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Innovating Patient-Centered Pharmacy Care in Bangladesh: Adapting Australian Practices for 2026 Collaboration

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ABSTRACT

There has been a paradigm shift in global pharmacy practice, where the traditional dispensing role of pharmacies has been transformed into a patient-centered clinical care paradigm. An example of this is high-income countries, such as Australia, which have successfully incorporated pharmacists into multidisciplinary groups to monitor medication, chronic illnesses, and preventive healthcare. In Bangladesh, pharmacy practice is, however, still very much confined to commodification of medicine, therefore loss of optimality in medication usage, poor management of chronic ailments, and eruption of antimicrobial resistance. This paper is a proposal for an International Australia-Bangladesh partnership to modernise the Bangladeshi pharmacy practice in Bangladesh by the year 2026. Its foundation lies in four connected pillars: (1) the capacity building to prepare pharmacists to take on a clinical role; (2) policy and regulatory changes to institutionalise and broaden the responsibilities; (3) new service innovations facilitated by technology like tele pharmacy; and (4) implementation science to track the consequences and inform their expandability. The programme aims to promote medication safety, chronic disease management, prevent the misuse of antibiotics, and increase patient satisfaction, and simultaneously help better the greater health system, by using proven Australian innovations and adapting them to the unique situation in Bangladesh.

Keywords: clinical pharmacy, Australia, Bangladesh, antimicrobial stewardship, tele pharmacy, quality use of medicines, implementation research.

Introduction

The pharmacist's role has changed significantly in the past three decades across the globe. Previously being mainly involved in the dispensing of medications, pharmacists in most jurisdictions now play an active role in providing direct patient care services- such as medication counselling, chronic disease management, preventive health screening, and immunisation. The idea was developed in 1990 and is known as pharmaceutical care, which implies that pharmacists take the responsibility of the therapeutic outcome of the patients instead of only selling pharmaceuticals. This vision has been realised in rich contexts, where pharmacists are integral to multidisciplinary care teams and play a decisive role in making therapeutic decisions and ensuring the safe and effective use of medicines. It has consistently been demonstrated through empirical evidence that patient outcomes and healthcare spending are improved when pharmacist-led interventions are implemented [1,2]. The COVID-19 pandemic only increased this change by making telehealth and telepharmacy services more acceptable, in which pharmacists can provide care at a distance [3].

On the other hand, patient-centred practice models of pharmacy have been slow to be adopted in many low- and middle-income nations (LMICs) [1]. The case of Bangladesh is also illustrative, even though Bangladesh produces large quantities of pharmacy graduates and has had a strong pharmaceutical manufacturing industry, most of the pharmacists continue to be limited to dispensing duties. Unqualified people often work in community pharmacies, and there is practically no clinical pharmacy service in hospitals [4]. Thus, unreasonable use of medicine, poor chronic disease control, and the increased antimicrobial resistance remain unchanged [5,6]. This paper attempts to translate tested innovations in Australia to the Bangladesh pharmacy practice. Through the assessment of global and Australian trends and perceptions of the Bangladesh-specific challenges, we suggest a well-organized partnership to adjust and execute Australian strategies by 2026 [7].

Pharmacy Practice Transformation on the Global Trends

Being responsible starts to go way beyond dispensing, something pharmacists around the globe are taking up. In most nations, they form initial contact with patients with minor illnesses where they give them over-the-counter guidance, referrals, and prescriptions. They treat chronic diseases like diabetes and high blood pressure and offer community health services, one of which is immunisation. Clinical services offered by pharmacists have proven to increase clinical outcomes, patient knowledge, and satisfaction, and create cost savings [1,2].

The primary care pharmacological role has been strengthened by interprofessional collaboration. Pharmacists in clinical environments facilitate medication reconciliation, inappropriate prescribing, and patient education on drug use [1]. The COVID-19 pandemic also highlighted the flexibility of the profession, as telepharmacy services allowed pharmacists to advise patients and administer treatment remotely, highlighting the strength of the profession [3].

