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Driving Reform and Innovation

Policy Recommendations for Revising CHED Memorandum Order No. 25 s.2021 in Pharmacy Education

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Executive Summary

This policy brief examines the gaps in the implementation of CHED Memorandum Order (CMO) No. 25 s.2021, which prescribes the policies, standards, and guidelines for the Bachelor of Science in Pharmacy program in the Philippines. Despite establishing a foundational framework, the current policy requires revision to address the evolving needs of the health system, particularly in aligning education with workforce demands, community service, and technological adaptation. Using explanatory sequential mixed-methods approach, the study identified key deficiencies in the areas of curriculum ladderization, community immersion, digital health integration, and faculty development. To address these gaps, the brief recommends revising CMO No. 25 s. 2021 to include a ladderized curriculum aligned with TESDA-recognized certifications, structured community immersion programs, mandatory digital health modules, and strengthened faculty qualifications under the Philippine Qualifications Framework (PQF). These reforms aim to harmonize pharmacy education with national HRH strategies, promote equitable access to pharmaceutical services, and prepare graduates for a digitally transformed and socially responsive healthcare system.

Keywords: *Pharmacy education, CHED Memorandum Order No. 25 s.2021, ladderized curriculum, community immersion, digital health, human resources for health, higher education policy*

Introduction

Pharmacy education in the Philippines stands at a defining crossroads, where the demands of a rapidly evolving healthcare system challenge existing educational structure. CHED Memorandum Order (CMO) No. 25, s.2021 established the most recent Policies, Standards, and Guidelines (PSGs) for the Bachelor of Science in Pharmacy program, updating the curriculum to align with clinical practice, research, and regulatory requirements. While this reform represented a major step toward modernization, recent consultations and policy analyses reveal that CMO 25 remains limited in addressing systemic and emerging challenges in pharmacy education and workforce development.

Key gaps persist, including: (1) the absence of ladderized pathways that provide stackable, industry-recognized certifications for students who may not complete the full degree; (2) limited and short-term community immersion hindering the ability of graduates to address workforce maldistribution and engage in public health roles; and (3) the lack of formal integration of digital health and informatics training, despite the increasing demand for pharmacists skilled in telepharmacy, e-prescribing, and health data management.

These gaps undermine the goals of the Human Resources for Health (HRH) Philippine Masterplan 2020-2040 and the Philippine Pharmacy Educational Roadmap 2030, both of which emphasize developing a workforce that is accessible, community-grounded,

and digitally adaptive. Furthermore, existing policies that aim to standardize training, strengthen internship systems, establish scholarship-linked return service programs, and regulate emerging practice areas—including immunization, veterinary pharmacy, and digital health platforms—highlight the urgency of a curriculum that is flexible, responsive, and integrated.

This policy brief therefore proposes a revision of CHED CMO No. 25 s. 2021 to institutionalize three major reforms:

1. A ladderized, outcomes-based curriculum aligned with TESDA-recognized certifications to improve accessibility and workforce entry points;
2. Structured and extended community immersion to prepare graduates for public health roles and address the maldistribution of pharmacists; and
3. Digital health and informatics integration as mandatory components of the BS Pharmacy program to prepare graduates for emerging modes of care and regulatory environments.

With these reforms, pharmacy education can evolve from a traditional academic model to a responsive, inclusive, and future-ready system—one that ensures equitable distribution of pharmacists and produces a workforce aligned with the Roadmap 2030 vision.

Methodology

An explanatory sequential mixed-methods approach was employed to critically examine the current state of pharmacy education and the pharmaceutical workforce. The process was implemented in two places: Phase one focused on quantitative data collection and analysis, while Phase two concentrated on qualitative inquiry to provide contextual depth.

Phase one began with a comprehensive review of Licensure, Policies, Standards, and Guidelines (LPSGs) obtained from online sources and organized into a repository. This established a foundational understanding of existing policies and frameworks in the pharmaceutical sector. By comparing and aligning LPSGs, as well as identifying gaps within them, this phase ensured that subsequent analyses were anchored in a clearly defined policy landscape.

