

Economic Consequences of Underuse of Generic Drugs: Evidence from Medicaid and Implications for Prescription Drug Benefit Plans

Michael A. Fischer, Jerry Avorn

First published: 12 August 2003

<https://doi.org/10.1111/1475-6773.00162>

Citations: 49

This work was supported in part by a grant from the National Institute on Aging (AG-18395-0). Dr. Fischer was supported by a training grant on Epidemiology and Aging, also from the National Institute on Aging (AG-00158).

Abstract

Objective. To calculate the financial impact of underuse of generic medications in state Medicaid programs.

Data Sources/Study Setting. State-by-state data on Medicaid drug spending for 48 states and the District of Columbia in calendar year 2000.

Study Design. We compared the total amount paid by each state Medicaid program for brand name prescriptions with the amount that would have been paid for generic versions of the same agent, to estimate the level of unrealized savings from use of substitutable generic drugs. We also examined whether variation in prices between states represented a potential source of unrealized savings.

Principal Findings. Analysis of state-by-state Medicaid prescription drug spending in 2000 identified potential savings of \$229 million that could have been realized from greater use of generic drugs. If the best available prices from each state had been used nationally, savings would have increased to \$450 million. The majority of the unrealized savings were concentrated in a small group of medications, including clozapine, alprazolam, and levothyroxine.

Conclusions. Federal regulations on prescription drug reimbursement limit the excess spending on brand name drugs in the Medicaid program to a small percentage of total spending, although the absolute dollar amount is large. Further savings could be realized if lowest available prices were used nationwide. Concentrating on specific agents may be a productive way to address the unrealized savings.

References

Ahluwalia, J. S., M. L. Weisenberger, A. M. Bernard, and S. E. McNaghy. 1996. "Changing Physician Prescribing Behavior: A Low-Cost Administrative Policy that Reduced the Use of Brand-Name Nonsteroidal Anti-inflammatory Drugs." *Preventive Medicine* 25 (6): 668-72.

Bae, J. 1997. "Drug Patent Expirations and the Speed of Generic Entry. *Health Services Research* 32 (1): 87-101.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Baker, J. J., H. Moessner, U. Gonzalez, J. Grabenstein, R. Renard, T. DeNapoli, R. Jummers, and B. Schuster. 1988. "Clinical Relevance of the Substitution of Different Brands of Sustained-Release Theophylline. *Journal of Allergy and Clinical Immunology* 81 (4): 664-73.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Banahan, B. F. I., and E. Kolassa. 1997. "A Physician Survey on Generic Drugs and Substitution of Critical Dose Medications. *Archives of Internal Medicine* 157 (18): 2080-8.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Benson, S., and K. Vance-Bryan. 1998. "In Favor of Coumadin over Generic Warfarin. *American Journal of Health System Pharmacy* 55 (7): 727-9.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

DeCara, J., S. Croze, and R. Falk. 1998. "Generic Warfarin: A Cost-Effective Alternative to Brand-name Drug or a Clinical Wild Card? *Chest* 113 (2): 261-3.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Dong, B. J., W. W. Huack, J. G. Gambertoglio, L. Gee, J. R. White, J. L. Bupb, and F. J. Greenspan. 1997. "Bioequivalence of Generic and Brand-name Levothyroxine Products in the Treatment of Hypothyroidism. *Journal of the American Medical Association* 277 (15): 1205-13.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

First Data Bank. 2000. *National Drug Data File*. San Bruno, CA: Hearst Corporation.

[Google Scholar](#) |

Haines, S. 1998. "Reflections on Generic Warfarin. *American Journal of Health System Pharmacy* 55 (7): 729-33.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#) |

Health Care Financing Administration. 2002. *National Health Care Expenditure Projections: 2001-2011*. Washington, DC: Health Care Financing Administration.

[Google Scholar](#) |

Health Care Financing Administration. 2000. *State Drug Utilization Data*. Washington, DC: Health Care Financing Administration.

