Today more children are living with food allergies than ever before. In fact, the percentage of young children diagnosed with peanut allergies nearly doubled from 1997 to 2002. According to the Food Allergy & Anaphylaxis Network (FAAN), approximately three million children currently suffer from a food allergy, with 90 percent being caused by the major food allergens, which include milk, eggs, peanuts, tree nuts, wheat, soy, fish, and crustacean shellfish. Although the reason for this increase is unknown, food allergy management is becoming an urgent area of focus for schools. There is no cure for food allergies, so strict avoidance on the part of the food allergy patient is the only way to prevent a potentially serious reaction. With children consuming meals and snacks in school during the school year, it is extremely important for all levels of school personnel to be informed about food allergies and be actively involved in taking preventive measures that ensure the safety of their students.

In an effort to gather more information on food allergy management in schools, the International Food Information Council (IFIC) and the School Nutrition Association (SNA) recently conducted a Web-based survey in spring 2008 of 844 school nutrition professionals and district directors in the U.S. to learn what they are currently doing to address food allergies.

Survey Objectives

The objectives of the IFIC-SNA survey were to: 1) measure the prevalence of food allergies in schools and assess the change in prevalence over the last several years; 2) determine what proportion of schools have formal food allergy plans and who is involved in those plans; 3) identify key food allergy topics of interest and preferred educational formats; and 4) identify “best practices” for managing food allergies in schools.

Survey Findings

According to the results of the survey, 84 percent of school nutrition professionals reported having children with known food allergies in their school. Approximately 54 percent of district directors said their district has a food allergy plan. And, many schools with formal food allergy plans in place have taken at least one of the following steps to respond to an allergic reaction: enacting their food allergy plan (22 percent); using the student’s epinephrine pen prescribed by his/her doctor (27 percent); calling 9-1-1 (25 percent); contacting the student’s parent or legal guardian (27 percent); or all of these (46 percent). Many school nutrition professionals also are taking action to prevent allergic reactions by reading ingredient labels (77 percent) and cleaning kitchen utensils to prevent cross-contamination (60 percent).

However, 21 percent reported that they do not have a formal plan for addressing food allergic reactions, and an additional 13 percent said they were unsure what they were supposed to do to respond to an allergic reaction.

IFIC-SNA 2008 School Food Allergy Survey: Having a Food Allergy Plan is Key to Prevention
Foodborne diseases are estimated to account for 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths per year in the U.S. alone, according to the Centers for Disease Control and Prevention (CDC). Over the past several years, high-profile outbreaks involving produce and other foods have raised questions about whether our food safety protection system is adequate to detect and respond to outbreaks of foodborne illness. In 2006, contamination of fresh spinach with the bacteria E.coli O157:H7 led to one of the largest outbreaks of foodborne illness in recent years. In 2008, public health officials investigated a multi-state outbreak of Salmonella Saintpaul, which led to more than 1,300 confirmed cases in 43 states, the District of Columbia, and Canada. Following a two-month investigation, jalapeno and Serrano peppers from Mexico were implicated, and it is possible that raw tomatoes were responsible for some of the earlier illnesses.

While produce is only one of many food categories linked to outbreaks of foodborne illness, it is the major one and poses special challenges. Fresh produce is especially vulnerable to contamination because it is grown in a natural environment (a field or orchard) and is often consumed without cooking or other treatments that could destroy bacteria. At the same time, consumption of produce has increased dramatically, a positive development from a nutrition perspective but a challenge from a food safety perspective because of the diversity of produce sources. Produce also is difficult to trace back to its source because it is perishable and usually no longer available for testing by the time consumers become ill. Fresh fruits and vegetables often are sold loose without any packaging that could identify the source, and repacking produce from multiple sources is common.

Although foodborne disease is a serious concern, in general, the U.S. has a very safe food supply. Public health agencies have made great strides in detecting and responding to outbreaks over the past 10 years, but challenges still remain in finding the source and removing product from the marketplace.

