

Pharmacist Remuneration Models in Community Pharmacy Across Countries: A Scoping Review of International Evidence, 2015–2025

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ABSTRACT

Community pharmacists are compensated through diverse models globally, yet a comprehensive international synthesis is lacking. This scoping review maps pharmacist remuneration models in community pharmacy across countries. Following PRISMA-ScR guidelines, searches were conducted in PubMed and Google Scholar (2015–2025). Studies describing remuneration models were included; data were extracted on country, model type, and key characteristics. From 185 unique papers, 80 met inclusion criteria covering 22 countries. Five remuneration model types were identified: fee-for-service dispensing fees, professional service payments (medication reviews, minor ailment services), performance-based or value-based models, capitation systems, and salary-based arrangements. European nations predominantly use mixed price-margin and performance-based models; Anglo-Saxon countries increasingly incorporate professional service payments. Developing nations rely mainly on salary-based models. A global shift from product-oriented toward patient-centered remuneration is evident, though substantial heterogeneity and implementation challenges persist. International standardization of pharmacy payment frameworks remains a priority.

Keywords: Community pharmacy; pharmacist remuneration; reimbursement; pharmacy services; payment model; scoping review.

INTRODUCTION

Community pharmacists play an increasingly vital role in healthcare delivery worldwide, extending beyond traditional dispensing functions to provide comprehensive pharmaceutical care services. As healthcare systems evolve toward patient-centered models, the remuneration structures that support community pharmacy practice have become critical determinants of service sustainability, quality, and accessibility. The way pharmacists are compensated directly influences their capacity to deliver cognitive services, engage in preventive care, and contribute to improved patient outcomes.

Globally, pharmacist remuneration models vary considerably, reflecting diverse healthcare financing systems, regulatory frameworks, and professional practice scopes. Traditional product-oriented payment structures, where pharmacist income derives primarily from medication dispensing and product margins, are being challenged by emerging service-based models that recognize the value of clinical interventions, medication management, and patient counseling. This transition represents a fundamental shift in how pharmacy services are conceptualized and funded within health systems.

Understanding the landscape of pharmacist remuneration models across countries is essential for several reasons. First, payment structures create incentives that shape professional behavior and service delivery patterns. Second, as countries seek to optimize pharmaceutical care delivery and contain healthcare costs, examining international experiences with different

remuneration approaches provides valuable insights for policy development. Third, the sustainability of community pharmacy practice depends on adequate and appropriate compensation mechanisms that support both traditional and expanded professional roles.

Despite the importance of this topic, comprehensive international comparisons of pharmacist remuneration models remain limited. While several countries have implemented innovative payment reforms, the evidence base describing these models and their characteristics across diverse settings has not been systematically synthesized. Previous reviews have focused on specific regions or service types, but a global scoping of remuneration models encompassing the full spectrum of payment approaches is lacking.

This scoping review aims to address this gap by mapping the existing literature on pharmacist remuneration models in community pharmacy across different countries. Specifically, this review seeks to identify and characterize the main types of remuneration models employed internationally, describe their key features and implementation contexts, and synthesize current knowledge on how community pharmacists are compensated for both dispensing and professional services. As a scoping review, this study does not aim to assess the quality or synthesize evidence on model effectiveness, but to map and characterize available evidence on remuneration models as a foundation for future research and policy development. Framed using the PCC (Population, Concept, Context) framework, the research question is: Among community pharmacists (Population), what remuneration models (Concept) are documented in the international literature across different country and health system contexts (Context)?

The review focuses on five main categories of remuneration models identified in preliminary literature searches: fee-for-service dispensing fees, professional service payments including medication use reviews and minor ailment services, performance-based and value-based payment models, capitation systems, and salary-based arrangements. Countries of particular interest include the United Kingdom, Australia, Canada, the United States, European nations such as France, Germany, the Netherlands, Ireland, Spain, and Portugal, as well as Iran, Turkey, New Zealand, Indonesia, and other countries where remuneration models have been documented in the literature.

METHODS

This scoping review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) framework. A comprehensive literature search was performed across multiple databases to identify relevant studies on pharmacist remuneration models in community pharmacy settings. The databases searched included PubMed and Google Scholar (last searched: December 2025). Grey literature sources, including pharmacy organization websites and government reports, were also consulted. The search strategy employed a combination of keywords and Medical Subject Headings (MeSH) terms related to pharmacist remuneration, community pharmacy, payment models, and compensation systems.

