

- larization of the survival curve in the Netherlands, 1950–1992. *Gerontologist*. 1996;36:773–782.
9. Duffy ME, MacDonald E. Determinants of functional health of older persons. *Gerontologist*. 1990;30:503–509.
 10. House JS, Kessler RC, Herzog AR, Mero RP, Kinney AM, Breslow MJ. Age, socioeconomic status, and health. *Milbank Mem Fund Q*. 1990;68:383–411.
 11. Leigh JP, Fries JF. Education, gender and the compression of morbidity. *Int J Aging Hum Dev*. 1994;39:233–246.
 12. Fries JF, Singh G, Morfeld D, Hubert HB, Lane NE, Brown BW Jr. Running and the development of disability with age. *Ann Intern Med*. 1994;121:502–509.
 13. Stewart AL, King AC, Haskell WL. Endurance exercise and health-related quality of life in 50–65 year-old adults. *Gerontologist*. 1993;33:782–789.
 14. Vita AJ, Hubert HB, Fries JF. Lifestyle risk factors and compression of lifetime disability. *Arthritis Rheum*. In press.
 15. Fries JF, Koop CE, Beadle CE, and The Health Project Consortium. Reducing health care costs by reducing the need and demand for medical services. *N Engl J Med*. 1993;329:321–325.
 16. Wagner EH, LaCroix AZ, Grothaus L, et al. Preventing disability and falls in older adults: a population-based randomized trial. *Am J Public Health*. 1994;84:1800–1806.
 17. Fries JF, Carey C, McShane DJ. Patient education in arthritis: randomized controlled trial of a mail-delivered program. *J Rheumatol*. 1997;24:1378–1383.
 18. Montgomery EB Jr, Leiberman A, Singh G, Fries JF. Patient education and health promotion can be effective in Parkinson's disease: a randomized controlled trial. *Am J Med*. 1994;97:429–435.
 19. Fries JF, Harrington H, Edward R, Kent LA, Richardson N. Randomized controlled trial of cost reductions from a health education program: the California Public Employees' Retirement System (PERS). *Am J Health Promotion*. 1994;9:79–92.
 20. Murray JL, Lopez AD, eds. *The Global Burden of Disease. Summary*. Cambridge, Mass: Harvard University Press; 1996.
 21. Fries JF. Prevention of osteoporotic fractures: possibilities, the role of exercise, and limitations. *Scand J Rheumatol*. 1996; 25:6–10.

Editorial: Goliath and Some Davids in the Tobacco Wars

The 40-Year Tobacco Wars, some have thought hopefully, are drawing to a close. Tobacco lords at last face the divulgence of information, with serious criminal and civil implications. Their financial empire threatened, they have negotiated a treaty. They seem to promise in good faith to cease and desist from waging continuous campaigns to entice and entrap smokers by addiction, at least among the young. With this promise goes a grant of virtual legal immunity.

Critics have underlined the loopholes in the treaty, for example, the weakened authority of the Food and Drug Administration and the imposition of an unprovable condition (to show the absence of a black market in cigarettes) on the regulators. As Kenneth Warner has pointed out in this Journal,¹ the agreement has a primary concern for financial compensation to the states, limited concern for the public health in the United States, and none for the health of publics abroad.

In these battles with the tobacco Goliath, public health has had one literal David—David Kessler—and another metaphorical one—C. Everett Koop. A third valiant is Stanton Glantz. He has contributed several papers to this Journal.^{2–7} One paper in particular—which deflated the claim that smoke-free restaurant ordinances depress restaurant sales³—has been impugned by the tobacco industry as fatally flawed.⁸

The tobacco industry has launched a personal attack upon Glantz's credibility and integrity as a scientist. Plainly, the aim is to destroy his career. The industry has assailed him in press conferences and

letters to government representatives and has formed a "public interest organization" (Californians for Scientific Integrity), seemingly for the sole purpose of suing him and his employer (the University of California). Contrary to the tobacco industry's claims, Glantz's contributions to this Journal have been sound and valid and attest to an unceasing and imaginative effort to limit the tobacco epidemic.

Glantz and Smith³ studied the effect of smoke-free restaurant ordinances on restaurant sales in the first 15 cities in the United States to enact such ordinances. Sales were measured by tax receipts, a suitably objective outcome that leaves no room for investigator bias. The period of observation was 1986 through 1993. The authors compared sales in these 15 cities with those in 15 matched cities without ordinances. No impact on revenues was found in the period after enactment.

