Webinar Report

Salmonella Under the Microscope: Tackling Outbreaks and Enhancing Food Safety in Europe

20th March 2025

Event code W61 ZD

IDA
Infectious Disease Alliance

www.id-alliance.org/

About this report

This report presents the key findings and discussions from the webinar "*Salmonella Under the Microscope: Tackling Outbreaks and Enhancing Food Safety in Europe*," organized by the Infectious Disease Alliance (IDA) on March 20, 2025. The webinar brought together leading experts in the field of global health, infectious diseases, and public policy to explore innovative solutions for *Salmonella* infection surveillance and control in Europe, including WHO's approach to strengthening foodborne disease response and national practices for *Salmonell*a investigations.

The event featured presentations by Dr. Carmen Savelli on WHO's global approach to strengthening foodborne disease surveillance and response, Dr. Steen Ethelberg on Salmonella outbreak investigations in Denmark, and Dr. Marianne Chemaly on *Salmonella* outbreak investigations in France. A moderated Q&A session allowed participants to engage with the speakers, addressing critical challenges and potential solutions.

This report is structured to reflect the key themes discussed in the webinar. It provides an overview of the webinar's objectives, speakers, and structure and summarizes the key discussions and findings from the presentations. Last, it highlights engagement metrics, outlines the main takeaways, and presents actionable recommendations for policymakers, researchers, and stakeholders involved in global health initiatives. This report aims to serve as a resource for stakeholders committed to advancing innovative approaches in the fight for the elimination of *Salmonella* infections and the establishment of a safer food system in Europe.

This webinar report was compiled by:
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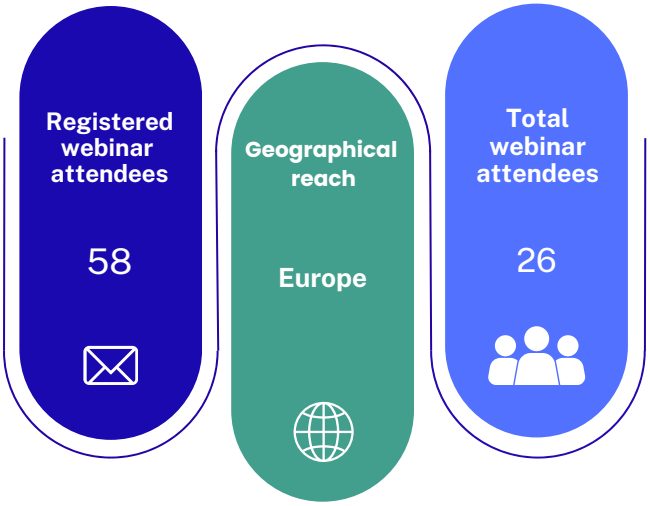
Background on *Salmonella* infections

Salmonella remains one of the leading causes of foodborne illnesses in Europe, with outbreaks posing threats to public health and economic stability. In an era of heightened global trade and antibiotic resistance, combating *Salmonella* demands innovative science and coordinated action. With over 87,000 confirmed *Salmonella* cases annually in Europe, the pathogen continues to challenge food safety frameworks. Factors like globalized supply chains, underregulated poultry industries, and antimicrobial resistance exacerbate its prevalence. Advancements in genomic surveillance, public health campaigns, and policy enforcement provide hope for mitigating its impact.

This webinar served as a platform to explore the latest research on *Salmonella* infections, examine innovative detection and prevention strategies, and identify actionable solutions that can enhance public health efforts.

Introduction

On March 20, 2025, the Infectious Disease Alliance (IDA) hosted a webinar titled "*Salmonella Under the Microscope: Tackling Outbreaks and Enhancing Food Safety in Europe*" The event featured leading experts who shared their insights on strategies to control and eliminate the impact of *Salmonella* infections and establish a safer food system in Europe. The webinar aimed to highlight key aspects of Salmonella surveillance and response and food safety policies in Europe.