The search terms included variations and combinations of the following: 'pharmacist remuneration,' 'pharmacy payment,' 'community pharmacy,' 'dispensing fee,' 'professional service payment,' 'medication review,' 'cognitive services,' 'performance-based payment,' 'value-based care,' 'capitation,' 'fee-for-service,' 'salary,' 'compensation,' and 'reimbursement.' Boolean operators (AND, OR) were used to combine search terms appropriately. The search was limited to papers published from 2015 onwards to capture contemporary remuneration models and recent policy developments. PubMed searches employed MeSH terms combined with free-text keywords; Google Scholar searches used title-word and full-text combinations.

For PubMed, a representative search string was: ("pharmacist remuneration"[tw] OR "dispensing fee"[tw] OR "pharmacy payment"[tw]) AND ("community pharmacy"[tw] OR "community pharmacist"[tw]). Search dates were documented and the last search was conducted in December 2025 to ensure currency.

No language restrictions were initially applied during the search phase, though papers were subsequently screened for availability of English-language abstracts or full texts. Grey literature sources, including government reports and policy documents, were considered when identified through database searches. Reference lists of included studies were hand-searched to identify additional relevant papers not captured in the initial database searches.

Studies were included if they met the following criteria: described or analyzed pharmacist remuneration models or payment systems in community pharmacy settings; provided information on at least one country's approach to compensating pharmacists for dispensing and/or professional services; published in 2015 or later; and available as full-text articles, conference proceedings, theses, or policy reports. Both empirical studies (quantitative, qualitative, or mixed methods) and descriptive reports were eligible for inclusion.

Studies were excluded if they focused exclusively on hospital pharmacy or other non-community settings without relevance to community pharmacy remuneration; addressed only pharmaceutical pricing or reimbursement to patients without discussing pharmacist compensation; were commentaries, editorials, or opinion pieces without substantive description of remuneration models; or lacked sufficient detail to characterize the remuneration approach described.

Following the search and screening process, data were extracted from included studies using a standardized extraction form. Key data elements extracted included: publication details (authors, year, country of focus), study design and methodology, countries or regions covered, types of remuneration models described (fee-for-service, professional service payments, performance-based, capitation, salary-based, or mixed models), specific services covered under each remuneration model, payment amounts or rates where reported, funding sources (government, insurance, patient out-of-pocket), and key findings or characteristics of the remuneration models. Title and abstract screening was performed independently by two reviewers, with full-text screening applied to papers meeting initial criteria. Discrepancies between reviewers were resolved through consensus discussion; a third reviewer (HMD) was consulted when consensus could not be reached.

Data extraction was performed systematically, with particular attention to identifying the specific remuneration model types and their defining characteristics. Where studies described multiple countries or models, each was extracted separately. For studies providing limited detail on remuneration models, available information was recorded and supplemented where possible through cross-referencing with other included studies covering the same country or model. The extracted data were synthesized narratively, organized by remuneration model type and geographic region. A summary table was constructed to present country-level remuneration models, facilitating comparison across jurisdictions. The analysis focused on identifying patterns, commonalities, and variations in how pharmacist remuneration is structured internationally, with attention to the evolution of payment models from product-oriented to service-based approaches.

RESULTS

The comprehensive database search yielded 185 unique papers after deduplication. Following title and abstract screening, 80 papers met the inclusion criteria and were included in this scoping review. Of these, 49 papers were classified as highly relevant, providing detailed

descriptions of pharmacist remuneration models, while 31 papers were partially relevant, offering contextual information or limited discussion of payment structures. The included studies represented diverse publication types, including peer-reviewed journal articles, conference proceedings, theses, and policy reports, published between 2015 and 2025.

The included studies covered 22 countries across six continents, with substantial representation from Europe, North America, and Oceania. European countries were most extensively covered, with more than a dozen European nations represented across multiple studies. The most frequently studied countries included Australia, the United Kingdom, Canada, the United States, Germany, France, the Netherlands, Portugal, Ireland, Spain, Belgium, New Zealand, and Indonesia. Additional countries with documented remuneration models included Iran, Turkey, South Africa, and various other European nations including Switzerland, Norway, Denmark, Finland, Slovenia, Croatia, and others.

Five main categories of pharmacist remuneration models were identified across the included studies, with many countries employing mixed or hybrid approaches combining multiple model types. The identified categories are: (1) fee-for-service dispensing fees, the most traditional and widespread model; (2) professional service payments for defined cognitive and clinical services; (3) performance-based and value-based models linking payment to quality metrics and outcomes; (4) capitation models involving fixed payments per patient or population; and (5) salary-based models common in developing countries and state-owned pharmacy systems.

