Introduction

Americans currently purchase over one-third of their calories dining out. Recent rising rates of obesity coincide with this exponential increase in the amount of money households spend on food away from home. High consumption of sodium and calories – especially from saturated fat – are associated with diet-related diseases. To curb these trends, nutritional labeling of menus has been introduced to educate consumers and equip them with noticeable information to make healthier dining decisions.

The study

Philadelphia, PA has the most comprehensive menu labeling regulations for full-service restaurants in the United States, presenting an opportunity to examine both menu nutritional content and customer responses to menu labeling. Drexel University, in partnership with the Philadelphia Department of Public Health, led a three-part study focused on full-service restaurant chains. The evaluation analyzed the nutritional value of foods listed on menus; what customers purchased and if their purchases differed depending on menu labeling; and finally, customer knowledge, attitudes, and behaviors regarding menu labeling. Data came from 21 full-service restaurants, 5 focus groups, and 648 customer surveys and transaction receipts collected at one large full-service restaurant chain’s outlets (two outlets had menu labeling and five outlets did not).

Full-Service chain menu offerings

<table>
<thead>
<tr>
<th>Calories and Nutrients on Adult Menus</th>
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</thead>
<tbody>
<tr>
<td><strong>Adult daily recommended limits</strong></td>
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<td><strong>Average meals displayed on menus</strong></td>
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<td>(Values as a percent of daily recommended intake)</td>
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<table>
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<tr>
<th>Calories and Nutrients on Children’s Menus</th>
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</thead>
<tbody>
<tr>
<td><strong>Children’s daily recommended limits</strong></td>
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<td><strong>Average meals displayed on menus</strong></td>
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<tr>
<td>(Values as a percent of daily recommended intake)</td>
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</table>

* When adult meals displayed on menus included ½ appetizer, entree, side dish, ½ desert + beverage, then average calories totaled 2020 kcal or 100% of calories for an entire day.

Menu Labeling set to expand nationally

When fully implemented, the US Patient Protection and Affordable Health Care Act will require all fast food and full-service chains with 20+ locations to provide nutrition information at point of purchase.
Healthy choices on menus

Only half of the 21 full-service restaurant chains included in this study offered “healthy choice” menu options, and among those restaurants, only 10% of à la carte entrees were tagged as “healthy choices.” While criteria for “healthy choices” varied, most emphasized lower calories rather than a broader suite of nutrients. “Healthy choice” items were lower in calories and fat than other items, but sodium far exceeded healthy levels and fiber was low. To better identify “healthy choice” items, restaurants can utilize the Healthy Dining criteria (see last page for references).

Healthy Dining Criteria for a Single Adult Meal

Calories <750 cal  Sodium <750 mg  Total fat <25 g  Saturated fat <8 g  Fiber >5 g

Among customers who participated in our intercept survey, 13% purchased an item that had a “healthy choice” tag and those customers were more likely to be middle-aged (40 years or older) and have attended graduate school. Most focus group participants did not readily notice “healthy choice” tags due to competing graphics on the menus. Nevertheless, they believed that tags could help guide choices, particularly for people who have been told by a health professional to limit calories, sodium, sugar, or saturated fat (20% of participants in our intercept survey were so cautioned).

Consumer comprehension of menu labels & nutrition

Two menu labeling formats have been used in Philadelphia restaurants. One lists nutrient values in a key code display with the correlating nutrient labels appearing at the bottom of the menu page. The other lists nutrient values accompanied by their nutrient labels. Focus group participants noted that key coded displays virtually ensured low use and poor comprehension of nutrition information.

<table>
<thead>
<tr>
<th>Key Code</th>
<th>Full Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>1400</td>
<td>1400 cal/s</td>
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</tbody>
</table>

The focus group discussions highlighted poor nutrition knowledge among consumers. Many participants were unaware that most adults did not need more than 2000 calories for an entire day, and they seriously underestimated the amount of physical activity required to compensate for a high-calorie meal.
**Consumer use of menu labels**

**Most customers saw the labels.** Almost 80% of customers reported seeing menu labels at outlets where labels were displayed using the "full label" format (format is shown on previous page). Among customers who saw the labels, **34% reported they used the labels** when deciding what to order and 66% reported they did not use the labels. Customers who used the labels purchased at least **400 fewer calories** than others.

After adjustment for customer characteristics, customers at labeled restaurants purchased about **160 fewer calories** (or 10% less calories) than customers at outlets without labels.

Regardless of whether customers noticed or utilized nutrition labels, customers purchased food and beverages that were **very high in calories and nutrients**: approximately 1830 calories, 3210 milligrams sodium, and 35 grams saturated fat.

Bar chart shows **average % of daily recommended intake** that customers purchased for a single meal. **Customers purchased meals that had 70%- 170% of calories and nutrients for an entire day.**

Customers who used nutrition labels purchased at **least 400 fewer calories** than customers who saw but didn’t use labels.
Opportunities for improvement

Include nutrition information for each menu item

- Display information on calories, sodium, saturated fat, & fiber
- Utilize clear, easy-to-follow labels in font that is similar to the item's price
- Include the FDA dietary reference statement on each menu page — "A 2,000 calorie daily diet is used as the basis for general nutrition advice; individual calorie needs, however, may vary"

Reduce portion sizes of regular entrees

- Reduce portion size to enhance health benefits
- Offer small portions of regular-sized items (e.g., small-plates, half-portions)

Reduce salt used in food preparation

- Prepare more menu items from scratch in order to control sodium
- Join the U.S. National Sodium Reduction Initiative & commit to lowering sodium
- Tag menu items that are lower in sodium (FDA defines "low" sodium as <140 per 100 grams which translates to <600 mg sodium for 15 ounces of food)

Offer more meals that are low in saturated fat

- Reduce use of saturated fats (solid fats) including cheese and cream
- Avoid cheese as a default topping & charge extra for adding it
- Offer & promote vegetarian entrees that have low/no dairy

Guarantee that children have healthful meal options

- Exclude sugary drinks from children’s menus
- Adopt criteria from the National Restaurant Association’s Kids LiveWell menu (see last page for reference)

Enhance appeal to health-conscious customers

- Increase fiber to improve satiety while decreasing calories
- Increase "healthy choice" items & promote these items in menu pictures
- Ensure "healthy choice" items meet criteria for calories, sodium, and saturated fat. At minimum, use criteria from the restaurant industry's Healthy Dining (see last page for reference).
Key references

Philladelphia Menu Labeling
Information for Consumers
http://www.foodfitphilly.org/menu-labeling/
Information for Philadelphia Food Establishments
http://www.phila.gov/health/services/Serv_MenuLabeling.html

Full-Service Restaurant Menu Evaluation.
Information on the restaurant menu analysis, methodology, and results.
http://www.pages.drexel.edu/~aha27/index.html

Full-Service Restaurant Customer Evaluation.
Information on the customer intercept study, methodology, and results.

Focus Group Research
Information on the focus group study, methodology, and results.

Daily Recommended Intake Values.

Healthy Eating Tips.
Guides to facilitate healthy eating, portion control, and nutrition awareness.
http://www.choosemyplate.gov/

National Salt Reduction Initiative

Healthy Dining Nutrition Criteria (website accessed October 2013)
http://www.Healthydiningfinder.Com/about-this-site/nutrition-criteria

National Restaurant Association's Kids LiveWell menu

Recommendations for Kid’s Meals

Acknowledgements

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The image on the front cover is by Gert Lavsen http://500px.com/lavsen

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