Objectives of this webinar

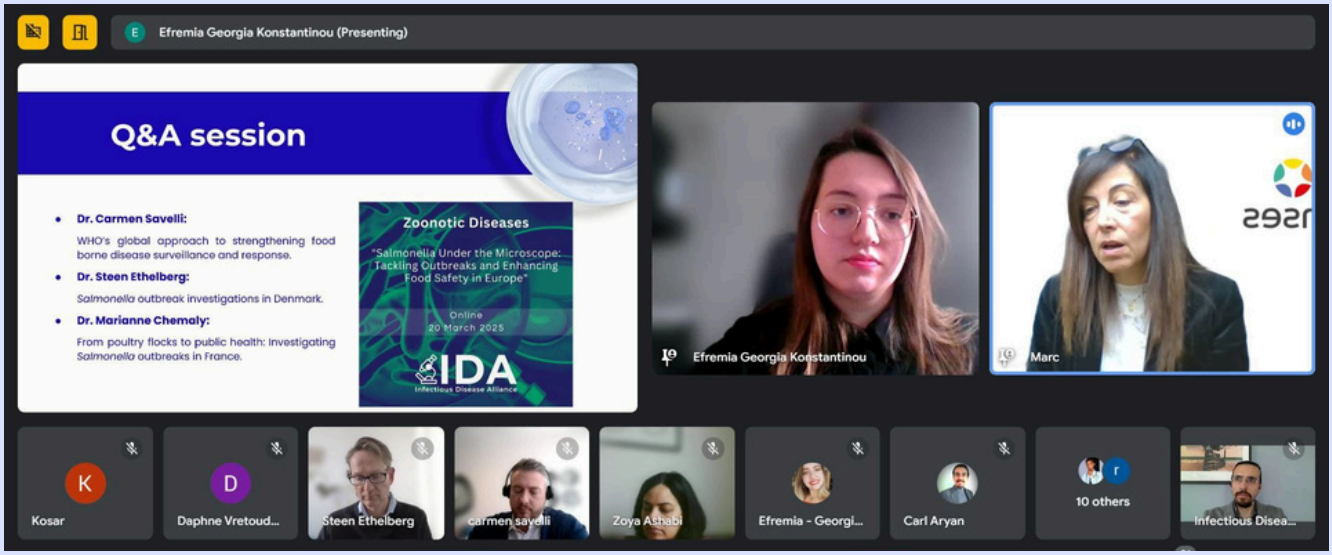
To bring together global health experts, researchers, and policymakers to discuss innovative strategies for the investigation of Salmonella infections and the implementation of food safety policies accross Europe, the webinar aimed to:

- Increase awareness about the role of Salmonella in foodborne illnesses and strategies for outbreak management.
- Promote the collaboration between stakeholders to accelerate progress toward a safe food system in Europe.
- Highlight innovative approaches to food safety through strategic messaging.
- Highlight the national practicies being implemented for Salmonella outbreaks control.

Through expert presentations and an interactive Q&A session, the webinar sought to facilitate knowledge-sharing, promote evidence-based solutions, and encourage actionable commitments to strenghten *Salmonella* infections surveillance and response..

Key speakers & topics

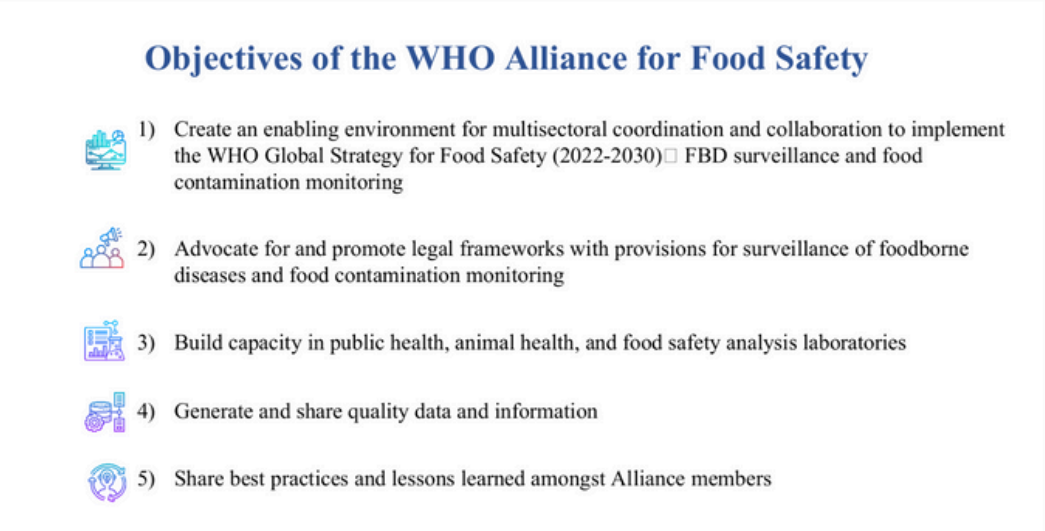
- **Dr. Carmen Savelli:** WHO's global approach to strengthening food borne disease surveillance and response.
- **Dr. Steen Ethelberg:** *Salmonella* outbreak investigations in Denmark.
- **Dr. Marianne Chemaly:** From poultry flocks to public health: Investigating *Salmonella* outbreaks in France.