Australian Pharmacy Practice Model: Excellence Framework

Australia is a model of high-level pharmaceutical practice. The success has a number of pillars. One, a National Medicines Policy that places importance on the Quality Use of Medicines (QUM) and identifies pharmacists as essential in ensuring safe and effective use of medicines [8]. The Australian pharmacy model is anchored in the National Medicines Policy, which prioritizes the Quality Use of Medicines (QUM) and positions pharmacists as essential healthcare providers.[8] Australian pharmacy practice is highly developed, with pharmacists integrated into multidisciplinary teams.[9] Systematic reviews confirm that clinical

medication reviews in Australia effectively identify drug-related problems and improve therapeutic management for patients with chronic conditions.[10]

Key remunerated services include the Home Medicines Review (HMR) program and MedsCheck (including Diabetes MedsCheck), which allow for comprehensive, face-to-face clinical assessments by accredited pharmacists.[11,12] This model has proven successful even in rural settings, where expanded practice roles are increasingly accepted by other health professionals.[13] Innovation is ongoing, evidenced by state-level pilots for pharmacist prescribing.[14]

Furthermore, the expansion of the National Immunisation Program Vaccinations in Pharmacy (NIPVIP) has integrated pharmacists into public health initiatives.[15] These programs are guided by the technical standards of the Australian Immunisation Handbook.[16] Recent evaluations of compliance programs, such as the Dose Administration Aid (DAA) evaluation, confirm that these clinical aids are vital for reducing medication misadventure and improving adherence in the community.[17] Pharmacists also play a critical role as stewards in controlling antimicrobial resistance, particularly in LMIC contexts.[18]

Issues with Pharmacy Practice in Bangladesh

Although Bangladesh has a well-established pharmaceutical manufacturing sector and an abundance of pharmacy training schools, there has not been much achievement in clinical pharmacy practice. Even in government hospitals, there are few, or perhaps none, of the clinical pharmacists, despite the express instructions in the National Drug Policy that they should be used. The situation in neighborhood pharmacies is no better: according to the survey, in many of the so-called model pharmacies, there is no qualified pharmacist, and prescription-only medications are dispensed without the necessary approval. Lax enforcement of the regulations, therefore, condones irrational dispensing habits and unregulated sale of antibiotics, hence contributing to the growing menace of antimicrobial resistance.

In addition, the curriculum in the pharmacy schools is very much based on pharmaceutical sciences and industry-related skills and has very limited coverage of clinical practice. As a result, graduates are deprived of adequate exposure to patient care and fail to gain the necessary clinical competencies needed in the modern practice. The further development of professional activities in clinical areas is still rather voluntary, which leads to the fact that pharmacists, who do not refresh their knowledge regularly in these areas, patient counselling, medication review, or chronic disease management.

The consequences of this for healthcare are far-reaching. Patients are given little information about taking drugs or how to take them; polypharmacy is epidemic in patients with severe illnesses; however, no adherence control and drug-interaction monitoring are done. Self-medication, especially antibiotics, is very common and results in even more antimicrobial resistance.

Proposed Pharmacy Care Collaboration Australia-Bangladesh (2026 Initiative)

The aim is to change the practice of pharmacy in Bangladesh by 2026 through a complex partnership with Australian partners. The programme will be co-designed with the Bangladeshi stakeholders and designed around four pillars, which are interdependent, and they include capacity building and education, policy and regulatory reform, service innovation and technology, and research, monitoring, and evaluation. A gradual schedule will support pilot testing and further scaling up.

The need to build capacity and educate the community is clearly highlighted in Chapter 5.1, Capacity Building and Education.

Capacity Building and Education

The systematic enhancement of the skills and confidence of the pharmacists is the key to this initiative. The modular training will include medication review, patient counselling, management of chronic disease, and antimicrobial stewardship. These courses will be provided in an online and face-to-face format in a hybrid way based on the experience of Australian professors, as well as local professors. Short-term clinical placements, including exchange visits to practice sites in Australia, will be used to expose them to the real world and develop champion pharmacists who would spearhead services in Bangladesh. Notably, the training modules will be incorporated into undergraduate programs and continuing professional development programmes so as to make it sustainable in the long run.

Policy and Regulatory Reform

The environmental policy needs to be fortified. The collaboration will promote the formal role of clinical pharmacists in community hospitals and the clear definition of the scope of practice that should include direct patient care, medication review, and protocol-based collaborative prescribing. A credentialing system will be in place to ascertain the competency of the pharmacists prior to providing clinical services. There will be increased enforcement of prescription-only medicine sale and the Model Pharmacy programme through incentives. In addition, we shall discuss the sustainable financing mechanisms like incorporating pharmacist services in the current health programmes or insurance schemes so that the pharmacists can be paid the cognitive services.

