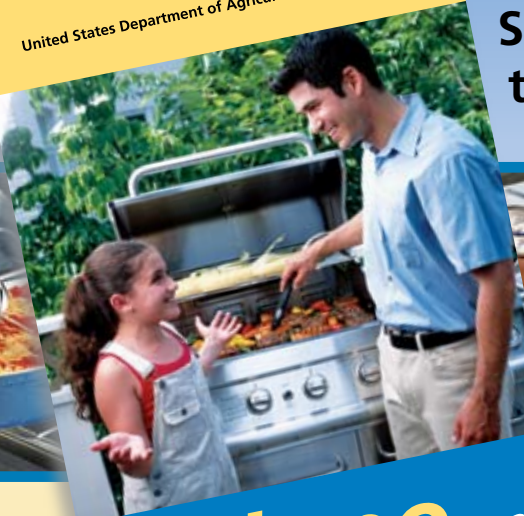


United States Department of Agriculture

## A Report of the "Is It Done Yet?" Social Marketing Campaign To Promote the Use of Food Thermometers



"Is it **done** yet?"

You can't tell  
by **looking**. Use a  
**food thermometer**  
to be sure.



[www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)



United States Department of Agriculture  
Food Safety and Inspection Service

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### **“Is It *Done Yet?*” Team**

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# Executive Summary

The U.S. Department of Agriculture's (USDA) Food Safety and Inspection Service (FSIS) developed the "Is It *Done* Yet?" campaign to increase consumers' use of food thermometers to prevent foodborne illness. The campaign emphasizes using a food thermometer for daily preparation of meat, poultry, and eggs, especially in small cuts of meat and poultry such as hamburgers and chicken breasts. The campaign, designed using social marketing principles, targets a specific segment of parents of children under the age of 10. These individuals, characterized as "Boomburbs," are upscale, suburban parents.

Of the parent segments considered, Boomburbs are the most likely to move rapidly through the stages of behavior change to fully adopt the desired behavior. They have a propensity for acquiring and using new information. They are major influencers of mass culture, setting trends and disseminating new ideas.

Other considerations included the number of children affected by that segment and how much the children are exposed to undercooked meat products. Boomburbs prefer high-quality, gourmet foods, which are often served at lower than safe internal temperatures (e.g., rare and medium-rare hamburger). Focus group studies confirmed that Boomburbs did not know about the unreliability of color of meat and poultry and the need to use a food thermometer for safety.

The Michigan State University (MSU) National Food Safety and Toxicology Center partnered with FSIS to conduct a pilot for this public health campaign in Michigan during 2 weeks in August 2004. The message promoted was, "Is it *done* yet? You can't tell by looking. Use a food thermometer to be sure."

The campaign consisted of daily special events and extensive Web and media outreach. Specific materials and promotional items were designed especially to appeal to the target audience. Michigan partnerships were an essential part of the campaign, with the MSU Food Science and Human Nutrition Department, MSU Extension, and local merchants taking lead roles. With their cooperation, the campaign effort achieved more than 5 million media impressions (estimated potential of how many times the message was seen or heard).

This report provides background information on FSIS' Food Thermometer Education Campaign—from which "Is It *Done* Yet?" originated—development, implementation of this campaign, objectives, evaluation of the pilot, and next steps in food thermometer education efforts by FSIS.

The campaign was designed to increase Boomburbs' awareness that they need to use a food thermometer and their intent to use one.

After the campaign, a higher proportion of Boomburb respondents indicated that they were likely to think about using a food thermometer. Among Boomburbs not always using a food thermometer, 50 percent more thought about using one. And, 47 percent more Boomburbs thought about using a food thermometer when cooking or grilling for their young children.

The overall proportion of Boomburbs using food thermometers (including sometimes, most of the time, and all of the time) increased by about 9 percent.

The number of parents not using and not thinking about using a food thermometer can be called "unaware." Of Boomburbs in that group, 15 percent became aware of the need to use a food thermometer. Of the Boomburbs not aware of the need to use a food thermometer when cooking and grilling for their children, 12 percent became aware after the campaign.

Information gained during the pilot of the "Is It *Done* Yet?" campaign was used to plan and develop a nationwide campaign by FSIS. Knowledge gained about the Boomburb audience and social marketing will be shared with educators and other campaign partners on the campaign Web site ([www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)).



# Background

## **You Can't Tell by Looking: The Importance of Consumers Using Food Thermometers**

FSIS has a long history of recommending food thermometer use. Research shows that color is not a reliable indicator of safety because meat could turn brown without reaching the internal temperature necessary to kill dangerous microorganisms. In fact, a USDA study found that 1 out of 4 hamburgers turned brown before reaching a safe internal temperature. Safety can only be assured by using a food thermometer.

## **Use a Food Thermometer To Be Sure: But, It's a Tough Sell**

In 1994, the USDA Meat & Poultry Hotline surveyed callers and found that only 50 percent owned a food thermometer. Of those who did, most used it only for a holiday turkey, if at all. Studies conducted by several State Cooperative Extension researchers also had similar findings. Data from a 1998 Food and Drug Administration (FDA) and FSIS national survey showed that only 46 percent of American cooks owned a food thermometer. And, only 3 percent used it to check small items like hamburgers.

Most Americans were not using food thermometers, and they did not think they needed to use one. Additional FSIS research found that consumers

- Had good food safety knowledge,
- Used color of meat and "intuition" to determine doneness,
- Had limited knowledge and use of food thermometers, and
- Were less than enthusiastic about using a food thermometer.

Consumers' attitudes specifically about thermometers were that using one

- Was inconvenient, "a hassle,"
- Would be expensive due to cost of purchasing a thermometer,
- Was not necessary because they *know* when food is done, and
- Was not necessary because they had been cooking without one for years without ill effects.

The research did show that parents of young children are more likely to make a behavior change that would benefit their children and that upscale cooks may consider thermometer use to enhance the quality of the cooked product.

In 2000, FSIS launched a national food thermometer education campaign with the mascot Thermy™ delivering the message, "It's Safe to Bite When the Temperature is Right!" Based on prior research, the campaign and the Thermy™ character were designed to appeal to the general population. Magnets, brochures, celebrity appearances, posters, television public service announcements, and a Web site ([www.fsis.usda.gov/thermy](http://www.fsis.usda.gov/thermy)) were developed as part of the campaign. Curricula for schools and materials for foodservice workers were also developed.

By working with partners in education, public health, and industry, FSIS was able to place the Thermy™ character, proper cooking temperatures, and instructions on thermometer use in the media, in food safety materials, and on packaging for thermometers. A national survey showed that the number of people owning a thermometer increased from 46 percent in 1998 to 60 percent in 2001. The proportion of cooks using a food thermometer for hamburger doubled from 3 percent to 6 percent and for chicken pieces increased from 8 to 10 percent. Industry data also showed an increase in thermometer sales.



# “Is It Done Yet?” Campaign Goals

To continue the momentum of increasing awareness and use of food thermometers, FSIS began work to more specifically target the food safety message. The goals of the new campaign were two-fold:

**1. Increase the use of food thermometers by parents of children under age 10 to reduce the incidence of foodborne illness.** Children of this age are more susceptible to foodborne illness and the serious, and sometimes fatal, effects of these illnesses. Outbreaks like *E. coli* O157:H7 in 1993 raised public awareness of the serious effects. Scientific research by USDA and others showed that these illnesses could be prevented with proper food handling. This goal also coincides with the objectives for food safety set in the Healthy People 2010 campaign, established in 1998.



