Culture and Data: The Keys to Highly Effective Public Health Program

Steven Mandernach,
Executive Director, Association of Food and Drug Officials

FDA Retail Seminar – Grand Rapids, MI – 10/6/2023

Making Public Health Decisions – with Courage, Persistence, and Using Data

1. What are some examples of public health and food safety leadership.

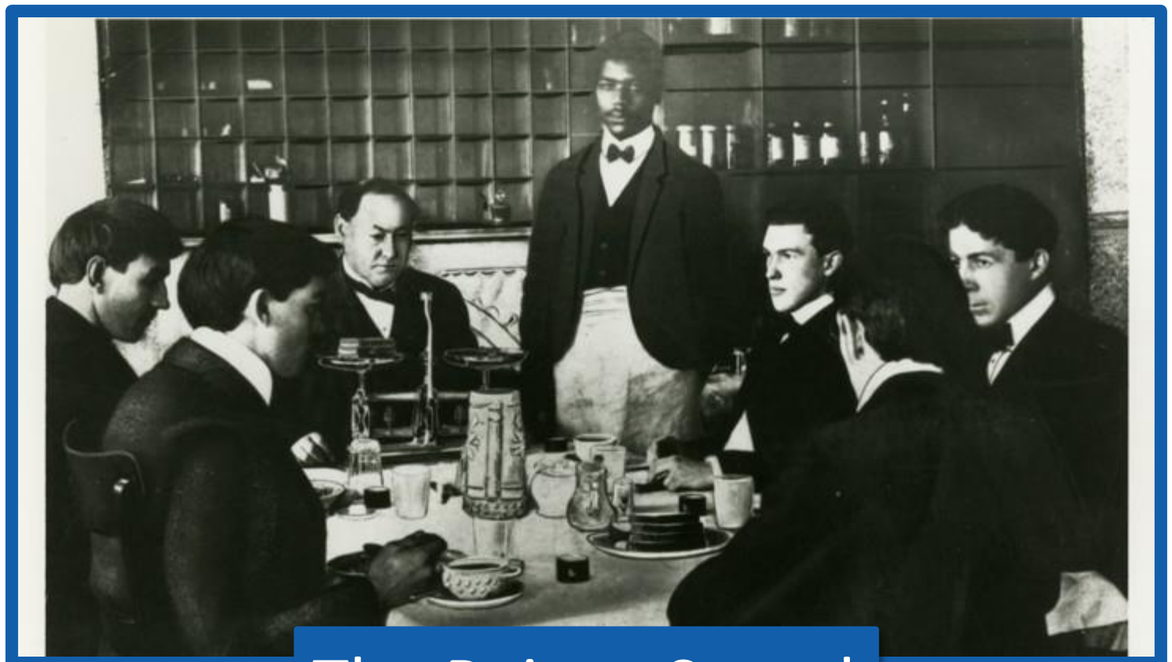
2. What is a public health or food safety regulatory culture and how might we measure and apply appropriate metrics at inspector level and program level?

3. How can we use data to help us evaluate and set metrics and performance measures at the program and individual levels that support and achieve a public health and food safety culture.

Public Health Heroes

Impacting Public Health Through Change

Harvey W. Wiley

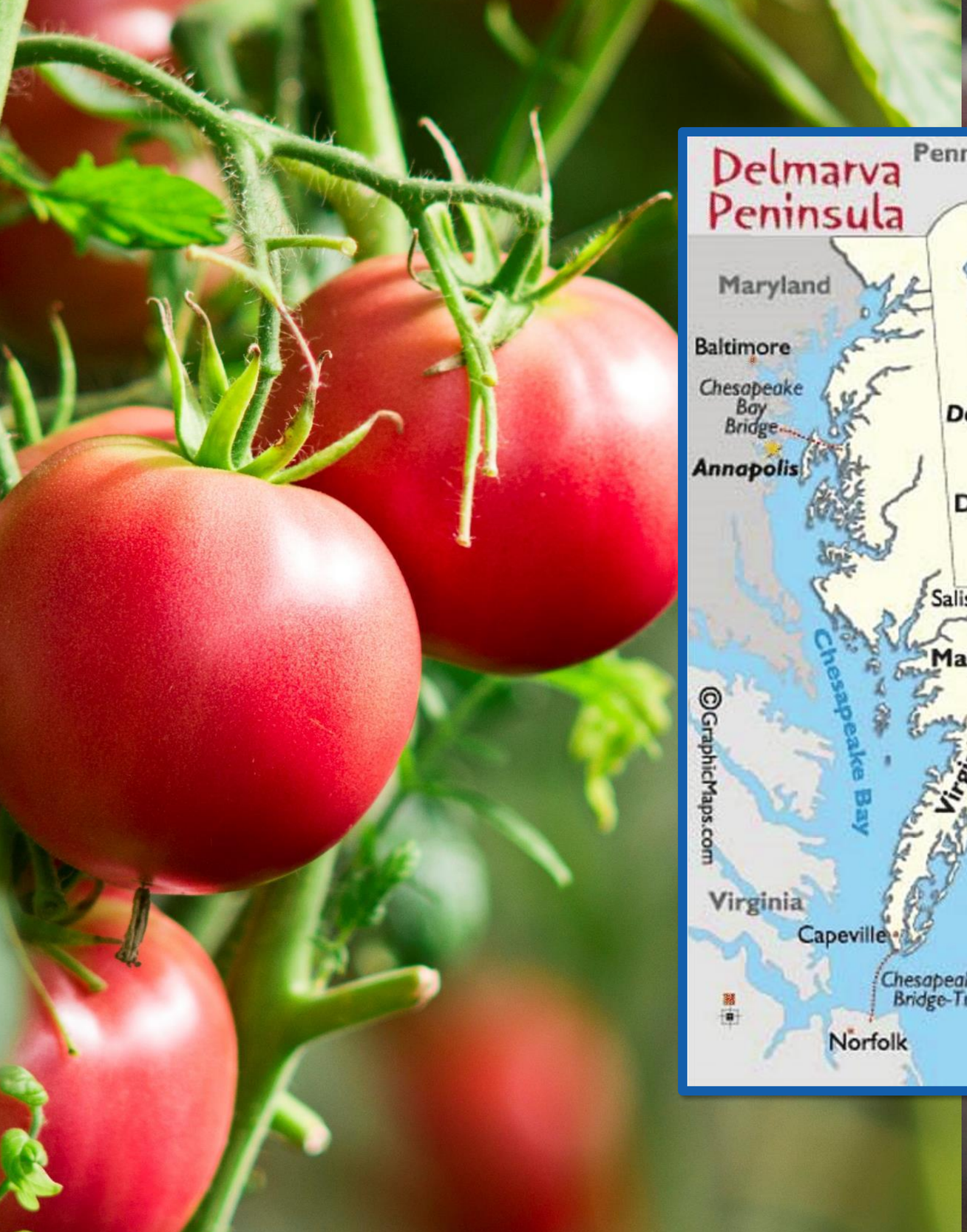


The Poison Squad

Impacting Public Health Through Change

Ernest Julian, Ph.D.

Assistant Director of Health at Rhode Island Department of Health (Retired)



Delmarva Peninsula
Pennsylvania
Delaware River
Maryland
New Jersey
Baltimore
Chesapeake Bay Bridge
Annapolis
Dover
Delaware Bay
Delaware
Salisbury
Ocean City
Maryland
Assateague Island National Seashore
Chesapeake Bay
Virginia
Atlantic Ocean
©GraphicMaps.com
Virginia
Capeville
30 mi
30 km
Chesapeake Bay Bridge-Tunnel
Norfolk
worldatlas

“Verify systematic correction

OR

perform a new inspection?”