Summary & key takeaways of the webinar

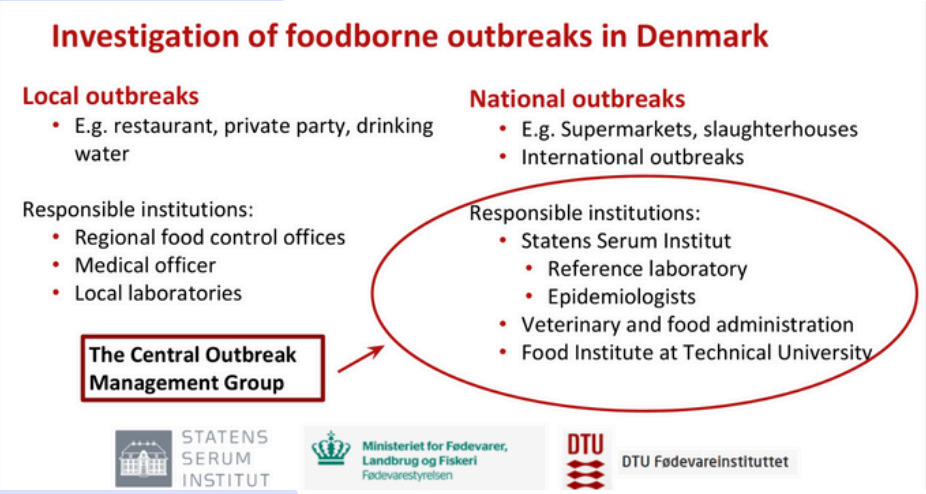
Dr. Carmen Savelli - WHO's global approach to strengthening foodborne disease surveillance and response.

Dr. Carmen Savelli, a Technical Specialist at the Department of Nutrition and Food Safety of WHO, presented the WHO's approach to food-borne disease surveillance. The presentation outlines the World Health Organization's (WHO) strategic approach to enhancing global foodborne disease (FBD) surveillance and response systems. It ties into the WHO Global Strategy for Food Safety 2022-2030, emphasizing the need for safe, nutritious food for all. The presentation highlighted the burden of foodborne diseases globally, affecting nearly 1 in 10 people annually and causing 420,000 deaths.
WHO's strategy focuses on strengthening national food safety systems through multisectoral collaboration, better food monitoring and surveillance, and improved response mechanisms, particularly in managing *Salmonella* outbreaks. The WHO Alliance for Food Safety has been established to implement this strategy and to coordinate international efforts, promote capacity building, and share best practices.
The importance of international cooperation, rapid information sharing, and network collaboration (e.g., INFOSAN, RASFF) is emphasized as critical in a globalized food system where pathogens cross borders easily.



Dr. Steen Ethelberg - *Salmonella* outbreak investigations in Denmark

Dr. Steen Ethelberg, Head of the Section of Food, Waterborne and Zoonotic Infections at SSI, presented on *Salmonella* investigations in Denmark. The presentation detailed how Denmark investigates *Salmonella* outbreaks, emphasizing the importance of outbreak detection, response, and prevention. It covered the collaborative approach between various public health, veterinary, and food authorities and explains Denmark's systematic, data-driven methods, including WGS and consumer purchase data analysis.
The presentation provided a case study of the 2011 *Salmonella* Strathcona outbreak, which was traced back to tomatoes sold by an Italian producer. It demonstrates the challenges in identifying foodborne outbreak sources, even with sophisticated tools, and stresses the need for international cooperation in a globalized food supply chain.

