



World Health
Organization



Strengthening Foodborne Disease Surveillance Through Training: The Global Foodborne Infections Network (WHO-GFN – formerly WHO Global Salm-Surv)

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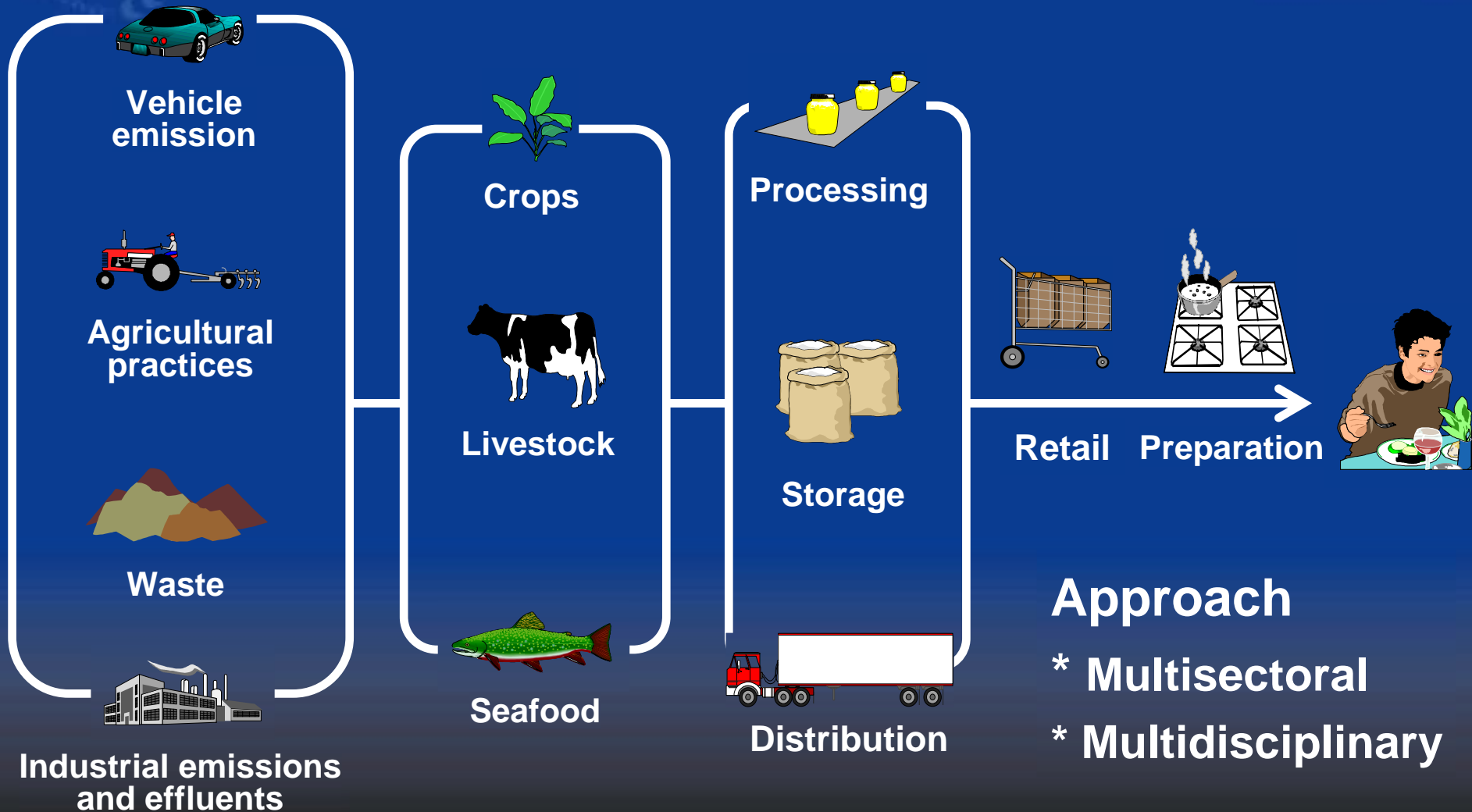
Introduction to a global issue



Many Food Safety Issues



Where Hazards Arise in the Food Supply



International foodborne disease outbreaks: Rapid spread worldwide by movement of food



