Interagency Food Safety Analytics Collaboration (IFSAC)
Priorities for 2024–2028

Introduction

The Interagency Food Safety Analytics Collaboration (IFSAC) develops, analyses, and publishes reports to improve the understanding of which foods are the most important sources of foodborne disease in the United States. IFSAC was formed in 2011 as a partnership of three federal agencies—the Centers for Disease Control and Prevention (CDC), the U.S. Food and Drug Administration (FDA), and the Food Safety and Inspection Service (FSIS)— to improve coordination of federal food safety analytic efforts and address cross-cutting priorities for food safety data collection, analysis, and use. Since its inception, IFSAC's focus has been foodborne illness source attribution, with an emphasis on four priority pathogens: *Campylobacter, Escherichia coli* O157, *Listeria monocytogenes,* and *Salmonella*. As part of this effort, IFSAC produces annual Foodborne Illness Source Attribution estimates for the United States.

Federal agencies and stakeholders use these attribution analyses to inform strategic planning and risk-based decision-making; estimate benefits of interventions; and evaluate the impact of interventions, such as new or revised regulations, policies, and performance standards. By bringing together data from a variety of sources, broadly exploring an array of methods, and developing sound analytical methods, IFSAC scientists can improve estimates of the sources of foodborne illness.

Purpose

IFSAC published an initial strategic plan to outline our shared goals and objectives for the first five years of the collaboration (2012 – 2016), which was followed by a strategic plan for 2017 – 2021 and an interim plan for 2022 – 2023. These documents outlined a commitment to improving foodborne illness source attribution estimates for the United States by focusing on three general areas: improving and expanding data, improving and expanding analytical methods, and improving and increasing communication activities. A description of projects, associated publications, and presentations are available on the IFSAC website.

Over the next five years, IFSAC intends to continue publishing annual reports with updated estimates of foodborne illness source attribution. Below, we re-iterate our overall focus and outline four priorities that will guide our work during calendar years 2024 – 2028.

During 2024 – 2028 IFSAC will focus on generating the most accurate and actionable estimates for foodborne illness source attribution in the United States by leveraging the latest science, data, and methods, and will communicate these estimates to stakeholders in government, industry, academia, and consumer organizations.

- **Priority 1:** Explore additional data sources and alternative methods to better estimate the sources of foodborne illnesses caused by *Campylobacter* and harmonize estimates across different approaches and data sources.

  IFSAC's annual Foodborne Illness Source Attribution reports have aimed to estimate food category sources of *Campylobacter* illnesses using foodborne outbreak data. However, the sources of reported *Campylobacter* outbreaks differ considerably from the sources of non-outbreak-associated illnesses as reported by other types of epidemiological studies. One major concern is that the food products most frequently associated with *Campylobacter* outbreaks (raw milk,

chicken livers) are rarely consumed. Therefore, outbreak data are not representative of sources of *Campylobacter* in the general U.S. population. For these reasons, IFSAC paused reporting of attribution estimates for *Campylobacter* in 2022. IFSAC aims to produce more reliable and generalizable *Campylobacter* source attribution estimates in the future by:

- o Examining alternative data sources including (but not limited to) genomic data, sporadic (non-outbreak-associated) disease data, FoodNet case-control study data, and FoodNet Population Survey data.
- o Exploring analytic approaches including (but not limited to) estimation of population attributable fractions using existing FoodNet case-control and population survey data, and reanalysis of case-control data, as well as developing and refining machine learning approaches using whole-genome sequencing (WGS) data from known sources to predict the sources of illnesses with unknown sources.

- **Priority 2:** Expand our list of priority pathogens to include non-O157 Shiga toxin-producing *Escherichia coli* (STEC)and provide source attribution estimates in IFSAC's annual Foodborne Illness Source Attribution reports.

  Non-O157 STEC is an important cause of foodborne illness in the United States and of increasing importance to federal food safety regulatory agencies. IFSAC will leverage existing non-O157 STEC data and analytical methods to estimate source attribution for this pathogen and incorporate these estimates in IFSAC Annual Attribution Reports.

- **Priority 3:** Consider incorporating data on non-foodborne sources of priority pathogens, such as animal and environmental sources, into IFSAC's annual Foodborne Illness Source Attribution estimates to better refine and contextualize foodborne illness source attribution estimates.

  Although the priority pathogens included in IFSAC's analyses are spread predominantly through foodborne transmission, these pathogens also spread through contact with water, human, animal, and environmental sources. To generate more accurate estimates for foodborne illness source attribution, IFSAC analysts will explore available data for non-foodborne sources of the priority pathogens and consider methods to incorporate this information in communications.

- **Priority 4:** Finalize existing analyses and disseminate findings to multiple audiences.

  IFSAC is engaged in numerous projects (description of current and completed projects can be found on the IFSAC website), many of which have not been communicated through peer-reviewed journal articles or other publications. To ensure sufficient resources for IFSAC's priority research areas during 2024 – 2028, IFSAC will review the status of all projects, determine which are close to completion, and identify which should be finalized and by when. During the final stages of each project, IFSAC will pursue and implement appropriate communication vehicles for each project, such as peer-reviewed publications, public reports, webinars, conference presentations, or updates to the IFSAC website to disseminate findings to the appropriate audiences (e.g., regulatory agencies, public health partners, academics, media, the industry, and the public).