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Improving Food Safety Through Prevention: CDC's Food Safety Prevention Status Report

Editor's Note: NEHA strives to provide up-to-date and relevant information on environmental health and to build partnerships in the profession. In pursuit of these goals, we feature a column from the Environmental Health Services Branch (EHSB) of the Centers for Disease Control and Prevention (CDC) in every issue of the *Journal*.

In these columns, EHSB and guest authors share insights and information about environmental health programs, trends, issues, and resources. The conclusions in this article are those of the author(s) and do not necessarily represent the views of CDC.

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In February 2016, the Centers for Disease Control and Prevention (CDC) released its second set of Prevention Status Reports (PSRs). These reports highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to address 10 important public health issues: excessive alcohol use; food safety; motor vehicle injuries; nutrition, physical activity, and obesity; healthcare-associated infections; prescription drug overdose; heart disease and stroke; teen pregnancy; HIV; and tobacco use.

The PSR process identifies policies and practices that, if implemented, would reduce the health and economic impact of these 10 public health issues. The PSRs consolidate information about each state's policies and practices in a simple format that stakeholders

can use to examine their state's status and identify areas for improvement. A three-level rating system (green, yellow, or red) is used to provide a practical rating of the status of policies or practices related to each of the 10 issues in each state (Figure 1).

Food Safety

As September is National Food Safety Month, we would like to highlight the food safety PSR. The food safety PSR measures the status of select practices and policies that can help states prevent or reduce foodborne illness risk. The food safety PSR focuses on three indicators.

1. The speed of DNA fingerprinting using pulse-field gel electrophoresis (PFGE) testing for all reported cases of Shiga toxin-producing *E. coli* 0157,

2. the completeness of PFGE testing of *Salmonella*, and

3. The adoption of select Food and Drug Administration (FDA) *Food Code* provisions.

In the 2013 PSRs, food safety only included the first two indicators listed above. This year's PSR, however, introduced the third indicator, which measures state adoption of critical FDA *Food Code* provisions designed to prevent foodborne illness and outbreaks associated with restaurants and other retail food service establishments. Local, state, tribal, and federal regulators use the FDA *Food Code* as a model for their own food safety rules and to be consistent with national food regulatory policy.

Specifically, the new indicator assesses whether states have adopted the following four provisions from the 2013 FDA *Food Code*.

1. Excluding ill food service staff from working until at least 24 hours after symptoms of vomiting and diarrhea have ended,
2. prohibiting bare hand contact with ready-to-eat foods,
3. requiring food service employees to wash their hands, and
4. requiring at least one employee in a food service establishment to be a certified food protection manager (Food and Drug Administration, 2013).

Ill Workers

Preventing ill workers from working is especially important as certain foodborne illnesses, such as norovirus, can be transmitted even after symptoms have ended. Ill and recently ill food service employees who transmit their illness to others through the food they prepare play a role

FIGURE 1

Three-Level Rating System Used to Rate the Status of State Policies or Practices for Each Prevention Status Report Indicator



FIGURE 2

Cost Effectiveness Section of the New Centers for Disease Control and Prevention Infographic on Kitchen Manager Certification

HOW MUCH DOES CERTIFICATION COST?



in almost half (46%) of restaurant-associated outbreaks (Gould, Rosenblum, Nicholas, Phan, & Jones, 2013). Furthermore, infected food workers cause about 70% of reported norovirus outbreaks from contaminated food (Centers for Disease Control and Prevention, 2014).

Bare Hand Contact and Hand Washing

One of the most effective ways to prevent the contamination of ready-to-eat foods (foods that will not be cooked) is through proper hand hygiene practices. Food service employees' bare hand contact with ready-to-eat foods plays a role in almost a third (30%) of restaurant-associated outbreaks (Gould et al., 2013). And only a third of restaurant workers wash their hands when they should (Green et al., 2006).

Food Protection Manager Certification

In addition to hand hygiene and exclusion of ill food workers, food protection manager certification is important to retail food safety. An accumulating body of evidence indicates that manager certification is related to

- increased manager food safety knowledge (Brown et al., 2014),
- safer restaurant food preparation practices (Brown et al., 2014),
- better inspection scores (Cates et al., 2009), and
- fewer foodborne illness outbreaks (Hedberg et al., 2006).

A new CDC infographic illustrates the importance of having a certified food protection manager and provides an overview of

certification benefits, including potential cost effectiveness (Figure 2).