Recently, nearly 3 years after publication, I received a letter about the paper. Addressed to me as Editor of the Journal, it was signed by Thomas Humber, president of the National Smokers Alliance. He informed me that the article had become, for the advocates of bans, "the standard reference" on the economic consequences of smoking bans. He went on to say, however, that an economist with excellent credentials, Michael Evans, had found the paper seriously flawed, and he enclosed the relevant review. Humber asked, therefore, that we re-review the paper in light of its manifest errors. In a letter of the same date to Richard Atkinson, president of the University of California, the National Smokers Alliance charged Glantz

as a faculty member with scientific incompetence or fraud in respect to the same paper.

Three facts embodied in Humber's letter are pertinent to its interpretation. The first fact is that the National Smokers Alliance chose to publicize Evans' critique at a press conference (held on the ostensible date of the letters to me and to the president of the University of California). Humber wrote that he "was aware" that our embargo rule for publication precluded submission of the critique to the Journal. He thus made clear by implication that he was aware that the proper forum for rebuttal of a scientific article is in the columns of the journal that published it.

His reason for not submitting the critique for publication is manifestly specious. The Journal specifies no embargo rules for critiques or rebuttals. In the face of uncertainty about the rules, authors can and should consult the staff of the Journal.

The second pertinent fact is Humber's stated reason for bypassing normal scientific procedure. This reason was the "damage being done by the Glantz study across the country." In other words, large losses for restaurateurs resulted from the smoking bans promoted by Glantz and Smith. These are crocodile tears. The tobacco industry weeps no tears for small business; it fights to the death to sustain and expand its own sales.

The third fact, frankly revealing the provenance of this attack on Glantz and Smith, is that the letter refers to the fact that the National Smokers Alliance "openly and gratefully" accepts "tobacco

money.” (Indeed, the Alliance was reportedly formed by the public relations firm Burson-Marsteller for Philip Morris.⁹)

In any event, we have again reviewed the paper in question, both editorially (myself) and by peer review. This review considered all the points made by Evans. In addition, in this issue we publish a follow-up study by Glantz and Smith.¹⁰ The paper reinforces the authors’ previous finding of no adverse effect of smoking bans on revenues, either for restaurants or for bars. The passage of time allows 3 more years of data to be added to the database. All reviewers agreed that both the previous work³ and the new work¹⁰ are sound.

Evans found one factual error of potential significance in Glantz and Smith³; namely, that the authors assumed that smoking bans began on the dates the ordinances were passed instead of on the dates they went into effect. These dates were not always the same. The periods for effective bans as corrected by the authors do not alter the published conclusions.¹¹

For the rest, Evans makes a show of reexamining the available data in much detail. Instead of a compelling critique, however, we find a melange of scientifically inadmissible manipulations of data to obtain a desired result. These are conflated with a flurry of suppositions as to what *could* be. Suppositions are then translated by mere assertion into factual “serious” flaws. Even if the Evans critique can pass in the field of economics for legitimate science—something I do not credit—it cannot pass in this Journal. Certainly, no economist has submitted so tendentious and meretricious an argument during my tenure.

We do not expect our detailed re-review and the further data presented in this issue to end the matter. Recently, I received a letter from a law firm retained by the National Smokers Alliance and Californians for Scientific Integrity. The letter asks for materials we have relating to the previous Glantz and Smith paper³—such as peer reviews and relevant data—to be used in an investigation of a possible charge of scientific fraud. (Since then, Californians for Scientific Integrity has filed suit against the University of California, making these same allegations. At a hearing on July 23, 1997, the judge ruled that the claims were unlikely to be sustained in court and denied the organization a restraining order against Dr Glantz.)

Glantz has himself done a good deal of work on how the tobacco industry created and uses the “smokers rights”

movement to attack legitimate science,^{5,7,12–15} work sufficient in itself to provoke the tobacco lords. Notably, he published, in *The Journal of the American Medical Association*,^{16–20} incriminating documents from the files of Brown and Williamson, a subsidiary of the British American Tobacco company. The journal’s editors and the entire board of directors of the American Medical Association²¹ signed the accompanying editorial comment. A book-length treatment of these documents²² has become a key reference for attorneys prosecuting the tobacco industry in the current flurry of litigation.

This attack on Glantz is nothing new. The tobacco lords, working through smokers rights groups and congressional lobbyists, sparked a strenuous if unsuccessful attempt late in 1995 by Congressman John Porter (R-Ill), chair of the House appropriations subcommittee that deals with the budget of the National Institutes of Health, to terminate Glantz’s National Cancer Institute grant.²³ The grant funded both the new restaurant study and the work on the Brown and Williamson documents.

