

Newsletter

VOL. 2

January 2019

Foreword

CHIFSS is a tripartite partnership between FSSAI, CII and HUL launched in 2016 with the purpose to strengthen protection of consumers and a healthy growth of food sector. It embodies the principles of food safety sciences and is positioned on risk based food safety approaches.

FSSAI is also exploring a risk based framework to improve food safety and addressing the burden of food borne illnesses. In this journey, CHIFSS in partnership with FSSAI has made an extensive effort by building awareness and capacity through public lectures and technical workshops, developing FSMS Guidance Documents and Training Packages and bringing in best practices on Microbiological Food Safety by bringing in domain experts of global repute.

This Newsletter captures the key features/activities that will help different stakeholders to engage and enable them to take part in this initiative effectively.

Shri Pawan Agarwal
CEO, FSSAI

Inside

Microbiological Risk Assessment and Risk Management.	01
FSSAI -ICMSF - CHIFSS Meetings	01
CHIFSS initiative to address food borne illness	03
Risk Assessment and Risk Management for Novel Ingredients and Additives	04
Public Lecture	04
Technical Workshop	04
Publications	04
Update on Food Safety Management System (FSMS) Guidance Document	04
Update on Training Packages	04
Networking and Collaborations	05
Contribution to Schedule 4	05
Rounding off 2018	05
Article - Addressing AMR for Food Safety - Status in India	06
Next Steps	07

Microbiological Risk Assessment and Risk Management

APPLICATION OF MODELLING, SENSORS, AND DATA IN FOOD SAFETY DECISION MAKING FOR ENHANCED RISK ASSESSMENT

FACILITATING MICROBIOLOGICAL RISK MANAGEMENT FOR FOOD BORNE DISEASE SURVEILLANCE IN THE COUNTRY

FSSAI- ICMSF- CHIFSS join hands to facilitate Microbiological Food Safety for Public Health Protection and Safe Food Production

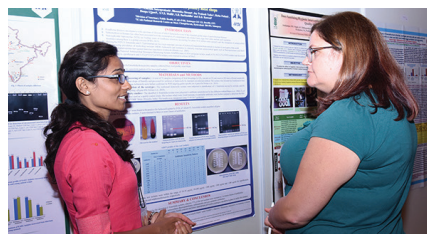
Food borne illness continue to remain one of the biggest public health challenges for the country. The population density, evolving lifestyles, lack of scientific and technical capabilities, are among several other factors that contribute to the rising disease burden. Hence, it is important that all stakeholders in the food sector adopt best practices to reduce food borne illness in the country. With this aim to bring in global best practices in microbiological food safety, FSSAI and CHIFSS partnered with ICMSF (International Commission on Microbiological Specifications for Foods) to promote the latest approaches in microbiological sampling, testing and statistical interpretation and jointly organized a Technical Workshop and an International Symposium:

Hands on Training on “Microbiological Food Safety: Sampling and Testing in Food Safety Management” using application of modelling, sensors and data for decision making in food safety at FSSAI on 8th October’2018.



International Symposium on “Microbiological Food Safety: Sampling and Testing in Food Safety Management” at Hotel Radisson, Mahipalpur on 9th-10th Oct’2018.

The Symposium was attended by over 11 international experts from ICMSF and approximately 300 stakeholders including eminent scientist, government officials, academia, industry, invitees and students from related fields.



Science Based Activity Framework for ensuring microbiological quality should lead into Surveillance Based Activity Framework for ensuring Microbiological Safety.

Dr N Bhaskar, Advisor QA, FSSAI



ICMSF’s commitment to a continued collaboration with CHIFSS in the area of microbiological safety of food in India. ‘We certainly experienced our recent events as an enormously valuable step towards that’.

Dr Martin Cole, Chairman, ICMSF



There is a need to develop a Food Safety Ecosystem by bringing together all stakeholders and make sure that all functions that need to work together must work together. And such forums provide a good opportunity to discuss on food safety challenges.

Dr Leon Gorris, Secretary, ICMSF

Addressing Food Borne Illnesses:

Follow up actions on FSSAI-CHIFSS Roundtable on “Reducing Food Borne Illness: Strengthening Surveillance Capabilities and Epidemiological Investigations” Supported by American Society of Microbiology held on 27th April’2018.

Enhanced utilization of IHIP, an electronic platform developed by MOH&FW in collaboration with WHO for sharing the data for surveillance and response to food borne outbreaks with other key stakeholders to facilitate Food Borne Disease Surveillance in the country

In an attempt to address the massive burden of food borne illnesses, CHIFSS has expanded the network and successfully enabled regulators and experts towards prioritized key actions.

