

What does research tell us about norovirus prevention?

Laura G. Brown, Ph.D.

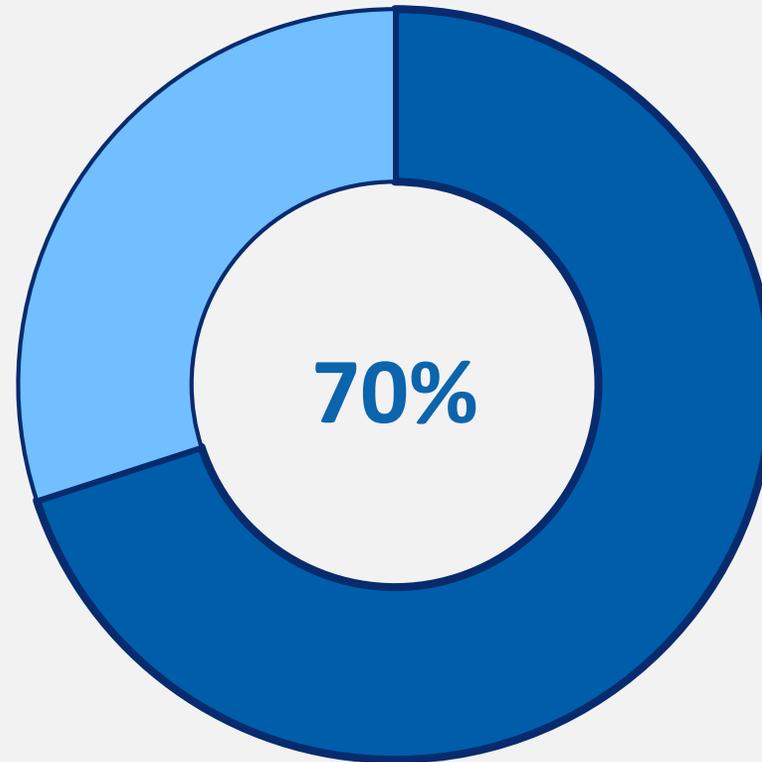
Food, Water, and Environmental Health Services Branch

Division of Environmental Health Science and Practice

AFDO Webinar

November 8, 2019

Contamination by suspected ill workers is a major contributor to foodborne norovirus outbreaks



Key to norovirus prevention: keep ill workers from working

Food workers should stay home from work when sick with vomiting or diarrhea



1 in 5 food workers say they have worked with vomiting or diarrhea

Key to norovirus prevention: good hand hygiene

Food workers should wash their hands properly



Food workers practice proper handwashing 1 in 4 times that they should

Food workers should avoid touching ready-to-eat foods with their bare hands



Workers had bare hand contact with ready-to-eat food in 1 in 3 restaurants

Key to norovirus prevention: cleaning and sanitizing

Food contact surfaces should be properly cleaned and sanitized



Contaminated equipment was
observed in 2 out of 3 restaurants

How to improve practices related to norovirus prevention?



FOOD SAFETY MANAGEMENT SYSTEMS

Food safety management system (FSMS)

