



This content is available to subscribers. [Subscribe now](#). Already have an account? [Sign in](#).

SPECIAL ARTICLE ARCHIVE



How Do Financial Incentives Affect Physicians' Clinical Decisions and the Financial Performance of Health Maintenance Organizations?

Authors: Alan L. Hillman, M.D., M.B.A., Mark V. Pauly, Ph.D., and Joseph J. Kerstein, M.B.A. [Author Info & Affiliations](#)

Published July 13, 1989 | N Engl J Med 1989;321:86-92 | DOI: 10.1056/NEJM198907133210205 | [VOL. 321 NO. 2](#)



Abstract

It has been suggested that the use of financial incentives by health maintenance organizations (HMOs) may change physicians' behavior toward individual patients. To test this hypothesis, we used a regression analysis of data from a survey of HMOs to examine the relation between the presence of financial incentives and two measures of the use of resources (the rate of hospitalization and the rate of visits for outpatient services) and one measure of the HMOs' financial viability (the achievement of break-even status). When we controlled for the effect of market-area variables, we found that some forms of compensation were significantly associated with these indicators of decision making by physicians. Among methods of paying physicians, the use of capitation or salaries was associated with a lower rate of hospitalization than the use of fee-for-service payment; physicians in for-profit HMOs and group-model HMOs also used the hospital less often. Placing physicians at financial risk as individuals and imposing penalties for deficits in the HMO's hospital fund beyond the loss of withheld funds were associated with fewer outpatient visits per enrollee, but a higher percentage of HMO patients in a physician's caseload was associated with more frequent visits. HMOs were more likely to break even if they were larger, older, had physicians who treated more HMO patients, and placed physicians at personal financial risk for the cost of outpatient tests; break-even status was also related to the type of HMO. We conclude that the use of some, but not all, financial incentives, as well as the type of HMO, does influence the behavior of physicians toward patients. It remains to be determined how these factors affect the quality of care. (N Engl J Med 1989; 321:86–92.)

This article is available to subscribers.

[SUBSCRIBE →](#)

NOTES

Dr. Hillman is a Teaching and Research Scholar of the American College of Physicians.

We are indebted to Mr. Chester Ching for help with the research, to Dr. Eugene Kroch for statistical advice, to Drs. John Eisenberg and W. Pete Welch for advice, and to Ms. Danita Joell for administrative assistance.



ARTICLE CATEGORIES

Research

Reviews

Clinical Cases

Perspective

Commentary

Other

Browse all Articles

Current Issue

Issue Index

RESOURCES

Authors & Reviewers

Submit a Manuscript

Subscribers

Institutional Administrators

Media

Advertisers

Agents

Permissions & Licensing

Reprints

NEJM CareerCenter

ABOUT US

About NEJM

NEJM Group

Products & Services

Editors & Publishers

Advertising Policies

Contact Us

Accessibility

FAQs

Help

Site Feedback

SUBSCRIPTIONS

Subscribe

Renew

Activate Subscription

Create Account

Manage Account

Pay Bill

Institution Subscriptions

Special Content

STAY CONNECTED

Email Alerts

Create Account

Apps


NEJM CareerCenter


Podcasts


RSS Feed


Remote Access


FOLLOW US


 Facebook


 X (formerly Twitter)

 Instagram

 Youtube

 LinkedIn

 Bluesky

 TikTok

JOURNALS

[The New England Journal of Medicine](#) | [NEJM Catalyst Innovations in Care Delivery](#) | [NEJM Evidence](#) | [NEJM AI](#)

Copyright © 2025 [Massachusetts Medical Society](#). All rights reserved, including those for text and data mining, AI training, and similar technologies. Electronic ISSN 1533-4406. Print ISSN 0028-4793. The content of this site is intended for health care professionals.

[Copyright](#) | [Terms](#) | [Privacy Policy](#)