Prioritized key actions identified during the roundtable are highlighted below:



Pathogens and foods with high disease burden

Pathogens

Desk research and collation of medical data from health organizations for pathogens

Food sectors/ consumption scenarios

Collation of data from sectoral experts and through food safety service providers (e.g. auditors)



Analysis and Testing

- Clinical Sample Analysis: Preparation of a Guidance Document
- Food Sample Analysis - Regulatory body and Laboratory to prepare a guidance document
- Collaboration of Indian Association of Medical Microbiologists (IAMM) and The Centers for Disease Control and Prevention (CDC) with FSSAI
- New Modern Food Testing lab with Advanced Microbiology facilities being set up by FSSAI



Networking and Collaboration

- Tools and data/ knowledge platforms for monitoring and management of foodborne illness
- FSSAI and World Health Organization (WHO) to partner sharing / exploring synergies across INFOLNET & IHIP platforms
- Development of training module for regulatory staff (by experts from FSSAI, WHO, CDC, National Centre for Disease Control (NCDC) and further facilitation of training of food safety officers



Small FBO and Public engagement and action: Food Hygiene

- Refresh and scale-up Clean street food campaign across top 10 high population cities
- Mass scale food safety and hygiene @home campaign
- Consumer and physician level access to report foodborne illness (e.g. Through app/ website)

RECOMMENDATIONS & ACTION TAKEN ON THE PROPOSED PRIORITY ACTIONS (Till Date)

1. Enhanced utilization of Integrated Health Information Platform (IHIP), an electronic platform developed by MOH&FW in Collaboration with WHO.
2. Follow up Meeting between relevant stakeholders was conducted on 3rd Dec’18 to discuss on the action taken till date and building of future action plan.

Risk Assessment and Risk Management for Novel Ingredients and Additives

NEED FOR SPECIFIC FOOD SAFETY ASSESSMENT FOR NOVEL INGREDIENTS AND ADDITIVES

With the advent of global food supply chains, there is growing list of novel ingredients and food additives which need safety assessment. To address this, CHIFSS had undertaken following activities

Public Lecture: Food Safety Assessment- Novel Ingredients and Additives

Dr Paul Hepburn

Programme Director Food and Refreshment, Safety & Environmental Assurance Centre (SEAC), Unilever, UK; dated 22nd June,2018



FSSAI-IITR-CHIFSS Technical Workshop on Food Safety Assessment – Novel Ingredients and Additives

To enhance the capability build on food safety assessments (exposure and risk assessment focus) of Novel Ingredients and Additives, with focus on the scientific principles that can help appreciate the regulatory context as well as Scientific Capability Development, a technical workshop was delivered by Dr Paul Hepburn, Unilever, UK and technical resource of FSSAI and IITR on 22nd June'2018.



Innovations in the food industry and increasing consumer interest in food safety, and the introduction of novel foods that are added to human foods, makes it imperative for the authority to have the safety evaluation of all the new ingredients through a rigorous scientific and risk assessment-based framework.

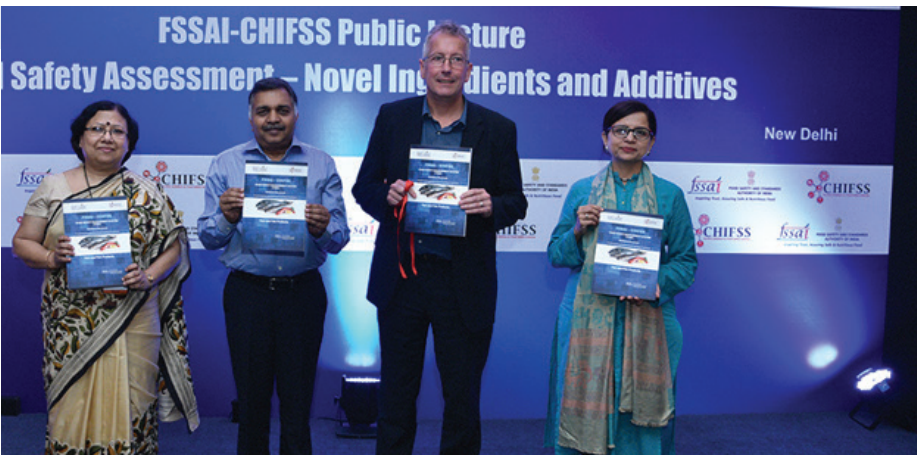
Mr. Pawan Agarwal, CEO, FSSAI

Food Safety Management System

PUBLICATIONS

FSMS Guidance Document

Release of FSMS- Fish and Fish products by Shri Pawan Agarwal, CEO, FSSAI on 22nd June'2018



Training Packages

Following Training Packages were developed and submitted to FSSAI:

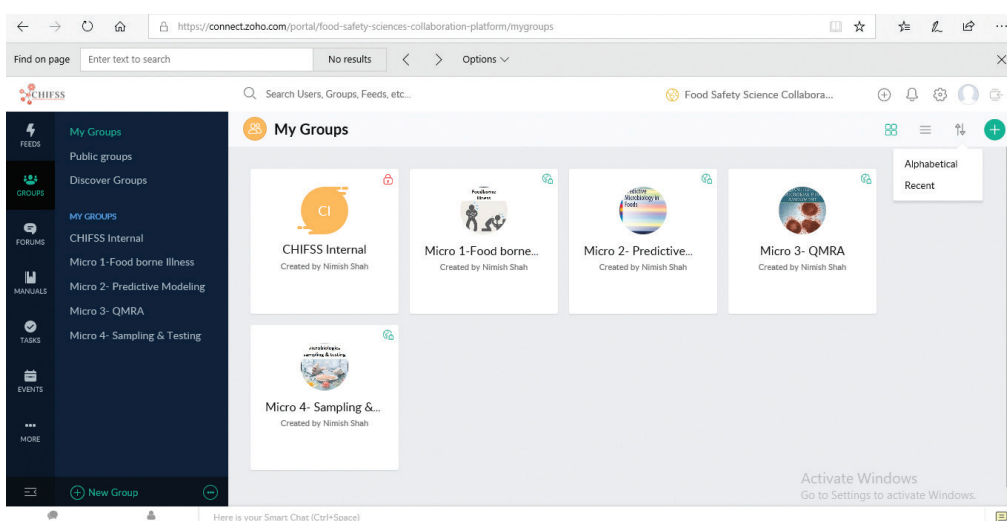
1. Poultry Meat and Poultry Meat Products Including Eggs : First NLRP workshop done on 13th Sep'2018 under FoSTAC using this training material.
2. Meat and Meat Products (Animals)



Networking and Collaborations

- Established partnership with international experts interested in capability building in India:
 - Mark Tamplin – UTAS
 - Leon Gorris, Paul Hepburn & Judith Fernandez-Piquer
 - ICMSF members

- Food Safety Science Collaboration Platforms (Pilot Project):** This digital collaboration platform built for members interested in food safety. It will help in understanding Predictive Microbiology, QMRA, Sampling and Testing concepts and applying the same for addressing food safety and food quality challenges.



Contribution to Schedule 4

Contribution to Sector Specific Food Safety and Standards Regulations: Schedule 4 Updation through Technical panels:

- Meat and Meat Products (Part 4 revision)
- Fish and Fish Products

Rounding Up 2018

01 Technical Workshops/ Roundtable: Total 4

- Development and Implementation of Food Safety Management System
- A roundtable to address the food borne illness burden in India
- Food Safety Assessment – Novel ingredient and Additives
- FSSAI-ICMSF- CHIFSS- Hands on Training on Microbiological Food Safety- Sampling and Testing in Food Safety Management

02 Public Lecture/ International Symposium: Total 2

- Public Lecture - Food Safety Assessment – Novel ingredient and Additives
- FSSAI-ICMSF-CHIFSS Symposium - Microbiological Food Safety- Sampling and Testing in Food Safety Management

03 Publications: Total 5

- FSMS Guidance Documents**
 - Poultry Meat and Poultry Meat Products
 - Fish and Fish Products
 - Meat and Meat Products (Animals)
- Training Packages**
 - Poultry Meat and Meat Products
 - Meat and Meat Products (Animals)

Article

ADDRESSING AMR FOR FOOD SAFETY PERSPECTIVE - STATUS IN INDIA

Anti-Microbial Resistance (AMR) is emerging as a major global public health concern and an important food safety issue. It is only recently that the implications of AMR have been widely discussed nationally and internationally, and the regulatory agencies are trying to deal with the issue holistically.

The use of antibiotics in human medicine started in the 1940s and led to a revolution in the treatment of infectious diseases, and first difficulties to treat infections due to resistance appear in the late 1950s when these drugs were introduced in veterinary medicines. After being introduced in veterinary medicines, it was not only used to treat infections in animals but also used to increase productivity in the meat industry as AGPs (Antibiotic Growth Promoters).

ANTIMICROBIAL RESISTANCE (AMR) AND FOOD SAFETY

An important segment of our food is of animal origin, both terrestrial and aquatic and the use of antibiotics in food animals plays a major role in human health, as antibiotic-resistant bacteria can be transmitted between humans and animals through contact, in food products, and from the environment. It can pose a greater human health consequence by increasing the frequency of infection and treatment failure. Antibiotics are not only used for treatment but also used as growth promoters in poultry industry as a feed component to fatten and increase meat yield. Therefore, it is important to regulate use of antibiotics in animals as well as in humans to curb the menace of AMR. It is also important to monitor the presence of antibiotic residues in animal food products as their presence can give chance to microorganisms to acquire resistance.

