



Prevention Status Reports



**PSR**

Office for State, Tribal, Local and Territorial Support

## Prevention Status Report for Hawaii

### Food Safety

Accessed on August 9, 2016

## About the Prevention Status Reports

The Prevention Status Reports (PSRs) highlight—for all 50 states and the District of Columbia—the status of public health policies and practices designed to address the following important public health problems and concerns:



## PSR Framework



Each report follows a simple framework:

- Describe the public health problem using public health data
- Identify potential solutions to the problem drawn from research and expert recommendations
- Report the status of those solutions for each state and the District of Columbia

## Criteria for Selection of Policies and Practices

The policies and practices reported in the PSRs were selected because they—

- Can be monitored using state-level data that are readily available for most states and the District of Columbia
- Meet one or more of the following criteria:

- Supported by systematic review(s) of scientific evidence of effectiveness (e.g., The Guide to Community Preventive Services)
- Explicitly cited in a national strategy or national action plan (e.g., Healthy People 2020)
- Recommended by a recognized expert body, panel, organization, study, or report with an evidence-based focus (e.g., Institute of Medicine)

## Ratings

The PSRs use a simple, three-level rating scale—green, yellow, or red—to show the extent to which the state has implemented the policy or practice in accordance with supporting evidence and/or expert recommendations. The ratings reflect the status of policies and practices and do not reflect the status of efforts of state health departments, other state agencies, or any other organization to establish or strengthen those policies or practices.

## Suggested Citations

For a state report:

Centers for Disease Control and Prevention. Prevention Status Reports: [State name]. Atlanta, GA: US Department of Health and Human Services; 2016. Accessed [month date, year].

For the National Summary:

Centers for Disease Control and Prevention. Prevention Status Reports: National Summary. Atlanta, GA: US Department of Health and Human Services; 2016. Accessed [month date, year].

## Public Health Problem



Diseases spread by a wide variety of contaminated foods continue to challenge the public health system. Bacteria, viruses, parasites, and chemicals can cause foodborne diseases, which can vary from mild to fatal (1). Robust surveillance for these diseases is essential for detecting outbreaks (2). It also provides critical information to food regulatory agencies and the food industry so that appropriate prevention and control measures can be implemented (3,4).



CDC estimates that each year, roughly 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die due to foodborne diseases (5). Risk for infection and severity of illness vary at different ages and stages of health (6).



Foodborne illness is costly. According to a 2015 study, 15 pathogens alone are estimated to cost \$15.5 billion in the United States per year. This includes medical costs (doctor visits and hospitalizations) and productivity loss due to premature death and time lost from work (7).

## Solutions and Ratings

The three practices in this report are recommended by the Council to Improve Foodborne Outbreak Response and the US Food and Drug Administration (FDA) because scientific evidence supports their effectiveness in improving foodborne disease surveillance, detection, and prevention (2–4). These practices are

- Increasing the speed of DNA fingerprinting using pulsed-field gel electrophoresis (PFGE) testing for all reported cases of Shiga toxin-producing Escherichia coli (E. coli) O157
- Increasing the completeness of PFGE testing of Salmonella
- Adopting provisions recommended in the FDA Food Code into state food safety regulations

Other strategies supported by scientific evidence include using trained staff and standardized questionnaires to interview persons with suspected foodborne illness as soon as possible after illness is reported and conducting environmental assessments as a routine component of foodborne disease outbreak investigations (2).

## Status of Policy and Practice Solutions

### Speed of pulsed-field gel electrophoresis testing of reported E. coli O157 cases

The annual proportion of E. coli O157 PFGE patterns reported to CDC (i.e., uploaded into PulseNet, the CDC-coordinated national molecular subtyping network for foodborne disease surveillance) within four working days of receiving the isolate in the state or local public health PFGE lab. PFGE is a technique used to distinguish between strains of organisms at the DNA level.

In 2014, Hawaii tested 100% of E. coli O157 cases within 4 days (8).