## **2. Use Social Marketing Principles To Create Lasting Behavior Change.**

Changing a behavior such as increasing food thermometer use takes more than just informing and educating. The principles of social marketing were employed to encourage thermometer use. Taking on a commercial marketing mind-set, educators sought to understand consumers' wants and needs during the formative research of

the campaign. Following the marketing model, educators examined the recommendations they were making and factors they would need to address to change the selected audience's behavior. These included the barriers to thermometer use, the competition, and the costs and benefits perceived by consumers. Marketing's "4 Ps: Product, Price, Place, and Promotion" were employed.

# Selecting the Target Audience

## Parents of Children Under Age 10

Studies reveal that parents of children under age 10 are most likely to change their behavior, but only for their children, not for themselves. Focus groups and previous survey data showed that parents were interested in the taste of food, ease of use, and safety for their children and others.

Following the social marketing model's stages of behavior change, FSIS would pursue an increase in

- The awareness that parents need to use a food thermometer when preparing food (Contemplation);
- Parents' intention to use a food thermometer (Contemplation);
- Trial use of food thermometers (Action); and
- Continued, regular use of food thermometer by parents of children less than age 10 (Maintenance).

**Table 1—Stages of Behavior Change**

| Stage             | Characteristic             | To Motivate Change                             |
|-------------------|----------------------------|--|
| Pre-contemplation | Unaware                    | Provide awareness                              |
| Contemplation     | Consideration              | Support information gathering                  |
| Action            | Trial                      | Facilitate "purchase" and experimenting        |
| Maintenance       | Fulltime adoption of habit | Encourage to repeat and "evangelize" to others |

Descriptions from *Communications Guide for Boomburbs Families*.

Continuing to use social marketing principles, the campaign began to focus on a more targeted audience. A commercially available market segmentation system was utilized. This system employs statistical models that combine numerous national surveys of consumer behavior, lifestyle, and attitude with annually updated census data. With existing data, the segmentation system provides very acute segmentation and audience descriptions. These segments are not limited to a specific geographic area; therefore, results can be applied to the same segment nationwide. This approach is called geodemographic segmentation.

Because parents of young children are often willing to adopt new food safety behaviors, population segments with high indices of households with children less than age 10 were selected. This group was narrowed down to four segments:

- *Boomburbs*—Upscale, suburban, two-earner families in newer communities, where the newest technological gadgets are frequently sought.
- *Heartlands*— Middle-class Midwesterners with larger families and traditional lifestyles, stressing recreation and family activities.
- *Rural Towns*— Rural, low-income, less-educated and underemployed families, with limited consumer choices.
- *Single Moms*— Predominantly African-American and Hispanic one-parent families in major metropolitan areas, where incomes are low and the parents are young.

## Targeting the Boomburbs

With the input of experts including nutrition and food safety educators and a social marketing firm, FSIS chose to target the Boomburb population. Of the four groups, Boomburbs are the most likely to move rapidly through the stages of behavior change to fully adopt the desired behavior. They are highly educated, seek the newest technology, and have a propensity for acquiring and using new information. They are major influencers of mass culture, setting trends and disseminating new ideas.

Other factors considered in choosing a segment included the number of children affected by that segment and how much the children are exposed

to undercooked meat products. Geodemographic information available about Boomburbs shows that these parents prefer high-quality, gourmet foods, which are often served after reaching lower internal temperatures (e.g., rare and medium-rare hamburger). Based on Boomburbs' media and information preferences in the geodemographic data, they would not avail themselves nor be exposed to as much information from the channels where FSIS and Extension educators would usually place thermometer education information. Focus group studies confirmed that Boomburbs did not know about unreliability of color for doneness nor the need to use a food thermometer for safety.



# Crafting the Message

## Getting to Know the Boomburbs

Geodemographic information already showed that Boomburbs

- Are hungry for news and information,
- Consume more than the average amount of scientific and technological entertainment,
- Are savvy about technology and love gadgets,
- Appreciate gourmet food,
- Are conscious about safety,
- Demand high achievement from their children,
- Seek luxury,
- Are “evangelizers” because they influence society through their leadership and key positions and share ideas with family and others,
- Get information from print, radio, television, and the Internet,
- Tend to seek information about new things, and
- Have food safety knowledge, but are not aware of the need to use a food thermometer.

Based on this information, FSIS conducted observational research in suburban Virginia to learn more about Boomburbs. Boomburb parents and their children were brought into a kitchen setting and participated in a “gourmet hamburger cooking contest.” The participants’ cooking practices were observed. FSIS was able to confirm that Boomburbs knew little about using food thermometers, saw thermometers as inconvenient, and used visual cues to decide if food was done.

Immediately following the cooking session, FSIS educators held discussions with the parents. They found that barriers to using food thermometers included:

- Family tradition, their role models did not use thermometers,
- Lack of knowledge about how and why to use food thermometers,
- The idea that checking the internal temperature was not required for small meat and poultry items.

Bridges to encourage Boomburbs’ use of food thermometers included the parents’ concern for their children’s safety and parents’ interest in technology and food quality. The discussions also revealed that the participants did not know the visual signs of doneness were not reliable. Participants also confirmed that they get information from the media and often from the Internet.

## Testing Messages

Based on the geodemographic data available about Boomburbs, the new observational research, and prior research results, FSIS worked with a social marketing firm to develop specific, targeted messages. The messages were then tested with Boomburb parents in Tampa, FL. A “special event” at a popular home and cooking store was held. Facilitators showed participants several message concepts in the form of color print advertisements. Participants expressed preferences for the components.

After additional focus groups to confirm findings, the slogan, “Is it *Done* yet? You can’t tell by looking. Use a food thermometer to be sure,” was selected.



# Planning the Campaign and Pilot

## Choosing Channels for the Message

FSIS developed a number of campaign products designed for the Boomburb audience:

- Web site ([www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)) with detailed information,
- Color brochure on why a food thermometer was necessary, how to choose one, how to use one, and the proper cooking temperatures,
- Magnet with a punch-out temperature chart; the remaining piece serves as a magnet photo frame,
- Print advertisements to be placed in newspapers and magazines on why, cooking temperatures, and where to get more information, and
- Radio public service announcements with promoting food thermometer usage as the campaign message.



## Partners for the Pilot Campaign

The Michigan State University (MSU) National Food Safety and Toxicology Center, MSU Food Science and Human Nutrition Department, and MSU Extension received funding from the Michigan Department of Agriculture to conduct a comprehensive food safety education program for Michigan consumers using social marketing. They approached USDA's FSIS about a partnership. The shared objectives led to collaboration. The Michigan project staff identified food thermometer use as an appropriate goal for a food safety campaign. FSIS determined that piloting the food thermometer use campaign in Michigan would be an appropriate step in the national campaign strategy.

## Establishing Objectives for the Pilot

FSIS and MSU set the following objectives for the campaign:

1. Employ partnerships.
2. Saturate the Boomburb market with the campaign messages.
3. Employ free and paid media.
4. Conduct on-site events at retail stores, schools, festivals, etc.
5. Conduct pre- and post-campaign research.

6. Evaluate the campaign based on movement through the stages of behavior change toward maintenance use of food thermometers.
7. Develop a national campaign based on the pilot because geodemographic segmentation makes results portable.

## Determining the Baseline

The MSU Department of Community, Agriculture, Recreation and Resource Studies administered a baseline survey in the weeks before implementation. This statewide survey collected information to identify where consumers with children less than age 10, in all four geodemographic sub-segments, stood in the stages of behavior change.

Surveys were mailed to 2,500 Boomburbs, 1,000 Heartlands, 1,000 Single Moms, and 1,000 Rural Towns throughout Michigan. Participation was encouraged with the offer of a drawing for \$300, \$200, and \$100 gift certificates to a local grocery store. The return was 24 percent, 4 percent higher than estimated. A phone survey of 88 completed calls, 40 of which were to Boomburbs, was used to measure non-response bias for the pre-campaign survey.

