

Prescription Drug Costs & Healthcare Quality: A Cross-National Analysis

Advancing Health Equity through Health Medication Literacy

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INTRODUCTION

Prescription drug affordability significantly impacts healthcare quality and health literacy in modern healthcare systems. In the United States, where pharmaceutical companies set prices with minimal oversight, 29% of adults report not taking medications as prescribed due to cost concerns, with 8% experiencing worsened health conditions as a result.

This reality contrasts sharply with other developed nations where government-regulated pricing ensures broader access to essential medications. As U.S. prescription drug expenditures reached \$460 billion in 2024, understanding how different pricing approaches affect health outcomes becomes increasingly urgent.

This study investigates how divergent approaches to drug pricing across six developed regions impact health outcomes and practical health literacy, providing evidence-based solutions to mitigate affordability barriers and advance health equity.

- Research Objectives:**
- Analyze prescription drug pricing mechanisms across six developed regions
 - Evaluate the relationship between drug affordability and medication adherence
 - Identify how health literacy impacts patient decision-making regarding prescribed medications
 - Develop evidence-based recommendations for healthcare professionals to improve medication adherence

DESIGN/METHODS

- Comparative Analysis Framework:**
- Countries Studied:** United States, European Union member states, Japan, Canada, Australia, and United Kingdom
 - Time Period:** 2022-2025
 - Data Sources:** Government health databases, pharmaceutical pricing reports, patient surveys, health literacy assessments

- Methodological Approach:**
- Literature Review:** Comprehensive analysis of pricing mechanisms, regulatory frameworks, and health outcomes across six regions
 - Quantitative Analysis:** Statistical comparison of drug prices, medication adherence rates, and health literacy scores
 - Qualitative Assessment:** Evaluation of patient experiences and healthcare provider perspectives
 - Policy Analysis:** Examination of regulatory approaches and their impact on affordability and access

- Analytical Focus:**
- Pricing mechanisms and their impact on affordability
 - Relationship between cost barriers & medication adherence
 - Health literacy's role in patient decision-making
 - Effectiveness of existing interventions

References

Prescription drug spending in the U.S. health care system. American Academy of Actuaries. <https://www.actuary.org>
Alexander, G. C., & Stafford, R. S. (2015). Does comparative effectiveness have a comparative edge? PubMed Central. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4406401/>

RESULTS

Comparative Analysis of Pricing Mechanisms:

- United States:** Market-driven pricing resulting in costs 2.78 times higher than 33 other OECD (Organization for Economic cooperation and Developemnt) countries
- Canada:** Government regulation through PMPRB (Patented Medince Prices Review Board) resulting in brand-name medications costing nearly three times less than in the U.S.
- European Union:** Value-based negotiations leading to decreased AMNOG (pharmaceutical expenditure growth) (0.7% decrease in Germany after Pharmaceuticals Market Reorganization Act implementation compared to 2.7% increase in U.S.)
- Japan:** Hybrid pricing model with government-capped profit margins at 17% under National Health Insurance
- Australia:** Direct government negotiation through PBSB (Positive Behavior Support)
- United Kingdom:** NHS bulk purchasing resulting in dramatic price differences (e.g., Actimmune: \$52,321 in U.S. vs. \$5,897 in UK)

Impact on Medication Adherence and Patient Behavior:

- 1/3 of Americans don't fill prescriptions due to cost concerns
- 21% opt for over-the-counter alternatives instead of prescribed medications
- 12% cut pills in half or skip doses to extend prescriptions
- These behaviors directly compromise treatment efficacy and patient outcomes