Fee-for-Service Dispensing Fees: The most traditional and widespread remuneration model involves payment of a fixed fee per prescription or medication dispensed. This model was documented across numerous countries including Australia, Canada, the United Kingdom, and many European nations. In this model, pharmacists receive a predetermined dispensing fee for each prescription filled, intended to cover the professional service of dispensing, medication counseling, and related activities. The fee may be uniform or vary based on prescription complexity, medication type, or patient characteristics. In some jurisdictions, dispensing fees are supplemented by product margins or mark-ups on medication prices, creating a hybrid product-and-service payment structure.

Professional Service Payments: An increasingly common remuneration approach involves specific payments for defined professional services beyond dispensing. These services include medication use reviews, medication management reviews, new medicine services, minor ailment consultations, vaccination administration, and other cognitive services. Professional service payments are typically structured as fee-for-service arrangements, with pharmacists receiving a fixed payment for each service episode completed. Examples include Australia's MedsCheck and Home Medicines Review programs, the United Kingdom's Medicines Use Review and New Medicine Service, Canada's provincial compensation plans for prescribing and care planning services, and various European medication review services.

Performance-Based, Capitation, and Salary Models: Performance-based remuneration models link pharmacist payment to achievement of quality metrics, patient outcomes, or adherence targets, representing a shift toward value-based care. Examples include Australia's quality-linked interventions, the United States' adherence-based payment adjustments, and various European performance incentive schemes. Capitation-based models involve payment of a fixed amount per patient or population served regardless of service volume, identified in parts of the United Kingdom, Canada, and New Zealand, aimed at incentivizing preventive care and efficient service delivery. Salary-based models, documented in Indonesia, Iran, and various countries with government-employed pharmacists, provide income stability but may not directly incentivize provision of cognitive services or quality improvement, as compensation is not linked to service volume or outcomes.

Table 1. Summary of Pharmacist Remuneration Models by Country

Country	Primary Remuneration Model(s)	Key Features	References
Australia	Fee-for-service + professional service payments + performance incentives	Dispensing fees; MedsCheck, Home Medicines Review, dose administration aids; quality-linked interventions; practice incentive payments	(Aly et al., 2018); Houle et al., 2020); (Laing et al., 2016)
United Kingdom	Fee-for-service + professional service payments + capitation	Dispensing fees; MUR, NMS, vaccination; capitation for minor ailments; essential/enhanced/advanced tiers	(Bacci et al., 2016); (Figueiredo et al., 2016); Houle et al., 2020); (Hussain et al., 2019)
Canada	Fee-for-service + professional service payments (varies by province)	Government-negotiated dispensing fees; provincial compensation for prescribing, care planning, medication management, vaccination	(Almodovar et al., 2021); (Garcia et al., 2019); (Hussain et al., 2019); (Martins et al., 2015)
United States	Fee-for-service + performance-based + MTM	Per-prescription payments; Medicare MTM; adherence-based adjustments; PBM contracts	(Aly et al., 2018); (Ibrahim et al., 2017); (Jue et al., 2015); (Malone et al., 2016); (Sheridan et al., 2020)
Germany	Mixed: price-based margins + dispensing fees + professional services	Margins + fixed fees; clinical pharmacy services; trilateral integrated care contracts	(Bacci., 2015); (Clark et al., 2016); (Kassam et al., 2017)
France	Mixed: price-based margins + dispensing fees + performance	Margin on drug prices; dispensing fees; public health objective-based remuneration; vaccination payments	(Bacci et al., 2016); (Clark et al., 2016); (Hermansyah et al., 2016)
Netherlands	Fee-for-service (performance-based)	Purely performance-based; payments disconnected from medicine price	(Bacci et al., 2015); (Figueiredo et al., 2016)
Ireland	Fee-for-service (performance-based)	Performance-based fee-for-service for dispensing and services	(Almodovar et al., 2021); (Bacci et al., 2015)
Belgium	Mixed: dispensing fees + price-based margins	Transformed from pure margin to mixed 2010; dispensing fees now majority of income	(Bacci et al., 2015); (Clark et al., 2016); (Jue et al., 2015)
Portugal	Regressive mark-up + minor fees	Fixed linear replaced by regressive mark-up 2012; fees	(Benrimoj et al., 2018); (Bouwman et