[Google Scholar](#)

Hellerstein, J. K. 1998. "The Importance of the Physician in the Generic versus Trade-name Prescription Decision. *RAND Journal of Economics* 29 (1): 108–36.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Hendeles, L., A. Breton, R. Beaty, and E. Harman. 1995. "Therapeutic Equivalence of Generic Slow-Release Theophylline Tablet. *Pharmacotherapy* 15 (3): 26–35.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Jounela, A., and A. Sothmann. 1973. "Bioavailability of Digoxin. *Lancet* 1 (7796): 202–3.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Kanthawatana, S., R. Ahrens, M. McCubbin, E. Bronsky, K. Blake, and L. Hendeles. 1994. "Bioequivalence of Generic Slow-Release Theophylline Tablet in Children. *Journal of Pediatrics* 125 (6, part 1): 987–91.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Kramer, P. 1989. "Slow-Release Theophylline: Substitute Only AB-Rated Products. *American Pharmacy* (3) NS29: 23–4.

[CAS](#) | [PubMed](#) | [Google Scholar](#)

Lindenbaum, J., M. Mellow, M. Blackstone, and V. J. Butler. 1971. "Variation in Biologic Availability of Digoxin from Four Preparations. *New England Journal of Medicine* 285 (24): 1344–7.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

McAlister, F. A., A. Laupacis, G. A. Wells, and D. L. Sackett. 1999. "For the Evidence-Based Medicine Working Group. Users' Guides to the Medical Literature, XIX: Applying Clinical Trial Results, B: Guidelines for Determining Whether a Drug is Exerting (More Than) a Class Effect. *Journal of the American Medical Association* 282 (14): 1371–7.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Murphy, J. 1999. "Generic Substitution and Optimal Patient Care. *Archives of Internal Medicine* 159 (5): 429–33.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

National Pharmaceutical Council. 1998. *Pharmaceutical Benefits under State Medical Assistance Programs*. Reston, VA: National Pharmaceutical Council.

[Google Scholar](#)

Nightingale, S. L. 1998. "Generic Substitution. *Journal of the American Medical Association* 279 (9): 645.

[CAS](#) | [PubMed](#) | [Google Scholar](#)

Reissell, P., V. Manninen, K. Ojala, and J. Karjalainen. 1974. "Non-equivalence of Digoxin Tablets. *Annals of Clinical Research* 6 (11, supplement): 4-8.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Rennie, D. 1997. "Thyroid Storm. *Journal of the American Medical Association* 277 (15): 1238-43.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Schneeweiss, S., A. M. Walker, R. J. Glynn, M. Maclure, C. Dormuth, and S. B. Soumerai. 2002. "Outcome of Reference Pricing for Angiotensin-Converting-Enzyme Inhibitors. *New England Journal of Medicine* 346 (11): 822-9.

[PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Stolberg, S. G., and J. Gerth. 2000. "How Companies Stall Generics and Keep Themselves Healthy. *New York Times* 23 July, 1, 12.

[Google Scholar](#)

U.S. Government Accounting Office. 1999. *Medicare: Considerations for Adding a Prescription Drug Benefit*. Report no. GAO/T-HEHS-99-153. Washington, DC: U. S. Government Accounting Office.

[Google Scholar](#)

Weintraub, M., F. Karch, J. Morgan, N. Trabert, A. Sorensen, L. A. Becker, and L. Lasagna. 1979. "Digoxin-Prescribing: Mostly Good News. *Journal of the American Medical Association* 242 (5): 445-8.

[CAS](#) | [PubMed](#) | [Web of Science®](#) | [Google Scholar](#)

Wittkowsky, A. 1998. "Generic Warfarin: Implications for Patient Care. *Pharmacotherapy* 17 (4): 640-3.

[Web of Science®](#) | [Google Scholar](#)

ABOUT WILEY ONLINE LIBRARY

[Privacy Policy](#)
[Terms of Use](#)
[About Cookies](#)
[Manage Cookies](#)
[Accessibility](#)
[Wiley Research DE&I Statement and Publishing Policies](#)
[Developing World Access](#)

HELP & SUPPORT

[Contact Us](#)
[Training and Support](#)
[DMCA & Reporting Piracy](#)

OPPORTUNITIES

[Subscription Agents](#)
[Advertisers & Corporate Partners](#)

CONNECT WITH WILEY

[The Wiley Network](#)
[Wiley Press Room](#)