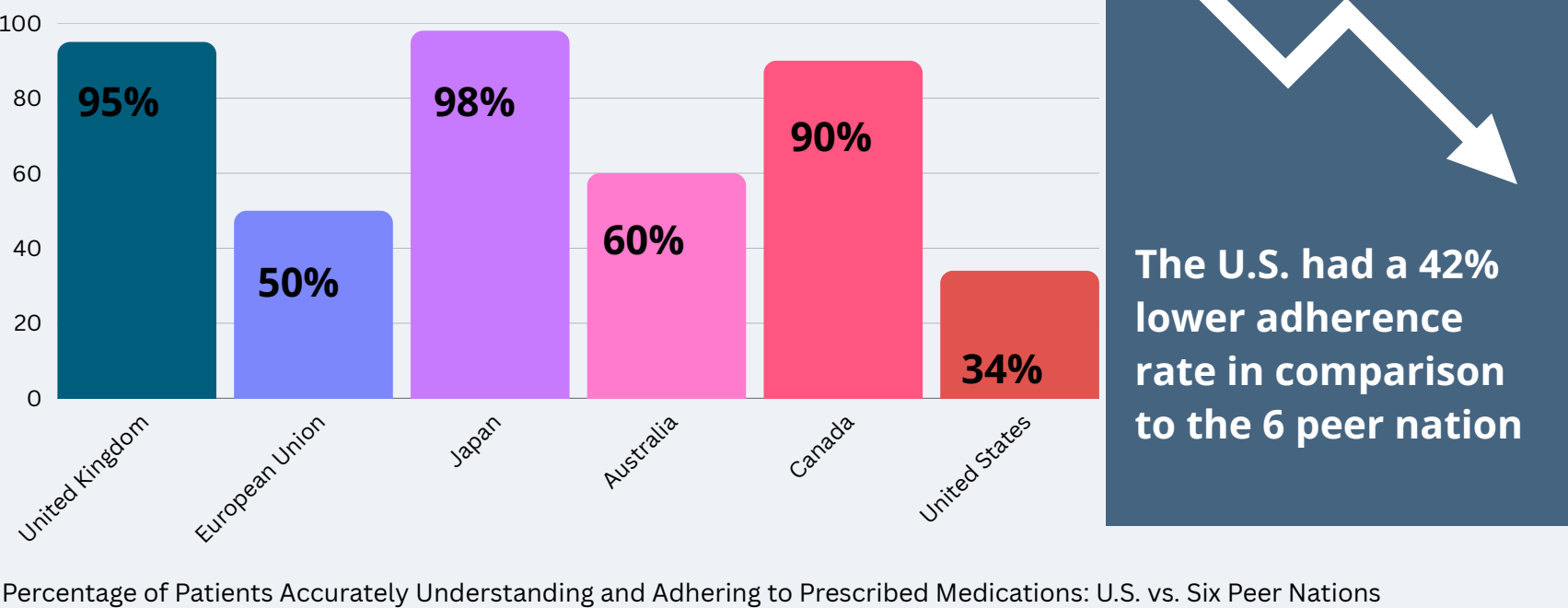
Economic Impact Analysis:

- U.S. pharmaceutical expenditures increased by 13.6% from 2022 to 2023, totaling \$722.5 billion
- Potential Medicare savings of over \$450 billion in 10 years through expanded price negotiations
- Global medicine spending projected to reach \$1.6 trillion by the end of 2025, growing at 3-6% CAGR (Compound Annual Growth Rate)

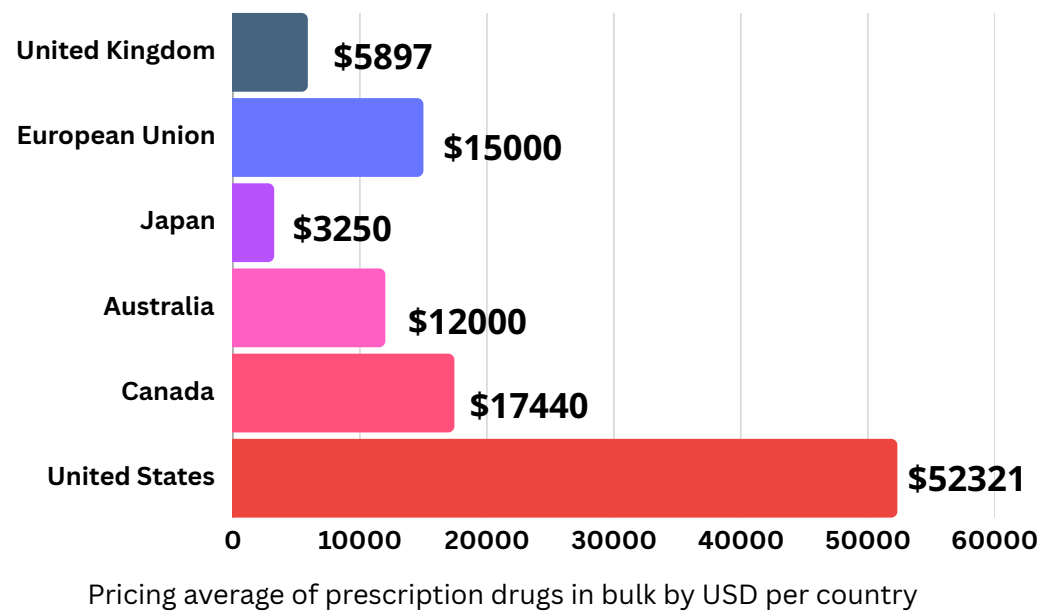
Effectiveness of Intervention Strategies:

