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Introduction

The integration of food data from research, microbiological monitoring, epidemiological investigation and disease surveillance is crucial to manage foodborne risk. Consequently, INSA launched the Portuguese Food Information Resource Programme (PortFIR) in partnership with GS1 Portugal to create national food chain expert networks and sustainable databases on food composition, consumption and chemical and microbiological contamination. The Portuguese Food Composition Network (RPCA) started its activity on January 2010. Presently, the Food Microbiological Information Network (RPIMA) is being built.

INSA is responsible for the scientific networks coordination and for the validation of databases content. GS1 coordinates the activities of information organization and transfer in order to facilitate the information flow.

Purpose

The purpose is to build the Portuguese Food Microbiological Information Network (RPIMA) including users and stakeholders, food microbiological data producers and regional authorities on agriculture and health (Figure 1) to maximize the usage of resources (data, knowledge, financial, human, equipment...), spread knowledge and amplify the national capability. This activity will allow to generate and disseminate information about frequency, distribution and level of pathogens occurrence in food and will support the identification and monitoring of potential vehicles of human infections in food chain.

The global objectives of RPIMA are to identify hazards, assess their risk and generate scientific evidence for risk reduction contributing to protect public health.

Methods

Potential users, stakeholders and data producers were identified and invited to participate in RPIMA through an e-mail questionnaire. A network meeting was organized to present, discuss and approve RPIMA's goals. A structured brainstorming with experts of each food chain step was used to define primary thematic working groups. PortFIR Reference Terms for transversal working groups (WGs), already functioning for RPCA, "Users" (GTU), "Organization and Transfer of Information" (GTOTI) and "Normalization Support" (GATAN), were adapted to microbiology specificities through consensus within the WGs.

Significance

The results obtained so far regarding involvement and willingness to share data and knowledge indicate that RPIMA will allow to 1) monitor food microbiological occurrence, 2) biotrace foodborne outbreaks, 3) detect antibiotic resistance emergence, 4) provide scientific evidence for risk management, good hygiene practices and optimization of HACCP systems 5) quantify the impact of risk management decisions, 6) trace climate change impact and 7) identify information gaps to be fulfilled through new research.

Results/Activities

Currently the network has 82 members covering activity areas like food production and trade, risk assessment, research and education (Figure 2). RPIMA's specific goals approved at its 1st annual meeting in October 2010 are a) to collect food microbiological data produced in different contexts, b) to collate and standardize the collected data c) to analyse it, and d) to generate new information and make it available to national and international users and stakeholders namely risk assessors and risk managers according to defined access levels. The brainstorming meeting took place on January 2011 and led to the creation of 2 WGs: "Food Chain Microbiological Occurrence" and "Foodborne Outbreaks" for which reference terms are being defined. Presently, the Terms of Reference of the transversal WGs (GTU, GTOTI and GATAN) adapted to include microbial specifications are under discussion.

RPIMA's near future activities are the identification of users needs and the development of: a) methodologies for data collection and collation, b) database model, c) database quality management system, d) technical specifications for the database and data transfer to other national and international databases.

Figure 1. Portuguese Food Microbiological Information Network (RPIMA)

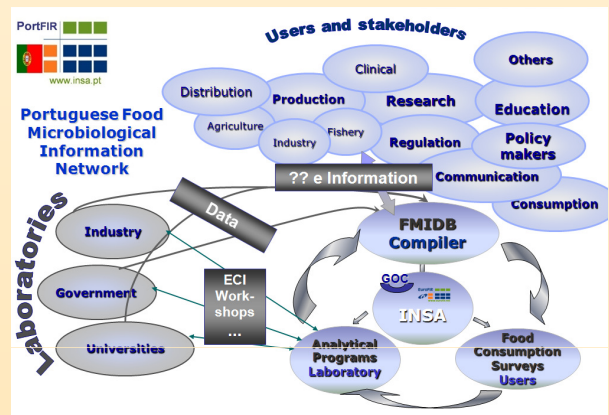


Figure 2. Distribution of RPIMA's participants activity