Innovation and technology of services offered by the company

Pilot services will prove the feasibility and the effects of clinical pharmacy in Bangladesh. Trained pharmacists will join ward rounds and participate in antimicrobial stewardship programmes in selected hospitals where they will manage medication reconciliation, run counselling clinics and participate in training pharmacists with the same roles. The service of medication review and chronic disease counselling will be implemented in the community pharmacies, and the pharmacists will collaborate with the physicians. The networks will also connect metropolitan pharmacists to rural patients (and drugstores) through video or mobile consultation, thus expanding the reach of pharmacist skills. They will be assisted by digital means including electronic prescription systems, drug-interaction checkers, and patient registries.

Research, Monitoring and Evaluation

To identify progress and results, a mixed-method implementation research model will be used. The existing practices, medication adherence and patient satisfaction will be documented by means of baseline surveys and audits. Such process indicators as the number of medication reviews carried out or pharmacist interventions will be monitored. Outcome indicators will comprise chronic disease control improvements, antibiotic misuse and medication errors reduction, as well as patient outcomes: patient satisfaction, and patient health literacy. The qualitative interviews will involve documentation of the viewpoints of the stakeholders and the barriers and facilitators. Refining interventions and creating a business case to scale up nationally will be done with the help of data.

Phases and Timeline of Implementation

The project shall be implemented in three stages. Phase 1 (mid-2025-early 2026): It entails needs assessments, partnership, curriculum design, and the collection of baseline data. Phase 2 (until 2026) starts pilot services and training programmes, and there will be a middle-year review to make changes to strategies. Phase 3 (2027) evaluates results, forms policy recommendations, and provides a national scale-up package.

Methodological Framework

Even though this initiative is more of an

implementation project than a conventional clinical trial, a systematic research design is needed to assess the impact of the initiative. It will be based on a mixed-methods design that will entail quantitative measures of results and qualitative ventures of experiences. Key elements include:

Study design: A longitudinal, quasi-experimental study design with pilot site pre-intervention and post-intervention assessments. Control locations where pharmacist interventions are possible can be considered.

Participants: Pharmacists involved in the training, patients in the hospitalised wards of the chosen wards, clients in the community pharmacy and healthcare professionals (physicians and nurses).

Collection of data: Pharmacy records, patient surveys, medication audit and clinical indicators (e.g., blood pressure, HbA1c) will be used as a source of quantitative data. The qualitative data will be collected in the form of focus groups and in-depth interviews.

Ethical issues: All participants will be informed to provide consent. Anonymous data will be stored in a safe place. The research will also endeavor to obtain the consent of the appropriate ethics committees in Bangladesh and other partner institutions.

Analysis: Quantitative data will be analysed with the help of descriptive statistics and comparative tests to measure changes over time and differences between intervention and control groups. The coded and thematic analysis of qualitative data will be used to determine patterns and provide explanations of quantitative results.

Validity and reliability: Triangulation of data sources and methods will be used to increase validity. Where possible, standardised measures (e.g., scale of validated adherence) will be employed.

Table 1. Outcome indicators, measurement too is and assessment time points

Outcome indicator	Measurement tool/data source	Assessment time point
Medication adherence	Validated adherence questionnaires; pharmacy refill data	Baseline;6 months; 12 months
Antibiotic misuse reduction	Pharmacy dispensing audits; patient surveys	Baseline; 6 months; 12 months
Chronic disease control (e.g., BP, HbA1c)	Clinical measurements from patient records	Baseline; 6 months; 12 months
Medication errors/reconciliation discrepancies	Hospital incidentreports; pharmacist intervention logs	Baseline; continuous monitoring
Patient satisfaction and knowledge	Patient satisfaction surveys; structured interviews	Baseline; 6 months; 12 months
Stakeholder perceptions of feasibility	Focus groups and key informant interviews	End of pilot (12 months)

Expected Results and Impact

The expected results of this program include patient-level outcomes, health system and professional development. The criterion of

improved medication adherence, an augmented awareness of their treatments and higher satisfaction with care should be observed among the patients in pilot sites in the short term. The loss of the wrongful dispensing of antibiotics would be anticipated through the counselling of pharmacists and the effective application of prescription-only sales. Patients with frequent follow-up and medication reviews may show improvements in the chronic disease indicators of blood pressure and HbA1c.