Healthy People 2030

- Sets public health goals for a 10-year period

Impacting Public Health Through Change

Ernest Julian, Ph.D.
Assistant Director of Health at Rhode Island Department of Health (Retired)

- Retained a very talented leader.
- Helped her learn her new position.
- Focused on public health every day.

Impacting Public Health Through Change

Frank Yiannas

Former Deputy Commissioner for Food Policy and Response

“Having a strong food safety culture is a choice. **Organizational cultures are created by leaders**, and one of the most decisive functions of leadership may well be the creation, the management, and – if when necessary – the destruction of culture. A food safety culture **starts at the top and flows downward**. It is not created from the bottom up.”

- Frank Yiannas

Food Safety Culture

Behavior change is probably the single most important part of food safety.

Impacting Public Health Through Change

Frank Yiannas

Former Deputy Commissioner for Food Policy and Response

- **Clearly** articulated goals.
- **Leading proactively** with a long-term purpose.
- Persevere and change an organization **regardless of how tough it is**.

Retail Food Safety Regulatory Association Collaborative Cooperative Agreement

Retail Inspection Report Data Analytics is one of the key projects for meeting the Collaborative's CAP objectives.

Data Analytics: Insights from inspection data sets

- How do we know we are on target?
- Everyone is collecting data, but it is not the same data
  - Different Food Codes
  - Different forms
  - Different risk categories

Participating States

PHASE 1

- Alaska
- Arkansas
- Kansas
- Iowa

PHASE 2

- Rhode Island
- Tennessee
- Pennsylvania
- Harris County, Texas
- New — South Carolina

SUMMARY DATA

DATE RANGE:
1/1/2017 – 12/31/2019

NUMBER OF FACILITIES:
172,000

NUMBER OF INSPECTIONS:
436,000

FACILITIES MATCHED TO THE TOP 500 RETAILERS:
20.7%

Data Quality and Transformation Process

Steps to transform the data into a single consolidated data warehouse:

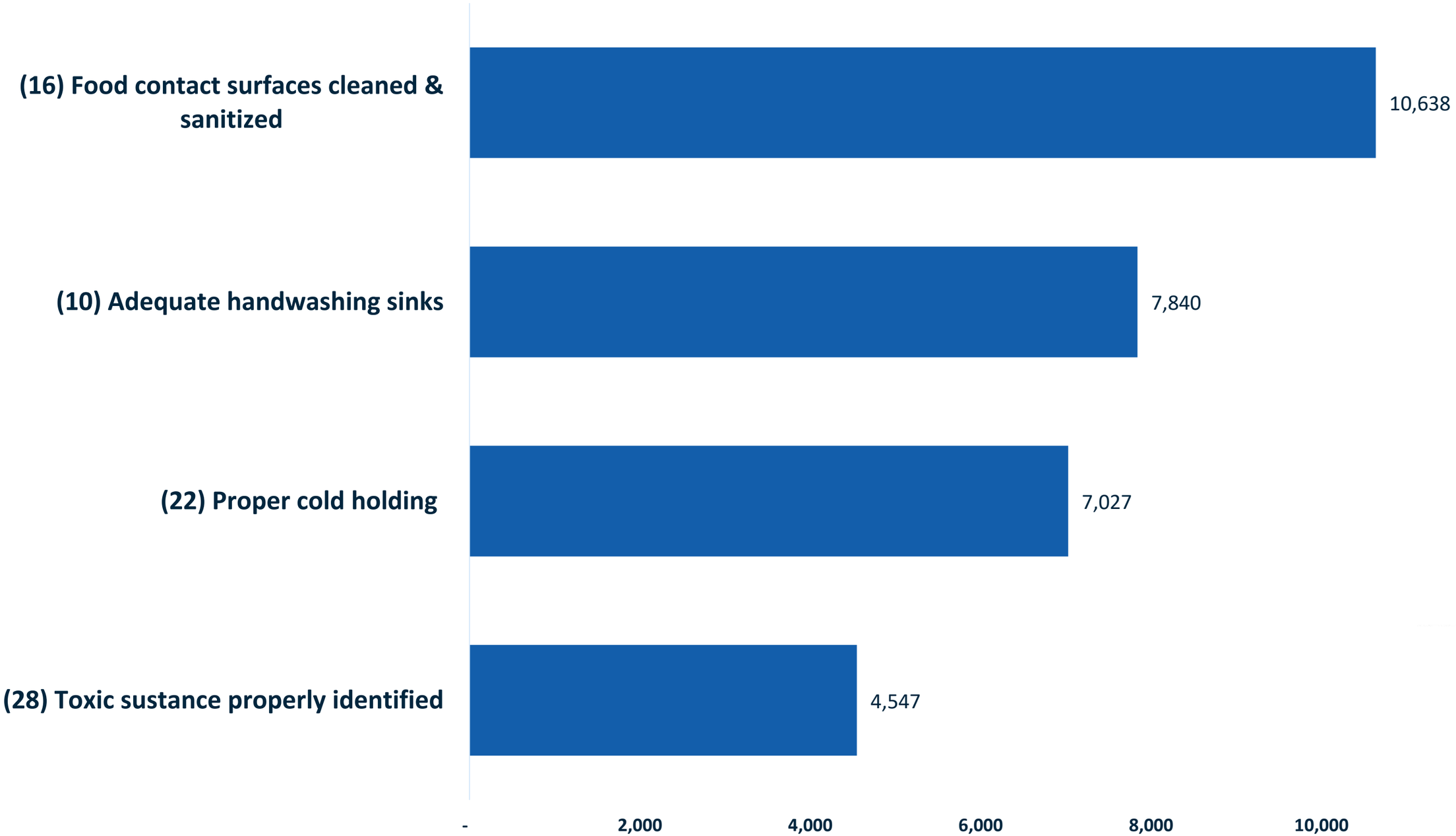
1. Review Data Elements with State/Local
2. Mapping to FDA Food Code 2017
3. Review Retail Inspection Report Sample
4. Receive Retail Inspection Data:
   A. Inspection Dates from **01/01/2017 to 12/31/2019**
   B. Inspection Reason Type – Routine Online
   C. Inspection Status – Approved (Final Form/Share)
5. Data Quality Review
6. Data transformation and Mapping Process