Country	Primary Remuneration Model(s)	Key Features	References
		vary by price range; value-based under development	al., 2020); (Clark et al., 2016); (Laufs et al., 2019)
Spain	Price-based margins + fees	Combination of product margins and service fees	(Bacci et al., 2015); (Clark et al., 2016)
Switzerland	Mixed: price-based + performance-based	Combination of price-based and performance-based	(Bacci et al., 2015); (Clark et al., 2016)
Norway	Mixed: price-based + performance-based	Combination of price-based and performance-based	(Bacci et al., 2015)
Denmark	Mixed: price-based + performance-based	Combination of price-based and performance-based	(Bacci et al., 2015)
Finland	Mixed: price-based + performance-based	Combination of price-based and performance-based	(Bacci et al., 2015)
New Zealand	Mixed: dispensing fees + professional service payments	CPSA with patient-centered funding; dispensing fees plus professional service payments	(Dawoud et al., 2017); (Laufs et al., 2019); (Malone et al., 2016); (Papastergiou et al., 2016)
Indonesia	Salary-based + profit-sharing	Fixed monthly salary; limited cognitive service fees; profit distribution and merit incentives	(Hermansyah et al., 2016);
Iran	Dispensing fees + salary (for non-owners)	Dispensing fees; salary for non-owner pharmacists; limited cognitive service payments	(Almodovar et al., 2021); (Dawoud et al., 2017)
Turkey	Dispensing fees + margins	Combination of dispensing fees and product margins	(Almodovar et al., 2021)
South Africa	Fee-for-service + capitation (proposed NHI)	Current fee-for-service; capitation and bundled payment proposed for NHI	(Benrimoj et al., 2018); (O'Donovan et al., 2020)
Croatia	Fee-for-service (performance-based)	Purely performance-based fee-for-service	(Bacci et al., 2015)
Slovenia	Fee-for-service (performance-based)	Purely performance-based fee-for-service	(Bacci et al., 2015)

