

The Economic and Clinical Impact of Pharmacy Service in the Indian Health Service: White Paper

Introduction

The Indian Health Service (IHS) is a federal agency under the Department of Health and Human Services (HHS) responsible for providing health care to 2.8 million American Indians and Alaska Natives (AI/AN) from 574 federally recognized tribes. IHS has recognized pharmacists as providers since 1996 (IHS Special General Memorandum 96-02, 1996), and pharmacists have been delivering comprehensive care as part of the health care team, including clinical pharmacy services, for over 60 years to AI/AN patients in rural and underserved areas. IHS pharmacists work alongside medical providers to enhance available services and increase access to care in a team-based, integrated model, often focusing on specialty diagnoses or specific disease state management through collaborative agreements. Pharmacists with advanced education and training to deliver clinical services are among the most accessible health care providers in the nation, including the IHS.

Background

The United States faces limited access to medical care and high health care costs. Physician shortages are predicted to increase over the next 10 years, with an estimated shortage of up to 86,000 physicians by 2036, causing a negative impact on health care delivery and patient outcomes. The demand for physician services will significantly outpace the supply of physicians in the United States.¹ In the IHS, the physician vacancy rate is 40% as of March 2025, demonstrating the need for additional clinicians to maintain access to care.

Escalating costs due to an aging population and increased healthcare spending challenge the United States economy. Therefore, identifying solutions to decrease health care expenditures is in high demand. Modalities that demonstrate both cost efficacy and cost savings are paramount.

This paper examines the clinical and economic benefits of incorporating clinical pharmacy services into IHS health care settings. It aims to discuss current issues related to medical provider shortages and the high cost of care. It demonstrates that incorporating clinical pharmacy services into team-based care models can help increase access to care, improve the quality of care, and decrease healthcare costs.

Clinical Impact of Pharmacy Services in the Indian Health Service

Within the Indian Health Service (IHS), pharmacy services are fully integrated into the health care system. Pharmacists are members of interdisciplinary teams in the medical care home model, inpatient care, emergency services, ambulatory care, and many specialty care services. Pharmacists within IHS are often highly clinically trained; many have completed post-graduate pharmacy residency programs, and 40% are board-certified and are relied upon as safety net providers, ensuring ongoing access to care. The medical staff of each IHS facility determines the clinical services and prescriptive privileges for individual pharmacists. This allows pharmacists to have an expanded scope of practice tailored to the local facility's

needs. In these roles, pharmacists care for a multitude of disease states including, but not limited to, diabetes, tobacco use disorder, latent tuberculosis, HIV (including pre and post-exposure prophylaxis), sexually transmitted infections, hepatitis C (HCV), pain management, hypothyroidism, hypertension, dyslipidemia, contraception, immunization administration, heart failure, asthma, substance use disorder, behavioral health, and anticoagulation.

The IHS National Clinical Pharmacy Specialist Committee (NCPSC) was established in 1997 to promote uniform clinical competency and define and recognize advanced scopes of practice for pharmacists. Clinical pharmacists may apply for the National Clinical Pharmacy Specialist (NCPS) certification when serving as a health care provider with prescriptive privileges. As part of this certification, each pharmacist submits clinical outcomes data for the diseases managed at their facility.

According to data submitted by NCPS-certified pharmacists in IHS in diabetes, hypertension, and tobacco cessation, the IHS provided 22,831 clinical pharmacy visits during fiscal year (FY) 2023. These visits improved patient outcomes and exceeded Government Performance and Results Act (GPRA) measures and other national statistics.

Figure 1. NCPS Outcomes

Disease Management	GPRA Goal ^{2,3}	National Outcome ^{2,3}	NCPS total # of patients	NCPS Reported Outcome
Hypertension	Blood Pressure (BP) <140/90 mmHg	GPRA: 52.4% meet BP <140/90mmHG	2,372	100% of patients achieved BP<140/90; Average (BP) 131/76 mm HG
Diabetes	A1c <8%		3,425	Average A1c 7.8%
Tobacco Cessation		CDC reported: 8.8% tobacco cessation quit rate ^{4,5}	760	Tobacco cessation quit rate at 6 months 24.9%

These NCPS outcomes (see Figure 1) highlight the quality of care pharmacists can achieve and maintain. However, only 152 out of 785 pharmacists within IHS held NCPS certification in FY 2023, and at federal IHS, the number of pharmacy visits reached at least 32,328. If tribal sites were included, this number could be substantially higher. More robust outcomes tracking data would be beneficial to demonstrate the success of this model across IHS and not only at sites with NCPS-certified pharmacists who report data.