Number of Retail Facilities and Inspections Analyzed by Risk Category*

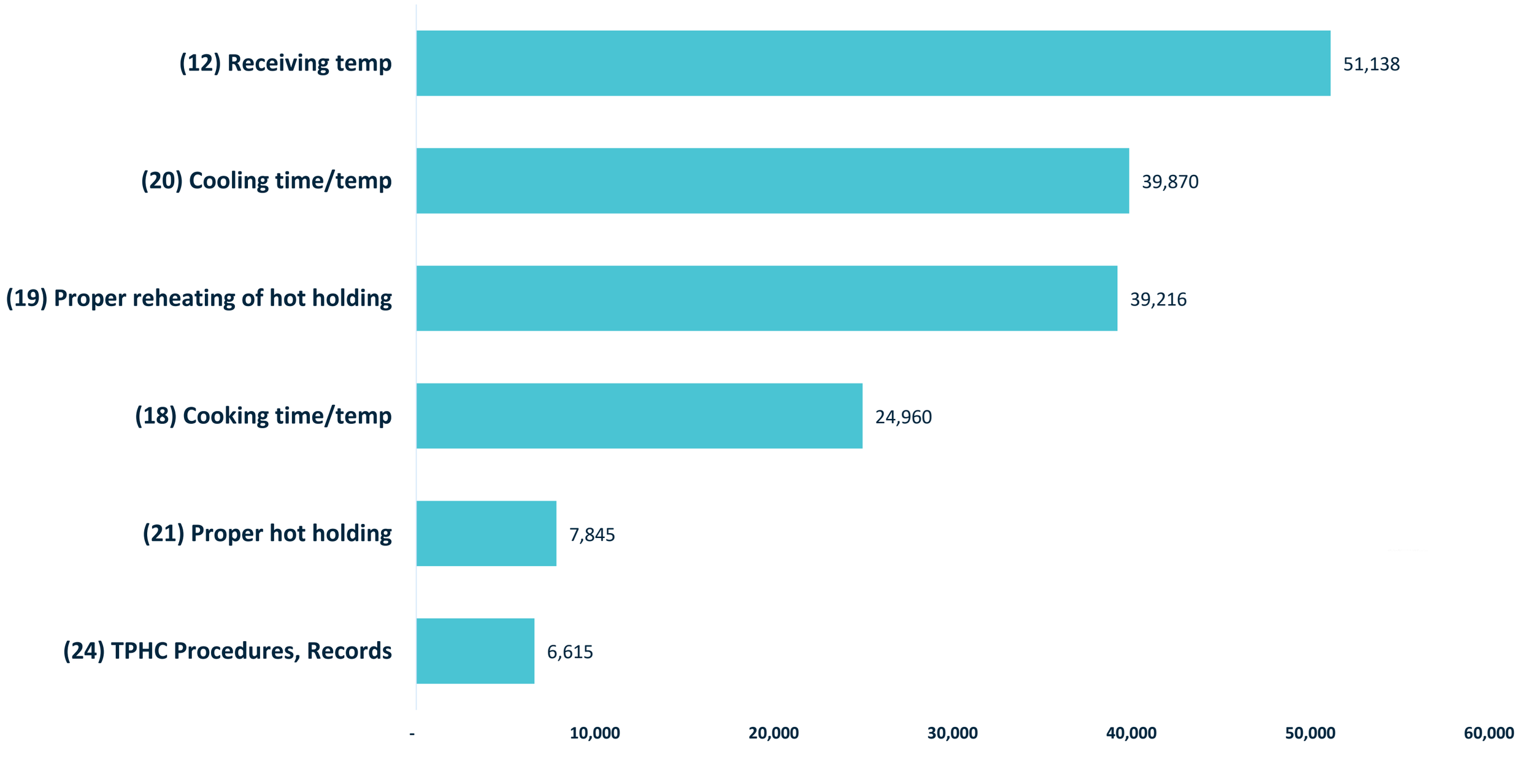
Risk Category	Number of Facilities (%)	Number of Inspections (%)
High	5,175 (17%)	15,449 (19%)
Medium	16,797 (55%)	45,693 (56%)
Low	8,427 (28%)	19,784 (24%)
TOTAL	**30,399**	**80,926**

* This represents the top retailer brands for which we have risk categorization, which is ~20% of the full inspection data set.

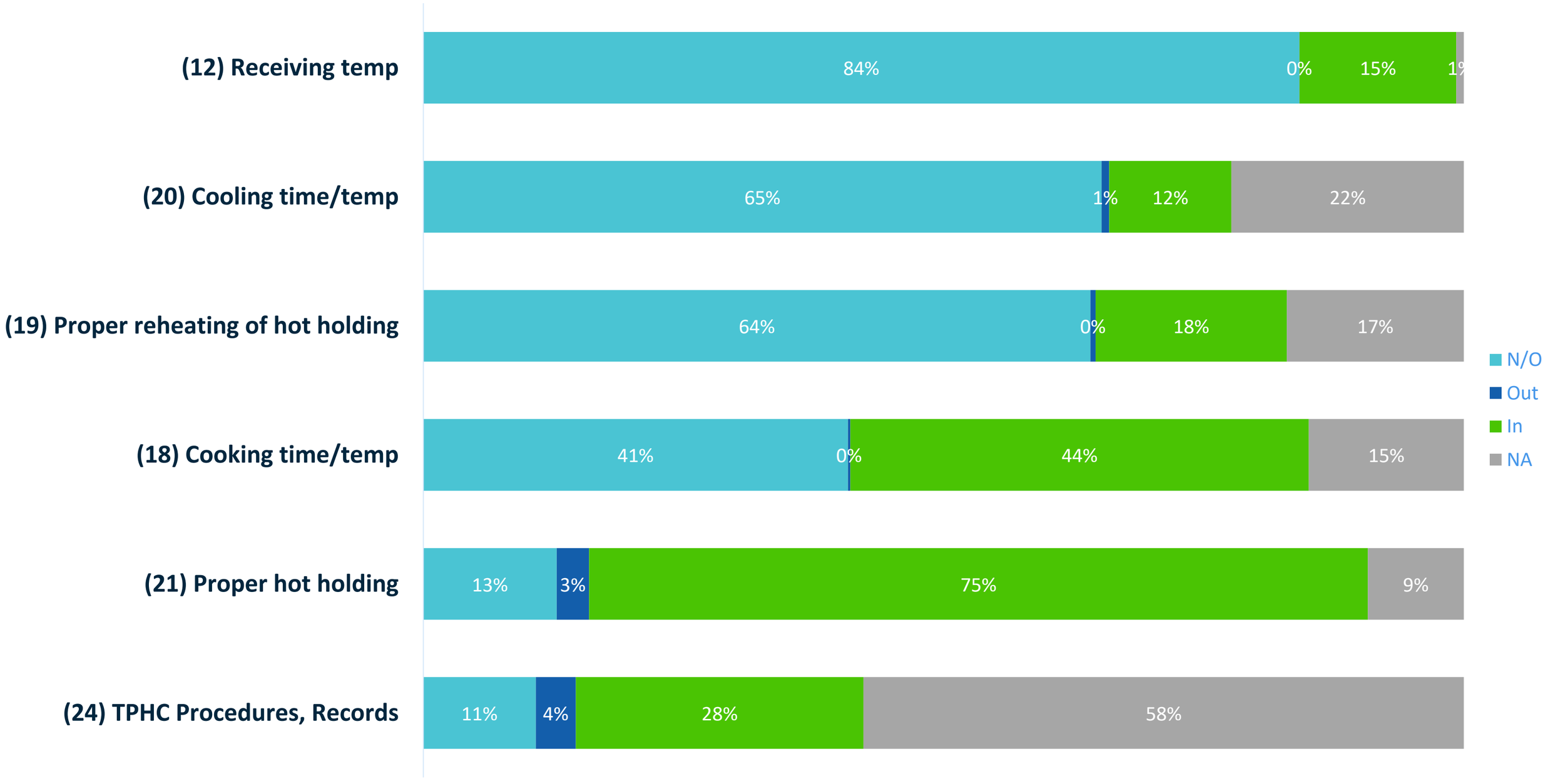
Top Risk Factors OUT OF COMPLIANCE during High or Medium Risk Inspections