**Tables 2 and 3—Baseline for Distribution by Percentage for Awareness and Behavior for Using a Food Thermometer When Cooking Meat and Poultry.**

**Boomburbs**

|                       | <b>Unaware</b> | <b>Think About It<br/>When Not Using</b> | <b>Use</b> |
|-----------------------|----------------|--|------------|
| Cooking and grilling  | 49             | 14                                       | 44         |
| For children under 10 | 51             | 15                                       | 42         |
| Hamburger patties     | 79             | 11                                       | 14         |

**Non-Boomburbs (Heartlands, Rural Towns, and Single Moms)**

|                       | <b>Unaware</b> | <b>Think About It<br/>When Not Using</b> | <b>Use</b> |
|-----------------------|----------------|--|------------|
| Cooking and grilling  | 54             | 21                                       | 34         |
| For children under 10 | 53             | 22                                       | 35         |
| Hamburger patties     | 79             | 15                                       | 11         |

**Implementing the Michigan Pilot**

MSU and FSIS planned the campaign for August 2 to August 15, 2004. Four Michigan counties were selected based on the high percentage of households falling into the target audience. Ingham (Ann Arbor), Washtenaw (Lansing), and Kent (Grand Rapids) counties were selected for the pilot campaign in order to provide separation of markets to allow for testing alternate strategies. In the post-test, Genesee County (Flint) was the control county.

On April 21, a strategic planning and communications meeting was held at MSU with FSIS, MSU and more than 50 partners from the Grand Rapids, Ann Arbor, and Lansing areas. Partners included members of a State food safety network, grocery chain representatives, local extension educators, and media groups. FSIS and MSU presented information about the benefits of partnering, an introduction to social marketing concepts, an explanation of the thermometer use campaign, and information and research about how and why the Boomburbs were chosen as the targeted audience segment. The partners divided into groups based on their geographic areas to brainstorm ideas for events and venues to best

reach the targeted segment. The group reconvened to discuss the ideas. It was confirmed that the USDA Under Secretary for Food Safety would be invited to the kick-off and activities would be planned with the USDA Food Safety Mobile. Local partners were encouraged to be issue champions in their counties.

For the rest of April and until the launch on August 2, FSIS and MSU continued to plan, coordinate, and make arrangements for the events. During this time, they also worked on promoting the events directly and with two public relations firms. (See “Media” in the next section.) In addition to materials FSIS created in the planning stages, MSU developed promotional items with a thermometer logo and the “Is It *Done* Yet?” message to reinforce the message and attract parents and their children. This included balloons, hats, aprons, chairs and shirts for event workers, and food thermometers. MSU also constructed bean bag and ring toss games that children and adults played. (See Appendix F.)

# Launching the Pilot

## Events

The implementation took advantage of some existing events and developed some others. The team appeared with the USDA Food Safety Mobile at schools, day camps, festivals, supermarkets, home improvement stores, shopping malls, and museums. The USDA Under Secretary for Food Safety kicked off the campaign and the FSIS Acting Administrator attended an event midway through the campaign. Each event included the Thermym™ and Fight BAC!® costume characters and a variety of activities. There were games for children, demonstrations on using food thermometers, free samples of burgers tested with thermometers, storytelling by USDA officials and partners, distribution of promotional items, and even an appearance and face-painting by a clown at one event.

Free digital thermometers were available from FSIS and small, instant-read dial thermometers from MSU, along with the “Is It *Done* Yet?” magnets and brochures, other food safety literature, stickers, temporary tattoos, T-sticks (disposable temperature indicators), balloons and more. In the course of the campaign, more than 2,000 digital thermometers provided by FSIS and 3,100 dial thermometers provided by MSU were given away.

**Table 4—Campaign Events by Location**

### Grand Rapids

| Event                         | Dates    |
|-------------------------------|----------|
| Public Museum of Grand Rapids | August 2 |
| Lowe’s                        | August 4 |
| Family Fare – Cutlerville     | August 5 |

### Ann Arbor

| Event   | Dates     |
|---|-----------|
| Briarwood Mall                                | August 6  |
| Dixboro Fair & Artisans on the Green Festival | August 7  |
| Kroger  | August 8  |
| Hands-On Museum                               | August 9  |
| Day Camps, Cobblestone Farms and Fuller Pool  | August 10 |

### Lansing and East Lansing

| Event                     | Dates        |
|---------------------------|--------------|
| Eastwood Towne Center     | August 11    |
| Kroger – Okemos           | August 12    |
| Great Lakes Folk Festival | August 14–15 |



**Table 5—Outreach Activities in Michigan**

| Activity  | Dates                        | Quantity         |
|---|------------------------------|------------------|
| Calls to USDA Meat & Poultry Hotline from advertisements offering a free food thermometer | July–November                | 226              |
| Thermometers distributed  | August 1–15                  | 5,100            |
| Brochures distributed   | August 1–15<br>July–November | 28,800<br>50,400 |
| Magnets distributed   | August 1–15<br>July–November | 17,750<br>20,000 |
| Event attendees reached   | August 1–15                  | 9,840            |

## Media

FSIS and MSU worked with two public relations firms to acquire both earned (free) and purchased media coverage of the campaign message. A media broker was contracted by FSIS to purchase media and value-added exposure. The broker was directed to procure radio, Internet, newspaper, and magazine advertising totaling almost \$100,000. Radio remotes were used to heighten awareness of the USDA Food Safety Mobile locations and the campaign message. MSU hired local a public relations firm to acquire earned media coverage in the three campaign areas. In addition, FSIS promoted the campaign and message to the media.

The combined efforts resulted in an estimated 5 million impressions (estimates of potentially how many times the message was seen or heard) during the campaign, not including earned television and radio. (See Table 6.)

## Print (Magazine and Newspaper)

Magazine ads were placed in the August 2004 issues of *Grand Rapids Magazine* and *Metro Parent* (Ann Arbor) promoting the “Is It Done Yet?” campaign messages. Readers were offered a free digital food thermometer if they called the USDA Meat & Poultry Hotline. Each requestor received a digital thermometer and one each of the “Is It Done Yet?” brochure and magnet. Requests totaled 214 as of December 1 (not including 12 from States other than Michigan).

Advertisements were run over 5 days in daily papers of each campaign county: *Lansing State Journal*, *Grand Rapids Press*, and *Ann Arbor News*. Advertisements were placed announcing upcoming events or campaign messages, such as proper internal temperatures for cooking meat. Each day, the advertisements ran in different sections of the paper: food, style, sports, and the “main” (A section) news. (See Appendix F.)

Papers and magazines such as the *Ann Arbor News*, *Metro Parent Magazine*, *Grand Rapids Press*, and two Michigan State University publications ran several articles and event listings, providing more earned coverage.

## Internet

FSIS and MSU primarily used the Internet in three ways to reach the audience segments: FSIS created a new site for the campaign ([www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)), Internet advertisements were included in the package from the media broker, and earned media coverage included Web-only news sites and some traditional media outlets posted information to their sites. FSIS acquired special approval to use this Web site address instead of a page linked through the FSIS home page or having a long address. According to focus group studies, the short, direct address is easier for consumers to remember, making them more likely to visit the site. From August 1 to September 1 approximately 1,430 Internet users visited [www.IsItDoneYet.gov](http://www.IsItDoneYet.gov), maintained by FSIS, and 222 of them viewed the detailed text of the brochure. In the first year (August 1, 2004 through July 31, 2005), 7,093 users visited the site, with 1,064 viewing the brochure.

