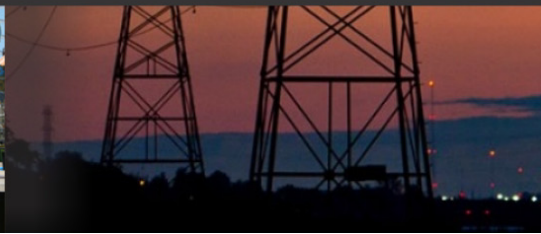


State of Consumer Safety in India 2016



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Ph: 91-141-2282821, Fax: 91-141-2282485

Email: cuts@cuts.org

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Abbreviations

AAI:	Airports Authority of India
ACD:	Anti-Collision Devices
ADAPT:	Able Disable All People Together
AGL:	Australian Gas Light Company
AHS:	Automated Highway System
AIDN:	All India Drug Network
AIIMS:	All India Institute of Medical Sciences
AIMSI:	Amusement Industry Manufacturers & Suppliers International
AMCs:	Annual Maintenance Contracts
API:	Actual Medical Component
ASME:	American Society of Mechanical Engineers
ATP:	Automatic Train Protection
BCAS:	Bureau of Civil Aviation Security
BDDS:	Bomb Detection and Disposal Squad
BIS:	Bureau of Indian Standards
BMC:	Brihanmumbai Municipal Corporation
CAG:	Citizen consumer and civic Action Group
CARES:	Council for Amusement & Recreational Equipment Safety
CDSCO:	Central Drugs Standard Control Organisation
CEA:	Central Electricity Authority
CEI:	Chief Electrical Inspector
CERC:	Central Electricity Regulatory Commission
CGF:	Consumer Grievance Redressal Forum
CHCs:	Community Health Centres
COMS:	Complaint Management System
COPRA:	Consumer Protection Act
CPSC:	Consumer Product Safety Commission
CRS:	Commission of Railway Safety
CWF:	Consumer Welfare Fund
DCGI:	Drug Controller General of India
DCPCs:	District Consumer Protection Councils
DCGI:	Drugs Controller General of India
DCR:	Development Control Regulations
DISCOMS:	Distribution Companies
DoCA:	Department of Consumer Affairs
DPCO:	Drugs Prices Control Order

EAMS:	Early Access to Medicines Scheme
EC:	Executive Committee
EERI:	Earthquake Engineering Research Institute
EGOM:	Empowered Group of Ministers
ELCB:	Earth Leakage Circuit Breaker
ERDA:	Electrical Research & Development Authority
ETCS:	European Train Control System
EU:	European Union
FAO:	Food and Agricultural Organisation
FDA:	Food and Drug Administration
FDC:	Fixed Dose Combinations
FDI:	Foreign Direct Investment
FMRAI:	Federation of Medical Representatives Association of India
FSSA:	Food Safety and Standards Act
FSSAI:	Food Safety and Standards Authority of India
GAIL:	Gas Authority of India Limited
GCP:	Good Clinical Practices
GDLS:	Graduated Driver Licensing Systems
GDP:	Gross Domestic Product
GERC:	Gujarat Electricity Regulatory Commission
GESRs:	Global Essential Safety Requirements
GNP:	Gross National Product
GRF:	Government Reserve Police
HESI:	Housing Earthquake Safety Initiative
HIFA:	Haryana Institute of Fine Arts
HLEG:	High-Level Expert Group
HMV:	Heavy Motor Vehicles
HSEU:	Health System Evaluation Unit
HUDCO:	Housing and Urban Development Corporation
IAEE:	International Association for Earthquake Engineering
IATA:	International Air Transport Association
ICMR:	Indian Council of Medical Research
IGRUA:	Indira Gandhi Rashtriya Uran Academy
IISEE:	International Institute of Seismology and Earthquake Engineering
INN:	International Non-proprietary Name
IOM:	Institute of Medicine
IPC:	Indian Penal Code
IPHS:	Indian Public Health Standards
URDA:	Insurance Regulatory and Development Authority
ISSET:	Indian Society of Earthquake Technology
ISS:	Integrated Security System
IT:	Information Technology
ITS:	Intelligent Transport Systems

LCC:	Low Cost Carriers
LPG:	Liquefied Petroleum Gas
MCI:	Medical Council of India
MERC:	Maharashtra Electricity Regulatory Commission
MHA:	Ministry of Home Affairs
MHRA:	Medicines and Healthcare Products Regulatory Agency
MISG:	UK Ministerial Industry Strategy Group
MMU:	Mobile Medical Units
MRO:	Maintenance, Repair & Overhaul
MSEDCL:	Maharashtra State Electricity Distribution Company Limited
MVA:	Motor Vehicles Act
NAARSO:	National Association of Amusement Ride Safety Officials
NABH:	National Accreditation Board of Hospitals
NAHSC:	National AHS Consortium
NBC:	National Building Code
NCDRC:	National Consumer Disputes Redressal Commission
NCRB:	National Crime Records Bureau
NDMP:	National Disaster Management Plan
NFPA:	National Fire Protection Association
NGOs:	Non-government Organisations
NHMFAU:	National Health and Medical Facilities Accreditation Unit
NHP:	National Health Policy
NHRDA:	National Health Regulatory and Development Authority
NHTSA:	National Highway Traffic Safety Administration
NLEM:	National List of Essential Medicines
NOC:	No Objection Certificate
NPEEE:	National Programme on Earthquake Engineering Education
NPPA:	National Pharmaceutical Pricing Authority
NPSDs:	Network of Patient Safety Databases
NRHM:	National Rural Health Mission
NUHM:	National Urban Health Mission
OABA:	Outdoor Amusement Business Association
OOP:	Out-of-Pocket
PESO:	Petroleum and Explosives Safety Organisation
PHCs:	Primary Healthcare Centres
PIL:	Public Interest Litigation
PIPs:	Programed Implementation Plans
PNG:	Pipelined Natural Gas
PNGRB:	Petroleum and Natural Gas Regulatory Board
PPP:	Public-Private Partnership
PSOs:	Patient Safety Organisations
PSQIA:	Patient Safety and Quality Improvement Act
PTW:	Permit To Work

RDSO:	Research Designs and Standard Organisation
RERA:	Real Estate Regulatory Authority
ROP:	Retinopathy of Prematurity
RPO:	Renewable Purchase Obligation
RRPF:	Railway Protection Force
SERC:	State Electricity Regulatory Commission
SPAD:	Signal Passing At Danger
SSU:	System Support Unit
STGs:	Standard Treatment Guidelines
TCAS:	Train Collision Avoidance System
TPWS:	Train Protection Warning System
TTE:	Train Ticket Examiner
UHC:	Universal Health Coverage
UMPPs:	Ultra Mega Power Plants
UNCRD:	United Nations Centre for Regional Development
UNGCP:	United Nations Guidelines for Consumer Protection
UTs:	Union Territories
VRUs:	Vulnerable Road Users
WCEE:	World Conferences on Earthquake Engineering
WHO:	World Health Organisation

Hem Pande

सचिव

Secretary

Tel. : 011-23782807, 23070121

Fax : 011-23384716

E-mail : secy-ca@nic.in



भारत सरकार

उपभोक्ता मामले, खाद्य एवं सार्वजनिक वितरण मंत्रालय

उपभोक्ता मामले विभाग

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Department of Consumer Affairs

KRISHI BHAWAN, NEW DELHI - 110001

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Dated the 09 December, 2016

FOREWORD

It gives me great pleasure to know that the Consumer Unity & Trust Society (CUTS International) is releasing a report "State of Consumer Safety in India Report" under the project titled "State of Consumer Safety in India" in partnership with the Department of Consumer Affairs, Ministry of Consumer Affairs, FOOD and Public Distribution, Government of India.

The report highlights the state of implementation of consumer safety in India across five service sectors, based on a comprehensive review and findings of the field research. It is expected that this report would help to generate higher awareness and lead to some concrete action and protection under the law.

CUTS International has consistently and continuously been working for more than three decades in areas related to consumers, which is commendable. I sincerely wish this and all future endeavours of CUTS International the very best.


(Hem Pande)



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Preface

Indian consumers are broadly segregated among urban and rural markets and catching the attention of marketers from across the globe. The sector includes massive middle class, comparatively huge wealthy class and a small economically disadvantaged class and together their spending is expected to touch more than double by 2025. Thus, the global conglomerates view India as one of the key consumer markets of goods and services.

Though various studies targeting Indian consumers have established that product quality and safety are gaining more importance among consumers in India yet nothing great has happened. Not a day passes when one does not come across news of death/injury from unsafe products or services. When reading such horrendous reports of death/injury, one wonders if there is no law for tackling such a menace. In fact, the state of consumer safety in India has never been encouraging.

As evident from the ‘State of Indian Consumer Report 2012’ prepared by CUTS (with support from the Department of Consumer Affairs, Government of India), it was found that there was a serious lack of consumer awareness about safety standards/certification. Only 22 percent consumers reported that they always assessed products or services in terms of their potential to cause threat/hazard. In fact, 32 percent consumers never considered the safety aspect of a product before making a purchase. The proportion of such people is more in rural areas as compared to urban areas as the rural consumers are illiterate and ignorant of their rights.

The need for consumer awareness and empowerment are becoming the clarion call in almost all sectors. Consumers cannot be cheated and callously exploited by the seller and service providers. Quality assurance and safety of products and services are central to preventing consumer detriment. But Indian safety standards are far behind when compared to countries like UK and America. Most of the manufacturers often just do the bare minimum to meet standards. In service sector particularly, India is still in the process of establishing systems to protect consumers’ right to safety despite services being such a crucial part of the country’s economy. Right to safety means the right of the consumer to be protected against products, production processes and services which are hazardous to health or life. It includes concern for consumers’ long-term interests as well as their immediate requirements.

Like other consumer rights, the right to safety is an important area of consumer protection which needs timely inspection and evaluation. The UN Guidelines for Consumer Protection clearly mention the right to safety as one of the inalienable rights of the consumer. The Constitution of India also has provisions regarding the right to safety. Apart from the Constitutional provisions, there are numerous legislations, international conventions and various regulations issued by different regulatory agencies on the issue of safety. But in India, to realise the right to safety, it is not enough to just have safety acts and policies in place. It is equally important that acts and policies are implemented well, monitored and popularised among the mass, so that the people

too can play a constructive and participatory role to ensure their own safety. By empowering consumers, visibility, accountability and functioning of agencies mandated to ensure consumers' right to safety in India would be enhanced.

The current project aims to strengthen consumer safety in India and publish the 'State of Consumer Safety in India Report' and thereby take the Indian consumer movement forward. Supported under Consumer Welfare Fund (CWF) by the Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India, the project aims to enhance consumer safety through research to find out ground realities, advocacy and by empowering of consumers on consumer safety issues. While the overall objective is to enhance consumer safety in India and thereby promote consumer interest, its immediate objective is to recommend actionable steps to strengthen consumer safety in India.

This report widely covers five services sector: Health (Medicines, Hospitals, Food and Water); Housing (Fire, Earthquake, Lifts); Public Amusement Services; Energy (Electricity, Gas); and Transport (Road, Rail, Aviation) with relevant other country experiences and suitable case laws/ judgements passed by National Consumer Disputes Redressal Commission.

The report consists of an analysis of the state of implementation of consumer safety in India in these service sectors, based on a comprehensive review and findings of an in-depth field research. It is expected that this report would help generate higher awareness and lead to some concrete action. Meanwhile, consumers should be aware of their safety-related rights and be able to push for improved legislations, regulations and standards on safety-related matters and their implementation. This would ensure the businesses to be more aware about consumer rights to safe products/services and thereby act more responsibly. Also the regulatory bodies will proactively implement safety standards. Thus, many untimely death and injuries from unsafe products/services could be avoided

One cannot enjoy the benefits by just claiming the rights alone; there are certain responsibilities for the consumers too in order to enjoy such rights.

Pradeep S Mehta
Secretary General
CUTS International

Overview and Acknowledgments

Background

India has been pioneer in consumer protection having Consumer Protection Act (COPRA), 1986 to provide not only easy and quick redressal of consumers' grievances but also a mechanism to promote and protect their interests. On completion of 25 years of Indian Consumer Protection Act in 2011, the Department of Consumer Affairs (DoCA), Ministry of Consumer Affairs, Food and Public Distribution, Government of India entrusted CUTS with the responsibility of publishing the 'State of Indian Consumer 2012', report.

The purpose of the report was to understand the real status of the common consumers at grassroots with regard to level of awareness and gauge the success in terms of realising the basic consumer rights and present a forward-looking outline to the DoCA, state consumer departments, and other line ministries/departments (of the Central and state governments) and advocate to act upon the state of consumers based on recommendations.

In the report it was prominently noticed that the area of consumer safety has been dealt by at least 25 different Indian acts implemented by different government departments and agencies. This fact was resulting into poor governance, lack of convergence and ineffective implementation of all rules and regulations related to consumer safety. Even in today's modern India, nearly 40 percent of consumers do not refer to any safety or quality certifications, such as ISI, ISO, Agmark, Codex etc. before any purchase.

During the review of the 'State of Indian Consumer 2012' report, after realising the relevance of the publication, the DoCA entrusted CUTS to bring out such reports on a biennial basis, and also after observing the glaring and harsh reality related to safety in India, decided to devote the next 'State of the Indian Consumer' report on the issue of Consumer Safety. Hence this report.

Coverage

The UN Guidelines for Consumer Protection (UNGCP) clearly mention the right to safety as one of the inalienable rights of the consumer. Right to safety means the right of the consumer to be protected against products, production processes and services which are hazardous to health or life. Keeping this in mind, a comprehensive research on the state of consumer safety in selected sectors was carried out. The following sectors were covered for the purpose of the research. Health (Medicines, Hospitals, Food and Water); Housing (Fire, Earthquake, Lifts); Public Amusement Services; Energy (Electricity and Gas); and Transport (Road, Rail and Aviation). The primary data was collected from states of Assam (Dispur & Jorhat), West Bengal (Kolkata & Jalpaiguri), Madhya Pradesh (Bhopal & Gwalior), Uttar Pradesh (Lucknow & Ghaziabad), Rajasthan (Jaipur & Udaipur) and Tamil Nadu (Chennai & Coimbatore).

Key Findings on Consumer Perception

The findings related to the perception of common consumers, about the safety issues are very important. It was discovered that mostly consumers are careful about safety for Medicines, which accounted for 38 percent followed by Gas (35 percent), Water (26 percent) and Hospital (25 percent). While the calamities, such as earthquake (36 percent) and fire (31 percent) were considered to be a major safety concern among consumers. It was observed that in none of the sectors in targeted states, conducted any trainings or mock drills for consumers to generate their awareness and preparedness during unforeseen emergency incidents that may put their life and limbs at safety risk. 38 percent of consumers opt for ISI mark electrical appliances across the states.

Around 40-45 percent stakeholders are dissatisfied with the services of the State Electricity Boards since there is no response from service providers in case of electrical or fire emergency. In some of the states, such as Madhya Pradesh and Rajasthan almost 15 to 20 percent of incidences of spurious drugs were reported. Around 25 to 30 percent of consumers highlighted that proper safety measures were not taken on safety in government as well as private hospitals. In Assam and Madhya Pradesh, only 15 to 20 percent consumers wear helmets on most of the occasions while in West Bengal practice of wearing seat belts was reported among around 50 percent of the consumers.

In Assam (14 percent) and Uttar Pradesh (39 percent), only few consumers saw availability of medical emergency kits at their cinema halls while in Rajasthan around 60 percent consumers observed the same.

In West Bengal, 72 percent of consumers stated that there are ‘much less pavements than what is required’, followed by Rajasthan where 53 percent of consumers had a similar opinion. Safety at railway crossing is a major concern across states. Mostly, consumers of Madhya Pradesh (39 percent) and Tamil Nadu (48 percent) have high safety concerns at rail crossings.

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George Cheriyan
Director
CUTS International &
Head, CUTS Centre for Consumer Action, Research & Training (CUTS CART)

Note on Contributors

Consumer Education and Research Centre

The chapter on Housing Sector has been contributed by a team of professionals of the Education and Research, Department of Consumer Education and Research Centre (CERC), Ahmedabad. The four objectives of this department are – Education, Awareness Building, Dissemination of Information and Advocacy. It undertakes research, brings out a magazine in both print and digital format, publishes brochures, questions misleading advertisements and interacts with the media. For the past 38 years, CERC activities have been dedicated to the promotion and protection of consumer interests through effective use of education, research, media and law. Consumer grievances are resolved by complaints and legal departments. CERC is the only consumer organisation in the country to have in-house laboratories for comparative testing of consumer products.

Krishna Kumar Bajaj

Bajaj is a Mechanical Engineer and Energy and Regulatory Expert, Ahmedabad. He has 36 years of experience in power sector, particularly in generation and distribution fields. He also worked as Honorary Director for 16 years with CERC and brought many laurels for the organisation. He is closely associated with Gujarat Electricity Regulatory Commission (GERC) and represents to protect interest of consumers. He is member of State Advisory Committee constituted under the Electricity Act and represented for important consumer-related issues of electrical accidents and provision of Earth Terminal. He has played an important role in power sector of Gujarat and made electricity companies accountable for their financial and technical performance.

S Saroja

Saroja is Director, Consumer Advisory and Outreach at the Citizen consumer and civic Action Group (CAG), Chennai – a not-for-profit organisation working since last 31 years. She has been with CAG since 2006 and leads the organisation's work on consumer issues. She is a lawyer by training and manages consumer complaints' desk at CAG. She advises consumers on various consumer and civic issues and handles consumer complaints. She manages relationships with government ministries/departments and officials and represents consumers on various forums. Her interaction with media includes her fortnightly columns in *Outlook Money* (2009) and *The Hindu-Metroplus* (*Caveat Emptor*, 2008-2014) and others on consumer matters.

Rinki Sharma

Sharma is Head, Projects & Corporate Social Responsibility with Consumer Voice India – a not-for-profit organisation working for Consumer Education and Empowerment from last 33 years. She has done Masters of Business Management in Finance and Marketing and has rich experience

of working on diverse projects, including safety aspects in transportation sector. She has also attended international trainings on various aspects in transportation sector to get exposure on international best practices and engaged in various activities of research, advocacy, and media at national level to strengthen consumer safety in transportation.

Simi T Balakrishnan

Balakrishnan is Assistant Policy Analyst and Researcher (International Trade Law) at CUTS. She has done her post graduation in Law from Cochin University of Science and Technology, Kerala. Her area of research is international trade and development issues, *albeit* having a special interest in trade, consumer and environmental issues. She also have a keen interest and working knowledge in the related field of international trade disputes and intellectual property laws. With a professional stint of more than a decade in CUTS, she has experience in working on projects related to these issues from South Asian perspective. She has published various research papers and articles, and spoke at international conferences.

Executive Summary

Introduction

Safety is a fundamental right and an essential condition for sustainable development of society. Safety is, however, not defined as a situation with total absence of hazards. Safety is a state in which hazards and conditions leading to physical, psychological or material harm are controlled in order to preserve the health and promote the well being of individuals and the community. The expansion of the market and the availability of a wide range of consumer goods and services have led to a situation where the possibility of unsafe goods and services creeping into the market is inevitable. It is the prime responsibility of the State to ensure the safety of the people, provide them a secure environment and establish quick and effective mechanisms for compensating the victims of such systems.

Governments and courts in many countries have instituted safety standards, legislation, and enforcement mechanisms to protect the interests of consumers and grant them the rights of choice, safety, information and redressal. The right to safety is important for safe and secure living. Without any effective regulatory mechanisms, consumers suffer the most in terms of safety. The right to safety means the right to be protected against products, production processes and services that are hazardous to health or life. It includes concern for consumers' long-term interests as well as their immediate requirements.

Right to Safety under UN Guidelines for Consumer Protection

The UN Guidelines for Consumer Protection (UNGCP) clearly mention the right to safety as one of the inalienable rights of the consumer. The Guidelines provide a framework for governments, particularly those of developing countries, to use in elaborating and strengthening consumer protection policies and legislation. The UNGCP consider two kinds of safety: physical safety and standards for the safety and quality of consumer goods and services.

As regards physical safety, it states that: "Government should adopt or encourage the adoption of appropriate measures, including legal systems, safety regulations, national or international standards and the maintenance of safety records to ensure that products are safe for either intended or normally foreseeable use. Consumers should be instructed to the proper use of goods and should be informed of the risks involved. Vital safety information should be conveyed to consumers by internationally understandable symbols wherever possible".

The Guidelines also recommend the adoption of policies to ensure that manufacturers compensate for defective or hazardous products. As for the second one, i.e. standards for the safety and quality of consumer goods and services, the Guidelines state: "Government should as appropriate, formulate or promote the elaboration and implementation of standards, voluntary and other, at the national and international levels for the safety and quality of goods and services and give them

appropriate publicity. These standards should also be reviewed periodically to conform to accepted international standards. Further, the government should encourage and ensure the availability of facilities to test and certify the safety, quality and performance of essential consumer good and services”.

Right to Safety in India

The right to safety is protected by the Constitution of India, as well as by various laws enacted by the Parliament and the State Legislatures.

Fundamental Rights: Safety Provisions

Consumers should be aware of certain fundamental rights that have a direct or indirect relation to the right to safety. Such rights are: Article 21: Protection of life and personal liberty; and Article 24: Prohibition of employment in factories, etc., or engagement in any hazardous employment of children below the age of 14 years. Article 32 of the Constitution provides for enforcement of such rights. A citizen has the right to move the Supreme Court by appropriate proceedings and the latter has the power to issue directions or writs for enforcement of these rights. Under Article 226 of the Constitution, the High Court's also enjoy similar powers to issue writs in cases of violation of fundamental rights.

Fundamental Duties: Safety Provisions

Article 51 A (g):to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures; and Article 51 A (i):to safeguard public property and to abjure violence.

Directive Principles of State Policy

Although the Directive Principles are not enforceable by law, like the Fundamental Rights, the principles laid down therein are fundamental in the governance of the country and it is duty of the States to apply these principles while making laws. The State is required, in particular, to direct its policy to ensure:

- that the health and strength of workers, men and women and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength [Art. 39(e)];
- that children are given opportunities and facilities to develop in a healthy manner and in a condition of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment [Art. 39 (b)];
- that free legal aid is provided to the poor and that opportunity for securing justice is not denied to any citizen by reason of economic or other disabilities [Sec. 39A];
- that the level of nutrition and the standard of living is raised, public health is improved and in particular, prohibition of consumption of intoxicating drinks and use of drugs which are injurious to health are prohibited [Art. 47]; and
- that provisions are made for protection and improvement of the environment and safeguarding of forests and wild life [Art. 48A].

Consumers should be aware of all these provisions, whether justifiable or not, as the Constitution is the mainstay of our legal structure and all the pieces of legislation have to conform to the constitutional provisions to be, and remain, valid.

Other Legislations

Industrial development in the field of manufactured goods has led to an influx of various consumer goods into the Indian market, to cater to the needs of consumers, and a variety of services, such as banking, financing, insurance, transport, housing construction and entertainment have been made available to the consumers.

In order to protect consumers from exploitation and to save them from adulterated and substandard goods and deficient services, the COPRA came into force on April 15, 1986.

Under the COPRA, 1986, a consumer is a person who:

- (i) buys any goods for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any user of such goods other than the person who buys such goods for consideration paid or promised or partly paid or partly promised, or under any system of deferred payment when such use is made with the approval of such person, but does not include a person who obtains such goods for resale or for any commercial purpose; or
- (ii) hires or avails of any services for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any beneficiary of such services other than the person who 'hires or avails of the services for consideration paid or promised, or partly paid and partly promised, or under any system of deferred payment, when such services are availed of with the approval of the first mentioned person but does not include a person who avails of such services for any commercial purposes;

The said Act enshrines the following six rights of a consumer:

- **Safety:** The right to be protected against the marketing of goods and services, which are hazardous to life and property.
- **Information:** The right to be informed about the quality, quantity, potency, purity, standard and price of goods or services, so as to protect the consumer against unfair trade practices.
- **Choice:** The right to be assured, wherever possible, of access to variety of goods and services at competitive prices.
- **Representation:** The right to be assured that consumer's interests will receive due consideration at appropriate forums.
- **Redressal:** The right to seek redressal against unfair trade practices or unscrupulous exploitation of consumers.
- **Education:** The right to acquire the knowledge and skill to be an informed consumer throughout his life.

Simultaneously, six other consumer protection laws give consumers and their organisations the right to prosecute offenders.

These laws are:

- Legal Metrology Act, 2009
- Food Safety and Standards Act, 2006
- Bureau of Indian Standards Act, 2016
- Agricultural Produce (Grading and Marking) Act, 1937
- Competition Act, 2002
- Essential Commodities Act, 1955

India has also introduced certain certification systems to ensure availability of safe and quality products to consumers. Bureau of Indian Standards (BIS) Act, 2016 recently passed by the Parliament, is a major step forward in ensuring high quality products and services in the country, with services being introduced for the first time under the Act. This will not only protect the consumers and enhance the overall quality of life but in the long run will also boost the *Make in India* initiative promoted by the government.

Present Indian Scenario

The quality of life of a citizen to a large extent depends upon the availability of suitable infrastructure and quality services. The recent shocking case of medical negligence where a father in Kanpur was forced to carry his son on his shoulder to the hospital since no ambulance, stretcher or timely treatment was provided also elucidated that assuring proper infrastructure and quality services needs more attention and is still a distant dream for many.

The present Indian scenario can be explained as following:

- Lack of awareness of consumers about their safety-related rights (what they can expect and should demand);
- Lack of information on products/services quality and related hazards;
- Lack of interest on the part of manufacturers/producers/service providers/ traders/regulators to implement safety norms; and
- Lack of motivation/interest on the part of regulatory authorities to implement safety norms in a proactive and reactive manner.

The problem is that, even if the government/Supreme Court lays down certain standards/restrictions, there is laxity in the implementation of such orders/ instructions by the authorities concerned. The consumers also do not show sufficient interest in the follow-up action or extend necessary co-operation to the authorities concerned.

Few examples given below will clear the picture:

- The Supreme Court has banned firecrackers that generate noise greater than 125 decibels but in practice, such crackers are still available in the country during festivals like Diwali. The recent Kerala temple firework disaster that led to the death of over 100 devotees in spite of denying the permission by both Additional District Magistrate and District Collector, very well illustrates the callous attitude of authorities concerned.
- As per the Law, hospitals, nursing homes and clinics of doctors, who declare or profess in writing that they provide 24-hour services, are legally bound to attend all cases. Failure to have the requisite equipment in working order and non-availability of competent staff within reasonable time would be inferred as medical negligence. But, in India, common picture is that emergency cases are not entertained by the private clinics/nursing homes by offering lame excuses like non-availability of beds!
- The National Building Code (NBC), formulated by the BIS, governs the design, safety and health aspects of buildings and structures. The fire protection requirements for all classes of buildings are covered in Part IV of the Code, which was revised and updated in 2005. But, most highrise structures constructed by private builders do not have a No-Objection

Certificate (NOC) from the Fire Department. In some cases, even government owned high-rise buildings do not have NOCs.

- Amusement park operators do claim that local officials inspect their facilities, the fact remains that due to a lack of technical expertise and ample budget often proper safety checks and investigations are casual or not performed at all. This was highlighted long time back in a 2005 CUTS article entitled “Joyride: Ride to Death?”, and even now nothing much has been changed. Token inspection coupled with conspiracy, carelessness and zero/inadequate follow-up have contributed to the rise in accidents within the amusement service industry.
- Although safety norms, like compulsory wearing of seatbelts by front seat occupants of cars and use of helmets while riding two-wheelers exist, they are rarely followed.
- Though railways claim that safety is given top priority, as per the findings of inquiry committees including *prima-facie* causes, out of a total of 292 consequential train accidents, excluding mishaps which occurred at unmanned level crossings, from 2012-13 to January 2016, 204 accidents have been attributed to failure of railway staff, according to Railway Ministry data.

All these issues have been discussed in detail in this research report that focusses on the consumer safety of services in following sectors:

1. Health: Medicines, Hospitals, Food and Water
2. Housing: Fire, Earthquake, Lifts
3. Public Amusement Services
4. Energy: Electricity and Gas
5. Transport: Road, Rail and Aviation

For the research purpose, survey samples were collected from following 12 districts of six states namely – Assam (Dispur & Jorhat); West Bengal (Kolkata & Jalpaiguri); Madhya Pradesh (Bhopal & Gwalior); Uttar Pradesh (Lucknow & Ghaziabad); Rajasthan (Jaipur & Udaipur); and Tamil Nadu (Chennai & Coimbatore).

Some of the findings are summarised for immediate referral:

Health: Medicines, Hospitals, Food and Water

In an overpopulated country like India, with its complex social architecture and economic extremes, the effect on health system is multi-fold. When discussing the scenario and safety norms of *medicines and hospitals*, a gap could be observed in provision of safer environment for users. Especially with upkeep of hospitals and medicines stocks, as it is directly related to the health of consumers there is an urgent need to focus on the gaps. Like in Rajasthan 41.45 percent of the respondents were not happy with the service at government hospitals and 43.44 percent with private hospitals. While in other states respondents had average satisfaction with the services provided.

Housing: Fire, Earthquake and Lifts

In *Housing* industry also the level of awareness amongst consumers is low. The findings show that most of the buildings are old as 10-15 years, and the service providers are conducting regular inspection of the buildings and its maintenance. Even medical kits are placed in many buildings. However, in West-Bengal it was found that the service providers are not conducting regular inspection visits. Likewise, poor construction was reported in Madhya Pradesh, Rajasthan and West Bengal. The buildings do not fulfill all criteria of safety norms. For instance, no water hydrant has been installed in Assam and Rajasthan as informed by the service providers. Not many activities are being done to generate awareness amongst the consumers like mock drills or awareness campaigns.

With regards to maintenance of lifts, there were negligible responses received from Assam. In other states majority of responses included 'no' and 'don't know' in relation to regular maintenance of the lift. In West Bengal 86.30 percent of the respondents did not have information regarding the maintenance of the lift, followed by 55.58 percent in Uttar Pradesh, 48.65 percent in Madhya Pradesh and 46.09 percent in Rajasthan. This is an important aspect to be worried about since a consumer should be aware of the maintenance of lifts installed in his/her building.

Public Amusement Services

Lack of supervision and commitment to implement and monitor standards of care is quite evident within this sector. State governments who are responsible for overseeing the safety of such amusement services often fail to give due attention to this sector. While very few inspect the services on regular basis, few others inspect just once a year and most do not carry out any inspections at all. Most of the time the officials react only after some grave mishap and subsequent media sensation. Even then in the end the officials at the grass root level who are mostly at the bottom end of the hierarchy are mostly blamed. The survey targeting water theme parks to assess safety measures points out that there are many theme parks across the country that do not have the presence of lifeguards, which is a basic mandatory requirement. The awareness level in relation to presence of Medical Emergency Kit at cinema halls and theme parks on an average also seems to be low. Surprisingly most of them (54.84 percent from Rajasthan, 50 percent from Tamil Nadu, and 100 percent from West Bengal) believed that no major harm would come to them while availing such services.

Energy: Electricity and Gas

Both electricity and gas can be hazardous for people, their property and the environment if not used properly. As per the survey findings, the choice of ISI marked electronic appliances were considered a safe purchase by 38.5 percent overall. An inter-state comparison shows the preference for ISI marked electronic items is the highest in Tamil Nadu (89.8 percent) and Uttar Pradesh (55.9 percent). The suggestion of the electrician for an appliance is considered as a preferred parameter for purchase in West Bengal (45.4 percent), Rajasthan (44.7 percent), Madhya Pradesh (38.9 percent) and Assam (33.4 percent). There were a high percentage of responses from consumers wherein they expressed they are unaware of the safety norms. For instance, in Rajasthan and Madhya Pradesh, higher consumers responded they are not aware of the perception towards role of electricity department. In case of emergencies too most of the consumers said they are not satisfied with the response rate of the service provider.

With respect to usage of gas as a source of energy, consumers seemed more or less unaware of the safety norms across all states. Consumers need to be proactive when it comes to addressing concerns related to gas leak, rectification or servicing. In many instances it has been observed that consumers took action only when it was an emergency and were not in regular habit of getting servicing done.

Transport: Road, Rail and Aviation

The awareness was highest among consumers under transportation sector as compared to other service industries that were surveyed. The consumers were well aware of the safety norms and regulations that are applicable in use of transportation related services like roads, railway and aviation. Where personal safety is concerned the consumers are aware of the benefits of using helmet and seat belt. The need of more zebra crossings and pavements for pedestrians was also highlighted in the discussions with consumers.

Query on consumers' experience with railway authorities when lodging complain was a mixed one. Consumers seem to be satisfied with the response from railway authorities however there were a few consumers who said that their experience has been 'dissatisfactory'; namely responses from West Bengal, Assam and Rajasthan. Regarding food safety while travelling in train, majority of the responses were recorded against 'dissatisfied'- cumulative of 40.21 percent from six states.

Summing up

One of the major findings of the survey was that lack of infrastructure, manpower coupled with callous attitude of service providers as the major impediment towards effective implementation and monitoring of consumer safety rules and regulations across these sectors.

While we see that we have a number of laws, but they are rarely implemented. There is also lack of initiative on the part of the implementing authorities. Their failure can be attributed to the police/licencing officials lacking the capability to be modern law enforcement agencies. Wide-ranging and in-depth reforms of enforcement officials are therefore necessary to ensure that laws are actually implemented and effective.

Also for the collective national interest, the regulatory and implementing agencies, the services providers and consumers should come together and ensure laws laid down are strictly enforced. Where there are lacunae measures need to be taken to come up with new rules and action plan to ensure consumer safety across these sectors in India.

One of the main reasons of poor implementation of safety-related measures is the lack of consumer awareness. Majority of consumers are not aware of the existence of such laws/rules. They are also not aware of their rights and in case of any problem they are not sure whom they should approach. This has been clearly established through the recent survey. The awareness campaigns for consumers and service providers should hence be intensified.

It is now 30 years since the COPRA was introduced, but only a very small percentage of consumers are aware of its existence. Similarly, from time to time, the government amends various laws and rules to protect the interests of consumers. But unfortunately, those for whom these changes are made remain mostly ignorant about them. Thus, consumers in India need to be informed, educated and guided on important issues that concern their rights as consumers.

It is quite likely that in the absence of checks by authorities and demand from consumers, producers/manufacturers/traders are not willing enough to comply with the law.

To ensure proper implementation of the existing rules, the need of the hour is an effective consumer movement. The fact that consumers can play a vital role in formulation and implementation of standards is evident from the example of our Western counterparts, where consumers have already taken over the responsibility of acting as watchdogs. Empowerment of consumers has led to high awareness levels. Thus, there is an urgent need to sensitise consumers, so that they are ready to take the hassle. This book is an attempt to educate consumers on different safety issues related to their daily lives.

We sincerely hope that this research report would be successful in bringing about a strong consumer movement, which will ensure that authorities will strictly implement the existing rules and producers/service providers would be obliged to follow those.

1

Safety of Consumers: Health Sector

– S Saroja

Healthcare System and Reforms

In 1948, the World Health Organisation (WHO) defined ‘Health’ as a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity. Later, during the Ottawa Charter for Health Promotion in 1986, the WHO stated that health is “a resource for everyday life, not the objective of living. Health is a positive concept emphasising social and personal resources, as well as physical capacities”. Health can be broadly divided into two aspects – physical and mental.

Though mental health refers to people’s cognitive and emotional well-being, physical health means a healthy body, which directly relates to regular physical activity, quality health care, improved nutrition, good standards of living and better quality of life. Most of these can be achieved by the availability, accessibility and affordability of quality and safe food, medicines, health care, water and sanitation to the common man.

The UN Guidelines on Consumer Protection and the Consumer Protection Act, 1986 have clearly specified ‘Right to Safety’ as an indubitable right of consumers. ‘Right to Safety’ is defined as ‘Right to be protected against marketing of goods and services that are hazardous to life and property’.

The Constitution of India also has provisions dealing with citizen’s right to safety. Thus, it is a well-established fact that health and life are indivisible and also intertwined with the need for safe food, medicines, health care, water and sanitation in order to ensure secure and enhanced quality of life.

However, from the ‘State of Indian Consumer Report 2012’, released by CUTS, it is evident that ‘safety’ is not a matter of priority for the Indian public and the state of consumer safety in India is not very encouraging. Hence, this chapter aims to highlight the importance of safety in the health sector, which includes health care, food, water and sanitation – essential machinery for human well-being, the related laws and regulations in place, the lacunae in the system that result in compromising consumer safety and the methods to address these gaps.

Reforms and Provisions in Healthcare

In an overpopulated country like India, with its complex social architecture and economic extremes, the effect on health system is multi-fold. The socially under-privileged are unable to access healthcare due to geographical, social, economic or gender related distances. Mushrooming but unregulated private healthcare sector makes the gap between rich and poor more evident.¹

“India initially adopted a public-sector-led model for health care provision, in which most services were to be provided free to all people. Successive policy frameworks emphasised rural primary healthcare. Variations among states in economic development, social conditions, and political governance led to wide disparities in service quality. Poorly resourced public services failed to meet the health needs of an expanding population.

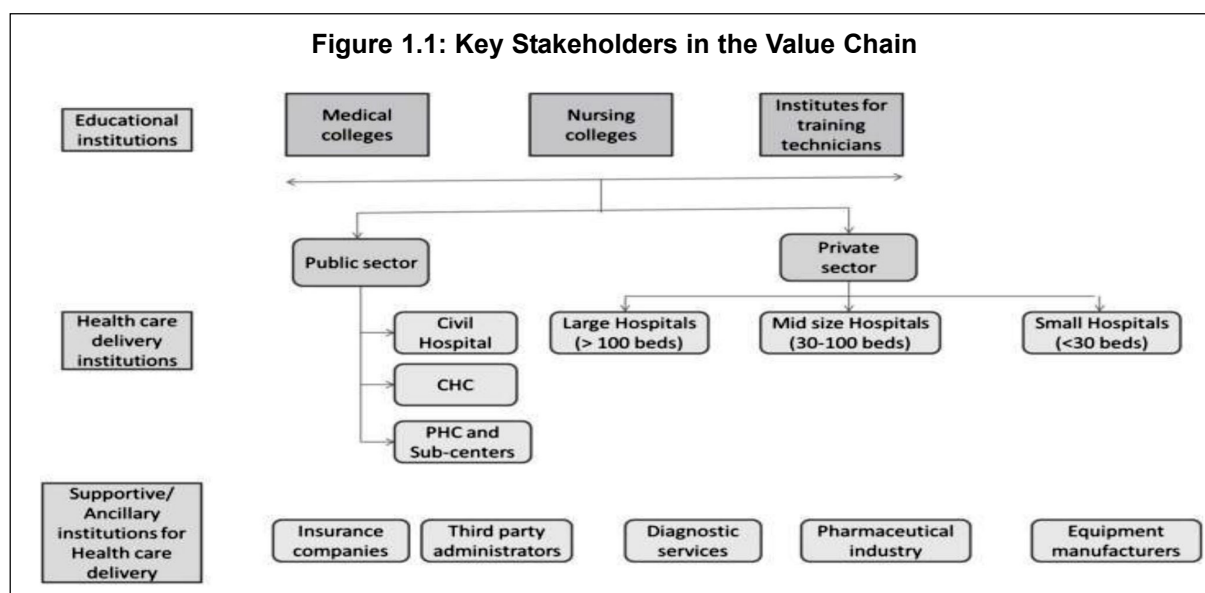
As the ability of public-sector health systems to respond to growing health needs dwindled and performance dimmed, the private sector grew. Initially, small private clinics proliferated, but after India’s economy opened up in the early 1990s, large corporate hospital chains took hold. Currently, the private sector provides nearly 80 percent of outpatient and 60 percent of inpatient care. However, because of their urban presence, these facilities do not provide basic health care to large segments of the rural population or the urban poor. The cost of private-sector health care is unaffordable for most Indians.

The first wave of reforms came with the launch of National Rural Health Mission (NRHM) in 2005, which focussed mostly on maternal and child health. NRHM was followed by a government-subsidised National Health Insurance Programme for unorganised workers, providing coverage of nearly US\$500 per family per year for hospital care. This did not reduce the out of pocket spending and in 2010, the Planning Commission of India convened a High-level Expert Group on Universal Health Coverage.²

Healthcare has become one of India’s largest sectors – both in terms of revenue and employment. Spending on healthcare in India was an estimated five percent of Gross Domestic Product (GDP) in 2013 and is expected to remain at that level through 2016. Total health care spending in local-currency terms is projected to rise at an annual rate of over 12 percent, from an estimated US\$96.3bn in 2013 to US\$195.7bn in 2018.³

As a patient/consumer, one is dependent on many stakeholders across the value chain in the Indian healthcare industry. Therefore, the inter-relationships across the players are intricate and raise several issues pertaining to conflicts of interest and end in compromising on consumers’ safety at different levels. A brief overview of the key stakeholders in the value chain is given in the Figure1.1⁴:

Public healthcare system comprises limited secondary and tertiary care institutions in key cities and focusses on providing basic healthcare facilities in the form of primary healthcare centres (PHCs) in rural areas.