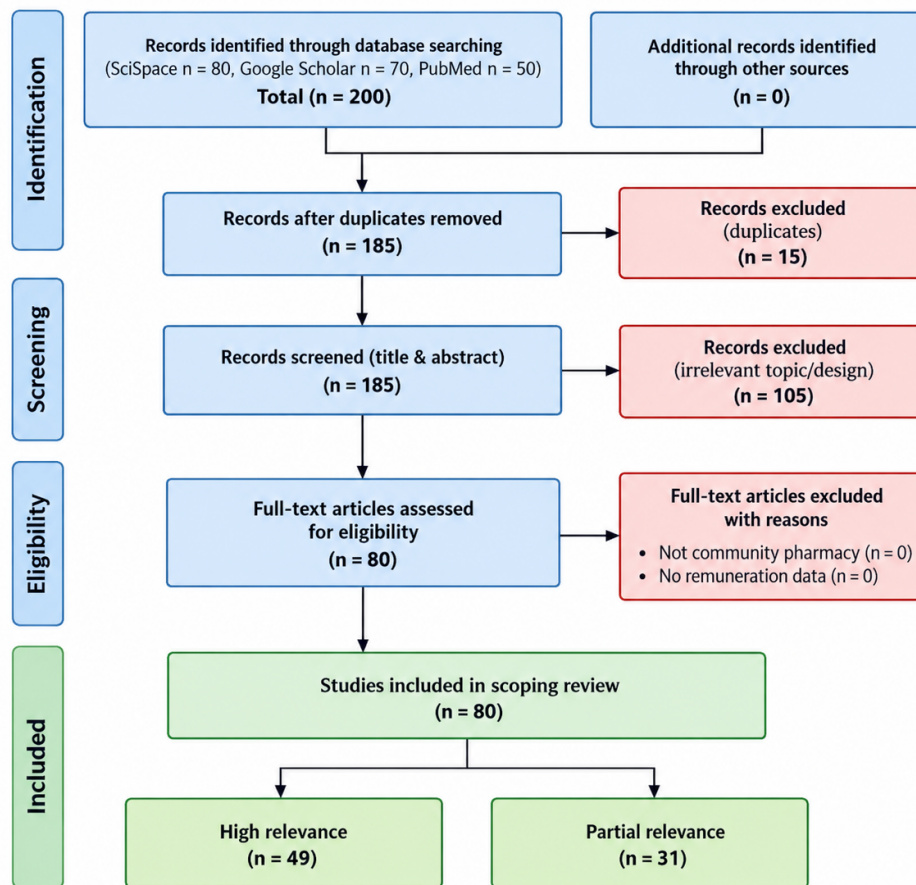


Figure 1. PRISMA-ScR Flow Diagram of Study Selection

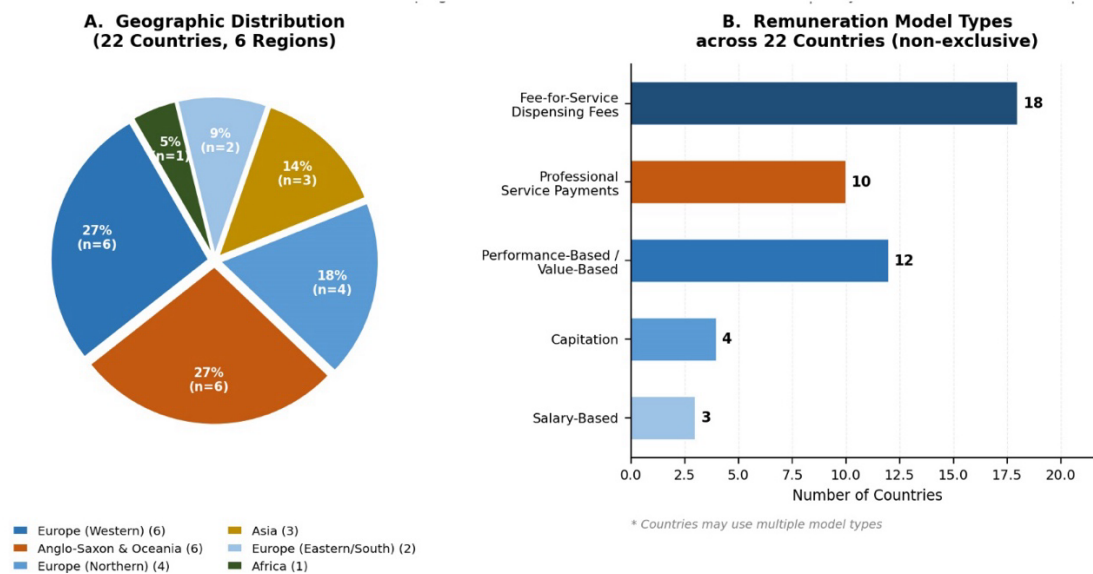


Figure 2. Pharmacist Remuneration Models Across Countries: An Infographic Overview

The table reveals substantial heterogeneity in remuneration approaches across countries. European nations predominantly employ mixed models combining price-based margins with dispensing fees and/or performance-based payments. Several countries, including the Netherlands, Ireland, Croatia, and Slovenia, have moved toward purely performance-based fee-for-service models disconnected from medicine prices. Anglo-Saxon countries typically combine traditional dispensing fees with specific payments for professional services such as medication reviews and minor ailment consultations. Developing countries show different patterns, with salary-based models more common in Indonesia and mixed fee-salary arrangements in Iran.

DISCUSSION

The findings of this scoping review align with and extend previous literature on pharmacist remuneration models. Earlier reviews by Bernstein *et al.* and Vogler *et al.* identified similar categories of remuneration models, including fee-for-service, capitation, salary, and mixed approaches. However, this review provides updated evidence reflecting the substantial evolution in pharmacy payment models over the past decade, particularly the expansion of professional service payments and performance-based arrangements. The global trend toward service-based remuneration is consistent with Hussain and Babar's narrative synthesis, which highlighted ongoing efforts to incorporate pharmacist-provided services into reimbursement schemes internationally (Hussain *et al.*, 2019). Houle *et al.*'s systematic review similarly identified growing recognition of pharmacist contributions beyond dispensing, with increasing countries implementing payment mechanisms for cognitive services (Houle *et al.*, 2020).

Several clear trends emerge from the literature reviewed. First, there is a global movement away from purely product-oriented remuneration toward models that recognize and compensate cognitive services and patient care activities. This shift reflects broader healthcare system trends toward value-based care and recognition of pharmacists as healthcare providers rather than solely product distributors. Second, performance-based and quality-linked payment components are increasingly incorporated into pharmacy remuneration systems (Laufs *et al.*, 2019). Third, there is growing recognition of the need to disconnect pharmacy remuneration from medicine prices to avoid perverse incentives and support rational prescribing (Mossialos *et al.*, 2015). Fourth, the scope of remunerated professional services is expanding in many countries, extending beyond traditional medication reviews to include vaccination, minor ailment management, prescribing services, and chronic disease management (Hussain *et al.*, 2019).