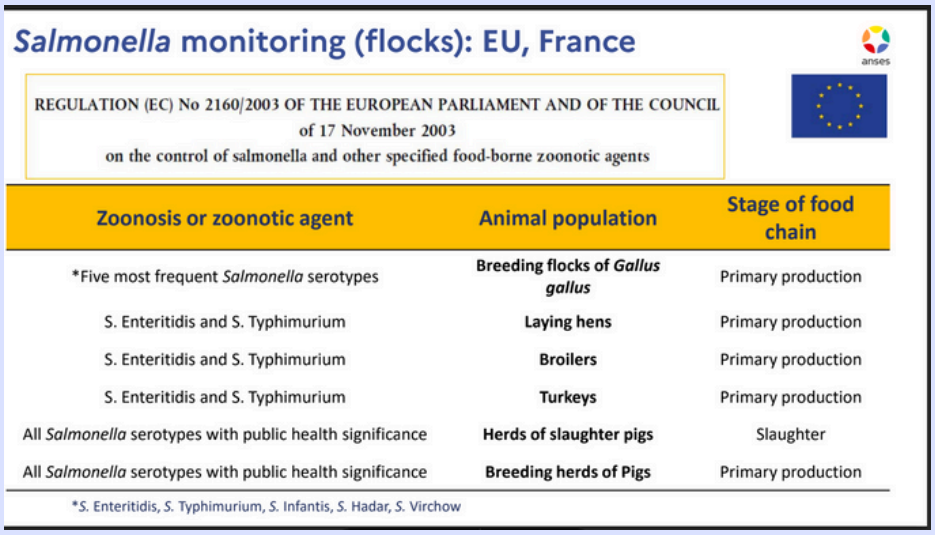


Dr. Marianne Chemaly - From poultry flocks to public health: Investigating *Salmonella* outbreaks in France

Dr. Marianne Cheamaly, Scientific Director for Food Safety at ANSES, presented on *Salmonella* outbreak investigations in France. This presentation highlighted France's approach to *Salmonella* monitoring and outbreak investigation, from farm to fork, within the One Health context. It outlines the roles of European and national bodies, including ANSES, ECDC, EFSA, and DG Santé, in surveillance, risk assessment, and management.

France conducts comprehensive *Salmonella* monitoring in humans, animals (especially poultry), and food products. Despite extensive control measures, *Salmonella* remains a major foodborne pathogen, responsible for a significant percentage of foodborne outbreaks in France.

The presentation featured a case study of a multi-country *Salmonella* Virchow outbreak (2023) linked to contaminated kebab meat from broilers, illustrating the complexity of cross-border outbreaks and the critical role of WGS for precise tracing.



Zoonosis or zoonotic agent	Animal population	Stage of food chain
*Five most frequent *Salmonella* serotypes	**Breeding flocks of *Gallus gallus***	Primary production
S. Enteritidis and S. Typhimurium	**Laying hens**	Primary production
S. Enteritidis and S. Typhimurium	**Broilers**	Primary production
S. Enteritidis and S. Typhimurium	**Turkeys**	Primary production
All *Salmonella* serotypes with public health significance	**Herds of slaughter pigs**	Slaughter
All *Salmonella* serotypes with public health significance	**Breeding herds of Pigs**	Primary production

*S. Enteritidis, S. Typhimurium, S. Infantis, S. Hadar, S. Virchow

Plan for continued engagement

- **Follow-up communication:** Share a post-event package with participants, including the event report, recording, and next steps.
- **Stakeholder network development:** Establish a platform for continued dialogue and collaboration among participants.
- **Periodic webinars and workshops:** Organize follow-up events to monitor progress and explore new innovations in establishing a safer food system in Europe.
- **Annual convening:** Build momentum for an annual event to evaluate progress and share best practices in monitoring *Salmonella* infections.