National Health Mission and Public Health Standards

The National Health Mission (NHM), which encompasses two sub-missions – National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM) – approved by the Cabinet in 2013 – is both agile and dynamic and is intended to guide states towards ensuring the achievement of universal access to health care through strengthening of health systems, institutions and capabilities.

The core values of NHM include safeguarding the health of the poor, vulnerable and disadvantaged and moving towards a right-based approach to health through entitlements and service guarantees, strengthening public health systems as a basis for universal access and social protection against the rising costs of health care.⁵

Indian Public Health Standards (IPHS) are a set of uniform standards envisaged to improve the quality of health care delivery in the country. NRHM seeks to provide effective health care to the rural populace throughout the country with special focus on the States and Union Territories (UTs), which have weak public health indicators and/or weak infrastructure.

Towards this end, the Indian Public Health Standards (IPHS) for Sub-centres, primary health centres (PHCs), community health centres (CHCs), Sub-district and district hospitals were published in January/February 2007.⁶

Operational Guidelines for Quality Assurance in Public Health Facilities

These defining relevant quality standards, a robust system of measuring these standards and institutional framework for its implementation, were issued by the Ministry of Health and Family Welfare in 2013.

State Programme Implementation Plans

The State Programmed Implementation Plans (PIPs) spell out the strategies to be deployed, budgetary requirements and health outcomes aimed for. The State's PIP is made by the Executive Committee (EC) of the State Health Society and approved by the State Government/Governing Board.⁷

Draft National Health Policy

The new draft National Health Policy (NHP), released in 2015, explicitly addresses the enactment of a right to health through parliamentary legislation but allows states to decide what services that right should translate into.⁸

However, considering past experience, when the NHP is likely to be unveiled is a big question. Also, if and when it is espoused, firm political commitment by state governments will be required for it to become more than an aspirational statement.

Preventive Healthcare Facilities

It is unfortunate that even in current medically advanced world some old but potentially dangerous diseases are still present in many parts of the world. In order to prevent and protect children from the onslaught of such diseases, the Indian Government has mandated several vaccines and has made them available at low price/for free in government hospitals. Most of the vaccines are to be administered at different stages right from the time of birth. Some of these vaccines include, BCG vaccine⁹, DPT vaccine, MMR vaccine and so on.

Challenges in Health Sector

“Despite various programmes being in place, the government’s low expenditure on health care places much burden on patients and their families, as evidenced by the country’s high out-of-pocket (OOP) spending rate, one of the world’s highest. According to the WHO, just 33 percent of Indian health care expenditures in 2012 came from government sources. Of the remaining private spending, around 86 percent was OOP”.¹⁰

According to reports, another major barrier to service delivery is the severe shortage of qualified health care personnel. According to a report, though there are 398 Indian medical colleges with an annual intake of 52,000 students, there are shortages of doctors, which are aggravated by urban concentration and emigration. Shortfalls of nurses and associated health professionals are even more acute. Many patients, especially those living in rural areas, still receive services from unqualified practitioners.

Besides, statistics reveal that India’s health infrastructure leaves much to be desired. The US has one bed for every 350 patients whereas the ratio for Japan is 1 for 85. In contrast, India has one bed for every 1,050 patients. Also, hospitals in India will need to increase their Information Technology expenditure considerably to provide improved and patient-oriented service.¹¹

The main challenges confronting the public hospitals presently include inadequate infrastructure, scarce manpower, unmanageable patient load, equivocal quality of services and high out of pocket expenditure. Major reforms are required to address all these issues in order to ensure quality, affordable, health care in India.

Patient Safety: A Shared Responsibility

Patient Safety is an indispensable and integral component of enhanced quality healthcare. The Institute of Medicine (IOM) defines Patient Safety as ‘medication without harm’. To put forth in

a more inclusive manner, Patient Safety is “a new healthcare discipline that emphasises preventing, reducing, reporting and analysis of medication errors” (leading to adverse healthcare events).¹²

Patient safety can be ensured by:

- Creation of active networks between doctors and patients and amongst the healthcare providers in order to improve communication
- Learning from the failure and constantly employing methods of risk-assessment in medical procedures
- Encouraging effective evidence-based care
- Monitoring improvement and
- Educating patients and creating awareness in them regarding the process of care¹³

At present, patient safety is a serious global public health issue. Estimates indicate that in developed countries as many as one in 10 patients is harmed while receiving hospital care. Out of every 100 hospitalised patients at any given time, seven in developed and 10 in developing countries acquire health care-associated infections. Hundreds of millions of patients are affected by this worldwide every year.

In recent years, countries have increasingly recognised the importance of improving patient safety. In 2002, WHO Member States agreed on a World Health Assembly resolution on patient safety.¹⁴

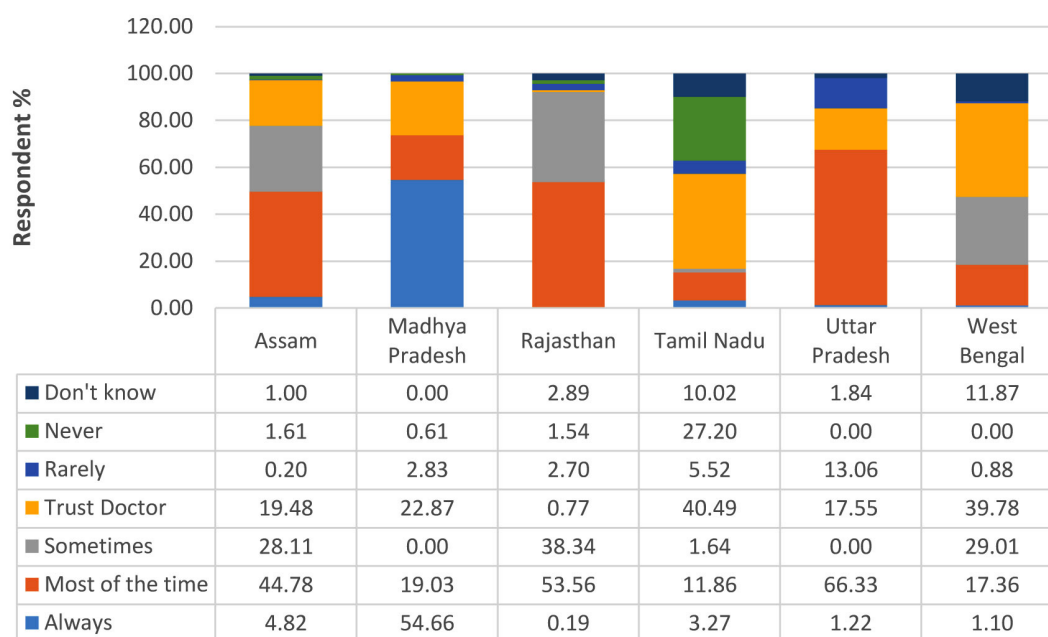
The most common causes due to which patient safety in India suffers are as following:

- Patient’s affordability status for availing medical services
- Patient’s identity issue is a matter of concern
- Wrong diagnosis by the doctors and medical negligence during treatment
- Irrational prescription, wrong administration, wrong dosage, wrong storage of drugs
- Lack of proper health system in place in country.
- Lack of sense of hygiene amongst the public. As a result, they suffer from many infections
- Non-adoption of standard treatment guidelines by most of the Indian states
- Huge difference between doctors and patients due to immense disparity in their knowledge and socio-economic status and
- Lack of availability of proper fire safety and security measures in health centres and
- Improper disposal of bio-medical waste posing a risk of infection to the patients

On the issue of prescribing antibiotics nearly 44.78 percent respondents reported that such medicines were prescribed most of the time and 66.33 percent respondents residing in Uttar Pradesh stated that they were prescribed antibiotics most of the time (see figure 1.2).

Media reports indicate medical errors – where consumer safety for life is truly threatened – as one of the top ten causes of death in the world. According to a 2013 study (Global Burden of Unsafe Medical Care) by Dr Ashish Jha of Harvard School of Public Health, of the 421 million hospitalisation in the world annually, about 42.7 million adverse events of medical injury take place, two-thirds of which are from low-income and middle-income countries. India records approximately 5.2 million cases a year, ranging from incorrect prescription, wrong dose, wrong patient, wrong surgery, and wrong time to wrong drug.¹⁵ Many a times, treatment kills a person not the disease. We have heard and read of many instances, where, forceps, scissors, cotton, towel, etc. were left inside following surgeries thus posing great risk to patients.

Figure 1.2: Antibiotics Being Prescribed too often

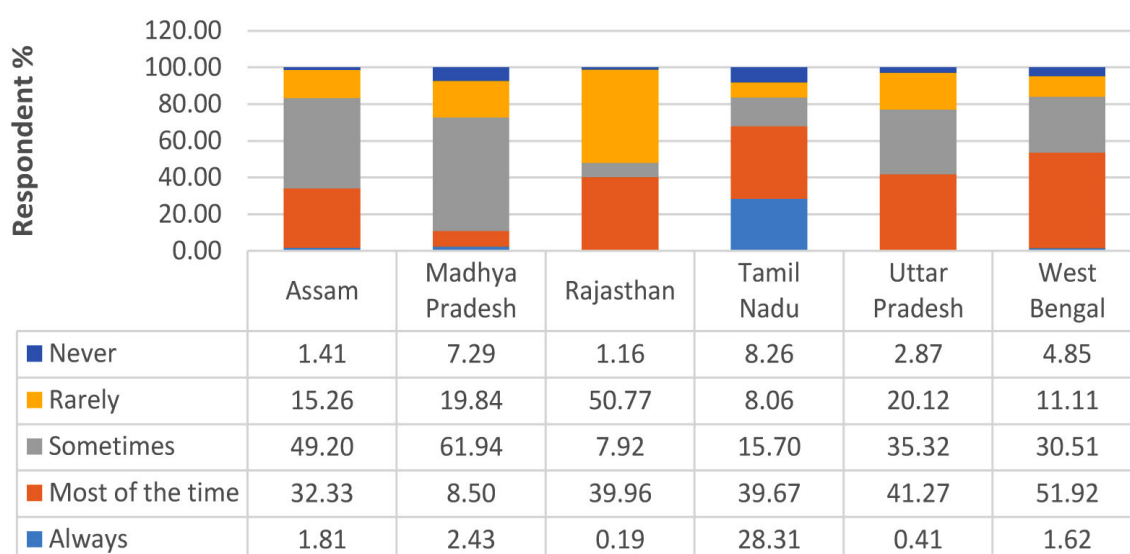


Consumers' Perception of Safety in Government Hospital and Private Hospitals

Government Hospitals

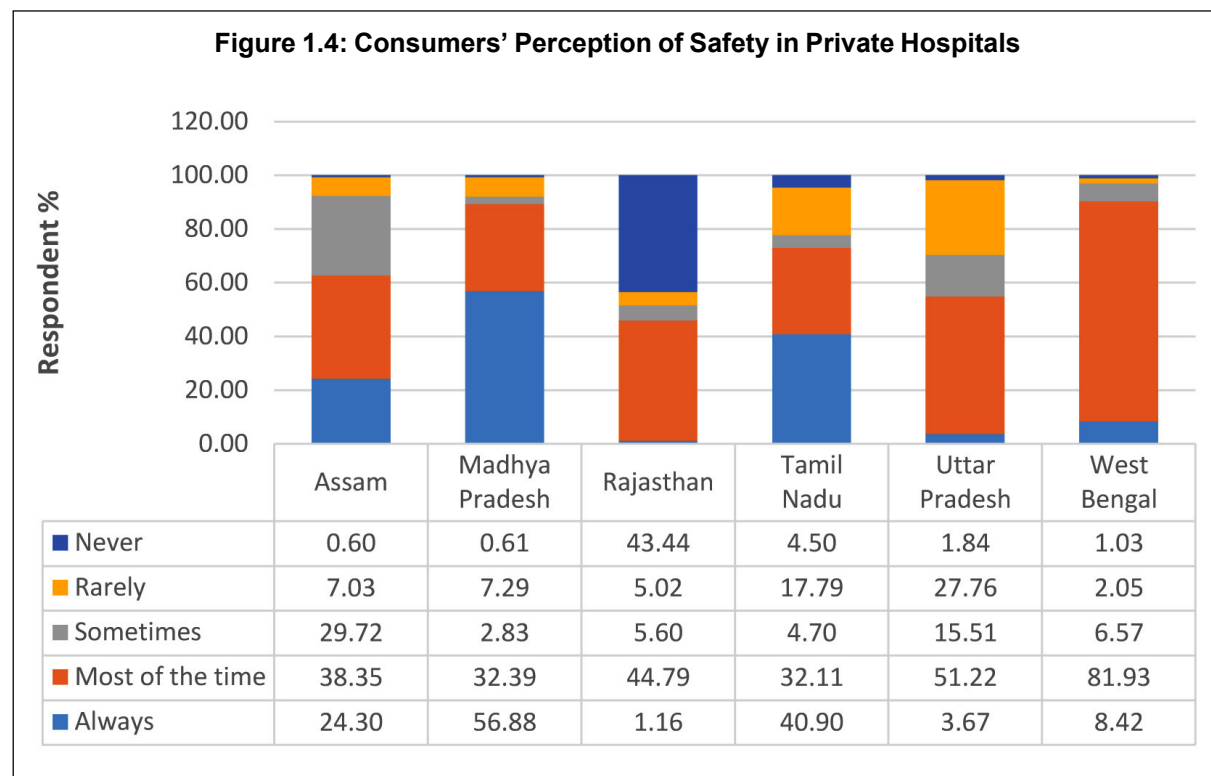
Nearly 32.33 percent of the respondents of Assam visited government hospitals most of the times. About 61.94 percent respondents of Madhya Pradesh visited them sometimes whereas 11.11 percent of respondents rarely visited government hospitals (see Figure 1.3).

Figure 1.3: Consumers' Perception on Safety in Government Hospitals



Private Hospitals

About 51.22 percent respondents of Uttar Pradesh indicated consumers' safety in private hospitals most of the time. Hardly 5.6 percent of respondents of Rajasthan believed in safety measures in private health centres. However, 4.50 respondents of Tamil Nadu expressed strong disbelief in safety in private hospitals (see Figure 1.4).



Medical Negligence, Consumer Protection Act and Medical Education Pattern

Fortunately, in 1995, the Supreme Court Judgement in Indian Medical Association vs. V P Shantha, brought the medical profession within the ambit of 'service' as defined in the Consumer Protection Act, 1986. This defined the relationship between patients and medical professionals as contractual.

The increase in medical negligence cases filed reveals a set of alarming statistics: 98,000 deaths from medical injuries occur in India every year, according to an ongoing National Accreditation Board of Hospitals and Healthcare Providers (NABH) study. Furthermore, medico-legal cases in the Supreme Court alone have gone up by 400 percent in the last 10 years, according to the online legal database, Manupatra. Currently, there are 3.5 lakh cases of medical negligence pending in India's consumer courts.¹⁶

A study of 41 cases on medical negligence, decided by the National Consumer Disputes Redressal Commission (NCDRC), during 2009-13, shows the following features:

- Medical negligence cases involving surgical procedure accounted for 33 cases (80 percent) and Medical treatment seven cases (20 percent)

- Hospitals were held negligent along with the consultants in 14 cases (34.4 percent) and Hospital alone in one case
- Consultants were compositely held negligent in 10 cases (24.3 percent). Contributory negligence present in one case
- Nearly nine cases (30 percent) of *res ipsa loquitor* were found
- About cases (30 percent) were accounted for failure to take proper informed consent. Unqualified staffs were accounted for five cases (14.6 percent)
- In almost 13 cases (31.7 percent) medical records were not properly maintained by the hospitals
- About 20 patients (48.7 percent) presumably died due to negligence of doctors
- In nearly 11 cases (26.2 percent) consultants failed to conduct the necessary investigation and
- In about six (14.6 percent) cases consultants failed to manage postoperative complication¹⁷

This shocking data goes on to confirm that medical negligence is one of the steadily rising challenges posed to consumer safety.

The landmark verdict of the Supreme Court in the Anuradha Saha case has the potential to significantly improve healthcare delivery. It awarded a hitherto unheard of sum of ₹5.96 crore as compensation to Dr Kunal Saha, husband of Anuradha who died as a result of medical negligence in 1998. This shows that the apex court of the land takes medical negligence, resulting in loss of life, seriously and also strongly indicates that the medical community should transform its ways and pay due attention to patient safety.

In the case of V Krishnakumar vs. State of Tamil Nadu¹⁸, since a prematurely born baby girl was not prescribed a test for the disease, Retinopathy of Prematurity (ROP), which is frequent in cases of premature births, the child lost vision. Based on the report by a medical team from the All India Institute of Medical Sciences (AIIMS), New Delhi, the NCDRC granted a compensation of ₹5 lakh in 2009 to the girl's parents, which remained unpaid by the state government.

Allowing a plea by the girl's father to enhance the damages, the Supreme Court awarded a compensation of ₹1.38 crore. It found no justification for why the necessary tests were overlooked by the specialists and held them accountable for negligence. It was topped with an additional amount of ₹2.87 lakh to take care of the medical treatment that the 18-year-old girl would require.

Similarly, in the case of V Kishan Rao vs. Nikhil Super Speciality Hospital,¹⁹ the complainant Kishan Rao was an officer in Malaria Department. His wife was wrongly treated for Typhoid instead of Malaria by the respondent hospital. It led to death of the patient. The District Consumer Forum awarded compensation of ₹2 lakh to the complainant.

However, the decision of the District Forum was overruled by the State and the National Commissions on the basis of lack of independent expert opinion in favour of complainant. However, the Supreme Court upheld the findings and decisions of District Forum in this case relying on the principle of *res ipsa loquitor* (meaning thereby the thing speaks for itself i.e. there is no need of expert opinion in every case of negligence).

Apart from the Consumer Protection Act, medical negligence also attracts various provisions of The Indian Penal Code, 1860 (IPC). As per the rules, if death is caused by the doctor while performing a medical activity, then on the lodging of FIR, the doctor shall be arrested under Section 304A and punished accordingly. But if no death occurs, but hurt or grievous hurt is caused then the doctor shall be prosecuted under Sections 337 and 338 of IPC.

Recently, in a Public Interest Litigation (PIL) filed in the Madras High Court, the Court ordered the Chennai Metropolitan Development Authority and other enforcement authorities to issue notices to multistoried hospitals that did not have facilities, such as ramps, fire safety measures and completion certificates for the structures. The PIL had insisted on the need to install fire and life safety measures and compliance of other building rules in multistoried hospitals, as many did not comply with the rules and were operating without due importance to patient safety.

Though there are legal options that a patient or the family has when he/she falls victim to medical errors and lack of other safety measures, it is important that all hospitals across the country avoid such situations and consider patient safety on top priority and make the patient feel safe and secure while in hospital.

The Clinical Establishments (Registration and Regulation) Act, 2010

The said legislation has been enacted by the Central Government, under the Ministry of Health and Family Welfare, to provide for registration and regulation of all clinical establishments in the country, with a view to prescribe the minimum standards of facilities and services provided by them.

The salient features of the Act²⁰ include generating comprehensive data base for all types of clinical establishments in the country, defining basic minimum standards for operation, registration of all facilities, making available details about registration and data of clinical establishments in public domain, ensuring that details of charges and facilities available are prominently displayed at a conspicuous place at each establishment, provisioning for healthcare providers to maintain records, cancelling of registration in case of violations and so on.

However, it is unfortunate that most States in the country are yet to espouse the Act. Tamil Nadu, for example, has not adopted the Act yet. Earlier, The Tamil Nadu Private Clinics Establishment Act, which was enacted in 1997, did not see the light of the day due to lobbying by private hospitals and threats to move courts against the state government's rules. As of now, registration is with the Health Department in the Corporation and there are no procedures for monitoring.

Thus, hygiene is pathetic in many of the mediocre clinics/hospitals and poses great risk to patient safety. There are also many of those hospitals/clinics across states that do not have the basic medical equipments required to deal with emergencies, thus endangering human life. It is important that The Clinical Establishments (Registration and Regulation) Act, 2010 is implemented in all states across the country in order to ensure patient safety.

Medical Education Pattern in India

“Medical education in India is known to give emphasis only to the acquisition of more knowledge than education on skill development and problem solving capacity.

Following the Medical Council of India (MCI) guidelines, colleges adhere to a pattern of one year of basic sciences, one and half years of para-clinical sciences and two years devoted entirely to clinical subjects. It is observed with grave disappointment that these subjects are taught in isolation as contrasted with teaching them in an integrated form that will ensure a holistic approach to problems. Imparting knowledge on ethical, moral and legal responsibilities, which are pre-requisites for a good doctor, is sadly lacking in the present day curriculum”.²¹

Right from the entrances till the final examinations in colleges, students are required to simply study a fixed set of information and produce the same on paper. Testing the mere recalling ability of the students and not other skills such as problem-solving, psychomotor, leadership and communication skills is the major cause for the quality of doctors these colleges produce today.²²

This being so, the admission procedures to medical colleges leave much to be desired. Apart from the All India Medical Entrance Exams, which is the standard test for admission to 15 percent of Central Government quota merit seats in Government Medical Colleges in India, states and private colleges have their own processes for admissions, which include the management quota, where, students, who score much less in higher secondary exams also get admissions in medical colleges against payment.

Thus, after graduation, it can be noticed that there is great variance in the knowledge acquired, problem solving skills learned and clinical competence of doctors that the country produces, which might directly impact patient safety. This problem is augmented by the uneven distribution of medical colleges in India.

Nursing in India

Nurses play a significant role in patient care and thus have a major responsibility towards patient safety. As recorded in 2013, India faces an acute shortage of nursing staff with an estimated deficit of 2 million. The nurse-population ratio is 1:2500 compared with ratios of 1:150 to 1:200 in higher income nations.²³

Research evidence on nurses’ working conditions and job satisfaction in India is limited. However, reports indicate that nursing lacks clear career pathways and mechanisms for promotion; in-service training is rare (except in the best corporate hospitals); pay is low (especially in small private hospitals); and working conditions are often inadequate.²⁴

While there are centres of excellence in nursing education in India, there is limited published material documenting their successes, systems and processes.

Generally, key issues in nursing education include:

- Inadequate educational monitoring and governance at State-level. For example, sub-standard institutions continue to operate despite being unable to meet INC and University standards
- Lack of good teaching staff in the educational institutes
- Poor physical, educational infrastructure and resources, especially for clinical skills teaching
- Lack of continuing professional development and promotional opportunities for faculty
- Over-cluttered curriculum of nursing
- Poor living accommodation for students
- Poor links between clinical areas and educational institutions and
- Inadequate clinical experiences²⁵

This situation needs to change drastically. Considering their important position in the medical field, it is important that necessary measures are taken to make sure that quality nurses are produced in sufficient numbers in order to safe-guard patients' interests.

Bureau of Indian Standards

In order to ensure standardisation in the field of medical equipment including all types of surgical instruments, electro-medical equipment, surgical dressings, anaesthetic and rehabilitation equipment, artificial limbs, biological stains, veterinary surgery instruments, dentistry, laboratory instruments, equipment and hospital planning, the Bureau of Indian Standards (BIS) has set up technical committees under various heads and is publishing diverse standards. Again, these standards are voluntary in nature with price attached and so, there is no incentive and the regulations are not mandatory for everyone to follow!

National Accreditation Board for Hospitals and Healthcare Providers

In order to improve patient safety, accreditation is considered to be the best tool to standardise healthcare. NABH²⁶ is a constituent Board of Quality Council of India, set up to establish and operate accreditation programme for healthcare organisations.

The Board is structured to cater to much desired needs of consumers and to set benchmarks for progress of health industry. Hospitals seeking NABH accreditation are required to meet several stringent criteria. The standards designed by NABH contain more than 500 essentials, including information to patients, for the hospitals to accomplish in order to get accreditation.

Therefore, a process-driven approach in all aspects of hospital activities, with a strong focus on patient rights and safety, control and prevention of infections, good patient care and better clinical outcome becomes mandatory. Thus, accreditation has become the solution for the quality and safety issues in hospitals.

Accreditation is only voluntary in nature and there are several hospitals in the country that cannot even consider going for accreditation due to lack of physical infrastructure, absence of standards and no procedures by which outcomes could be measured.

While this is so, “hospital accreditation itself is criticised for its emphasis on structure and documentation and less attention being given to the clinical process and outcomes of care. The concern is, once the accreditation is conferred, the hospital can slip back into old ways of functioning and worse, the strain of complying to the documentation may put the staff into a ‘relax mode’ that may take the service levels to a new low.

The incident of fire and subsequent death of around 100 people, including patients and employees at AMRI Hospital, Kolkata, an NABH accredited hospital, have raised serious questions on correlation between quality and accreditation.

Medical audit or clinical audit is the comparison of actual practice against agreed, documented, evidence based standards with the intention of improving patient care. Though most of the accreditation programme include medical audit, it is not done with the required rigor in the Indian hospitals”.²⁷

Accordingly, irrespective of accreditation, it is crucial that a repository of medical records, containing updated information from across all hospitals, be it private or public, is created and maintained by the Health Department of all States and periodical medical audit carried out and the details made available in public domain in order to ensure that required standards are observed by hospitals and quality health care provided, which eventually enhances patient safety.

Box 1.1: Patient Safety Legislations in the US and UK

The Patient Safety and Quality Improvement Act, 2005 (PSQIA) is the main statute governing and necessitating Patient Safety in the US. The main objective of its enactment was to facilitate confidential reporting and analysis of patient safety issues to prevent future hazards.²⁸

The PSQIA establishes Patient Safety Organisations (PSOs) to collect consolidate and analyse the information reported by healthcare providers in a confidential manner and to look into the failures, errors, near misses and adverse events and identify patterns in the same and propose reforms in medical practices to prevent future risks. It furthermore establishes the Network of Patient Safety Databases (NPSDs) to provide evidence-based management resource to healthcare providers and PSOs, analyse the national and regional statistics and promote inter-operability among reporting systems.²⁹

Other healthcare reform laws in the US are:

- Emergency Medical Treatment and Active Labour Act, 1986
- Health Insurance Portability and Accountability Act, 1996
- Medicare Prescription Drug Improvement and Modernisation Act, 2003
- Health Information Technology for Economic and Clinical Health Act, 2009 and
- Patient Protection and Affordable Care Act, 2010.

UK has its own agencies that also perform the functions of improving patient safety. The National Safety Patient Agency (NPSA)³⁰ was established under the National Health Service (NHS) Act, 2006 for this purpose. Its functions are to inform, support and influence organisations and people in the health sector to improve safe patient care.

An Additional Body, Medicines and Healthcare Products Regulatory Agency (MHRA), the Regulatory body of medicines and other healthcare products in England, has framed schemes for patient safety. For instance, the Early Access to Medicines Scheme (EAMS)³¹ proposed by the UK Ministerial Industry Strategy Group (MISG) and approved by the Government and MHRA in 2014, seeks to give patients with life threatening or seriously debilitating conditions without adequate treatment options, access to medicines that do not yet have a marketing authorisation when there is a clear unmet medical need. Under the scheme, the MHRA will give a scientific opinion on the benefit/risk balance of the medicine, based on the data available when the EAMS submission was made. The opinion lasts for a year and can be renewed.

Box 1.2: Market-driven Approach to Patient Safety in the US

Also known as 'healthcare purchase initiative', it can be explained using the example of 'The Leapfrog Group'. The Group, consisting of the CEOs of businesses, aims "to mobilise employer purchasing power to initiate breakthrough improvements in the safety of healthcare for Americans". They hope to impact medical care by incentivising healthcare providers to stick to certain standards for the process and delivery of care, using their financial influence.

The Group promotes three main patient safety practices:

- Use of computerised physician order entry
- Involvement of critical care physicians for treating ICU patients and
- Use of evidence-based hospital referral systems

These initiatives were chosen by the Group as they have been proven to show enhanced quality of care and feasible implementation. A research sponsored by this Group suggests these three strategies could prevent 60,000 deaths per year and over 500,000 errors in administration of medication.³²

Approach of Professional Societies

Some of the earliest initiatives to improve patient safety were brought forth by medical professional societies than businesses or the government. Though they might not have the power of the government or the healthcare purchasers, their views in medical community and clinical experience are greatly advantageous. Also, healthcare providers would be naturally more inclined to follow the guidelines proposed by medical professional societies than government or industry.³³

Patient Rights and Regulations

Formalised in 1948, the Universal Declaration of Human Rights recognises "the inherent dignity" and the "equal and unalienable rights of all members of the human family". It is on the basis of this concept of the person, and the fundamental dignity and equality of all human beings, that the notion of patient rights was developed. Assuring that the rights of patients are protected requires more than educating policy makers and healthcare providers; it requires educating citizens about what they should expect from their governments and their healthcare providers – about the kind of treatment and respect they are owed.³⁴

It is unfortunate that we do not have a dedicated Charter for patient rights. However, MCI, a statutory body with the responsibility of establishing and maintaining standards of medical education and recognition of medical qualifications in India, which registers doctors to practice in India in order to protect and promote the health and safety of the public by ensuring proper standards in the practice of medicine, has put forth The Code of Ethics Regulations that defines duties of physicians towards their patients. However, how effectively are the regulations and acts of MCI implemented is everyone's guess!

Other efforts to ensure patient rights include the High-Level Expert Group (HLEG) on Universal Health Coverage (UHC) that was constituted by the Planning Commission of India in October 2010, which among other reforms, had recommended for the establishment of the National Health Regulatory and Development Authority (NHRDA) with three key units: System Support Unit (SSU); The National Health and Medical Facilities Accreditation Unit (NHMFAU); and The Health System Evaluation Unit (HSEU).³⁵

In addition, the Union Ministry of Health and Family Welfare, in the draft National Health Policy 2015, has suggested making health a fundamental right, similar to education and denial of health an offence.

Standard Treatment Guidelines

Standard Treatment Guidelines (STGs) are aimed at providing health practitioners with standardised guidance in making decisions about appropriate healthcare for specific clinical conditions.³⁶ They are critical to promoting rational use of medicines, moving towards achieving and maintaining an acceptable standard of quality of health care and have great potential to improve patient care. STG's are usually evidence based and subject to change with new developments.

While a few states like Karnataka, Maharashtra and Uttar Pradesh successfully developed their own STG's, they were limited in their scope, covering only certain diseases and not updated after the first edition.

Regular updates to reflect current recommendations and actual clinical experience add to the credibility and acceptance of the guidelines. Adoption/adaptation of valid pre-existing guidelines³⁷ not only saves time, effort and money but also ensures that there is a good-quality document in place after an active adaptation process. The adaptation process in various states like Gujarat, Rajasthan and Uttarakhand, revealed that the main changes required were the addition of a few more priority diseases, while only a few changes in the treatment protocols were needed.

It is important that all states realise the significance of this and ensure implementation in respective states in order to provide better health care.

Clinical Trials

The Drugs and Cosmetics Act defines 'clinical trial' as:

- In respect of drugs, any systematic study of new drug or investigational new drug or bioavailability or bioequivalence study of any new drug in human participants to generate data for discovering or verifying its clinical, pharmacological, including pharmacodynamic and pharmacokinetic, or adverse effects with the objective of determining safety, efficacy or tolerance of the drug; and
- In respect of medical devices, the systematic clinical investigation or study of an investigational medical device or a new medical device in, or on human participants to assess the safety or performance or effectiveness of the medical device.

Regulations for conducting clinical trials in the country are prescribed under various rules and schedule of the Drugs & Cosmetics Rules, 1945.

Good Clinical Practices (GCP) is an ethical and scientific quality standard for designing, conducting and recording trials that involve the participation of human subjects. Compliance with this standard provides assurance to public that the rights, safety and well-being of trial subjects are protected, consistent with the principles enshrined in the Declaration of Helsinki and ensures that clinical trial data are credible.

India offers unique opportunities for conducting clinical trials in view of the large patient pool, well- trained and enthusiastic investigators and premiere medical institutes available in the country along with considerable low per patient trial cost, as compared to developed countries. Indian Good Clinical Practices Guidelines were developed to ensure uniform quality of clinical research throughout the country and to generate data for registration for new drugs before use in the Indian population.³⁸

Later, with the objective to streamline clinical trials, as the booming clinical trial industry was raising safety concerns because of lack of regulation of private trials and the uneven application of requirements for informed consent and proper ethics review, the Central Drugs Standard Control Organisation (CDSCO) released a slew of orders making a wide range of changes to the agency's policies governing clinical trials.³⁹

By an order dated June 15, 2009, the Office of the Drug Controller General of India, while granting permission for Clinical Trials, has made registration of clinical trial in Indian Council of Medical Research (ICMR) Clinical Trial Registry mandatory. Also, the Office of the Drug Controller General of India has issued an Order in 2012 mandating submission of Periodic Safety Update Reports of new drugs to the Drugs Controller General of India (DCGI) every six months for the first two years and for subsequent two years, as is required under Schedule 'Y' of the Drugs and Cosmetics Rules.

By another Order dated December 15, 2014, the Office of the DCG announced the Formulae to determine the quantum of compensation in case of clinical trial related injury.⁴⁰ Considering the various trials taking place, it is necessary that the trial subjects' interests are duly protected.

Growing Medical Tourism

Health care in India continues to be poor, especially in rural areas, determined by shortages of trained health workers, lack of funds, corruption and various other factors as discussed above, on the other hand, medical tourism is fast growing in India. With general tourism on the rise, it is estimated that the volume of medical tourists from worldwide could reach up to 5 million by 2016. India hosts medical tourists from Maldives, Bangladesh, US, UK, Canada and Germany.⁴¹ According to a research project commissioned by the Government of India to Indian Institute of Tourism and Travel Management, cardiac treatment (30 percent) is the most popular procedure in Indian medical tourism, followed by orthopedic including joint replacement (15 percent), nephrology (12 percent), neuro-surgery (11 percent), cancer (11 percent) and all others, including cosmetic surgery (22 percent). Moreover, medical tourism is an example of how India is profiting from globalisation and outsourcing.⁴²

Though impressive, this does not address the divide between facilities aimed at medical tourism and those that cater to the health needs of the average, rural, Indian! While it is an acknowledged fact that medical tourism is an important source of foreign exchange and goodwill to the country in the global arena, it is necessary that the public health care in the country is improved so that Indians benefit.

Other Medical Facilities

Mobile Medical Units

Mobile Medical Units (MMU) is a mechanism to provide outreach services in rural and remote areas and thus enhances patient safety. MMUs comprise of one/two/three vehicles varying state-wise. If there is more than one vehicle, then, one is used for transport of medical and part-medical personnel, second is used for carrying equipment/ accessories and basic laboratory facilities and the third vehicle carries diagnostic equipment, such as X-Ray, ultrasound, ECG machine and generator. Each unit will have a doctor, nurse, radiologist, lab attendant, pharmacist, helper and driver. There will be provision of medicines in the unit. Operational guidelines for MMUs were released recently.⁴³

Telemedicine

Telemedicine is an emerging field in healthcare arising out of the synergistic convergence of Information Technology with Medical Science having enormous potential in meeting the challenges of healthcare delivery to rural and remote areas besides several other applications in education, training and management in health sector.⁴⁴

According to WHO, telemedicine is defined as: “The delivery of healthcare services, where distance is a critical factor, by all healthcare professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for continuing education of healthcare providers, all in the interests of advancing the health of individuals and their communities”.

The barriers of broken roads and poor transport are being overcome by telemedicine. For rural India – where 80 percent of the population lives with only 30 percent of the country’s doctors and where healthcare access is determined by geographical location and income levels – the success of healthcare, at the moment, hinges on innovation. Telemedicine is not here to replace but it’s bridging the chasm.⁴⁵ Telemedicine falls within the purview of the Ministry of Health and Family Welfare, Government of India.⁴⁶

What are Drugs?

According to Section 3(b) of the Drugs and Cosmetics Act, 1940 ‘drug’ includes:

1. All medicines for internal or external use of human beings or animals and all substances intended to be used for or in the diagnosis, treatment, mitigation or prevention of any disease or disorder in human beings or animals, including preparations applied on human body for the purpose of repelling insects like mosquitoes.
2. Substances (other than food) intended to affect the structure or any function of the human body or intended to be used for the destruction of [vermin] or insects, which cause disease in human beings or animals, as might be specified from time to time by the Central Government by notification in the Official Gazette.
3. All substances intended for use as components of a drug including empty gelatin capsules.
4. Such devices intended for internal or external use in the diagnosis, treatment, mitigation or prevention of disease or disorder in human beings or animals, as might be specified from time to time by the Central Government by notification in the Official Gazette. Drugs that are sold to customers are of two kinds: Branded and Generic.

Branded Drugs

When a drug is discovered, the inventor of the drug gets a patent. He/she has exclusive rights for its manufacture and sale. However, once the patent expires, other companies can manufacture and market the drug. They can give the drug their own brand name.

Generic Drugs

Generic Drugs in India are marketed only under their International Non-proprietary Name (INN). Branded Drugs are invariably costlier because their trade margins and their marketing costs are higher. Generic drugs bring in money from the sheer volume of sales.

There are more than 20,000 (conservative market estimate) brands of drugs in the market. For example, there are more than 1,200 brands of Paracetamol alone, which is a drug for fever.⁴⁷ The issues around this are⁴⁸:

The Problem of Choice

It is difficult for a customer or a doctor to choose rationally when there are so many brands of just one drug. Price variations: There is a great variation in prices among brands. There are drugs that are 300-400 percent costlier in comparison to the cheaper alternative! The same company often makes more than one brand and prices them differently! Neither the doctor nor the patient is always aware that there might be cheaper alternatives for the same quality/efficacy.

A myth of quality is generated: Doctors often observe that some brands have a greater efficacy on their patients than other brands and so they prescribe them. They often feel that quality considerations should override cost considerations.

Given this background, some issues of concern are as following:

- Is there a body of objective evidence to prove that brand A is better than brand B? Have a large number of other doctors validated this observation with verifiable data which is the hallmark of the scientific process?
- Further, if the same company is making more than one brand and selling it at different prices, where does the question of quality come in?
- All manufacturers have an (are required to obtain) approved license to manufacture from the Drug Controller. If so, then, how can there be a difference in quality? (Of course, quality control is not an issue for small companies alone. Violating norms can be found across all levels – be it the small companies or the multinationals.)

Thus, it is crucial for the Government to enforce a policy that all drugs are sold only under generic name with the drug company's name indicated in brackets. This will enable patients to compare prices of the same drug being marketed by same/different companies. Of course, the Government's recent initiative, *Jan Aushadhi*⁴⁹ that involves opening of *Jan Aushadhi* stores, where, unbranded quality generic medicines, whose patency would be equivalent to branded expensive drugs, would be sold at lower prices, is laudable. However, it is yet to take off in all the states! Also, the regulatory authorities should put up an independent source of information about all drugs sold in the Indian market.

Drug Pricing in India

Drug prices in India are controlled by the Drugs Prices Control Order (DPCO). The DPCO is an order issued by the government under Section 3 of the Essential Commodities Act, 1955 empowering it to fix and regulate the prices of essential bulk drugs and their formulations. National Pharmaceutical Pricing Authority (NPPA) controls and regulates the prices of pharmaceutical drugs in India. It has limited authority to fix, review and justify pharmaceutical prices under the DPCO, 1995.

The DPCO's primary objectives include expanding the National List of Essential Medicines (NLEM), authorising the NPPA to regulate prices of India's NLEM and authorising the NPPA to regulate price increases of non-essential medicines. The NLEM is a dynamic list and is reviewed every three years in order to include or exclude drugs as relevant to new innovations and associated with the present market competition. Recently, the number of drugs under price control (NLEM) has been increased to 376 from the previous list of 348 prepared in 2011. Usually, for drugs not under price control, the companies are at liberty to decide the margins. The point is where does the actual difference in cost structure between different brands of the same drug occur?

Manufacture

There cannot be too many variations in the manufacturing costs of a drug. There are only 500 active pharmaceutical ingredients – the actual medicinal component (API) on the whole and about 1,300 bulk drug manufacturers make them.

Formulating

This is a process where the API is made into its usable form by making it into a tablet or syrup or capsule. Here there may be some minor difference in the cost based on the quality control systems or the quality of materials used or scale of operation.