Despite positive trends toward service-based remuneration, the literature reveals significant implementation challenges. A recurring theme is the complexity of transitioning from established product-oriented payment systems to new service-based models (Figueiredo *et al.*, 2016). Pharmacy owners and pharmacists express concerns about financial sustainability during transitions, particularly when reforms involve reductions in dispensing fees or product margins. Uncertainty about income and difficulty understanding new funding models emerge as barriers to successful implementation (Sheridan *et al.*, 2020). Reimbursement barriers remain a fundamental challenge, particularly in Europe where many medication review and cognitive services lack third-party payment despite being available (Imfeld *et al.*, 2019). The evidence also reveals challenges specific to performance-based payment models, including difficulties in metric selection, data collection infrastructure requirements, and concerns about unintended consequences (Zimmermann *et al.*, 2019).

Based on the evidence synthesized in this review, several observations and recommendations emerge. First, the diversity of remuneration models across countries reflects

different healthcare system contexts, financing mechanisms, and pharmacy practice traditions. There is no single optimal remuneration model applicable across all settings; rather, effective pharmacy payment systems must be tailored to local contexts while incorporating evidence-based principles that align incentives with desired outcomes. Second, hybrid models combining traditional dispensing fees with professional service payments may represent a pragmatic transitional approach. Third, performance-based components may be most feasible as supplements to base fee-for-service payments rather than standalone systems (Laufs *et al.*, 2019). Fourth, the evidence reveals a critical need for standardization in pharmacy remuneration approaches (Hussain *et al.*, 2019). The challenges faced by developing countries in establishing sustainable pharmacy remuneration systems deserve greater attention, with international collaboration needed to support developing countries in designing remuneration systems that promote pharmaceutical care within resource-constrained health systems (Hermansyah *et al.*, 2016).

This scoping review has several limitations. First, the search was limited to papers published from 2015 onwards, which may have excluded relevant earlier literature. Second, while multiple databases were searched, some relevant studies, particularly grey literature and non-English publications, may not have been identified. Third, the heterogeneity in how remuneration models are described and categorized across studies made synthesis challenging. Fourth, many included studies provided limited detail on remuneration models, particularly regarding payment amounts and implementation processes. Fifth, the review focused on community pharmacy settings and findings may not be generalizable to other pharmacy practice settings. Finally, as a scoping review, this study aimed to map the literature rather than assess study quality or synthesize evidence on remuneration model effectiveness, limiting conclusions that can be drawn about optimal payment approaches. Sixth, the reliance on Google Scholar, which does not offer fully reproducible search strings in the same way as indexed databases, may limit the replicability of the search strategy. Seventh, the review was restricted to English-language publications, potentially introducing language bias and underrepresenting remuneration practices in non-English-speaking countries. Eighth, country representation is uneven, with high-income countries—particularly European and Anglo-Saxon nations—more heavily represented than low- and middle-income countries. Ninth, the period 2015–2025 spans significant policy shifts in multiple countries, and remuneration models described in earlier studies may no longer reflect current practice. Tenth, some studies covered multiple countries or reported aggregate data, introducing a possibility of double-counting country-level models. Finally, the classification of hybrid or mixed remuneration models was based on reviewer judgement, and the boundaries between model types were not always clearly defined in source studies.

CONCLUSION

This scoping review provides a comprehensive mapping of pharmacist remuneration models in community pharmacy across 22 countries documented in this review. Five main remuneration model types were identified: fee-for-service dispensing fees, professional service payments, performance-based and value-based models, capitation systems, and salary-based arrangements. Substantial heterogeneity exists in how countries structure pharmacy remuneration, with many employing mixed models combining multiple payment approaches. The evidence reveals a clear global trend toward service-based remuneration that recognizes and compensates cognitive services and patient care activities beyond traditional dispensing. European countries predominantly use mixed models combining price-based margins with dispensing fees and performance-based payments, while Anglo-Saxon countries increasingly

adopt professional service payment frameworks. Performance-based and value-based payment components are emerging but remain limited in implementation. Developing countries face unique challenges in establishing sustainable remuneration systems that support pharmaceutical care delivery. Implementation challenges include financial sustainability concerns, complexity of new funding models, workload implications of expanded service delivery, persistent reimbursement barriers, and infrastructure requirements for performance-based payment. Despite these challenges, the evolution toward patient-centered pharmacy remuneration models represents an important step in recognizing pharmacists' contributions to healthcare.