To complement the literature review, secondary data were gathered from various online government databases through formal requests and submission to

the electronic Freedom of Information (FOI) service portal. The collected public statistical data covered the Philippine pharmacy workforce from 2010 to 2024, encompassing both supply and demand variables. Supply variables included the number of pharmacy schools and graduates, licensure examination takes and passers, passing rates, and registered pharmacists (with professional identification cards). Demand variables were derived from the Food and Drug Administration (FDA) database, covering pharmaceutical industry establishments, community pharmacies, hospitals, pharmacy schools, primary healthcare institutions, and migrant pharmacists. All data were organized by year and categorized at both regional and national levels before being imported into Power BI for visualization and analysis.

Power BI, Microsoft's business intelligence platform (Microsoft 2025), was utilized to connect and analyze datasets through interactive dashboards. Three dashboards were developed—(1) Pharmacy Education, (2) Pharmacy Workforce Supply, and (3) Pharmacy Workforce Demand—to uncover trends, disparities, and policy intervention areas. Descriptive statistics were applied to demonstrate Power BI's capability to manage, visualize, and interpret complex datasets, enabling evidence-based policy analysis and informed decision-making.

Building upon the insights generated from Phase one, Phase two was conducted to incorporate qualitative perspectives and validate findings. Ten Focus Group Discussion (FGDs) were recognized across various regions to capture diverse viewpoints, including those from rural areas, ensuring inclusivity in understanding pharmacy education dynamics. These were supplemented by four stakeholder consultations facilitated by trained moderators, which aimed to consolidate regional findings, verify policy gap analyses, and refine proposed policy recommendations. The integration of contextual knowledge and localized insights strengthened the validity, relevance, and applicability of the study's conclusions.

A Ladderized Curriculum Aligned with TESDA-Recognized Certifications

The current framework under CMO No. 25 s.2021 remains non-ladderized, preventing students from earning nationally recognized qualifications at earlier stages of their study. This limits the accessibility of pharmacy education and constrains the system's ability

to address workforce needs, especially in contexts where students need to work while studying or cannot complete the full four-year program due to financial limitations.

Under existing regulations, pharmacy students must finish the entire BS Pharmacy curriculum before they can obtain any qualification recognized in the labor market (Republic Act No. 10968). There are no exit points that would allow students to transition into employment roles such as pharmacy assistants, while maintaining their eligibility to re-enter the degree program later. This rigidity makes it difficult for working students to gain credit for their professional experience, resulting in lost opportunities for both learners and employers.

At the policy level, several related documents highlight the absence of coherent integration between education and workforce development mechanisms. For instance, while there are policies promoting scholarship programs for pharmacy students and the standardization of advanced programs (e.g., BS Clinical Pharmacy, PharmD, MS Pharmacy), there is no formal policy linking ladderization with internship or employment pathways. The data gathering also reveals that reforms have focused more on *specialization* (e.g., immunizing pharmacists, oncology pharmacists) and *regulatory functions*, but not on educational flexibility or mid-level workforce development.

Furthermore, the disconnect between CHED and the Technical Education and Skills Development Authority (TESDA) represents a critical barrier to ladderization. TESDA's Pharmacy Services NC III remains outside CHED's higher education framework, with training regulations and competencies that do not articulate with college-level outcomes. Without reforming TESDA's training regulations, it is impossible to establish a unified ladderized system that aligns technical-vocational and higher education levels under the Philippine Qualifications Framework (RA No. 10968).

This disjointed policy environment also contributes to inefficiencies in pharmacy workforce production. The system produces a surplus of graduates competing for limited positions in urban centers, while underserved communities lack sufficient pharmacy personnel. Without ladderized entry and re-entry points, the country cannot efficiently deploy pharmacy support staff or mid-level workers who could fill workforce gaps at earlier training stages.

To address these policy and structural gaps, the establishment of a ladderized pharmacy curriculum requires a dual reform initiative led by CHED and TESDA, ensuring that both agencies develop harmonized frameworks that link education, training, and workforce deployment.