Marketing and Distribution Cost

This is where there is a substantial difference in the cost. To cope with the competition that exists, pharma companies use a variety of promotional tactics that increase the cost of the drug to the patient.

Margins

There is the huge trade margin given to pharma distributors and retailers thanks to competition between companies. This margin is passed on to the customer. For example, the trade margin percent was 1531 percent for Ofloxacin. The distributors' price was ₹330/- for 100 tablets and it had an MRP of ₹1,600/ for 100 tablets.⁵⁰ Irrational combinations – reason for higher costs and poses great risk to patient safety.

Drugs are essential and lifesaving. If prices go up or down we cannot shrink or expand requirement i.e. demand is inelastic. The industry argument is that price control results in the suppression of the free market dynamic of competition that keeps prices down. This is shown by surveys to be incorrect. The drugs, which have been taken out of price control have shown a higher price rise than drugs, which are not under price control.

Thus, tighter regulation to avoid pricing anomalies is the need of the hour.⁵¹ It is also important that information on pricing is made available on public domain, so that the doctors and the lay

public can see the differences in pricing of various drugs and make an informed choice. Drug pricing is directly linked to affordability, which in turn relates to patient safety and therefore regulating drug pricing becomes most essential.

Irrational Drugs Combinations⁵²

Rational drug therapy means the use of drugs which are efficient, safe, low cost and easy to administer. *Irrational use of drugs* could be using irrational drugs available in the market or irrational prescription of rational drugs by doctors or irrational usage of drugs by patients themselves all of which are harmful to health.

What are Irrational Drugs?

Drugs with no clear proven efficacy – that are of doubtful value! These drugs simply create a false sense of security among prescribers and patients. For example, some digestive enzyme preparations, some costly anemia preparations.

Combinations of Drugs

There are two kinds of drug combinations. Many drugs may be prescribed for one patient depending on the disease condition. For example, a patient may have hypertension and ischemia: here, the doctor attempts to find a balance of drugs that should not interact with each other adversely.

The other is when two or more drugs are combined in one. For example, antibiotics combined with other antibiotics, antipyretics with analgesics – for example, Ibuprofen and Paracetamol.

According to the WHO Expert Committee, combination of drugs should not be used unless there are no alternative single drugs available. There are very few indications for combining drugs in this manner where they facilitate/are necessary for each other's actions.

The British National Formulary lists only these rational indications, which are few in number. In the Indian pharma market, such irrational fixed dose combinations abound and doctors prescribe them freely though there is no clear proven efficacy.

Problems with irrational combinations are as following:

- Increased risk of adverse effects – difficult in identifying which ingredient caused the reaction
- Increased chances of drug interactions whose monitoring then becomes difficult
- Increased cost
- Encourages irrational prescribing by doctors
- With irrational combinations of antibiotics there is the problem of drug resistant bacteria and
- Drug companies frequently change ingredients making it difficult to keep track of the changes

The Drugs and Cosmetics Act clearly states that permission for the manufacture and marketing of any new drug has to be obtained from the DCGI. However, in practice, the State Drug Controllers of various states give approval for the sale of these drugs.

While for over 30 years pharmaceutical companies have been selling fixed-dose combination drugs with scant need to justify their efficacy, safety or rationality for use, it is good and interesting to know that the Ministry of Health and Family Welfare has finally, as recently as in March 2016, prohibited 344 fixed dose combination of drugs for human use, under Section 26A of Drugs and Cosmetics Act, 1940 for manufacture, sale and distribution in the country.

Though pharma companies have been able to obtain interim judicial stay orders, it is hoped that the courts take into account the serious public health implications of the sale of certain drugs and allow regulatory intervention banning uncertified combination drugs, including codeine-based cough syrups and various cold and flu drugs.⁵³

In the meanwhile, it is important for the government to come out with a list of Fixed Dose Combinations (FDCs) that are scientific. It should be noted that, all FDCs are not harmful. WHO has a list of essential drugs (19th WHO Essential Model List of Essential Medicines, April 2015). This list which is revised every three years has totally 425 drugs of which 27 are scientifically approved FDCs. The drug regulatory authorities should insist that only these FDCs are to be manufactured and nothing else. If not, even this big exercise of banning of 344 irrational FDCs will just be another mockery.⁵⁴

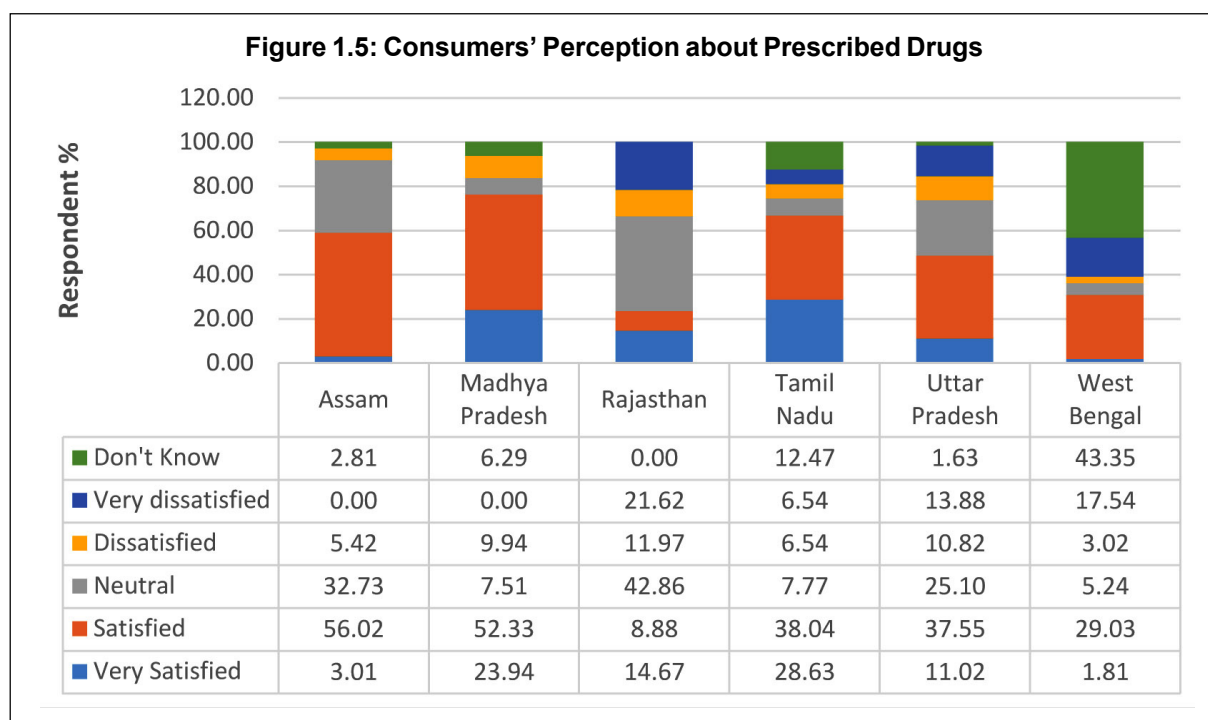
Pharmaceutical Promotional Practices

Medical representatives are engaged by the pharmaceutical industry in order to brief and update doctors about the availability and the therapeutic use of latest drugs introduced in the market. However, in the past few decades, it has become more like any other business, as, often, medical representatives promote their products by offering various gifts and incentives in order to woo doctors to prescribe their company's drugs. Citizen consumer and civic Action Group (CAG), CUTS and other organisations have done surveys in the past that show that incentives range from free samples of drugs, freebies like pens, laptops, refrigerators, sometimes even holidays to exotic locations.

Pharma clearly calculates and spends on a doctor in a proportion to what he can 'repay' in terms of sales. Many pharma companies also sponsor a range of medical conferences and seminars. The promotional costs will be included in the drug price and ultimately, it will have to be the consumer who will pay the cost of promotion!

Not only costs, there are also other ethical issues/concerns that may have a direct impact on the health of patients. Firstly, since the product is being promoted, will information given to doctor be unbiased in terms of side effects is a big question and secondly, these unethical promotional practices may also result in doctors writing out irrational prescriptions, which may affect patients' health adversely.

When the consumers were questioned about their perceptions on prescribed drugs then about 21.62 percent respondents of Rajasthan were found to be quite dissatisfied whereas only 1.81 percent respondents from West Bengal were found to be very satisfied (see figure 1.5).



The MCI's code of ethics regulations prevents doctors from accepting gifts but how effectively are these implemented is a big question. Thus, with the intention to regulate the promotional practices of pharma companies, CAG drafted Rules, to be incorporated under the Drugs and Cosmetics Act, in 2011 and was interacting with the government directly and through various networks like All India Drug Network (AIDAN), Federation of Medical Representatives Association of India (FMRAI) – who are actively working in this space since past many years – to get it endorsed and implemented.

Subsequently, a year back, the Government introduced a voluntary code of marketing practice for pharma industry, which was vehemently opposed considering the consistent failure of voluntary codes in other areas in the past. Now, with the purpose to make the Code statutory, the Government has come out with a draft Order, called the Drugs (Code for Marketing) Order, 2015 to be incorporated under the Essential Commodities Act, 1955. Once this comes into force, it is hoped that the promotional practices would be regulated to a great extent.

Sales of Spurious Drugs

Sale of spurious drugs is a major problem today. While according to CDSCO, only 0.3 percent of drugs in the Indian market are spurious, several unofficial studies put the percentage of spurious drugs to as high as 18-20 percent. Any drug, from an antibiotic to a pain killer, can be spurious. In 2007, fake drug makers sold more than 600 different types of generic, branded and over-the-counter drugs and used improved packaging to make fake and spurious drugs harder to detect.⁵⁵

The Drugs and Cosmetics (Amendment) Act, 2008 significantly increased the penalty for manufacture of spurious or adulterated drugs. Penalties for manufacture of spurious drugs include a minimum imprisonment of 10 years – which may extend to a life term and a minimum fine of ₹10 lakhs or three times the value of the drugs confiscated, whichever is higher. In some cases, the offences are also non-bailable.

Role of Pharmacies

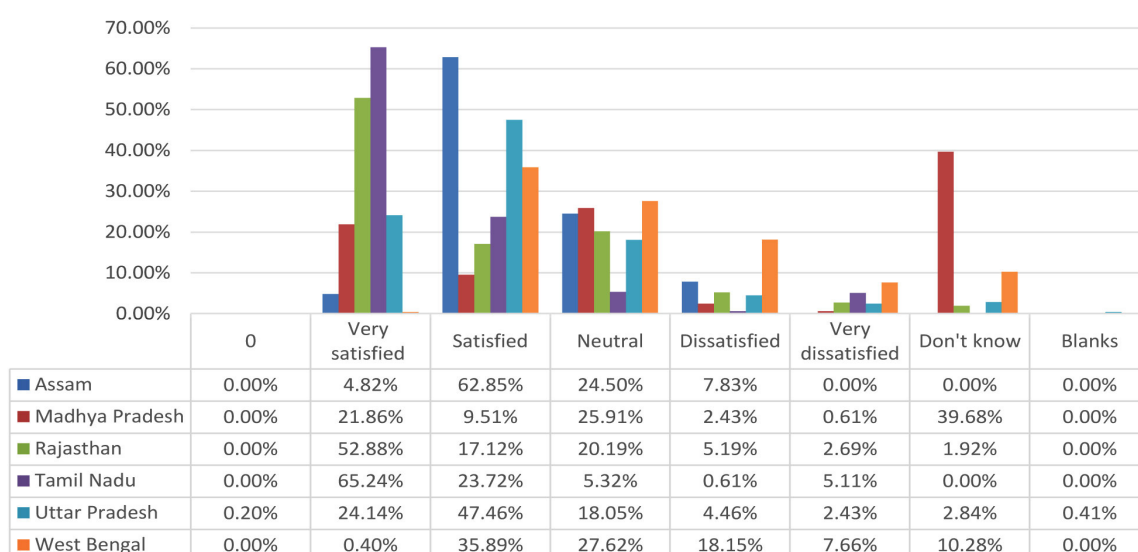
While pharmacies are required to sell only those drugs that are classified as OTC drugs, over-the-counter, most pharmacies in India sell even Schedule H drugs - which should be sold only against a medical practitioner's prescription – over the counter, without a prescription. This puts the consumers' health at great risk. While consumer awareness on the harmful effects of self-prescription and/or buying drugs without a doctor's prescription is much needed, the drug authorities should also periodically monitor/inspect pharmacies and take necessary action in order to ensure that prescription drugs are not sold over the counter and medicines stored suitably – an important requirement for improved efficacy of drugs.

Table 1.1 provides an insight into the state of medical stores monitored and supervised for quality check.

Table 1.1: Medical Stores Monitored and Supervised for Quality Check				
State	Strongly Agree (%)	Agree(%)	Disagree (%)	Total
Assam	0.00	100.00	0.00	1
Guwahati	0.00	100.00	0.00	1
Jorhat	0.00	0.00	0.00	0
Madhya Pradesh	50.00	0.00	50.00	2
Bhopal	0.00	0.00	100.00	1
Gwalior	100.00	0.00	0.00	1
Rajasthan	33.33	66.67	0.00	3
Jaipur	0.00	100.00	0.00	1
Udaipur	50.00	50.00	0.00	2
Tamil Nadu	33.33	33.33	33.33	3
Chennai	0.00	100.00	0.00	1
Coimbatore	50.00	0.00	50.00	2
Uttar Pradesh	33.33	66.67	0.00	3
Ghaziabad	100.00	0.00	0.00	1
Lucknow	0.00	100.00	0.00	2
West Bengal	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0
Total	33.33	50.00	16.67	12

In the state of Tamil Nadu, nearly 65.24 percent people reported that they were quite satisfied with the level of awareness of the drug store staff regarding the side effects of drugs. Moreover, in West Bengal 18.15 percent respondents were found to be dissatisfied with the knowledge of medical store staff on the side effects of medicines (see figure 1.6).

Figure 1.6: Drug Store Staff Awareness on Side Effects of Drugs



Regulation of Diagnostic Centres

Regulation of Diagnostic Centres is an area, which remains totally unaddressed. Anybody can start a diagnostic centre on obtaining a licence under the Shops and Establishments Act. There are no specific, prescribed standards notified and today, there are many small ones that operate like petty shops. While consumer safety is in jeopardy with no guarantee for quality, there is also wide disparity in pricing. Though high price might be attributed to better service quality by the industry, from a consumer's perspective, the important factor remains that prices are driven by commissions to doctors for suggesting a particular lab to their patients.

NABL accreditation is an option but since it is not mandatory, very few diagnostics centres in the country have accreditation. For radiology and other imaging services, centres obtain initial approvals from bodies like Bhabha Atomic Research Centre and Atomic Energy Regulatory Board. However, there are no monitoring, inspections or audits as follow up to ensure that quality and standards are maintained. This situation needs to change for the better at the earliest in order to protect consumers' interests.

Regulation of Medical Devices

Import, manufacture, sale and distribution of medical devices are regulated in India under the provisions of the Drugs and Cosmetics Act 1940 and Rules 1945. However, not all, but only notified medical devices are regulated under the Act.

Comprehensive Health Insurance

With increasing risk of medical emergencies due to modern lifestyle patterns and increasing costs of healthcare and medical treatments across private hospitals in India, medical insurance has become more of a necessity as it provides coverage for medical and hospitalisation expenses during times of illnesses. The different types of health policies available in India include individual

health plan, family floater policy, critical illness policy, pre-existing disease cover, senior citizen health cover, preventive health care, accident cover, etc.

In an attempt to improve service standards in the health insurance sector, Insurance Regulatory and Development Authority (IRDA) framed the IRDA (Health Insurance) Regulations, 2013⁵⁶ and also issued guidelines standardising 46 most commonly used definitions/terms/conditions in health insurance policies.⁵⁷ Insurance portability and free-look period for policies that are for a term of more than three years are some of the other advantages associated with health insurance.

In spite of IRDA's efforts, there are diverse problems that consumers continue to face at different levels of taking a policy. The products are complex - policies differ in exclusion-clauses, conditions – and are in fine print. This makes it difficult for the common man to compare and choose. While life insurance depends only on death for payment, there are several issues associated with mediclaim.

Agents mislead consumers, the terms of the policy keep changing, while taking the policy no one knows what excuses the insurer will find to deny claims on a later date, the premium amount keeps increasing with age about which information is not shared earlier and the hospitals charge a much higher price once they know that the patient has insurance cover and this often results in consumer having to spend out of his pocket despite having cover. This causes great inconvenience to consumers and thus, the very idea of them taking mediclaim gets defeated.

Access to Food Safety

'Food safety' means assurance that food is acceptable for human consumption according to its intended use.⁵⁸ Access to safe and sufficient food is a basic human necessity and food safety is a scientific discipline describing handling, preparation, and storage of food in ways that prevent food-borne illness. Health hazards associated with food include:

- Food borne and water borne diarrheal diseases – according to Food and Agricultural Organisation (FAO) of the UN, annually, around 2.2 million people die, especially children are affected
- Adulteration of food that makes food unsafe/sub-standard, causing health problems
- Chemical or toxin contamination causing acute poisoning or chronic illnesses like cancer
- Food rich in trans-fats, saturated fats, sugar and salt – increased risk of non-communicable diseases like diabetes mellitus, hypertension, etc. and
- Anti-microbial resistance – an increasing global public health issue

Food adulteration has become an epidemic in India. Starting from water, milk, ghee, pulses, turmeric, rice, tea, edible oils, tomato sauce, chilli powder and so on, most food items are adulterated thus causing great concern to consumers. Water, urea, detergent, etc. are the common adulterants added to milk and a survey done by the Food Safety and Standards Authority in 2011 revealed that more than 68 percent of milk was unfit for human consumption.

Ripening of mangoes and other fruits using chemicals like calcium carbide, which has carcinogenic properties and is highly harmful, is another issue where consumers are often left helpless.

Pesticides in fruits and vegetables are another major, common problem faced by consumers. Rampant use of chemical pesticides and fertilisers for assumed quick and better yield often result

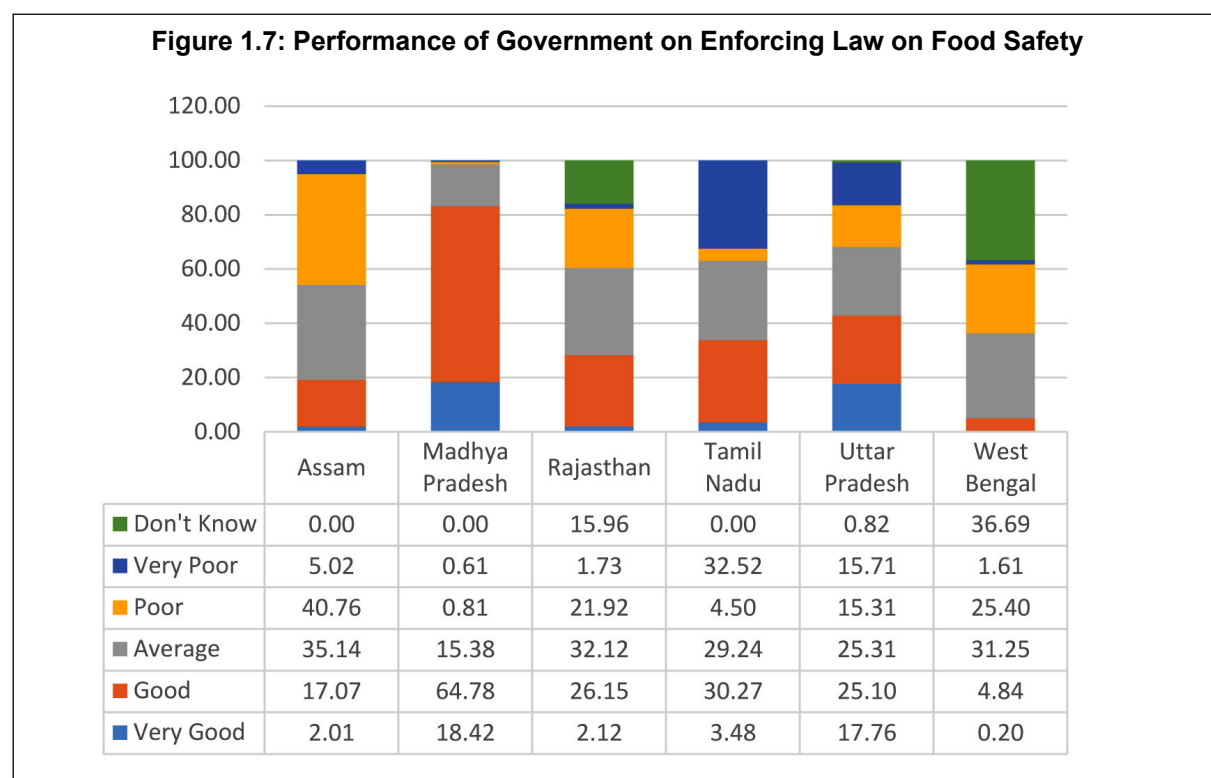
in the residual limits of these pesticides exceeding the prescribed norms, thus posing threat to human health. Also, harmful insecticides with adverse health impacts are indiscriminately used on fruits and vegetables grown. While organic farming is being encouraged to tackle this problem, the shift cannot be expected to happen easily, especially with farmers used to using chemical pesticides since past many years.

Following western countries, Indians are also moving towards processed foods. Processed foods are foods that are compromised by the addition of hormones, additives, preservatives, unnatural genetic material or other chemical or heat treatments that alter or destroy the natural healthy enzymes, fatty acids, vitamins and minerals. The main goal of food processing is to lengthen the shelf life of foods so that larger amounts can be sold over time. Processed foods are changed extensively from their raw state. The additives used may contain harmful substances, such as peroxide and coal tar, which have extremely harmful effects on the human body.

In India, the comprehensive Food Safety and Standards Act (FSSA) was enacted in 2006. With the aim to establish a single reference point for all matters relating to food safety and standards, the Food Safety and Standards Authority of India (FSSAI) was established under the FSSA.

FSSAI has been created for laying down science based standards for articles of food and to regulate their manufacture, storage, distribution, sale and import to ensure availability of safe and wholesome food for human consumption.⁵⁹

Various scientific committees and panels have been formed to analyse and come up with standards and regulations for diverse food products including preservatives, additives, etc. Despite all this, the lacunae remain in the monitoring and implementation of the law. While the infrastructure in the States, to deal with issues of such great magnitude, might not be sufficient, the biggest question that arises many a time is if there is even the will to act. There are times when manufacturers do



not comply even with the labelling requirements, and when the matter is taken to the authorities' notice, they, very often, choose to ignore the complaint and fail to take necessary action that would be a deterrent and stop the offenders from repeating the mistake.

Assessing the performance of government on enforcing law on food safety only 2.01 respondents found it very good and 32.52 percent respondents of Tamil Nadu reported the government functioning to be very poor.

Consumer awareness also plays a major role here. Consumers should learn to make informed choices, read labels, check for the best before or expiry date, boycott products that do not have proper labels, follow proper hygiene, have food in hygienic places and so on in order to ensure that the food they consume is safe.

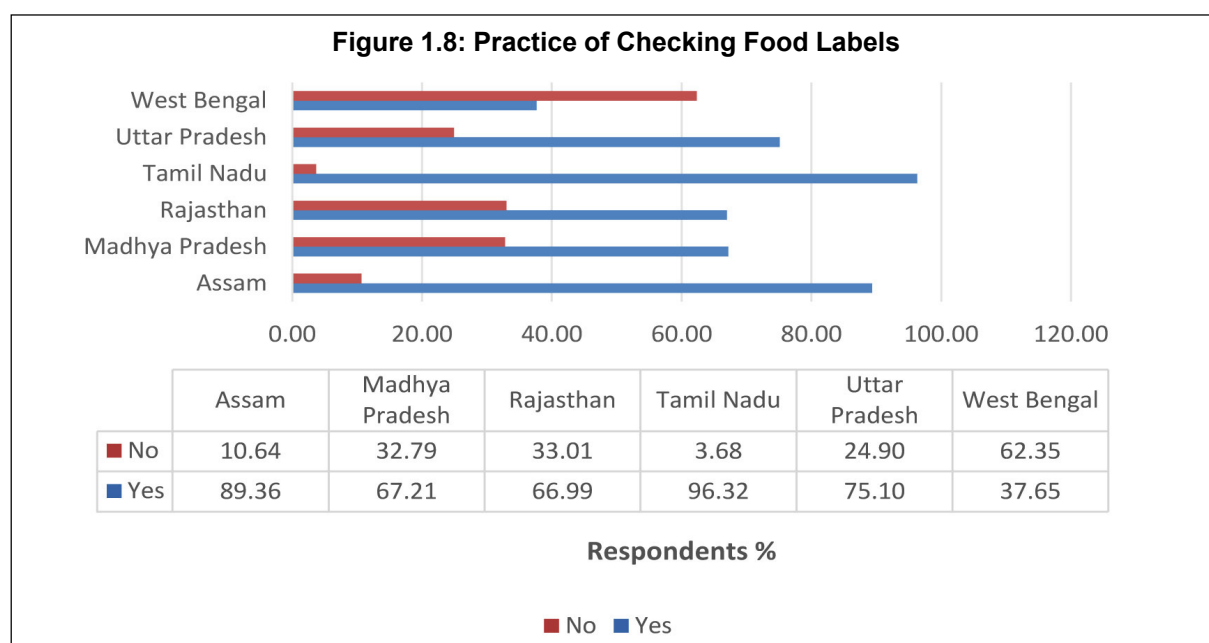
Practice of Monitoring Food Labels

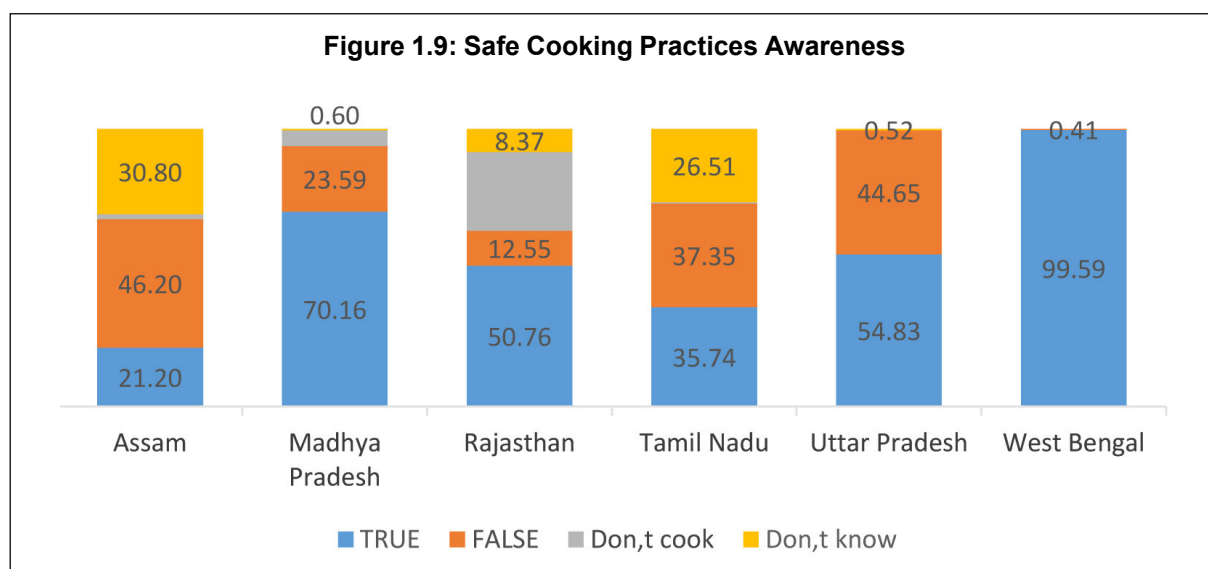
A recent survey done by CUTS in the states of Assam, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal to understand consumers' practice of checking food labels revealed that 62.35 percent respondents of West Bengal were not in practice of checking food labels. It was also found that while 96.32 percent respondents of Tamil Nadu were found to be in this practice (see figure1.8).

WHO's five significant aspects to ensure safer food access include:

- Maintaining cleanliness in cooking food
- Keeping raw and cooked foods to be placed separately
- Cook thoroughly
- Keep cooked food at required temperature
- Use safe water and raw materials while cooking

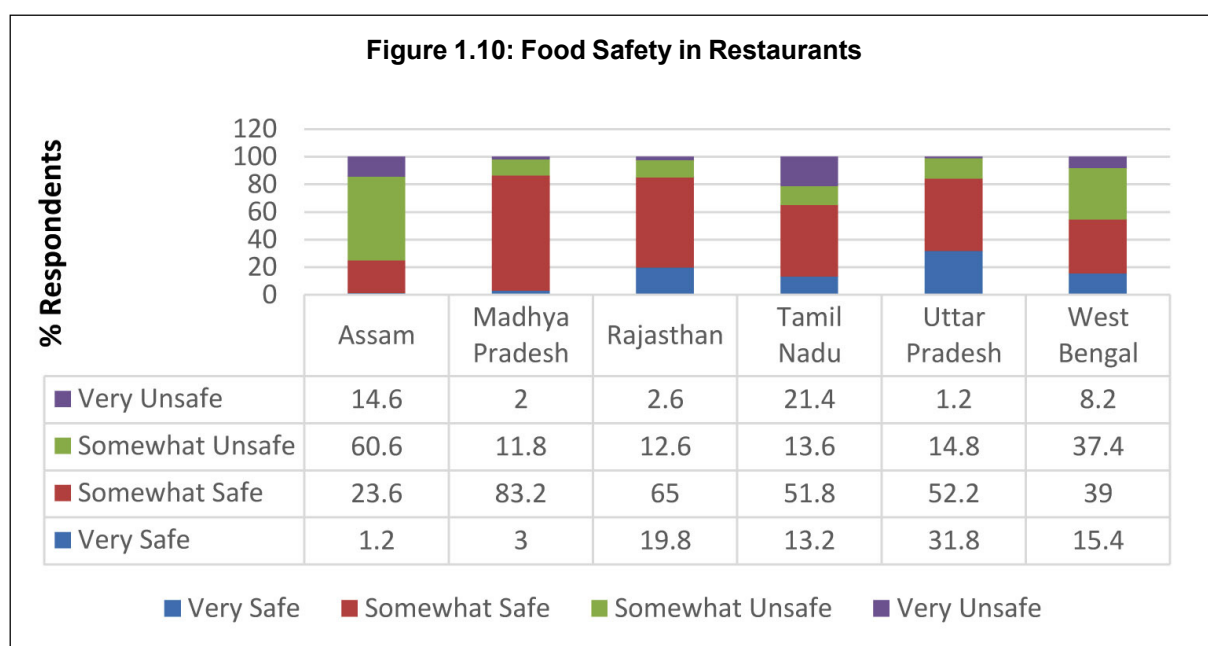
While many people were aware (with true response), there were a few who said that there was no such thing as 'safe cooking practices' and to which they responded as 'False' (see figure1.9).





Similarly, a survey question on consumers' perception of food safety in restaurants evinced the following response:

On being questioned about status of food safety in restaurants nearly 31.98 respondents considered food safety in restaurants to be quite safe whereas 37.4 respondents of West Bengal considered the same somewhat unsafe (see figure 1.9).



Water and Sanitation

The United Nations Development programme has called water “.....the stuff of life, and a basic human right”.⁶⁰ Poor access to clean drinking water and sanitation is among the most intractable and serious problems facing millions of people in the developing world. Water security, both in terms of access and quality has been at the centre of numerous missions, initiatives and programmes at the National and International level, India being the focus of many of these due to the State's

continued failure to deliver clean water and effective sanitation to many of its' citizens. With respect to sewerage and sanitation, there continues to be a severe shortfall both in terms of infrastructure and service delivery. According to the World Bank report in 2015, about 60 percent of Indians still do not have access to "improved sanitation".⁶¹

Risks to Consumers

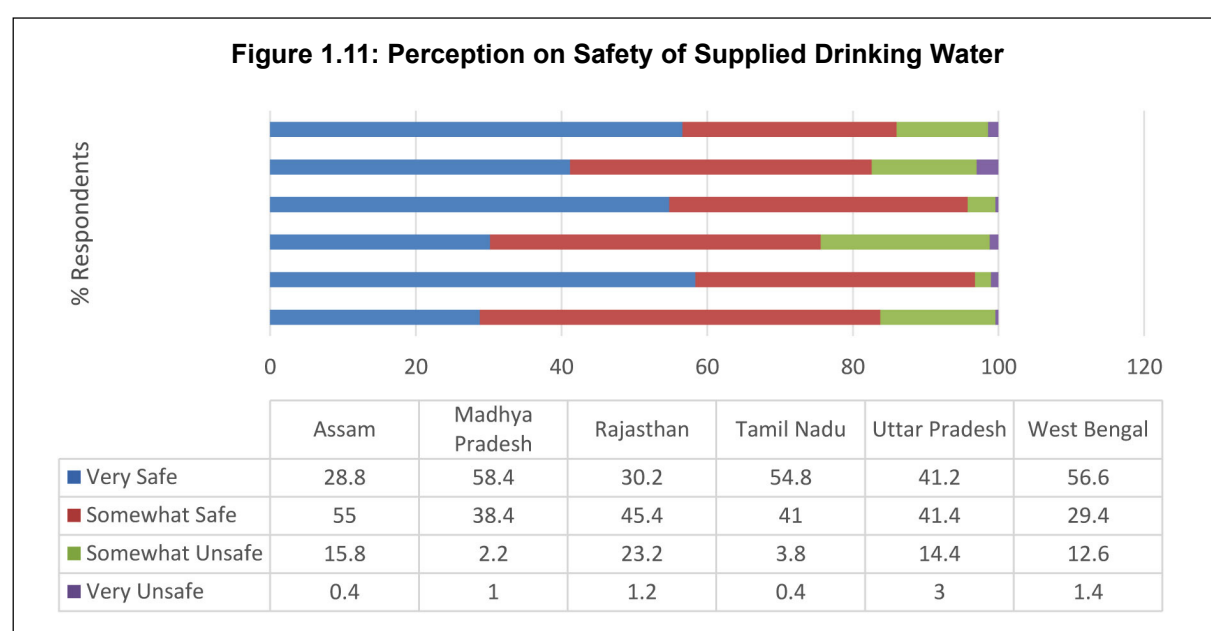
The risks to citizens and consumers caused by the existing Water and Sanitation *status quo* are significant and varied. However, the primary concern is the severe threat to health, especially that of infants and young children) that poor water supply and sewerage inevitably lead to.

Due to contaminated water and lack of access to clean drinking water: The World Bank has estimated that approximately 21 percent of communicable diseases in India are relatable to contaminated water. The WHO has suggested that up to 40 percent of diseases are waterborne. Diarrhoea, heavily linked with unsafe water remains the leading cause of infant mortality in India, the National Centre for Biotechnology Information has indicated that over 13 percent of child deaths under the age of 5 are diarrhea related.⁶² The lack of access or overloading of clean water access points faced by millions is therefore directly implicated in one of India's most widespread and most consistently fatal health crises.

On being asked about safety of drinking water being supplied nearly 58.4 respondents of Madhya Pradesh considered it to be very safe whereas only 28.8 percent respondents from Assam considered it to be quite safe. About 45.4 respondents from Rajasthan considered it somewhat safe (see figure1.11).

Lack of Access to Sewerage and Sanitation

It is important to note that many of the health risks posed by lack of access to clean drinking water can also result from inadequate provision of sanitation and sewerage, especially in densely populated areas. The Census of India has it that approximately 82 percent of India's 72 million urban households are provisioned with toilets in their premises; only 40 percent of these are connected to a piped sewerage system.⁶³



The inadequacy of sanitation infrastructure and services in cities inevitably has an impact on health and quality of life, with the poor suffering the worst.⁶⁴ The absence of ‘umbrella legislation’ on water has been identified by some as among the reasons for lack of coherence in India’s efforts to properly regulate water and related issues in the country.

Recommendations

The following are the required recommendations to be taken into account and addressed timely to enhance the state of health services in India:

- The Government of India should give top most priority to health care and provide quality health services to the public.
- The infrastructure of hospitals should be enhanced in such a manner, so that it can fulfill the needs of the patients.
- Standard treatment guidelines should be followed across the country
- Mandatory accreditation procedures should be adopted.
- Implementation of the Clinical Establishments Act in all States should be ensured.
- Emphasis on data collection and audit of care and outcomes as part of a mandated clinical governance and quality assurance programme
- Safe and prompt delivery of medical services for public should be ensured.
- Quality, affordable medicines should be made available to the public.
- Promotional practices of pharma companies need to be regulated,
- Food safety officers and drug authorities in states should act *pro bono*, carry out periodical inspections and take necessary actions and
- Admission procedures and quality of medical and nursing education in India should be enhanced.

Conclusion

Thus, from the important issues discussed in this chapter, it is clear that despite the government coming out with various large scale initiatives, consumer safety in health sector continues to be a cause of concern probably because of lack of effective implementation! “We cannot think of a developed country until and unless we continue to succeed in the improvement of one of the most important sectors. Not only with public healthcare, but there appears to be widespread dissatisfaction and frustration among public about private healthcare as well. There is lack of trust in doctors and hospitals. This trust deficit may cause a significant negative impact on the recovery and well-being of patients. Therefore, there is an urgent need to bridge the gap.

In very broad terms, the medical profession needs to ensure uniform standards of high probity and integrity amongst its members and good practice of evidence based medicine. The Government needs to promote the development of specialist medical bodies that govern and oversee the practice of members of their specialty and issue periodic guidelines and clinical pathways to attain uniform practice”.⁶⁵

Similarly, with regard to pharma, food and water, effective, timely enforcement of laws would ensure consumer safety to a great extent. Consumers also should realise their rights and responsibilities and act accordingly.

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2

Safety of Consumers: Housing Sector

– CERC Team

Affordable Housing in India

Like most emerging economies, India is witnessing accelerated urbanisation. In fact, 600 million people are expected to make urban India their home by 2031.¹ The estimated shortage of urban housing in 2012 itself was 26.5 million units. In the same year, 9.3 million households in urban India did not have access to any kind of housing, while 17.2 million lived in inadequate housing conditions, such as slums, congested housing or obsolete housing.²

According to United Nations guidelines, the Right to Basic Needs is one of the Consumer Rights. It is defined as the right to adequate food, clothing, shelter, energy, sanitation, health care, education and transportation. Talking of shelter, it goes without saying that the shelter provided should ensure safety of the residents and their property.

Hence, apart from providing ‘affordable’ housing, there is a vital need to provide ‘safe’ housing in the country. In this chapter we address the issue of Housing Safety with specific reference to Fire, Earthquake and Elevator Safety.

Housing Related Services

The term housing related services can be interpreted in many ways. One, it includes basic services, such as provision of water supply, drainage and sanitation, garbage disposal and electricity. A broader definition would include roads and street lighting and public transportation. An even broader one would include social infrastructure such as health services and educational facilities. Again, there are housing related services where ‘safety’ is of prime importance, such as provision of earthquake resistant features in buildings, fire protection provisions and measures to ensure safe operation of elevators.

State of Safe Housing

Safety can be defined as the “control of recognised hazards to achieve an acceptable level of risk”. This can take the form of being protected from exposure to something that causes health or economic losses. Thus, it includes protection of people and possessions.

Housing provides shelter from the ravages of nature and security from threats to life and property. There are two aspects of housing safety:

- A building's ability to protect its occupants from external threats, such as earthquakes, weather and theft
- A building is safe from internal structural and equipment failures that could harm its inhabitants.

Required Measures to Ensure Housing Safety

Various measures required for ensuring safety in housing include:

- Geological surveys (to ascertain, for instance, how firm the ground is at a particular building site)
- chemical analysis of construction material and stress tests
- government regulations, so suppliers know what standards their products are expected to meet
- implementation of standard protocols and procedures and
- supervision of construction activity
- periodic evaluations
- training for operators/users (for instance, in the case of elevators).

Building code

A building code is a set of rules that specify minimum standards for buildings. It ensures provision of minimum standards for safety, health, and general welfare including structural integrity, mechanical integrity, exit access in the case of emergencies, fire prevention and control, and energy conservation.

In India, it is the National Building Code, 2005, which provides rules to ensure that buildings provide Fire, Earthquake and Elevator Safety.