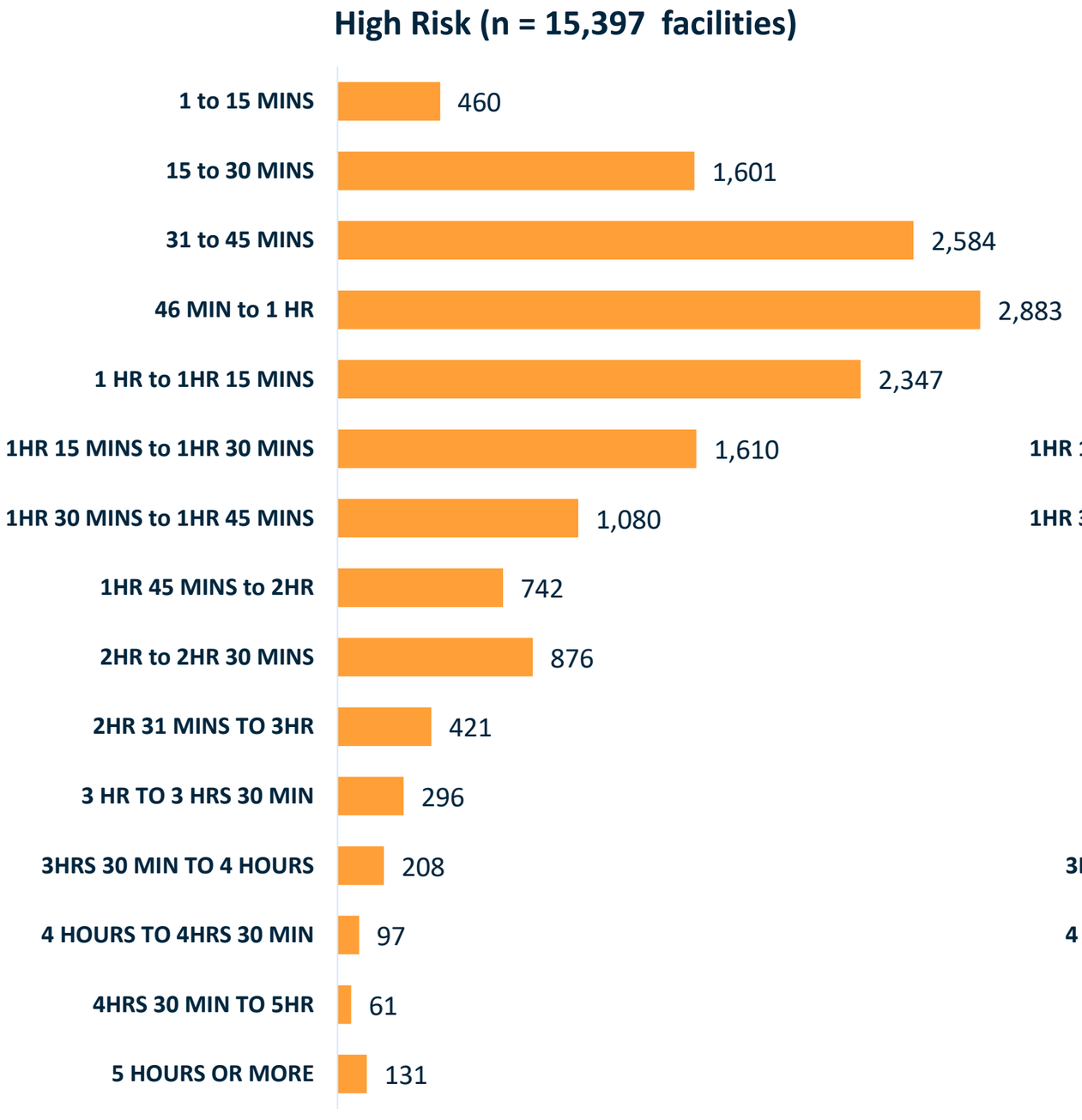
Top Risk Factors NOT OBSERVED during High or Medium Risk Inspections

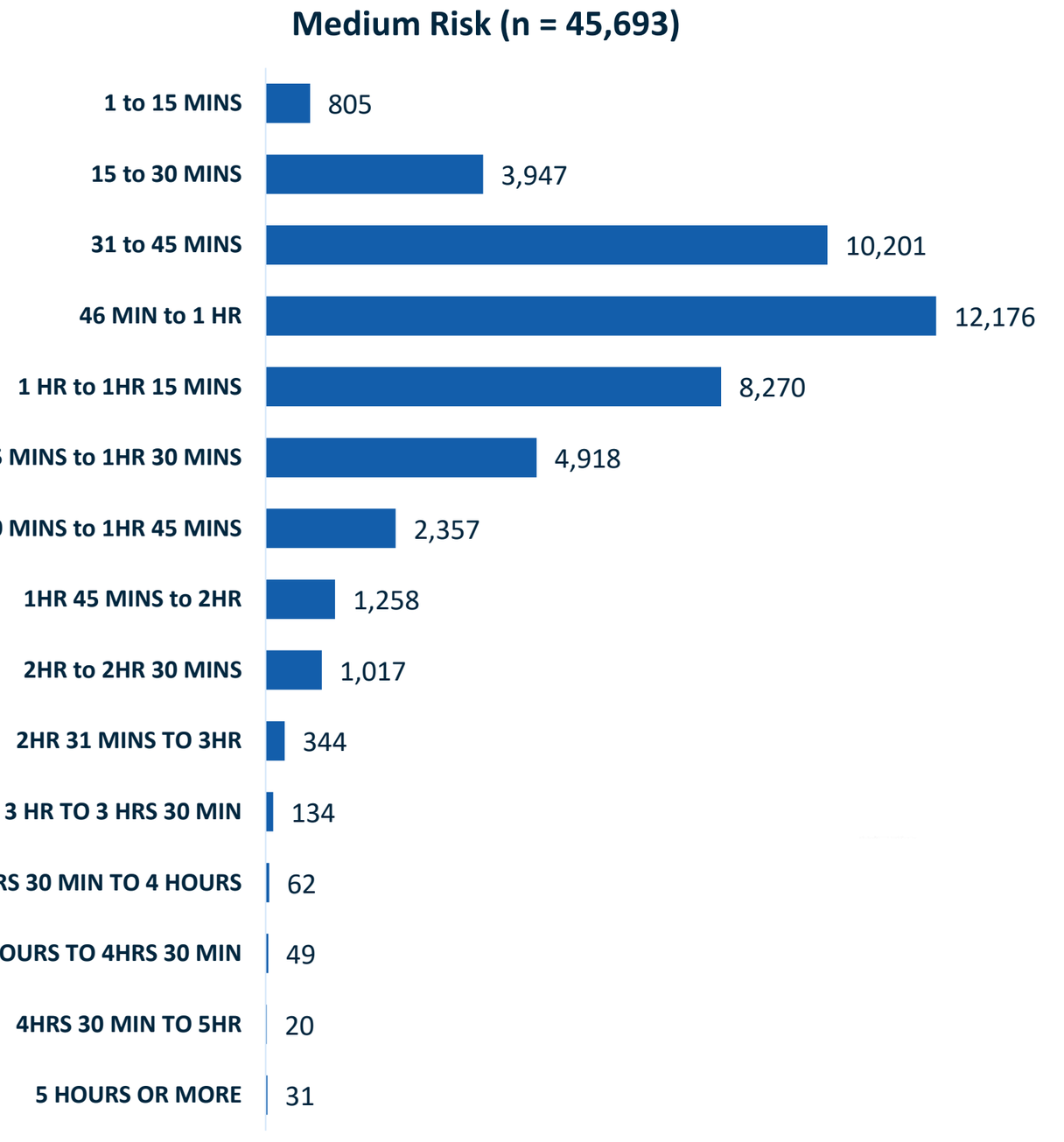


Key Foodborne Illness Risk Factor Compliance Status
High or Medium Risk Retailers

