Consumer, Producer, and Retailer Response to Front of Package and Shelf Nutrition Labeling Systems

Presented by
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BACKGROUND AND METHODS
Food producers and retailers have recently been adding summary nutrition information on the front of packages in addition to the mandated Nutrition Facts Panel.

DHHS ASPE and FDA are interested in ensuring that front-of-package (FOP) and shelf-label nutrition systems are useful for the consumer and that the nutrition criteria are based on science.
Study Purpose

- Conduct a literature review on consumer, producer, and retailer response to FOP and shelf nutrition labeling.
Examples of Labeling Schemes

- FOP nutrient-specific labels
  - Traffic Light (TL)
  - Guideline Daily Amount (GDA)
  - Percent Daily Intake (% DI)
  - Traffic light GDA (TL-GDA)

- FOP summary symbols
  - Heart Foundation Tick
  - Keyhole symbol

- Shelf-labeling systems
  - NuVal
  - Guiding Stars
Conceptual Framework

- **Consumer Response:**
  - Attention/Processing ➔ Liking ➔ Understanding ➔ Use

- **Producer Response:**
  - New and Reformulated Products ➔ Purchase and Sales

- **Combined Consumer and Producer Response:**

Methods: Literature Review

- Twelve databases searched to retrieve over 110 peer-reviewed journal articles and studies in grey literature.

- Most effective search terms included:
  - ("front of package nutrition label" or "FOP label" or "front of package label" or "shelf-labeling")
  - and ("Consumer" or "Consumer response" or "effective" or "design" or "nutrition" or "producer" or "retailer")

- English or English-translated articles dated January, 1990 to October, 2010 included in search.

- Over 40 empirical studies identified from the U.S., Australia, New Zealand, and several European countries.
KEY FINDINGS
Findings on Consumer Response

Attention and Processing
- FOP labels should be large and positioned to stand out against potential “competing” elements on food packages.
- Consumers more quickly process simple graphic or color coded labels.

An eye-tracking study in UK found nutrients attracting most attention on traditional nutrition label were those indicated by the Traffic Light (Jones & Richardson, 2007).

<table>
<thead>
<tr>
<th>Nutrition Information</th>
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<tbody>
<tr>
<td>Typical values</td>
</tr>
<tr>
<td>Energy</td>
</tr>
<tr>
<td>Protein</td>
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<tr>
<td>Carbohydrate</td>
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<td>(of which sugars)</td>
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<tr>
<td>Fibre</td>
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<td>Sodium</td>
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</tbody>
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Findings on Consumer Response

**Liking**

- Consumers believe FOP nutrition labels are helpful in making healthy food selections at the supermarket.

- Consumers prefer labels that they believe are easy to understand quickly and are appealing such as labels incorporating text and traffic light color-coding.

Findings on Consumer Response

Understanding

Among the 18 empirical studies we reviewed, evidence indicated that consumers more frequently could identify healthier food choices when they saw FOP nutrition labels incorporating *TL color coding* compared with more *complex* nutrient-specific FOP labels such as the GDA or *summary* labels such as “Ticks”.

![Nutrition Label Example](image-url)
Findings on Consumer Response

Percentage of German Customers Selecting the Healthier Product

Findings on Consumer Response

**Effects on Labeling Features: Words and Colors**

- Findings from an experimental study suggest that consumers most clearly understand text indicating “high,” “medium,” and “low” levels of nutrients.

- Traffic light colors further increased performance.

Findings on Consumer Response

**Percentage of UK Consumers Selecting the Healthier Product**

Findings on Consumer Response

Effects on Diverse Sub-populations

- Older adults, consumers with low-socioeconomic status (SES), and non-white consumers generally had more difficulty understanding FOP nutrition labels than other groups.

- For consumers of low SES and high BMIs, labels incorporating traffic light colors are the easiest FOP labels to understand. (Better than the GDA in some studies and better than a single “tick” in other studies.)
Findings on Producer/Retailer Response

**Effects on Product Reformulation**

- Although the number of studies is limited, analysis of products before and after implementation of FOP labeling suggests that the introduction of FOP labeling has led producers to reformulate existing food products and formulate new food products that have healthier nutrient content.
Findings on Producer/Retailer Response

Example of Effects on Product Reformulation

Change in Caloric Content for Dairy Products After Implementing Choices Logo

Effects on Sales

- Six of eight studies suggest that food products indicated as “healthy” by FOP nutrition schemes or shelf labels will likely increase product sales, suggesting a public health benefit.

- While this increase is modest, perhaps in the range of 1 to 2%, maximum growth over time can lead FOP nutrition labels to have an appreciable impact.
Combined Consumer and Producer/Retailer Response

Example of Effects on Sales

Percentage Change in Sales of Starred Foods After the Introduction of Guiding Stars in Hannafords Supermarkets

KNOWLEDGE GAPS AND CONCLUSIONS
Key Knowledge Gaps

- Studies in the U.S. assessing the effects of alternative FOP labeling systems on the range of consumers
- Few studies compared a TL system with a graded summary system such as a set of stars
- Effects of FOP labels in actual shopping situations (as suggested by experts)
- Effects of other contextual information, such as nutritional claims on the front of packages
- Effects of social marketing, in-store promotions, and consumer education to encourage use of FOP labels.
- Development of a monitoring system
Conclusions

- Simple FOP nutrition labels such as the Traffic Light can reduce processing time
- Consumers like FOP Nutrition Labels
- FOP Nutrition Labels Increase Identification of Healthier Foods
  - Labels with Traffic light color coding > GDA
  - Labels with Traffic light color coding > single “Tick”
  - Text can further increase effects
  - Simpler labels may be particularly important for diverse populations
Conclusions (continued)

- FOP Nutrition Labels can prompt reformulation of healthier foods
- FOP Nutrition labels can increase sales of healthier foods (modestly but increasing over time)
- Key knowledge gaps remain
FOR FURTHER INFORMATION CONTACT

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THANK YOU