Housing Safety, Consumer Rights and Socio-economic Growth

Six consumer rights are mentioned in Section 6 of India's Consumer Protection Act, 1986. They are: (i) Right to Safety (ii) Right to be Informed (iii) Right to Choose (iv) Right to be Heard (v) Right to Seek Reprisal and (vi) Right to Consumer Education. United Nations guidelines mention two more rights: (i) Right to Basic Needs and (ii) Right to Healthy Environment.³

Housing (Fire, Earthquake & Elevator) Safety is closely linked to the Right to Safety. It is defined as the right to be protected against the marketing of goods and services, which are hazardous to health, life and property. Consumers are entitled to safe housing. They should be adequately protected from fire, earthquakes and elevator accidents. This implies that the building should conform to all the required norms.

With socio-economic growth comes increasing urbanisation. The growth of housing in urban centres is usually in the vertical direction due to shortage of land. People living in high-rises face higher risk of earthquakes, inability to escape if fires break out and elevator accidents.

Poverty robs many of the Right to Basic Needs (shelter) as well as the Right to Safety (safe housing). Slums and congested housing are poorly protected from fires and earthquakes. To

promote inclusive growth, the economically weaker sections must be given sturdier and safer houses.

Significance of Housing Safety for Consumers

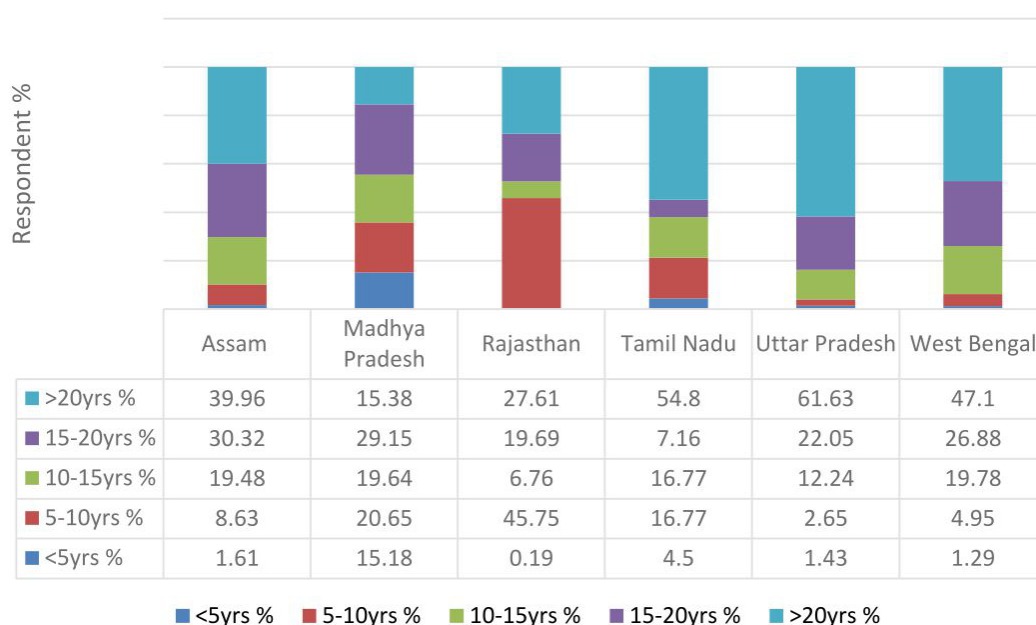
It hardly requires to be said that housing safety is vital for the consumer. Not only does he spend a large chunk of his savings to procure a house, his home is his heaven where he seeks to be secure and at peace.

However, residents of high-rise buildings have many fears regarding safety. They fear that they might be trapped inside during a fire as it takes longer to reach the street from the higher floors. Residents in places with active tectonic plates worry about the entire building falling because of an earthquake. Residents of high-rises also face the risk of elevator accidents.

Age of the Building

One of the factors related to housing safety is age of a building. In a recent survey conducted by CUTS, a large percentage of respondents from Assam, Madhya Pradesh, Tamil Nadu, Uttar Pradesh and West Bengal reported that their building was more than 10 years old. In Rajasthan, 45.75 percent of the respondents said the building was in 5-10 years old. The percentage of respondents who said their building was more than 20 years old were as follows – Uttar Pradesh (61.63 percent), Tamil Nadu (54.81 percent), West Bengal (47.10 percent) and Assam (39.96 percent). Except Madhya Pradesh with 15.18 percent of buildings less than five-years old, all states reported less than 5 percent of the buildings under five-years old (see Figure 2.1).

Figure: 2.1: State-wise Survey on Age of Buildings



Real Estate Act – Provisions for Consumer Safety

Till recently, home buyers were not adequately protected under the law. Purchase contracts were biased towards the builder. There were no warranties against manufacturing/building defects and no refund/replacement policy.

Now, home buyers can breathe a sigh of relief. Eight years after it was proposed, the Real Estate (Regulation and Development) Act, 2016 was recently enacted and became effective from 01 May 2016. The Act makes a move towards ensuring consumer protection and standardising business practices by bringing in transparency and safety in the market.

Important Provisions of the Act Related to Consumer Safety

Builders cannot sell housing projects without registering with Real Estate Regulatory Authority (RERA).

- Builders are liable for structural defects for five years.
- RERA to decide on the complaints of buyers in 60 days' time. Decisions of RERA can be appealed before the Real Estate Appellate Tribunals.
- Disclosure of details of promoter, project, layout plans, land status, all approvals, and details of real estate agents, contractors, and engineers is also a must.
- Model contracts for purchase agreements will be the norm and
- Consent of two-third allottees required for any change in project plans.

Fire Safety in Buildings: Provisions and Challenges

*Seven people were killed in a massive fire that engulfed the 26-storeyed Mont Blanc building in South Mumbai in December 2013. The fire was doused by 14 fire engines in a 4-5 hour rescue operation. Several families were trapped in the upper floors of the building.*⁴

*This tragedy exposed the lack of fire safety provisions in high-rises in the city. A senior fire official pointed out that norms concerning the width of the approach road, sprinkler systems inside individual apartments, open space, second staircase and emergency exit had not been followed at Mont Blanc*⁵

Disasters due to fire have claimed hundreds of innocent lives and damaged property worth billions in India. Fires also result in loss of business and adversely affect the environment.

Data from National Crime Records Bureau (NCRB) show that accidental fires claimed 19,513 lives in 2014. On an average, fire accidents in India cause 20,000 fatal injuries and financial loss of 1,200 crore every year.⁶

Building fires are the most common among fire disasters. Reports indicate that the major cause of deaths from accidental fire is electrical short circuit. Hot and dry climatic conditions and lack of fire fighting equipment further aid the spread of such fires. Almost 20 percent of all accidental fires in 2014 were in residential buildings, killing 3,794 people and injuring 139.⁷

Table 2.1: Occurrence of Fire Accidents at Various Places				
Place of Occurrence	No. of Cases	Persons Injured	Deaths	Share in Deaths (%)
Fire in residential buildings/dwellings	3736	139	3794	19.4
Accidental fire in vehicles (automobiles)	288	27	249	1.3
Fire in factory manufacturing combustible materials like cracker/match box factories	143	103	148	0.8
Fire in commercial buildings	179	49	157	0.8
Others	15848	1541	14987	76.8
<i>Source: Accidental Deaths and Suicides in India, 2014 (NCRB)</i>				

Fire safety in buildings is determined by a number of factors: (1) provisions of means of escape in case of fire (2) ability of a building to resist the effects of fire and to minimise the spread of fire and smoke and (3) provision of means of access to firefighters.

The country is witnessing a vertical growth in urban areas, which has given rise to a new set of problems. Handling fire situations in residential buildings, especially high-rise minimise buildings become more complex. This is because not many high-rise structures in India can facilitate quick evacuation in case of an emergency. A small fire in a residential building might spread very fast and can reach a stage beyond control.⁸ Timely help from fire brigade to carry out a major firefighting operation is needed.

Table 2.2: Major Causes of Fire					
Causes	2010	2011	2012	2013	2014
Electrical short circuit	1312	1523	1439	1690	1779
Fireworks	276	237	505	462	150
Cooking gas cylinder/stove burst	4820	4005	3746	3395	3525
Other causes	18006	18811	17591	16630	14043
<i>Source: Accidental Deaths and Suicides in India, 2014 (NCRB)</i>					

Not many people are aware about fire safety and norms. Although, there are rules and regulations related to fire safety, these are rarely followed. In India, currently there are no specific fire safety regulations for low rise building or individual homes. Negligence in following fire safety measures causes major fires in buildings leading to loss of life and property.

In the event of a fire, occupants of most buildings, especially high-rises, face risk to their lives, as very few buildings are equipped with fire safety measures. This is because fire safety standards continue to be flouted by builders across the country. The situation is becoming quite alarming as the Indian cities are grappling with unplanned growth of skyscrapers and mammoth apartment blocks. High-rise buildings may look attractive, but they are not as safe as they should be. Most high-rise structures promoted by private builders do not have a No Objection Certificate (NOC) from the Fire Department.

In a survey by CUTS, participants were asked questions related to five-safety provisions in buildings i.e. water hydrants, emergency exit, regular check, display of exit points and fire alarm. In Assam (Guwahati) all of the respondents confirmed that fire alarm was placed in the buildings. In Madhya Pradesh (Bhopal and Gwalior). Nearly 25 percent of the respondents informed that there are water hydrants, emergency exists and regular checks done in their buildings. All respondents from Tamil Nadu (Chennai) and Uttar Pradesh (Ghaziabad) said ‘water hydrants’ were installed in buildings. All respondents in Rajasthan (Jaipur) said that ‘display of exit points’ was available in buildings. In West Bengal (Jaipaguri and Kolkata) 50 percent respondents informed about ‘water hydrants’ and ‘regular check’.

Table 2.3: Provision of Fire Safety in Buildings						
State	Water hydrants (%)	Emergency exits (%)	Regular check (%)	Display of exit points (%)	Fire alarm (%)	Total
Assam	0.00	0.00	0.00	0.00	100.00	1
Guwahati	0.00	0.00	0.00	0.00	100.00	1
Madhya Pradesh	25.00	25.00	25.00	0.00	0.00	4
Bhopal	0.00	50.00	0.00	0.00	0.00	2
Gwalior	50.00	0.00	50.00	0.00	0.00	2
Rajasthan	0.00	0.00	0.00	100.00	0.00	1
Jaipur	0.00	0.00	0.00	100.00	0.00	1
Tamil Nadu	100.00	0.00	0.00	0.00	0.00	1
Chennai	100.00	0.00	0.00	0.00	0.00	1
Uttar Pradesh	100.00	0.00	0.00	0.00	0.00	1
Ghaziabad	100.00	0.00	0.00	0.00	0.00	1
West Bengal	50.00	0.00	50.00	0.00	0.00	2
Jalpaiguri	100.00	0.00	0.00	0.00	0.00	1
Kolkata	0.00	0.00	100.00	0.00	0.00	1
Total	40.00	10.00	20.00	10.00	10.00	10

It is necessary to understand that accident or the extent of damage can be prevented by taking appropriate precautionary steps, such as regular inspection, maintenance and repair of potentially dangerous areas.

Legislations

Legislations, standards and codes have a vital role in forcing the occupiers to provide the required fire protection system, both active and passive.⁹ The National Building Code (NBC) of India, 2005, set guidelines relating to building construction and fire safety. Formulated by the Bureau of Indian Standards (BIS), NBC governs the design, safety and health aspects of buildings and structures. The fire protection requirements for all classes of buildings are covered in Part IV of the Code, which was revised and updated in January 1997.

NBC requires:¹⁰

- Construction of escape or separate exit routes in all high-rise buildings
- The exit staircase in residential categories should be 1.6 m wide for every 1,000 sq. m area
- The entrance of lifts and staircase should have fire-proof and smoke-proof doors to prevent upward movement of smoke and fire
- The doors to the exit staircase should be kept open
- There should be open spaces around the building, so that a fire engine can move around it
- Refuge area shall be provided on every 8th floor of high-rise buildings. If people are trapped on upper floors they should be evacuated and taken to the refuge area built for such a situation.
- Buildings should have an external staircase, so that people can move out of the building, if the internal staircase is filled with smoke
- In building more than 15 m high, kitchens working on gas fuel, departmental stores and shops should not be operated in the basement. Fire fighting equipment should be provided on all floors
- Distance between upper surface of the floor and lowest point of the ceiling should be at least 9 feet
- To ensure adequate water supply during fire-fighting operations, high-rise buildings should have underground static water storage tanks and terrace tanks with specific water pumping capacity and
- High-rise buildings should have fire-fighting equipment like wet riser, yard hydrant, automatic sprinkler system and manually operated electric fire alarm systems

However, these are mere guidelines and can only become mandatory provisions if the State Governments adopt them through legislation. Also, there is no provision for taking penal action against erring builders. Though builders are supposed to make provision for these fire safety measures at the time of construction and obtain a certificate from the Fire Services Department, in most cases all or any of these rules are violated at the cost of citizen's safety.

Accidents show the extent to which promoters and the concerned authorities have made a mockery of the code. Occupants and owners routinely ignore the notices sent to them and, as a result, large number of Indians in cities and towns continue to live and work in firetraps.

Other regulations

As per the Development Control Regulations (DCR), a building with a height of 24 m (eight floors) and above is classified as a high-rise. Many of the high-rise buildings have been served notices for lack of open space on all four sides and also having inadequate internal fire-fighting systems. DCR officials also say that it would be a major violation if two staircases are absent for those buildings that are over 70 metre tall and buildings where horizontal travelling distance is more than 22 meter. Commercial high-rises adhere to the norm but most residential towers reportedly do not.¹¹

The Ministry of Urban Development has also issued guidelines to prevent fire mishaps. Buildings need to have a static water storage tank and fire alarm system. Other provisions are regular fire drills, using prescribed material for construction and restrictions on occupancy. Owners of buildings have to obtain fire permission from the chief fire officer in the area.

State provisions

Many of the NBC provisions have been incorporated by various state governments and local bodies in their own building regulations. For example, according to a provision in the Maharashtra Fire Prevention and Life Safety Measures Act, 2006, the developer, owner or occupier shall comply with all the fire and safety measures adhering to the NBC, and as amended from time to time, failing which it shall be treated as a violation of the Act. It means that the onus of maintaining the fire safety installations in a building or in occupancy is the responsibility of the owner or occupier.¹²

The Maharashtra Act also has a provision, which states every owner/occupier will have to submit a certificate every six months in the prescribed Form issued by a Licensed Agency regarding the compliance of the maintenance of fire prevention and life safety measures in good, repaired and efficient condition to the Chief Fire Officer or nominated officer. All the existing buildings within Brihanmumbai Municipal Corporation (BMC) limits are required to follow the rules, failing which, they can attract stricter action of imprisonment apart from fine¹³.

In February 2016, the Gujarat Government brought into effect the Gujarat Fire Prevention & Life Safety Act, making it mandatory across the state to levy a fine of ₹50,000 for violation of the regulations. Ironically, high-rise buildings in Ahmedabad Municipal Corporation and other municipal corporation areas, which do not have fire NOC or lack fire safety measures, do not fall within the ambit of the Act. This is because the Fire Safety Act exempts areas under municipal corporation limits. The enactment of the law was the outcome of various litigations in Gujarat High Court demanding proper implementation of building byelaws, including fire safety measures, in high-rise buildings.¹⁴

Global Standards of Fire Safety

The National Fire Protection Association (NFPA) is a US trade association, with some international members, that creates and maintains private, copyrighted, standards and codes for usage and adoption by local governments. NFPA 1, Fire Code, advances fire and life safety for the public and first responders as well as property protection by providing a comprehensive, integrated approach to fire code regulation and hazard management. It covers the full range of fire and life safety issues from fire protection systems and equipment and occupant safety in new and existing buildings to hazardous materials, flammable and combustible liquids, LPG and more.

Australia and New Zealand have extensive legislation covering building design and construction and standards for equipment, systems, and installations. Australia has a high ratio of research and testing facilities in relation to its population, performing some of the world's most advanced investigation and research projects in fire protection, such as smoke control in various types of buildings.

In Asia, Japan is probably the leader in fire safety regulations. Philippines and China have recently made enormous strides in improving regulations on building characteristics and fire safety, principally because of public pressure in response to numerous high fatalities in fires.¹⁵

Indian Standards *vis-à-vis* International Standards

According to experts, Indian standards compare favourably with the fire protection standards followed worldwide, such as the British Standard, BS 476: Part 4-24; German Standard, DIN 4102; American Standard of Testing Material, ASTM 119, and the International Standard Organisation, ISO 834.¹⁶

Thus, the problem in India is not with the Code but with its enforcement. It is only after an accident that authorities generally find out whether or not the sprinkler systems had worked or whether or not non-combustible materials in the building were of international standards.

Box 2.1: Expert Opinion on Fire Safety

M F Dastoor, Chief Fire Officer, Ahmedabad Fire and Emergency Service (AFES)

1. What are the three major causes of fire accidents in residential areas as per your experience?

LPG, kitchen/house fires; electric short circuit in gadgets and flammable floors, partitions and ceilings are some of the major causes of fires in residential locations. Incidences of fire in vehicles parked in hollow plinth parking leading to fires at higher floors are also on the rise.

2. What are the major regulations governing Fire Safety in Housing Sector in India?

There are provisions for fire protection only for high-rises (above 15 or 18 meters). It is suggested to have fire protection for even low-rise buildings like sprinkler for hollow plinth parking and basement parking. Staircases of all types of buildings should be ventilated above the parapet wall to prevent getting smoke logged.

3. What are the gaps that you see in the current regulations?

There are several regulations being followed in the country. All these regulations should be reviewed by a panel of experts and a comprehensive regulation should be made applicable throughout the country.

4. Is there strict implementation of the current regulations? If no, then what steps can help stricter enforcement?

No. Commercial establishments can be sealed and penalty/charges be levied. Declaration of NO Insurance cover for these buildings and their occupants is another step. The office-bearers of the building and societies should be made responsible for the loss of lives and property.

5. Are there Fire Safety Audits conducted?

They are conducted only for those buildings which come forward to get their NOC renewed annually.

6. What points should consumers keep in mind while building their homes to prevent fire accidents or reduce damage in such incidents?

The buyers should ask for copy of NOC for the building issued by the fire department, copies of approved plans for the fire protection requirements of the building. This will enable them to check whether there is installation of fire protection system and other requirements. They should also check for the provisions of escape route and ventilation provisions.

Fire Safety Audit¹⁷

Fire safety audit is an effective tool for assessing fire safety of a building. The audit helps to identify the areas for improvement in fire safety measures in fire prevention, protection and mitigation in case of fire. It also provides an action plan for emergency preparedness. In other words, it is aimed to assess the building for compliance with the NBC on fire prevention, fire protection and life safety measures.

There is no clear provision in any of the safety legislations in India regarding the scope, objectives, methodology and periodicity of a fire safety audit.

NBC recommends periodic fire safety inspection by the key personnel among the occupants of the building. In case of industrial building, the statutory authorities insist for fire safety audit by external agencies depending on the type of activity and the nature of the materials handled in the building. Maharashtra Fire Prevention and Life Safety Measures Rules, 2009, made it mandatory for building owners and residents to conduct half-yearly fire safety audits and submit the report to the fire department. This is a good step.

However, making the licensed agencies responsible for conducting the fire safety audit has created some confusion because the same agency has also been entrusted with the work of installing and maintaining the firefighting systems. This may dilute the scope and methodology of the audit.

Suggested Advocacy Issues

The regulatory authorities should be persuaded to:

- Adopt global best practices in regulations for fire safety and regularly update it
- Develop a comprehensive regulation, which includes norms suggested by the NBC and BIS, which should be adopted by all states in municipal by-laws and zoning regulations
- Make it mandatory for builders to comply with the fire safety norms, with severe penalties including rigorous imprisonment for repeat offenders
- Make the building promoters, officers from administration who issue licences as well as the office-bearers of the building responsible for any loss of property or life in case of fire
- Declare 'No Insurance Cover' for building which do not comply to the norms
- Delegate responsibility and authority for enforcement of the fire safety rules to a relevant authority
- Ensure periodic inspection of buildings at various stages of construction to check for any violation
- Make the Electricity Department lay protected and underground cables, regularly maintain transformers and regularly check electricity points at consumers' home for potential fire hazards
- Create awareness among citizens about fire safety standards and sensitise them about the issue. This will ensure that they insist on provision of fire safety norms before purchasing a flat
- Create awareness among consumers about the risk involved while handling cylinders and educate people about safe handling of cylinders.
- Make clear provision regarding scope, objectives, methodology and periodicity of a fire safety audit
- Make annual fire safety audits mandatory all over the country

Safety Measures to be Followed by Consumers¹⁸

- Consumers should ensure that wires and cables are not placed near lifts in high-rises or main parts of the house. During short circuit, wires catch fire and the fire spreads easily.
- Cooking gas cylinders should be kept in an airy area and check-up of gas tubes and stove by authorised technicians should be carried out periodically. Defective products should be replaced as and when its noticed.
- Consumers should also ensure that an authorised technician carry out periodic checks of electrical wires and circuit breakers, and install fire fighting systems like extinguishers within their homes as and where it's needed.

Conclusion¹⁹

A fire can happen at any time at any place creating lot of devastation including loss of life and severe damage to property. The installation of smoke detectors, fire alarms and sprinklers should be made compulsory, especially in high-rise buildings.

Annual fire safety audits should be made mandatory all over the country. The audit work should be entrusted to independent agencies which have expertise in the area. Only if all stakeholders take collective efforts, can Fire Safety be ensured.

Safety from Earthquakes

Latur earthquake in 1993 left almost 10000 dead, likewise the Gujarat earthquake in 2001 left more than 20000 dead. Even the recent tragedy in Nepal in 2015 claimed nearly 9000 lives. There was endless devastation of life and property every time. Add to these the deadly earthquakes of the Indian Ocean and Pakistan in 2004 and 2005 respectively. Are we any wiser as a country today after experiencing these in the last 25 years alone? India is one of the most disaster prone countries, with about 85 percent area vulnerable to one or multiple natural and man-made disasters. It has about 57 percent area including the capital of the country in high seismic zone that could face moderate to severe earthquakes. Despite of this danger, metro cities like Mumbai and Delhi continue to grow vertically.

Earthquake Hazards

It is said that earthquakes do not kill people, buildings do, the ones which are badly constructed. Today, most of the population in earthquake-prone regions are living and working in informal buildings, and maximum losses of lives during earthquakes have occurred due to their collapse. Earthquakes also pose considerable risks to people's livelihoods and to the environment. As witnessed over the past few years, Earthquakes result in severe disasters as they destroy and damage infrastructure, causing great human and economic losses.

Although one cannot control the seismic hazard in the community where one lives or works, one can influence the most important factor in saving lives and reducing losses from an earthquake: the adoption and enforcement of up-to-date building codes, which are prescribed and designed to ensure safe buildings. But how far is this happening? A survey, on quality of housing, conducted by CUTS throws some light of the state of consumer awareness in this respect. A survey conducted by CUTS across six states about the age of buildings revealed that among the States surveyed, except Madhya Pradesh with 15.18 percent of building less than five years old, rest all five states have reported less than 5percent of the buildings under five years old.

Table 2.4 shows the age of homes from the survey of 12 cities. Of the 2954 respondents, almost 40 percent live in houses older than 20 years whereas only 4 percent houses are less than 5 years old.

The information gathered clearly indicates that although construction of safe buildings is of prime importance, retrofitting of existing buildings to make them safe becomes equally important considering that almost 80 percent people are living in houses more 10 years old.

Table 2.4: State-wise Age of the House						
State	<5yrs %	5-10yrs %	10-15yrs %	15-20yrs %	>20yrs %	Total
Guwahati	0.81	11.29	35.08	46.77	6.05	248
Jorhat	2.40	6.00	4.00	14.00	73.60	250
Bhopal	0.40	13.60	37.20	19.60	29.20	250
Gwalior	12.5	18.5	29.39	38.93	1.68	244
Jaipur	9.2	15.9	28.4	29.5	17	269
Udaipur	0.40	7.63	10.84	24.50	56.63	249
Chennai	1.21	18.22	8.50	0.81	71.26	247
Coimbatore	3.5	15.25	29.24	14.01	38	242
Ghaziabad	2.79	5.18	23.90	39.84	28.29	251
Lucknow	0.00	0.00	0.00	3.35	96.65	239
Jalpaiguri	2.75	9.17	32.57	36.70	18.81	218
Kolkata	0.00	1.21	8.50	18.22	72.06	247
Total	4.03	16.93	15.67	22.51	40.86	2954

In the survey, housing service providers in 6 states were asked to rate work done by builders and contractors (table 2.5). Those in four states were satisfied with the work done by the builders and contractors and categorised them as excellent. In the other two states, service providers categorised their work as 'good'.

Service providers were also asked if they had received any report on poor construction of the building in the past five years. In Assam, Tamil Nadu, and Uttar Pradesh, they had not received any such reports in the past five years. In Madhya Pradesh (25 percent), Rajasthan (100 percent) and West Bengal (50 percent) respondents shared of having received one or two reports on poor construction of building. These results portray that either all or most buildings have good construction thereby ensuring safety or that there exists a general lack of knowledge or attention to requirements of safety. What is true?

The data in Table 2.6 shows inadequate preparedness in the events of earthquakes. Also provision for senior citizens/physically challenged/children/women in building was reported only in Chennai, Tamil Nadu and Gwalior, Madhya Pradesh.

Table 2.5: Rating on the Builders/Contractor's work			
State	Excellent %	Good %	Total
Assam	100.00	0.00	1
Guwahati	100.00	0.00	1
Madhya Pradesh	100.00	0.00	4
Bhopal	100.00	0.00	2
Gwalior	100.00	0.00	2
Rajasthan	0.00	100.00	1
Jaipur	0.00	100.00	1
Tamil Nadu	100.00	0.00	1
Chennai	100.00	0.00	1
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
West Bengal	0.00	100.00	2
Jalpaiguri	0.00	100.00	1
Kolkata	0.00	100.00	1
Total	70.00	30.00	10

Table 2.6: Provision of Earthquake Safety in Building				
State	Emergency exits %	Mock drill %	Medical/first aid %	Total
Assam	0.00	0.00	100.00	1
Guwahati	0.00	0.00	100.00	1
Madhya Pradesh	75.00	0.00	0.00	4
Bhopal	100.00	0.00	0.00	2
Gwalior	50.00	0.00	50.00	2
Rajasthan	0.00	100.00	0.00	1
Jaipur	0.00	100.00	0.00	1
Tamil Nadu	100.00	0.00	0.00	1
Chennai	100.00	0.00	0.00	1
Uttar Pradesh	100.00	0.00	0.00	1
Ghaziabad	100.00	0.00	0.00	1
West Bengal	100.00	0.00	0.00	2
Jalpaiguri	100.00	0.00	0.00	1
Kolkata	100.00	0.00	0.00	1
Total	70.00	10.00	20.00	10

Officials from respective department were interviewed about administrative procedures, consumer relations like grievance/complaints and awareness generation. When asked about design and implementation policies of building in relation to consumer safety, they responded that buildings were planned in a safe manner, were stable and eco-friendly buildings were being constructed. In their opinion, stability of building was of utmost concern so that it was earthquake resistant and that all provisions under the government rules were being followed. Moreover, the findings indicated that the consumers were mostly concerned about the height of the building and the area where it was constructed and feedback from them was 'very good'.

Meanwhile, safety havoc during earthquakes continues to happen. This reflects the lack of concern, awareness and attention to safe construction compliances on the part of both regulators and consumers.

Legislations

Countries around the world have procedures outlined in seismic codes to help design engineers in the planning, designing, detailing and constructing of structures. Codes help to improve the behaviour of structures, so that they may withstand the earthquake effects without significant loss of life and property. Seismic codes are unique to a particular region or country. They take into account the local seismology, accepted level of seismic risk, building typologies, and materials and methods used in construction. Further, they are indicative of the progress a country has made in the field of earthquake engineering.²⁰

Building codes are sets of regulations governing the design, construction, alteration and maintenance of structures. They specify the minimum requirements to adequately safeguard the health, safety and welfare of building occupants. In India, the construction activity is guided by the National Building Code and the Standards formulated by BIS. Buildings that do not satisfy the NBC requirements or violate them, can suffer penalty, cancellation of sanction or demolition. All materials and workmanship should be of good quality and conform generally to accepted standards of **Bureau of Indian Standard** specification & codes as included in National Building Code of India.

1. National Building Code of India 2005 (NBC 2005)

The National Building Code of India (NBC) guides the regulations for construction activity in the country and encompasses all the aspects which are vital for safe and orderly building development. It serves as a Model Code for adoption by all agencies involved in building construction works. The Code mainly contains administrative regulations, development control rules and general building requirements; fire safety requirements; stipulations regarding materials, structural design and construction (including safety); and building and plumbing services.

The Code was first published in 1970 at the instance of Planning Commission and then revised in 1983. Considering further developments in the field of building construction including the lessons learnt from calamities like devastating earthquakes and super cyclones witnessed by the country, NBC was revised comprehensively by BIS and has now been brought out as NBC 2005.

2. Indian Standards on Earthquake Engineering

The first formal seismic code in India, namely IS 1893, was published in 1962. The BIS has formulated earthquake engineering codes and Indian Standards for design and construction to be followed by structural engineers, builders and developers to ensure safety of buildings taking into

account seismic data from studies of Indian earthquakes. These are according to the four seismic zones the country has been divided into, from Zone II being least vulnerable to Zone V the most severely vulnerable.

The seismic codes of BIS are evolved based on consensus from a network of all Stake holders and provide a guideline in designing and repairing of buildings under seismic forces. The regulations in these standards do not ensure that structures suffer no damage during earthquake of all magnitudes. But, to the extent possible, they ensure that structures are able to respond to earthquake shakings of moderate intensities without structural damage and of heavy intensities without total collapse.

IS 1893:1984 [Criteria for Earthquake Resistant Design of Structures] is the main code that provides the seismic zone map and specifies seismic design force. This Standard deals with earthquake resistant design of structures and is applicable to buildings; elevated structures; bridges; dams etc. It also gives a map which divides the country into five seismic zones based on the seismic intensity (Ref Figure 1).

The standard is in five parts, which deal with different types of structures. A list of Indian Seismic codes is given in Box 2.2.

Box 2.2: BIS Seismic Codes: At a Glance

The BIS has the following seismic codes dealing with Earthquake resistant construction

1. IS 1893 (Part 1):2002 'Criteria for Earthquake Resistant Design of Structures (5th revision): Part 1 General provisions and Buildings'
2. IS 1893(Part 4):2005 'Criteria for Earthquake Resistant Design of Structures: Part 4 Industrial Structures Including Stack Like Structures
3. IS 4326:1993 Earthquake Resistant Design and Construction of Buildings - Code of Practice (2nd Revision)
4. IS 13827:1993 Improving Earthquake Resistance of Earthen Buildings – Guidelines
5. IS 13828:1993 Improving Earthquake Resistance of Low Strength Masonry Buildings – Guidelines
6. IS 13920:1993 Ductile Detailing of Reinforced Concrete Structures Subjected to Seismic Forces – Code of Practice
7. IS 13935:2009 Seismic Evaluation, Repair and Strengthening of Masonry Buildings – Guidelines

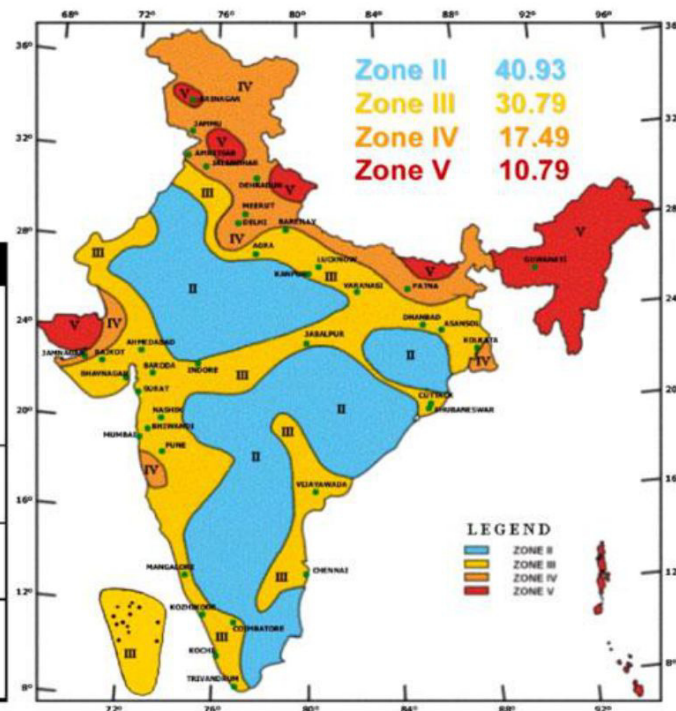
Figure 2.2: Seismic Zones

The seismic zone map is revised with only four zones, instead of five by merging erstwhile zone I with zone II. Hence, only zones II, III, IV and V appear in the new zones.

Seismic Zone Map of India: -2002

About **59 percent** of the land area of India is liable to seismic hazard damage

Zone	Intensity
Zone V	Very High Risk Zone Area liable to shaking Intensity IX (and above)
Zone IV	High Risk Zone Intensity VIII
Zone III	Moderate Risk Zone Intensity VII
Zone II	Low Risk Zone VI (and lower)



http://nidm.gov.in/safety_earthquake.asp

Challenges in Implementation of Safety Measures

High rise and multi-storey buildings are the hallmark of present day urban India, housing majority of the urban population. In the 2001 earthquake, people saw these buildings collapsing like they had no strength and the memories still haunt them. They realised that buildings they call home, go to work at or send their children to study are very similar and therefore vulnerable to future earthquakes. It is expected that the government and the building industry would take adequate measures in terms of policy and practice to ensure safety of buildings, especially for all new construction. Seismic codes have long been defined, but are they implemented? Explored hereunder are some issues, which throw light upon the gaps in policy and implementation.²¹

Effective Certification

Certification or licensing of professionals ensures a level of competence and imparts accountability, thereby also resulting into constraints on misconduct and malpractice. In India, there is a licensing system for professionals like doctors, chartered accountants, even company secretaries. In the wake of destruction observed during recent earthquakes, it becomes imperative that licensing of civil engineers be instituted and certification of buildings by them be made mandatory to ensure safe construction. Without statutory accountability, it is difficult to ensure compliance of seismic codes in construction industry.²²

Enforcement of Building Code

Building construction in India is regulated by municipal authorities in cities and towns. Rural areas have no such regulatory requirement. Requirements of submission and approval of building plans vary across cities. Some cities may require only a certificate from an engineer/architect that building complies with all codes and is structurally safe. Whereas municipalities have a system of checking buildings for fire safety by the Fire Department before being issued as occupancy permit, there is no such system for checking structural safety. There is no system of review of building plans/drawings by the passing authorities. These lacune need to be plugged for making the compliance to building code meaningful.²³

Challenges in Ensuring Safe Dwellings

There may exist a difference of opinion about the methods required to solve the problem of earthquake safety among the stakeholders in the building industry, which includes academicians, policy makers and practitioners. For some engineering and seismic instrumentation are primary, whereas others feel the need for mass awareness campaigns to create a demand for safe constructions.²⁴

It is however clear and agreed upon by all that buildings, both new and old, have to be made earthquake safe to solve the problem. It can be done mainly by stringent regulation and code compliance in new construction. Old buildings can be safeguarded by sensible retrofitting, taken over a period of time for the existing building stock, but this has practical limitations.²⁵

Areas of Concern for Earthquake Safety

1. *Developing professional competence*²⁶

Large manpower is necessary to address the problem of earthquake safety. There is a need for large scale and continued programmes for providing training and education on safer constructions at various levels viz. academic institutions, industry bodies and workforce like masons etc. A system for regulating engineering profession should be instituted in India. Competencies of artisans and technicians associated with the building industry also need to be stoked and a system of certification will be useful.

2. *Ensuring safe construction of new buildings*²⁷

Public awareness about seismic risks is important for bringing about change in construction practices and creating need for safe buildings. It also makes it easy to implement safety programmes. Code compliance has to be enforced through various mechanisms and accountability should be brought into the profession. Municipal authorities must not only collect certificates of compliance of seismic codes, but also verify such certificates random independent review. Simultaneous indigenous research and development initiatives are needed for development and implantation of practices and policies for safe construction.

3. *Safety in rural constructions*²⁸

Different approaches are needed for the rural and informal constructions that are not regulated by the municipal authorities as against the urban areas. Construction technologies which help in constructing ordinary earthquake-resistant houses with locally available resources are needed for which indigenous re-search and reworking of traditional constructions methodologies need to be undertaken.

Improvement in structural safety and construction practices in urban areas will positively impact the practices across rural areas too.

4. Seismic retrofitting of existing constructions²⁹

Retrofitting is the primary measure for making old building earthquake safe. However, it has the following limitations:

- It can be expensive with cost of retrofitting ranging from 10 to 50 percent of the cost of a similar new facility.
- It is a lengthy process and will require decades considering the inventory of unsafe constructions and the resources available.
- Technology and expertise play an important role in retrofitting, which will also vary depending upon the type of structures requiring retrofitting.
- Government must undertake retrofitting of important facilities and public buildings.
- A sensible prioritisation system is needed, since not all facilities cannot be retrofitted at the same time. To maximise the safety with the amount spent, there must be rational prioritisation considering seismic hazard at the site, vulnerability of the facility, consequences of damages, etc.

Mitigation Initiatives in India – Regulations vs. Enforcement

Countries with a history of earthquakes have well developed earthquake codes. Thus, countries like Japan, New Zealand and the United States of America, have detailed seismic code provisions. Development of building codes in India also started quite early. Today, India has a fairly good range of seismic codes covering a variety of structures, ranging from mud or low-strength masonry houses to modern buildings. However, the key to ensuring earthquake safety lies in having a robust mechanism that enforces and implements these design code provisions in actual constructions.³⁰ Various initiatives have been taken up in the country, some in conjunction with the international efforts.

- The GoI-UNDP Disaster Risk Management Programme is the National initiative to reduce vulnerabilities of communities in some of the most hazard prone areas of India with a major component being development of a techno-legal frame work. This includes promoting enforcement of legislation for registration, regulation of builders, promoters and real estate developers, creating framework for compulsory certification system for engineers and architects, and developing course curriculum for professionals along with developing guidelines on Disaster Safety aspect.
- Indian Society of Earthquake Technology (ISET) is a founder member of the International Association for Earthquake Engineering (IAEE) a forum dealing with various aspects of earthquake engineering. The Executive Committee of ISET also acts as the ‘Indian National Committee on Earthquake Engineering’. The ISET contributes in the formulation of various Indian Standard Codes of Practice related to earthquake engineering.
- National Programme on Earthquake Engineering Education (NPEEE) is a Ministry of Human Resource Development (Government of India) initiative executed by the Indian Institutes of Technology (Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (Bangalore) to build capacity for earthquake engineering education in India.

- The Disaster Management Act, 2005 provides for the effective management of disasters and for matters connected therewith or incidental thereto. Various authorities have been set up under the Act like National Authority, National Executive Committee, State Disaster Management Authority, District Disaster Management Authority and the National Disaster Response Force (NDRF). However, the implementation of the National Disaster Act, 2005 has been slow and slack. It has been criticised for marginalising NGOs, elected local representatives, local communities and civic groups; and for fostering a hierarchical, bureaucratic, command and control, ‘top down’, approach that gives the central, state, and district authorities sweeping powers.
- National Disaster Management Plan (NDMP) has been released on 1 June, 2016. It is the first ever national plan prepared in the country and aims to reduce loss of lives and assets by making the country disaster resilient. The focus areas of the plan are understanding disaster risk, improving disaster risk governance, investing in disaster risk reduction (through structural and non-structural measures) and disaster preparedness, early warning and building back better in the aftermath of a disaster.

Surviving from Earthquakes: Global Scenario

Many agencies and organisations are active internationally to deal with the problems of safety related to earthquakes all over the globe. These provide a platform for exchange of technical and tactical expertise for earthquake safety and mitigation efforts.

- 1 Earthquake prone countries of Japan, Chile, Egypt, Indonesia, Kazakhstan, Mexico, Peru, Romania and Turkey are members of the International Platform for Reducing Earthquake Disaster (UNESCO-IPRED), a platform for collaborative research, training and education in the field of seismology and earthquake engineering with the mission to identify gaps through shared knowledge and experience. Effective practices from this forum should be adopted for successful implementation in the country.
- 2 Supported by UNESCO, The International Institute of Seismology and Earthquake Engineering (IISEE) were established in Japan in 1962, and is dedicated to training researchers and engineers in developing countries. A similar separate and dedicated institute needs to be established in India to create expertise and train building industry manpower.
- 3 The ‘Housing Earthquake Safety Initiative (HESI)’ was launched in 2007 under the United Nations Centre for Regional Development (UNCRD) which was established by the Government of Japan and the United Nations in 1971 to promote sustainable regional development in developing countries. HESI’s objective is to improve the structural safety of houses and other residential buildings through effective implementation of building safety regulations in Algeria, Indonesia, Nepal and Peru. HESI’s efforts and initiatives should be studied and used to strengthen implementation of safety norms in India.
- 4 **India** is a member of the International Association for Earthquake Engineering (IAEE), an organisation that includes representation from the world’s national earthquake engineering societies with the objective of helping to improve worldwide seismic safety. It also organises World Conferences on Earthquake Engineering (WCEE). Latest and best practices shared at forum should be adopted for enhancing safety in India.