Procedures

A set of actions adopted by management minimizes food safety risks

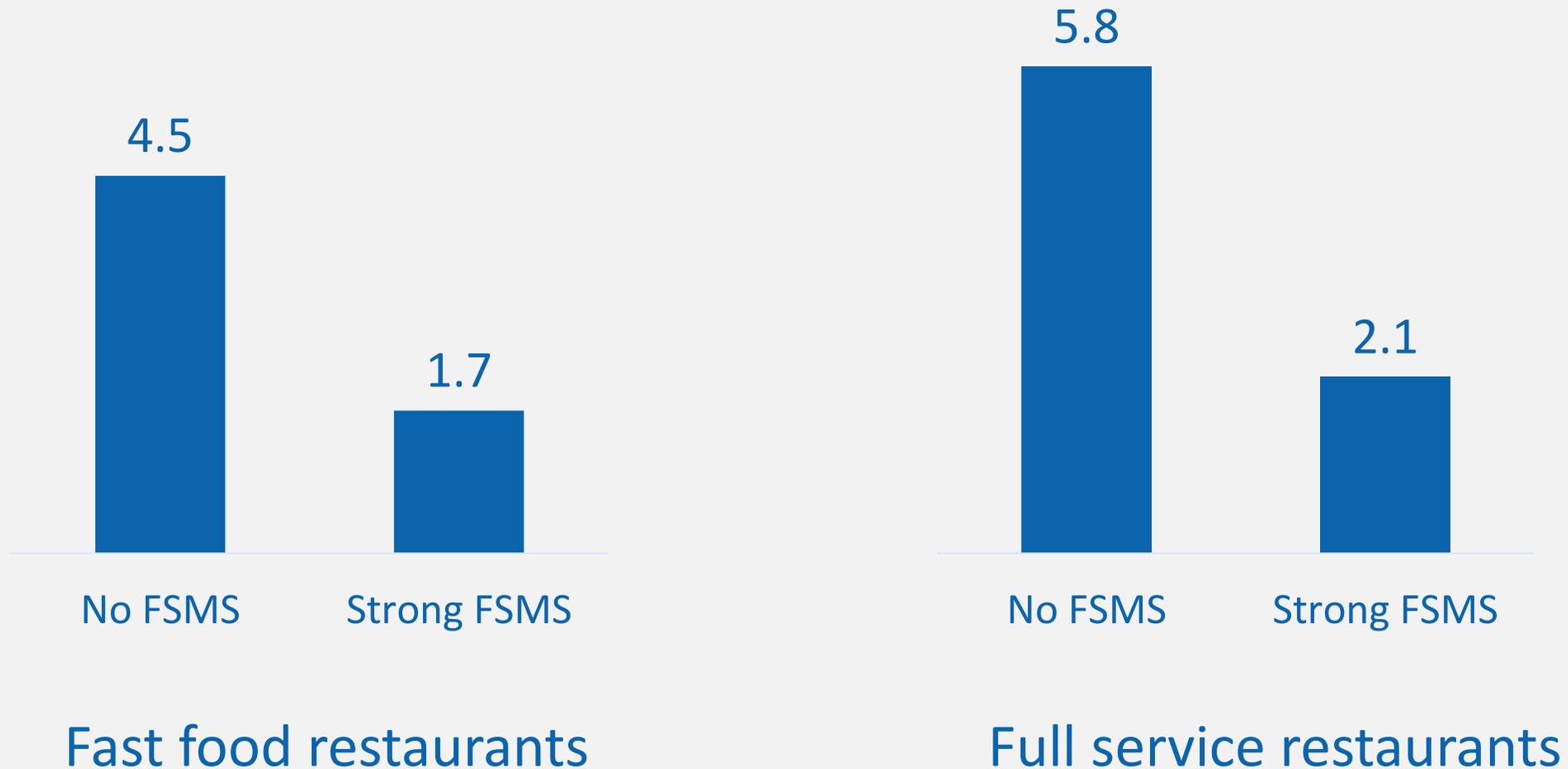
Training

Teaching employees food safety procedures

Monitoring

Routine measurements to determine if food safety procedures are being followed

Food safety management system ratings and out-of-compliance food safety practices