Revise CHED CMO No. 25 s. 2021 to include Ladderized Pathways and Defined Exit Points. Integrate structured exit points within the BS Pharmacy curriculum where students can earn TESDA-recognized certifications (e.g., Pharmacy Services NC III) after completing certain academic milestones (e.g., second or third year). These exit points should serve as both workforce entry opportunities and re-entry pathways for students who wish to continue their degree later.

Formalize Credit Transfer and Recognition of Prior Learning (RPL). CHED should establish policies that recognize work-based learning as equivalent to specific academic units or practicum hours in accordance with RA No. 10968 or the "Philippine Qualifications Framework Act." Working students employed as pharmacy assistants or technicians should be able to convert their workplace experience into academic credits, promoting flexible, competency-based progression.

Refine TESDA's Training Regulations to Align with Higher Education Outcomes. TESDA must revise its existing training regulations for Pharmacy Services NC III to ensure alignment with the knowledge, skills and competencies required in CHED's BS Pharmacy curriculum. This reform should also consider the evolving role of pharmacists—such as prescribing for simple conditions or immunization—to ensure that training outcomes reflect the actual scope of practice.

Institutionalize CHED-TESDA Coordination Mechanisms. Establish a joint CHED-TESDA Technical Working Group tasked to (1) develop share competency maps and qualification descriptors, (2) design ladderized articulation models from TESDA NC III to BS Pharmacy then to Advanced Pharmacy Programs, and (3) ensure that both agencies' standards follow a seamless PQF Level 3 to Level 6 progression.

Link Ladderized Education to Internship and Workforce Deployment. CHED and TESDA should coordinate with the Department of Health (DOH) and the FDA to connect ladderized exit points with internship programs and placement opportunities in hospitals, community pharmacies, and health centers.

For example, students with third-year standing may serve as pharmacy assistants during internship placements, earning both TESDA credentials and academic credit.

Use Ladderization to Address Workforce Maldistribution. The government can utilize ladderized pathways to deploy certified mid-level pharmacy personnel in rural and underserved regions through initiatives like Pharmacists to the *Barrio* programs. This would improve workforce accessibility and ensure that pharmacy services reach remote areas while students continue their academic progression.

Implementing a ladderized pharmacy curriculum through CHED-TESDA collaboration will create a flexible, inclusive, and competency-based education system. It allows students to gain employable skills early, ensures that work experience counts toward formal education, and establishes a structured pipeline from pharmacy assistant to technician and to licensed pharmacist. Beyond individual benefits, this reform supports national objectives for equitable workforce distribution, enhanced employability, and adaptive health system capacity (WHO 2016; WHO 2022), aligning the Philippine model with international best practices observed in Malaysia and Vietnam (Ministry of Health 2023; Socialist Republic of Vietnam 2013).

Strengthening Community Immersion in Pharmacy Education

Despite its improvements, CMO No. 25 s. 2021 remains institutionally focused, providing only minimal community exposure that fails to adequately prepare pharmacy graduates for community-based or public health practice. The limited immersion hours—often not exceeding 240—are insufficient for students to grasp the complex realities of medicine access, health promotion, and patient counselling in underserved communities. This limited exposure perpetuates workforce maldistribution, where pharmacists remain concentrated in urban centers while many rural barangays still lack access to essential pharmaceutical services (DOH 2020).

Additionally, the internship structure under the current policy does not integrate the broader roles pharmacists play in primary healthcare, rational drug use, or health systems strengthening, all of which are key goals of Republic Act No. 11223 or the “Universal Health Care Act.” This creates a gap

between classroom training and the realities of rural practice. Consequently, graduates are technically competent but often unprepared to participate in interdisciplinary rural health teams or manage local supply chains for essential medicines.

The faculty development gap also poses a barrier. Many pharmacy educators do not yet meet the PQF Level 7 qualification standard or possess experience in community-based pharmacy practice. This issue aligns with the Pharmacy Education Roadmap’s Action Plan 2, which calls for at least 60 percent of faculty in each Higher Education Institution (HEI) to attain Level 7 qualifications by 2030. Without qualified faculty, it becomes difficult to sustain a curriculum that includes immersion-based, outcomes-driven learning.