- 5 In the US, a technical society of engineers, geoscientists, architects, planners, public officials, and social scientists including researchers, practicing professionals, educators, government officials, and building code regulator has been formed. This organisation named The Earthquake Engineering Research Institute (EERI) has the objective to reduce earthquake risk by advancing the science and practice of earthquake engineering. It has become a leader in earthquake investigations and in the dissemination of earthquake risk reduction information both in the US and globally. There should be similar organisation in India, which provides policy inputs and monitors the development and enforcement of earthquake safety provisions.

Recommended Advocacy Issues

Overhaul of curriculum

Illustratively, 97 percent of the curriculum in engineering addresses the small minority of 2.6 percent of reinforced concrete houses in the country. The present undergraduate courses provide almost no exposure to structural design of masonry. Comprehensive review of curricula is required to include: 1) traditional construction technologies and 2) at least a minimum mandatory curriculum that prepares graduates to meet the needs of the nation.³¹

Lack of trained manpower

There is a serious shortage of quality trained manpower who are familiar with best housing practices. After 2001 Bhuj Earthquake, MHRD supported the National Programme on Earthquake Engineering Education (NPEEE) for three years. Another limited time effort was made by Ministry of Home Affairs (MHA). All relevant ministries of central government of India should undertake long-term programme to train (in many cycles) the professionals and artisans. Focussed Ph.D. programme with the housing agenda should be launched.³²

Regulation and Certification of manpower

This is, especially important considering that unskilled, untrained and often uneducated people get into the construction business. People without education or awareness about safety and quality, who have not succeeded in another field but have some money, consider this an easy business. This needs to be regulated. Some minimum qualification or skill certification should be made mandatory as is done in other professions.

Documentation

Construction processes of different types of structures need to be documented. This will help in research and development and for sharing best practices for safe construction across the industry.

Safety assessment

Post-earthquake assessment of buildings should be done to study the impact and result of compliance with codes and provisions against the damage to buildings. Results in these studies will provide valuable inputs for code revisions, improving construction practices, and developing competent manpower.³³

Conclusion

Earthquakes are low probability – high consequence events, and the challenge is always of who owns the problem: is it the safety activists, the academics, or the government bodies? Our seismic

risk continues to grow, that is, we are continuing to add more unsafe buildings to our already existing unsafe building stock every day.³⁴

The lack of implementation of the much needed steps is a system failure of all stakeholders. Three significant defaulting stakeholder groups could be identified as Academics (who failed to upgrade the curriculum and teach the much needed background to graduates), Bureaucrats (who are generalists and fail to apply themselves to specialised information of disaster management) and Publicly elected policy makers all levels (who have vested interests in construction activity with profit maximisation motive, and lack respect for adherence to the design and construction standards and to quality control and assurance practices).³⁵

There is no more important factor in reducing a community's risk from an earthquake than the adoption and enforcement of up-to-date building codes. Evaluating older buildings and retrofitting structural and non-structural components also are critical steps. To survive and remain resilient, communities should also strengthen their core infrastructure and critical facilities, so that these can withstand an earthquake or other disaster and continue to provide essential services.³⁶

Enforcement of the codes indeed remains a major challenge since it is the most important step in the direction towards safety. However, enforcement alone is not enough, considering that in a country like India only a small proportion of the population lives in the urban areas regulated by the municipal system. In order to provide safe construction for the masses, more robust building types are needed that are inherently stronger against earthquakes³⁷.

Safety of Elevators – Few Cases of Mishaps

Mishap: *While playing hide-and-seek, Dhruvisha (8), hid between the landing door and the car door of the lift which was on the ground floor. Someone upstairs called the lift and the car moved, dragging Dhruvisha up. Midway, she fell into the pit of the lift and died.*

Cause: The gap between the two doors as per Gujarat Lifts and Escalators Rules, 2001 should not be more than 75 mm. It was more than 150 mm. Because of this wide gap, when the wooden door closed, the girl was trapped between the two doors, and the lift became operative.

Mishap: *Binal Soni, (18) was talking to a friend when she walked backwards towards the lift on the ninth floor, opened the door of the lift and stepped in. Since the lift was not there, she plunged to her death landing on top of the lift car.*

Cause: In this case, a defective door locking mechanism was the cause of the tragedy. The door opened even though the lift car was not on that floor. On investigation, it was found that the licence to operate the lift had not been renewed.

As can be seen observed from the above cases, elevator accidents occur for one or more of these reasons:

- lack of care and risky behaviour by users
- children are not warned about the hazards of playing near a lift
- the lift is not as per specifications in some way
- the lift has not been maintained properly resulting in defects and malfunctioning

According to the magazine *Elevator World India*, most elevator-accident deaths result from a passenger or technician falling into an elevator pit. Some deaths occur while carrying out rescue operations. The free fall of an elevator is another frightening cause for an accident.

Lacking Good Safety System – A Cause of Concern

A survey conducted by CERC a few years ago found several lacunae in the procedure outlined above which lead to accidents. They are:

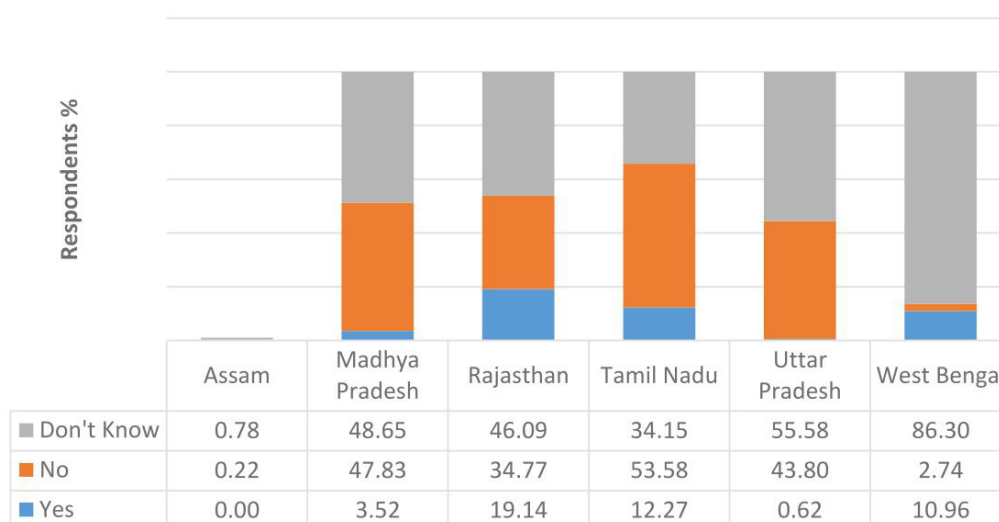
- Many lifts operate without licences.
- Lifts are not inspected regularly, many times only on paper, due to the shortage of manpower.
- Many lifts are made of sub-standard material or are defective.
- Sometimes, lifts are not installed properly. This may be because they are supplied and installed by local assemblers who are not professionally qualified.
- Lift shaft and/or machine room dimensions are not as per specifications. In some cases the room is used as a store room or a cable booster is fixed there.
- Lift doors are not made of waterproof and/or fireproof material as required.
- Though sliding shutters are banned, except for goods lifts, they are in use in many lifts.
- Repairs and maintenance are not carried out regularly in many cases. Often an unauthorised agency is hired to maintain the lift to cut costs.
- Generally untrained staff operates lifts.
- There is lack of education and awareness among the public about working of lifts. Adults take risks themselves and do not counsel children properly either leading to many tragedies.

Lack of Awareness about Maintenance

According to primary research by CUTS has revealed low consumer awareness about lift maintenance. In West Bengal, 86.30 percent of the respondents did not have information regarding the maintenance of lifts, followed by 55.58 percent in Uttar Pradesh, 48.65 percent in Madhya Pradesh and 46.09 percent in Rajasthan. There were negligible responses received from Assam.

This is an importance aspect to inquire into as consumers should be aware of the maintenance of lifts installed in their buildings.

Figure 2.3: Survey on Consumer Awareness about Regular Maintenance of Lifts



Elevators in India

There are around 4 lakh elevators (rough estimate) operating in India with an annual increase of 35,000 to 40,000 units every year.³⁸ With increasing migration to urban centres, and the largely vertical expansion in cities, this figure is set to shoot up. A building more than 13 metres high has to have an elevator that starts from the ground floor and has a minimum capacity of six persons. Most elevators are built to provide about 20 years of service as long as periodic maintenance/inspections are done.

Legislations

National standards

In India, the National Building Code (NBC) 2005 (brought out by the BIS), lays down guidelines on 'Installation of Lifts and Escalators'. It covers the essential requirements for the construction, installation, operation, maintenance and inspection of all types of lifts so as to ensure safe and satisfactory performance. These are mere guidelines and can only become mandatory provisions if the state governments adopt them through legislation.

Requirements of NBC

- All electrical work in connection with installation shall be carried out in accordance with the provisions of the Indian Electricity Act and Rules.
- All materials, fittings and appliances used in installation shall conform to Indian Standard specifications set by the BIS.
- The installation shall be carried out in conformity with Part 4 of the NBS - 'Fire and Life Safety' and local fire regulations
- The NBC specifies bottom and top clearances for the lift car to ensure safety. It also specifies dimensions of the pit (space in the lift shaft below the lift car when it is at the lowest floor), machine room, lift shaft, total headroom and landing doors, among other things.

As per the NBC, the number of lifts and their capacities (load and speed) required for a given building depend on (1) number of floors (2) population of each floor to be served and (3) maximum peak demand. The minimum load recommended is 884 kg and the speed recommended for a building of 6-12 floors is 0.75 to 1.5 metres/second. The NBC said it should be ensured that passenger lifts operate quietly and are positioned in the building after careful thought.

Provisions of States

Many states have brought out regulations for installation and operation of lifts. For instance, in Gujarat, the Gujarat Lifts and Escalators Act, 2000 and Rules (2001) lay down the procedure as described below in brief:

- **Installation:** The builder purchases the lift/s. After that, he has to get permission (valid for six months) from the office of the Chief Electrical Inspector (CEI) in the state government before installing the lift.
- **Operation:** Within one month of installation, the builder has to apply for a licence to operate the lift. The licence has to be renewed every three years.
- **Inspection:** The lift will be inspected by a state government official at the time of grant of licence and again at the time of renewal. In addition, the builder/chairman of society has to ensure that the lift is inspected every six months.
- **Maintenance:** Annual Maintenance Contracts (AMCs) have to be given to agencies approved by the CEI. The agencies have to visit the sites every month.

Box 2.3: World-wide Safety of Elevators

ISO 22559-1:2014 specifies Global Essential Safety Requirements (GESRs) for elevators, their components and functions and establishes a system and provides methods for minimising safety risks that may arise in the course of, the operation and use of, or work on, elevators.

In UK, Lifts Regulations 1997, consumer safety has been given importance with the following provisions:

- Lifts must be designed, constructed and installed to prevent normal starting if the rated load is exceeded.
- Fast lifts must be equipped with a speed-monitoring and speed-limiting device.
- If the lift is designed to allow trapped people to escape without outside help, instructions must be clear and visible in the car.
- It is an offence to supply lifts or safety components which do not comply with the requirements of the Regulations. Any person committing an offence is liable, under summary conviction, to imprisonment, a fine or both.

In the US, the American Society of Mechanical Engineers (ASME) has laid down a safety code for elevators. Three of the many provisions are:

- A two-way communications system between the car and a location staffed by authorised personnel will be provided. A push button saying HELP will activate the system.
- An emergency standby power system shall automatically take over and operate the elevator in the event of power supply failure.

Also, the US has specified several requirements to protect the interests of physically challenged passengers. For instance, elevator hall and car buttons should be mounted at certain heights (42 inches); lift cars should be large enough to accommodate a wheelchair and a 360-degree turn and call buttons should be a minimum of 0.75 inches in diameter and should be illuminated to a specific level.

In view of the fact, that many elevator accidents occur during repair or maintenance work, a Voluntary Code of Practice for Health and Safety Issues in the **New Zealand** Lift Industry has laid down an elaborate 'lockout' code to ensure safety of technical personnel working on lifts.

Box 2.4: Expert Opinion on Operation of Lifts

PN Gandhi, Chief Electrical Inspector, Gujarat

1. What are the major regulations governing safe operation of lifts at the national and state levels?

Lift being a subject in the State List of the Constitution of India, no law/regulations prevail regarding lifts at national-level. However, standards are prescribed by the BIS regarding erection and maintenance of lifts. Gujarat, West Bengal, Maharashtra, Tamil Nadu, Karnataka, Himachal Pradesh, Delhi and Haryana are some of the states that have their own laws related to lifts.

2. What are the three major causes of lift accidents as per your experience?

As per our experience, three major causes of lift accidents are: (i) faulty door locking system (ii) improper clearance between landing door and car door of lifts and (iii) lack of proper maintenance or maintenance by unauthorised persons.

3. What are the most important steps that need to be taken to prevent lift accidents?

Regular maintenance and periodical inspection of lifts by authorised persons and creating safety awareness among users.

4. Roughly how many lifts are in operation in Gujarat? How many inspectors are available to inspect lifts?

Around 50,000 lifts are in operation in the state. There are 13 inspectors and 28 assistant inspectors available in Gujarat to inspect lifts.

5. How can the general public ensure safety in lift use?

The general public can ensure safety in lift use by having awareness about safe operation and educating children about the same.

Suggested Advocacy Issues

There are several gaps in the system in India that seeks to ensure Consumer Safety in the Use of Lifts. These are not gaps in laws *per se*, but more in the implementation of laws and lack of consumer awareness on safety issues.

Roles and Responsibilities of Government Authorities

- The number of lifts in urban areas is increasing rapidly and the government enforcement machinery is not able to keep pace. As a result, regular inspection of lifts is not carried out and records are not properly kept. To ensure proper inspection, the manpower shortage should be tackled and the number of inspectors increased.
- Many lifts operate though their licences are not renewed. In such cases, the wrongdoer should be penalised. Strict implementation of licensing rules are vital.
- At the time of installation it should be ensured that the lift is as per specifications. Accidents are likely to occur if this is not so.

Measures to Enhance Consumer Safety

- All lifts should have an ‘overload sensor’ that prevents elevator from moving until excess load is removed.
- Most elevator related emergencies are due to either power failure or fire. If high-rises install generators, the power failure issue would be dealt with.
- Most elevator firms have phased out collapsible grill doors owing to safety concerns. However, they continue to be used as they are not yet banned and are cheaper to install.
- Elevators should have electric fans or air conditioning units for circulation and comfort in the event of the lift getting stuck.

Civic Roles and Responsibilities of Consumers

1. Awareness has to be increased among the public on how to use elevators safely. Children should be warned not to play near elevators.
2. Residents of a society should be aware of the rules and check if they are being followed. They should ensure that the elevator in their society is being maintained properly.

Duties of a Builder/Chairman of Residential Society

- At the time of purchase, the builder should ensure that the lift is as per specifications. If he is careless on this account, the users are in for trouble.
- As per rules, the chairman has to ensure that lifts are inspected twice a year. This should be adhered to strictly and there should be no attempt to cut costs by avoiding inspection just because there is a fee involved.
- The Chairman of the society has to ensure that the following work is carried out once a month: cleaning and lubrication of all parts; examination of ropes, their attachments, safety devices, door locks, moving parts and electrical connections, including lighting, plug points and earthing.
- The chairman should ensure that a lift that is not in safe working condition is not operated. He should not succumb to any kind of pressure from residents. Never compromise on safety.
- Good quality locks should be put on the doors so that they do not open easily.

- To save money societies may hire unauthorised agencies to maintain elevators. This should be avoided at any cost in the interests of the safety of the residents.
- If the lift is not working or under maintenance, the machine room and all doors should be locked and a signboard saying 'Lift out of order' should be put up on every floor.
- When the builder hands over charge of the society to the residents, the Chairman has to inform the CEI of the change of name and address and get the licence and other documents from the builder. Very often this is not done making it difficult to pin responsibility if an accident occurs.
- If an accident occurs, the Chairman should contact the maintenance agency and fire brigade. He should also intimate the CEI. The office of the CEI conducts an investigation and gives a report to the court.

Rules of Consumer Awareness

- A 'capacity plate' giving the rated load of passenger lifts has to be fixed giving the number of persons and weight. A person's weight is taken as 68 kg.
- The approach to the lift on each floor has to be kept lighted during night and even day, if needed.
- An emergency alarm signal, which can be operated by a push button in the lift, and is clearly audible outside the lift, should be provided. This is needed if the lift gets stuck due to breakdown or power shutdown.
- A battery-operated unit has to be provided in the lift for light and emergency alarm.
- A battery operated telephone should be provided in the lift. This, like other items of community property, is often stolen. So an inbuilt push and talk system can be installed.
- Instructions in English, Hindi and the regional language of the state for rescue of persons travelling in the lift by manual operation of brake, in case of failure of lift motor or power supply, should be affixed in the machine room.

Table 2.7: Tips for Safe Operation of Elevators

Do's	Don'ts
Stand clear of elevator door as it is closing. Door sensors are not always reliable	Do not overload the lift. Heed the number and weight specified on the capacity plate
Enter and exit the lift at designated floor alignments	Never put your hand through the doors as it could lead to serious injury
In case of fire, earthquake or any other emergency, use the stairs	Children should be told not to keep pressing the buttons inside or outside the lift
Keep clothes away from door openings	Do not panic if you are stuck in a lift. Do not try to force your way out if the elevator is between floors. Use the Alarm button, Help button or Emergency phone inside the cabin. Clearly convey to the other party which block and elevator you are inside
Hold children and pets firmly while using an elevator	Do not allow your children to use the lift as a play area. Children below 10 years should not be allowed to travel alone in a lift
When the elevator arrives at a floor, step aside and allow those inside to exit first.	Do not carry cement, bricks and other heavy loads in a lift
Extinguish smoking materials before entering a lift	Do not resist closure of the lift if there is a defect

- A logbook should be maintained for every lift recording details of repair and maintenance.
- A copy of the licence should be displayed in the lift and in the machine room.

Conclusion

The ground realities in India are quite different from what the law lays down. Unfortunately, consumers are not aware of the rules that their building societies should follow. They also indulge in unsafe practices which lead to tragic accidents. Again, at times, builders and the chairmen of the societies take shortcuts to reduce costs. To ensure safety in lift use, all the stakeholders – consumers, builder/lift manufacturer, chairman of society and government – should put safety first.

As is evident, codes and regulations are not enough. They have to be made mandatory and enforced effectively by Central and state governments with sufficient provision for taking penal action against erring parties. At the same time, academics should keep abreast of global best practices and suggest revisions to the codes.

Consumer awareness about what the laws prescribe will also go a long way in preventing avoidable tragedies. Only if consumers are armed with knowledge will they be able to demand and ensure that the laws are upheld. Also, other stakeholders involved – builders, equipment manufacturers, chairmen of residential societies and government functionaries - should put safety of lives and property ahead of personal gain.

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3

Safety of Consumers: Amusement Sector

– *Simi T Balakrishnan*

Amusement Ride Safety and Standards

The Government of India has enacted various laws and legislations to protect the interest of consumer and the foremost legislation being the Consumer Protection Act, 1986. Besides, concerns relating to consumer safety are dealt by effectively enacting numerous legislations and by interpreting various constitutional provisions, international conventions and various regulations issued by different regulatory agencies on the issue of safety. However, most of time the work carried out to ensure consumers' right to safety has been trickled down to mere product safety. Given the increasing scope of services in today's world, more focus on consumer safety in the services sector is vital.

The Consumer Protection Act 1986 defines 'service' as service of any kind which is made available to the potential users and includes the provision of facilities in connection with banking, financing, insurance, transport, processing, supply of electrical or other energy, board or lodging or both, housing construction, entertainment, amusement or purveying of news or any other information, but does not include the rendering of any service free of charge or under a contract of personal service.

Further, the Act defines the 'consumer' who avails such services as a person who hires or avails any services for a consideration which has been paid or promised or partly paid and partly promised, or under any system of deferred payment and includes any beneficiary of such services other than the person who hires or avails of the services for consideration paid or promised, or partly paid and partly promised, or under any system of deferred payments, when such services are availed of with the approval of the first-mentioned person.

The actual safety level of a service is basically determined by the aggregate effects of the following main components:¹

- The safety of the premises, structures and equipment used for providing the service;
- The qualifications of the service provider;
- The availability and quality of the information on the safety aspects of the service provided to the user/consumer of the service;
- The way in which the service is carried out by the service provider;
- The general abilities and behaviour of the consumer;

- The availability of emergency procedures and equipment to reduce damage in case of accidents.

This chapter would focus on how far a consumer who avails amusement services is safe in India? So far such a comprehensive study analysing the safety of consumers availing various amusement services has not been carried out in India. Ensuring safety in services will not only save the lives and fate of countless but also boost consumer confidence, thus boosting the nation's economy.

Common Public Amusement Services in India

Fairs and festivals are of ancient origin in Indian culture. In fact, India is widely known around the world as a land of 'Fairs and Festivals'. With different communities living harmoniously, often festivals are celebrated in frequent close intervals. Among these festivals, some are celebrated to mark the change of seasons, many others on the grounds of religious, spiritual and cultural fairs or some auspicious occasions most of which are carried forward from the time immemorial. All these festivals are celebrated by people with great enthusiasm and fanfare in the most colourful atmosphere.

For instance, the *Khumbh mela* that witnessed the largest gathering in the world held at four Hindu religious places Prayag, Haridwar, Ujjain and Nashik; the Kolkata Book Fair, which is the world's third largest annual conglomeration of books; the famous Sonapur Cattle Fair near Patna which is the world's largest animal fair and the very famous Goa carnival which is been celebrated since the 18th century.

Such periodic fairs and celebrations were thus a natural place for the development of amusement attractions as every festival completes only with cultural programmes, food and small fun rides and games for children. Hence, it would not be wrong to call such small street fairs and celebrations as the originator of modern amusement services.

In India, the public amusement or entertainment services are of the several categories including drama theatres, cinema halls, circuses, fair grounds, celebrations associated with religious festivals, amusement and theme parks. The amusement and theme park industry, which is the most prominent ones in these categories, is about two decades old in India and it is relatively new when compared to its origin in developed world.

From one Appu Ghar (New Delhi) in 1984 to over 150 plus amusement parks, the Indian amusement park industry is witnessing a huge growth. According to a report by Insight Alpha, a research firm, at present, the size of this business in India is estimated to be around ₹40bn and is estimated to grow by 10 percent per annum in next couple of years. It is expected that the industry would be worth ₹100bn by 2020.² Besides, given the fact that the growth potential is substantial, overseas companies in entertainment parks and attractions like Universal Studios, Disney, Sony and Ripley Entertainment are mulling over investments of billions of dollars in India.

Table 3.1 shows the revenue of amusement parks and theme parks in India from 2008 to 2012, with a projection until 2018. In 2012, revenues of amusement parks and theme parks in India amounted to approximately US\$763mn.

Table 3.1: Revenue of Amusement Parks/Theme Parks in India (2008- 2018)											
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Revenue in (US\$m)	508	594	529	750	763	783	887	909	971	1,036	1,105
Source: < www.statista.com/forecasts/331233/india-amusement-parks-and-theme-parks-revenue-forecast-sic-9321 >											

Risk Assessment in Amusement Services

Amusement and entertainment services are potentially dangerous, especially if they are not properly maintained or the appropriate safety protocols are neglected. Accidents can occur if the venue and equipments are not regularly repaired or properly maintained. Consumers can also get sick from eating adulterated or spoiled foods that are sold during such fairs and festivals. If any negligence results in an accident, the owner, the organisers and all concerned government officials who grant licences could be held equally liable.

All these years, the country had been witnessing quite a number of adverse events that are well associated with the entertainment and amusement activities in religious festivals and mass gatherings, fairgrounds, circuses, cinema halls, and amusement/theme parks. But most of the time getting a reliable data on accidents in fairgrounds and other amusement services is very difficult. In fact laws and regulations relating to such events differ from State to State and considering that often many injuries go unreported, an accurate approximation to gauge the severity of the issue is difficult to determine. This makes comparative analysis of the effectiveness of safety measure over time a very uncertain process.

Accidents during Public Amusement Services

Here are some of the most horrifying tragedies in India that highlights the failure to ensure consumer safety in public amusement services. Most of them reflect the scant disregard for safety norms by the service providers and reaffirm the urgent need to have and implement proper consumer safety measures in place. Some of the common accidents reported in the public amusement services are as following:

- *Fireworks at religious festivals:* More than hundreds of people died and more than 300 people suffered severe burn injuries as a result of a major fire that took place at Puttingal temple annual festival at Paravur in Kollam district of Kerala in the month of April 2016.
- *Short circuit at a community function:* Fire broke out due to electric short circuit at a community function of the eunuchs, gathered at the community centre in Nandnagari in East Delhi in 2011. About 14 eunuchs died and 50 got injured.
- *Electric short circuit at trade fair:* This claimed 64 lives – 64 people died and 80 sustained injuries after a fire engulfed the tent at a crowded consumer trade fair in Meerut. The blaze, sparked off by an electrical short-circuit in one of the enclosures, took minutes to spread across to the two other adjoining enclosures that were razed before any help could arrive. Hundreds were trapped because of inadequate openings in the air-conditioned tented enclosures.
- *Blasting of electric transformer at cinema hall:* This accident claimed 59 lives – 59 people had died and 103 were injured in an inferno at Uphar cinema hall, in New Delhi due to negligence of many concerned people of the cinema hall. The transformer at the parking

level burst, and 20 cars in the parking lot caught fire, eventually leading to a large scale fire in the five-storey building, which housed the cinema hall and several offices.

- *Mishaps at fairs in villages:* Four people were injured after a section of a rollercoaster ride which collapsed at a fun fair at *Vacation mela 2015* in Ahmedabad. The accident occurred because three people were in each car meant for two. Negligence on part of the ride operators was quite evident from the accident.
- *Bangalore circus fire:* A fire swept the main tent of the Venus Circus in Bangalore in 1981 sending it crashing down in flames onto a crowd of about 4,000 people and killing more than 90 people, the majority of them being children. The circus tents were pitched under high tension electric cables.
- *Ride malfunctions:* About eight people were injured at Queens Land Theme Park in Chennai. Also 18 people were badly injured in 2014 due to faulty giant wheel resulting in an over oscillation of the cabins attached to the wheel. As the ride operator switched on the machine and left without monitoring, the visitors had to contact the concerned persons in the control room to seize the ride.
- *Roller coaster accident:* At Adlabs Imagica Theme Park in Mumbai (Maharashtra), two ladies were seriously hurt while three others had minor injuries following an accident that took place in the ride called 'Bandits of Robinhood'. The ride resulted into malfunctioning after a wheel of one of its cars derailed. Following the sudden braking, victims who were seated together in one of the cars, hit their heads and collided against a metallic frame with a jerk.
- *Woman thrown from ride and killed:* At EVP amusement park in Chennai, a 20-year-old woman was killed when she was thrown from the 'octopus ride'. The woman suffered serious head injuries after being thrown from the ride.
- *Water slide collapsed injuring 15:* At Nicco Park in Kolkata 15 people were injured when a water slide collapsed due to overcrowding. Six people were seriously injured.
- *Couple thrown from ride:* At a carnival in Durgapur city (West Bengal), a man and his wife was ejected some twenty feet from a merry-go-round type ride. The ride's seat apparently detached from the main part of the ride when the nuts and bolts became too loose. The man had a fractured nasal bone while his wife had bruises on her hands and legs. Both apparently were knocked out by the fall as well.
- *Woman thrown from ride:* At EVP World amusement park in Chembarambakkam, Tamil Nadu, a 25-year-old woman had multiple fractures when she was thrown off the 'cup and saucer' ride and slammed against the base of the structure, fracturing her hip and collar bone.

Box 3.1: Consumer Safety in Developed World

Europe

Each year hundreds of millions of people rush to popular theme parks and fairgrounds in EU from around the world in order to have a good time of their short break from daily routine. Consumers, both young and old, enjoy having fun with families and friends by riding thrilling roller coasters, seeing daring spectacles, and enjoying varied themed environments. According to a report published by EU, unfortunately there are about 19,000 injuries per year across the EU-15 member states associated with fairgrounds and amusement parks.³ Most of the injuries involve children.

The report also states that there is no direct relevant community legislation to address the safety risks for consumer services, except for transport sector. However, there are numerous measures, which are applied to fairgrounds and amusement parks to ensure the safety of consumers including national legislation, international and national non-regulatory measures as well as local measures.

Box 3.2 The Health and Safety Legislation Relating to Fairground Rides in UK⁴

- General requirements of Health and Safety at Work Act 1974 for the protection of employees, the self-employed and the public in the operation of rides
- Requirements of the Health and Safety at Work Act for product safety, in particular Section 6 which places duties on designers, manufacturers and importers of rides
- Provision and Use of Work Equipment Regulations 1998 and The Lifting Operations and Lifting Equipment Regulations 1998 regulations relating to the safety of equipment used at work
- Pressure Systems Safety Regulations 2000, relating to risks from hydraulic and pneumatic systems
- Electricity at Work Regulations 1989, covering electrical safety;
- Management of Health and Safety Regulations 1999, requiring amongst other things risk assessments; arrangements for planning; organisation, control, monitoring and review of preventative and protective measures; competent persons to assist; procedures for serious and imminent danger and for danger areas; contact with external services including first-aid; emergency medical cases and rescue work; co-operation between employers; employee training and information for temporary workers and
- Construction (Design and Management) Regulations 1994, which will apply to construction processes associated with the installation and maintenance of rides, particularly large complex rides at theme parks.

The Health and Safety at Work etc. Act 1974 and subsequent health and safety regulations thus place duties on a wide range of people. These include the following:⁵

- Designers, suppliers, manufacturers, installers and importers have duties to ensure that the attractions are safe when first supplied and installed, to carry out any necessary research and provide information about safe use, updated in the light of experience.
- Organisers should have total control of the fairground or amusement park, and have duties concerning safe layout and emergency procedures.
- Responsible amusement organisers/authorities should have control and should realise their duty to maintain the services rendered safely.
- Operators are in immediate charge of an attraction and have a duty to operate it safely.
- Attendants help to operate an attraction, and have a duty to take reasonable care for their own and others' safety, and to follow instructions.
- Inspection bodies (who may be companies) provide inspection and testing services. Where they are engaged by other duty holders to perform specific tasks, it should be established that the particular type of inspection and testing service required is one that body is registered to perform.

Box 3.3: Safety Regulations across the Globe

In UK, the Pyrotechnic Articles (Safety) Regulations 2015, which came into force on August 17, 2015, deal with the safety of fireworks as a consumer product. Before placing a firework on the market, a manufacturer must ensure that it has been designed and manufactured in accordance with the essential safety requirements. All fireworks intended to be sold to the public must be 'CE' marked showing that they meet European Union (EU) requirements set out in Directive 2013/29/EU. Significantly, a manufacturer must keep the technical documentation and the EU declaration of conformity drawn up in respect of a firework for a period of 10 years beginning on the day on which the firework is placed on the market.

Under the 2015 Regulations, a retailer must not sell F1 category fireworks to anyone under the age of 16. F2 and F3 category fireworks must not be sold to anyone under 18. The most powerful F4 category fireworks must not be sold to members of the public; they can only be supplied to a person with specialist knowledge. These measures are specifically designed to promote consumer safety. It is also an offence to use fireworks after 11pm and before 7am without permission.⁶

Using fireworks illegally can result in prosecution and a fine of up to £5,000 and/or a prison sentence of up to 6 months. An on-the-spot fine of £90 may also be levied. The penalty for committing an offence of supplying a category F2 or F3 firework to any person under 18 years, or supplying a category F1 firework to any person under 16 years, is a fine of up to £5,000 and up to six months' imprisonment.

In all areas, local authority Trading Standards officers are responsible for enforcing regulations on consumer safety and age of purchase. Enforcement of the Regulations in respect of other pyrotechnics will fall primarily to the Health & Safety Executive.

In US, the Government regulation of amusement services often depends on whether the ride is categorised as fixed-site or a mobile service. A fixed-site ride is a permanent fixture at a certain, specific location and classic examples are large theme parks like Disney World, Universal Studios and Sea World. Whereas, mobile rides/parks are usually transported from location to location as part of fairs, carnivals, parties or other events.

Since 1981, the US Consumer Product Safety Commission (CPSC), an independent federal regulatory agency, has had some authority over amusement rides, but exclusively over mobile rides. But unfortunately the fixed site rides does not come under the preview of the commission and this is often termed as the "Roller Coaster Loophole" in the Consumer Product Safety Act, 1981. Such parks regulations are left up to the state and the local jurisdiction. In many states, there are regulations regarding inspections and insurance requirements, but reporting is not mandated. In several states, there are no regulations regarding theme park safety.

According to Penny and Associates, a law firm based in the US, the guideline for amusement rides varies from State to State. Presently, ten States have no state-administered assessment programs for mobile rides. Fourteen States and the District of Columbia have no state-administered programmes for fixed-site rides. For example, Florida's theme parks, which account for more than 20 percent of all amusement park business in the US, are exempt from state regulatory laws.

Regarding liability, the law firm⁷ states that the amusement parks, carnivals, and fairs may be sued for amusement park injuries under a variety of theories, including premises liability, negligence and products liability. However, obtaining a recovery for an amusement park ride injury is generally quite difficult for some of the following reasons, among others:

- The most common amusement park injury is usually to the neck or back, with resulting pain but no other physical manifestation. Because such injuries are not visible, proving their existence or that they were caused by the ride is not easy.
- When there is no regulation, the amusement park often controls and conducts the investigation, making it difficult to collect evidence for a successful amusement park injury lawsuit.
- Owners and operators of amusement parks are not required to protect patrons from every conceivable danger or hazard; i.e., they are not insurers of their patrons' safety. In some jurisdictions, a patron's failure to obey written or oral safety instructions may greatly reduce or completely bar recovery.
- Several states have 'recreational use immunity' – statutes that immunise property owners from liability when they open their property to the general public free of charge.
- Courts may hold that the patron 'assumed the risk' of injury by choosing to go on the ride, thereby precluding recovery.

The US Consumer Product Safety Commission collects data on fixed rides at amusement and theme parks, along with mobile rides at events, such as carnivals, and other events. It estimates that there were 40,900 hospital-treated injuries from accidents at these sites in 2014, which is more than those in the previous year. In 2014, 18,807 of these injuries were sustained by children between the ages of five and 14 (see Table 3.2).

Table 3.2: Amusement Attraction Injuries by Age in US, 2008-2014							
Year	2008	2009	2010	2011	2012	2013	2014
Age Group							
Under 5	4,280	4,006	4,159	5,139	6,364	5,681	5,475
5 to 14	13,435	14,490	16,595	17,189	19,491	17,022	18,807
15 to 24	4,503	7,093	5,447	6,536	6,989	5,999	6,332
25 to 64	8,108	7,929	10,214	8,097	10,407	9,255	10,174
Over 65	263	246	355	193	595	192	112
Total	30,590	33,765	36,749	37,154	43,846	38,149	40,900
Source: U.S. Consumer Product Safety Commission, National Electronic Injury Surveillance System. Accessible at < www.cpsc.gov/en/Research—Statistics/NEISS-Injury-Data/ >							

Likewise, the fireworks laws in the US are a patchwork of regulations that vary by State and even by county and local township. Many States with relatively liberal fireworks regulations only allow their sale around Independence Day and New Year's, the most popular holidays for fireworks. Moreover, some States like Massachusetts and New Jersey have a complete ban on consumer fireworks but allow public displays by professional pyro-technicians. Other States like Ohio and Vermont allow sparklers, but no other devices. Thus all States have varying laws that often change based on the time of year.⁸

Amusement Services Safety: Legislations, Regulation and Implementation in India

Like in many other developed countries, India too does not have a specific legislation to address consumer safety in amusement services. As per the Indian Constitution, both entertainment and amusements are included in List-II. Subjects defined and enlisted under the List-II of the Seventh Schedule of the Constitution of India forms the exclusive domain of the respective State Governments within India, and thus effectively ousting the domain of the Central Government in framing laws under these subjects.

Being a State subject, the norms with respect to this sector vary from state to state. But before going into detail about the subject, let's look how the term "Place of Public Amusement" is defined by few of the State legislations/rules/order. This would help us to analyse the coverage of the present study.

What is Public Amusement?

The Delhi Police Act, 1978 defines the term 'place of public amusement' under Section 2(k) as any place where music, singing, dancing or game or any other amusement, diversion, or recreation or the means of carrying on the same is provided, to which the public are admitted either on payment of money or with the intention that money may be collected from those admitted and includes a race course, circus, theatre, music hall, billiard or bagatelle room, gymnasium, fencing school, swimming pool or dancing hall;

The expression 'Place of public amusement' has been defined in Section 2(9) of the Bombay Police Act, 1951 as any place where music, singing, dancing, or any diversion or game, or the means of carrying on the same, is provided and to which the public are admitted either on payment of money or with the intention that money may be collected from those admitted and includes a race course, circus, theatre, music hall, billiard room, bagatelle room, gymnasium, fencing school, swimming pool or dancing hall.

From the above definitions, it is clear that in order to bring a particular place within the ambit of these definitions; it is not enough that it is a place where music, singing, dancing or any diversion or game etc. are provided. What is further necessary is that the admission of the public to such place should be either on payment of money or with an intention that money may be collected from those admitted. Thus, the second limb of these definitions is crucial. Where no payment of money is involved, providing amusements at a particular place itself will not convert such a place into a "place of public amusement", even if public is admitted to such a place.

But this is not the same in few other states. For instance, under Section 2 (14) of the Karnataka Police Act, 1963, "place of public amusement" means any spot where music, singing, dancing or any diversion or game, or the means of carrying on the same is provided and to which the public are admitted and includes a race course, circus, theatre, music hall, billiard room.

Likewise, Section 2(3) of The Bengal Places of Public Amusement Act, 1933 defines "place of public amusement" as any place, enclosure, building, vessel, tent, booth or other erection, whether permanent or temporary, where music, singing, dancing or any diversion or game or the means of carrying on the same is provided and to which the public are admitted either free or on payment

of money or on any other consideration and includes a carnival, circus or amusement park. Hence, the very definition of the word the place of public amusement varies in each State.

Rules and Regulations in Public Amusement

Since most of the rules and regulations with respect to public amusement services are similar across different States in India, the study highlights those general guidelines/requirements laid down that aids to ensure safety of consumers.

Like most businesses, amusement services are subject to state and local regulations. However, they are not subject to any special state or central oversight. To ensure basic safety few requirements are to be met by the owner of the place and/or the organisers of the event/game. Most of which are related to mechanical, electrical, design and operational safety checks.

With respect to the amusement parks, though its mushrooming all over India, still there is no licensing or regulatory authority to assess safety of consumers in such parks. Organisers are just mandated to get permission from the police who are the licensing authority. But unfortunately, they are often ill-equipped to check the operational safety of the equipments and machineries used in such amusement services. CUTS-Safety Watch researchers had conducted spot checks at amusement fairs and the findings were shocking.⁹ No one checks the equipment and even routine maintenance work is not carried out, none have safety instructions or even an emergency manual, none have emergency medical equipment or trained emergency medical teams, none have fire-fighting equipment and many of the rides they offer are downright dangerous, especially for the kids.

In fact, till 2004, there were not even any safety guidelines or standards for parks to follow while building safe rides either at the centre or the state. In 2004, the Bureau of Indian Standards (BIS) introduced guidelines for structural safety,¹⁰ but alas these guidelines are not mandatory and mere voluntary and in most cases, the police, who give permission to these fairs and parks, are not even aware of these norms. IS24 15475 focusses on amusement ride safety while IS 15492 takes care of safety in water parks. The guidelines provide information about safety requirements, selection and training of operators and operation and maintenance procedures. They also highlight key points in the design, manufacture and setting up of amusement rides.

Structural Stability Certificates

In case of large amusement parks, the parks have to obtain structural stability certificates on an annual basis from the public works department, a common practice for most buildings. But unfortunately such inspections are not carried out specifically to assess the safety of rides. Sources say that even this basic certification is not strictly observed.¹¹ Besides, in most cases the authorities have to obtain “No objection certificates” from the following departments at the local level – Police, Health department, Fire department, Food department, and the Medical department.