History shows that agreements with the tobacco lords create only an illusion of surrender. In this editorial, we bring to notice one more indicator that the wars continue. In this battle, and many before it, we have seen the tobacco lords victorious and, when not outright victors, able to outmaneuver their opponents and evade the consequences of apparent defeats. So it was with notices that cigarettes are “harmful to your health.” And so it was again with advertising on television, when powerful and effective tobacco counteradvertisements were abandoned in exchange for the elimination of tobacco advertisements. Now, in face of the flawed “global settlement” states attorneys general reached with the industry, public health must not lower its guard. Reliance on state and individual litigation rather than on Congress could be the better course.

Having diversified into huge conglomerates, the tobacco lords put out tentacles that reach ever farther, into Congress, into the press and the media, into ostensibly scientific literature, and indeed, into every potential point of influence. This is not a war that public health can quit when all that has been won is a skirmish, a battle, or even a campaign. The tobacco industry is waging its own world war. So must we. □

Mervyn Susser
Editor

References

1. Warner K. Dealing with tobacco—the implications of a legislative settlement with the tobacco industry. *Am J Public Health*. 1997;87:906–909.
2. Begay ME, Traynor M, Glantz SA. The tobacco industry, state politics, and tobacco education in California. *Am J Public Health*. 1993;83:1214–1221.
3. Glantz S, Smith LRA. The effect of ordinances requiring smoke-free restaurants on restaurant sales. *Am J Public Health*. 1994;84:1081–1085.
4. Hazan A, Lipton H, Glantz S. Popular films do not reflect current tobacco use. *Am J Public Health*. 1994;84:998–1000.
5. Cardador T, Hazan A, Glantz S. Tobacco industry smokers’ rights publications: a content analysis. *Am J Public Health*. 1995;85:1212–1217.
6. Glantz S. Preventing tobacco use: the youth access trap. *Am J Public Health*. 1996;86:156–158.
7. Macdonald H, Aguinaga S, Glantz S. The defeat of Philip Morris’ ‘California Uniform Tobacco Control Act.’ *Am J Public Health*. In press.
8. Richards B. Pro-tobacco groups step up attacks on a longtime foe. *Wall Street J*. July 23, 1997:B1.
9. Stauber J, Rampton S. *Toxic Sludge Is Good for You*. Monroe, Me: Common Courage Press; 1995:14, 29–31.
10. Glantz S, Smith L. The effect of ordinances requiring smoke-free restaurants and bars on revenues: a follow-up. *Am J Public Health*. 1997;87:1687–1692.
11. Erratum. In: Glantz S, Smith L. The effect of ordinances requiring smoke-free restaurants on restaurant sales. *Am J Public Health*. 1997;87:1729–1730.
12. Samuels B, Glantz S. The politics of local tobacco control. *JAMA*. 1991;266:2110–2117.
13. Samuels B, Begay M, Hazan A, Glantz S. Philip Morris’ failed experiment in Pittsburgh. *J Health Polit Policy Law*. 1992;17:329–351.
14. Traynor MP, Begay ME, Glantz SA. New tobacco industry strategy to prevent local tobacco control. *JAMA*. 1993;270:479–486.
15. Aguinaga S, Glantz S. The use of the public records acts to disrupt tobacco control. *Tobacco Control*. 1995;4:222–230.
16. Glantz SA, Barnes DE, Bero L, Hanauer P, Slade J. Looking through a keyhole at the tobacco industry: the Brown and Williamson documents. *JAMA*. 1995;274:219–224.
17. Slade J, Bero L, Hanauer P, Barnes DE, Glantz SA. Nicotine and addiction: the Brown and Williamson documents. *JAMA*. 1995;274:225–233.
18. Hanauer P, Slade J, Barnes DE, Bero L, Glantz SA. Lawyer control of internal scientific research to protect against products liability lawsuits: the Brown and Williamson documents. *JAMA*. 1995;274:234–240.
19. Bero L, Barnes DE, Hanauer P, Slade J,

- Glantz SA. Lawyer control of the tobacco industry's external research program: the Brown and Williamson documents. *JAMA*. 1995;274:241-247.
20. Barnes DE, Hanauer P, Slade J, Bero LA, Glantz SA. Environmental tobacco smoke: the Brown and Williamson documents. *JAMA*. 1995;274:248-253.
21. Todd JS, Rennie D, McAfee RE, et al. The Brown and Williamson documents: where do we go from here? *JAMA*. 1995;274:256-259. Editorial.
22. Glantz SA, Barnes DE, Bero L, Hanauer P, Slade J. *The Cigarette Papers*. Berkeley, Calif: University of California Press; 1996; 219-224.
23. Wiener J. The cigarette papers. *The Nation*. January 1, 1996:11-18.