Economic Impact of Pharmacy Services in the Indian Health Service

In addition to improving clinical outcomes, clinical pharmacists play a critical role in health care delivery by expanding care access and reducing overall health care costs. Numerous studies have shown that pharmacist-directed patient care programs lead to positive clinical, economic, and humanistic benefits.⁶ The collaboration between clinical pharmacists and primary care physicians has the potential to support cost savings while maintaining and improving care quality. A 2008 literature review on the economic impact

of clinical pharmacy services found that for every \$1 invested in a clinical pharmacy practitioner (CPP), \$4.81 was saved in reduced costs or gained in other economic benefits.⁷ Additionally, the Military Health System also saw a positive return on investment of \$2.15 to \$4.21 for every \$1 invested in clinical pharmacists.⁸ Implementing clinical pharmacists in primary care settings could lead to significant cost savings through collaboration with physicians to manage medication regimens and chronic disease states. Examples of potential economic impact from pharmacists:

Diabetes

- An A1c reduction of 1% has demonstrated a 3-year cost savings of \$1,200 to \$4,100 per patient.⁹
- 19,985 patients with diabetes were seen by NCPS-certified pharmacists within IHS from FY 2017 to FY 2023, with an average A1c decrease from baseline of 1.53%. Pharmacists are estimated to have provided cost savings for IHS of approximately \$7,994,000 to \$27,312,900 annually.
- According to the Diabetes Ten City Challenge (DTCC), pharmacists reduced total health care costs in diabetes by \$1,079 per patient annually.¹⁰ In FY2023, NCPS-certified pharmacists within IHS directly provided care for 3,245 patients with diabetes. Based on the DTCC data, this would translate to an estimated \$3,500,000 in cost savings for diabetes care in IHS.

Anticoagulation

- Pharmacist-run anticoagulation clinics have been shown to reduce direct health care costs by approximately \$1,600 per patient compared to standard medical care.¹¹
- 9,097 patients were seen for anticoagulation services by NCPS-certified pharmacists within IHS from FY 2017 to FY 2023, translating to an estimated theoretical reduction in direct health care costs of over \$14,000,000.

Tobacco Cessation

- At 1.5 years after quitting tobacco, patients had \$541 less in health care costs every quarter than smokers, translating to more than \$2,000 saved annually.¹²
- Using NCPSC data from FY 2019 to FY 2023, 5,068 patients were seen, with a 20% quit rate (1,013 patients). This results in an estimated healthcare cost savings of approximately \$2.2 million.

Immunizations

- Since June 2022, 22 pharmacists and pharmacy technicians administered over 7,400 influenza, 10,300 COVID-19, and nearly 14,000 non-flu/non-COVID vaccines. This accounted for over 1/3 of all vaccines administered at this large IHS medical center.
- The IHS facility is in a state that recognizes pharmacists as billable providers. Over \$5.2 million in revenue has been generated since 2022, allowing a full-time staff of 10 individuals to expand access to care through walk-in immunization services with extended hours to accommodate families and children after school/work.

Clinical pharmacists also play a crucial role in optimizing health care delivery by expanding access to care. Staffing shortages were a key challenge in reducing primary care wait times within IHS.¹³ In 2018, IHS had a 29% vacancy rate for physicians, 31% for physician assistants, and 34% for nurse practitioners.¹⁴ For a provider panel of 1,200 patients, PCPs have enough appointment slots to see a patient 2.5 times annually, according to the Veterans Health Administration (VHA).¹⁵ 27% of PCP return appointments were averted following the integration of clinical pharmacists into the VHA primary care Patient Care Aligned Care Team

(PACT). Clinical pharmacists have the potential to offer a cost-effective solution to alleviate the burden on PCPs while improving access to care for patients.

The IHS primary care physician salary range (Tier 3) as of January 2024 is between \$165,000 and \$336,000 (average \$250,500).¹⁶ For the GS-12 IHS Pharmacist, salaries range from \$131,176 to \$171,283 (average \$151,230).¹⁷ Clinical Pharmacist Specialists are eligible for GS-12 positions, as they are typically board-certified or have completed postgraduate residency training. Costs per 30-minute patient encounter are \$60.22 with a primary care physician and \$36.35 with a clinical pharmacist practitioner based on a 40-hour workweek for 52 weeks (see Figure 2). This equates to a potential cost minimization of \$23,870 per 1,000 primary care visits (see Figure 3).