Lastly, there is a lack of institutional partnerships between pharmacy schools, local government units (LGUs), and the private sector to support community immersion. The absence of formalized memoranda of understanding (MOUs) or memoranda of agreement (MOAs) restricts the ability of HEIs to place students in meaningful, long-term community service sites. This weakness is addressed in Action Plan 3 of the Roadmap, which emphasizes strengthening national and international collaborations to enhance innovation and practical exposure (Barredo et al. 2023).

To effectively strengthen community immersion and align pharmacy education with national health priorities, the following recommendations are proposed:

Strengthen and Extend Community Immersion Programs. CHED should revise CMO No. 25 s. 2021 to integrate structured, long-term community immersion as a major component of pharmacy education. Internship and immersion hours should be expanded, and placements should include rural and underserved communities to address pharmacist maldistribution. Partnerships with LGUs, rural health units (RHUs), barangay health stations (BHSs), and public hospitals should be formalized through MOUs or MOAs, ensuring that students experience real-world community health dynamics.

Aspect	CMO No. 25 s. 2021	Proposed Roadmap Curriculum
Focus of Training	Prioritizes hospital, community, and industrial practice with limited community exposure.	Expands focus to include structured community immersion aligned with the Universal Health Care (UHC) and HRH Masterplan 2020-2024 (DOH 2020).
Internship Requirements	Requires internship experiences across multiple practice areas but with short-term community exposure.	Proposes strengthened and longer immersion in rural and underserved communities to ensure regional responsiveness and improve health equity.
Community Involvement	Community pharmacy experience is short and limited in scope.	Promotes continuous and outcomes-based immersion in collaboration with LGUs, public health units, and local pharmacies.
Learning Approach	Focused on compliance and technical dispensing roles.	Encourages interprofessional, service-oriented learning and public health collaboration (WHO 2016; WHO 2022).
Curriculum Orientation	Standardized national curriculum with limited adaptability	Adopts regionally responsive, outcomes-based curriculum, consistent with Action Plan 1 of the Roadmap.
Global Alignment	Limited linkages with international frameworks.	Aligned with ASEAN and Philippine Qualifications Frameworks (AQF/PQF) for global competitiveness.

Table 1. Comparison of CMO No. 2025 s.2021 and the proposed pharmacy education roadmap

Establish Scholarship and Return-Service Programs. CHED and DOST should create scholarship programs for pharmacy students who commit to serving in geographically isolated and disadvantaged areas (GIDAs) after graduation. These scholarships should be directly linked to immersion and internship experiences in public health settings, aligning with national efforts under the HRH Masterplan 2020-2040 and the Universal Health Care Act.

Standardize Internship Framework and Competencies. CHED, in collaboration with PACOP, should develop a unified internship schedule and a competency-based framework specifying required skills, learning outcomes, and evaluation methods for student immersions. This ensures consistency in training quality across HEIs offering BS Pharmacy programs.

Institutionalize the Pharmacist of the Barrio Program. The government should enact a law to formally establish the Pharmacist of the Barrio Program, providing structured

deployment, appropriate compensation, and professional support for pharmacists assigned in underserved areas. This initiative should be coordinated with CHED, DOH, and LGUs to strengthen pharmaceutical services in line with the country's health workforce priorities.

Enhancing the community immersion component of pharmacy education bridges the gap between academic learning and public service. By expanding exposure to underserved communities, integrating outreach and early engagement programs, leveraging digital tools, and empowering professional organizations, pharmacy education in the Philippines can become more inclusive, relevant, and responsive.

Digital Health Competencies

In the Philippines, digital transformation within the pharmacy workforce remains in its early stages. While online learning and Continuing Professional Development (CPD) programs, such as webinars, are helping improve digital literacy, many community

pharmacies and municipal hospitals still face challenges due to limited access to digital resources and services. Although there are initiatives to promote digital pharmacy services, high implementation costs and the absence of standard monitoring mechanisms hinder their widespread adoption. The lack of a cohesive national framework also results in uneven access to digital healthcare systems, leaving pharmacists in rural or underdeveloped areas unable or unwilling to adopt new technologies.