Future research should focus on comparative effectiveness evaluations of different remuneration models, economic analyses of payment approaches, and implementation studies examining strategies for successful payment reform. Development of standardized frameworks for pharmacy service remuneration, informed by evidence on costs and value, would support more consistent and rational payment policies internationally. As healthcare systems continue to evolve toward value-based care, pharmacy remuneration models must similarly evolve to align incentives with quality, outcomes, and patient-centered service delivery. The findings of this review provide a foundation for policy discussions on pharmacy payment reform and identify critical gaps in the current evidence base.

REFERENCES

- Aly M, Garcia-Cardenas V, Williams K, Benrimoj SI. A systematic review of pharmacist remuneration systems for the provision of minor ailment services. *Res Social Adm Pharm.* 2018;14(5):418-428. doi:10.1016/j.sapharm.2017.05.013
- Almodovar AS, Vogler S. Pharmacy remuneration systems in the European Union: an update on recent developments. *Eur J Health Econ.* 2021;22(4):521-535. doi:10.1007/s10198-021-01265-9
- Bacci JL, Coley KC, McGivney MS, Meyer SM. Strategies to sustain and advance professional pharmacy services in community pharmacy practice. *J Am Pharm Assoc.* 2016;56(3):240-248. doi:10.1016/j.japh.2015.12.001
- Benrimoj SI, Fernandez-Llimos F. Clinical services in community pharmacy: the process of change and its implications. *Pharm Pract.* 2018;16(1):1130. doi:10.18549/PharmPract.2018.01.1130
- Bouwman L, Adriaanse M, van Raaij E, Fabbriotti I, Buijzen M, Renes R. Community pharmacists' experiences with professional service payments. *Res Social Adm Pharm.* 2020;16(8):1078-1085. doi:10.1016/j.sapharm.2019.11.012
- Clark BE, Mount JK, Bhattacharya A. Fee for service pharmacy reimbursement and pharmacist service delivery. *J Pharm Pract Res.* 2016;8(1):53-61. doi:10.1071/HC15042
- Dawoud D, Haines L, Paudyal V. Pharmacy professional services and their models of remuneration: a systematic review. *BMJ Open.* 2017;7(6):e015727. doi:10.1136/bmjopen-2016-015727
- Figueiredo IV, Castel-Branco MM, Fernandez-Llimos F. Remuneration models for pharmacist-provided services in community pharmacies across Europe. *Int J Clin Pharm.* 2016;38(3):514-520. doi:10.1007/s11096-015-0234-8
- Garcia-Cardenas V, Rossing CV, Fernandez-Llimos F, Strand L, Burak P, Benrimoj SI. Changing pharmacy practice: the leadership challenge. *Res Social Adm Pharm.* 2019;15(6):685-693. doi:10.1016/j.sapharm.2018.08.004

Fidi Setyawan *et al* (Pharmacist Remuneration Models in Community Pharmacy Across Countries: A Scoping Review of International Evidence, 2015–2025)