The advertisements were placed on three Web sites:

- FREEP.com (operated by the *Grand Rapids Press*),
- LSJ.com (operated by the *Lansing State Journal*),
- M-Live (operated by the University of Michigan in Ann Arbor)



**Table 6—Impressions Achieved**

|              | <b>Newspaper</b> | <b>Magazine</b> | <b>Radio</b>     | <b>TV</b> | <b>Internet</b>  | <b>Partner Promos</b> | <b>Total</b>     |
|--------------|------------------|-----------------|------------------|-----------|------------------|-----------------------|------------------|
| Paid         | 1,439,194        | 49,899          | 1,520,000        | --        | 1,026,312        | --                    | 4,035,405        |
| Earned       | 511,132          | 106,250         | unknown          | unknown   | 80,730           | 235,500               | 933,612          |
| <b>Total</b> | <b>1,950,326</b> | <b>156,149</b>  | <b>1,520,000</b> | <b>--</b> | <b>1,107,042</b> | <b>235,500</b>        | <b>4,969,017</b> |

Web banners (flash ads) were posted with the “Is It *Done Yet?*” logo and text encouraging thermometer use. (See Appendix F.)

Additional coverage by local Internet news sites also provided coverage.

### Radio

More than 1,000 advertising spots were placed on AM and FM radio stations of various program formats in each of the three areas. Formats included public radio, adult contemporary, rock, classic rock, country, sports talk, news, and news talk.

Remote radio broadcasts with popular DJ’s from “Is It *Done Yet?*” events were arranged as part of the “value added” to the advertising packages. Some gave away prizes and interviewed USDA and MSU food safety experts and spokespersons at the events. Other stations conducted live interviews of experts from their studios if they were not able to participate on site. Some unique interviews included on-air grilling and providing of samples and prizes to listeners stopping by the station or event locations.



All broadcasts invited listeners to come to campaign events in the local areas. Several stations provided campaign literature at station events during the 2-week campaign period. Many also conducted in-depth interviews with FSIS executive management and later broadcast the interviews as part of the stations’ public affairs programming. Some stations added Web banners for the campaign to their sites during the 2-week period.

### Television

Though no advertisements were purchased for television, earned coverage was considerable, with information broadcast in news stories or on community calendars. Stations in all three campaign areas and representing the four major networks covered the events and campaign. Many also published information on their Web sites. Community Television Network, a city-owned cable news channel, ran its story for nearly 6 weeks in December and January. The channel reaches 86,000 subscribing households in Ann Arbor and Ypsilanti.

### Partner Outreach and Promotion

Event and site partners also did their part to get the message out about the campaign and events, handing out flyers, sending e-mails, and posting information on their Web sites. In addition, these partners also put up posters in their facilities and grocers made in-store announcements. FSIS and MSU both issued press releases the first 2 days of the campaign, announcing the effort to decrease incidence of foodborne illness. Some of the hosts also issued news releases about the events at their locations.

# Measuring and Evaluating

## Evaluation of the Campaign Pilot

FSIS and MSU were successful in meeting all the objectives for the pilot set out at the beginning of their partnership:

1. Government, community, education, and retail partners all participated in varied campaign activities.
2. The Boomburb market was sufficiently saturated with the campaign message. According to an informal survey of potential focus group participants, between 43 and 53 percent of those Boomburbs had heard or read about thermometer usage during the campaign period or soon after. (See Appendix I.)
3. FSIS contracted with a media buyer to purchase radio, print, and Internet advertising resulting in more than 4 million impressions. MSU hired a public relations firm to achieve earned media. At least 21 media outlets covered the campaign, some running multiple pieces. (See Table 6.)
4. Events were conducted at a wide variety of sites, including radio stations, grocery stores, shopping centers and malls, festivals, museums, and children's day camps. (See Table 4.)
5. Several areas of research were conducted in Michigan: a pre-campaign mail survey, an on-site survey, a post-campaign survey, and post-campaign focus groups.
6. The campaign has been evaluated in terms of the stages of behavior change, based on the questions used in pre- and post-campaign mail surveys.
7. Information gained during the pilot campaign has already been used to modify the educational pieces such as the magnet and brochure. (See Appendix F.) Lessons learned during the planning and implementation of the pilot have been used as guidance to other organizations using the "Is It *Done Yet?*" materials.

According to MSU researchers, it is important to consider the following limitations when assessing the impact and effectiveness of the pilot campaign:

- The campaign was of relatively short duration, only 2 weeks.
- The monetary investment in the promotion campaign was relatively small.
- The campaign constituted only a fraction of the variety of promotional messages to which residents of the study counties were exposed, thus they might not take notice of its message.
- Meal preparation involves behaviors that are passed down from generation to generation and result in a firmly ingrained manner in which food is prepared even among young adults.

Thus, the campaign faced two major challenges: to capture the attention of the targeted recipients amid competing messages from a multitude of sources and, if received, to be powerful enough for recipients to alter firmly established behavior developed over their lifetime. Under such circumstances, even small pre- to post-campaign changes in results should be deemed meaningful, according to MSU researchers. (See Appendix H.)

Despite the media clutter and ingrained behavior challenges facing the campaign, it was effective in increasing awareness and had an impact on meat preparation behavior by providing information on what action to take and educating the audience on how to execute that action.



## Methodology

### Mail Surveys

MSU researchers deemed the data to be reliable based on several factors:

- There appeared to be no bias in the data based upon internal data comparisons or on a small sample of non-respondents queried by telephone.
- Nothing occurred during the campaign that was likely to have influenced meat preparation behavior of the population in the study area.
- Approximately 70 percent of respondents were in the targeted segment of households with children under 10.
- Pre- and post-campaign responses were similar enough that differences in propensity to consume meat are not a source of bias.
- Post-campaign survey was administered during the 2 weeks immediately after the campaign.
- Response rate for the post-campaign survey was high (30 percent).
- The questionnaires used in the pre- and post-campaign surveys were identical.

The primary focus of the survey research was on Boomburb households. However, three other types of households were also included in the pre- and post-campaign mail surveys: Heartland, Rural Town, and Single Mom. This was to measure the effectiveness on secondary audience segments when Boomburbs are targeted.

In both the pre-campaign survey and post-campaign survey, incentives were used to encourage responses, resulting in 24 percent and 30 percent respectively. The total number of respondents to the mail surveys was 4,327, including a control county. A phone survey of 146 completed calls, 67 of which were to Boomburbs, was conducted to measure nonresponse bias for both surveys.

The post-campaign survey was administered in the three campaign counties and in the fourth control county (Genesee, which includes the Flint area). A control county was employed in the study design to assess the influence of possible uncontrollable events, especially meat- or poultry-related, on food preparation behavior during the campaign. These types of events tend to generate mass media coverage, which would confound interpreting pre- and post-campaign results. No such event occurred during the course of the study.

Researchers did not include results from the control county survey in the report, because the results are similar to the pre-campaign results in the other counties.

### Focus Groups

RTI International, on behalf of FSIS, conducted two focus groups in each of the three campaign locations, one with Boomburbs and one with non-Boomburbs. Each focus group had 6 to 8 participants for a total of 45.

Participants were screened for eligibility requirements:

- Heard or read about food thermometer usage in the previous 2 months;
- Had children aged 10 years old or younger living in their households;
- Had primary or shared responsibility for cooking in their households;
- Prepared and ate meat and/or poultry in their homes at least three times a week;
- Were 18 to 55 years old;
- Had not participated in a focus group in the past 6 months; and
- Had not been employed, nor had family members employed, by the Federal government, the food industry, the health care industry, or a marketing research, advertising, or public relations firm in the previous 5 years.

In addition to these criteria, participants had to have annual household incomes of at least \$50,000 and at least a 4-year college degree to be eligible to participate in the Boomburb focus groups. To be eligible to participate in the non-Boomburb focus groups, participants must not have completed a 4-year college degree.

Prior to the focus group discussions, participants completed a questionnaire that collected information on participants' thermometer usage before and after campaign exposure, exposure medium, and demographics. Each focus group lasted approximately 90 minutes.