Figure 2. Cost Saving with a Clinical Pharmacist (CP)

Provider Type	Average Salary	Cost Per 30-minute Encounter
Primary Care Physician	\$250,500	\$60.22
Clinical Pharmacist	\$151,230	\$36.35

Figure 3. Potential Cost Minimization

Cost Minimization Converting from PCP to CP 30-minute Encounter	Cost Avoidance Per 1,000 Encounters
\$23.87	\$23,870

Based on the cost per 30-minute encounter, Figure 4 provides potential cost savings for pharmacy primary care visits conducted annually from federal IHS sites.

Figure 4: Potential Cost Savings

	2019	2020	2021	2022	2023
Pharmacy Primary Care Clinic Visits	17,635	12,514	12,324	18,322	19,733
Cost with Primary Care Physician	\$1,061,979.70	\$753,593.08	\$742,151.28	\$1,103,350.84	\$1,188,321.26
Cost with Pharmacist	\$641,032.25	\$454,883.90	\$447,977.40	\$666,004.70	\$717,294.55
Potential Cost Savings	\$420,947.45	\$298,709.18	\$294,173.88	\$437,346.14	\$471,026.71

From 2015 to 2024, pharmacists had 5,509 patient visits in a pharmacist-run disease state clinic at one IHS site in New Mexico. Assuming 30-minute appointments, pharmacists freed up 2,754 hours of provider time, allowing providers to see other patients and potentially increasing care access.

Challenges and Barriers

Despite the benefits of collaborative clinical pharmacy services, several challenges and barriers must be considered to realize their economic value fully.

Lack of Nationwide Legal Recognition as a Health Care Practitioner

Pharmacists are not recognized as health care practitioners under the Social Security Act, Section 1861, and therefore cannot bill Medicare Part B directly for clinical pharmacy services.¹⁸ While some individual states have started to recognize pharmacists as providers in at least one element of their Medicaid program or within state statute, the absence of federal recognition for provider status has nevertheless been an obstacle for consistent reimbursement across the country. Additionally, a lack of correlation was found between a state's recognition of pharmacists as providers and payment for services, as Medicaid and commercial payers often follow Medicare payment policies, further emphasizing the need for federal recognition.¹⁹

A nationwide internal survey conducted in Fall 2023 by the IHS National Pharmacy Council Revenue Enhancement for Clinical Services workgroup assessed the current state of clinical pharmacy billing at federal IHS Pharmacy sites nationwide.²⁰ The following areas were represented: Albuquerque, Billings, Bemidji, Great Plains, Navajo, Oklahoma City, Phoenix, and Portland. Among the 33 respondents offering clinical pharmacy services, approximately 50% reported not receiving payment. The survey highlighted a lack of consistency in billing and reimbursement for clinical pharmacy services, likely due to differences in provider recognition across states.

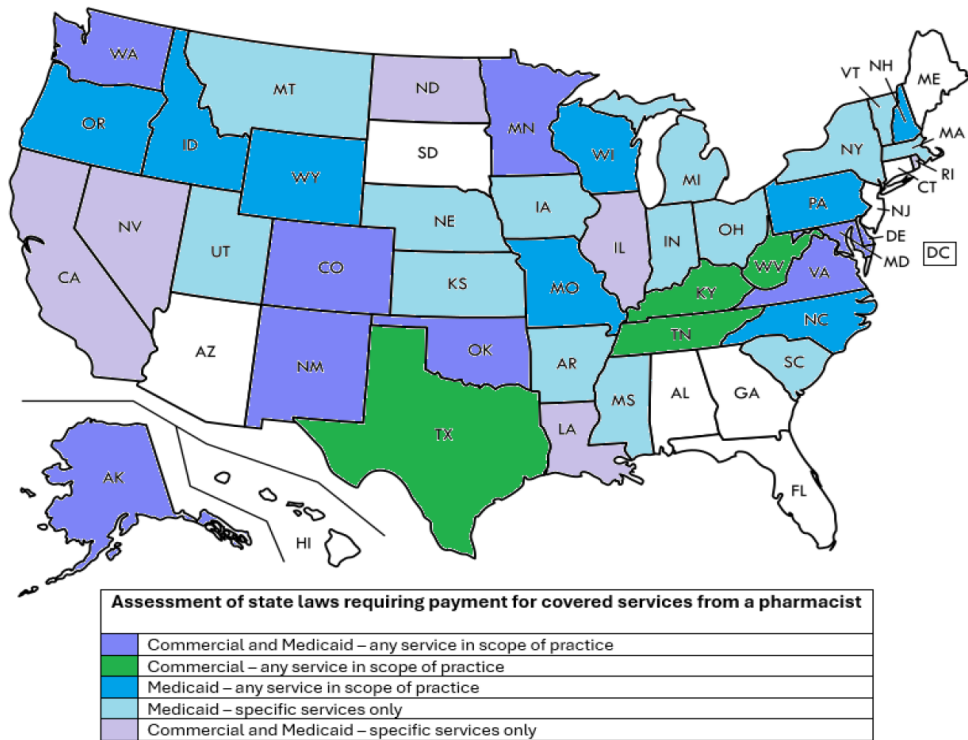
Payment for Pharmacist Services in the United States

