



An integrated approach to food safety and zoonoses

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Building capacity to detect, control and prevent foodborne infections

• Need for surveillance and control

Food and food products contaminated with foodborne pathogens often look and smell the same as safe food. Therefore, visual inspection is not enough to ensure safe food and ingredients.

Laboratory-based surveillance of animals, food and humans is important, both to detect and prevent foodborne pathogens from entering or spreading through the food chain, as well as to identify foodborne disease outbreaks so that appropriate control measures can be taken.

Many countries still lack the necessary surveillance capacity for outbreak detection and response. In addition, foodborne disease outbreaks go undetected, in part due to lack of communication between the human, veterinary, and food sectors.

Due to the globalization of animal and food trade, national food safety issues can have global implications. It is, therefore, imperative that countries are able to detect and deal with clusters of foodborne pathogens and disease.

• What is WHO doing?

In 2000, WHO initiated *WHO Global Salm-Surv (GSS)*, now called **Global Foodborne Infections Network (GFN)**, to enhance Member State capacity to conduct integrated surveillance for foodborne and other enteric infections from the farm to the table.

The network promotes integrated, laboratory-based surveillance, and fosters intersectoral collaboration and communication among microbiologists and epidemiologists in human health,

veterinary, and food-related disciplines.

• Activities

The work of GFN encompasses a number of key activities:

- **International training courses:** to build technical capacity and foster inter-sectoral and multi-disciplinary collaboration and communication.
- **External Quality Assurance System:** to assess the quality of serotyping and antimicrobial susceptibility testing of foodborne pathogens in laboratories worldwide.
- **GFN Country Databank:** a global passive surveillance system that collects annual *Salmonella* summary data from national reference laboratories.
- **Reference testing:** to provide technical advice and free of charge reference testing of *Salmonella* and other enteric pathogens by GFN Steering Committee partners and Regional Centres of Excellence.
- **Focused regional and national projects:** to promote continued development and application of techniques learned at GFN international training courses.



The mission of the WHO Department of Food Safety and Zoonoses is to lower the burden of disease from food and animals, focusing on industrialized and traditional production systems, and integrating prevention from farm to table. This work includes the provision of scientific advice, efficient standard setting, and clear communication in support of foodborne and zoonotic disease prevention and international efforts to food-related outbreak detection and response.

● Achievements to date

- 10 internationally renowned institutes and surveillance networks that provide guidance and training capacity to Member States;
- an individual membership of more than 1650 colleagues from over 700 National Reference Laboratories and other national and regional institutes in 181 countries and territories;
- 20 training sites around the world, seven of which have been designated GFN Regional Centres of Excellence;
- over 75 international training courses in Chinese, English, French, Portuguese, Spanish and Russian for microbiologists and epidemiologists from over 130 countries;
- contributions from more than 80 countries have provided data to the GFN Country Databank on in excess of 1.5 million human isolates and close to 400 000 isolates from non-human sources, to help provide a global overview of the epidemiology of *Salmonella*;
- the External Quality Assurance System, one of the world's largest proficiency tests, with more than 180 laboratories from 90 countries participating annually.
- GFN has developed and made available laboratory protocols for pathogens such as *Salmonella*, *Campylobacter*, *Shigella*, *E. coli*, *Clostridium botulinum* and *Vibrio cholerae*.



● Planned activities

- Conduct courses to augment and strengthen laboratory-based surveillance and outbreak detection and response skills in microbiology and epidemiology, including through train-the-trainer and e-Learning.
- Assist the International Health Regulations (2005) by building core capacities for surveillance and response in countries.
- Enable countries' full participation in response to international food safety and zoonotic emergencies through the International Food Safety Authorities Network (INFOSAN) and the Global Early Warning System for Major Animal Diseases, including Zoonoses (GLEWS).
- Foster partnerships with International Organizations, Networks, Academia, Foundations and other Public and Private stakeholders relevant to regional and country goals.
- Facilitate the collection of national, regional and global data through an expansion of the existing Country Databank for other pathogens, and develop a user-friendly interface for end-users of these data.

WHO contacts

Dr Maged Younes
 Director
 Department of Food Safety and Zoonoses
 World Health Organization
 20, avenue Appia, CH-1211 Geneva 27
 Switzerland
 Tel. +41 22 791 2773
 Fax: +41 22 791 48 07
 E-mail: younesm@who.int

Dr Bernadette Abela-Ridder
 Scientist
 Department of Food Safety and Zoonoses
 World Health Organization
 20, avenue Appia
 CH-1211 Geneva 27
 Switzerland
 Tel. +41 22 791 2072
 Fax: +41 22 791 48 07
 E-mail: abelab@who.int