### Market Saturation

A survey of potential focus group participants suggests that at least 43 percent of individuals in the target segments of the three campaign counties read or heard messages about food thermometer use in August and September. In the Lansing area, the result was 52.6 percent. These results cannot be deemed statistically significant due to the nature of the survey, which was taken while recruiting and screening out focus group participants. It does indicate that a substantial number of people heard or read messages related to the campaign, even though the activities lasted only a few days in each area.

On the questionnaires administered before the focus groups, participants noted that they had heard or read about thermometer usage at campaign events, the FSIS Web site, local and national news (newspaper, magazine, radio, and television), radio public service announcements, and advertisements in various media. Some heard or read about thermometer use through media not directly targeted by the campaign, such as the Food Network and cooking magazines.

## Results

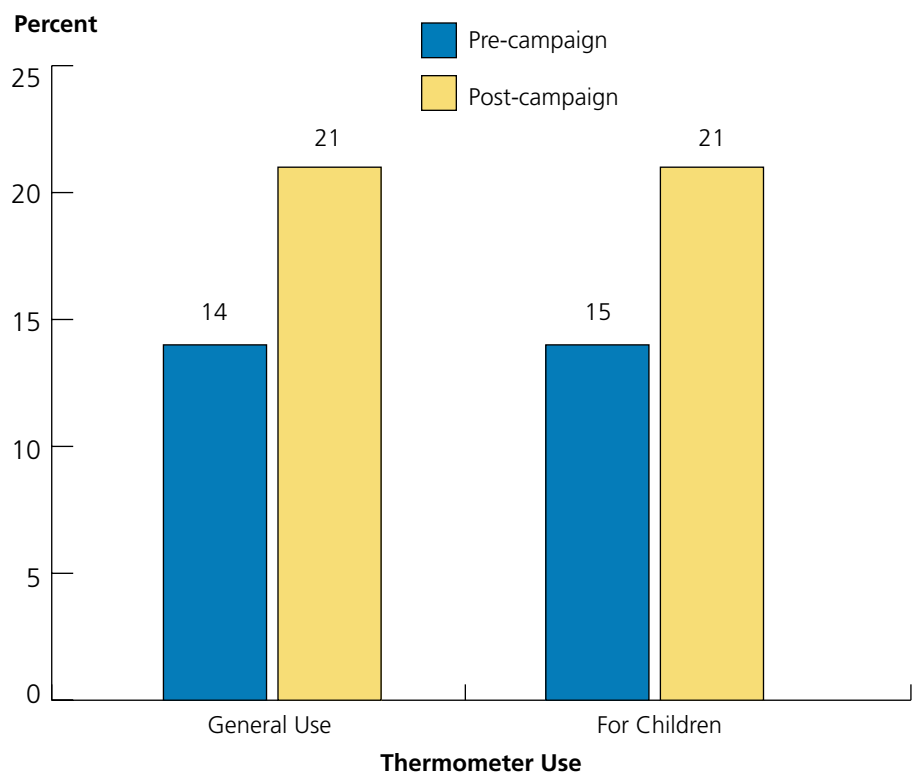
### Boomburb Awareness

The campaign was designed to increase Boomburbs' awareness that they need to use a food thermometer and Boomburbs' intent to use one. When cooking or grilling, but not using a food thermometer, 50 percent more Boomburbs thought about using one. When cooking or grilling for their young children and not using a food thermometer, 47 percent more thought about it. Before the campaign, about

14 percent thought about using a food thermometer in both situations. After the campaign 21 percent thought about using one. (See Figure 1.)

Parents not using and not thinking about using a food thermometer can be called "unaware" (Pre-Contemplation). Of Boomburbs in that group, 15 percent became aware of the need to use a food thermometer. When cooking and grilling for their children, the movement for Boomburbs was 12 percent.

**Figure 1—Boomburbs that think about using a food thermometer when they do not use one.**





### **Boomburb Behavior**

The proportion of Boomburbs using food thermometers (including sometimes, most times, and all of the time) when cooking and grilling meats in general increased by about 9 percent. The number before the survey was 44 percent and went up to 48 percent. (See Appendix E.)

### **Whom Boomburbs Trust and Call**

In the survey, respondents were asked about the source they use and trust for food preparation information. The two most trusted sources of food preparation information by Boomburbs are “health professionals” and the “USDA.” “Celebrities and popular stars” are least trusted sources. The most commonly used sources of information in preparing foods are “cookbooks” and “friends and relatives.” This information will be used in selecting spokespersons, venues, media, and formats for future campaigns.

### **Observations From Focus Groups**

During the focus groups conducted after the campaign, participants shared information about their use of food thermometers and what information they read or heard about using thermometers. Focus group participants discussed their impressions of the campaign brochure and offered suggestions about how it could be improved and how it had an impact on their awareness and knowledge of food thermometers and participants’ use of thermometers. Participants provided similar feedback on the magnet, Web site, radio public service announcement, and print advertisements. This feedback has been used in revisions to the campaign materials.

After receiving a free food thermometer at a campaign event, one Boomburb participant in a focus group said she was surprised that the meat she had cooked had not reached a safe internal temperature when she thought it was done; she was glad that she had received the food thermometer and plans to continue using it. Another Boomburb participant said that after hearing the radio public service announcement she thought, “I’m pretty confident [about my cooking] but maybe I shouldn’t be.” Some participants in both segments said they became “more conscious” or “more cautious” when cooking meat and poultry or considered purchasing or using a food thermometer.

After watching a local television news story about food thermometer usage, one Boomburb participant started using a food thermometer more often to set an example for her 15-year-old daughter; she taught her daughter how to use a food thermometer when cooking meat and poultry. At least two Boomburb participants considered using a food thermometer to protect their children from foodborne illness but had yet to use or purchase one. This is all additional evidence of the effective targeting of the campaign to Boomburbs.

One non-Boomburb participant who only used a food thermometer for large cuts of meat now uses one when grilling steaks and chicken on an outdoor grill, “so my little boy doesn’t get sick [from foodborne illness].” Of the three participants who received a free food thermometer at the Mobile, two participants still only use the food thermometer on large pieces of meat. One participant stated, “I know I should use one, but it’s hard to break the habit [of not using a food thermometer when cooking meat and poultry].”

## Next Steps

Information gained during the pilot of “Is It *Done Yet?*” in Michigan was used to plan and develop a nationwide campaign by FSIS. Knowledge gained from the pilot campaign about the Boomburb audience and about the social marketing process is being reported and shared so it can be applied to other public health campaigns by other social marketers, educators, and other campaign partners.

The nationwide campaign began in July 2005. This campaign supports the Healthy People 2010 initiative, which has as one of its goals to increase food thermometer use. It also supports the national Dietary Guidelines for Americans 2005, which promotes food safety, including use of a food thermometer.



This nationwide “Is It *Done Yet?*” campaign strives to support these goals with the following campaign objectives:

- Build and use partnerships among national, regional, and local entities,
- Build and use partnerships among government, education, health organizations and industry in common localities,
- Report and share success stories through the campaign Web site ([www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)),
- Provide coordination, materials, ideas, plans, and other resources from FSIS to partners in this multi-year effort.

To prepare for this nationwide campaign, FSIS used information gathered from surveys, focus groups, and experiences from the pilot with MSU. Based on these findings, FSIS created new informational materials, including a brochure, video news release, Web site, advertisements, and radio public service announcement. FSIS also created a media kit, a sample of a local press release, and information kits for partners.

Based on the results showing a positive effect on the awareness and behavior of Boomburbs and initial interest from partners around the country, FSIS looks forward to similar successful campaigns across the Nation.