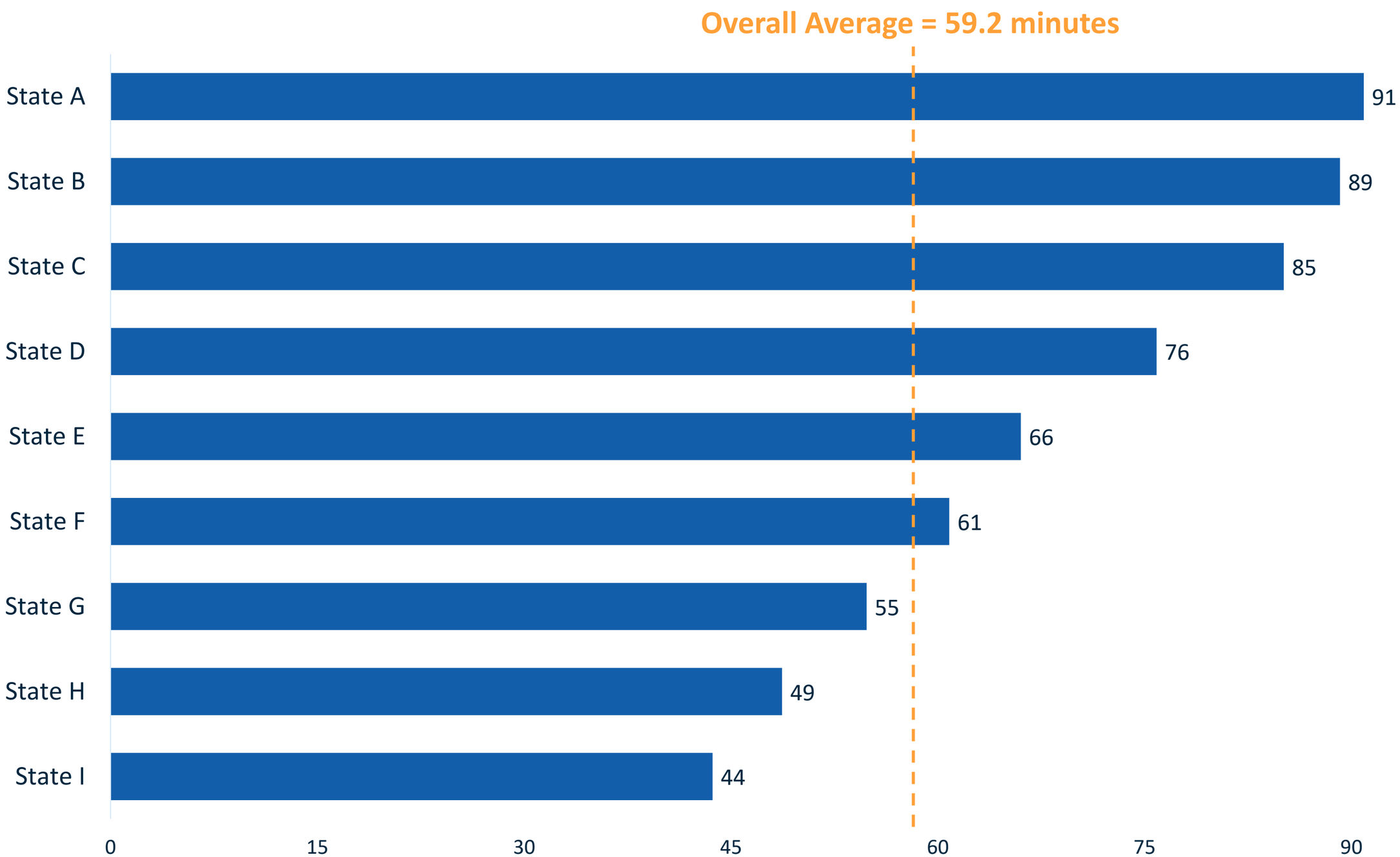


Routine Inspection Duration – High and Medium Risk Facilities

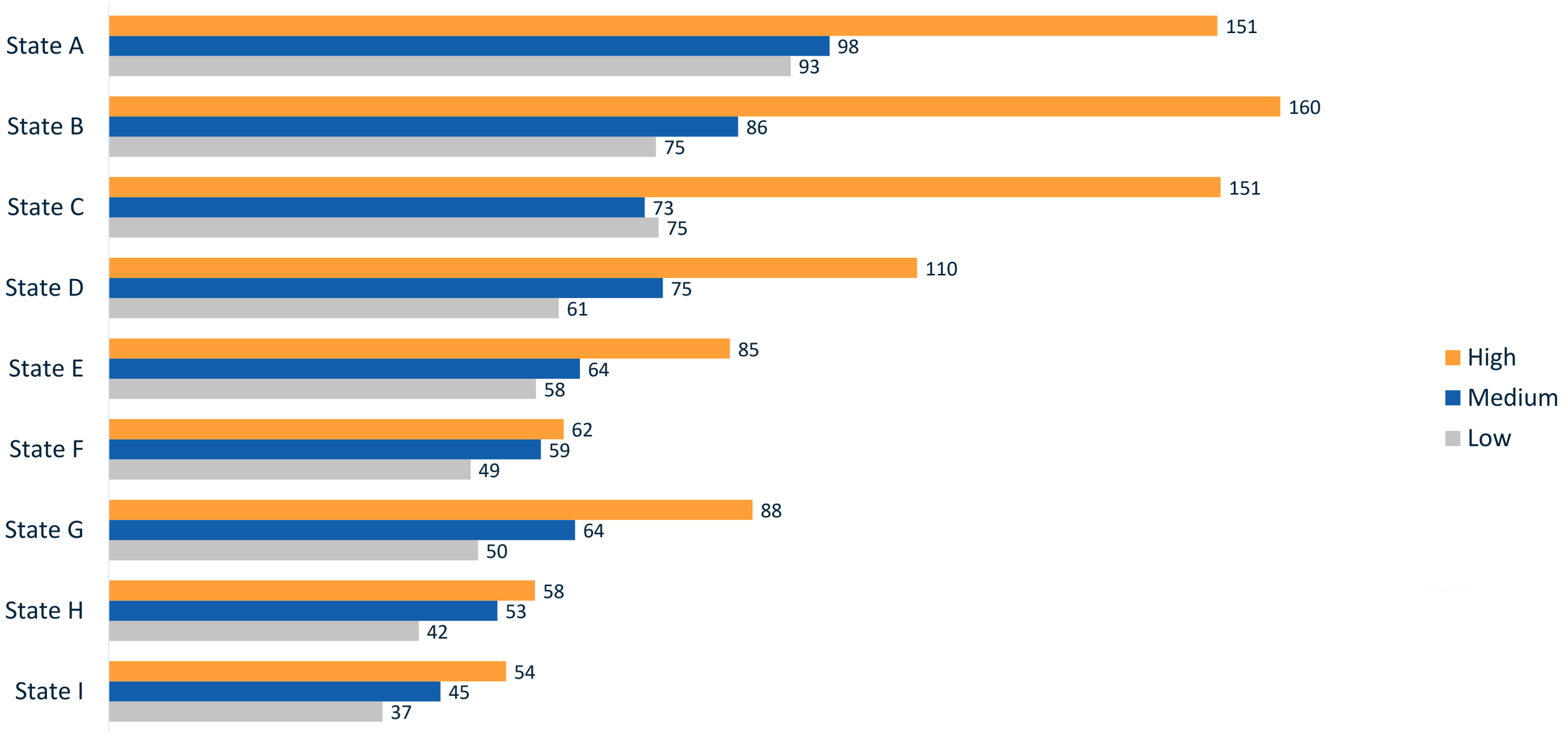




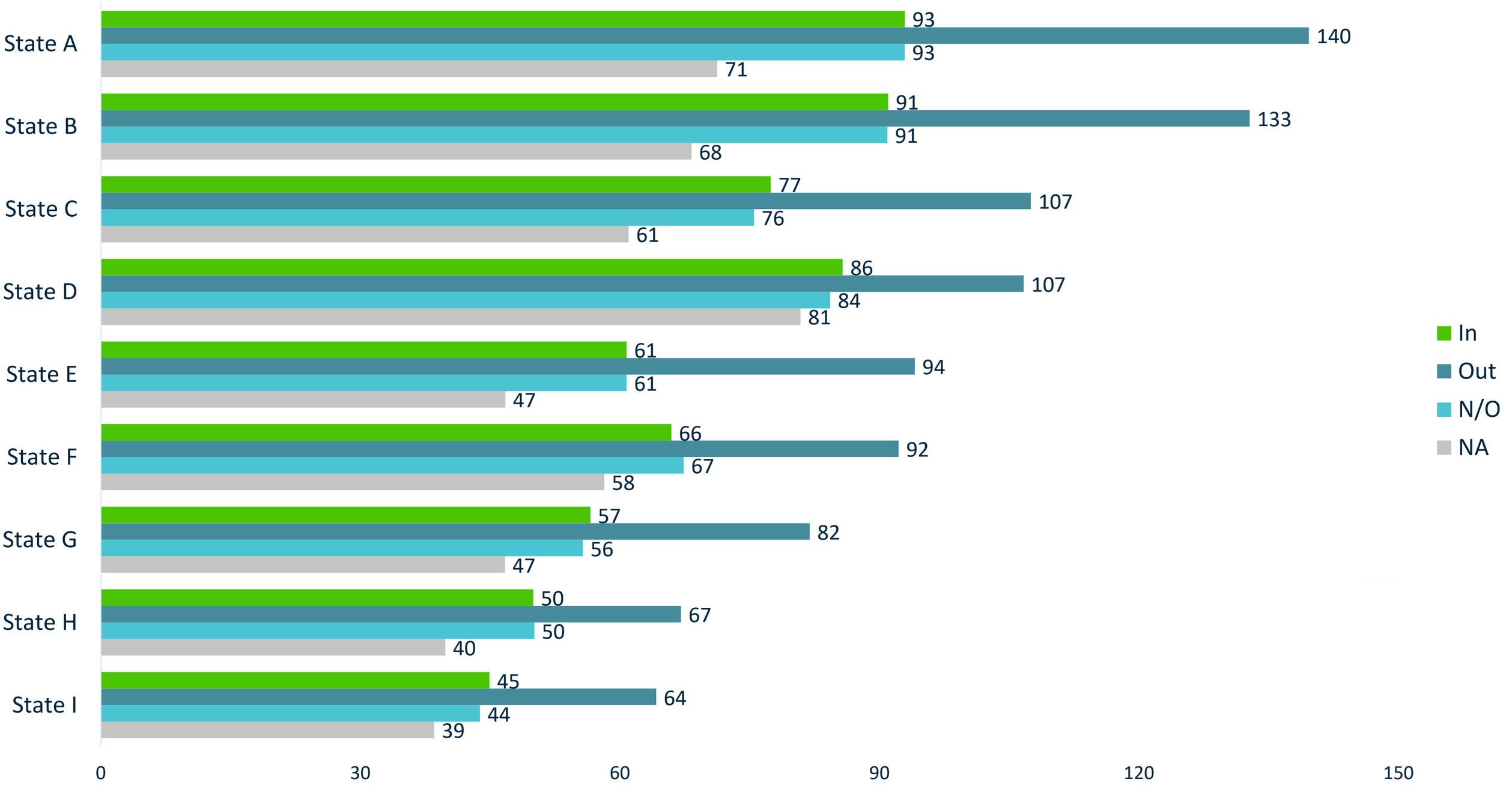
Routine Inspection Duration by State



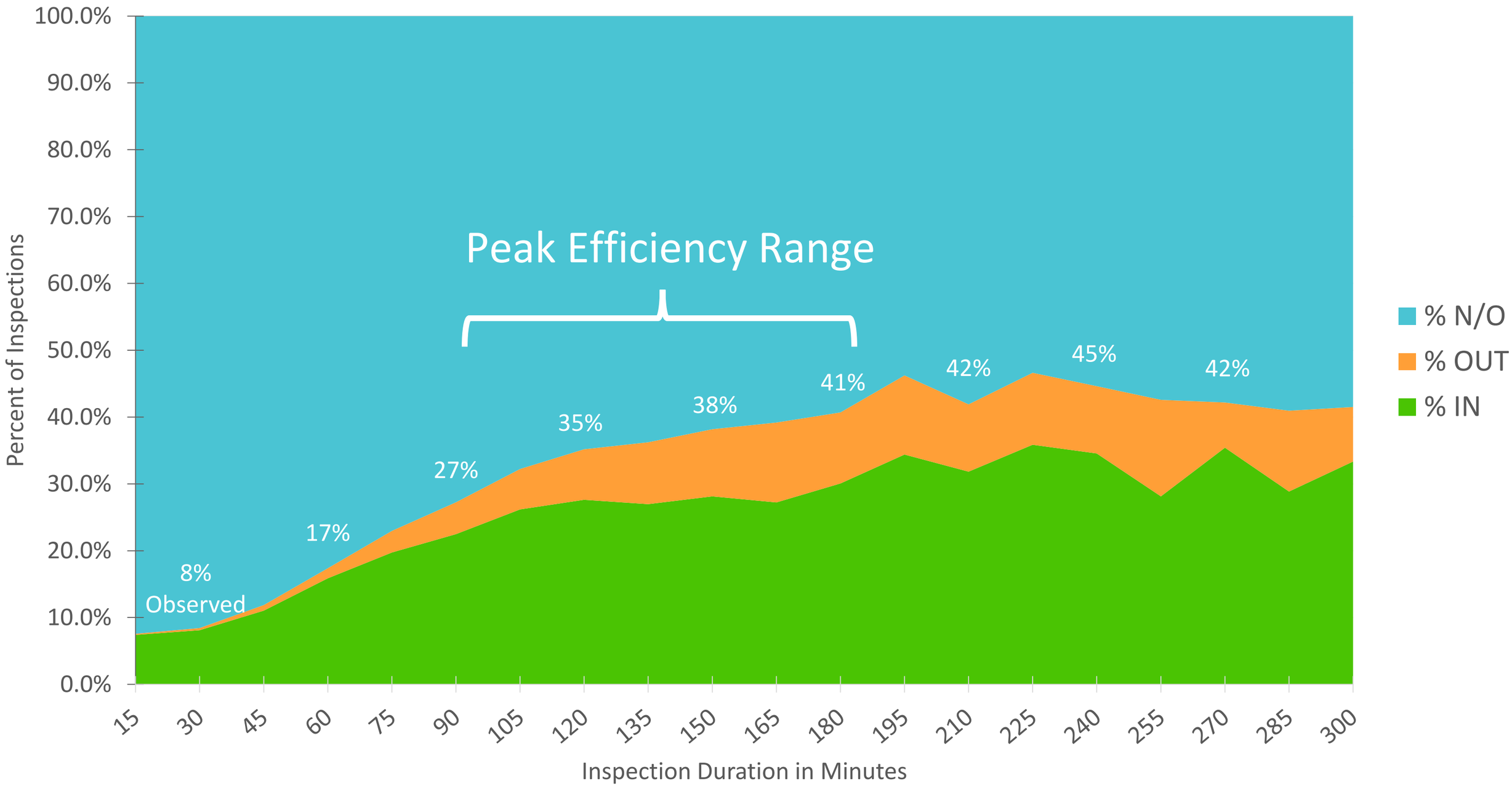
Routine Inspection Duration by State and Risk Level



Average Duration of Inspections (in minutes) for the Compliance Status of Five Key Foodborne Illness Risk Factors, by State



Proper Cooling Time and Temperature
Compliance Status by Inspection Duration



Inspection Peak Efficiency Range

Similar analysis of key Foodborne Illness Risk Factor items suggests an inspection length **peak efficiency range** of

90 – 180 minutes

Key Foodborne Illness Risk Factor Items	Peak Efficiency Inspection Length
Proper Cooling Time and Temp	120 - 180 minutes
Proper Reheating of Hot Holding	105 - 180 minutes
Proper Cooking Time and Temp	105 - 165 minutes
No Bare Hand Contact with RTE Food	75 - 120 minutes
Hands Cleaned and Properly Washed	75 - 120 minutes
PIC Present, Knowledgeable, Performs Duties	120 - 180 minutes

Are we focused on the **right** things?