Detecting Outbreaks

Detecting outbreaks begins with identifying individual cases of foodborne illness. The U.S. has an active surveillance system called FoodNet—a cooperative venture among federal, state, and local agencies in 10 states. Staff routinely contacts all clinical labs to collect information on every confirmed case of foodborne illness. For a case to be confirmed, the ill person must seek medical care and submit a specimen in which the pathogen is identified. FoodNet provides a better picture of how many illnesses are occurring, where they are occurring, and what pathogens are responsible.

FoodNet is complemented by another system called PulseNet, which tracks disease-causing bacteria by “DNA fingerprinting.” Public health officials at the state, local and federal level perform DNA “fingerprinting” on disease-causing bacteria isolated from people who have become ill, and these “fingerprints” are uploaded to the national database located at CDC, where they are available instantly to public health officials nationwide. Database managers at CDC perform regular searches, looking for clusters of patterns that are the same. By finding similar patterns through PulseNet, scientists can determine whether an outbreak is occurring, even if the affected people live far apart.

Identifying the Source

Unfortunately, PulseNet cannot identify the source of an outbreak by itself. It identifies clusters of cases that likely have a common source, such as a food distributed to numerous states. Once the recent cluster has been identified, an epidemiological investigation is needed to determine if the cluster truly represents an outbreak and to identify the cause or causes. State and local public health agencies are primarily responsible for conducting outbreak investigations. At the state’s request, CDC will help. This plays a critical role in the national coordination of response efforts. Multi-state cooperation is key due to the wide distribution of food in the marketplace.

The investigation includes sample collection in facilities and a review of animal management practices (animals can contaminate produce in the fields), processing practices, and water use. In the case of the recent produce outbreak, epidemiological studies indicated that jalapeno and Serrano peppers grown, harvested, or packed in Mexico were the cause of some clusters of illness, but that raw tomatoes consumed early in the outbreak could have caused some illnesses. The case for identifying an outbreak source is strengthened when a genetic fingerprint of the pathogen in an affected person can be matched with the fingerprint in a suspected food. This occurred with one of the jalapeno pepper samples tested. The ability to make this match is a relatively new phenomenon.

(continued on page 3)
Anatomy of an Outbreak

Taking Action

Once CDC, working with state and local governments, identifies the possible foods associated with an outbreak, it notifies the appropriate regulatory agency.

USDA has regulatory authority over meat, poultry, and processed eggs, and FDA is responsible for all other foods.

At that point, the regulatory agency begins a trace-back investigation in an attempt to identify the specific source of contamination. This is done by tracing the food suspected of making people sick back through the supply chain from the retailer or restaurant and inspecting points in the supply chain to determine where the contamination most likely occurred. Bills of lading (receipts of goods accepted for transportation) and invoices will be examined, and information is obtained on the practices and conditions under which the product was stored and handled. If a source is identified, the government works with industry to recall the product if appropriate. In the case of Salmonella Saintpaul, a distribution center in McAllen, Texas worked with FDA to recall the contaminated product in the U.S. The agency also may issue a public health alert to advise consumers to avoid certain products.

Improvements Needed

The infrastructure that exists to detect and respond to outbreaks needs improvement. Not all states have robust systems for identifying and investigating illnesses or even standardized questionnaires with which to interview ill patients about what they have eaten.

Improvement in trace-backs also is needed to identify which foods are responsible, and which foods are not. The pathways that fresh produce travels from field to consumer have become increasingly complex, with items changing hands many times. FDA is working extensively with states and the fresh produce industry to encourage the use of traceability procedures and technology.

More research also is needed to better understand how pathogens are introduced into the environment and how they are affected by processing practices. At this year’s International Association for Food Protection conference in Columbus, Ohio, researchers described studies examining how pathogens might enter produce through the stem and cuts in the surface, and how the temperature of water used to wash or cool produce after picking might play a role in introducing pathogens into produce.