As an example, for our easy and clear understanding the requirements laid down by the Delhi Police Licensing Unit for a person to start an amusement park, discotheque, circuses, *melas*, cinema hall and auditoriums within Delhi are provided in Annexure I.

The guidelines in the Annexure are just an illustration of basic requirements required by the licensing authorities in most States for various amusement services. There are plethora of rules and guidelines issued by various States aimed at building safety, consumer safety, fire prevention and control and safety of electrical installations. But such regulatory provisions laid down fall short when it comes to implementation.

Similar is the case with respect to religious gatherings and celebrations. Most of the festivals in India are observed with mass gatherings and prayers. Festivals at places of worships are very common wherein large crowd participate to observe the rituals and also as spectators. But unfortunately, most of the time such mass gatherings have become the hotspots of different kinds of hazards and a few of them had turned into disasters. Like the recent firecracker tragedy in Kollam, Kerala.

Casualties during religious festivals mostly happen either due to human stampedes, violent behaviour of elephants or because of careless illegal firecracker displays.¹² Other than few states coming up with some rules related to engaging elephants in festivals and few guidelines to perform fireworks in festivals, a detailed guideline to cover the entire safety aspects of the festivals is still far behind. Gathering of large crowd at a limited geographical area for short time period and the diversity of crowd always challenge the safety measures unless it is systematically planned, executed and monitored.¹³

**Box 3.4: Amusement Services in India Mainly Regulated
by the State/Local Government**

State governments

State legislations by and large cover issues like direct and indirect taxes, entertainment tax, employment, safety, pollution control and disaster management. Approval for amusement park project is generally given by the State Ministry of Tourism.

Local governments

These include the municipalities of urban and suburban areas and *gram panchayats* (in rural areas). They give various licences and approvals required for the organising a fair or for commencement of parks and setting up of venue for large gatherings.

Central government

The BIS is the national standards body in India that has introduced a code of practice for the Indian amusement park industry, along with guidelines for structural safety, in 2004. However, these are mere guidelines that are voluntary in nature.

Implementation of Safety Standards

Lack of supervision and commitment to implement and monitor standards of care is quite evident within this sector. State governments who are responsible for overseeing the safety of such amusement services often fail to give due attention to this sector. While very few inspect the services on regular basis, few others inspect just once a year and most do not carry out any inspections at all. Most of the time the officials react only after some grave mishap and subsequent media sensation. Even then in the end the officials at the grassroot level who are mostly at the bottom end of the hierarchy are mostly blamed.

The recent firecracker tragedy at Kerala highlights this situation wherein the collector blames the district police chief and they in turn blame the district administration and local politicians. The tragedy had occurred during an unauthorised display of fireworks early morning during, which a spark from a firecracker fell on the storehouse containing crackers. The accident killed 110 persons and injured over 400 people. If it was not for the Explosive Rules 2008, the Petroleum and Explosives Safety Organisation (PESO) would have been held liable for such gross negligence as the organisation was generally responsible for controlling and administering the usage of explosives including crackers. But the 2008 Rule entrusted this responsibility to district authorities. The district collector is entrusted with issuing licence for possession and use of fireworks for public display.

Besides, such grave tragedies repeat in spite of adequate guidelines laid out by both the government and honourable Supreme Court on earlier occasions. The Supreme Court has banned firecrackers that generate noise greater than 125 decibels. This is also in violation of the Ministry of Environment and Forests Notification no. G.S.R. 682 (E) dated 05/10/1999 wherein it has stated that the noise level of crackers should not exceed 125 decibels. Even, the Supreme Court has ordered restricting fireworks display between 10pm and 6am. All these are blatantly violated by festival organisers on most occasions and the authorities' in charge of implementing and monitoring also turn their back fearing religious or political backlash.

In case of a fire accident, it is only after the accident that fire authorities generally find out the key causes, as to whether or not the sprinkler systems had worked or whether or not non-combustible materials in the building were of international standards.¹⁴

Uphaar Cinema Fire Mishap

The Uphaar Cinema fire disaster in Delhi, which claimed a toll of 59 lives is a grim revelation of the lack of observance of safety standards in the multiplexes and the apathy on the part of the officials concerned in ensuring that the building, electrical and fire safety regulations are observed by the licensee. It is reported that the cumulative negligence and indifference of the licensee/ Management of the theatre, the Delhi Electricity Board officials and the authorities who granted No Objection Certificate (NOC) for renewal of license contributed to the fire tragedy. During its hearing, the Delhi High Court noted that several requests by the Fire Department for upgradation of the fire combating equipments were caught up in bureaucratic red tape. The Court observed: "When lives of citizens are involved, the requirement of those dealing in public safety should be urgently processed and no such administrative process of clearance in matters of public safety should take more than 90 days".¹⁵

A survey under this study was conducted by CUTS across selected Indian States targeting water theme parks to assess their safety measures. Findings from the survey indicate that there are theme parks across the countries that lack a lifeguard, which is a basic mandatory requirement for water theme parks. (see table 3.3)

Token inspection coupled with conspiracy, carelessness and zero/inadequate follow-up have contributed to the rise in accidents within this sector. Hence, the need for speedy and effective enforcement should always be the top priority to prevent such harrowing incidents in future. Further, the suggestion, to setup a single nodal agency to look into the implementation and enforcement of safety issues, made by both the Supreme Court and High Court in the case relating to victims of Uphaar tragedy could be given a serious thought and implemented on urgent basis.¹⁶

Table 3.3: Consumers Opinion on Presence of Life Guards			
State	Yes (%)	No (%)	Don't Know (%)
Assam	29.51	70.49	0.00
Guwahati	28.44	71.56	0.00
Jorhat	38.46	61.54	0.00
Madhya Pradesh	44.68	55.32	0.00
Bhopal	33.33	66.67	0.00
Gwalior	48.57	51.43	0.00
Rajasthan	12.12	87.88	0.00
Jaipur	14.04	85.96	0.00
Udaipur	0.00	100.00	0.00
Tamil Nadu	43.31	56.69	0.00
Chennai	39.39	60.61	0.00
Coimbatore	50.56	49.44	0.00
Uttar Pradesh	75.18	24.82	0.00
Ghaziabad	86.81	13.19	0.00
Lucknow	52.17	47.83	0.00
West Bengal	11.99	8.05	79.96
Jalpaiguri	2.96	1.25	95.79
Kolkata	24.16	17.23	58.61
Total	23.20	27.40	49.39

Such a single point nodal agency/licensing authority should consist of experts in structural engineering/building, fire prevention, electrical systems, law and order, municipal sanctions, urban planning, public health and licensing. A single multi-disciplinary body would ensure that the responsibility of public safety is in the hands of a body, which could be then held squarely responsible for any lapse and these would lead to a situation which would avoid the passing of the buck.

The existing position of different bodies looking after various components of public safety cannot be continued. A single body would also ensure speedier processing of applications for licence reducing red tape and avoidable complications and inevitable delay. The Supreme Court had categorically stated that the existing system of police granting licences should be abolished. These suggestions, which specifically relate to cinema theatres might hold good for all other public amusement services.

For instance, somewhat like the US independent safety Commission – the CPSC. The Commission is an independent federal regulatory agency established by the Consumer Product Safety Act to protect the public against unreasonable risks of injury and death from consumer products. The Defects Investigation Division within the Office of Compliance is responsible for, among other things, identifying defects in consumer products which present substantial product hazards and developing recalls designed to remove such products from both consumers and the chain of

distribution. Nevertheless, as earlier stated, its drawback is that the Commission has jurisdiction only over mobile amusement rides and all other entertainment services come outside its preview. However, much can be learned from the way it functions.

The CPSC staff engages in the following activities to foster amusement ride safety:¹⁷

1. Serving as a clearinghouse for safety information on ride incidents identified by Commission investigators and state and local ride officials. We transmit this information to state and local officials periodically or as needed.
2. Working on voluntary safety standards for mobile amusement rides through the Council for Amusement & Recreational Equipment Safety (CARES), the National Association of Amusement Ride Safety Officials (NAARSO), the Outdoor Amusement Business Association (OABA), and Amusement Industry Manufacturers & Suppliers International, Ltd. (AIMS International, Ltd.).
3. Developing technical expertise for mobile amusement rides.
4. Undertaking investigations to identify specific mobile rides which may have defects. As complaints or incidents are received, our technical staff evaluates them and staff takes appropriate follow-up actions to promote safety.
5. Compliance staff at the Commission notifies state officials of recalls, safety alerts, and information that promote safety nationwide. As well as, providing information on deaths and injuries associated with mobile amusement rides.
6. Assisting individual states with legislative efforts.

In India, though park operators do claim that local officials inspect their facilities, the fact remains that due to a lack of technical expertise and ample budget often proper safety checks and investigations are casual or not performed at all. This was highlighted in a 2005 CUTS article entitled ‘Joyride: Ride to Death?’ where even a few suggestions were put forth.

Box 3.5: Joyride or Ride to Death?

CUTS Recommendations in 2005 to avoid accidents at amusement parks

- There should be proper norms and regulations for issue of certificates to be followed by all.
- Rides and attractions in an amusement park must be inspected and certified at least annually. Certificates for rides and attractions at itinerant fairs and carnivals should not be valid for more than 30 days.
- Each time a ride or attraction is moved to a new location, it must be inspected and a new certificate issued before operation begins.
- The officers responsible for grant of licenses to amusement parks or owners of joy rides should have the technical expertise to understand the functioning of these machines. Those who grant license without verifying whether proper safety arrangements have been made should be punished.
- Random follow-up inspection is needed to ensure compliance with recommendations issued. Licences to be revoked upon failure to maintain adequate insurance coverage and also if the operator fails to make proper repairs.
- Every amusement park should have clear safety instructions in the local language and also list whether or not the rides are safe for the very young, the elderly, cardiac patients, expectant mothers etc. There should be an ambulance, doctor and a first aid kit.
- There should be emergency provisions at every amusement park. Public gathering places should certainly have fire-fighting equipment ready. The venue should clearly specify the do’s and don’ts.
- Safety clasps should have childproof locking systems.

Source: Accessible at <www.cuts-international.org/cspac-safety-articles.htm>, CUTS International, 2005

Safety in Developed Countries

Likewise, most developed countries have adequate legislations to regulate the use of fireworks. In India this is a big lacuna, as there are no regulations/legislations for preventing or regulating the use of fireworks by public. Few guidelines issued by government agencies and judiciary have failed to control dangerous practices in the production, sale and use of firecrackers. In 2015, Delhi High Court compared the damage caused by firecrackers to firearms. “It is not as if firecrackers are capable of any less harm than an arm within the meaning of Arms Act. Owing to less stringent control on use, firecrackers are available far more easily than an arm and are rampantly used and which has over the years resulted in incidents of fire and injury caused by firecrackers, on the occasion of Diwali, having become a routine affair and multiplying annually.”

In UK, it is an offense to throw or set off fireworks on any street, highway, or public place. There are huge penalties and fines for this. According to the UK Fireworks Act 2003, it is an offence to possess fireworks in public places, and setting off fireworks during the night (between 11pm and 7am) is a punishable offense. The Fireworks Act in Canada prohibits selling and setting off fireworks in the country, except between October 24 and November 01 in any year. It also specifies that fireworks may not be sold to a minor without the written permission of the parent or guardian of the minor.¹⁸

Enactment of similar stringent legislations plus ensuring effective implementation at all levels could aid in averting firework related injuries in India. Such a piece of legislation should stipulate the safety measures that are to be taken during public display of fireworks, the noise limit, the time limit for organising such displays, including the age limit for independently handling such crackers as well as the minimum distance or barren space required while lighting firecrackers and watching fireworks.

Box 3.6: Food Safety Issue at Festivals

Though it is necessary to hold licence of FSSAI before opening any temporary food stalls at food *melas*, exhibition and festivals, Tourism Department of Manipur failed to inform the same to food business operators who participated in the ‘Sangai Festival 2015’.

Food stalls were opened without any FSSAI license on the first day. A team of Food Security Officers who examined the stalls and checked whether the foods available were within the permissible limits or not, found many short falls. While one food stall was found mixing “non-permitted colour additives” in the food served, the Kitchens of over ten food stalls were found unhygienic. Besides, no carpets were seen along the lanes leading to these food stalls to avoid dusts, while other areas were well protected.

Source: www.fssairegistration.in/blog/licenses-issued-late-after-tourism-dept-fails-to-inform-food-stall-owners/

Another danger for consumers while availing various amusement services are food poisoning. Though it is necessary to hold licence of Food Safety and Standard Authority of India (FSSAI) before opening any temporary food stalls at carnivals, *melas*, fairs and festivals, most of the time the organisers fail to ensure so. Hence, food safety remains to be a serious issue in such mass gatherings.

The recent study published by the 'International Journal of Innovation Research in Science and Technology' highlights this situation. It states that in India there is a serious threat of microbial contamination of food due to poor food hygiene and safety knowledge of food handlers. While huge improvements have been there in this sector but problems still exist. Poor personal hygiene of vendors, poor quality of water used, negative attitude and practice of vendors, ignorant consumers coupled with careless attitude of the organisers and local government officials at such fairs and *melas* worsen the situation.

Strict enforcement of the laws by concerned food safety officials will not only enhance food safety but will also lead to cleaner environment in and around such amusement services. And because the food sector also acts as a huge livelihood support for a large number of people, and development is expected to enhance the overall socio-economic situation as well.

Consumer Protection Act and Amusement Services

The Consumer Protection Act, 1986 empowers every consumer some basic rights that include safety. The right to safety is the right to be protected against consumption of goods and services hazardous to health and life. There are many laws to secure a consumer's right to safety, including standards for safety of goods and services. As per the provisions of the Act, the goods are those, which are manufactured or produced and sold to consumers through wholesalers and retailers. The services are in the nature of transport, telephone, electricity, housing, banking, insurance, medical treatment, etc.

A person who goes to a fun and fair is a consumer and if any accident occurs due to the organiser's negligence, he is entitled to compensation. This order was passed by the National Consumer Dispute Redressal Commission in Haryana Institute of Fine Arts (HIFA) and another vs. Rajesh Mani Kaushik and others (RP No 384 of 1999, decided on February 25, 2008). The complainant had sought rupees 4 lakh as compensation for the injuries and suffering undergone by him and his family on account of an accident involving a 'merry-go-round' put up at a fair, Phulwari Children Bazar, in Karnal in 1996. The complainant had taken his wife and two children to the *mela* and they all decided to go on the ride.

However, as the merry-go-round picked up full speed, its seats got detached and the family members went flying into space. As they landed on hard ground 15 yards away, they suffered serious injuries. The Karnal District Consumer Forum in this case awarded a compensation of ₹20,000, but the State Consumer Commission enhanced it to ₹1 lakh and held not only the owner of the merry-go-round and the operator responsible for the mishap, but also HIFA and its Director and asked them to jointly and severally pay the compensation amount. It stated that a person who organises such a fair or *mela* would be liable for the deficiency in service rendered by the owner of the merry-go-round. The reason is it is the organiser's responsibility to take precautions in *mela* that no such untoward incident occurs and such machines are properly installed. This was upheld by the National Commission.

Consumer Rights in Amusement Services

Indian markets are flooded with unsafe products and services, safety rules are frequently violated, accidents keeps repeating. All this plus violation of inspection rules and grant of illegal permissions is a common practice. Country keeps witnessing grave incidents and every time it points towards

the scale at which safety rules are flouted and the irregular, inefficient or lack of effective monitoring system in place. Despite this there is no compulsion for officials in charge to mend the way of discharging their duties and responsibilities. The primary factor for this sorry state of affairs is consumer ignorance about their rights.

To protect the interest of consumers in India, government enacted the Consumer Protection Act 1986. The Act gives us six basic rights – right to safety; right to information; right to choose; right to be heard; right to seek redressal and the right to consumer education. These basic rights need to be protected since the consumer avail services given by the service providers based on trust and faith.

The rights of a consumer while visiting the fairs, festivals, theatres, amusement parks, fairgrounds and any other amusement services can be summarised as the following:

Right to Information

Every consumer has the right to be informed of the general safety requirements, safe use of various services provided like rides and attractions, health conditions required, physical restrictions, such as height and weight limitations for each services provided, safe entry and exit to the venue, possible hazards and hidden dangers in case of any deficient services or negligence from service provider and or consumers, emergency procedures and evacuation plans in case of fire, earthquakes, floods, or crowd stampede and other disasters, information on reporting accidents and incidents, availing first aid, and procedures and precautions to be taken by the consumer to avoid hazards and the consequences of failure to follow such instructions.

These shall be provided through means that are easily accessible and noticeable, which should always include at on-site, ride-specific orientation, and in a language that the consumers understand.

Right to Safety

Every consumer has a right to a safe use of services provided. This can be easily attained by ensuring strict compliance to standards set by the government and licensing body where the amusement service provider is doing business. This right also refers to the right to have access and to use emergency and safety devices, to avail medical assistance, and proper application of first aid procedures. This also includes the proper training of organisers, operators, attendants, employees on safety, and the regular inspection of attractions by a certified inspector as may be required by the licensing body. The amusement service providers should do everything possible to prevent harm and hazards to the consumers.

Right to Redress

Every consumer who availed any amusement services has a right, without fear of retribution to bring complaints or take action against the amusement provider, its owners/organisers, operators, attendants, and employees, for wrong or injury caused to the consumer or his or her spouse and minor children. The consumer has a right to satisfaction or relief from a wrong or injury as the case may be. Satisfaction of a wrong or injury may be done through rectifying the problem, providing compensation, conducting an investigation, or extending a formal apology to the consumer or his dependants.

To protect and promote these rights the Consumer Protection Act has set up the Consumer Protection Council at the National, State and District level. Their composition includes representatives of the government, public bodies, consumer representatives and representatives of trade and business. While it is the responsibility of the Central Government to set up the Central Consumer Protection Council, the responsibility for setting up the State & District Consumer Protection Councils (DCPCs) rests with the State Governments. But in many States these councils do not exist and if they exist they are not functional to fulfill their objectives.

The Councils at the State-level function, if at all, in a token manner to fulfill their formal responsibility. So to ensure safety of consumers who avail amusement services, it is very much vital to establish, activate and empower these councils in real terms in every State and Districts to attain the real objectives of the Act.

Table 3.4 illustrates the careless and poor awareness level of consumers with respect to safety at such public amusement services. Nearly 62 percent of those surveyed never bothered to read the instructions that are displayed for the visitors in such parks. Survey further highlighted that almost 39.4 percent of those surveyed believed that there is nothing to worry about, or that nothing will happen to them (table 3.5).

Table 3.4: Consumers view on Reading and Following Instructions Displayed in Amusement Park for Visitors			
State	Yes %	No %	Total
Assam	10.56	89.44	483
Guwahati	17.48	82.52	246
Jorhat	3.38	96.62	237
Madhya Pradesh	4.38	95.62	251
Bhopal	4.25	95.75	212
Gwalior	5.13	94.87	39
Rajasthan	19.09	80.91	241
Jaipur	0.00	100.00	17
Udaipur	20.54	79.46	224
Tamil Nadu	54.73	45.27	497
Chennai	35.18	64.82	199
Coimbatore	67.79	32.21	298
Uttar Pradesh	70.00	30.00	270
Ghaziabad	72.57	27.43	237
Lucknow	51.52	48.48	33
West Bengal	74.72	25.28	265
Jalpaiguri	64.47	35.53	76
Kolkata	78.84	21.16	189
Total	38.22	61.78	2007

Table 3.5: Consumer Response Regarding Reading Instructions in Amusement Park						
State	Staff Taking Care (%)	Belief in no harm (%)	Time Wastage & Spoils Fun (%)	Self-Responsibility (%)	Others (%)	Total
Assam	0.00	5.71	42.86	51.43	0.00	35
Guwahati	0.00	0.00	45.16	54.84	0.00	31
Jorhat	0.00	50.00	25.00	25.00	0.00	4
Madhya Pradesh	0.00	20.00	32.00	48.00	0.00	25
Bhopal	0.00	20.00	32.00	48.00	0.00	25
Gwalior	0.00	0.00	0.00	0.00	0.00	0
Rajasthan	0.00	54.84	0.19	44.78	0.19	527
Jaipur	0.00	18.61	0.00	81.02	0.36	274
Udaipur	0.00	94.07	0.40	5.53	0.00	253
Tamil Nadu	0.00	50.00	0.00	50.00	0.00	2
Chennai	0.00	50.00	0.00	50.00	0.00	2
Coimbatore	0.00	0.00	0.00	0.00	0.00	0
Uttar Pradesh	0.58	0.00	0.00	99.42	0.00	171
Ghaziabad	0.58	0.00	0.00	99.42	0.00	171
Lucknow	0.00	0.00	0.00	0.00	0.00	0
West Bengal	0.00	100.00	0.00	0.00	0.00	4
Jalpaiguri	0.00	0.00	0.00	0.00	0.00	0
Kolkata	0.00	100.00	0.00	0.00	0.00	4
Total	0.13	39.40	3.14	57.20	0.13	764

In India, unfortunately, people still do believe that if something unfortunate take place then it is an act of god. The worst is that only a very negligible percentage of respondents believed that the ‘staff will take care’. This highlights the apathy of service providers in ensuring safety of the consumers in general. Hence, the need to protect and promote the above basic consumer rights, particularly the right to safety and redress, becomes even more necessary for our country.

Recommendations

There are sufficient laws, rules and guidelines formulated from time to time plus a handful of relevant court orders to protect consumer’s right to safety while enjoying amusement services across various fields. What is more lacking in our country is the effective and stringent enforcement of such guidelines and laws.

Most of the rules and guidelines issued have explicit legal provisions, wherein the duties of all in the system have been laid down very clearly. But it is the spirit of honestly discharging one’s duty that is on the wane, and has always remain to be a matter of great concern across any sector in India. Most of the time, the implementing authorities and related support centre’s are so lethargic and careless that it leaves the poor consumers vulnerable to grave dangers. The best example to

quote here is the temple festival firecracker tragedy in Kerala that took away hundreds of innocent life's this April.

In case of amusement services, to control the growing number of accidents few steps could be taken like:

- The failure in implementation can be attributed to the police/licencing officials lacking the capability to be modern law enforcement agencies. Wide-ranging and in-depth reforms of enforcement officials are therefore necessary to ensure that laws are actually implemented and effective.
- The BIS should do away with the voluntary approach and make the guideline framed for amusement parks mandatory.
- State governments should be directed to strictly implement their existing laws for amusement parks. Licensing officers should be sensitised more about their sense of responsibility and the serious risk such parks pose to consumer's life and health. Inspections should be 30 days in the case of amusement fairs and each time such a fair move to a new location and the equipment for joyrides is assembled, technically qualified teams should carry out inspections before a fresh certificate is issued.¹⁹
- Meanwhile efforts should be taken by the relevant stakeholders to frame suitable laws for issuing certificates separately to amusement parks and amusement fairs with strict provisions for periodic inspection of all equipment. A central body to overview entire parks safety across the country would not be a bad idea.
- Emergency medical teams and insurance cover for parks, religious festivals and fairs must be made mandatory. At present, public liability insurance is not that popular among mass in India. Few temple authorities or organisers do cover their religious functions but there are no mandatory directions by the Centre or the National Disaster Management Authority to cover every major mass gathering or religious event.
- Fix minimum qualification for maintenance personnel's in parks and most importantly protect the consumers from contractual abuses as one-sided standard contracts and exclusion of essential rights in contracts.
- Another most important step is to spread awareness about the types of accidents and better educating the public about the dangers and hazards present in amusement parks, religious mass gatherings, theatres, carnivals and fairs. The aim of such programmes should be to enable people to act as discriminating consumers, capable of making an informed choice of services provided, and conscious of their rights and responsibilities. While developing such

Box 3.7: Problems in Implementing a Law

Given the costs and procedure involved, passing a law outlawing or enhancing criminal penalties may actually be the easier. The difficult part rests in the implementation of the law in a large and diverse country, such as India. In enacting laws there is little, if any, attention paid to the existing institutions that have been tasked with the implementation of the law. There is no systematic study of the capabilities and capacity of existing law-enforcement mechanisms, such as the police or the courts, to handle new obligations under a new law. In the hurry to be "seen to be doing something" it is quite likely that taking the easy legislative route, far from addressing existing problems, only adds new ones, even – exacerbating the existing problems.

Source: Alok Prasanna Kumar, Who Will Bell the Cop, Economic and Political Weekly, Vol. 51, Issue No. 16, 16 Apr, 2016.

programmes, special attention should be given to the needs of disadvantaged consumers, in both rural and urban areas, including low-income consumers and those with low or non-existent literacy levels. Consumer groups, service providers, local government bodies and other relevant organisations of civil society should be involved in these educational efforts.

- Need to have a central mechanism to collect and analyse accidents data reporting and also put in efforts to check under reporting, mis-classifying accidents, and ignoring accidents by service providers and making victims arrange for themselves to get medical facilities.
- Enact central legislation which could fill in the void that now prevents effective central safety oversight of amusement park rides.
- Governments should, as appropriate, formulate or promote the elaboration and implementation of standards, voluntary and other, at the national and State level for the safety and quality of services provided to consumers and give them appropriate publicity. The BIS standard for amusement parks safety and quality should be reviewed from time to time, in order to ensure that they conform, where possible, to generally accepted international standards.
- Ensure regular and strict enforcement of the laws by food safety officials. This will not only enhance food safety but will also lead to cleaner environment in and around such amusement services.
- In the case of firecrackers display and handlings, mandatory requirements laid down should be strictly enforced and efforts should also be taken simultaneously to encourage voluntary effort in creating awareness on the handling and use of fireworks. A stringent law like in other countries as discussed above could be considered in the long run.
- Activate and empower the Consumer Protection Councils in real terms in every State and Districts to attain the real objectives of the Consumer Protection Act.

Conclusion

Each type of amusement activity is unique. Fairs, festivals, amusement parks, theatres and various other mass gatherings are being held at various geographical locations and terrains irrespective of seasons. Hence, deriving a common pattern for ensuing safety of public and consumers in particular is futile. Availability of reliable data in this sector is really a major hurdle to carry out research for further improvement on safety aspect. The organiser of such amusement services is primarily responsible for the safe conduct of the activity or event with required structural and non-structural safety measures.

But for all this the service providers will have to invest a little more from their pocket and thus ensure safety standards. That would definitely be a smaller amount when compared to the huge compensation they might need to pay in case of any accidents due to negligence. Therefore, in the collective national interest, the regulatory and implementing agencies, the services providers and the consumers should come together and ensure laws laid down are strictly enforced and where there are lacunae measures need to be taken to come up with new rules and with some action plan to ensure consumer safety across this sector in India. Since the amusement services are directly related to tourism sector any improvement in this area would significantly contribute to the overall economic development of the country.

The chapter could be better concluded with the observation of Supreme Court²⁰ – “Enactment of a law, but tolerating its infringement, is worse than not enacting law at all. The continued infringement of law, over a period of time, is made possible by adoption of such means which are

best known to the violators of law. Continued tolerance of such violations of law not only renders legal provisions nugatory but such tolerance by the Enforcement Authorities encourages lawlessness and adoption of means, which cannot, or ought not to be tolerated in any civilised society. Law should not only be meant for law abiding but is meant to be obeyed by all for whom it has been enacted. A law is usually enacted because the legislature feels that it is necessary”.

Endnotes

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4

Safety of Consumers: Power Sector

– Krishna Kumar Bajaj

Electricity and Gas: Essential Components of Life

Electricity is a great boon of modern science. Electricity has removed darkness from the world and has illuminated every sphere of human activity. Currently, life without electricity is almost impossible. Modern life has become so modern and so mechanical that it is almost impossible to survive without electricity. The television, radio, grinder, tape-recorder, heater all that we are using at home are running only by electric power.

Presently, it is difficult to manage without two basic necessities electricity and gas. While affordable electricity and gas is one issue, safety of the people and their property is of paramount importance and in no way can be compromised. This aspect becomes quite important in view of the great paradox of Indian society, which on one hand is predominantly illiterate and semi-literate and on the other hand, is now privy to latest gadgets and appliances and is exposed to usual hazards of electricity, being ignorant of the contents and warnings indicated in the literature and leaflets, associated with such apparatuses. In view of this scenario, primarily, the onus of protecting the lives of the populace at large and safe guarding the safety of the public lies with the State machinery.

In this chapter, a study has been presented, showcasing regulatory, legal and statutory provisions, relating to consumers' safety in the electricity and gas sector.

Indian Power Sector: An Overview

The energy sector (electricity and gas) of India has gone through drastic changes in policies during the last couple of years. These changes have introduced competition in generation sector with major contribution from Independent Power Producers who have set up Ultra Mega Power Plants (UMPPs) with capacity of above 4000 MWs. For the first time, there is surplus power in India with peak deficit dropping below 1.0 percent. The implementation of Renewable Purchase Obligation (RPO) has reduced carbon dioxide gas protecting the environment.

More attention is needed on the performance of electricity companies and better consumer services. Distribution Companies (DISCOMS) create shortage of power and implement load shedding though power is available from Indian Energy Exchange. This is due to poor financial condition of DISCOMs who are not able to clear long pending dues of generating companies.

Power sector has failed to generate competition particularly in transmission and distribution sector. Due to constrain in power transmission open access consumers are deprived cheaper power and are compelled by generating companies to purchase electricity within the State. The residential and commercial consumers have to wait for long to have option of purchasing power from other power suppliers.

Electricity as a Form of Energy

Through the movement of electrons, electricity has the power to heat, to produce light, to move things and to make things work. When you plug something in and turn it on, you complete the electrical circuit from power station to your home. Through the movement of electrons, electricity has the power to heat, to produce light, to move things and to make things work. When you plug something in and turn it on, you complete the electrical circuit from power station to one's home. Electricity can flow through some materials easily, such as metal and water. These are called conductors. Substances like rubber, plastic, glass and ceramics are called insulators as electricity does not travel easily through them.

An electric circuit is a path in which electrons from a voltage or current source flow. The point where those electrons enter an *electrical circuit* is called the 'source' of electrons. The point where the electrons leave an *electrical circuit* is called the 'return' or 'earth ground'.

Furthermore, the Indian Power sector has installed capacity of more than 3 lakh MWs with average Plant Load Factor above 65 percent. It had an annual electricity production of 1030 billion units in 2015 and the demand is expected to cross 1900 billion units by 2020. India with a population of 125 crore people has almost 20 crore consumers. The country handles almost 950 billion units and is facing an energy scarcity of 3.6 percent with peak scarcity of almost 4.7 percent. The per capita consumption of power is found to be 1010 Kwh (unit).

Moreover, India is found to be world's fourth largest energy consumer, after the US, China and Russia and has world's fifth largest installed power capacity. The country has worldwide per capita annual average consumption of power of 2,600 units. India's transmission and distribution network losses exceeded 32 percent in 2010. Technical losses like faulty meters were reported to be from 15-20 percent that under estimate actual consumption. To meet the increasing demand of power about 125,000 villages are likely to be connected to India's electricity grid.

**Table 4.1: Installed Power Capacity across the Country in MWS
(As on March 31, 2016)**

Region	Thermal Power	Nuclear Power	Hydro-Power	Renewable Power	Total Power Capacity
Northern	50976	1620	18247	8630	79473
Western	82968	1840	7448	15315	107571
Southern	43834	2320	11558	18154	75866
Eastern	32897	Nil	5531	750	39178
Total MWs	210675	5780	42784	42849	302088
Total %	69.7	1.9	14.2	14.2	100.0
Source: Central Electricity Authority					

From Table 4.1, it can be observed that almost 70 percent generation in India is based on coal and gas followed by 15 percent from hydro and 13 percent from wind/solar energy. Western region has the highest installed capacity compared to other three regions of India.

The power sector can be divided into three segments – generation, transmission and distribution. If we look into safety aspects, the generating companies do not jeopardise safety of consumers except on environment related issues since they use coal, lignite or gas for generation of electricity.

However, transmission and distribution lines play a major role as far as safety is concerned leading to fatal and non-fatal accidents involving human beings and animals. Therefore, in this chapter we will discuss issues related to these sectors, elaborate reasons for these accidents, and steps to be taken by central/state governments, central electricity authority, Central and State Electricity Regulatory Commissions (SERC) and transmission/distribution companies.

Table 4.2: Indian States with Highest Installed Capacity		
S. No	State	Installed Capacity (in MWs)
1	Maharashtra	38551
2	Gujarat	29431
3	Tamil Nadu	23754
4	Rajasthan	17535
5	Madhya Pradesh	16814
<i>Source: Central Electricity Authority</i>		

Electricity being a concurrent subject in List III of the seventh Schedule of the Constitution of India, both the central and state governments have jurisdiction. The Ministry of Power at the Centre is primarily responsible for the development of electrical energy in the country. It is concerned with perspective planning, policy formulation, processing of projects for investment decision, monitoring of the implementation of power projects, training and manpower development and the administration and enactment of legislation in regard to thermal, hydro power generation, transmission and distribution.

The Centre is also responsible for the Administration of the Electricity Act, 2003, the Energy Conservation Act, 2001 and to undertake such amendments to these Acts, as might be necessary from time to time, in conformity with the Government's policy objectives. The State government is responsible for matters within the State.

The regulatory system consists of Central Electricity Regulatory Commission (CERC) regulating all matters pertaining to more than one state, SERC for matters within a state and an Appellate Tribunal, which is the higher court of appeal against the two regulators. In addition, there is a Central Government authority – the Central Electricity Authority (CEA) responsible for power planning for the country and according approvals for large hydro projects.

Though there have been notable improvements, especially in the physical infrastructure, the state of service delivery continues to be appalling, even though the structural reforms in the sector that evolved and shaped the sector over the 1990s and early 2000s with state-level experiments, and later culminated in the Electricity Act 2003, had provisions for consumer protection and participation in the electricity regulatory process.

Earthing mechanism

Earthing is a system, which is capable of carrying current under normal or fault conditions to the ground. It should be capable of handling magnitude and duration of current under overload protection without any fire or flash. Moreover, earthing should be such as to protect persons near the area of earthed structures and installations and they should not be exposed to danger of electrical shocks

Need of Earthing?

Earthing is required to save human life from danger of electrical shock or death by blowing a fuse and providing an alternative path for the fault current to flow so that it will not endanger the user. Earthing protects buildings, machinery and other defective appliances. To ensure that all exposed conductive parts do not reach a dangerous potential. Besides, provides safe path to dissipate lightning and short circuit currents along with a stable platform for operation of sensitive electronic equipment and to maintain voltage at any part of an electrical system at a known value so as to prevent over current or excessive voltage on appliances or equipment earthing.

How Earthing Works?

The basic idea of safety from electrical disaster is the same all over the world. The body of the equipment is connected to an earth pin on the mains outlet. This is already connected through the house wiring and switchboard to an electrically solid Earth Point, which is called Earthing Terminal to be provided by distribution companies.

Should a fault develop within the equipment, which causes a live conductor to come in contact with the body of equipment, the fault current will flow to earth and the equipment or main switchboard fuse or circuit breaker will blow. This protects the user from electric shock, directing the dangerous current to the earth rather than through the human body. Earth Leakage Circuit Breakers measure the current in active and neutral conductors. If these differ by more than few milliamps, the circuit is disconnected instantly.

Therefore, provision of Earth Terminals at the premises of consumers is mandatory for safety of consumers. State Electricity Regulatory Commissions should direct distribution companies to provide a safety certificate to consumers when a new power connection is provided. This will make DISCOMs accountable for electrical accidents at premises of consumers in case of improper and inadequate earth terminals.

Provision of Earth Terminals

This is the most crucial issue, which has been neglected for almost six decades as government distribution companies do not provide earth terminal at consumers' premises as per Rule-33 of the Indian Electricity Rules, 1956, which have been replaced by Clause-16 of Central Electricity Authority regulations on "Measures Relating to Safety and Electric Supply" "On the other hand,

private distribution companies like Tatas, Reliance and Torrent Power Ltd. provide Earth Terminals up to premises of consumers.

The provision of earth terminal is for the safety of consumers as well electrical appliances used by them. In case of any fault the ELCB will trip the power supply and for tripping of ELCB the provision of earth terminal is very essential. The Government Distribution Companies provide earth terminal up to Distribution Transformers violating Clause-16 of CEA regulations.

Advocacy 1 (Earth Terminals)

All four distribution companies of the Government of Gujarat were providing TT system of earthing and no earth terminals were provided at premises of consumers violating Rule-33 of Indian Electricity Rules, 1956. Consumer Education and Research Centre (CERC), Ahmedabad filed a petition before the Gujarat Electricity Regulatory Commission (GERC) in 2007, which was admitted as Case No. 909/2007. The consumer organisation pointed out that the TT system does not fulfil requirements as per Rule-33 of IER and Clause-16 of CEA Regulations and therefore GERC should direct them to provide TN-S or TN-CS system of earthing.

GERC, after conducting several hearings and appointing retired Chief Engineer of Central Electricity Authority (CEA) as consultant, passed the final order on this matter on 20-04-2009 with following directives:

Para-15 of above order

In view of above observations and directions, we allow the petition. The Chief Electrical Inspector (CEI) is directed to frame necessary guidelines for implementation of Rule-33 of I.E. Rules, 1956 for overhead as well as underground system throughout the State as per recommendation of CEA. The Respondent No. 3 to 6 (State DISCOMs) are directed to implement the recommendations of CEA and directions given by CEI for compliance of Rule-33 of I.E. Rules, 1956. The Respondents are also directed to submit within three months the report of the Electrical Research & Development Authority (ERDA) of Vadodara along with Detailed Project Report (DPR) and PERT CHART of the works to be carried out by the respective licensees, specifying the methodology and time schedule for implementation of the recommendations of CEA and directions of CEI.

Since there was no response from Electrical Research and Development Association (ERDA) and CEI, a review petition was filed by CERC before GERC for non-implementation of its order. GERC once again directed ERDA, CEI and state distribution companies to comply with the order.

CERC objected to collection of charges from consumers by distribution companies for providing earth terminals to their premises as money had already been collected by the DISCOMs while providing new connections. GERC directed all state DISCOMs to provide Earth Terminals whenever new electricity connections are released. GERC also directed them to submit plans to provide Earth Terminals for old connections.

In spite of all advocacy efforts by CERC, the progress in providing Earth Terminals was very slow. CERC was compelled to file a Public Interest Litigation (PIL) before Gujarat High Court in 2012. The High Court directed GERC to handle this matter, since it is highly technical and

GERC should monitor implementation of its directives as per order dated April 20, 2009. As on March 31, 2016, DISCOMs have almost covered more than 50 percent old connections and has provided suitable earth terminals at premises of consumers.

Electricity causing accidents

Every year, thousands of people get either killed or injured from accidents caused due to electricity. In most cases, such incidents happen due to lack of safety or precautions, as well as overall lack of knowledge regarding electricity. Home safety is one of the biggest concerns for consumers today. Not only is the safety of their family a huge issue, but no one wants to lose all of their materials in an accident that could have been prevented.

Accidents can take place in distribution system due to following reasons causing fatal or non-fatal injuries to people and other creatures:

- Failure of distribution line supports either due to use of low standard material or improper/poor erection work
- Snapping of overhead conductors
- Improper earthing at distribution transformers and earth wire at certain line supports along the distribution lines.
- Inadequate clearances between overhead wires and ground and buildings
- Not observing safety rules and using of low standard tools by employees of distribution companies
- Non-functioning of protective system, which fail to operate and disconnect power supply at both incoming and outgoing ends.
- Poor communication with authorities and switching on supply when people are working and
- Observance of Permit To Work (PTW) system for proper isolation and earthing of lines before start of work

Accidents can take place in distribution system due to following reasons turning fatal or causing non-fatal injuries to people:

Using an old or defective electrical appliance

This including an appliance with a frayed cord, cracked or broken plug, or any appliance that has given someone any kind of shock. Frayed or damaged cords should be replaced immediately or the appliance disposed of. Many old plugs do not have safety barriers between the connections – replace them with modern plugs or dispose of the appliance.

Attempting to repair damaged electrical appliances

Accidents can occur only qualified repairman or a licensed electrician can repair appliances.

Repairing broken down power switch

Repairing a loose, cracked or broken power switch – cover it immediately and arrange for a licensed electrician to replace it.

Snapping Live Overhead Wires

Electricity is generated at power plants at 11 KV and then intensity is increased to 220 or 440 KV. This power at extra high voltages is transferred through overhead transmission lines to substations of distribution companies. In sub-stations, once again voltages are reduced to 66 or 33 KV for industries and 11 KV for commercial and residential consumers.