Links between procedures and food safety

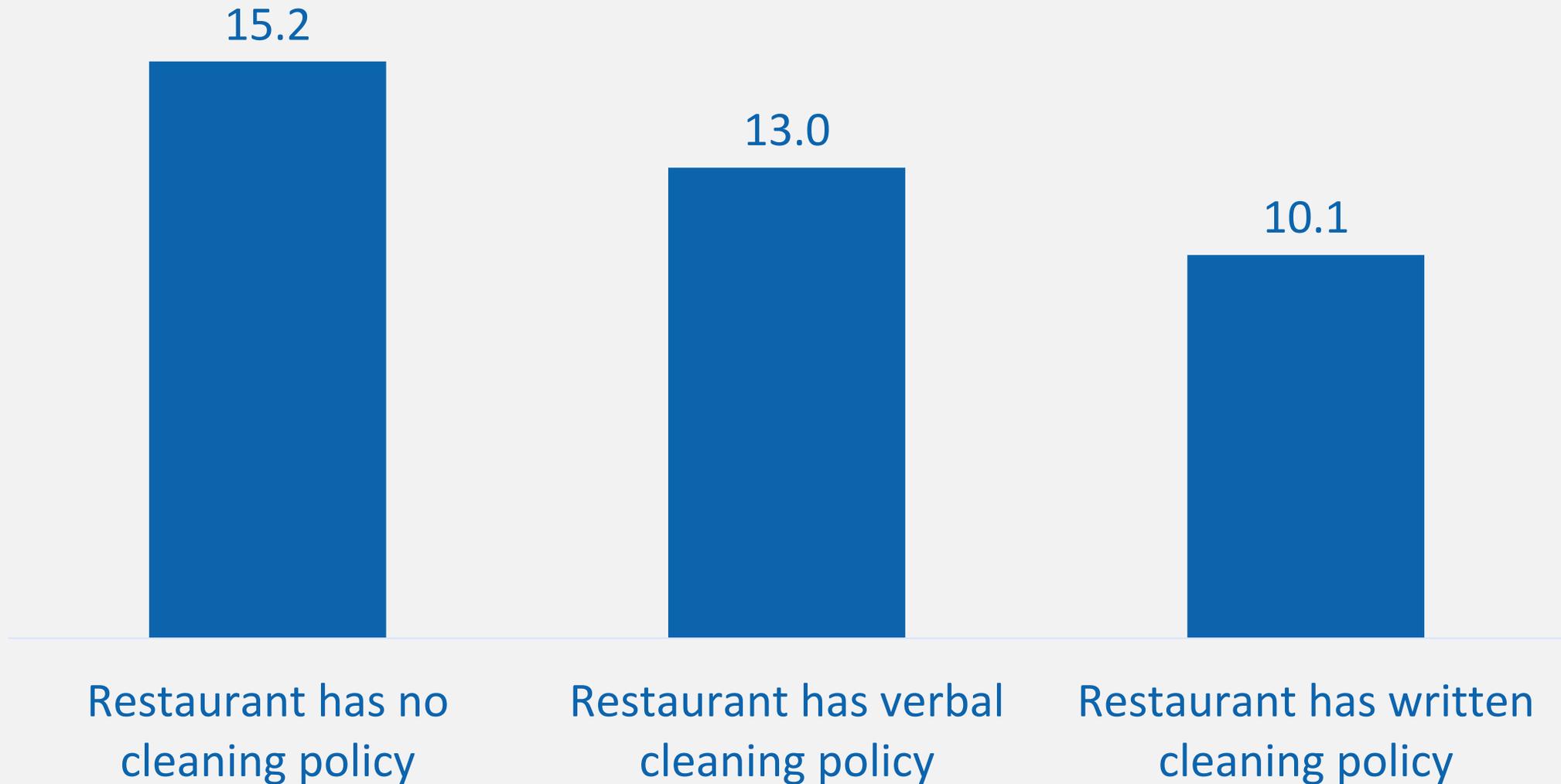
Written slicer cleaning policy → Slicers cleaned more frequently

Staffing plans for absent workers

Policy requiring workers to tell managers when they are ill → Workers less likely to work while ill

