level	Scope of Access
Australia	My Health Record (MyHR)	Two-way (Read & Write)	Pathology, imaging, immunisations, discharge summaries, specialist letters
UK	Summary Care Record (SCR)	Read-only	Prescriptions, allergies, limited GP information
USA	Health Information Exchange (HIE), PDMPs	Fragmented, region-specific	Dependent on local systems; often prescriptions and immunisations only