Prevention also is key—the best way to reduce outbreaks is to provide a safer product. FDA issues various guidance documents to provide industry with “best practices” to minimize contamination. For example, FDA has Good Agricultural Practices that address factors such as irrigation water, animal control, worker health and hygiene, and sanitation of facilities and equipment. The agency issued a guidance document for fresh-cut produce in 2008 (http://www.foodsafety.gov/~dms/prodguid.html).

As another step, FDA announced in August it would permit the use of irradiation to treat iceberg lettuce and fresh spinach. Irradiation already is approved for meat and poultry, molluscan shellfish, and spices. Irradiated products must be labeled to indicate that they have received this treatment.

In the years to come, we can expect improvements in the infrastructure that exists to identify outbreaks and their sources and more research to find ways to reduce contamination during and after production. Meanwhile, consumers play a key role in food safety. While they cannot prevent all illnesses, there are a number of steps they can take to reduce them. For produce, FDA advises consumers to take these general precautions:

- Refrigerate or discard cut, peeled or cooked produce items within 2 hours.
- Avoid purchasing bruised or damaged produce items, and discard any that appear spoiled.
- Thoroughly wash all produce items under running water.
- Keep produce items separate from raw meats, raw seafood, and other raw produce items (separation helps to avoid cross contamination).
- Wash cutting boards, dishes, utensils, and counter tops with hot water and soap when switching between types of food products.
Having a Food Allergy Plan is Key to Prevention

In addition, most school nutrition professionals (80 percent) report collecting food allergy information from students at least once a year, which is critical in keeping track of new allergies and medications. Moreover, 55 percent have provided food allergy education to parents and students, and 56 percent have provided education to foodservice personnel.

Several schools report that personnel from different departments are involved in food allergy management. In addition to nurses (85 percent), school nutrition professionals cited other foodservice workers (73 percent), foodservice directors (68 percent), parents (57 percent), and teachers (54 percent) as all being involved. Increasing awareness at all personnel levels is important because an allergic reaction can happen anywhere, inside or outside the school, including when students are on field trips, at class parties, and at after-school events.

The survey revealed that school nutrition professionals want food allergy education tools and training. When provided with a “wish list” of food allergy educational tools, school nutrition professionals selected several they would like to have, including a database with common food ingredient names for food allergens (65 percent); a best practices guide for implementing food allergy management programs (63 percent); educational materials for school nutrition professionals (63 percent); and food allergy identification materials (62 percent). Top training topics included reading food labels (66 percent), recipe preparation/menu substitution (56 percent), and preventing cross contamination (50 percent).

According to the survey, only 54 percent of district directors said their district has a food allergy plan, and only 12 percent said their entire state uses the same plan. As a result, survey participants were interested in examples of best practices that have been adopted successfully by other schools which they could adapt to their own school environment. Examples of best practices given by district directors included: creating an allergy response plan so all involved know exactly what is expected; providing alternative meals or substitutions for students with allergies; and identifying students with allergies through the use of the school’s Point of Sale system to help cashiers double-check the child’s meal choices. These are solutions schools can implement to improve their food allergy management practices.

Conclusion

Although food allergies are becoming a more prevalent issue in schools, addressing them consistently can be challenging. Nonetheless, a majority of school nutrition professionals and school districts surveyed have taken proactive measures to develop food allergy plans voluntarily without mandates or dedicated resources, which shows their concern about food allergies and their desire to do something to help prevent and manage allergic reactions in schools.

There currently are no consistent nationwide procedures for schools to follow to address food allergies in schools. Those schools and districts with formal food allergy plans often tailor them to individual students who have specific food allergy needs, which means that there are dozens of different food allergy plans being used across the country.

The survey also shows there is a need for food allergy education and training for many school nutrition professionals, as well as other school personnel involved in student health, safety, and overall welfare. Some common themes identified through this survey include 1) keeping open communications among all school personnel involved; 2) regular collection of food allergy information and keeping updated records; and 3) knowing what to do and where to find students’ food allergy information/medication when an allergic reaction occurs. By adopting practices that already have been successful in other schools, school personnel can be confident that these practices may be effective in helping to make their schools safer for food allergic children. For more information about food allergies visit http://www.ific.org/publications/other/foodallergyresources.cfm.