STRATEGIES TO TACKLE AMR IN RELATION TO FOOD SAFETY:

To tackle the problem of AMR, a holistic and multi sectoral approach has to be followed, there is a requirement for an action plan and intersectoral strategy on AMR to promote the prudent use of antibiotics in all sectors. An effective coordination and action is needed from all stakeholders particularly the Agriculture, Animal Husbandry, Veterinary, Food Safety and Health.

International Organizations like WHO, FAO and OIE have already recognized the importance of antibiotic resistance including in relation to food safety. In World Health Assembly resolution WHA51.17 WHO urged the member states to encourage the reduced and rational use of antibiotics in food animals. WHO has recommended that the use of antimicrobial as growth promoters that belong to classes of antimicrobial agents used in humans should be terminated or rapidly phased out in the absence of risk-based evaluation.

Codex Alimentarius Commission has also developed a collection of food standards, guidelines and code of practices to minimize and contain anti-microbial resistance. It also stresses on the importance of providing for safe and effective use of antibiotics in veterinary medicine.

REGULATORY STATUS IN INDIA

In India the issue of AMR came into attention of the policy makers in 2010, with the discovery of New Delhi metallo- beta lactamase 1 (NDM-1) a superbug named after New Delhi where it was isolated from a Swedish patient in 2009. Subsequently the AMR related policies were initiated.

The National Policy for Containment of Antimicrobial Resistance in India 2011, plans to develop national level data on AMR in humans.

The non-governmental initiative in 2012 came as Chennai Declaration, which formulated a road map to tackle the problem of AMR in India with a five-year plan to be implemented in hospitals in all developing countries, including India. Over last seven years several policies were enacted and in April 2017, a comprehensive National Action Plan for containment of AMR, that aligned with GAP (Global Action Plan) was launched in April 2017, with the signing of Delhi declaration, which pledges to adopt a holistic and collaborative approach towards prevention and containment of antimicrobial resistance (AMR) in India.

ROLE OF FOOD SAFETY & STANDARDS AUTHORITY OF INDIA (FSSAI)

Presence of antibiotics and veterinary drug residues in food for human consumption is the prime concern of Food Safety & Standards Authority of India (FSSAI). The notification recently issued by FSSAI prohibits 19 antibiotics and veterinary drugs, from being used at any stage of processing of meat, meat products, poultry and eggs, sea food or any variety of fish and fishery products and specifies the tolerance limits for 103 antibiotics and veterinary drugs for various animal tissue and milk and this regulation will be effectively enforced from January 2019. However, specifying tolerance limits or MRLs and enforcing the law, is not the only way to addressing this problem in totality. The focus has to be on ensuring quality through an effective food safety management system (FSMS) throughout the food production chain including good veterinary and animal husbandry practices. FSSAI has developed sector specific guidance documents for the industry to foster better GHP and GMP practices in their sectors and through the initiative of FOSTAC training program the food handlers are getting trained and certified in Food Safety Management practices.

WAY FORWARD

Antimicrobial resistance can affect everybody, regardless of where they live, their health status, economic circumstances, lifestyle or behavior. It can affect sectors beyond human health, such as animal health, agriculture, food security and economic development. Therefore, everybody in all sectors and disciplines need to be engaged in action to combat the problem, and in efforts to preserve the effectiveness of antimicrobial medicines.

To conserve antibiotic effectiveness in humans and animals there has to be a well-established surveillance and monitoring systems in place, so that antibiotic use in both human and veterinary sector can be tracked and a database is built. Stringent enforcement has to imposed on use of antibiotics as Growth Promoters. Veterinarians should be trained and educated for judicious use of antibiotics for infection prevention in animals. Farmers need to be educated about the dangers of antibiotic resistance and they can even be incentivized to discourage unnecessary use of antibiotics in animals.

Dr. Rubeena Shaheen

Director (FSMS / Risk Assessment
and R & D); FSSAI

Next Steps

Scientific capability & expertise build in food safety risk assessment-

Areas of Focus:

- 1.) Microbiological Risk Assessment and Risk Management
- 2.) Risk Assessment and Risk Management for Novel Ingredients and Additives
- 3.) Food Allergens

Partners:



FOOD SAFETY AND STANDARDS
AUTHORITY OF INDIA
Inspiring Trust, Assuring Safe & Nutritious Food
Ministry of Health and Family Welfare, Government of India



Confederation of Indian Industry



Hindustan Unilever Limited

CII-HUL Initiative on Food Safety Sciences (CHIFSS);

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