Call to action

Call to Action against *Salmonella* infections for a safer food system in Europe

Dear Global Health leaders, policymakers, and advocates,

We stand at a critical juncture in the fight against *Salmonella* and foodborne diseases. *Salmonella* remains one of the leading causes of foodborne illnesses in Europe, with outbreaks posing threats to public health and economic stability. In an era of heightened global trade and antibiotic resistance, combating Salmonella demands innovative science and coordinated action. With over 87,000 confirmed *Salmonella* cases annually in Europe, the pathogen continues to challenge food safety frameworks. Factors like globalized supply chains, underregulated poultry industries, and antimicrobial resistance exacerbate its prevalence. Advancements in genomic surveillance, public health campaigns, and policy enforcement provide hope for mitigating its impact.

The Crisis at Hand

Salmonella remains one of the most persistent and dangerous foodborne pathogens in Europe, causing thousands of infections annually. Despite advances in food safety regulations, outbreaks continue to emerge, fueled by globalized food supply chains, antimicrobial resistance, and climate-driven environmental changes. Contaminated poultry, eggs, dairy, and fresh produce pose serious risks to public health, straining healthcare systems and undermining consumer confidence in food safety.

The Consequences of Inaction

Failure to act swiftly and decisively will have severe repercussions:

- More frequent and severe outbreaks, leading to hospitalizations and fatalities.
- Increased antimicrobial resistance (AMR), making infections harder to treat.
- Economic losses in the food industry due to recalls, trade restrictions, and loss of consumer trust.
- Weakened public confidence in food safety standards and regulatory bodies.
- Greater burden on healthcare systems, diverting resources from other critical public health challenges.

Why this matters for Global Health security

Salmonella outbreaks are not isolated incidents—they are part of a larger global challenge that threatens food security, economic stability, and public health. Tackling *Salmonella* requires a coordinated One Health approach that considers human, animal, and environmental health. If left unaddressed:

- Trade disruptions will escalate, as affected countries impose import bans and restrictions.
- The risk of antibiotic-resistant strains spreading across borders will grow, making infections harder and more expensive to treat.
- The European food sector could face severe economic downturns, impacting livelihoods across the supply chain.

By strengthening surveillance, enforcing stricter food safety measures, and investing in scientific innovation, we can mitigate these risks and create a safer, more resilient food system.

IDA's Call to Action

We urge governments, food industry leaders, scientists, public health professionals, and consumers to take immediate action:

- Governments & Policymakers:
  - Strengthen *Salmonella* monitoring programs and enhance early warning systems.
  - Enforce stricter hygiene regulations in food production, processing, and distribution.
  - Increase funding for One Health research and outbreak response initiatives.

- Food Industry & Agricultural Sector:
  - Improve biosecurity measures on farms to prevent contamination at the source.
  - Reduce reliance on antibiotics in livestock to combat antimicrobial resistance.
  - Invest in new food safety technologies, including rapid pathogen detection methods.

- Public Health & Healthcare Professionals:
  - Enhance disease surveillance and outbreak investigation capabilities.
  - Promote public awareness campaigns on food handling and hygiene best practices.
  - Strengthen cross-border collaboration for outbreak response and information sharing.

- Researchers & Scientists:
  - Develop new diagnostic tools for early and accurate detection of *Salmonella*.
  - Investigate the role of climate change in pathogen transmission and develop mitigation strategies.
  - Innovate safer food processing and storage solutions to reduce contamination risks.

- Consumers & Civil Society:
  - Demand greater transparency and accountability from food producers and policymakers.
  - Adopt safe food handling practices to minimize personal and household risk.
  - Support initiatives advocating for safer, more sustainable food systems.

Time is Running Out. Act Now!

We stand at a critical juncture in the fight against *Salmonella* and foodborne diseases in Europe. Every delay in strengthening food safety measures puts lives at risk and threatens economic stability. Urgent action is needed to enhance outbreak response, improve food production standards, and safeguard public health.

Click here to sign the Call to Action on *Salmonella* infections

The IDA thanks all speakers, participants, and partners for their contributions to this insightful discussion. By working together, we can drive meaningful change in global health and contribute to a safe food system in Europe.

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