Annotation: Issues in Equalizing Medicare Expenditures—The Devil Is in the Details

Geographic variation in health care use raises both empirical and policy questions. The empirical questions relate to cause and effect: What factors account for the variation observed, and what are the consequences of variation for the health and well-being of individuals and populations? The prescriptive policy questions lie in the realm of values and action: To what extent is variation "justified" or justifiable, and how should inequities be redressed? The former questions are amenable to research and analysis; the latter ultimately must be resolved through the political process. We need good answers to empirical questions to solve technical problems, and to set the stage for debating policy questions. We need open discussion and argument about values, so that we can examine assumptions about proper policy that may underlie research findings.

Kane and Friedman's article in this issue of the Journal¹ makes an important contribution to this two-track process through both its empirical work and its open advocacy of redistributive reform. Examining geographic variation in current Medicare expenditures, the authors find that substantial interstate variation persists after they control for sociodemographic differences in the population. Health care system characteristics such as the number of hospital beds in a state and the proportion of primary care physicians account for much of this variation.

The authors' position is clear: expenditure variation across states is a problem—disparities attributable to population characteristics are legitimate, but disparities attributable to supply-side characteristics are not. Furthermore, Medicare payments should not reward high-expenditure states. As policymakers debate proposals to avert the pending Medicare trust fund deficit, Kane and Friedman argue against across-the-board Medicare cuts. Instead they advocate targeted efforts to ensure that states with lower spending will be treated less harshly than those that have been more "profligate."

When Congress enacted Medicare as a universal entitlement, the assumption was that the program would pay for medical care "without regard to personal income or means but based on some more or less objective indicator of need."² The law did not spell out objective indicators. Rather, it relied on certified health care providers (hospitals, doctors, nursing facilities, etc.) to ensure that medical need would drive service provision. The underlying conception of equity as "need-based" equality of utilization" became the standard for evaluating program results.³ Health services researchers developed measures of self-reported health status as a proxy for need and examined use of hospitals and physician visits as a function of health status. National surveys based on these measures found that Medicare attenuated the relationship between income and service use for individuals with comparable "need."⁴⁻⁷ Largely on the strength of these studies, Medicare has been judged a resounding success in promoting equal access to mainstream care, and popular support for the program is tied closely to its reputation for universality.

Yet disparities among subgroups of the elderly have existed from Medicare's inception,^{7,8} reflecting the status quo at the time of inception and the program designers' intention to interfere as little as possible in the private practice of medicine. The emergence of small area analysis as a prominent field of health services research has served to highlight those disparities associated with beneficiaries' place of residence. Kane and Friedman's study follows on the work of Wennberg and other practitioners of small area analysis who have applied the standard of need-based equality of utilization to the problem of equity across geographical subgroups. These researchers have found that higher hospital use rates and increased Medicare expenditures neither reflect "needier" populations nor result in lower age-, sex-, and race-adjusted mortality rates in selected communities.⁹⁻¹¹ On the basis of these

findings, Wennberg has argued for reducing excess capacity as the most equitable way of constraining health care costs.

The results of other research studies suggest caution in accepting the view that reductions in health care spending can be made without harm to individuals. Hadley's analysis of Medicare mortality rates, using a national cohort of Medicare beneficiaries and more sophisticated modeling techniques than those employed in most small area studies, found that a 10% increase in Medicare spending per beneficiary was associated with mortality rates that were 3% to 4% lower for Whites, depending on age and sex, and 6% to 10% lower for Blacks.¹² Recent studies of deaths from coronary heart disease also point to the role of increased medical intervention in reducing mortality.¹³ Furthermore, focusing on mortality rates as the major indicator of health outcomes ignores the role of medical care in treating morbidity and enhancing health-related quality of life. Clearly, additional research is needed to determine how different levels of investment in health care resources at the population level affect not only mortality but also individuals' health and functional status.

Nonetheless, even without such information, simple logic supports the proposition that targeted expenditure reductions are preferable to uniform cuts that would preserve existing disparities. The devil, as they say, is in the details. And several "details" inherent in redistributive proposals are likely to engender contentious debate. One area of likely contention is the choice of *geographical units to be equalized*. Proposals to redistribute Medicare spending across states generally assume that states should be rewarded or penalized on the grounds that they are the geographical entities with the greatest control over health system capacity. Yet counties, cities, and hospital market areas

Editor's Note. See related article by Kane and Friedman (p 1611) in this issue.