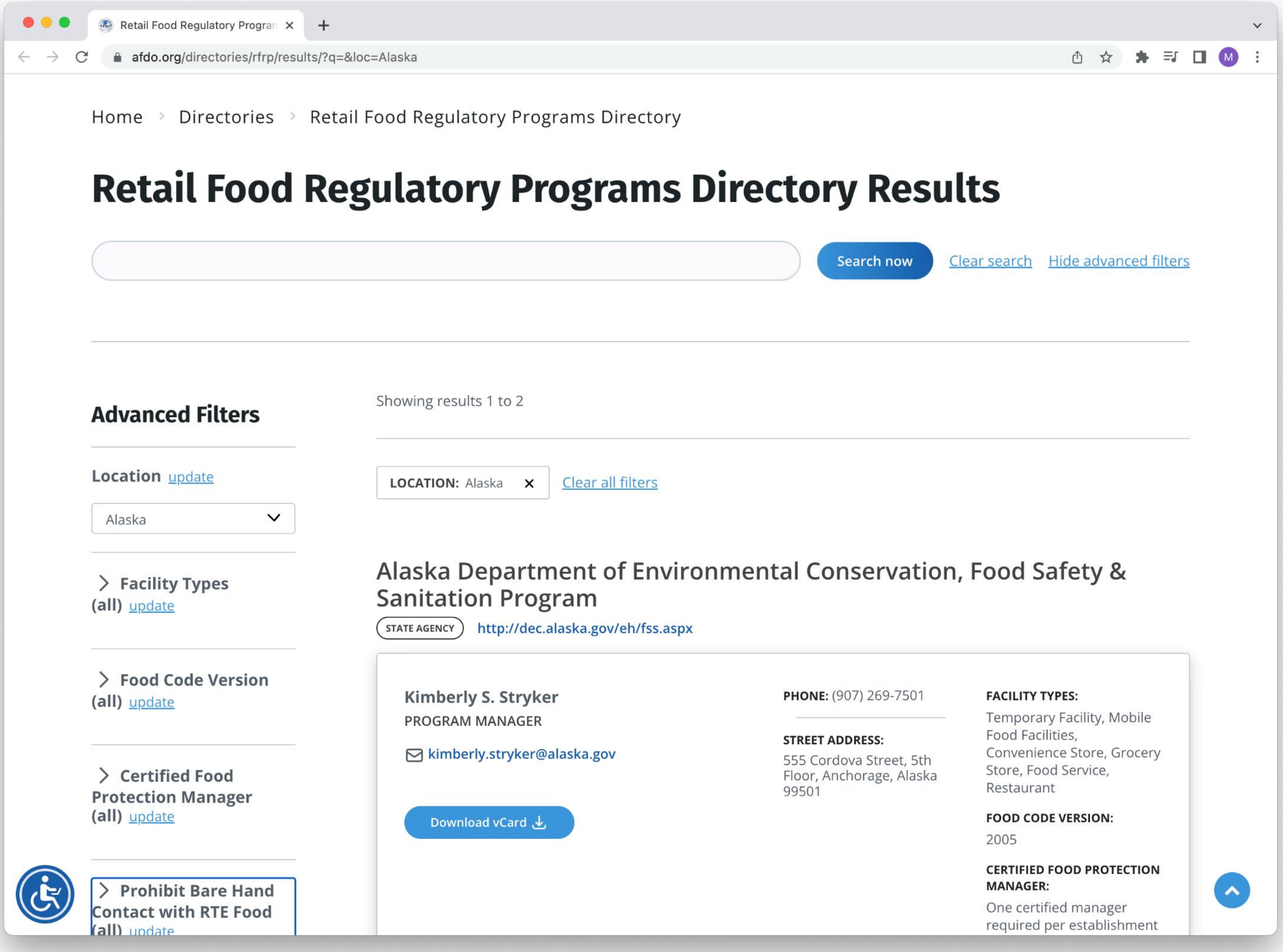
Questions future data analysis can help answer

- ? Are we observing the right things and inspecting at the right time?
- ? Are we looking for and finding the root cause of risk factor violations?
- ? Is compliance for the moment or permanent?
- ? Are our actions having a positive public health impact?

Foodborne Illness Investigations

- Foodborne illnesses and outbreaks must become a priority.
- Beginning conversations with industry when “signals” of a potential foodborne outbreak are evident.
- Resources: webinars, workshops, and training.