SARS OUTBREAK, 2003: Rapid spread worldwide by movement of people

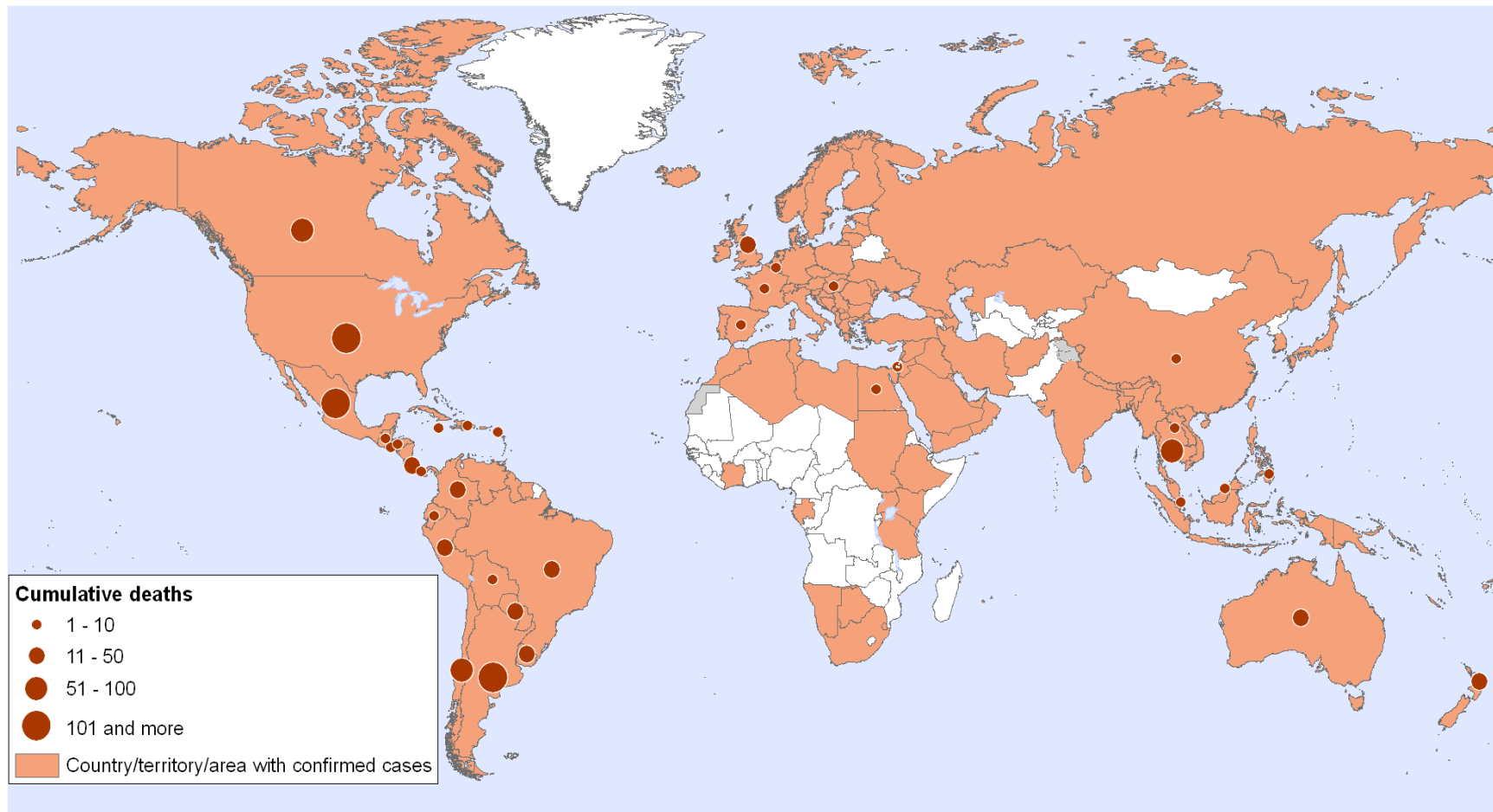


New Influenza A (H1N1), 2009: Rapid spread worldwide by movement of people

Pandemic (H1N1) 2009

Status as of 31 July 2009

Countries, territories and areas with lab confirmed cases and number of deaths as reported to WHO





Cycle of Surveillance & Public Health Protection





Surveillance

Systematic ongoing collection, collation, analysis, interpretation and dissemination of data for public health action



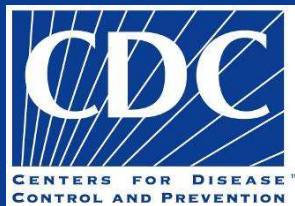
Global issues require Global solutions

What is GFN?

A network of institutions and individuals working in veterinary, food and public health disciplines committed to enhancing capacity of countries to detect, respond and prevent foodborne and other enteric infections



GFN: Steering Committee





GFN: Network Vision



Foodborne and other enteric infectious diseases are a common cause of illness, disability, and death worldwide

We believe they are preventable, and therefore, place an unnecessary burden on society

Our vision is that all countries will prevent and control these diseases



GFN: Mission

- To promote integrated, laboratory-based surveillance
- Foster inter-sectoral collaboration among human health, veterinary, and food-related disciplines
- Enhance the capacity of countries to detect, respond, and prevent foodborne and other enteric infections.