IFIC Food Allergy Resources:

“School Foodservice and Food Allergies: What You Need to Know”
http://www.ific.org/publications/other/allergysheet.cfm

“Understanding Food Allergy” Brochure
http://www.ific.org/publications/brochures/allergybroch.cfm

“Understanding Food Allergy” Continuing Education Module
http://www.ific.org/adacpe/foodallergyce.cfm

Kidnetic Bright Paper: “Kids and Food Allergies: Facts, Tips, and Resources”
http://www.kidnetic.com/BrightPapers/?c=For+Parents&p=1284
Spotlight on Food Allergy Best Practices

There are a few school districts that stand out for their innovation and effectiveness when it comes to food allergy management. One such district is Spokane Public Schools (SPS) in Spokane, Washington.

Following an allergic student’s death after consuming an allergen-containing food on a school field trip seven years ago, SPS wanted to do everything they could to ensure it would never happen again. Over the last seven years they have worked tirelessly to incorporate formal processes and procedures that must be followed for students with a life-threatening allergy of any kind.

Also, Washington state law requires all students with a life-threatening condition to have an Emergency Action Plan (EAP) on file before they can even start school.

SPS is a shining example for schools hoping to establish or improve a plan for the first time. The SPS Nutrition Services Web site (http://www.spokaneschools.org/NutritionServices/) has an Allergy Information / Special Diets page with links to forms, recipes, menu substitution ideas, medical response information, label reading information, nutritional information, and more.

An “Accommodation Check List for Care Team” [also on their Web page] is completed for each student with a life-threatening allergy and includes ways to prevent scenarios in which an allergen could be introduced to the child. The Check List involves all levels of personnel, and according to Doug Wordell, RD, the SPS Director of Nutrition Services, “Communication between departments is key. Our nurses coordinate the EAPs and do an excellent job, but it’s imperative that they have a good relationship with the other support services.”

Also having standard procedures for all students with a life-threatening condition takes the guess work out of the equation and simplifies the process. Wordell said, “It’s important to keep the process as simple as possible.” They also have a comprehensive document called “Guidelines for Managing Life-Threatening Food Allergies in Schools” that details each component of their food allergy policy. Other resources on their Web site support the Guidelines and help put the plan into action. The information is accessible to the public, so parents and other school personnel can see what SPS has done to address food allergies.

Doug Wordell, has been actively involved in the development, implementation, and ongoing improvement of food allergy management practices for the district. “We’re always learning; you’re never there,” Wordell said.

Mr. Wordell offered these final words of advice on managing food allergies in schools:

1) Use Your Plan;
2) Practice Your Plan; and
3) Call 9-1-1.”
Country-of-Origin Labeling Requirements
Now in Effect for Increased Number of Foods

The value of labeling food products as to their country of origin has been debated for some time, with some supporters saying it will bolster demand for U.S. products and will provide consumers with helpful information they need to make purchasing decisions. Opponents say the requirements are protectionist and do not really provide consumers with useful information on the safety of those products. Regardless of the pros and cons, country-of-origin is now law, and consumers will be seeing more products in the marketplace labeled with this information.

Country-of-origin labeling for various products was required by the 2002 and 2008 Farm Bills, but not all provisions have been implemented. Labeling of wild and farm-raised fish and shellfish has been visible in grocery stores since 2004, but labeling provisions for other commodities were either delayed or recently added by the 2008 Farm Bill.

As of September 30, 2008, the following products are now covered; beef, lamb, pork, fish, chicken, fresh and frozen fruits and vegetables, peanuts, macadamia nuts, pecans, and ginseng. For those products now being labeled (everything except wild and farm-raised fish and shellfish), USDA has indicated it will conduct education and outreach activities for six months to give retailers time to adjust to the requirements. The information about origin can be conveyed through a variety of ways, including labels, signs, placards, and stickers. Labels could indicate that a product is of U.S. origin, has multiple countries of origin, or is from one foreign country.