These EHV/HV overhead lines have a protective mechanism, such that in case of snapping or dropping of these overhead wires on the ground, protective relays operate instantaneously disconnecting power supply at both ends and making it harmless for general public. Unfortunately, this does not happen all the time. At times, live wires drop on the ground causing severe damage or fire to standing crop in case lines drop on agricultural land. If live wires drop in public areas and properties, then there is every possibility of human and animal deaths along with damage to public property.

Every year nearly 300 people and 600 animals die in most of the Indian states due to dropping of live overhead wires of transmission and distribution companies. In many places these protective systems are either not installed or fail to operate due to improper earthing and lack of preventive maintenance. More than half of these deaths take place during the four months of monsoon. Distribution transformers are installed in open fields but with no wire fencing around them.

Animals go near these transformers for grazing grass during monsoon and get electrocuted even if leakage voltages are of 25-30 volts. Animals like cows, goats and buffaloes die within 30 feet radius of distribution transformers due to leakage current generated by improper earthing.

Most of the SERCs have notified regulations on Standard of Performance of Distribution Licencees, which clearly states:

“The earth wires and the earth electrodes provided in the distribution system shall be maintained in good condition to ensure instantaneous operation of protective equipment, which may be either a fuse or a circuit breaker in case of accidental snapping of conductor. In case of the failure in the operation of protective system during any accidental snapping of conductors, the circuit shall be de-energised manually immediately after it comes to the notice of concerned employee of the distribution licensee. A detailed investigation shall be done to determine the cause of non-operation of the protective system and remedial measures shall be taken promptly. The records of all fatal and non-fatal electrocution accidents shall be maintained along with the investigation report of Chief Electrical Inspector (CEI) of respective State Government. A copy of action taken report with regard to the procedure prescribed by CEI for safety measures for avoiding recurrence of such accidents shall be submitted to State Commission”.

The Chief Electrical Inspector is the monitoring authority of electrical accidents and responsible for safety of consumers. However, his role is limited to filing of reports. No action has been initiated to reduce number of deaths due to electrocution accidents.

Advocacy 2 (Overhead Wires)

Consumer Education and Research Centre, an Ahmedabad based NGO is an active Consumer Organisation in the power sector of Gujarat and has raised this issue at various platforms including State Advisory Committee meetings organised by the Gujarat Electricity Regulatory Commission (GERC) but no positive response was received from distribution companies of Gujarat.

Finally, CERC filed a petition before GERC in 2003 under Case No.125/2003 making four distribution companies and Chief Electrical Inspector as parties to this petition. GERC held a number of hearings and demanded details and explanations from all respondents. GERC passed the final order on April 21, 2006 with following directives to various authorities:

“Hence, we direct Chief Electrical Inspector to take necessary action under Section – 161 (3) of Electricity Act, 2003 in the event of such accidents occurring due to electricity. A mechanism to monitor the implementation of its recommendation and public awareness drive will go a long way in preventing such accidents. All opponents are directed to make proper and efficient earthing and its regular maintenance and provide guide wire. Proper supervision and safety measures during maintenance work should be taken up only after isolating of lines or apparatus as the case may be by following Indian Electricity Rules, 1956. Construction below the line should not be allowed and safe distance from the line should be maintained and appropriate size of fuse and isolating apparatus should be utilised. We also direct the opponents to take appropriate actions for implementation of relevant regulations framed by this Commission as well CEA”.

The comparison of human and animal deaths in Gujarat before and after filing the above petition before GERC are given in Table 4.3.

Table 4.3: Comparison of Human and Animal Deaths				
Financial Year	Fatal Human	Fatal Animals	Non-fatal Human Beings	Total
2007-08	368	715	395	1478
2015-16	264	399	244	907
Reduction in Deaths	104-28 %	316-44 %	151-38 %	571-39 %
<i>Source: DISCOM websites</i>				

It can be observed that advocacy has impact on performance of Electricity Companies as number of deaths has reduced by 28 percent in human beings and 44 percent in animals during last eight years. Similar procedure of filing petitions before SERCs by NGOs will definitely bring down the number of human and animal deaths in all states of India.

The following suggestions should be implemented to control/reduce human and animal deaths across India where number of accidents are not noticed or reported by media. In 2016, live overhead wires dropped on a passenger bus killing more than 40 people. Farmers whose crops are burnt due to dropping of these wires suffer huge losses and are helpless in getting compensation. Recently in Gujarat, a rule has been introduced that “Crop Insurance Policy” has to be taken by distribution companies who are made liable to pay compensation in case crop is damaged due to dropping of live overhead wires.

In Gujarat this issue was discussed at various platforms including State Advisory Committee and Electricity Supply Code Review Panel meetings where the Chief Electrical Inspector has to submit a half-yearly report and make a presentation before these committees.

Box 4.1: Supreme Court Judgment on Power-driven Accident

In Civil Appeal No. 11466 of 2014

Raman (Appellant) v/s Uttar Haryana Bijli Vitran Nigam Ltd. (Respondent)

A four year old boy Raman was electrocuted on November 03, 2016 when he came in direct contact with live electric wire lying open on roof of the house. Triple amputation was carried out by removing boy's both the arms up to armpit and left leg up to knee as the grievous injuries suffered were not curable. The disability certificate was issued to the appellant on February 08, 2012 certifying 100 percent permanent disabilities.

It was stated on behalf of appellant that prior to this tragic accident, the victim boy's father Manoj Kumar along with other neighbours had lodged complaint on August 16, 2011. The complaint was handed over to SDO – Chhajpur, Panipat to remove iron angle from the vicinity of residential area, which has endangered life of about 40-50 families. But no action was taken by competent authority of respondent.

The appellant's father approached the High Court by filing WRIT Petition under Article-226 of the constitution seeking compensation from respondent for negligence, which resulted into this tragic accident. The High Court directed respondent *Nigam* to pay compensation of 30 lakh immediately for loss of enjoyment of life and trauma suffered by boy's family.

The respondent Nigam filed an appeal before the Supreme Court challenging order of Punjab High Court. The Apex Court modified the Punjab High Court Order as follows:

"The deposit of 30 lakh as Corpus amount exclusively belongs to appellant – Raman for 100 percent permanent disability suffered by him due to electrocution on account of negligence of respondents. The monthly interest earned during the period of his minority shall be withdrawn by appellant's guardian and spend the same towards his monthly expenses. After attaining majority, it is open for appellant either to continue with the deposit or withdraw the entire amount".

Safety Hazards at Meter Installation

Leakage at consumer's premises

In case of Earth Leakage/LED indicator provided on electronic meters found 'On', it is the duty of licencees' meter reader, who checks the meter every month, to inform the consumer that there is leakage in the premises and advise him to get his wiring checked and leakage stopped. He should also inform concerned sub-divisional office about the leakage. The consumer should take prompt action to check leakage and avoid higher consumption and safety hazards.

Earth leakage protective device

Section 61A of The Indian Electricity Rules, 1956 states that the supply of energy to every electrical installation of 5 KW and above shall be controlled by an earth leakage protective device so as to disconnect the supply instantly on the occurrence of earth fault or leakage of current. In accordance with this section, a consumer having sanctioned load equal to or more than 5 KW has to install Earth Leakage Circuit Breaker (ELCB) at his premises. This is an important safety measure for all consumers.

Box 4.2: Foreign Model of Energy Safety Council

Both electricity and gas can be hazardous for people, their property and the environment if not used properly. The Energy Safety Council of New Zealand ensures that consumers enjoy benefits of electricity and gas safely with the use of Acts, Regulations, Education, Monitoring and Enforcement. Council works for both the public and industry to create an environment where people and property are safeguarded from the dangers of electricity and gas and electrical and gas appliances, installations, and electricity and gas generating systems are safe.

The Energy Safety Council oversees safety and supply quality requirements of Electricity Act and Gas Act enacted by the New Zealand Government by taking the following measures:

- Developing and applying internationally accepted standards for electricity and gas safety and supply
- Networking with other interested national and international organisations
- Publicising electricity and gas safety and advising consumers and suppliers about the safety of electrical and gas products and services
- Undertaking detailed analysis of electrical and gas accidents and
- Monitoring and conducting audits, taking corrective and enforcement action as appropriate

The Energy Safety Council is responsible for framing *Electricity Safety Regulations* and *Gas Safety Regulations* inviting comments and suggestions from stakeholders and consumer organisations. It works with manufacturers, importers, suppliers, retailers, and traders of electrical and gas products to ensure safety of New Zealand consumers.

Other functions of Safety Council include:

- Monitoring markets in New Zealand to encourage appropriate products and processes
- Conducting compliance audits of electrical and gas appliances
- Monitoring the safety of existing installations and networks
- Investigating complaints related to safety of electrical and gas installations, products and networks and
- Advising the government on energy safety issues

Wiring

If at the time of testing of installation, the licensee's representative finds that there is defect in the consumer's wiring, he should serve notice in writing to make such modifications as are necessary to render the installation safe.

Energy Safety Acts and Regulations

Most advanced countries are cautious about consumer safety in use of electricity and gas. They have enacted special safety Acts and Regulations to protect lives of their citizens but unfortunately in India we do not have an Act on safety of consumers. Though State Electricity Regulatory Commissions have power to monitor electrical accidents, their role is limited by shortage of manpower. In Table 4.4 provides a few examples of Government Acts and Regulations for safety of consumers:

Table 4.4: Government Acts and Regulations for Safety of Consumers		
Country	Acts	Regulations
Australia	Electricity Safety Act, 2002	Electricity Safety Regulations, 2013
Canada	Electricity Act, 1998	–
India	Electricity Act, 2003	CEA Safety Regulations, 2010
New Zealand	Electricity Act, 1992	Electricity Safety Regulations, 2010
United Kingdom	Electricity Regulation Act, 1999	–
South Africa	Electricity Regulation Act, 2006	–
United States of America	Federal Power Act, 1935 Energy Policy Act, 1992	Energy Security Act, 1980

CEA Regulations on Consumer Safety

The Electricity Act, 2003 has empowered Central Electricity Authority (CEA) under Section 53 to frame regulations on safety of consumers in providing electricity supply at premises of consumers. Accordingly, the CEA has notified “Central Electricity Authority Regulations, 2010”.

Regulation No. 13: Service Lines and Apparatus on Consumer’s Premises

1. The supplier shall ensure that all electric supply lines, wires, fittings and apparatus belonging to him or under his control, which are on a consumer’s premises, are in safe condition and in all respect fit for supplying electricity and the supplier shall take precautions to avoid danger arising on such premises from such supply lines, wires, fittings and apparatus.
2. Service lines placed by the supplier on the premises of a consumer which are underground or which are accessible shall be so insulated and protected by the supplier as to be secured under all ordinary conditions against electrical, mechanical, chemical or other injury to the insulation.
3. The consumer shall, as far as circumstances permit, take precautions for the safe custody of the equipment on his premises belonging to the supplier.
4. The consumer shall also ensure that the installation under his control is maintained in a safe condition.

Regulation No. 14: Switchgear on Consumer’s Premises

1. The supplier shall provide a suitable switchgear in each conductor of every service line other than an earthed or earthed neutral conductor or the earthed external conductor of a concentric cable within a consumer’s premises, in an accessible position and such switchgear shall be contained within an adequately fireproof receptacle.
2. Provided that where more than one consumer is supplied through a common service line, each such consumer shall be provided with an independent switchgear at the point of rigid junction to the common service.
3. Every electric supply line other than the earthed or earthed neutral conductor of any system or the earthed external conductor of a concentric cable shall be protected by a suitable switchgear by its owner.

Regulation No. 23: Street Boxes

1. Street boxes shall not contain gas pipes and precautions shall be taken to prevent, as far as possible, any influx of water or gas.
2. Where electric supply lines forming part of different systems pass through the same street box, they shall be readily distinguishable from one another and all electric supply lines of voltage exceeding 650 Volts at or in street boxes shall be adequately supported and protected so as to prevent risk of damage to or danger from adjacent electric supply lines.
3. All street boxes shall be regularly inspected for the purpose of detecting the presence of gas and if any influx or accumulation is discovered, the owner shall give immediate notice to any authority or company who provided gas mains in the neighbourhood of the street box. In cases where a street box is large enough to admit the entrance of a person after the electric supply lines or apparatus therein.
4. Placed in position, ample provision should be made firstly to ensure that any gas, which may be by accident obtained access to the box shall escape before a person is allowed to enter and secondly for the prevention of danger from sparking.
5. The owners of the street boxes or pillars containing circuits or apparatus shall ensure that their covers and doors are kept closed and locked and are so provided that they can be opened only by means of a key or a special appliance.

Source: CEA Regulations (Measures in safety for electric supply) 2010

Section 161 of Electricity Act Notice of Accidents and Injuries

“If any accident occurs in connection with the generation, transmission, distribution, supply or use of electricity in or in connection with, any part of the electric lines or electrical plant of any person and the accident results or is likely to have resulted in loss of human or animal life or in any injury to a human being or an animal, such person shall give notice of the occurrence and of any such loss or injury actually caused by the accident, in such form and within such time as may be prescribed, to the Electrical Inspector or such other person as aforesaid and to such other authorities as the Appropriate Government may by general or special order, direct.”

State Electricity Regulatory Commissions have notified regulations on Standard of Performance of distribution licensees where safety of consumers has been considered. Accordingly, details of electrical accidents including fatal or non-fatal for human beings and animals are covered under these regulations. DISCOMs have to put all details related to these accidents every quarter and should be displayed on their web sites. State Advisory Committee discusses this issue during the meeting where Chief Electrical Inspector has to make presentation. Unfortunately, except Gujarat no other SERC has covered this issue under SoP regulations, and therefore no details are available of loss of human and animal life. Ministry of Power should direct all SERCs to display details of human and animal deaths along with action taken by Electrical Inspector.

Role of Rajasthan Electricity Regulatory Commission

The Rajasthan Electricity Regulatory Commission has taken very pro-active role in making the three Distribution Companies of the State, to address the following steps of the Commission deep rooted problem of Consumers' Safety.

In an important step towards Consumers' Safety, the Commission issued the following specific guidelines to the DISCOMs towards Consumers Awareness/Education and sanctioned ₹50 lakh for each of the three DISCOMs in the Tariff Order for the FY 2015-16:

- The DISCOMs shall be conducting, two-tier workshops, relating to safety, one for the officers/officials and other for the consumers. In the workshop for officers/officials, the staff shall be thoroughly acquainted with the CEA Regulations on Safety.
- In the workshops for consumers, the basic care to be taken for usage of electricity with special emphasis on safety measures should be explained.
- Consumers should be explained on Energy Conservation Act and how to reduce energy bills. The workshop for consumers may include Consumer Organisations.

Electricity: Recommendations

1. Central Electricity Authority to monitor and get details from all distribution companies of all States on quarterly basis on electrical accidents involving human and animal deaths.
2. State governments should direct all State Electricity Regulatory Commissions to implement Clause-16 of CEA regulations in Government-owned distribution companies of their respective states to provide earth terminals at premises of consumers.
3. Large number of State Electricity Regulatory Commissions have not included this topic in Standard of Performance Regulations where DISCOMs have to put these details on their websites every quarter.
1. Chief Electrical Inspector to monitor that proper earthing is provided by distribution companies and submit the report to State Commission every six months.
2. State Governments and State Electricity Regulatory Commissions to derive a formula for compensation to relatives and families of deceased persons. The amount of compensation should be based on formula applicable for The Motor Vehicles Act, 1988, which considers age, salary and dependents in family to calculate amount of compensation.
3. SERCs should make strict regulations for action against staff/officers involved in electrical accidents. They should be held liable and be made to pay heavy compensation which can be recovered from their salaries.
4. Appointment of a qualified Safety Officer by each distribution company, whether owned by Government or private players, should be made mandatory. A Safety Manual should be prepared by each DISCOM.
5. Implementation of Permit To Work (PTW) system to avoid any human error. The maintenance team will take PTW from operating staff that will isolate system at both incoming and outgoing ends after doing proper earthing.
6. Constitution of committee to monitor electrical accidents in each state which should comprise of experts from power sector, members from consumer organisations as well as from NGOs having technical and legal knowledge about the electricity sector of respective states.
7. Constitution of Energy Safety Council in each state to monitor, taking corrective measures and enforcement of safety rules.

Role of Petroleum and Natural Gas Regulatory Board

In India, people were using wood, coal, dry dung and kerosene as fuel for cooking and other domestic work. In 1955, Burma Shell Corporation introduced Liquefied Petroleum Gas (LPG) distribution cylinders. LPG is a mixture of propane and butane with tertiary gases. Initially, it was not possible for middle class people to opt for LPG due to its high cost. Later, the government started providing subsidy for LPG cylinders and mass production of gas cylinders began. Soon use of gas cylinders reached far corners of India including remote places.

Due to huge amount of availability of gas in India, the government opened the doors for private gas producers like Adani, Reliance and Essar. During the last couple of years it has been feasible in India to supply domestic gas directly to the premises of consumers through pipelines and installation of meters. This has created competition in the distribution of Pipelined Natural Gas (PNG). A large number of towns are covered under this scheme.

The Ministry of Petroleum and Natural Gas has established the Petroleum and Natural Gas Regulatory Board – PNGRB with effect from 01.10.07 under Petroleum and Natural Gas Regulatory Board Act, 2006. The main function of PNGRB is to regulate the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas excluding production of crude oil and natural gas. PNGRB Act, 2006 provides the legal framework for the development of natural gas pipelines and city or local gas distribution networks.

Pipelined Natural Gas

Pipelined Natural Gas has few distinct advantages over other fuels these are:

Uninterrupted supply

PNG network offers continuous and adequate supply of natural gas solving problems of storing gas in cylinders.

Unmatched benefits

No hassles of booking LPG cylinders and no long wait for its delivery. No need to check LPG cylinder refill for any suspected underweight. The user is spared from inconvenience of connecting and disconnecting of cylinders.

Safety of PNG

- Narrow inflammability makes PNG as one of the safest fuels. The combustible mixture of natural gas and air does not ignite if the mixture is leaner than 5 percent and richer than 15 percent of the air: fuel ratio.
- Natural gas is higher than air, therefore in case of leakage it quickly disperses with air with adequate ventilation.
- PNG is supplied through pipelines at very low pressure therefore it is safer system as quantity of natural gas is very small in the premises.
- The system design is temper proof ensuring total safety of consumers.
- Since natural gas is odourless, ethyl mercaptan (a chemical having sulphur like odour) is added before distribution to give distinct odour.

Source: Gas Authority of India Ltd (GAIL) Website

Precautions for LPG Consumers

- The consumers should always buy Liquid Petroleum Gas (LPG) cylinder from authorised dealers only.
- They should check that the cylinder has been delivered with company seal and safety cap intact. They not accept the cylinder if seal is broken.

- The consumers should always check the weight of new gas cylinder as delivery boy is supposed to carry a spring balance with him.
- One should also check that the quantity of gas filled in a cylinder is mentioned on top of each cylinder and this should be equal to the actual weight.
- The consumers should immediately stop gas supply from the regulator and open doors and windows to allow the gas to escape in case of gas leakage.
- Only qualified persons should be called for servicing of gas cookers and regulators.
- LPG cylinders should be checked and tested after every ten years.
- Filling gas in damaged or out-of-test date cylinders is illegal and can prove hazardous.
- LPG cylinders must not be filled until re-stamped by approved gas cylinder test station.
- To determine the last test date of LPG, refer information stamped on the cylinder foot ring or valve protection collar.
- Please look for the due date of test, which is marked on the inner side of the cylinder stay plate. If this date is passed, then do not accept the cylinder.

The month and year are marked in the LPG cylinder in the below given format:

A-2018 – January-February-March, 2018

B-2018 – April-May-June, 2018

C-2018 – July-August-September, 2018

D-2018 – October-November-December, 2018

- The information that should be provided on the cylinder's foot ring or valve collar and the data plate should include: manufacturing standard; design water capacity in kg or litre; manufacturing standard; test pressure; last test date; and mass weight.

Source: Energy Safety-Australia

Safety Guidelines for PNG

In case the gas leakage in house or area is stopped, inform the company immediately.

- Always close the main valve of the cylinder in case the consumer is out for a day or more.
- When you turn on your gas again after a long period, the consumer ensure that all doors and windows of your house are opened.
- The consumers should always use standard ISI mark gas stoves and burners.
- The rubber tubes connecting gas stove and the cylinder should not be covered and should be regularly cleaned properly.
- Always ensure that the hot utensils or liquids are not in direct contact with the rubber tube.
- If there is doubt of a gas leakage, do not ignite a matchstick or lighter.
- Once you complete your cooking, make sure that you close the burner knob and gas tap.
- Gas leakage can be easily detected due to peculiar smell or odour.
- If the gas supply stops suddenly, close the knob and open all doors and windows. Only once there is no smell of gas should you turn on the stove again.
- It is a safe practice to wear cotton apron or cotton clothes during cooking.
- Children should be kept away from the gas stoves.
- Periodically keep checking the rubber tube for any cuts or damage and
- The consumers should never store combustible or explosive/flammable items in the kitchen.

Source: Adani Gas Ltd.

Natural Gas: Benefits and Supply

Natural Gas is the fuel of the 21st century and is an environment friendly, efficient and economical fuel, which is used for varied applications in domestic, commercial and industrial sectors. At present, it is used for cooking, water and space heating and steam and power generation. Natural gas is also used as a fuel for the automobile sector in the compressed form – as CNG.

Natural gas is colourless, odourless, non-toxic, inflammable and lighter than air fuel. It is a mixture of hydrocarbons consisting of 80-90 percent methane. It is a clean and green fuel used in most major cities of the world. In India, usage of natural gas has been growing at a fast pace and consumption is expected to increase from the present 9 percent to 25 percent by 2025. The important benefit is that the combustible mixture of natural gas and air does not ignite if the mixture is leaner than 5 percent or richer than 15 percent of the air fuel ratio required for ignition.

Natural Gas is transported and supplied to consumers' premises through an extensive pipeline network that is based on the main steel pipeline that brings gas from source to the city. The gas commonly known as Pipelined Natural Gas (PNG) is routed via small pipes to homes, offices, stores, factories and all other demand centres in the city.

Along the steel network, CNG Stations are located where Natural Gas is compressed and distributed to vehicles as a fuel. Pressure regulators maintain pressure in the pipelines. Metering device is in consumer's premises to record the units of gas consumed by the user, based on which invoice is raised for payment of gas consumption.

Gas Safety Information

Gas is a safe and efficient source of energy when used properly. Gas appliances and installations incorporate in their designs safety features to protect people and property from malfunctions. However, without proper installation and use, the potential exists for the appliance not to function properly.

All gases will diffuse in air. Gases, which are lighter than air, such as natural gas, rise and mix with air and disappear quite quickly. Gases that are heavier than air, such as LPG tend to collect at the lowest point. If LPG builds up on the ground or in confined space, the gas disappears gradually as air might be mixing in smaller amounts.

For escaping gas to be fire or explosion hazard, there has to be gas (fuel) and air (oxygen) in correct proportions and an ignition source.

Measures to be taken during gas leakage

Leakage and subsequent smell in a building is normal and steps must be taken to eliminate hazard or a potential hazard that could arise from leaking gas. The gas supplier's instructions should always be followed. However, the following steps offer general information on making the situation safe.

- Turn off the supply of gas to the building or flat at the meter or cylinder as the case might be. At times, turning off the gas at the meter may not stop the leakage, as it may be coming from a nearby gas main or service
- Considering necessary, one should evacuate the building or flat

- Eliminate ignition sources by extinguishing any flames, preventing smoking, preventing lighting any matchsticks etc.
- If lights are on, leave them on but do not switch on lights which are in off mode.
- Ventilate the building by opening all the doors and windows.
- Inform the gas supplier and
- Do not enter the gas affected areas

Distribution of Natural Gas

Natural Gas is transported and supplied to the consumer's premises through an extensive pipeline network that is based on the main steel pipeline which brings gas from the source to the city. This gas, commonly known as Piped Natural Gas (PNG), is routed via smaller pipes to homes, offices, stores, factories and other demand centres in the city. CNG stations are located along the steel network, where natural gas is compressed and distributed to vehicles as a fuel. Pressure regulators maintain the requisite pressure in the pipeline. Meters are installed at premises of consumers to record consumption of natural gas units, based on which invoices are generated by the supplier.

Consumer Satisfaction by Gas Service Providers

The services provided to consumers by gas agencies is very important in this sector. Consumer Unity & Trust Society (CUTS) carried out a survey and selected nearly 3000 consumers to know their response on this issue. The survey was done in six States and results are as follows:

Table 4.5: Satisfaction Status of Consumers					
Name of State	Yes		No		Total
	Consumer No.	Consumer (%)	Consumer (%)	Consumer No.	
Assam	372	74.4	128	25.6	500
Madhya Pradesh	148	29.8	348	70.2	496
Rajasthan	193	36.5	336	63.5	529
Tamil Nadu	484	97.2	14	2.8	498
Uttar Pradesh	145	29.7	344	70.3	489
West Bengal	382	78.0	108	22.0	490
TOTAL	1724	57.4	1278	42.6	3002

The gas consumers of Tamil Nadu were quite much satisfied with services provided by Gas Distributors with 97.2 percent while consumers of Madhya Pradesh and Uttar Pradesh were unhappy with the services. Looking to overall scenario of all six States nearly 57.4 percent consumers are satisfied with the services while remaining 42.6 percent were not satisfied with the services of Gas suppliers.

Guidelines for Domestic PNG Consumers

- PNG domestic consumers need to provide right of access only to the authorised person for the purpose of meter reading, repairing or testing or replacement of the equipment if the

authorised persons carry temper proof photo identity card or any other authorisation documents. Failing this, the consumer shall be at liberty to deny any access.

- Authorised entities shall intimate in advance to the consumers for any scheduled inspection in that area.
- In order to facilitate verification, authorised entities will provide name and contact number of at least one designated officer and this phone number will be a human interface and not an automated response.
- Upon inspection and in case of defect in equipment, charges if any, may be collected by authorised entities in next monthly invoice after taking signature of consumer.
- Authorised entities should start a publicity campaign to create consumer awareness and printed warnings on bills sent every month.
- Invoices sent by Authorised entities shall include name, address and telephone number of Complaint Receiving Cell and Appellate Authority.
- Authorised entities will advise consumers to report any incidence of replacement of spurious part, which might cause accident. The entities shall check such premises where such incidences have taken place and replace spurious part to avoid any accident.
- Authorises entities will file FIRs in the concerned police stations in that area where such incidence has taken place and also bring to the notice of State authorities to crack down on such malpractices.
- For operating the pressure regulator always follow the instruction given at the top sign plate of the pressure regulator
- Always use BIS approved rubber tube, Check for BIS mark on rubber tube. The length of the rubber tube should be between 1 to 1.5 metre.
- The consumers should ensure that this rubber tube is replaced after every 24 months.
- Do not conceal any part of rubber tube by any type of shut or cover, which obstructs the visual check of entire length of the tube.
- Always use BIS marked hotplates and appliances.
- Avoid keeping *pooja* lamp and refrigerator in kitchen.
- Get your cylinder checked by deliveryman at the time of receipt of refill for proper weight as he is supposed to carry weighing scale.
- Do not install cooking appliances on the floor. The appliances should always be placed on table or platform where cooking is convenient in a standing position. Do not use wooden top tables.
- Gas appliances should never be placed in front of the window. There is possibility that strong breeze may put off the flame causing accumulation of LPG gas in kitchen or room.
- There should be no shelves on wall where gas stove is placed. There is every possibility that your apparel may catch fire when you lean over a lighted stove.
- LPG should never be used in a room with closed doors and windows. The room or kitchen should be well ventilated and should have cross ventilation and
- Ensure that nozzle of your appliance is of the same dimensions as the nozzle of your regulator and the rubber tubing. Your dealer will advise you of the dimensions.

Source: PNGRB Website

Good Practices in Using LPG Cylinders

The place of gas installation is very important. If the following precautions are taken, it will by itself be an insurance against any mishaps in your kitchen.

1. Always keep the cylinder in vertical position with the valve on top. If cylinder is placed in any other position, liquid LPG may gush out of the open valve creating a dangerous situation.
2. Cylinder must be installed at ground-level and never below ground-level or in cellars or basement.
3. Not more than two cylinders should be stored in one room. To store two cylinders, the kitchen should have minimum floor area of 10 sq. meters.
4. If cylinder is placed in a cupboard, it should be provided with ventilation openings, both at floor level and at top-level. A half gap should suffice.
5. Cylinder must not be installed in any position in which it may become overheated i.e. alongside a *sigree* or any other heating appliance.
6. Avoid storing any combustible articles close to the cylinder and LPG installation.
7. No other heating device, such as an electric oven, kerosene stove etc. should be placed within one metre area of your gas appliance.
8. Do not keep cylinder exposed to sun, rain, dust and heat.
9. Do not keep any vessel /utensil cloth etc. on the top of cylinder.
10. Always keep the safety/security cap tied with the top ring stay plate of your cylinder, so that in the event of leakage through valve spindle the cap can be fixed on the top of the valve for stopping the leakage of gas.
11. The installation should be kept at convenient place, so that cylinder, pressure regulator knob and rubber tube is easily accessible.
12. Do not keep empty or full cylinder without cap fitted on the valve.

The Consumer Protection Act, 1986

Right to Safety

According to the Consumer Protection Act 1986, the consumer has the “*right to be protected against marketing of goods and services which are hazardous to life and property*”.

The Government of India needs to set up world-class Product Testing facilities to test drugs, food, cars and other products. Developed countries like the US have stalwart agencies oversee the protection of consumer rights – Food and Drug Administration (FDA) for food and drugs, National Highway Traffic Safety Administration (NHTSA) for automobiles and Consumer Product Safety Commission (CPSC) for various other consumer products.

Each product which can potentially be a danger to our lives should be marketed after adequate and complete verification as well as validation. India is very much behind other developed countries in protecting this consumer right.

Consumer Rights under Consumer Protection Act

As a consumer, some of your basic rights under the Consumer Protection Act are:

- You are entitled to a cooling off period
- Remedies must be addressed timely
- If you receive goods you did not ask for, you do not have to accept or pay for them
- Contracts must be clear and comprehensive
- Sales incentives should not be false, misleading or deceptive
- Deliveries must be made on time

Responsibilities of Consumers

You as a consumer also have responsibilities, such as:

- Conduct thorough research and compare products or services before you buy them
- Check the qualifications of service providers
- Read and follow product instructions
- Get what you pay for

Unawareness of Power Consumers

A survey was conducted by Maharashtra Electricity Regulatory Commission (MERC) across the state to check the level of awareness of electricity consumers of Maharashtra State Electricity Distribution Company Limited (MSEDCL). The survey revealed that consumers have little knowledge about Electricity Ombudsman and services provided to them like determination of compensation and period for which power supply should be provided to them.

MERC is a State Electricity Regulatory Commission, which was established by the state government. SERCs have many powers, such as regulating tariffs and solving problems of electricity companies and consumers as well. SERCs have to protect the interests of consumers and simultaneously make electricity companies viable financially.

The survey covered 12,177 consumers of whom 6,110 were urban consumers. It covered residential and commercial consumers from 30 urban areas and 130 rural areas across Maharashtra. One of its shocking findings was that only three electricity consumers were aware that many orders are passed by the “Consumer Grievance Redressal Forum (CGRF)” and “Electricity Ombudsman” Consumers were hardly aware about whom to approach in case of non-implementation of their orders.

Around 74.7 percent of consumers complained about the many problems related to new electricity connections. Other problems faced were related to excess billing, voltage fluctuations and interruption in, failure of or disconnection of power supply. These consumers complained to the electricity companies but no action was taken to resolve their grievances.

Consumer Services in Energy Sector

The consumer services are most neglected in this sector particularly the gas sector. There is a mechanism to make electricity companies accountable for their performance and consumer services. Most of State Electricity Regulatory Commissions have notified regulations on Standard of Performance of Distribution licencees and if these are violated then consumers are entitled for compensation as decided by Consumer Grievance Redressal Forum (CGRFs) of licensee.

Unfortunately, CGRFs are reluctant to give any compensation as Chairperson of CGRFs are generally retired Chief Engineer of Same or other distribution company. For example, as per the SoP regulations. Distribution companies have to maintain supply voltages within + or –6 percent for LT consumers but voltages drop below this value during morning/evening peak hours and exceed limit during night hours when power demand is minimum.

All distribution companies have constituted CGRFs and their quarterly report is being submitted before SERCs but consumers are not getting justice. The orders of CGRFs are challenged before Electricity Ombudsman but distribution companies are challenging Ombudsman's order before High Court in case the order is in favour of consumer.

There is no such system in gas sector as LPG distributors have monopoly and are not bothered about consumer services. Fortunately, PNG consumers have some benefit as gas supplier has customer care department who listen to complaints of consumers and there is Nodal Officer in each company to help consumers. But consumers are still at the mercy of nearly 1300 PNG gas suppliers in India.

The consumers are not aware about these facilities of services for resolution of their grievances. The service providers have to take initiatives to inform consumers by use of media and printing these facilities on electricity/gas bills of consumers at least twice in a year. The details should include designation and name or authority long with address and contact numbers including email.

Gas Sector: Conclusion

A lot has to be done in India for safety of consumers as the present Consumer Protection Act covers safety of consumers only for food and pharmaceutical products and services.

It is high time that electricity, lift/escalator and gas are also covered to protect consumers. Rules have to be stringent made and enforced so as to penalise service providers and give adequate compensation to consumers in case of fatal and non-fatal accidents. The Regulatory authorities should use their powers to protect consumers from any deficiencies and malpractices of service providers.

The most important issue today is that consumers are losing faith in the grievance redressal mechanism under the Consumer Protection Act as orders often get delayed. Moreover, consumer courts are reluctant to provide compensation and costs and consumers have to spend from their pockets to appoint advocates. Consumer courts should have a panel of advocates who can argue on behalf of poor consumers without charging fees.

Also, many cases are delayed in consumer courts due to lack of access to technical expertise. It is advisable that each State should form a committee consisting of experts in various subjects, such as insurance, medicine, electricity, telecommunications, gas among others, to guide the consumer courts for early settlement of cases. The Central and State Governments should act immediately to regain the confidence of consumers.

In the latest developments, Ministry of Power has directed Central Electricity Authority to prepare guidelines on safety of consumers in generation, transmission, distribution and supply of electricity. The government has shown its concern regarding safety of consumers in energy sector of India, which is a positive step as far as safety of consumers is concerned.

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5

Safety of Consumers: Transport Sector

– Rinki Sharma

Infrastructure Development in India

Development is related at improving the welfare of a society through appropriate social, political and economic conditions. The expected outcomes are quantitative and qualitative improvements in human capital. For example, income and education levels as well as physical capital, and infrastructures like utilities, transport, and telecommunications. While in the previous decades, development policies and strategies tended to focus on physical capital, recent years has seen a better balance by including human capital issues.

The transport sector is an important component of the economy and a common tool used for development. This is even more so in a global economy where economic opportunities have been increasingly related to the mobility of people, goods and information. This includes involvement in securing borders, licensing vehicle operators, licensing vehicles, and enforcing various other laws regulating the safe use of vehicles and the transportation system.

While issues of safety and security of consumer have been before for many years transport, it is only recently that security and safety in transportation has become an over-riding issue. Accidents involved in all transportation and other criminal activities like hijacking, terrorist attacks, drug trafficking are most targeted issues in this sector. Thus, collectively, the transportation sector is closely involved in the security of our society and, in many ways, such as it is a critical element of economy as it provides a gathering place of group of people will be a front-line area of focus in enhancing security. The future of transportation will be very much influenced by security and safety considerations.

Aviation Sector and its Contribution to Economy

Three different types of economic benefits of industries create from Air transport to, from and within India, which is measured by its contribution to jobs, GDP and tax revenues. Using the air transport the principal benefits are crafted for the customer, the passenger or shipper. Various benefits engender, such as Foreign Direct Investment (FDI), business clusters, and the spillover effect induces on an economy's productive capacity.¹

Significant growth of the Indian aviation sector in the recent years is driven by the liberalisation of aviation sector, increasing affordability of air travel and the strengthening of feasible domestic airlines, especially low-cost carriers.

As per the International Air Transport Association (IATA) India's domestic air passenger demand grew by 28.1 percent (July 2015) as compared to the previous year. This growth is three times as compared to China's (10.9 percent) growth and five times as compared to the US (5.9 percent) growth during the same period. The forecasted growth for India's domestic traffic is expected to be around 15 percent for the current year. India is expected to become the third largest aviation market by 2020.²

Tony Tyler, Director General and Chief Executive Officer of IATA has stated that the global world is focusing on Indian aviation, starting from manufacturers, businessmen, airlines, global businesses, tourism boards to individual travellers and shippers. According to him, if there is a common goal among all stakeholders in the aviation sector of India, a bright future can be expected.

Emphatically, India seems to be on a verge of a civil aviation revolution. Aviation Industry in India holds around 69 percent of the total share of the airlines traffic in the region of South Asia. This time period, thus, is critical for the industry and requires serious governance and leadership to create global Indian institutions.³

Factors Contributing to the Growth of the Aviation Sector

In 1994, the then Government of India repealed the Air Corporations Act, 1953 and replaced it with the Air Corporations (Transfer of Undertaking and Repeal) Act, 1994 thus enabling private companies to operate scheduled services at domestic locations. This was part of the broader liberalisation reforms that started in 1991 thus from an over-regulated and under-managed sector, the aviation industry in India has now changed to a more open, liberal and investment-friendly sector.⁸⁸

Some major factors, such as higher household incomes, strong economic growth, entry of low cost carriers (LCC), increased FDI inflows in domestic airlines, increased tourist inflow, surging cargo movement, cutting edge information technology (IT) interventions, regional connectivity, modern airports, sustained business growth and supporting government policies contributing to the immense growth of the aviation sector in India.

Major Threats in Aviation

For a country, which is globally ninth in the civil aviation market, ranks fourth in domestic passenger volume. Sounds great but this rosy picture might be trying to paint the truth is that the sector faces major challenges like high operational costs, high cost of aviation turbine fuel, high service tax and other charges, shortage of maintenance facilities, high foreign exchange rate, competition from foreign airlines, congestion at airports, terrorist attack anywhere in the world can negatively impact air travel and lack of qualified pilots and technical manpower.⁴

The real challenge of the Indian aviation industry is to manage the unprecedented growth of air traffic with safety. The increase in air traffic has raised the demand for aircrafts. But at the same time, it has also posed a problem of modernising the airport and air navigation infrastructure so

that safe, efficient and orderly operations are ensured. There is an urgent need to study the causes of the issues and address them so as not to obstruct the growth path of the aviation sector.

Basic Objectives of National Civil Aviation Policy 2016 ⁵

- Establish an integrated eco-system, which will lead to significant growth of civil aviation sector, which in turn would promote tourism, increase employment and lead to a balanced regional growth.
- Ensure safety, security and sustainability of aviation sector through the use of technology and effective monitoring.
- Enhance regional connectivity through fiscal support and infrastructure development.
- Enhance 'Ease of doing Business' through deregulation, simplified procedures and e-governance.
- Promote the entire aviation sector chain in a harmonised manner covering cargo, (Indian maintenance, repair and overhaul industry) general aviation, aerospace manufacturing and skill development.

To offer a number of benefits to both individuals and businesses government needs to come up with a comprehensive policy in the civil aviation sector which facilitates consumer with modern airports. For this the private sector is being encouraged to become actively involved in the construction of airports through different Public-Private Partnership (PPP) models, with substantial state support in terms of financing, concessional land allotment, tax holidays and other incentives.

Benefits of providing Low Cost Carrier (LCCs), such as its becomes most suitable transport for long distances, which results as the reduced travel time, make it most suitable transport for hilly and desert areas and the transport of light, perishable and costly goods.

The Airports Authority of India (AAI) plans to revive and operationalise around 50 airports in India over the next 10 years to improve regional and remote air connectivity.⁸⁷ By providing these facilities there is fast connectivity between industrial and commercial centers spread across the country with greater security, less jostling in transit and lower insurance costs.

Policy Framework in Aviation Sector

By simplifying the policy framework governing investments, positive impacts are seen on the economy, which has made flying more affordable and subsequently provide a great impetus to the growth of Indian Aviation sector.

The government has cleared for take-off a more liberal civil aviation policy, kick-started consolidation among public sector banks by backing SBI's proposed merger of five associate banks with itself and approved 10 percent stake sale in Housing and Urban Development Corporation (HUDCO) in a fresh push to reforms. Allowing up to 100 percent FDI in aviation sector would make foreign investors more interested in Aviation Industry, which has been consistently making losses throughout the last decade and has an accumulated loss of around US\$1bn.