On a system-wide level, initial achievements will stimulate the policymakers to embrace formal clinical pharmacist roles and reimbursement systems. The enhanced medication administration and a decrease in adverse drug events will decrease hospital readmissions and health care expenditures. Furthermore, the creation of telepharmacy networks will increase the presence of pharmacist experience in the rural environment and facilitate fair access to care.

The collaboration will professionally develop a pool of qualified pharmacists who will be able to provide patient-centred services. Such practitioners will be role models to the profession and more curriculum development and research projects will be encouraged. Finally, the project will entrench the multidisciplinary teams in Bangladesh, therefore, institutionalising the transformation of patient-centred pharmaceutical care.

Conclusion

It is possible and timely to adjust the established aspects of the Australian pharmacy to Bangladesh. Through focused capacity building, facilitating policy change, new service provision and strict review, the 2026 initiative can bring a lasting change in relation to patient-centered pharmaceutical care. The eventual beneficiaries will be patients who will have more effective and safer therapy, better management of chronic diseases and easily available pharmacists. The enhanced pharmacist workforce and the enhanced diversity in matching pharmacists with healthcare teams will increase the efficiency of the system and help to attain the national health objectives.

References

1. Bennett AA, Sakkeena MHF, McLachlan AJ. Overcoming antimicrobial resistance through the improvement of the role of pharmacists in developing countries: a narrative review. *J Pharm Pharm Sci*. 2018;21(1):63-72.
2. Wu S, Tannous E, Haldane V, et al. Barriers and facilitators of implementing interventions to improve appropriate antibiotic use in low- and middle-income countries: a systematic review based on the Consolidated Framework for Implementation Research. *Implement Sci*. 2022;17(1):30.
3. Kapatsa T, Bwanali AN, Kambewa LN, et al. Assessing the implementation determinants of antimicrobial stewardship programmes in sub-Saharan Africa through the complexity lens. A CFIR-guided systematic review. *Front Microbiol*. 2025; 16:1660778.
4. Rouf MA, Islam MA, Gunaseelan S, et al. The present imminent problems in pharmacy education in Bangladesh: the way forward. *Pharm Teach Learn*. 2014;6(5):730-735.
5. Jakaria M, Azam S, Siddiqui SA, et al. Pharmacy irrationality and lack of health care services in Bangladesh: a COVID-19 pandemic lesson. *J Basic Clin Physiol Pharmacol*. 2021;32(3):129-130.
6. The Business Standard. Paper model pharmacies only. 2020.
7. Mondal SK, Chowdhury S, Ganguly A, Faroque ABM. Analysis of the existing situation in new model pharmacies in Bangladesh. *Dhaka Univ J Pharm Sci*. 2021;20(1):1-10.
8. Australian Government Department of Health and Aged Care. *National Medicines Policy*. Published December 2022.
9. Moles RJ, Stehlik P. Pharmacy practice in Australia. *Can J Hosp Pharm*. 2015;68(5):418-426.
10. Jokanovic N, Tan ECK, van den Bosch D, et al. Clinical medication review in Australia: a systematic review. *Res Social Adm Pharm*. 2016;12(3):384-418.
11. Pharmacy Programs Administrator. Home Medicines Review. Accessed April 25, 2026.
12. Pharmacy Programs Administrator. MedsCheck and Diabetes MedsCheck. Accessed April 25, 2026.
13. Taylor S, Cairns A, Glass B. Expanded practice in rural community pharmacy as perceived by health professionals in Australia. *Int J Pharm Pract*. 2020;28(5):458-465.
14. Queensland Health. Pilot on innovative pharmacy to be extended throughout the state. Ministerial statement. September 25, 2023.
15. Australian Government Department of Health and Aged Care. Expansion of the National Immunisation Program Vaccinations in Pharmacy Program. Published April 24, 2024.
16. Australian Technical Advisory Group on Immunisation. *The Australian Immunisation Handbook: Preparing for Vaccination*. Updated March 13, 2026.
17. Department of Health, Disability and Ageing. Evaluation of the Dose Administration Aid program: collection of data and survey responses from community pharmacists, consumers and carers to inform future directions for the program. Commonwealth of Australia; 2024.
18. Gharat MG, Kumar TMP, Vaidya RV, et al. Antimicrobial resistance stewards in LMICs: community pharmacists. *J Pharm Pharm Sci*. 2024; 27:12721.