Exemptions to the requirements have been set by implementing regulations. For example, while consumers will see labeling at grocery stores, foodservice establishments such as restaurants, lunchrooms, cafeterias, and food stands are exempt from the requirements.

In addition, processed foods (including cooked and cured) such as corned beef, chicken tenders, and roasted peanuts will not have to carry labeling. Also exempt are “blended” products that contain two or more covered commodities. An example would be a salad mix that contains lettuce and carrots. Consumers may see some foods that are labeled even though they are not covered by the regulations to carry a label, since voluntary country-of-origin labeling is permitted as long as it is truthful.

USDA’s Agricultural Marketing Service (AMS) has set specific criteria that must be met for the various labeling options. For more information, visit the AMS web site at www.ams.usda.gov.

What’s New @ IFIC.org?

The IFIC Foundation has updated one of its most popular publications. Healthy Eating During Pregnancy (http://www.ific.org/publications/brochures/pregnancybroch.cfm). This brochure, developed in partnership with the American Academy of Physician Assistants, provides mothers-to-be with important nutrition and food safety information for this new phase in life. Topics such as weight gain, food ingredients, how much of specific nutrients to eat, and safe food handling practices are all covered in a consumer-friendly way. Visit http://www.ific.org/publications/brochures/pregnancybroch.cfm for a downloadable PDF of the new brochure.
“Turkey Talk” about Food Safety

With the holiday season fast approaching, it is important to prepare safe and enjoyable meals especially when serving turkey. Here are a few important food safety tips to keep in mind when preparing meals or eating holiday leftovers to help reduce the chance of foodborne illness for you and your family.

Fresh or Frozen?

Fresh Turkeys

- Allow one pound of turkey per person.
- Buy your turkey only 1 to 2 days before you plan to cook it.
- Keep it stored in the refrigerator until you are ready to cook it. Place it on a tray or in a pan to catch any juices that may leak.
- If pre-stuffed turkeys are not handled properly, harmful bacteria that may be in the stuffing can multiply very quickly.

Frozen Turkeys

- Allow one pound of turkey per person.
- Keep frozen until you are ready to thaw it.
- Turkeys can be kept frozen in the freezer indefinitely; however, cook within 1 year for best quality.
- Thaw turkeys by following the instructions on the frozen turkey package.

(NewsBites continued on page 8)
“Turkey Talk” about Food Safety

Follow these tips during the Holidays and at all times to help reduce the chance of foodborne illness for you and your family

- Cook whole turkeys to at least 165°F. While on the subject of cooking temperatures, remember to cook ground beef, including meatloaf, to an internal temperature of at least 160°F.
- Thaw food in the refrigerator or microwave, not on the kitchen counter. Also, marinate foods in the refrigerator.
- Refrigerate or freeze perishables, ready-to-eat foods, and leftovers within two hours of purchasing or preparation.
- Do not eat cooked or perishable foods that have been kept in the refrigerator more than two to three days.
- Wash your hands with hot, soapy water before and after preparing food. Be sure to wash your hands after using the bathroom, changing diapers, and playing with pets.
- Reheat sauces, marinades, soups, and gravy to a rolling boil. Heat other leftovers thoroughly to a minimum internal temperature of 165°F.
- When in doubt (about the way a food looks or smells) throw it out.

For more information about foodborne illness and other food safety tips for the holidays, visit A Consumer’s Guide to Food Safety Risks, the USDA Meat and Poultry Hotline or The Partnership for Food Safety Education.

For more detailed information on how to safely thaw and prepare a turkey, visit “Poultry Preparation” – a Fact Sheet for consumers from the U.S. Department of Agriculture (USDA) http://www.fsis.usda.gov/Fact_Sheets/Lets_Talk_Turkey/index.asp