Resources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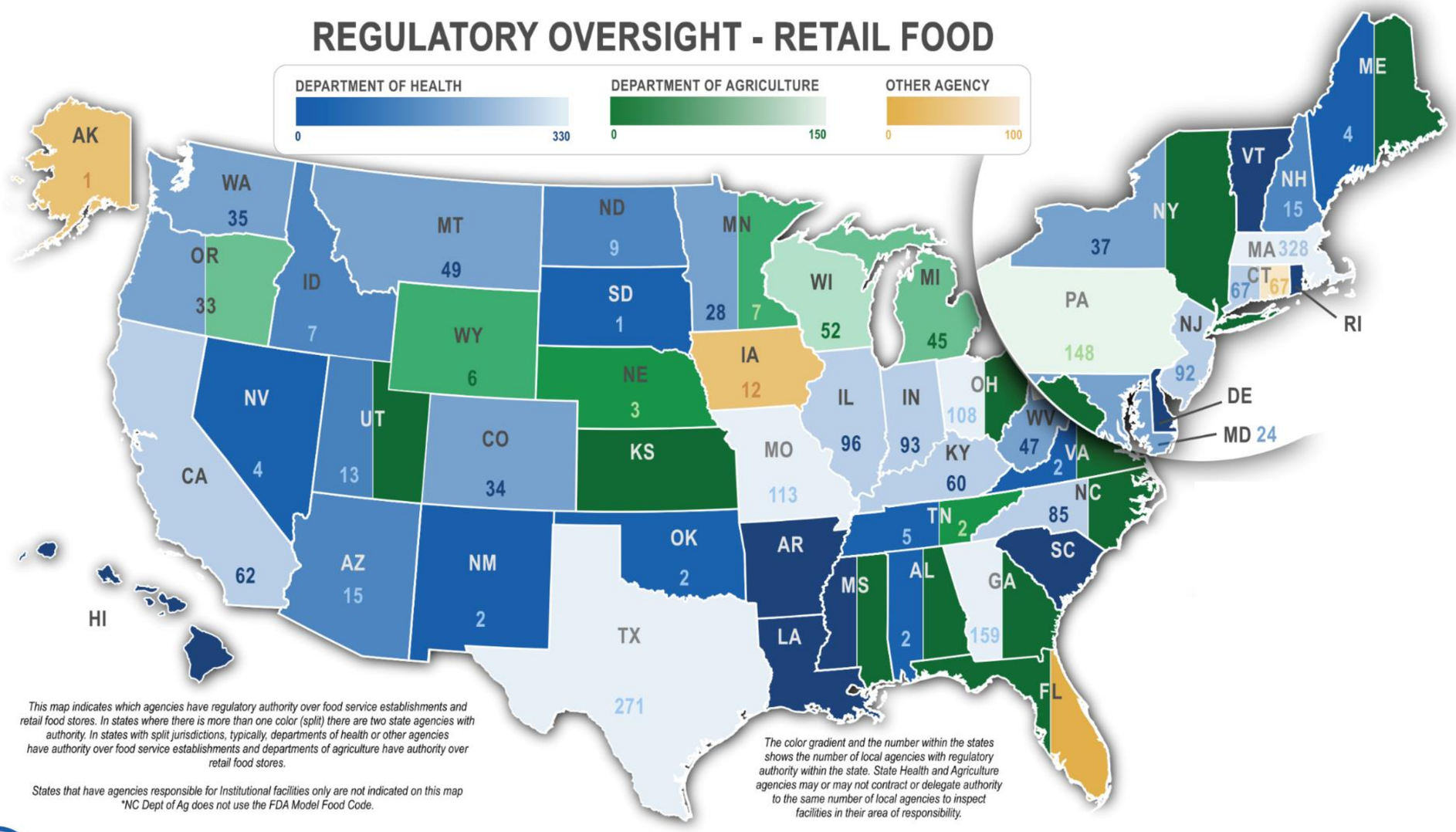
afdo.org/directories/rfrp/results/?q=&loc=Alaska
Home › Directories › Retail Food Regulatory Programs Directory
Retail Food Regulatory Programs Directory Results
Search now
Clear search
Hide advanced filters
Advanced Filters
Showing results 1 to 2
Location update
Alaska
LOCATION: Alaska ×
Clear all filters
Facility Types (all) update
Food Code Version (all) update
Certified Food Protection Manager (all) update
Prohibit Bare Hand Contact with RTE Food (all) update
Alaska Department of Environmental Conservation, Food Safety & Sanitation Program
STATE AGENCY
http://dec.alaska.gov/eh/fss.aspx
Kimberly S. Stryker
PROGRAM MANAGER
kimberly.stryker@alaska.gov
Download vCard
PHONE: (907) 269-7501
STREET ADDRESS:
555 Cordova Street, 5th Floor, Anchorage, Alaska 99501
FACILITY TYPES:
Temporary Facility, Mobile Food Facilities, Convenience Store, Grocery Store, Food Service, Restaurant
FOOD CODE VERSION:
2005
CERTIFIED FOOD PROTECTION MANAGER:
One certified manager required per establishment

Regulatory Oversight



This map indicates which agencies have regulatory authority over food service establishments and retail food stores. In states where there is more than one color (split) there are two state agencies with authority. In states with split jurisdictions, typically, departments of health or other agencies have authority over food service establishments and departments of agriculture have authority over retail food stores.

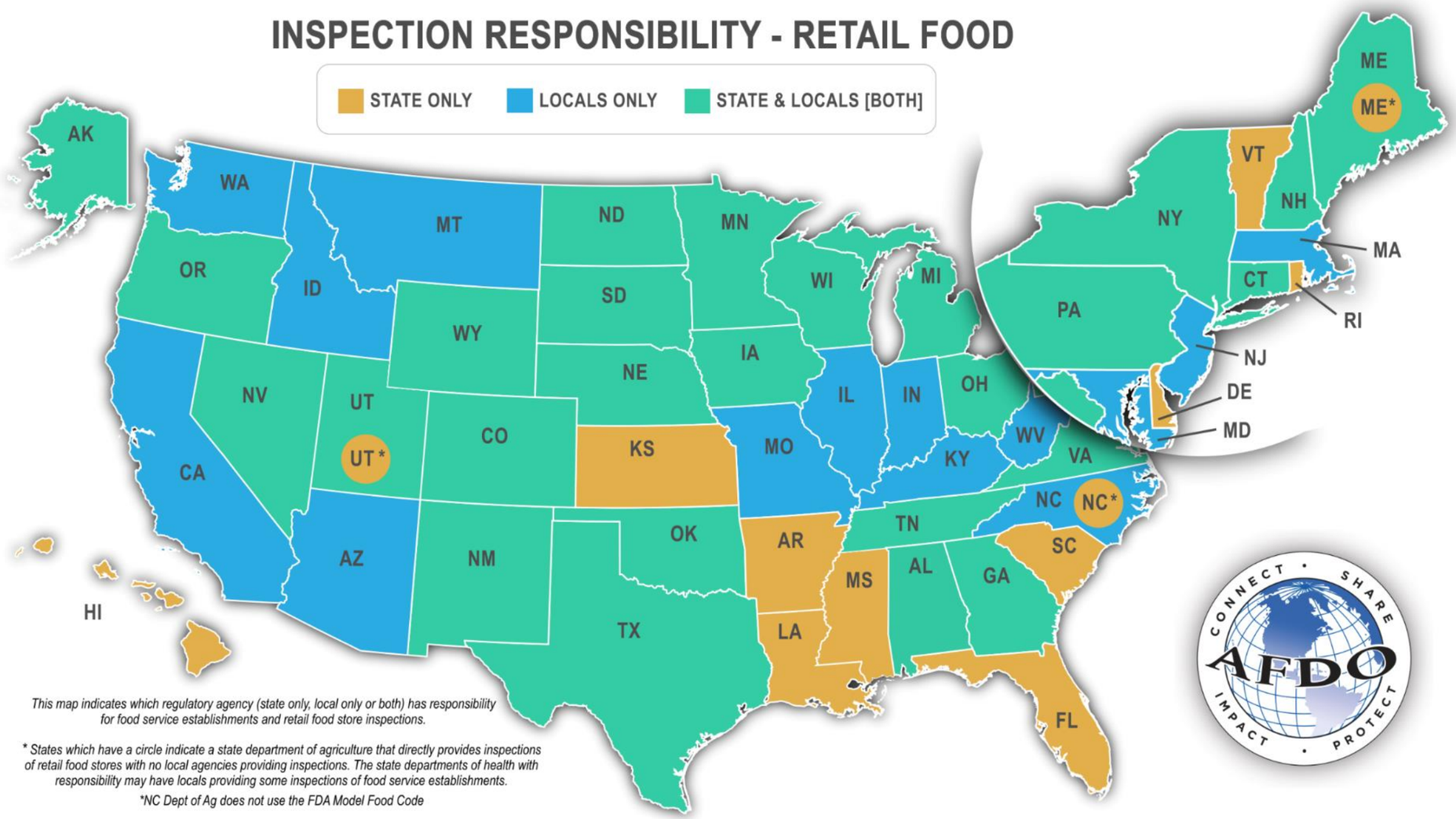
States that have agencies responsible for Institutional facilities only are not indicated on this map
**NC Dept of Ag does not use the FDA Model Food Code.*

The color gradient and the number within the states shows the number of local agencies with regulatory authority within the state. State Health and Agriculture agencies may or may not contract or delegate authority to the same number of local agencies to inspect facilities in their area of responsibility.

Inspection Responsibility Map

afdo.org/directories/ir/

Inspection Responsibility Map



Retail Food Guide For
Developing HACCP Plans for Special Processes

Meeting the Requirements of the FDA Food Code in Relation to Specialized Processing Methods at Retail

April 3, 2023

Public Health Focused Programs

- Performance Metrics for Program and Staff Public Health Focused
- Data Is Frequently Used Monitor Progress and Changes Made as Needed
- Leaders Must Change and Evolve Programs:
  Today's Answer Likely Isn't Tomorrow's Answer

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