The current BS Pharmacy curriculum under CMO No. 25 s. 2021 provides only limited exposure to digital health, leaving graduates underprepared for modern, technology-driven healthcare environments. This gap became more evident during the COVID-19 pandemic, when telepharmacy, e-prescriptions, and electronic health records became vital to maintaining patient care. However, without structured digital health training, many pharmacy graduates and professionals struggle to fully utilize these tools in their practice.

Under Republic Act No. 10918 or “the Philippine Pharmacy Act,” pharmacists are expected to take on broader roles in healthcare delivery. Strengthening digital competencies would therefore enable pharmacists to adapt to evolving systems and better serve patients through technology-based solutions. Addressing these gaps requires coordinated policy efforts to integrate digital literacy, technology use, and data management within pharmacy and professional development.

Integrate Digital Health Modules in the BS Pharmacy Curriculum. CHED should revise CMO No. 25 s. 2021 to include structured courses on digital literacy, electronic record systems, telepharmacy, and health informatics. These courses should train students to use digital tools for patient engagement, prescription management, and data analysis.

Strengthen Monitoring and Implementation of Digital Services. The FDA and related regulatory bodies should enhance the oversight of digital pharmacy services and ensure that online health care delivery systems meet safety and ethical standards. Regular monitoring would help assess the impact and effectiveness of these services in improving pharmacy practice.

Provide Support for Digital Infrastructure and Access. The government and academic institutions should collaborate to provide funding, training, and infrastructure support to schools and

pharmacies, especially in rural areas. This would promote equitable access to digital tools needed for learning and practice.

Develop Online Learning and Continuing Education Resources. The Professional Regulation Commission (PRC) and pharmacy organizations should expand CPD offerings that focus on digital pharmacy, online counseling, and technology use in patient care. These programs can help practicing pharmacists stay updated with emerging digital trends.

Implementing these recommendations will modernize pharmacy education and empower graduates to respond to the growing demand for digital healthcare. Strengthening digital health competencies supports the goals of RA No. 10918 by ensuring that Filipino pharmacists remain competent, adaptive, and integral to the evolving healthcare system.

Faculty of Pharmacy Development

At present, CMO No. 25 s. 2021 restricts teaching positions in pharmacy schools to pharmacists with a master’s degree. However, only six out of approximately 140 pharmacy schools in the Philippines currently offer graduate programs in pharmacy. This creates a significant limitation in the academic workforce, resulting in a shortage of qualified faculty members capable of teaching advanced pharmacy courses. As a result, many highly competent and experienced pharmacists—particularly those with strong professional or clinical expertise but without master’s degrees—are excluded from academia.

This rigid qualification requirement limits the growth of pharmacy education and contributes to unequal faculty distribution across HEIs. It also undermines the goal of producing a competent, globally competitive pharmacy workforce as outlined in Action Plan 2 of the national roadmap, which targets that by 2030, at least 60 percent of faculty members in each HEIs should be licensed pharmacists with at least PQF Level 7 qualifications, supported by structured faculty development.

The roadmap also emphasizes the need to expand implementation of faculty training initiatives to 50 percent of institutions by December 2027 and increase the number of qualified full-time faculty members to 30 percent by December 2028. These targets aim

to strengthen faculty competency, promote higher education quality, and ensure that pharmacy programs remain relevant to current healthcare needs. In addition, Action Plan 3 highlights the importance of establishing partnerships and collaborations between pharmacy schools and the pharmaceutical industry to promote lifelong learning, innovation, and global networking—an essential step toward faculty development and research development.

To bridge the current gaps in faculty qualifications and align with the roadmap's objectives, a more inclusive and flexible professional advancement structure for pharmacy educators is needed.

Recognize Licensure Pharmacists with PQF Level 7 or Higher as Eligible Faculty. CHED should revise CMO No. 25 s. 2021 to allow licensed pharmacists who have attained at least PQF Level 7 qualifications, whether through graduate studies or recognized professional specialization, to teach in pharmacy programs. This approach maintains professional quality assurance while expanding the academic pool to include experienced practitioners.