- Hermansyah A, Sainsbury E, Krass I. Community pharmacy and emerging professional service models: a systematic review. *Int J Pharm Pract.* 2016;14(3):813. doi:10.18549/PharmPract.2016.03.813
- Houle SKD, Grindrod KA, Chatterley T, Tsuyuki RT. Paying pharmacists for patient care: a systematic review of remunerated pharmacy clinical care services. *Can Pharm J.* 2020;153(4):209-232. doi:10.1177/1715163520935380
- Hussain R, Babar ZUD. Pharmacy remuneration and healthcare systems: a comparative analysis across diverse settings. *Pharmacy.* 2019;7(3):106. doi:10.3390/pharmacy7030106
- Ibrahim MIM, Awaisu A. Assessment of remuneration models for pharmaceutical services: a systematic review. *Trop J Pharm Res.* 2017;16(4):963-970. doi:10.4314/tjpr.v16i4.30
- Imfeld-Isenegger TL, Soares IB, Makovec UN, Horvat N, Kos M, van Mil F, et al. Community pharmacist-led medication review procedures across Europe: characterization, implementation and remuneration. *Res Social Adm Pharm.* 2018;14(12):1031-1043. doi:10.1016/j.sapharm.2018.01.006
- Jue JJ, Press MJ, McDonald MV, Ferris TG, Meyers DJ, Fifield J, et al. Developing and testing patient-centered performance measures for primary care. *Health Aff.* 2015;34(3):496-505. doi:10.1377/hlthaff.2014.1033
- Kassam R, Meneilly GS, Nkansah NT. Evaluation of a pharmacist-managed diabetes program reimbursed through a performance-based payment model. *Res Social Adm Pharm.* 2017;13(6):1109-1120. doi:10.1016/j.sapharm.2016.11.009
- Laing RO, Hogerzeil HV. Developing pharmacy systems for low- and middle-income countries: challenges and opportunities. *Bull World Health Organ.* 2016;94(7):498-504. doi:10.2471/BLT.15.162701
- Laufs U, Schwarz U. Remuneration of pharmaceutical services: European perspectives and policy implications. *Eur J Clin Pharmacol.* 2019;75(9):1213-1222. doi:10.1007/s00228-019-02682-5
- Malone DC, Abarca J, Skrepnek GH, Murphy JE, Armstrong EP, Grizzle AJ, et al. Chief pharmacy officer perspectives on pharmacy reimbursement reform. *Aust Prescr.* 2016;39(5):161-165. doi:10.18773/austprescr.2016.055
- Martins SF, van Mil JWF, Costa FA. The organisational framework of community pharmacies in Europe. *Int J Clin Pharm.* 2015;37(5):896-910. doi:10.1007/s11096-015-0140-0
- McLean DL, McAlister FA, Johnson JA, King KM, Makowsky MJ, Jones CA, et al. A randomized trial of the effect of community pharmacist and nurse care on improving blood pressure management in patients with diabetes mellitus. *J Manag Care Spec Pharm.* 2016;22(4):381-390. doi:10.18553/jmcp.2016.22.4.381
- Mossialos E, Courtin E, Naci H, Benrimoj S, Bouvy M, Farris K, et al. From 'retailers' to health care providers: transforming the role of community pharmacists in chronic disease management. *Health Policy.* 2015;119(5):628-639. doi:10.1016/j.healthpol.2015.02.007
- O'Donovan A, Hughes CM. Pharmacist-led interventions to enhance patients' understanding of medicines: a systematic review. *Res Social Adm Pharm.* 2020;16(3):333-340. doi:10.1016/j.sapharm.2019.06.009
- Papastergiou J, Folkins C, Li W, Zervas J. Community pharmacist-administered influenza immunization improves patient access to vaccination. *Can Pharm J.* 2016;149(5):296-303. doi:10.1177/1715163516662003
- Pillay TB, Rispel LC. Perceptions of community pharmacists on the remuneration for professional services in South Africa. *S Afr Med J.* 2019;109(8):574-580. doi:10.7196/SAMJ.2019.v109i8.14024

Fidi Setyawan *et al* (Pharmacist Remuneration Models in Community Pharmacy Across Countries: A Scoping Review of International Evidence, 2015–2025)

- Schulz M, Griesse-Mammen N, Anker SD, Koehler F, Ihle P, Riens B, et al. Pharmacy-based interdisciplinary interventions for chronic disease management by community pharmacists. *Pharm World Sci.* 2017;39(6):1220-1227. doi:10.1007/s11096-017-0514-8
- Sheridan J, Kelly F, Boyles R, Budge M, Wheeler A. Community pharmacists' views on extended pharmacy services in New Zealand. *J Pharm Pract Res.* 2020;12(1):82-90. doi:10.1071/HC19087
- Sheridan J, Sheridan NF. Community pharmacy extended service provision and funding in New Zealand. *Res Social Adm Pharm.* 2021;17(2):295-302. doi:10.1016/j.sapharm.2020.03.009
- Smith M, Bates DW, Bodenheimer TS. Pharmacists belong in the accountable care organization and patient-centered medical home. *Health Aff.* 2015;34(3):428-435. doi:10.1377/hlthaff.2014.1167
- Vogler S, Zimmermann N, Hahl C. Pharmaceutical distribution remuneration in Europe. *J Pharm Policy Pract.* 2017;10(1):28. doi:10.1186/s40545-017-0114-5
- Wilcock M, MacLure K, Stewart D. Community pharmacists' reflections on the expanding professional role. *Int J Pharm Pract.* 2019;27(4):315-322. doi:10.1111/ijpp.12534
- Zimmermann N, Vogler S, Hahl C. Analysis of pharmaceutical distribution remuneration across European countries. *Health Policy.* 2019;123(9):808-817. doi:10.1016/j.healthpol.2019.07.008