Table 5.1: Foreign Direct Investment Policy in Airports⁶		
Sector/Activity	FDI Equity (in %)	Cap Entry Route
Greenfield projects	100	Automatic
Existing projects	100	Automatic up to 74% government route beyond 74%

Foreign equity up to 100 percent is allowed by the means of automatic approvals pertaining to establishment of Greenfield airports and foreign equity up to 74 percent is allowed by the means of automatic approvals pertaining to the existing airports. Foreign equity up to 100 percent is allowed by the means of special permission from Foreign Investment Promotion Board, Ministry of Finance, pertaining to the existing airports.⁹²

Table 5.2: FDI Policy: Air Transport Services⁹¹		
Sector/Activity	% of Equity/ FDI	Cap Entry Route
(1) (a) Scheduled Air Transport Service/ Domestic Scheduled Passenger Airline (b) Regional Air Transport Service	49% FDI (100% for NRIs)	Automatic
(2) Non-Scheduled Air Transport Service	100%	Automatic
(3) Helicopter services/seaplane services requiring DGCA approval	100%	Automatic

Up to 49 percent of foreign equity is allowed by the means of automatic approvals pertaining to the domestic air transport services. Up to 100 percent of NRI investment is allowed by the means of automatic approvals pertaining to the domestic air transport services.⁷

The government has also removed the restriction of waiting for five years before flying internationally, which would bring in much-needed completion.

Analysis of New Civil Aviation Policy 2016 from Consumers Prospective ⁸

The Government also intends to provide air connectivity to smaller cities across the country at a fare of 2500 per hour of flight. This would be achieved through subsidy, 80 percent of which would be provided by centre and rest by state government.⁹

The benefits for customers are given as following:

- The decision to cap air fares at ₹2500 (for one-hour long flights) for regional routes will lead to a huge rise in passenger numbers from Tier II and Tier II cities.
- Government's move to refund 80 percent of the losses incurred by airlines due to the cap in fare on such routes and offer sops and incentives to airlines to fly on these routes is a good move.
- For flight cancellations announced within 24 hours of departure, compensation has been raised to nearly ₹10,000 but airlines will get tax incentives for operating on unserved routes.

New airlines with 20 planes and in operation for less than five years can presently operate overseas flights. Easing the 5/20 rule marks a further step towards liberalising the country's aviation market

but earlier 5/20 rule made it mandatory for operators to have minimum 20 planes and 5 years of experience in operating domestic flights.

However, consumers will have to pay an extra 2 percent cess in domestic and international tickets for a regional connectivity fund. Revival of old air strips, single window for all aviation related transactions and complaints by the Directorate General of Civil Aviation have also been incorporated in the new policy that also proposes real time safety tracking. Additionally, refund of cancelled tickets will be paid in 15 days.¹⁰

Consumer Services and Challenges in Aviation Sector

Security Challenges

Institutional, human and technological resources deficits are making security vulnerable to unprecedented threats without any first-hand information to intelligence agencies. There is a need to fill this deficiency both by qualitative and quantitative measures.¹¹

The Committee chaired by Dr Kanwar Deep Singh, M P recommended that Airport Security should be absolute in the report.

The Committee notes that the airports have been categorised as hypersensitive, sensitive and normal. Out of 98 functional airports, only 59 are covered with CISF security cover and 39 are not under CISF. Explanations given to the Committee was lack of funds for providing CISF security cover at all the 98 airports.

Deficiency of Security Gadgets: There is shortfall in Random Screening Equipment (X-BIS machines, hand-held metal detector, door frame metal detector and explosive trace detector), Communication Equipment (VHF, walkie-talkie and hands free), Bomb Detection and Disposal Squad (BDDS) equipment. There is an urgent need to take up the issue of deficiency of security gadgets and installation of CCTV cameras and clearance of shadow zones at various airports, so that such deficiencies do not become a cause for concern in the Indian airport security system.

The Committee recommended that adding video analytic features needed to be activated at all airports. Besides, provision of digital video recording system for 30 days does not exist at 20 airports. The inefficiency of the data storage for longer durations needs to be resolved. According to the committee, Dog Squads (were) not available at Coimbatore, Agra, Gwalior, Porbandar, Portblair and Diu airports.¹²

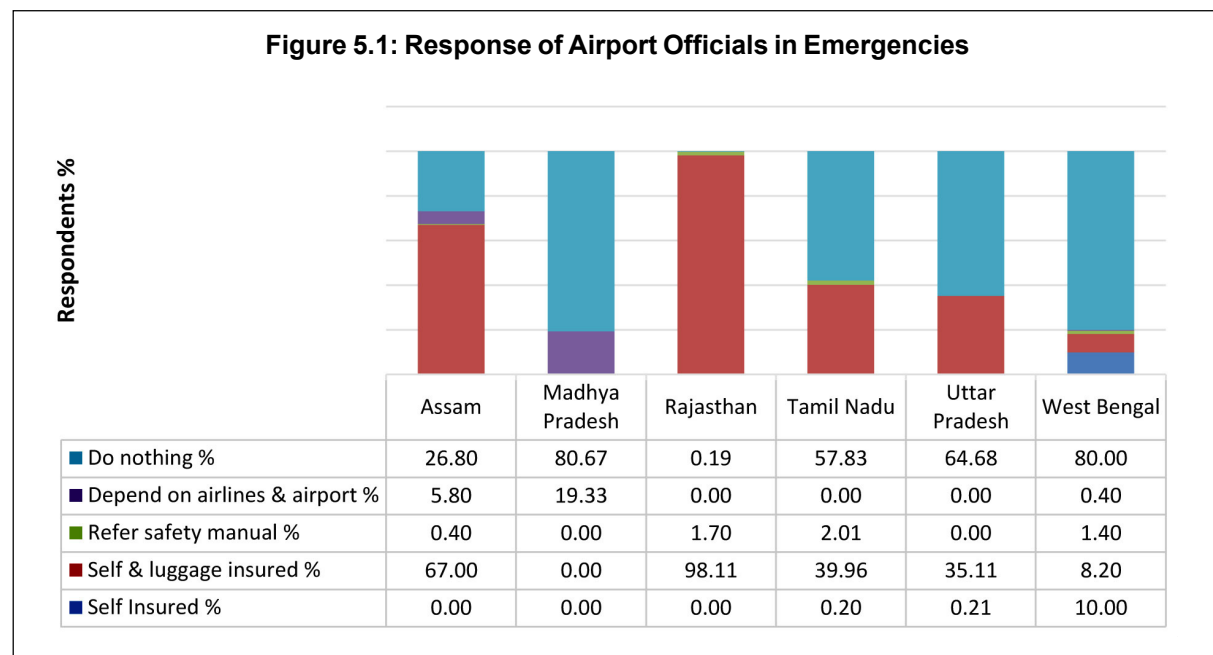
From above it is inferred that the gaps in the government policy and also lack of effective strategy to put security of Indian Citizens on risk due to lack of resources. Few challenges in the aviation sector are:

- Services provided at all Indian airports except the major ones continue to be far below the global standards.
- Limited airport connectivity within the states.
- Use of drone technology is a significant threat for the security and governments around the world are taking seriously this issue.
- There should be an increase in the number of more airports in the country.
- Lack of consumer awareness in this sector.

Analysis of Safety Concerns in India

An analysis has been done by CUTS across India to figure out various Safety Concerns

Figure 5.1: Response of Airport Officials in Emergencies

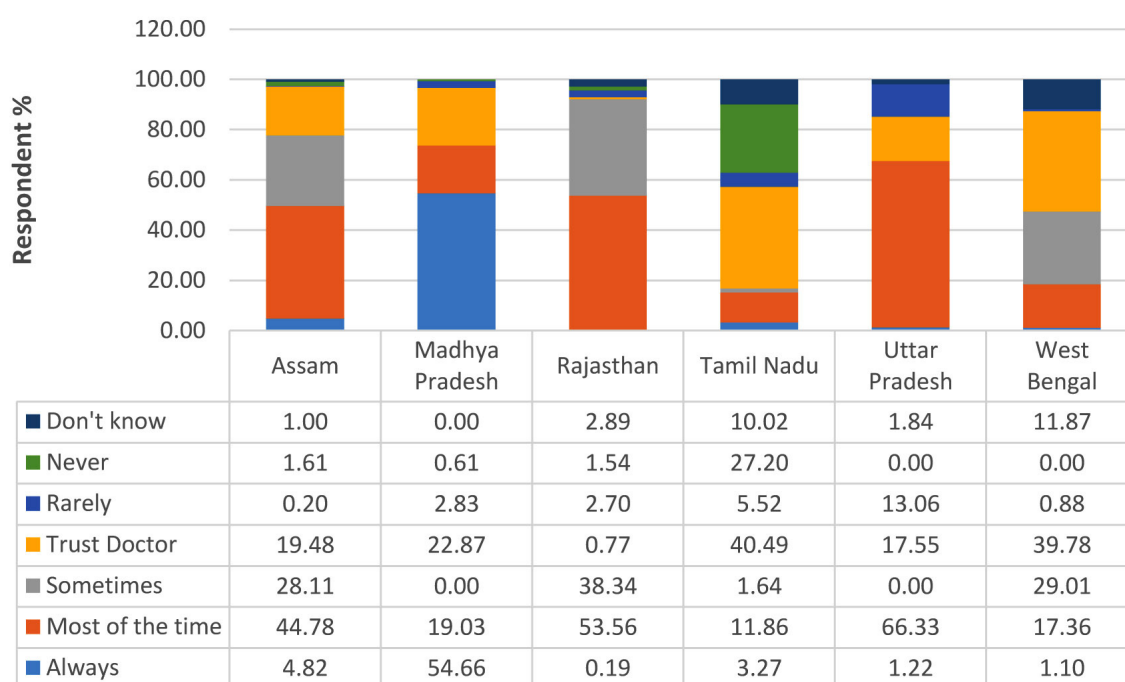


Consumers were inquired about their experience with the response of the airport authority to the complaints made. Many consumers from Assam (67 percent), Rajasthan (98.11 percent), Tamil Nadu (39.96 percent) and Uttar Pradesh (35.11 percent) indicated 'self and luggage insured' reaction. About 26.80 percent from Assam, 80.67 percent from Madhya Pradesh, 57.83 percent from Tamil Nadu, 64.68 percent from Uttar Pradesh and 80 percent from West Bengal mentioned that the airline authorities 'do nothing' (see Figure 5.1).

Table 5.3: Public Opinion on Safety Measures taken by the Service Provider

State	District	Very Satisfied (in %)	Satisfied (in %)	Dissatisfied (in %)	Very Dissatisfied (in %)	Not Aware (in %)	Total
Assam	Guwahati	0.00	34.80	0.40	11.20	53.60	250
	Jorhat	0.00	99.20	0.40	0.40	0.00	250
Madhya Pradesh	Bhopal	0.00	0.00	0.00	0.40	99.60	250
	Gwalior	0.00	0.00	0.00	88.00	12.00	50
Rajasthan	Jaipur	0.00	96.72	3.28	0.00	0.00	274
	Udaipur	0.00	99.61	0.00	0.00	0.39	255
Tamil Nadu	Chennai	0.00	0.00	4.03	0.00	95.97	248
	Coimbatore	0.40	79.60	0.00	0.00	20.00	250
Uttar Pradesh	Ghaziabad	0.00	0.00	0.00	0.00	100.00	251
	Lucknow	0.42	72.46	0.00	0.00	27.12	236
West Bengal	Jalpaiguri	0.40	14.80	0.00	0.40	84.40	250
	Kolkata	19.60	1.60	2.80	0.40	75.60	250
Grand Total		1.85	44.95	1.00	2.70	49.50	2814

Figure 5.2: Safety Measures by Passengers

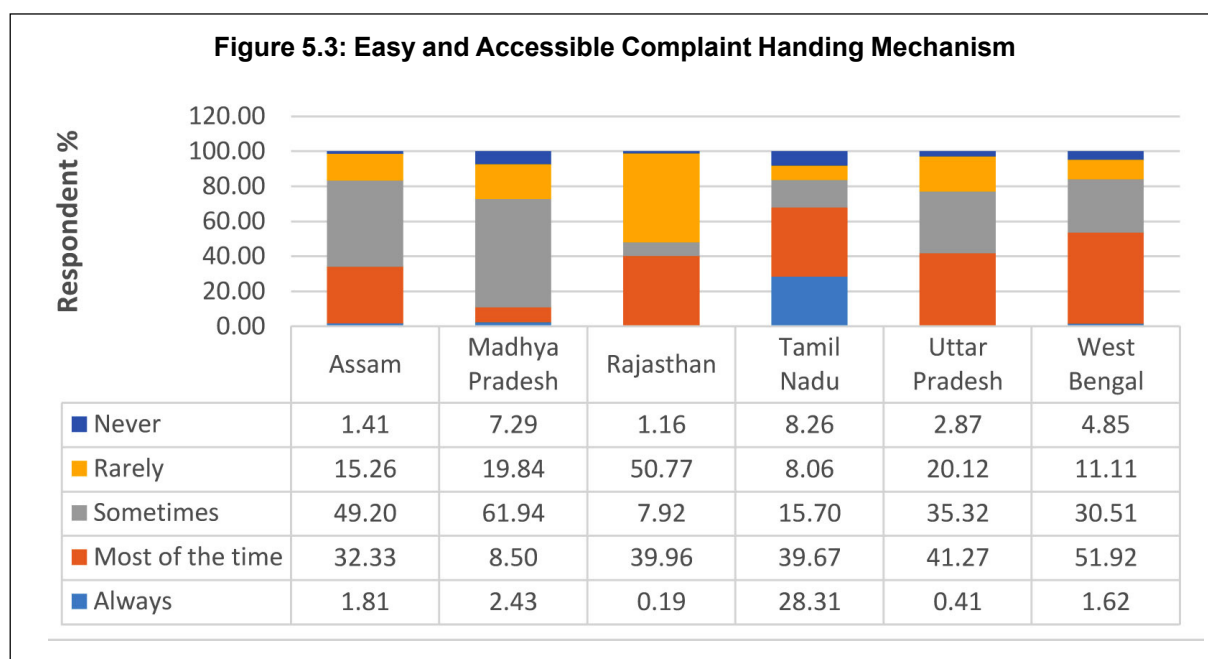


Consumers were also asked about other than airport authorities providing safety to them, how do consumers themselves ensure their safety. About 26.80 percent from Assam, 80.67 percent from Madhya Pradesh, 57.83 percent Tamil Nadu, 64.68 percent in Uttar Pradesh and 80 percent from West Bengal said 'do nothing'. Many consumers also indicated 'self and luggage insured' namely in Assam 67 percent, Rajasthan 98.11 percent, Tamil Nadu 39.96 percent and Uttar Pradesh 35.11 percent as given in Figure 5.2.

Most of the consumers were unaware of the maintenance and safety norms at the airport. Majority of the answers were given for 'not aware': In Assam it was found to be 93.40 percent, Madhya Pradesh 100 percent, Rajasthan 52.45 percent, Tamil Nadu 97.19 percent, Uttar Pradesh 94.94 percent and West Bengal 86.40 percent. Only 40 percent from Rajasthan stated that they were 'very satisfied' with the safety services at airports.

Consumers were asked about the accessibility of complaint handling mechanism at airports, to which higher number of responses come under the 'self and luggage insured' category. Assam 67 percent, Rajasthan 98.11 percent, Tamil Nadu 39.96 percent and Uttar Pradesh 35.11 percent (see Figure 5.3).

Table 5.4: Maintenance and Safety at Airports						
State	Very satisfied (in %)	Satisfied (in %)	Dissatisfied (in %)	Very dissatisfied (in %)	Not Aware (in %)	Total
Assam	2.20	4.00	0.20	0.20	93.40	500
Guwahati	3.60	8.00	0.40	0.40	87.60	250
Jorhat	0.80	0.00	0.00	0.00	99.20	250
Madhya Pradesh	0.00	0.00	0.00	0.00	100.00	496
Bhopal	0.00	0.00	0.00	0.00	100.00	250
Gwalior	0.00	0.00	0.00	0.00	100.00	246
Rajasthan	40.00	7.55	0.00	0.00	52.45	530
Jaipur	0.00	3.64	0.00	0.00	96.36	275
Udaipur	83.14	11.76	0.00	0.00	5.10	255
Tamil Nadu	2.21	0.60	0.00	0.00	97.19	498
Chennai	3.36	1.01	0.00	0.00	95.64	298
Coimbatore	0.50	0.00	0.00	0.00	99.50	200
Uttar Pradesh	4.66	0.40	0.00	0.00	94.94	494
Ghaziabad	0.00	0.00	0.00	0.00	100.00	251
Lucknow	9.47	0.82	0.00	0.00	89.71	243
West Bengal	13.20	0.40	0.00	0.00	86.40	500
Jalpaiguri	1.20	0.80	0.00	0.00	98.00	250
Kolkata	25.20	0.00	0.00	0.00	74.80	250
Total	10.70	2.22	0.03	0.03	87.01	3018



Remarkable Initiatives in Aviation Sector

A number of key initiatives have been taken up in the recent past to push the aviation sector of the country:¹³

1. Hike in FDI in Civil Aviation

The Government had relaxed the FDI norms in the civil aviation sector. Thus, the FDI by foreign airlines went up to 49 percent in scheduled air transport service/domestic scheduled passenger airline/regional air transport service, up to 100 percent.

In non-scheduled air transport services and 100 percent for helicopter services/seaplane service permitted subject to certain sectoral regulations.

2. Big Digital Push

The Government embarked a big digital push in the aviation sector as well: For internal governance, the Civil Aviation Ministry saw the implementation of e-office where all the wings under the Ministry like Directorate General of Civil Aviation (DGCA), Bureau of Civil Aviation Security (BCAS), Commission of Railway Safety (CRS) and Indira Gandhi Rashtriya Uran Academy (IGRUA) came under a single URL of *ca.eoffice.gov.in* where all new files are generated electronically.

- About 90 percent files are submitted through e-office today, as per the latest report and
- Launch and implementation of single-window clearance for all NOC for fixed wireless station operators who seek clearance on radio frequency allocation from AAI.

3. Push for Regional Connectivity

The objective of the proposed Regional Connectivity Policy is to encourage airlines to operate in remote and regional areas by offering various concessions/ incentives and at the same time, making it obligatory to fly to remote and intra remote areas.

4. Maintenance, Repair and Overhaul

The government has got down to creating a conducive environment for the growth of Maintenance, Repair & Overhaul (MRO) industry to enhance the viability of MRO business.

National Civil Aviation Policy includes development of MRO activities in consultation with Ministry of Finance, Department of Revenue and will focus on rationalisation of the taxes and simplification of customs procedures to facilitate MROs. The government has also scrapped the one-year restriction for utilisation of duty free parts apart from allowing import of unserviceable parts by MROs for providing exchange.

5. Initiating New Projects

- Commissioning of New Integrated Terminal Building with capacity to handle 500 domestic and 200 international passengers at a time at Tirupati Airport
- Signing an MoU between AAI and Singapore Cooperation Enterprise for Operations and Maintenance support of Ahmedabad and Jaipur Airports
- Development of International Air Cargo Hub at gateway airports in India
- Under the plan, airports will be developed as regional cargo hubs, integrating multi-modal transport facilities, cold chains and other commodity specific requirements.

Consumer Cases: Lack of Proper Services

Air Deccan (Deccan Aviation Ltd) Vs. Dinesh B.V. & Anr (October 01, 2013)

Brief facts of the case are that complainants booked ticket from Bangalore to Chennai. Complainants got checked their luggage and got boarding pass. After arriving in Chennai, they were unable to get their bag and on inquiry came to know that it was misplaced and accordingly airport authorities issued endorsement in that regard. The said bag was containing valuable clothes and other articles, but could not be traced. Complainant filed complaint alleging deficiency on the part of Opposition party. But the opposition party resisted complaint and denied allegation of missing of the bag and further alleged that complainant has not mentioned the weight of the alleged baggage and prayed for dismissal of the complaint. Learned District Forum after hearing both the parties allowed complaint and directed opposition party to pay US\$400 (₹15,804/) along with ₹1,000/ as litigation cost.¹⁴

Box 5.1: Supreme Court to Spice Jet – Case of Jeeja Ghosh

Supreme Court to SpiceJet: Pay ₹10 Lakh to Flyer with Cerebral Palsy

Disabled rights activist Jeeja Ghosh who was offloaded from a SpiceJet flight in February 2012 at the Kolkata airport merely because the captain felt she was a threat to the flight when she was going to attend a conference in Goa hosted by NGO – Able Disable All People Together (ADAPT).

Four years later, the Supreme Court bench of Justices, ordering SpiceJet Ltd. to pay ₹10 lakh in damages to Ghosh in two months, observed how disabled persons live behind the closed door of neglect of both family and society and very few have found the key to open the door, like Ghosh.

In a major victory to the rights of disabled persons in the country, the apex court held it is the bounden duty of private airlines, especially their flight crew, to take care of every need of a disabled person.

The incident turned out to be a trigger for the Supreme Court to direct authorities to revamp air travel laws to stop any kind of discrimination against disabled persons either in airports or on-board flights.¹⁵

International Case Studies

On March 06, 2006 at John F Kennedy International Airport in New York, an elderly man drove his car onto the runway through two security gates. He made it to an active runway where an Air France aircraft was preparing to land. The man drove around for approximately 23 minutes before being stopped. On the same day, a man made it on to the runway by running through a secure gate while it was being opened at Midway International Airport in Chicago. The man made it through one of the three perimeter entrances that did not have a camera, resulting in four different runways being closed down. This incident led to 222 aviation security officers being retrained and a redesign of all perimeter gates.^{16 17}

The UK trialed a controversial new method of screening passengers to further improve airport security using backscatter X-ray machines that provide a 360-degree view of a person, as well as ‘see’ under clothes, right down to the skin and bones. They are no longer used and were replaced by mm wave scanners, which show any hidden items while not showing the body of the passenger.¹⁸

Consumer Safety in Railways: Issues and Initiatives

Indian railway system is the main artery of the country's inland transport it virtually form the life-line of the Country, serving to its needs for humongous movement of traffic, both freight and passenger, thereby contributing to economic growth and also promoting national integration. Being a premier transport organisation of the country is the largest rail network in Asia and the world's second largest under one management.

It is one of the world's largest railway networks comprising 115,000 km (71,000 mi) of track over a route of 67,312 km (41,826 mi) and 7,112 stations. In 2014-15, Indian Railway carried 8.397 billion passengers annually or more than 23 million passengers a day and 1058.81 million tons of freight in the year. In 2014-2015 Indian Railways had revenues of ₹1,634.50bn (US\$24bn), which consists of ₹1,069.27bn (US\$16bn) from freight and ₹402.80bn (US\$6.0bn) from passengers tickets. The trains have a 5 digit numbering system and runs 12,617 passenger trains and 7,421 freight trains daily. As on March 31, 2016, total electrified RKM (route Km) stands at 27,999. During the financial year 2015-16, 1,190 RKM has been electrified.^{19 20}

The first railway line in India was opened for public traffic on April 16, 1853 between Mumbai and Thane over a distance of 34 km. In 1951 the systems were nationalised as one unit, the Indian Railways, becoming one of the largest networks in the world. Indian Railway operates both long distance and suburban rail systems on a multi-gauge network of broad, meter and narrow gauges. It also owns locomotive and coach production facilities at several places in India. Its operations cover twenty nine states and seven union territories and also provide limited international services to Nepal, Bangladesh and Pakistan.²¹

Since its inception, the Indian Railways link factors of production together in a network of producers and consumers to create a more efficient division of production. It connects industrial production centres with markets and with sources of raw materials and facilitates industrial development and link agricultural production centres with distant markets.

It provides rapid, reliable and cost-effective bulk transportation to the energy sector, petroleum products from refineries to consumption centres and to move coal from the coal fields to power plants. It links places, enabling large-scale, rapid and low-cost movement of people across the length and breadth of the country. In the process, the Indian Railways has become a symbol of national integration.²²

The Indian Railways contributes to India's economic development, accounting for about one percent of the GNP (Gross National Product) and the backbone of freight needs of the core sector. It directly accounts for the total employment in the organised sector, which is of 6 percent and an additional 2.5 percent indirectly through its dependent organisations. It has invested significantly in health, education, housing and sanitation. With its huge network of schools and investment in training, the Indian Railways plays an important role in human resource development.

In the present Scenario with aims of achieving double digit growth and embarking on ambitious ideas, such as 'Make in India', Rail Transport becomes ever more important.

Significance of Railways for Consumers

Being the cheapest and most convenient mode of passenger transport it suited for the long journey for the masses, especially for the middle class. It is used for the quick movement of men and material for the long distances and remote area. Railways play a vital role in mitigating the sufferings of the people in the event of natural calamities like droughts, floods, famines, earthquakes, etc. This is done by carrying relief and rescue teams and essential items to the affected areas and save people from sufferings and starvation.

Railways also help in facing man-made calamities like social, political, religious disturbances, insurgency, etc. It facilitates easy movement of police, troops, defence equipment, etc. The importance of railways to save the country's freedom and integrity from external aggression has been proved at several occasions.

Being a backbone of the Indian transport system it bridges the gap of the producer to the consumer and plays the significant role in development and growth of Industries as well as in providing the job opportunities. Railways are, especially suited to long haulage of bulky materials like coal, petroleum and ores.

It increasing and boosting the Tourism of our country IR also organises budget and deluxe package tours for domestic and foreign tourists. A popular tourism package for budget tourists covering important tourist destinations across India is *Bharat Darshan*. Luxury tourism packages are also available, that involve special luxury trains, such as Buddhist Circuit Train and Maharajas' Express operation.²³

Unsatisfactory State of Consumer Safety in Railways

Although Indian Railways have progressed a lot, both quantitatively and qualitatively, during the last few years, this system is still plagued by a number of problems which require immediate attention. Safety of 13 million passengers that Indian Railways serve every day is of paramount importance to the system.

A recent Comptroller and Auditor General (CAG) report has blamed the Indian Railways for not providing adequate train services, leading to overcrowding and death of passengers in suburban trains. In a worrying trend, about 33,445 people were killed in accidents occurring due to crossing rail track, falling from running trains and hitting with poles in suburban sections between 2010 and 2014.²⁴

The railway network has taken a number of steps through innovative use of technology and stepped up training to its manpower to enhance safety standards. A number of distressed bridges, old tracks, signalling system and other safety enhancement devices will be replaced during this period.

Security of railway passengers is at present a shared responsibility of the Railway Protection Force (RPF) and the Government Reserve Police (GRP). For the security and assistance of women passengers deployment of women police Force has been made.

Shocking Statistics of Train Accidents (2009-10 to 2013-14)

Data given in table 5.5 indicates that a large number of accidents happen mainly because of derailments and at level crossing.²⁵

It is quite evident that more than 80 percent of the accidents are caused by human errors (railway staff or others). The good sign, however, is that the number of accidents per million km run and number of casualties per million passengers carried has reduced in the past few years.

Table 5.5: Various Causes of Accidents							
Year	Collisions	Derailments	Level Crossing Accidents	Fire in Trains	Misc. Accidents	Total	Train Accidents/ million train km
2009-10	9	80	70	2	4	165	0.17
2010-11	5	78	53	2	1	139	0.14
2011-12	9	55	61	4	2	131	0.12
2012-13	6	48	58	8	0	120	0.11
2013-14	4	52	51	7	3	117	0.10

Table 5.6: Factors Responsible for Railway Accidents							
Year	Human Errors (Due to Railway Staff fault)(%)	Human Faults (Due to Fault of others) (%)	Equipment Failure(%)	Sabotage (%)	Incidental Factors (%)	Unexplored Cause (%)	Accidents under Investigation & Others(%)
2009-10	38.2	45.5	0	8.5	2.5	1.2	4.1
2010-11	41.7	41.7	1.5	11.5	2.2	0	1.4
2011-12	43.5	47.4	2.3	4.6	1.6	0	0.6
2012-13	34.7	47.9	5.8	2.5	5.0	1.7	2.4
2013-14	41.9	48.7	2.6	2.6	3.4	0	0.9

In the last five years, human failure has accounted for 86 percent of the total accidents. Out of this, about 40 percent accidents are due to the failure of railway staff and the rest by those other than the railway staff. Further, equipment failure has caused only 2.2 percent of the accidents, which is a welcome sign.

According to National Crime Records Bureau, about 27,581 Indians died in 2014 in railway related accidents. The NCRB has recorded railway-related accidents in two categories – railway and railways crossing accidents.

The leading cause of deaths in railway accidents:

- Fall from trains/collision of trains with people on tracks, which together accounted for 13,542 deaths.
- Other causes include – collisions (99 deaths), derailments (59), and explosion/fire (32). Causes for rest of the cases are not known.

According to the NCRB, 25,006 people died and 3,882 were injured in a total of 28,360 railway accidents across the country in 2014. The railway accident cases have decreased by 9.2 percent as compared to those in 2013.

NCRB states that a total of 2,547 railway crossing accidents led to 2,575 deaths and 126 injuries across the country in 2014. The railways crossing accidents have increased by 83.5 percent when compared to 2013.²⁶

Causes of Railway Accidents^{27 28}

The following factors contributed in causing railway accidents:

Old railway coaches

For many years now there has been talk about increased use of non-combustible and non-inflammable materials in railway coaches. The Railways took a policy decision to make the shift, and coach production units were asked to go in for fire-retardant material. But this is obviously a slow process and new coaches could be made with them. The problem persists with the old coaches still in use. A major drive to check passengers carrying stoves or inflammable materials was launched, and met with some success.

Table 5.7: How Old are the Rail Coaches?			
State	> or < 3 years %	> or < 5 years %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	0.00	0.00	0
Jaipur	0.00	0.00	0
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	100.00	1
Chennai	0.00	100.00	1
Coimbatore	0.00	0.00	0
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

Two other major sources of fire incidents relate to overheating wheels and electrical short circuit. With advances in technology, it should be possible for the Indian Railways to detect such hazards in time to prevent a fire. Smoke detectors and circuit breakers have become commonplace and can easily be installed in trains.²⁹

Nearly all 100 percent from Madhya Pradesh and Uttar Pradesh responded that the coaches are less than three years old. In Tamil Nadu, about 100 percent of the service providers answered that the coaches are less than five years old.

Almost 100 percent of the service providers from Madhya Pradesh and Uttar Pradesh stated the condition of the train coaches is checked once in every two years. However, 100 percent from Tamil Nadu answered that it is checked 'every year'.

Table 5.8: Frequency of Checking of Trains/Coaches			
State	Twice a Year %	Every Year %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	0.00	0.00	0
Jaipur	0.00	0.00	0
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	100.00	1
Chennai	0.00	100.00	1
Coimbatore	0.00	0.00	0
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

Some of the major causes of accidents identified are as following:

Railway crossings unnamed

Unnamed level crossings are another problem area for the Indian Railways, and one of the major causes of accidents. In spite of various measures taken by the Indian Railways, level crossing accidents have continued to occur, that too frequently. Mishaps at level crossings account for about 40 percent of train accidents and about 60 percent of fatalities due to the failure of the railways to name these crossings or build road overbridges or underpass. There are 30,348 level crossings across the country out of which around 11,563 are unmanned.

Over-aged railway tracks

The major problem faced by Indian railways is that the tracks are old and outdated. These old tracks cause many serious railway accidents. The tracks suffer from fatigue and wear and tear in due course of time, and their replacement should be carried on side by side. In several derailments, poor condition of tracks had been found responsible. The condition of tracks becomes more significant when one look at the other assets of the railways.

Passenger safety in train

Lack of security arrangement on train resulting in theft, dacoities, etc. Number of police force on the train is insufficient, especially women police force for the safety of women passengers.

Passengers without tickets

Another problem that is being faced in India is that a large number of passengers travel without purchasing tickets. Indian railways have to bear extra losses every year on account of travelling without tickets.

Attack on railways

The Indian railways had to suffer a heavy loss of crores of rupees. The railways are attacked during the time of disturbances and violence's that arise in any part of the country.

Problem of replacement

The problem of replacement of old and obsolete railways engines, wagons and other equipment has created a serious problem in India.

Problem of laying double lines

Most of the railway lines are single lines which create great inconvenience to the railway organisation and passengers.

A number of new initiatives have been taken to improve the facilities and security for passengers of Indian Railways.

Provision of All India Security Helpline '182'

All India Security Helpline '182' has been provided over Indian Railway to facilitate the travelling passenger. The service is very important public service and may play an important role in any emergency like crime against women, onboard unlawful activity, train accidents, medical attention required fire etc.

Provision of All India Passenger Helpline '138'

The All India Passenger Helpline '138' has been provided as a public interface for quarries/ complaints related to medical emergency, cleanliness, food and catering, coach maintenance, linen etc. (except security).

Complaint Management System Portal

For the help and assistance to bona fide railway passengers to give their feedback and also to register their complaints, Minister of Railways has launched Complaint Management System (COMS) portal on March 02, 2015 which consists of the following application.

- A mobile app based complaints and suggestion application (currently on the android platform)
- A web-based complaints answer suggestions application on URL www.coms.indianrailways.gov.in

Safety Initiatives in Railways

Indian Railways are quite unique and distinctive in character, really a microcosm of India. To make it a safe and reliable system is an enormous challenge as Railways has the most intricate and involved inter-dependencies. Safety on the Railways is the end product of the cohesive fusion of its myriad parts. The following are few of the safety initiatives taken in the railway sector.

- Railways to work towards 'Zero Accident' mission.
- Train Protection Warning System (TPWS), which is a safety Automatic Train Protection (ATP) system conforming to European Train Control System (ETCS) Level-1. It eliminates accidents caused by human error of signal passing at danger or over speeding by loco pilot.
- Enhancement of Safety at Level Crossing Gates: 282 Level Crossing Gates have been interlocked with Signals to enhance safety.
- Train Collision Avoidance System (TCAS) is to overcome shortcomings of ACD (anti-collision devices) system due to its dependence on GPS and for large scale deployment on Indian Railways, a cost effective indigenous safety system – TCAS is being developed indigenously by Research Designs and Standard Organisation (RDSO) in association with Indian Vendors. This system is aimed at providing dual capability of preventing train accidents caused due to Signal Passing At Danger (SPAD) or non-observance of speed restrictions by train drivers as well as preventing train collisions caused due to non-observance of rules in case of manual operations.
- Provision of Integrated Security System (ISS): ISS at five stations namely Trivandrum, Mangalore & Ernakulum (SR), Triputi (SCR), Thane (CR) has been commissioned. In addition to this, CCTV system has been commissioned at 10 stations namely Miraj (CR), Bengaluru, Yesvantpur, Mysore(SWR), Bhubaneswar, Puri, Cuttack, Visakhapatnam (ECoR), Bhopal and Itarsi (WCR). Cumulatively, ISS at 63 stations has been commissioned over Indian Railway. In addition, CCTV system has been cumulatively commissioned at 19 stations over Indian Railway. CCTV surveillance system has been provided at 21 PRS/UTS locations.
- Indian Railway develops warning system for unmanned level crossings – Indian Railway has developed a vandal-proof warning system for unmanned level crossings, which is working satisfactorily on Coimbatore-Metupallayam section. Research Designs and Standards Organisation (RDSO), railways' research wing, which has finalised the specifications of the system, has recommended to all zonal railways to initiate steps for installation of the warning system in their respective areas as a step towards prevention of accidents.

The system is equipped with two blinkers and one siren to alert people when a train is within one km radius of the level crossing. Besides, there is a provision in the system for sending SMS alerts about trains crossing to pre-programmed mobile numbers. The system consists of two sensor modules and a control module in which train movements are detected and siren and blinker alerts are produced when the train is within 1 km of the level crossing. Sensor modules are located within 1 km of level crossing to detect train movement on track.³⁰

- Indian Railway Catering and Tourism Corporation with the assistance of Centre for Railway Information Systems have launched n-line ticketing facility, which can be accessed through website *irctc.co.in*. Computerised reservation facilities were added at 245 new locations. At present, these facilities are available at 758 locations in the country covering about 96 percent of the total workload of passenger reservation. Computerised Reservation related enquiries about accommodation availability, passenger status, train schedule, train between pair of stations etc. have been made web enabled.³¹

Consumer Cases: At a Glance^{32 33 34}

- Gondia District Consumer Redressal Forum has imposed a penalty of ₹20,000 and a cost of ₹10,000 on Central Railway for deficiency in providing services as per its Citizens' Charter. Lawyer Sudhir Rathod lodged a complaint as railways failed to provide basic facilities like water, light and even the train ticket examiner (TTE), in his compartment in Chhattisgarh Express.
- The district consumer disputes redressal forum of Chandigarh has ordered the Railways to pay ₹8,000 in compensation to a passenger who missed a train in New Delhi because of an eight-hour delay in a connecting train.
- Consumer Forum in New Delhi directed the Railways to pay ₹35,000 to Delhi-based woman lawyer Laxmi Priya Dey whose vanity bag was snatched while she was travelling in Delhi bound Rajdhani Express with her family in January 2013.
- A brief case with clothes etc. deposited in Railway Cloakroom was delivered to a wrong person – Authorities directed to pay ₹11,200 as compensation – 1999(2) CPC 272 T.N.
- Railway Authority cancelled the train without any intimation to the respondent/complainant – Compensation of ₹25,000/- awarded by Fora below does not suffer from any illegalities - 2014(3) CPC 446 N.C.
- Gold necklace with *mangalsutra* worn by petitioner was snatched from adjacent exit door of the coach – Deficient service proved – Compensation of ₹25,000 awarded in place of ₹5,000 – 2009(1) CPC 333 N.C.
- When there is a theft in train neither conductor nor the coach attendant was present in compartment at the time of stealing of ornaments. The Railway authorities were directed to pay ₹50,000 - 2008(2) CPC 97 N.C.

Above analysis through survey by CUTS International across India (graphical representation done above under problem of old coaches and also for other important aspects:

Findings from the Survey of Railway Officials

The officials serving the respective department were interviewed. The questions related to administrative procedures, consumer relations like grievance/complaints and awareness generation. They were asked about the following important aspects:

Consumer safety policies

When asked about design and implementation policies of building in relation to consumer safety, the interviewed officials informed that departments follow the policies that are formulated by the Ministry. All safety norms and manufacturing/construction is taken care by the manufacturers and not the department officials.

Rules and regulations

The officials were also questioned about the rules and regulations being specified for providing services to consumers along with addressing safety issues, to which they responded that manuals are developed for everything and the department follows those guidelines. The condition of the coaches and roads was checked at regular intervals to ensure safety of passengers.

Consumer concerns and satisfaction

Furthermore, the officials were asked about the primary issues being raised by the consumers to the department aiming to ensure safe journey to the passengers. There were no such complaints from the consumers. Consumer satisfaction is the primary concern of the department.

Awareness generation among consumers

Awareness generation was conducted through TV/radio. On railway stations, announcements are made on the various platforms. Any urgent information is shared with the passengers through announcements regarding delay in trains, accident news or change of platform for arrival of train.

Roadways as Most Affordable Means of Transport and its Role in Economy

India has a road network of 33 lakh km, which is the second largest road network in the world. The quantitative density of road per sq. km of land is 0.66 km, which is close to that of US (0.65). Qualitatively, major share of roads in India are unpaved, narrow and lack all weather transportation. This needs to be improved as Road transport is the most important mode of transport in the country.³⁵

Indian road transport system has long connectivity with reaching out to remote areas. Roads can negotiate high gradient and sharp turns; roads can also be constructed in hilly areas also. In short and medium distances roads play a very important role in the transportation of goods and passengers. In addition, the road transport also provides last-mile connection for other modes of transport, such as railways, airports, ports and inland waterway transport and complements the efforts of these modes in meeting the needs of transportation.

Road transport system establishes easy contact between farms, fields, factories and markets. This makes different products available to consumer located in different parts of the country. It is the road network that makes it possible to distribute products across rural and urban India and across different terrains in country. In the modern times, roads are the facilitator of door to door services.

Good road network provides consumers access to larger markets, hospitals, and different low cost products. Perishable commodities like vegetables, fruits and milk are transported more easily. An efficient transport system is a pre-requisite for sustained economic development. Of the various

modes of transport that connect the cities and villages of the country, road transport constitutes the crucial link. Road Transport facilitates movement of men and material, helps trade and commerce, links industry and agriculture to markets and opens up backward regions of India. In addition, the road system also provides last-mile connection for other modes of transport, such as railways, airports, ports and inland waterway transport and complements the efforts of these modes in meeting the needs of transportation.³⁶

The growing importance of Road Transport is a result of its growing share in the GDP of the country: The share of road transport in GDP is presently 3.69 percent, which accounts for a major share of all transport modes which contribute 5.5 percent to GDP. