

# Compliance in 2017 With Federal Calorie Labeling in 90 Chain Restaurants and 10 Retail Food Outlets Prior to Required Implementation

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**Objectives.** To examine early compliance with the delayed federal calorie labeling regulation that requires posting calories on menus and menu boards at retail food chains with 20 or more establishments nationally.

**Methods.** We explored implementation of calorie labeling at 90 of the largest US chain restaurants and the 10 highest-grossing supermarket chains from May to December 2017. We contacted corporate offices and at least 2 locations for each chain, made site visits when possible, and supplemented these efforts with targeted Internet searches.

**Results.** Overall, 71 (79%) restaurant chains partially or fully implemented labeling, as did 9 (90%) supermarket chains. Fast-food and fast-casual restaurants fully implemented labeling at a modestly higher rate than did full-service restaurants.

**Conclusions.** Most of the retail food chains we assessed implemented calorie labeling policies in advance of the May 2018 compliance date.

**Public Health Implications.** Although implementation of federal calorie labeling has been delayed repeatedly in the 8 years since the passage of the legislation, retail food chains have demonstrated a high rate of compliance with calorie labeling in advance of the required May 2018 implementation date. Despite reports from some retail food industries that compliance will be difficult, current implementation shows the feasibility of complying. (*Am J Public Health.* 2018;108:1099–1102. doi:10.2105/AJPH.2018.304513)

Americans spend 50% of their food dollars on away-from-home foods, and such foods account for nearly one third of daily calories<sup>1,2</sup>; obesity and related health outcomes are associated with frequent consumption of away-from-home foods.<sup>3</sup> Consumers underestimate calories in away-from-home foods, with a quarter of fast-food diners underestimating the energy content of meals by at least 500 calories.<sup>4</sup> To address concerns that consumers lack adequate information about these foods and spur retail food chains to reformulate menu items so that they are lower in calories, the Patient Protection and Affordable Care Act (Pub L No. 111-148) included a provision requiring retailers with 20 or more locations to post calories on all prepared foods. In its final rule, the US Food and Drug Administration (FDA) interpreted the law broadly to apply to all chains that sell “restaurant-type” foods,

including restaurants, supermarkets, and convenience stores.<sup>5</sup>

After years of repeated delays in implementing the law, the FDA settled on a final compliance date of May 5, 2017. However, in response to requests for more time to comply with the law, primarily from the grocery, convenience store, and pizza industries, the FDA provided a year extension to May 7, 2018. These industries continue to lobby for changes to the law, which they claim is burdensome and costly. Furthermore, they argue that nutrition information is already available for consumers elsewhere, such as

online.<sup>6</sup> Because of the frequent delays to date, we sought to determine how many restaurant and supermarket chains were implementing calorie labeling in advance of the federal requirement.

## METHODS

We obtained a list of restaurant chains and a categorization of restaurants (fast-food, fast-casual, full-service) from Menustat, a large nutritional database of restaurant menus,<sup>7</sup> and between May and November 2017 we contacted the corporate headquarters of 93 of the top US chains. When contacting corporate offices, we inquired about the company-wide policy on calorie labels for every food item on either printed menus (full-service) or menu boards (fast-casual and fast-food). We contacted these offices through listed corporate e-mail addresses and telephone numbers, typically for the public relations, communications, or nutrition department. When no contact information was available for one of these departments, we contacted customer service offices.

Study staff asked specifically “Does your company currently have calories posted on in-store menus nationally?” with additional follow-up questions or explanations when necessary. If customer service representatives were unable to answer, study staff asked to speak with the appropriate department.

To supplement this information, we called restaurant locations in at least 2 different states,

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**TABLE 1—Federal Calorie Labeling Compliance in 2017 by US Restaurant Chains and Retail Food Outlets Prior to Required Implementation**

Fast-Food	Fast-Casual	Full-Service	Retail Food
<b>Chain-wide compliance<sup>a</sup></b>			
Arby's	Boston Market <sup>b</sup>	Applebee's <sup>b</sup>	Costco <sup>b</sup>
Auntie Anne's	Captain D's	BJ's Restaurant & Brewhouse	H.E. Butt Grocery Company (H-E-B)
Baskin Robbins <sup>b</sup>	Chipotle <sup>b</sup>	Bob Evans	Kroger <sup>b</sup>
Bojangles'	Ci Ci's Pizza	California Pizza Kitchen <sup>b</sup>	Meijer <sup>b</sup>
Carl's Jr.	Firehouse Subs <sup>b</sup>	Carrabba's Italian Grill	Publix <sup>b</sup>
Chick-fil-A	Jason's Deli	Chili's <sup>b</sup>	Safeway <sup>b</sup>
Culver's	Jimmy John's	Denny's	Target <sup>b</sup>
Del Taco	McAlister's Deli	Friendly's <sup>b</sup>	Walmart <sup>b</sup>
Dunkin' Donuts <sup>b</sup>	Panera Bread <sup>b</sup>	Frisch's Big Boy	Whole Foods <sup>b</sup>
El Pollo Loco	Qdoba <sup>b</sup>	Joe's Crab Shack	
In-N-Out Burger	Starbucks <sup>b</sup>	Long John Silver's	
Jack in the Box		Moe's Southwest Grill	
Jamba Juice <sup>b</sup>		Noodles and Company	
KFC <sup>b</sup>		Perkins	
Krispy Kreme		Pizza Hut	
Krystal		Red Lobster	
Little Caesars		Romano's Macaroni Grill	
McDonald's <sup>b</sup>		Ruby Tuesday	
Panda Express <sup>b</sup>		TGI Friday's <sup>b</sup>	
Quiznos <sup>b</sup>		Yard House <sup>b</sup>	
Sbarro			
Sonic <sup>b</sup>			
Steak 'n Shake			
Subway			
Taco Bell <sup>b</sup>			
Tim Hortons			
Wendy's <sup>b</sup>			
White Castle			
<b>Partial compliance<sup>c</sup></b>			
7-Eleven <sup>b</sup>		Chuck E. Cheese's <sup>b</sup>	AB Acquisition LLC (Albertson's) <sup>b</sup>
Burger King <sup>b</sup>		Famous Dave's	
Casey's General Store		IHOP <sup>b</sup>	
Dairy Queen <sup>b</sup>		Red Robin	
Papa John's			
Popeyes			
Sheetz			
Whataburger			

*Continued*

chosen randomly, excluding locations in cities where we knew calorie labeling policies had already been implemented.<sup>8</sup> In addition, we

conducted Internet searches and made site visits to 33 chains, nearly all in Massachusetts; our focus was on chains for which labeling implementation

was uncertain. On these site visits, we found conflicting information on labeling implementation, relative to data collected from our

TABLE 1—Continued

Fast-Food	Fast-Casual	Full-Service	Retail Food
		<b>No labeling<sup>d</sup></b>	
Checkers Drive-In/Rally's	Papa Murphy's	Hooters	
Church's Chicken	Round Table Pizza	LongHorn Steakhouse <sup>b</sup>	
Domino's	Zaxby's	O'Charley's	
Einstein Brothers		Olive Garden <sup>b</sup>	
Five Guys <sup>b</sup>		Outback Steakhouse <sup>b</sup>	
Hardee's		PF Chang's <sup>b</sup>	
Jersey Mike's Subs		The Capitol Grille <sup>b</sup>	
Wawa		Golden Corral	

<sup>a</sup>Overall rates: fast-food, 64%; fast-casual, 79%; full-service, 62.5%; and retail food, 90%.

<sup>b</sup>Site visit conducted.

<sup>c</sup>Overall rates: fast-food, 18%; fast-casual, 0%; full-service, 12.5%; and retail food, 10%.

<sup>d</sup>Overall rates: fast-food, 18%; fast-casual, 21%; full-service, 25%; and retail food, 0%.

calls, in 6 of the restaurant chains: 4 full-service, 1 fast-casual, and 1 fast-food (Table 1).

From September to December 2017, we contacted the 10 highest-grossing supermarket chains in the United States. We gathered information for 9 of these chains by calling 2 store locations per chain in 2 different states; the other chain had stores in only a single state. We spoke to representatives in each store's deli and bakery areas, the primary locations of prepared foods. Study staff asked "Are calories labeled next to item prices in the bakery and deli?" We captured further information through site visits to 9 of these chains in locations in various states.

We determined that restaurants and supermarkets had implemented calorie labeling chain-wide if we obtained consistent information from all contacts and that they had implemented labeling partially if some sites reported labeling and others did not. We determined that chains had not implemented labeling if there was consistent information indicating that they had not done so. We did not find variability in the types of items labeled by restaurant chains; they had either implemented or not implemented labeling. In the case of supermarkets, we could not easily determine whether all prepared foods were labeled because of the heterogeneous nature of products in different locations.

## RESULTS

Overall, 59 (66%) restaurant chains fully complied with the labeling requirements,

12 (13%) partially complied, and 19 (21%) had not begun labeling. Compliance rates according to chain type were similar, with full or partial compliance rates of 82%, 79%, and 75% for fast-food, fast-casual, and full-service restaurants and full compliance rates of 64%, 79%, and 63% (Table 1). All but one of the supermarket chains fully implemented labeling according to our criteria; Albertson's partially implemented labeling. Supermarkets were most likely to label their hot or cold "ready-to-eat" items. They were somewhat less likely to label self-serve bakery items such as muffins or donuts.

## DISCUSSION

Most of the retail food chains we assessed implemented calorie labeling policies in advance of the May 2018 compliance date. Implementation of menu labeling was similar for fast-food, fast-casual, and full-service restaurants. Several chains began posting calorie information at least 1 year before the initial May 5, 2017, deadline, including Chick-fil-A, Chipotle, Dunkin' Donuts, McDonald's, Panera Bread, Starbucks, and Subway.

