



FOOD SAFETY: THE INDIAN PERSPECTIVE

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ABSTRACT

In this modern era of globalization and industrial growth, one of the key questions that need attention in a developing country like India is that of food safety. In India, the full burden of food borne illnesses is not known; most food borne illnesses go unreported. India is struggling with age old problem of poor environmental sanitation, lack of access to safe water and poor disease surveillance. These hazards are in addition to the menace of food adulteration. The government of India introduced the food safety and Standards Act 2006 to overcome the deficiencies in the Prevention of food adulteration act, 1954. To achieve food safety, the public health sector must play a pivotal role in building a community of various stakeholders and partners, who share common goals and responsibilities.

Key words: Food safety, adulteration

INTRODUCTION

In this modern era of globalization and industrial growth, one of the key questions that need attention in a developing country like India is that of food safety. Almost any kind of food can spread disease, and unsafe food is responsible for creating a vicious cycle of disease and malnutrition, affecting all, but particularly infants, young children, and the elderly. Food can be rendered unsafe by pathogenic organisms or chemicals.

Taking up this important issue, the WHO has adopted the theme for World health Day 2015 as "Food Safety - From farm to plate, make food safe." Food Safety means assurance that food is

acceptable for human consumption according to its intended use. A local food safety problem can rapidly become an international emergency.

Food safety is an umbrella term that encompasses many facets of handling, preparation and storage of food to prevent illness and injury. Access to sufficient and safe food is a basic human necessity and essential for creating a world without hunger and for achieving poverty reduction worldwide.

In developed countries, there are intricate standards for food preparation, whereas in less-developed countries the main issue is simply the

availability of adequate safe water, which is usually a critical item.

Problem Statement

Unsafe foods containing pathogenic microorganisms and toxic chemicals are responsible for more than 200 diseases ranging from diarrhea to cancer. Food- and waterborne diarrheal diseases are linked to the deaths of an estimated 2 million people annually worldwide, including many children. It is estimated that the reduction of food borne diseases by 10% would save 5 million people from getting sick.¹

The initial WHO Food borne Disease Burden Epidemiology Reference Group (FERG) figures, from 2010, show that ² there were an estimated 582 million cases of 22 different food borne enteric diseases and 351 000 associated deaths. It also shows that the enteric disease agents responsible for most deaths were Salmonella Typhi (52000 deaths), enteropathogenic E. coli (37000) and norovirus (35000). The African region recorded the highest disease burden for enteric foodborne disease, followed by SouthEast Asia. Over 40% people suffering from enteric diseases caused by contaminated food were children aged less than 5 years according to the same report.

The Centers for Disease Control and Prevention (CDC) have documented causes of illness in 1,565 outbreaks of single food commodities during the period 2003-2008.³ Despite the fact that food borne diseases are among the most widespread problems of public health concern, not more than 10% and sometimes maybe as low as 1%, of the real incidence of food borne diseases are reported.⁴

In India, the full burden of food borne illnesses is not known; most food borne illnesses go unreported. The scientific investigations/reports on outbreak of foodborne diseases in India for the past 29 (1980-2009) years indicated that a total of 37 outbreaks involving 3,485 persons have been affected due to food poisoning.⁵

Pesticides and the use of fertilizers in the past 50 years have grown nearly 170 times. As a consequence, persistent residues of these chemicals contaminate food and disperse in the environment and find their way into the food chain.⁶

Adulteration of food

India is struggling with age old problem of poor environmental sanitation, lack of access to safe water and poor disease surveillance. These hazards are in addition to the menace of food adulteration.

Adulteration of food cheats the consumer and poses a serious risk to health. Adulterant means any material which is or could be employed for making the food unsafe or sub-standard or misbranded or containing extraneous matter. Adulterated food is dangerous because it may be toxic and can affect health and it could deprive nutrients essential for proper growth and development.

Adulterants can broadly be classified into three categories:

1. Intentional adulterants: Sand, marble, stones, mud etc.
2. Incidental adulterants: Pesticide residues, droppings of rodents
3. Metallic contaminants: Arsenic, Lead etc

Current food laws and Regulations

Various measures have been taken to protect consumers against the intake of unsafe foods. ISO 22000 is a standard developed by the International Organization for Standardization dealing with food safety. The ISO 22000 international standard specifies the requirements for a food safety management system that involves interactive

Communication, system management, prerequisite programs, and Hazard Analysis and Critical Control Points (HACCP) principles.⁷

In 2003, the World Health Organization (WHO) and the Food and Agriculture Organization of the United Nations (FAO) published the Codex Alimentarius, which serves as a guideline to food safety.⁸

The government of India introduced the food safety and Standards Act 2006 to overcome the deficiencies in the Prevention of food adulteration act, 1954. The Food Safety and Standards Authority of India has been established under this act. The Act aims to establish a single reference point for all matters relating to food safety and standards by moving from multi-level, multi-departmental control to a single line of command. The FSSAI and the state authorities shall enforce various provisions under the act.

The Way Ahead

Food can be made safe by concerted efforts of all stakeholders. The government must implement the present laws related to food safety as strictly as possible. Strict action must be taken against companies violating the prescribed standards of food safety. The consumers must be made aware of the importance of food safety through increased IEC activities.

We have to come to terms with emerging challenges to ensure food safety. These new challenges are in the form of newly discovered food borne pathogens, rapidly emerging food technologies and increasing global trading in food products.

In India, food safety has linkages with the Swachh Bharat initiative of the Indian government that promotes cleanliness and hygiene. These are key factors influencing food safety. Food safety also has linkages with the 'Make in India' campaign of the government. India has huge potential in the export of high value agricultural produce. The government of India reaches nearly 200 million beneficiaries through the nationwide food supplementation programs like midday meals and supplementary nutrition programs of Integrated Child Development Services Scheme. The public distribution system supplies grains to people below poverty line. These programs should be further strengthened and food safety must be ensured in them as they affect a majority of people.

To achieve food safety, the public health sector must play a pivotal role in building a community

of various stakeholders and partners, who share common goals and responsibilities. This partnership should encompass consumer and school education, science and research, agriculture and fishery, tourism, trade, industry as well as regulatory authorities.

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