# Appendices

## Appendix A—Response Comparison Between Pre- and Post-Campaign Studies: Boomburb Respondents With Children Under 10 Years of Age

### Q1. Are there any children under the age of 10 living in your household?

|      | Yes    | No   | Number of Respondents |
|------|--------|------|-----------------------|
| Pre  | 100.0% | 0.0% | 423                   |
| Post | 100.0% | 0.0% | 709                   |

### Q2. About how many times a week do you prepare meals at home that include meat?

|      | 0 times | 1-2 times | 3-4 times | 5-6 times | 7 or more times | Number of Respondents |
|------|---------|-----------|-----------|-----------|-----------------|-----------------------|
| Pre  | 0.7%    | 6.7%      | 28.5%     | 37.8%     | 26.4%           | 421                   |
| Post | 1.7%    | 5.1%      | 30.8%     | 36.6%     | 25.7%           | 707                   |

### Q3. How often do you use a food thermometer when you cook or grill meats?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 1.9%   | 6.9%       | 35.1%     | 56.1% | 419                   |
| Post | 2.5%   | 5.7%       | 39.7%     | 52.2% | 690                   |

### Q4. The times when you don't use a food thermometer when you cook or grill meat, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 14.0% | 86.0% | 407                   |
| Post | 21.0% | 79.0% | 676                   |

### Q5. How often do you use a food thermometer when you cook or grill meats for your children under age 10?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 2.4%   | 6.5%       | 32.9%     | 58.3% | 417                   |
| Post | 3.3%   | 5.8%       | 35.0%     | 55.9% | 694                   |

### Q6. The times when you don't use a food thermometer when you cook or grill meat for your children under age 10, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 14.6% | 85.4% | 404                   |
| Post | 21.4% | 78.6% | 663                   |

### Q7. How often do you use a food thermometer when you cook or grill hamburger patties?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 3.1%   | 1.9%       | 8.9%      | 86.1% | 416                   |
| Post | 3.6%   | 3.2%       | 7.1%      | 86.1% | 689                   |

### Q8. The times when you don't use a food thermometer when you cook or grill hamburger patties, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 11.1% | 88.9% | 403                   |
| Post | 13.9% | 86.1% | 663                   |

## Appendix B—Response Comparison Between Pre- and Post-Campaign Studies: Non-Boomburb Respondents With Children Under 10 Years of Age

### Q1. Are there any children under the age of 10 living in your household?

|      | Yes    | No   | Number of Respondents |  |
|------|--------|------|-----------------------|--|
| Pre  | 100.0% | 0.0% | 508                   |  |
| Post | 100.0% | 0.0% | 872                   |  |

### Q2. About how many times a week do you prepare meals at home that include meat?

|      | 0 times | 1-2 times | 3-4 times | 5-6 times | 7 or more times | Number of Respondents |
|------|---------|-----------|-----------|-----------|-----------------|-----------------------|
| Pre  | 0.4%    | 4.1%      | 23.9%     | 32.1%     | 39.4%           | 507                   |
| Post | 1.4%    | 4.6%      | 25.3%     | 35.9%     | 32.9%           | 870                   |

### Q3. How often do you use a food thermometer when you cook or grill meats?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 1.4%   | 5.6%       | 27.1%     | 65.9% | 501                   |
| Post | 1.3%   | 5.0%       | 30.3%     | 63.4% | 856                   |

### Q4. The times when you don't use a food thermometer when you cook or grill meat, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 20.7% | 79.3% | 489                   |
| Post | 18.1% | 81.9% | 832                   |

### Q5. How often do you use a food thermometer when you cook or grill meats for your children under age 10?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 1.6%   | 7.2%       | 25.8%     | 65.4% | 500                   |
| Post | 2.1%   | 5.1%       | 28.6%     | 64.2% | 850                   |

### Q6. The times when you don't use a food thermometer when you cook or grill meat for your children under age 10, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 22.1% | 77.9% | 489                   |
| Post | 19.3% | 80.7% | 833                   |

### Q7. How often do you use a food thermometer when you cook or grill hamburger patties?

|      | Always | Most Times | Sometimes | Never | Number of Respondents |
|------|--------|------------|-----------|-------|-----------------------|
| Pre  | 2.0%   | 3.0%       | 5.5%      | 89.5% | 494                   |
| Post | 2.0%   | 2.5%       | 5.2%      | 90.3% | 849                   |

### Q8. The times when you don't use a food thermometer when you cook or grill hamburger patties, do you think about using one?

|      | Yes   | No    | Number of Respondents |
|------|-------|-------|-----------------------|
| Pre  | 14.9% | 85.1% | 489                   |
| Post | 14.1% | 85.9% | 830                   |



## Appendix C—Stage Comparison Between Pre- and Post-Campaign Studies: Boomburb Respondents With Children Under 10 Years of Age

### Stages of Behavior Change

| Situation                                |                           | Pre-Contemplation | Contemplation | Action | Maintenance |
|--|---------------------------|-------------------|---------------|--------|-------------|
| General Use<br>(Q3 and Q4)               | Pre                       | 48.7%             | 6.2%          | 35.1%  | 8.8%        |
|  | Post                      | 41.4%             | 10.4%         | 39.7%  | 8.2%        |
|  | Difference                | -7.3%             | —             | —      | —           |
|  | Increased or Decreased by | -15.0%            | —             | —      | —           |
| For Children<br>Under 10<br>(Q5 and Q6)  | Pre                       | 50.6%             | 7.2%          | 32.9%  | 8.9%        |
|  | Post                      | 44.5%             | 10.2%         | 35.0%  | 9.1%        |
|  | Difference                | -6.1%             | —             | —      | —           |
|  | Increased or Decreased by | -12.1%            | —             | —      | —           |
| With Hamburger<br>Patties<br>(Q7 and Q8) | Pre                       | 79.3%             | 63.0%         | 8.9%   | 5.0%        |
|  | Post                      | 76.6%             | 87.0%         | 7.1%   | 6.8%        |
|  | Difference                | —                 | —             | —      | —           |
|  | Increased or Decreased by | —                 | —             | —      | —           |

Pre-Contemplation—Never use a food thermometer and do not think about it.

Contemplation—Never use a food thermometer, but do think about it.

Action—Sometimes use a food thermometer.

Maintenance—Use a food thermometer most or all of the time.

### Awareness and Behavior

| Situation                                |                           | Unaware | Aware | Think About | Use   |
|--|---------------------------|---------|-------|-------------|-------|
| General Use<br>(Q3 and Q4)               | Pre                       | 48.7%   | 50.1% | 14.0%       | 43.9% |
|  | Post                      | 41.4%   | 58.3% | 21.0%       | 47.9% |
|  | Difference                | -7.3%   | —     | 7.0%        | 4.0%  |
|  | Increased or Decreased by | -15.0%  | —     | 50.0%       | 9.1%  |
| For Children<br>Under 10<br>(Q5 and Q6)  | Pre                       | 50.6%   | 48.9% | 14.6%       | 41.8% |
|  | Post                      | 44.5%   | 54.3% | 21.4%       | 44.1% |
|  | Difference                | -6.1%   | —     | 6.8%        | —     |
|  | Increased or Decreased by | -12.1%  | —     | 47.0%       | —     |
| With Hamburger<br>Patties<br>(Q7 and Q8) | Pre                       | 79.3%   | 20.2% | 11.1%       | 13.9% |
|  | Post                      | 76.6%   | 22.7% | 13.9%       | 13.9% |
|  | Difference                | —       | —     | —           | —     |
|  | Increased or Decreased by | —       | —     | —           | —     |

Unaware—Pre-Contemplation

Aware—Use or think about using a food thermometer.

Think About—Think about using a food thermometer when they do not.

Use—Use a food thermometer sometimes, most of the time, or all of the time.

Difference is shown only if significant at the .05 level.

