Industry Response to Labeling Initiatives: Impact on Industry Activities Regarding Food Analysis and Nutrient Databases

"A Perspective from the Baby Food Industry"

Sandra J. Bartholmey
Gerber Food Products
Fremont, Michigan

INTRODUCTION

Baby food manufacturers have provided mandatory nutrition information on baby food labels since the first nutrition labeling guidelines were approved in 1973 for products that are regulated by FDA and since 1983 for USDA regulated products which contain meat and poultry. Although approximately thirty percent of food companies have been providing nutrition information on a voluntary basis since these regulations were made, the 1990 proposed rules published by FDA, the Nutrition Labeling and Education Act of 1990 and USDA's Advance Notice of Proposed Rulemaking on Nutrition Labeling of Meat and Poultry Products published this April are the first concerted efforts to mandate nutrition labeling of almost all foods.

For food companies such as Gerber that already have nutrition labeling programs in place, the impact of the new regulations is different from that on companies that do not have such programs in place. However, I want to emphasize the profound impact these regulations will have, even on a company with analytical capabilities and data base in place that satisfies current nutrition labeling mandates.

But first, I want to quickly review the rationale that inspired the new regulations and look at it from a baby's perspective because I think this is an important point we need to keep in mind in our discussions.

RATIONALE FOR NUTRITION LABELING CHANGES

The 1988 **Surgeon General's Report on Nutrition and Health** presented the scientific basis that related dietary excess and imbalance to the major causes of death and chronic disease in the United States. In 1989, the National Research Council's Committee on Diet and Health issued its Report on **Diet and Health: Implications for Reducing Chronic Disease Risk**. This report also focused on clarifying "the role of diet in the etiology and prevention of the major causes of morbidity and mortality in the United States."

Both reports recommended dietary modifications along the lines of the **Dietary Guidelines for Americans** to help the majority of Americans become healthier. These recommended dietary changes for adults are the driving force behind the nutrition labeling changes designed to help consumers reduce intake of foods high in fat and saturated fat and increase intake of foods high in complex carbohydrate and fiber. These recommendations are sound advice for most adults and older children.

BABIES ARE DIFFERENT FROM ADULTS

Both reports, however, recognize that the dietary needs of infants and young children are different from the recommendations made for adults to modify their diets, that the nutritional priorities of infants and young children for growth and development require different dietary recommendations.

Gerber thinks the labeling of foods should reflect that difference by exempting baby foods from labeling of saturated fats, cholesterol and fiber -- nutrients that have a reverse importance in the infant diet compared to the adult diet. This position will be discussed during the panel discussion.

NUTRITION LABELING CHANGES

I want to give credit to several people who provided the backbone of this presentation. First of all to Bonita Funk, Manager of Gerber's Nutrition Lab, who is the meticulously thorough person who compiled the following information for a presentation to the Foods Lab Conference held in Pittsburgh last month on the Impact

of Labeling Changes on the Food Lab. Jim Kraley helped with information on label design, and Wesley Meeuwsen on nutrient data banks.

The nutrients currently required on labels are listed on the left of the slide, the FDA proposed nutrients in the center and those required by NLEA on the right. As can be seen from the highlighted areas, both of the new formats differ significantly from the current one.

Declarations of percent U.S.RDA for protein, thiamin, riboflavin, and niacin have been eliminated. Declarationsof percent of Reference Daily Intake (RDI) for Vitamin A, Vitamin C, Calcium and Iron are required.

A calculated value for calories from fat will now be required.

Declarations of saturated fatty acids and cholesterol will be required.

NLEA of 1990 requires carbohydrates to be further categorized as complex carbohydrates, sugars and dietary fiber. The FDA proposes an additional declaration of dietary fiber.

In summary, the changes call for additional labeling of calories from fat, saturated fatty acids, cholesterol, sugars and dietary fiber. How will these affect analytical capabilities, and what are other considerations regarding changes in labels?