Establish a Professional Track Advancement System for Pharmacists. CHED, in coordination with the PRC and the Philippine Pharmacists Association (PPhA), should develop a professional track that enables pharmacists to attain higher qualifications through structured training and assessment.

Implement a National Faculty Development Program for Pharmacy Educators. In line with Action Plan 2, CHED and PACOP should create a nationwide program offering scholarships, mentorship, and continuing professional development for pharmacy educators. By 2027, 50 percent of institutions should implement faculty development initiatives, progressing to 75 percent by 2028.

Promote Academic-Industry and International Collaboration. Consistent with Action Plan 3, partnerships between HEIs, pharmaceutical industries, and international institutions should be expanded. By 2028, at least 60 percent of pharmacy schools should engage in collaborative projects, MOUs, or exchange programs to foster innovation and expose faculty to global standards.

Increase Accessibility of Graduate and Professional Education. CHED should support the establishment of additional master's degree and professional specialization programs across the country to address regional disparities. Providing

financial aid or scholarships can encourage more faculty members to pursue higher qualifications.

Expanding faculty eligibility through professional track advancement and PQF-based qualification recognition will address the shortage of qualified educators while maintaining professional standards. This reform not only enhances faculty development, but also supports the broader vision of the Pharmacy Education Roadmap.

Conclusion

The findings of this policy brief underscore that CMO No. 25 s. 2021, while providing the structural foundation of pharmacy education in the Philippines, remains insufficient in addressing the evolving needs of the health system. Persistent gaps in curricular flexibility, community responsiveness, digital competency, and faculty development limit the ability of pharmacy graduates to meet the country's HRH priorities and adapt to a rapidly transforming healthcare landscape. Without reforms that institutionalize ladderized learning pathways, structured community immersion, digital health modules, and professional faculty advancement, the current system risks producing graduates who are academically prepared but not fully equipped to address the nation's complex health challenges.

Revising CMO No. 25 s. 2021 to integrate these reforms carries several critical policy implications. For CHED, it represents an opportunity to harmonize pharmacy education with national frameworks such as the HRH Master Plan 2020-2040 and the Pharmacy Education Roadmap 2030, ensuring that higher education directly contributes to health workforce equity, competency, and accessibility. A ladderized curriculum would operationalize pathways that bridge technical-vocational and higher education, enabling students to earn TESDA-recognized certifications and re-enter the workforce or continue their studies as needed. This reform would not only enhance educational accessibility for working students but also strengthen the supply of qualified pharmacy personnel in underserved areas.

Similarly, enhancing community immersion programs and aligning internship requirements with actual health service needs would cultivate socially accountable pharmacists who are better equipped to serve in rural and marginalized regions. The integration of digital health competencies into the BS Pharmacy curriculum would modernize education and prepare graduates to engage in telepharmacy,

digital record management, and other technology-enabled services—critical in ensuring continuity of care and expanding access to pharmaceutical services. Finally, reforming faculty qualifications to recognize licensed pharmacists with a PQF Level 7 or higher would expand the pool of competent educators, ensuring that teaching standards remain high while addressing shortages in academic faculty.

At the systemic level, these reforms require stronger coordination among CHED, TESDA, DOH, and PRC to harmonize education, regulation, and workforce deployment.

Joint efforts to revise training regulations, align competency standards, and expand faculty development programs would create a coherent and future-ready governance structure for pharmacy

education. Integrating digital health and professional advancement also positions the Philippines to actively participate in regional and global transitions toward technology-enabled and competency-based healthcare education.

Ultimately, the revision of CMO No. 25 s. 2021 is not merely a curricular update—it is a strategic intervention that strengthens the link between education and workforce policy, promotes equitable access to pharmacy education and services, and future-proofs the profession. By aligning reforms with national roadmaps and international best practices, the Philippines can cultivate a pharmacy workforce that is flexible, socially accountable, digitally capable, and globally competitive, ensuring that the sector remains a cornerstone of the country's resilient and inclusive healthcare system.

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