PSR Ratings

Analysis of the PSR rating data for this *Food Code* indicator shows that as of September 2014, 33% of states have a rating of green (full), 31% have a rating of yellow (partial), and 35% have a rating of red (absent) (Figure 3). Further analysis indicates that all states have a provision requiring handwashing, yet

- 37% do not have a provision excluding ill food service employees from working until at least 24 hours after symptoms have ended,
- 20% do not have a provision preventing bare hand contact with ready-to-eat foods, and
- 47% do not have a provision requiring manager certification (Figure 4).

These data suggest that, while all states are showing some progress, there is room for improvement.

The inclusion of this *Food Code* indicator in the PSR highlights the important role of state food safety rules and regulations. We invite you to review your state's PSR status and to pay particular attention to the *Food Code* indicator. Consider working with stakeholders and decision makers to improve your state's use of the 2013 FDA *Food Code* by adopting the provisions your state is lacking. Together, we can improve our nation's food handling practices, which will in turn improve our health. 🍔

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Learn More

Learn more about the Centers for Disease Control and Prevention (CDC) Prevention Status Reports (PSRs) and food safety resources and the Food and Drug Administration (FDA) *Food Code*.

- CDC PSRs: www.cdc.gov/psr/national-summary.html
- CDC food safety PSR: www.cdc.gov/nceh/ehs/news/features/2016/food-safety-psr.html
- CDC food safety resources: www.cdc.gov/nceh/ehs/activities/food.html
- Kitchen manager certification infographic: www.cdc.gov/nceh/ehs/docs/factsheets/ckm-infographic.pdf
- FDA *Food Code*: www.fda.gov/Food/GuidanceRegulation/RetailFoodProtection/FoodCode/

FIGURE 3

State Adoption of the Four Food and Drug Administration Food Code Provisions

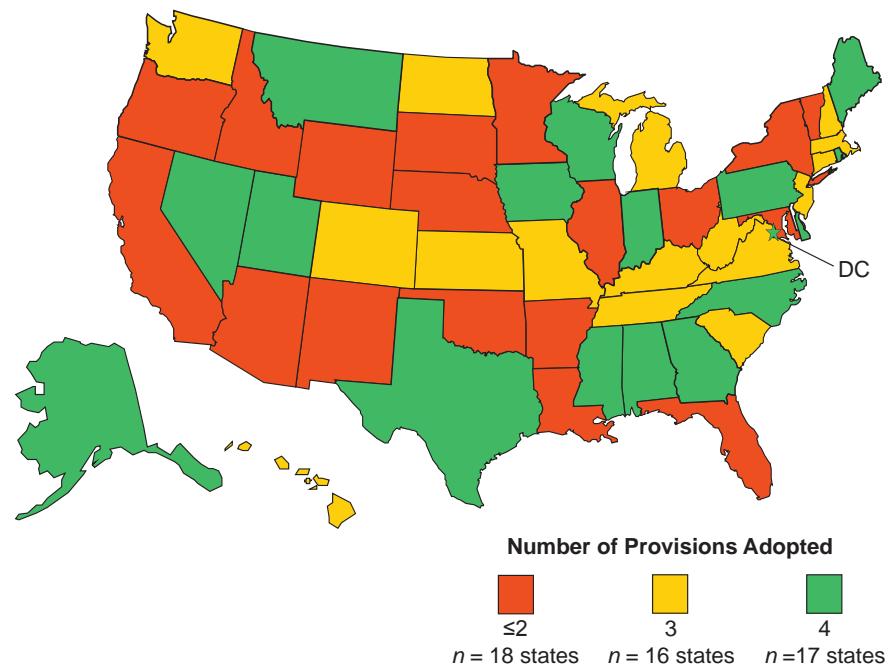


FIGURE 4

State Adoption Status Based on Specific Food and Drug Administration Food Code Provisions

24-Hour Exclusion of Ill Food Workers



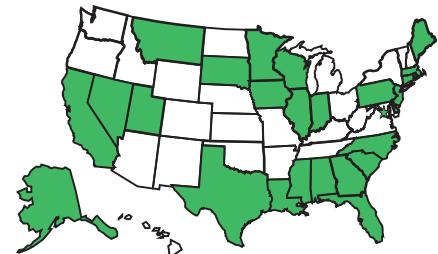
Prohibition of Bare Hand Contact



Requiring Food Service Workers to Wash Their Hands



Certified Food Protection Manager



Note. Green = state adoption of provision.