Rating	Percentage of annual reported cases tested within four days
Green	≥90.0%
Yellow	60.0%–89.9%
Red	<60.0%

CDC target: Testing of ≥90% of annual reported E. coli O157 cases within four days. The CDC Public Health Emergency Preparedness Cooperative Agreement, which provides federal funding to state, local, tribal, and territorial health departments, has two national laboratory performance targets for food safety, including the E. coli testing target. Performing DNA fingerprinting as quickly as possible for all Shiga toxin-producing E. coli improves outbreak detection, helps prevent additional cases, and identifies prevention and control measures for food regulatory agencies and the food industry (2).

### How This Rating Was Determined

The speed of PFGE testing for reported E. coli O157 cases was determined by accessing the [PulseNet \(http://www.cdc.gov/pulsenet/\)](http://www.cdc.gov/pulsenet/) national E. coli O157 database for calendar year 2014. Turnaround times were calculated per lab by subtracting the received date (receipt in the PFGE lab) from the upload date (upload to the PulseNet national database), excluding weekends and federal holidays. The percentage of samples tested within four days was calculated by dividing the number tested within four days (numerator) by the total number uploaded to the PulseNet national database (denominator). If the received date for a sample was missing, the sample was counted in the denominator but not the numerator, thus lowering the percentage.

The rating reflects the extent to which the state tested E. coli O157 cases within four days as determined by the PulseNet database.

### Completeness of pulsed-field gel electrophoresis testing of reported Salmonella cases

The annual proportion of Salmonella cases reported to CDC's National Notifiable Diseases Surveillance System with PFGE patterns uploaded into PulseNet.

In 2014, Hawaii tested 100% of reported Salmonella cases (8,9).

Rating	Percentage of annual reported cases tested by PFGE
<b>Green</b>	<b>≥90.0%</b>
Yellow	60.0%–89.9%
Red	<60.0%

Research and experts in the field agree that performing DNA fingerprinting of all Salmonella cases would improve outbreak detection, help prevent additional cases, and identify prevention and control measures for food regulatory agencies and the food industry (2).

#### How This Rating Was Determined

The completeness of PFGE testing of reported Salmonella cases was determined by accessing the [PulseNet \(http://www.cdc.gov/pulsenet/\)](http://www.cdc.gov/pulsenet/) national Salmonella database for calendar year 2014. The number of Salmonella entries per state was determined and used as the numerator. The denominator was the number of cases reported by each lab to the National Notifiable Diseases Surveillance System for calendar year 2014.

The rating reflects the proportion of all Salmonella cases tested in the state as determined by the PulseNet database.

### State adoption of selected foodborne disease-related provisions

Inclusion in the state's food safety regulations of selected provisions contained in the 2013 FDA Food Code related to norovirus and other foodborne illnesses.

As of September 2014, Hawaii had adopted three of the four selected provisions in the 2013 FDA Food Code: excluding ill food service staff from working until at least 24 hours after symptoms of vomiting and diarrhea have ended, prohibiting bare hand contact with ready-to-eat food, and requiring food service employees to wash their hands (10).

Rating	Number of selected provisions contained in the 2013 FDA Food Code adopted into the state food code
Green	All four
<b>Yellow</b>	<b>Three</b>
Red	Two or fewer

The FDA publishes model food safety practices to prevent transmission of norovirus and other foodborne illnesses, but adoption is at the discretion of state governments (3). CDC has identified four provisions that are critical to reducing foodborne illnesses (11):

- Excluding ill food service staff from working until at least 24 hours after symptoms of vomiting and diarrhea have ended (section 2-2 of the 2013 FDA Food Code)
- Prohibiting bare hand contact with ready-to-eat food (section 3-301.11)
- Requiring at least one employee in a food service establishment to be a certified food protection manager (sections 2-102.12 and 2-102.20)
- Requiring food service employees to wash their hands (section 2-3)

#### How This Rating Was Determined

Publicly accessible state food code regulations were assessed for the presence of the selected provisions contained in the 2013 FDA Food Code (10). The rating reflects the number of provisions included in state food safety regulations.

## References

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