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## Perspective

### Health Care Reform in Action — Calorie Labeling Goes National

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Tucked away on page 455 of the 906-page health care reform act (Public Law 111-148) is a provision for listing calorie counts on the menu boards of chain restaurants and adjacent to {Q1}each food

offered in vending machines and in retail stores. Establishments with 20 or more {Q2}locations nationwide must post calories “in a clear and conspicuous manner,” along with “a succinct statement concerning suggested daily caloric intake” — presumably the 2000 kcal-per-day standard that the Food and Drug Administration (FDA) uses for the “Nutrition Facts” on packaged foods. When the Nutrition Labeling and Education Act of 1990 went into effect in 1994, it required that nutrition labels be placed on food products but exempted restaurants. The new law removes that exemption.

The advocacy group Center for Science in the Public Interest

(CSPI) organized support for this measure after having issued a 2003 report arguing that {Q3} nutrition labeling would help to control the rising rates of obesity. The report summarized evidence that more people eat meals away from home than ever before, that U.S. children consume twice as many calories at restaurants as at home, and that nearly everyone underestimates the calorie content of restaurant meals.<sup>1</sup>

In 2004, an FDA Obesity Working Group report, “Calories Count,” recommended providing nutrition information at the point of sale in restaurants. The FDA asked the {Q4}independent Keystone Center to review the

status of such information. The Center’s 2006 report of the Keystone Forum, convened to develop recommendations on the topic, indicated that about half of restaurant chains provide calorie information but put it in places where it is unlikely to be seen. The forum urged more accessible posting and research to investigate how calorie information is used, affects restaurant management and sales, and works in practice. Although recognizing that variations in sources of ingredients, preparation methods, and portion sizes affect calorie determinations, the forum concluded that customers’ right to know the calorie counts of their foods outweighed other concerns.

Much evidence suggests that there is a potential value in posting calorie counts. Research has revealed widespread public interest in obtaining access to and

using calorie information. Some preliminary studies found menu labeling to lead to slight reductions in the number of calories people purchase, particularly when such labeling is accompanied by a statement referring to a recommended daily intake of 2000 kcal per day. Other studies, however, found no effect or indicated that such posting might actually encourage young men, in particular, to eat more. Because these studies were largely conducted in classrooms or school cafeterias and used self-reports, cash-register receipts, or other such indirect measures of food consumption, their overall significance is not easily interpreted.<sup>2</sup>

New York City was the first locality to require calorie labels. In 2006, the New York City Health Department proposed requiring quick-service chain restaurants with more than 15 outlets — those that were already providing calorie information — to post calorie counts on menu boards. The New York State Restaurant Association opposed the proposal on the grounds that calorie labeling would be impractical, expensive, and an unconstitutional violation of free commercial speech. It filed lawsuits and lobbied for preemptive legislation. After much legal wrangling, the courts ruled in favor of the City.<sup>3</sup> The measure went into effect on July 19, 2008.

The strong opposition suggested that restaurants were unlikely to post calorie counts voluntarily. Yet by 2009, California, Oregon, and Maine required calorie labeling, as did a dozen or more U.S. counties and cities. Similar bills were under consideration in at least 30 other regions. Confronted with a cacophony of differing laws, the

restaurant association dropped its opposition, thereby paving the way for a national law that supersedes local and state laws.

New York City has now had calorie labeling in place for 2 years, and it is worth asking whether this initiative has improved customers' purchases, induced restaurants to reduce the caloric content of their foods, and educated the public about the calories in foods and diets. One study examined the first question; the others have not yet been addressed. Shortly after the labeling began, investigators collected cash-register receipts and survey responses from more than 1100 fast-food customers in low-income New York City neighborhoods and in Newark, New Jersey, a city with comparable low-income neighborhoods but no menu labeling. Although nearly 28% of New York customers said they noticed and were influenced by calorie labeling, this group purchased about the same number of calories as everyone else.<sup>4</sup> This result might be expected, since these outlets were located in areas with few choices of restaurants and where residents might be likely to seek low-cost foods that are high in calories.

Encouraging chains to reformulate their products or reduce portion sizes might be one potential benefit of labeling requirements, but a comparison of current numbers to those in my collection of 2007 nutrition brochures yields no clear trend. McDonald's, for example, decreased the calories in large orders of french fries by 30 but increased those in small orders by 20. Starbucks has decreased the calories in many of its drinks, but some Subway sandwiches have more calories now. The New

York City Health Department's more systematic evaluation, as yet unpublished, suggests that calorie reductions of about 10% have been common.

My personal observations raise several concerns about the implementation of this policy. In some chains, the calorie numbers are posted in print too small or too obscure to be read easily. Some chains post amounts to the absurdly precise single calorie — 497 for a club sandwich at Cosi, for example. Calorie numbers are best rounded off to the nearest 10 or 25; they are ballpark figures. One comparison of actual measurements to posted amounts revealed wide deviations, sometimes by as much as a factor of two.<sup>5</sup> Some chains, such as Le Pain Quotidien, do not post counts at all but provide calorie information on menus by request. Chains that allow customers to select their own quantities of food post calorie counts in uninterpretable ranges: 170 to 780 for a salad at Chipotle, or 330 to 890 for ice cream at Cold Stone Creamery. FDA regulations will need to deal with such issues.

Despite such logistic problems and modest benefits, calorie labeling is well worth the trouble. Here, at last, is help for explaining the relationship of food energy to body weight. Calories are otherwise impossibly abstract; they cannot be seen, smelled, or tasted. Almost everyone underestimates the number of calories in away-from-home foods, especially when portions are large or the foods are promoted as healthful. Few nonbiochemists understand that "calories" are actually kilocalories, and 1 kcal is the amount of heat needed to raise the temper-

ature of a liter of water from 14.5° to 15.5°C at 1 atmosphere of pressure. It is much easier to explain how posted calorie counts in fast-food meals fit into a 2000-kcal diet.

Calorie labeling demonstrates that larger portions have more calories. Judging by reactions to my lectures about portion size and the *Mindless Eating* studies of Cornell University professor Brian Wansink, this relationship is apparently not intuitively obvious. Many people find it difficult to believe that any food contains more than 200 or 300 calories. Watching the calorie counts of McDonald's french fries go from 230 (small order)

to 380 (medium) to 500 (large) may be instructive to anyone who is paying attention. That not everyone will look at calorie postings is a given. For those who do look, calorie labeling provides an incentive to avoid large portions — and to share the 670-calorie Pain Quotidian cookie with three friends.

Disclosure forms provided by the author are available with the full text of this article at NEJM.org.

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### Queries for Author:

Q1: "each food offered" OK, per pp.456 and 457?

Q2: "locations" OK, per p. 455?

Q3: "nutrition" OK, per Web site?

Q4: OK to add "independent"? or describe Center briefly?

Q5: "choices of restaurants" OK? Or do you mean the restaurants had few choices (i.e., menu choices within a restaurant were limited)?