Imagine someone sits down to lunch at a casual dining chain thinking they want something a little lighter after a big meal the previous evening. And so they order the Cobb salad with grilled chicken. Salad is healthy. Grilled chicken is healthy. It feels like a success. If they did this in 2006, they would probably have no idea that the light lunch they just ordered contains half a day’s worth of calories. But if they go to the same restaurant today, the calorie information will be displayed on the menu next to each item, thanks to a provision of the Patient Protection and Affordable Care Act that requires food establishments with 20 or more locations to post calorie information for prepared foods. No longer are consumers in the dark, guessing how many calories are in their restaurant meals.

Rummo et al found that this policy has helped customers order fewer calories at fast food restaurants. In their study, calorie labeling was associated with a 25-calorie reduction (about 2% of baseline calories-per-transaction) in purchased Taco Bell meals 2 years after implementation. The authors used transaction data and a difference-in-differences design with a synthetic control approach to examine the outcomes of calorie labeling in response to 6 local calorie labeling laws in the US (although 94% of the labeled restaurants were in California) prior to national implementation of the policy. Although the authors observe no change in calories in non-California locations, this appeared to be due to a large increase in calories purchased from in-store locations that started 6 months after labeling and declined through 15 months after labeling. It is unclear what drove this spike in the data, but the effect size and its timing makes it unlikely to be in direct response to calorie labeling.

The article by Rummo et al is a useful contribution to the restaurant labeling literature, which until recently was dominated by small, underpowered studies of the early local labeling laws in New York City, Philadelphia, and Seattle. Those studies produced null effects with the exception of a well-powered study using transaction data from a national coffee chain, which estimated that the New York City policy was associated with an average decline of 6% or a 15-calorie-per-order reduction. For this reason, the early narrative around calorie labeling prematurely concluded that it was not effective in changing customer food purchases.

We now have multiple rigorous evaluations of calorie labeling using large sales data sets—across different settings, time periods, and geographic locations—and can feel confident in concluding that menu labeling is associated with changed behavior. For example, Petimar et al analyzed 67 million transactions from 104 restaurants in the Southern US and found an average reduction of 5% or 73 calories-per-transaction following nationwide implementation of calorie labeling. A separate article by Petimar et al analyzed 374 million transactions in a chain of 173 supermarkets, which are also subject to the national calorie labeling law, and found a 5% (or 10 calorie) decrease per transaction from bakery items. It is possible that the restaurant study by Petimar et al estimated somewhat larger effect sizes from calorie labeling than the study by Rummo et al study because their study period covered national implementation of the law in 2018. Chain restaurants, such as Taco Bell, may have been more likely to reformulate their menu after national implementation rather than in response to local or state labeling laws, which is what the study by Rummo et al captured. Indeed, a study of 59 chain restaurant menus from 2012 to 2019 found that items newly added to menus after labeling implementation had on average 113 fewer calories than items added to menus before labeling, implying possibly larger effects of this policy today than estimated by Rummo et al. But are the observed caloric reductions—ranging from 2% to 6%—large enough to improve health?
Although these reductions are small, consider that US residents get approximately one-third of their calories from prepared foods and that this has been steadily increasing for decades. In 2022, US residents spent more money on prepared foods outside the home than on groceries. It is easy to see how these reductions can add up in a given week for someone who grabs a morning coffee out, has a fast food lunch, brings home a roast chicken from the supermarket, and goes out to eat at a casual chain restaurant with their family on a Friday night. And while the major evaluations of restaurant calorie labeling have focused on calorie content, these foods also tend to have high amounts of sodium, sugar, and saturated fat, suggesting health benefits of labeling that go beyond reduced calorie intake. At the same time, these large sales data sets only provide per-transaction information, so we do not know to what extent these reductions in calories are split across meals for multiple people. We also lack data on the degree to which people might compensate for these caloric reductions.

To be sure, addressing the current epidemic of nutrition-related diseases will require a much larger overhaul of the food environment than any single intervention, let alone such a light-touch one. Calorie labeling needs to be part of a suite of serious healthy eating policies, including taxing unhealthy foods and beverages, regulating unhealthy nutrients in the food supply, mandating front-of-package nutrition warning labels, improving school nutrition standards, and regulating deceptive food marketing. But eating behavior is difficult to change, so as food and nutrition policy researchers, we find it very encouraging that such a simple intervention—merely placing some numbers on a restaurant menu—can lead to any behavior change.

The Cobb salad with grilled chicken still has 1000 calories. But now that we have calorie labeling, some people will order these deceptively high-calorie items less often or never again. And, more generally, those trying to make lower-calorie choices when dining out will be better prepared to do so.

ARTICLE INFORMATION
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