Pizza restaurants, convenience stores, and grocery stores have expressed concerns regarding the federal calorie labeling requirements. Legislation recently passed in the US House of Representatives would allow calories to be displayed in stores separate from

product locations (e.g., in a nutrition facts brochure) and enable primarily take-out restaurants to post calories only online.<sup>9</sup> Furthermore, the legislation would allow for labeling calories per serving, rather than for the entire item, without disclosing the number of serving sizes per item. However, the widespread early implementation of calorie labeling demonstrates that a heterogeneous array of retailers have the capacity to comply with labeling. Some retailers have described cost as a burden; however, because they already provide nutrition information for menu items on their Web sites, the costs incurred would be limited to replacement menus and menu boards. The FDA recently issued further guidance to the industry to facilitate compliance and offer flexibility.<sup>10</sup>

## Limitations

This study involved several limitations. For example, although we gathered information on a diverse sample of restaurant and supermarket chains, we were limited to telephone contact with most chains. Also, we were not able to differentiate between franchise and corporate-owned restaurant locations. We conducted this study over several months, and retailers may have changed their policies over that period. In fact, we heard anecdotes that several full-service restaurant chains had complied with calorie labeling but removed labels from menus after the delay was announced. This reversal of labeling practices

might be easier for full-service chains because they use printed menus in contrast to the menu boards typically present at fast-food and fast-casual chains.

## Public Health Implications

Research has been mixed regarding whether calorie labeling affects consumer choices in restaurants. A recent systemic review showed a small reduction in calories purchased after labeling, but more extensive research is necessary.<sup>11</sup> There is emerging evidence that food retailers might be changing offerings so that they are lower in calories after labeling, primarily by introducing lower-calorie menu items to replace higher-calorie items.<sup>12</sup> After widespread implementation of calorie labeling, there will be evidence as to whether this policy intervention affects consumers' eating behaviors, shifts social expectations of increased access to nutrition information about away-from-home foods, or pushes retailers and restaurants toward healthier menus and recipes. **AJPH**

## CONTRIBUTORS

L. P. Cleveland contributed to the study design, analysis and interpretation of data, and the drafting of the article. D. Simon contributed to the concept and study design, analysis of data, and revisions of the article. J. P. Block contributed to the study design, analysis and interpretation of data, and revisions of the article.

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## HUMAN PARTICIPANT PROTECTION

No protocol approval was needed for this study because no human participants were involved.

## REFERENCES

1. US Department of Agriculture, Economic Research Service. Food expenditures. Available at: <https://www.ers.usda.gov/data-products/food-expenditures/food-expenditures/#Food>. Accessed May 21, 2018.
2. Lin B-H, Guthrie J. Nutritional quality of food prepared at home and away from home 1977–2008. Available at: [https://www.ers.usda.gov/webdocs/publications/43698/34514\\_summaryeib105.pdf?v=41270](https://www.ers.usda.gov/webdocs/publications/43698/34514_summaryeib105.pdf?v=41270). Accessed May 21, 2018.
3. Kant AK, Whitley MI, Graubard BI. Away from home meals: associations with biomarkers of chronic disease and dietary intake in American adults, NHANES 2005–2010. *Int J Obes (Lond)*. 2015;39(5):820–827.
4. Block JP, Condon SK, Kleinman K, et al. Consumers' estimation of calorie content at fast food restaurants: cross sectional observational study. *BMJ*. 2013;346:f2907.
5. Power SE, O'Toole PW, Stanton C, Ross RP, Fitzgerald GF. Intestinal microbiota, diet and health. *Br J Nutr*. 2014;111(3):387–402.
6. Roberto CA, Schwartz MB, Brownell KD. Rationale and evidence for menu-labeling legislation. *Am J Prev Med*. 2009;37(6):546–551.
7. Bleich SN, Wolfson JA, Jarlenski MP. Calorie changes in large chain restaurants from 2008 to 2015. *Prev Med*. 2017;100:112–116.
8. Center for Science in the Public Interest. State and local menu labeling policies. Available at: <https://cspinet.org/resource/state-and-menu-labeling-policies>. Accessed May 21, 2018.
9. Leung CW, Rimm EB. Misinterpretation of SNAP participation, diet, and weight in low-income adults. *Am J Public Health*. 2015;105(10):e1.
10. US Food and Drug Administration. Menu labeling requirements. Available at: <https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingNutrition/ucm515020.htm>. Accessed May 21, 2018.
11. Crockett RA, King SE, Marteau TM, et al. Nutritional labelling for healthier food or non-alcoholic drink purchasing and consumption. *Cochrane Database Syst Rev*. 2018;2:CD009315.
12. Bleich SN, Economos CD, Spiker ML, et al. A systematic review of calorie labeling and modified calorie labeling interventions: impact on consumer and restaurant behavior. *Obesity (Silver Spring)*. 2017;25(12):2018–2044.