IMPACT ON GERBER FOOD ANALYSES METHOD DEVELOPMENT

Fatty Acids

Gas chromatography methods now in place can adequately quantify saturated fatty acids. Better methods need to be developed for mono- and polyunsaturates. Gerber's Nutrition Lab is participating with other food companies in a collaborative study to determine which methods and GC columns give the best resolution of the unsaturated fatty acids in various food products. Once an updated method is established, we can verify our existing fatty acid data or start re-analyzing our products. Collaborative studies are time-consuming, but necessary to satisfy AOAC requirements for validated methodology.

Cholesterol

An AOAC-approved cholesterol method is in place, but is time-consuming, tedious and requires the use of benzene, a potent liver carcinogen. Again, a collaborative study is needed to validate an alternative method that was developed that appears to be accurate, saves time and does not require benzene.

Sugars

High Performance Liquid Chromatography (HPLC) is the method of choice for sugar analysis. FDA proposes to use HPLC to monitor label compliance for sugar content and proposes to include tri- and tetrasaccharides and sugar alcohols in with the more commonly defined sugar content of mono- and disaccharides. This presents a challenge for food labs because current HPLC methods do not all determine sugar alcohols, and no collaborative studies have validated methods that determine saccharides beyond two glucose units.

Dietary Fiber

Analysis of dietary fiber by the AOAC-approved method (aka Prosky method) is the method specified for use in FDA's proposed ruling. The Prosky method requires three days and extensive analyst time to perform. Two less labor-intensive methods have been reviewed by collaborative study, but more validation is required before one can be adopted for official use.

In summary, better analytical methods that are more efficient and at least as accurate at current AOAC methods are needed to help provide accurate information to consumers at a reasonable cost.

COSTS

Laboratory Analyses

Speaking of costs, the nutrition labeling changes will cost Gerber anywhere from $90,000 to $172,000 in analytical costs alone based on an estimated $500 to $960 per product. These estimates are based on analysis of one sample from each of three packs where a sample is defined by the FDA sampling protocol as a composite of twelve containers pulled at random throughout a pack period. We consider data from three "samples" the minimum on which to base a label declaration, following USDA policy.

The Gerber in-house cost estimates shown in this slide are based on our current average hourly laboratory charge rate and do not include reagents or other supplies, equipment or additional personnel that may be required for the analyses. Because Gerber has an in-house lab and equipment and chemists in place, the lab costs look favorable compared to the higher cost of a contract lab. But for companies without such facilities, the contract lab may be the least expensive option in the long run.

Changes in Label Format Design

With each new line of nutrient data added to a label an inch wide, we challenge our Corporate Design department with a major undertaking. Once they have

managed to squeeze another item in the limited space allotted and the Legal, Nutrition, Label Control, and Marketing departments have reviewed it and approved it, then USDA has to approve it if it is a meat or poultry item. Finally, Purchasing can order the label to be printed and arrive to coincide with the production schedules in the plants.

The average cost for the design changes we have been discussing are anticipated to be about $1200 per label which totals $216,000 for 180 products in the Gerber line of baby foods.

Nutrient Data Bank

Adding more nutrients to our nutrient data bank does not present a problem. Slots are available to receive added nutrients for each product, and programs are in place to calculate raw data into amounts of nutrients per serving and per 100 grams. The biggest challenge will be to generate the data and make whatever changes will be required on the label within the time frame proposed for implementation of the nutrition labeling changes, by May, 1993.

SUMMARY

The impact of nutrition labeling changes on Gerber Products Company can be summarized in economic terms. Total costs for nutrition labeling changes are estimated to fall between $300,000 and $400,000. Since the analyses must be repeated annually to verify label accuracy, this range represents only the initial impact. Another component of the NLEA of 1990 is the educational element. Whether or not baby foods will be required to carry all of the new nutrient information, it will be essential to write new or revise current consumer and professional publications to include the new nutrient data and place them in proper perspective regarding their importance in the infant diet.

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