As of April 2024, 42 states have passed legislation that requires either the state's Medicaid program or commercial insurance to cover at least one pharmacist service.²¹ New Mexico allows pharmacists to bill both Medicaid and commercial insurance programs. New Mexico is unique because it enables pharmacists with a New Mexico Pharmacist Clinician license, NCPS, or NCPS-Diagnostic certifications to bill New Mexico Medicaid. The billing rate depends on contracts with insurance companies. At one New Mexico IHS facility, the state's Medicaid program provides a flat billing rate of up to \$719, regardless of provider type (MD/DO, advanced practice practitioner, or pharmacist). In FY 2023, a single NCPS-D certified pharmacist generated \$239,610 in reimbursements for the facility, primarily from New Mexico Medicaid. This exceeds the GS-12, Step 10 pharmacist salary (\$171,283), effectively covering the cost of the pharmacist's position.

The average amount reimbursed per visit at one New Mexico facility for the pharmacist was \$635, with a 91% reimbursement rate. In comparison, the average reimbursement per visit for five physicians was \$508 (78% rate of reimbursement), and for three advanced practice practitioners was \$511 (77% reimbursement rate). The total average annual reimbursement for FY 2023 for the physicians and advanced practice practitioners at that site was \$252,000 and \$271,174, respectively. It is important to note that the pharmacist's time in the clinic varied from 1 to 4 days per week due to administrative duties. Increasing clinic time could significantly enhance pharmacist reimbursement and access to care. Nonetheless, the data demonstrates that pharmacists in New Mexico could potentially cover the costs of their positions without imposing financial strain on their respective facilities.

Minnesota allows pharmacists to bill both commercial and Medicaid insurance programs. Like New Mexico, Minnesota Medicaid will enable pharmacists to enroll as individual providers (see Figure 5). Two federal sites in Minnesota reported \$215,238 and \$78,706 in reimbursements for clinical pharmacy services for FY 2024. One has two and a half full-time equivalent pharmacist positions in primary care and behavioral health, and the other has two full-time equivalent pharmacist positions dedicated to providing care within a Patient-Centered Medical Home (PCMH) model, each supporting a PCMH team while supporting pharmacy dispensing operations.

Figure 5. Medicaid and Commercial Reimbursement for Pharmacist Services²²



Conclusion

Clinical pharmacy services within IHS provide a cost-effective solution to improving patient outcomes, expanding access to care, and reducing health care costs. Clinical leaders at IHS facilities are encouraged to capitalize on the opportunity to utilize pharmacists to provide medication and disease state management services through local medical staff credentialing and privileging. However, to fully realize the potential of these services, legislative action is needed to establish federal statutory recognition of pharmacists as health care practitioners. The evidence presented in this white paper strongly supports the integration and expansion of clinical pharmacy services as a critical component of the IHS health care delivery system.