Currently: ~ 1200 members from 158 countries

3. Russia-St. Petersburg-Level II-June 2005



GFN: 2000 – 2009 International Training Courses



- 55. Brazil-Level III-Sept 2008
- 56. China-Adv Wksp IV-Oct 2008
- 57. Kenya-Level II-Jan 2009
- 58. Guam-Level I-Feb 2009
- 59. Thailand-Adv Wksp III-March 2009
- 60. Costa Rica-Adv Wksp I-April 2009
- 61. Madagascar-Level II-April 2009
- 62. China-Focussed Wksp-May 2009
- 63. Poland – Adv Wksp-May 2009
- 64. Thailand - nat. course-July 2009
- 65. China-Adv Wksp IV-Sep 2009

4. Russia-St. Petersburg-Level III-May 2006

5. Russia-St. Petersburg-Adv Wksp I-Sept 2007



GFN: Goals

- To **strengthen capacities** of national public health institutions
- To **establish regional centres** for specialized training and expand to new areas of need
- To **foster collaboration** among microbiologists and epidemiologists in national institutions working with foodborne disease and pathogens



GFN: Goals

- To **advocate for political support** for foodborne disease surveillance
- To **foster global communication** about foodborne disease and pathogen surveillance
- To **improve quality and reporting** of national data



GFN: Major Activities

- International Training Courses
- Regional Center Development
- External Quality Assurance System (EQAS)
- Electronic Discussion Group (EDG)
- Country Databank
- Focused Regional and National Projects
- Reference Testing



GFN: International Training Courses



- **Generally 10 (6-17) countries attend**
- **One course every 12-18 months**
- **Courses run 5-6 days**
- **Microbiologists (Human, Veterinary, and Food Disciplines) and Epidemiologists**
- **Courses develop practical skills, importance of interaction between disciplines, platform for communication, and future plans of action for each country**

Location of GFN Training Sites

65 international training activities for > 120 countries



Location of 2009 GFN Centers of Excellence





Basic Microbiology Training Course

- Microbiologists (Human, Vet, and Food)
- Hands on teaching, lectures, and exercises
- Focus on one pathogen: isolation, identification, and serotyping of *Salmonella*
- Antimicrobial susceptibility testing
- Lectures and exercises on surveillance



Advanced Microbiology Training Course



- Same microbiologists (Human, Vet, and Food)
- Hands on teaching, lectures, and exercises
- Review Basic Microbiology Course laboratory methods
- Focus on second pathogen (*Campylobacter*): isolation, identification, and antimicrobial susceptibility testing
- Lectures and exercises on surveillance and selected topics



ADVANCED MICROBIOLOGY TRAINING COURSE IN BANGKOK, THAILAND

12th SAC Seminar: Combating Global Infections | 21-24 September 2009, Irkutsk, Russian Federation



Integrated Microbiology-Epidemiology Training Course



- Microbiologists and epidemiologists
- Joint, small group (country), and separate lectures and exercises
- Laboratory: review of Basic and Advanced Microbiology Course, introduce advanced techniques (PCR), or other pathogens (*E.coli* O157)
- Epidemiology: spectrum of surveillance, outbreak detection and response, small group exercises, computer lab
- Creation of Joint Country Plan of Action by microbiologists and epidemiologists



INTEGRATED MICROBIOLOGY-EPIDEMIOLOGY TRAINING IN BUENOS AIRES, ARGENTINA

12th SAC Seminar: Combating Global Infections | 21-24 September 2009, Irkutsk, Russian Federation



Future Levels of Training

- **Advanced Training Workshop possibilities**
 - ◆ **Conference-based**
 - ◆ **Sub-regional training**
 - ◆ **Special Projects (partnering with other networks, eg. PulseNet)**
- **Managers**
 - ◆ **Involvement of decision-makers in training for better implementation**



Measuring Impact of Training

- **Training course evaluations**
 - ◆ Being developed in partnership with the Division of International Health, CDC
 - ◆ Introduced last year in Integrated Courses

- **Program Evaluation**
 - ◆ Being developed by the GFN Evaluation Subcommittee



Opportunities to Apply Skills from Training

■ EQAS

- ◆ External Quality Assurance System-unidentified *Salmonella* strains sent to all participating labs for serotyping and antimicrobial susceptibility testing
 - Central Research Institute of Epidemiology (Moscow)
 - Institute Pasteur (St. Petersburg)
- ◆ Results assessed by GFN

■ Focused Regional /National Projects

- Pathogen-specific Projects
- Burden of Illness Studies
- Enhanced Surveillance Studies



Fostering Communication

- **Membership: general, institutional**
 - ◆ Over 862 members worldwide (as of April 2005)
- **Electronic Discussion Group:**
 - ◆ Moderated discussion via email in English, Spanish, French, Arabic and Russian
- **Country Databank**
 - ◆ Web-based databank where countries enter top 15 *Salmonella* serotypes
- **Regional Centers**
 - ◆ Coordinate training and provide regional support
- **International Meetings**
 - ◆ Presentations to member countries and organizations
- **Web sites:** www.who.int/salmsurv/en/



Thank you for your attention

The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention

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