- Evidence supporting medication literacy assessments in improving patient understanding
- Cost-transparency tools enabling informed decision-making
- Digital medication management platforms increasing adherence rates among patients with chronic conditions

Adherence Rates

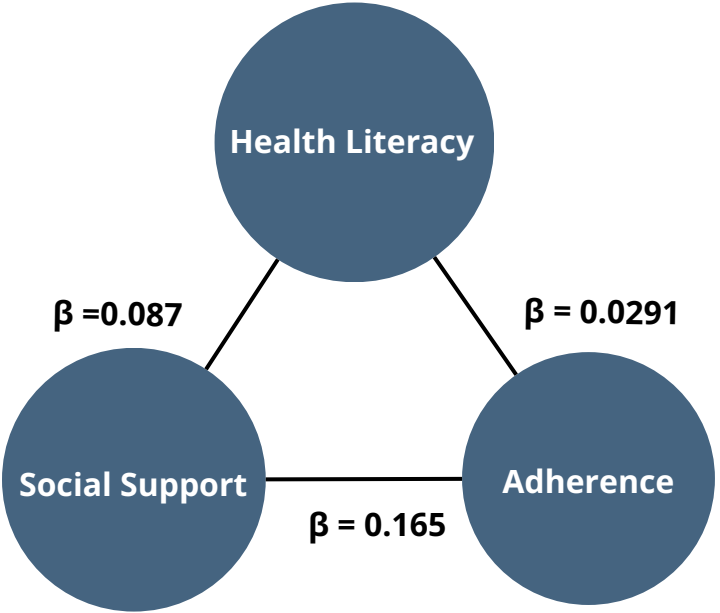


Cost Rates



Health Literacy and Adherence Correlation

Statistical evidence showing health literacy directly influences medication adherence ($\beta = 0.291$, $P < 0.001$)
Social support indirectly influences adherence through health literacy ($\beta = 0.087$, $P < 0.001$)
Social support directly affects adherence ($\beta = 0.165$, $P < 0.001$)



CONCLUSION

Government regulation of drug prices is closely tied to both healthcare quality and health literacy. Countries with centralized drug pricing systems (e.g., Canada, UK) show stronger adherence and better patient outcomes than the U.S., where market-driven pricing creates affordability barriers that worsen health disparities.

- Key Insights:**
- Regulatory Approach Matters:** Government intervention in drug pricing correlates strongly with medication affordability and adherence
 - Health Literacy is Critical:** Patients with higher health literacy navigate cost barriers more effectively
 - Systemic Reform Needed:** While the Inflation Reduction Act represents progress, more comprehensive approaches are necessary
 - Practical Interventions Work:** Healthcare professionals can implement targeted strategies to improve medication adherence even within existing constraints

Looking ahead, future research should focus on evaluating the long-term impact of wage-adjusted subsidies and the ethical governance of AI in healthcare to further advance equity and informed access to care.

CONNECTION TO IHA'S MISSION

- Advances Practical Health Literacy:** Proposes actionable strategies (e.g., digital tools) to help patients understand and manage medication costs and instructions.
- Promotes Health Equity:** Supports inclusive policies to reduce barriers for low-income and marginalized groups, aligning with IHA's commitment to equitable healthcare access.
- Empowers Patients and Providers:** Encourages solutions that enable both patients and providers to overcome medication-related challenges, reflecting the IHA's focus on real-world impact.

RECOMMENDATIONS: HEALTH PROFESSIONALS

- Implement Medication Literacy Assessments:** Incorporate standardized tools to identify patients struggling with medication understanding & Target educational interventions based on results.
- Develop Cost-Transparency Tools:** Leverage digital platforms for medication price comparisons & Help patients access available discounts and assistance programs
- Utilize Prescription Assistance Program Navigators:** Refer patients to navigators or support staff for help with applications and accessing resources & Reduce administrative burdens for accessing life-saving resources
- Support Adherence:** Recommend reminder tools (apps, pillboxes) for patients with complex regimens.