References

1. GlobalData Plc. The Complexities of Physician Supply and Demand: Projections From 2021 to 2036. Washington, DC: AAMC; 2024
2. GPRA report summary 2023: Government performance and results act (GPRA). Indian Health Service. Accessed October 17, 2024. <https://www.ihs.gov/quality/government-performance-and-results-act-gpra/gpra-report-summary-2023/>.
3. GPRA 101 - Indian Health Service. Indian Health Service. Accessed October 17, 2024. https://www.ihs.gov/california/tasks/sites/default/assets/File/BP2014-3_GPRA101_Brennan&Blocker.pdf.
4. Smoking and tobacco use. Centers for Disease Control and Prevention. Accessed October 17, 2024. <https://www.cdc.gov/tobacco/>.
5. VanFrank B, Malarcher A, Cornelius ME, Schechter A, Jamal A, Tynan M. Adult smoking cessation — United States, 2022. *MMWR Morbidity and Mortality Weekly Report*. 2024;73(29):633-641. doi:10.15585/mmwr.mm7329a1
6. Touchette DR, Doloresco F, Suda KJ, et al. Economic evaluations of clinical pharmacy services: 2006-2010. *Pharmacotherapy*. 2014;34(8):771-793. doi:10.1002/phar.1414
7. Perez A, Doloresco F, Hoffman JM, et al. ACCP: economic evaluations of clinical pharmacy services: 2001-2005. *Pharmacotherapy*. 2009;29(1):128. doi:10.1592/phco.29.1.128
8. Kelly S, Juneau RA, Palmrose G, et al. Cost-benefit analysis with return on investment of clinical pharmacists in the Military Health System. *J Manag Care Spec Pharm*. 2024;30(5):456-464. doi:10.18553/jmcp.2024.30.5.456
9. U.S. Department of Agriculture. Fresh for Less Mobile Markets and Curbside Delivery Produce Prescription: Increasing incentives and equity for local fruits and vegetables. National Institute of Food and Agriculture. Accessed October 17, 2024. <https://portal.nifa.usda.gov/web/crisprojectpages/1028996-fresh-for-less-mobile-markets-and-curbside-delivery-produce-prescription-increasing-incentives-and-equity-for-local-fruits-and-vegetables.html>.
10. Fera T, Bluml BM, Ellis WM. Diabetes Ten City Challenge: final economic and clinical results. *J Am Pharm Assoc (2003)*. 2009;49(3):383-391. doi:10.1331/JAPhA.2009.09015
11. Giberson S, Yoder S, Lee MP. Improving Patient and Health System Outcomes through Advanced Pharmacy Practice. A Report to the U.S. Surgeon General. Office of the Chief Pharmacist. U.S. Public Health Service. December 2011.
12. Saul J. Smoking and healthcare costs: When do companies see savings? The EX Program. Accessed October 17, 2024. <https://www.theexprogram.com/resources/blog/smoking-and-health-care-costs-when-do-companies-see-savings/>.
13. Trends in Patient Wait Times for Indian Health Service Facilities: A Mixed-Methods Assessment (Report No. HP-2023-04). Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. January 2023. Accessed October 14, 2024. <https://aspe.hhs.gov/sites/default/files/documents/d97b325fa8b2bdeffc62dba0fb3666a9/IHS-Wait-Times-Report-1-30-2023.pdf>.
14. Calac A. Training Our Own: How to Address Primary Care Shortages Within the Indian Health Service. Accessed October 10, 2024.

- https://www.nihb.org/docs/03092020/Alec%20Calac_Health%20Professional%20Shortages_PAPER.pdf.
15. Optimizing the Clinical Pharmacist Practitioner (CPP) to improve access and quality care. U.S. Department of Veterans Affairs. Accessed September 1, 2024.
https://www.pbm.va.gov/PBM/CPPO/Documents/ExternalFactSheet_OptimizingtheCPPToImproveAccess_508.pdf.
 16. United States Department of Veterans Affairs (VA) Title 38 Physician, Dentist and Podiatrist Pay Ranges for Use at the Indian Health Service. Indian Health Service. Accessed October 5, 2024.
https://www.ihs.gov/sites/ohr/themes/responsive2017/display_objects/documents/paytables/2024/VAPayTablesIHS-1-14-24.pdf.
 17. Indian Health Service Title 38 Special Salary Rate Table #I-07 GS-0660, Pharmacist/Supervisory Pharmacist. Indian Health Service. Accessed October 5, 2024.
https://www.ihs.gov/sites/ohr/themes/responsive2017/display_objects/documents/paytables/2024/2024PharmacistNationwideI-07.pdf.
 18. Developing Trends in Delivery and Reimbursement of Pharmacist Services. National Alliance of State Pharmacy Associations. November 2015. https://naspa.us/wp-content/uploads/2015/11/103015_Avalere_NACDS_WhitePaper_LP_Final.pdf.
 19. Weaver, K. NASPA finds state-level provider status is widespread, but not necessarily linked to payment. Pharmacy Today. February 2014.
 20. Pett R, Jaeger P. Clinical Pharmacy Revenue Survey Summary and Data Analysis. PowerPoint presented at IHS NPC Revenue Enhancement for Clinical Services meeting. January 11, 2024.
 21. Hogue M. Payment for pharmacists' services is spreading quickly across the states. American Pharmacists Association. Accessed October 14, 2024. <https://www.pharmacist.com/CEO-Blog/payment-for-pharmacists-services-is-spreading-quickly-across-the-states>.
 22. Smith M, Bodenheimer T, Robb K. Building The Primary Care Workforce With Pharmacist Clinical Services. Health Affairs. November 13, 2024. Accessed November 16, 2024.
<https://www.healthaffairs.org/content/forefront/building-primary-care-workforce-pharmacist-clinical-services>.