## Appendix D—Stage Comparisons Between Pre- and Post-Campaign Studies: Non-Boomburb Respondents With Children Under 10 Years of Age

### Stages of Behavior Change

| Situation                             |      | Pre-Contemplation | Contemplation | Action | Maintenance |
|---------------------------------------|------|-------------------|---------------|--------|-------------|
| General Use<br>(Q3 and Q4)            | Pre  | 54.3%             | 11.2%         | 27.1%  | 7.0%        |
|                                       | Post | 51.9%             | 10.5%         | 30.3%  | 6.3%        |
| For Children Under 10<br>(Q5 and Q6)  | Pre  | 53.4%             | 11.4%         | 25.8%  | 8.8%        |
|                                       | Post | 53.1%             | 10.8%         | 28.6%  | 7.2%        |
| With Hamburger Patties<br>(Q7 and Q8) | Pre  | 78.9%             | 9.7%          | 5.5%   | 5.0%        |
|                                       | Post | 80.3%             | 9.1%          | 5.2%   | 4.5%        |

Pre-Contemplation—Never use a food thermometer and do not think about it.

Contemplation—Never use a food thermometer, but do think about it.

Action—Sometimes use a food thermometer.

Maintenance—Use a food thermometer most or all of the time.

### Awareness and Behavior

| Situation                             |      | Unaware | Aware | Think About | Use   |
|---------------------------------------|------|---------|-------|-------------|-------|
| General Use<br>(Q3 and Q4)            | Pre  | 54.3%   | 45.3% | 20.7%       | 34.1% |
|                                       | Post | 51.9%   | 47.1% | 18.1%       | 36.6% |
| For Children Under 10<br>(Q5 and Q6)  | Pre  | 53.4%   | 46.0% | 22.1%       | 34.6% |
|                                       | Post | 53.1%   | 46.6% | 19.3%       | 35.8% |
| With Hamburger Patties<br>(Q7 and Q8) | Pre  | 78.9%   | 20.2% | 14.9%       | 10.5% |
|                                       | Post | 80.3%   | 18.7% | 14.1%       | 9.7%  |

Unaware—Pre-Contemplation

Aware—Use or think about using a food thermometer.

Think About—Think about using a food thermometer when they do not.

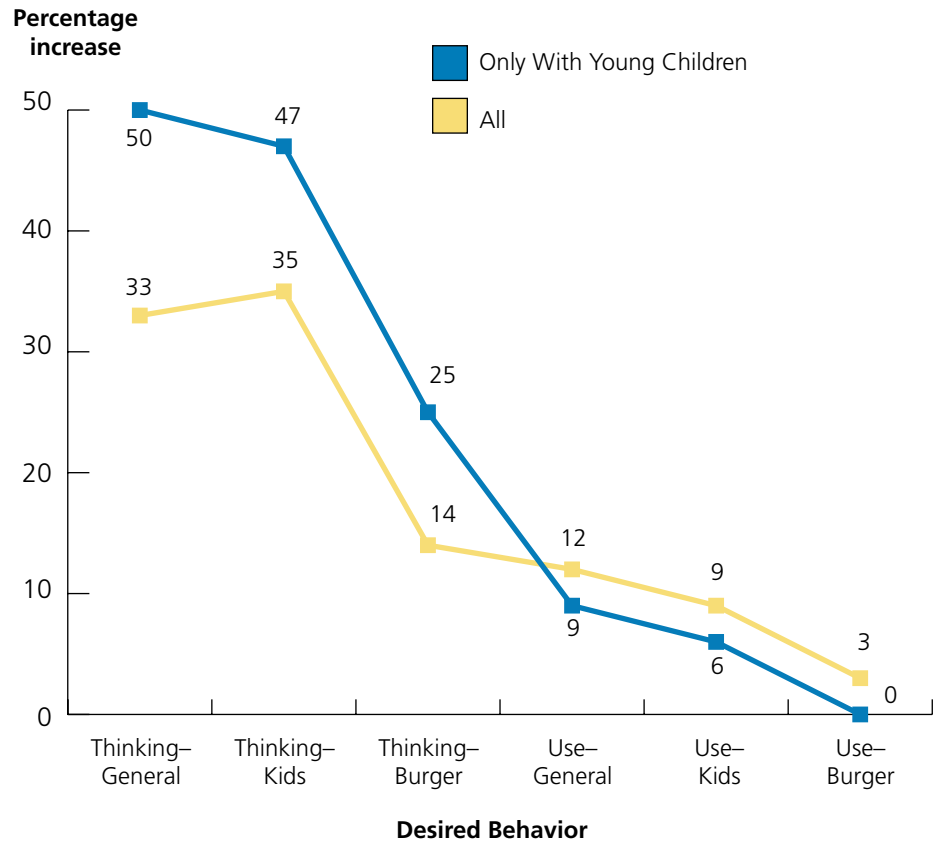
Use—Use a food thermometer sometimes, most of the time, or all of the time.

There were no differences in Non-Boomburbs significant at the .05 level.

## Appendix E—Increases of Boomburbs’ Thinking About and Using Food Thermometers

Although the 9-percent increase in use by Boomburbs with children under age 10 is not statistically significant, a larger sample size would result in increased statistical power and may then show an increase that is statistically significant, as the larger group showed. The two groups were similar in the proportion how many more reported the desired behaviors. (Responses from Boomburbs without children under 10 in their households—29 percent of Boomburb respondents—were omitted to find results for the more specific group.)

**Comparison of All Boomburbs Surveyed vs. Only Parents With Children Under Age 10**



Appendix F—Advertisements, Logos, and Promotional Items

"Is it **done** yet?"  
Use a food thermometer to be sure





"Is it **done** yet?"  
Use a food thermometer to be sure

[www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)



**Is it done yet?"**  
You can't tell by looking.  
Use a **food thermometer** to be sure.

1 out of every 4 hamburgers looks done before it has reached a safe internal temperature of 160 °F.

USDA Meat & Poultry Hotline  
1-888-MPHotline (1-888-674-6854)  
[www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)

Logos (above) by MSU. Print advertisements and Web banner by USDA.

"Is it **done** yet?"  
You can't tell by looking.  
Use a **food thermometer**



1 out of every 4 hamburgers looks done before it has reached a safe internal temperature of 160 °F.

Call the USDA Meat & Poultry Hotline to have your food safe.  
USDA Meat & Poultry Hotline  
1-888-MPHotline  
[www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)



**Did You Know?**  
1 out of every 4 hamburgers looks done before it has reached a safe internal temperature of **160 °F**.

**USDA's Food Safety Mobile**



We're traveling the country with food safety education.

Cook food to a safe internal temperature:  
Hamburgers  
Steaks  
Chicken breasts  
Pork Chops

160 °F

To find out more, call the USDA Meat & Poultry Hotline  
1-888-MPHotline

USDA United States Department of Agriculture Food Safety and Inspection Service. USDA does not endorse any products, services, or organizations. USDA is an equal opportunity provider and employer. This is a public service announcement.



Branding items (hats, shirts, aprons, chairs, balloons), promotional samples of thermometers, and campaign-themed games (bean-bag and ring toss) by MSU and USDA.



### Fiesta Burgers

#### Ingredients

Makes 4 servings.

- 1 1/2 pounds ground beef
- 1/2 cup onion, chopped
- 2 tablespoons red bell pepper, finely chopped
- 3 tablespoons picante sauce or salsa
- 2 tablespoons prepared Dijon-style mustard
- 1 tablespoon prepared horseradish (optional)
- salt and pepper to taste
- sesame seed hamburger buns
- leaf lettuce and sliced tomatoes
- condiments and garnishes of choice



#### Preparation Directions

1. Wash hands with soap and warm water for 20 seconds before handling the meat.
2. In a bowl, mix ground beef with onion, red pepper, picante sauce or salsa, mustard, horseradish if desired, salt and pepper.
3. Form four equal-sized patties.
4. Preheat grill to medium-high heat.
5. Using utensils, place burgers on grill that has reached medium-high heat.
6. Check each burger with a food thermometer after approximately 10-15 minutes. A hamburger is done when it reaches 160°F. Clean grill.