Policy or schedule for cleaning → Smaller outbreaks

Links between procedures and average norovirus outbreak size





Links between training and certification and food safety

Certified kitchen manager



Fewer critical violations on inspections

Food worker food safety training



More likely to have correct sanitizer solution concentration

Food worker food safety training



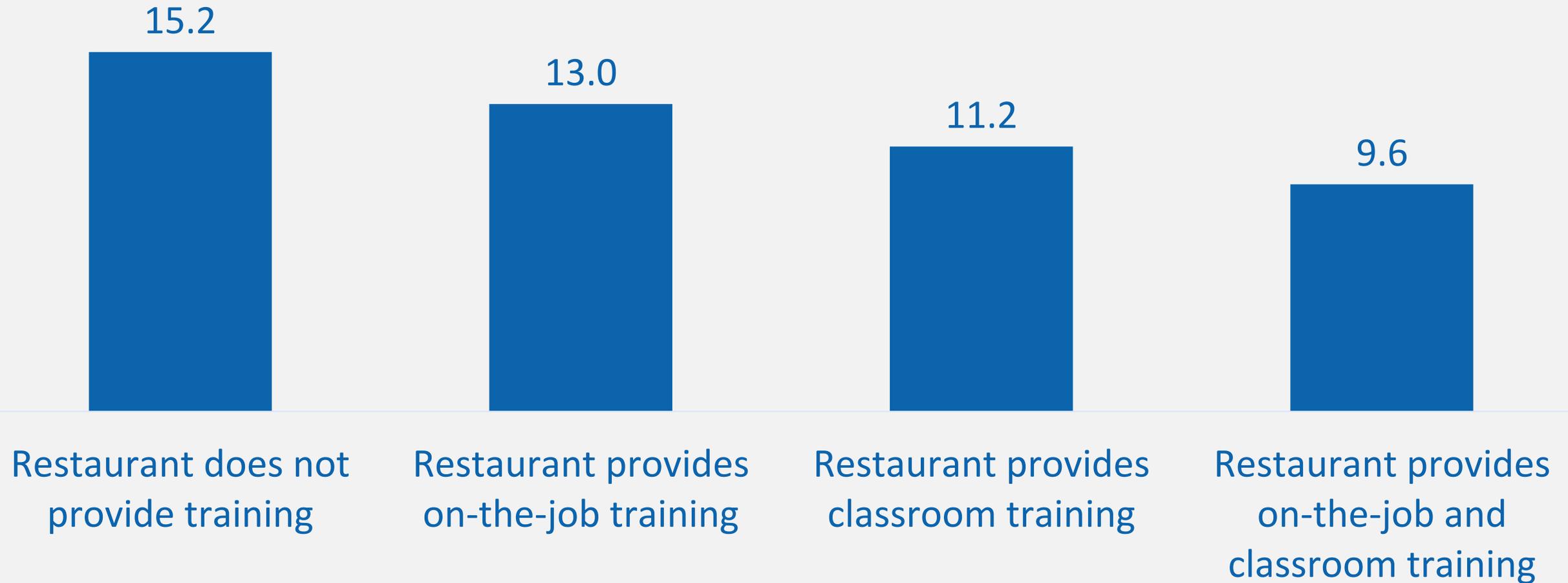
Workers more likely to wash hands when needed

Food worker food safety training



Smaller outbreaks

Links between training and average norovirus outbreak size



Links between monitoring and food safety

Food workers actively monitor cooling food temperatures



Foods more likely to cool within recommended timeframe

Workers record food temperature temperatures



Lower odds of an outbreak





REGULATIONS

Regulations and food safety

- **Prohibiting bare-hand contact**
- **Requiring a certified kitchen manager**



**Fewer
norovirus
outbreaks**

What can food officials do?

- **Focus prevention efforts on**
 - Preventing ill workers
 - Good hand hygiene
 - Cleaning and sanitizing
- **Support strong food safety management systems in restaurants**
 - Procedures
 - Training and certification
 - Monitoring
- **Adopt and enforce food safety regulations**



Thank you

Laura G. Brown
Email: lrg0@cdc.gov

For more information, contact NCEH
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov
Follow us on Twitter [@CDCEnvironment](https://twitter.com/CDCEnvironment)

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

