International WGS Policy Updates

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Outline

• Food Safety Resolution (WHA 73.5)

• CCFH Draft Guidance Foodborne Outbreaks

• Development of a Pandemic Instrument

• FAO work on water and food safety

• WHO work on WGS guidance for FBD outbreaks
WHA 73.5: Food Safety Resolution

- Adopted during WHA in 2020 (previous resolutions were in 2010 and 2000)

- Built off:
  - 2019 international food safety meetings
  - 2019-2023 WHO 13th General program of work
  - 2015 estimates of FBD
  - 2019 World Bank study
  - Work in Codex
  - INFOSAN
  - etc
WHA 73.5: Food Safety Resolution

- Requests Member States to use INFOSAN

- Requests the Director General:
  - to update... the WHO global strategy for food safety in order to address current and emerging challenges, incorporating new technologies ..., and to submit a report for consideration by the Seventy-fifth World Health Assembly in 2022;
  - to facilitate understanding by Member States of developments in epidemiological and laboratory sciences and technologies in food and agriculture that provide new tools for risk assessment and management of food safety systems, and surveillance and outbreak response in respect of foodborne illness, and to support Member States’ ability to assess the challenges and opportunities linked to the use of new and appropriate technologies in food safety, including the importance of fully realizing the benefits of such technologies by sharing the data generated;
GUIDELINES ON THE MANAGEMENT OF BIOLOGICAL FOODBORNE OUTBREAKS

• From Codex Committee on Food Hygiene

• Advanced for adoption at Step 8 (March 2022)

• Waiting for CAC in November 2022 for final approval
GUIDELINES ON THE MANAGEMENT OF BIOLOGICAL FOODBORNE OUTBREAKS

• SCOPE

• These guidelines provide guidance to competent authorities on the preparedness for and management of foodborne outbreaks

• The guidance addresses preparedness, detection and response with the intent of limiting the extent of such outbreaks.

• They include recommendations on the appropriate use of new analytical technologies, for example, genetic typing methods in outbreak investigation. The scope is limited to biological hazards
• When WGS is used, consideration should be given to:
  • Laboratory capability, specific equipment ... and personnel trained in
    implementation of WGS, analysis and interpretation of WGS results. Having
    access to personnel with expertise in bioinformatics is critical for analysis of
    sequence data.
  • Sharing of WGS sequences in a form that is useful for comparison between the
    human health authorities and the food and veterinary authorities.
  • Legal requirements for sharing of data. If data are shared in open databases there
    may be a need for anonymizing the samples to ensure confidentiality of personal
    or business information, thus only allowing limited metadata to identify the
    sequences.
  • Use of existing genomic sequence data hubs containing data on foodborne
    pathogens and associated tools for analysis.
Development of a Pandemic Instrument

- In November 2021, in a Special Session of the World Health Assembly agreed to:
  - Beginning the global process of drafting and negotiating a convention, agreement, or other international instrument under the Constitution of the World Health Organization to strengthen pandemic prevention, preparedness, and response
  - with a view to adoption under Article 19 of the WHO Constitution, or other provisions of the Constitution as may be deemed appropriate by the INB
  - In direct response to the Covid-19 pandemic
  - Will take several years to develop and sharing of sequence data will likely be specifically mentioned
Research at the intersection of water and food safety
GenomeTrakr/NCBI Global Distributions of Several Foodborne Enterics Isolated from Water Sources
Genomics-Based Water Surveillance

Collaborations on Agricultural Water

Agriculture community

Academic organizations

Government
Work with FAO

- FDA has a 5 year (currently in year 3) Cooperative Agreement with FAO’s Land and Water Unit
  - Exploration of scientific methods related to understanding the geospatial link between foodborne pathogens in environmental water sources and to food safety.
  - Consultations with key stakeholder groups – scientific community/experts and farmer community/extensionists/private sector
  - Hosting global scientific meetings
  - Developing policy/awareness briefs
  - Working with pilot countries
Work with WHO

• describe to public health impact of WGS as a tool for strengthening integrated surveillance along the food chain, with a specific focus on its application to foodborne disease surveillance
• identify the barriers to implementation in low- and middle-income countries
• summarize the current state of WGS technology
• describe how different people working in public health use information from WGS

https://www.who.int/publications/i/item/789241513869