United States Department of Agriculture  
Food Safety and Inspection Service



"Is it **done** yet?"

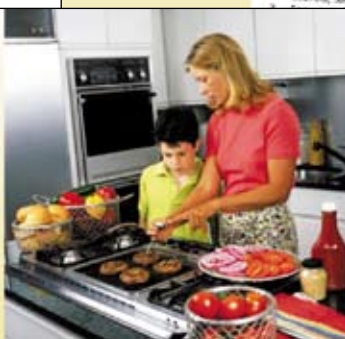
You can't tell by looking.  
Use a food thermometer to be sure.



### Thermometers Aren't Just for Turkey Anymore

These days, food thermometers aren't just for your holiday roasts – they're for all cuts and sizes of meat and poultry, including hamburgers, chicken breasts, and pork chops. Using a food thermometer when cooking meat, poultry, and even egg dishes is the only reliable way to make sure you are preparing a safe and delicious meal for your family.

The Centers for Disease Control and Prevention estimate that harmful bacteria in food cause 5,000 deaths, 325,000 hospitalizations, and 76 million illnesses **each year**.



### Why Use a Food Thermometer?

Everyone is at risk for foodborne illness. Young children under 10 are especially vulnerable. One effective way to prevent illness is to use a food thermometer to check the internal temperature of meat, poultry, and egg dishes. Using a food thermometer not only keeps your family safe from harmful food bacteria, but it also helps you to avoid overcooking, giving you a safe and flavorful meal that is done on time.

### Seeing Isn't Believing

Many people assume that if a hamburger is brown in the middle, it is done. However, looking at the color and texture of food is not enough – you have to use a food thermometer to be sure! According to USDA research, **one out of every four** hamburgers turns brown before it reaches a safe internal temperature. The only safe way to know if meat, poultry, and egg dishes are "done" is to use a food thermometer. When a hamburger is cooked to 160°F, it is both safe and delicious!

### How To Use a Food Thermometer

The food thermometer should be placed in the thickest part of the food and should not be touching bone, fat, or gristle. Begin checking the temperature toward the end of cooking, but before the food is expected to be done. Compare your thermometer reading to the Recommended Temperatures to know when your food is done. Because there are many different types of food thermometers, it is important to read the instructions for your food thermometer to clean your food thermometer before and after each use.

### USDA Recommended Internal Temperatures



Steaks & Roasts  
**145 °F**



Pork  
**160 °F**



Ground Beef  
**160 °F**



Chicken Breasts  
**170 °F**



Whole Chicken  
**180 °F**



## Keep Your Family Safe

"Is it **done** yet?"

You can't tell by looking.  
Use a food thermometer to be sure.

USDA Meat & Poultry Hotline  
1-888-MPHotline  
(1-888-674-6874)



United States Department of Agriculture  
Food Safety and Inspection Service

### USDA Recommended Internal Temperatures

- 145 °F Beef, lamb & veal steaks & roasts, medium rare (medium-160 °F).
- 160 °F Ground beef, pork, veal & lamb. Pork chops, ribs & roasts. Egg dishes.
- 165 °F Ground turkey & chicken. Stuffing & casseroles. Leftovers.
- 170 °F Chicken & turkey breasts.
- 180 °F Chicken & turkey, whole bird, legs, thighs & wings.



145 °F 160 °F 160 °F

[www.IsItDone.gov](http://www.IsItDone.gov)

[www.IsItDoneYet.gov](http://www.IsItDoneYet.gov)

Informational brochure and magnet by USDA and used during the Michigan activities.





# Appendix G

Please, go to Part 1 to begin survey.

*This survey takes about 5 minutes to complete.*

**Purpose:** The purpose of this study is to assess common food preparation practices.

**Directions:** Please read and respond to each question. There are no correct or incorrect answers. Your participation in this study is voluntary and you may withdraw at any time.

**Food Preparation Survey**

**MICHIGAN STATE UNIVERSITY**

**Survey Directions:** Please ask the person in household who cooks most often to complete and return this survey?

Check "N/A" next to the option that best reflects your answer to each question.

**Part 1**

**1. Are there any children under the age of 10 living in your household?**

\_\_\_ Yes \_\_\_ No

**2. About how many times a week do you prepare meals at home that include meat?**

\_\_\_ 0 times (Please go to part 3)  
\_\_\_ 1-2 times  
\_\_\_ 3-4 times  
\_\_\_ 5-6 times  
\_\_\_ 7 or more times

**Part 2**

The following section asks about your typical meal preparation. When responding to each question, please consider both your indoor and outdoor cooking and/or grilling.

**3. How often do you use a food thermometer when you cook or grill meats?**

\_\_\_ Always (Please, go to question #5)  
\_\_\_ Most times  
\_\_\_ Sometimes  
\_\_\_ Never

**4. The times when you don't use a food thermometer when you cook or grill meat, do you think about using one?**

\_\_\_ Yes \_\_\_ No

**5. How often do you use a food thermometer when you cook or grill meat for your children under age 10?**

\_\_\_ Always (Please, go to question #7)  
\_\_\_ Most times  
\_\_\_ Sometimes  
\_\_\_ Never

**6. The times when you don't use a food thermometer when you cook or grill meat for your children under age 10, do you think about using one?**

\_\_\_ Yes \_\_\_ No

**7. How often do you use a food thermometer when you cook or grill hamburger patties?**

\_\_\_ Always (Please go to Part 3)  
\_\_\_ Most times  
\_\_\_ Sometimes  
\_\_\_ Never

**8. The times when you don't use a food thermometer when you cook or grill hamburger patties, do you think about using one?**

\_\_\_ Yes \_\_\_ No

**Part 3**

The following section asks about whom you trust to deliver messages addressing food preparation, and where you seek food preparation information.


**9. How much do you trust food preparation information from the following sources?**

|                                | Very Low | Low | High | Very High |
|--------------------------------|----------|-----|------|-----------|
| Celebrities/popular stars      |          |     |      |           |
| Federal government agencies    |          |     |      |           |
| Food companies                 |          |     |      |           |
| Friends/Relatives              |          |     |      |           |
| Health professionals           |          |     |      |           |
| Local schools                  |          |     |      |           |
| MSU Extension (4-H)            |          |     |      |           |
| News media                     |          |     |      |           |
| Non-governmental organizations |          |     |      |           |
| State government agencies      |          |     |      |           |
| U.S. Department of Agriculture |          |     |      |           |

**10. How often do you use these sources for information about food preparation?**

|                                | Never | Sometimes | Other | Always |
|--------------------------------|-------|-----------|-------|--------|
| Adult classes                  |       |           |       |        |
| K-12 classes                   |       |           |       |        |
| Books on cooking               |       |           |       |        |
| Federal government agencies    |       |           |       |        |
| Friends/relatives              |       |           |       |        |
| Internet                       |       |           |       |        |
| Magazines                      |       |           |       |        |
| MSU Extension (4-H)            |       |           |       |        |
| Newspapers                     |       |           |       |        |
| Non-governmental organizations |       |           |       |        |
| Radio                          |       |           |       |        |
| State government agencies      |       |           |       |        |
| Television                     |       |           |       |        |

Please return your completed survey in the enclosed postage-paid envelope.



**Please complete and return by June 15<sup>th</sup>, 2004**

Pre-campaign mail survey conducted by MSU and entry form for incentive prize.

**MICHIGAN STATE UNIVERSITY**

**Food Preparation Survey Entry Form**

Drawing items include 3 Meijer's Gift Certificates valued at: \$300.00, \$200.00 & \$100.00

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

This information will only be used to contact you should your name be drawn for the one of the grand prize items.

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December 2005

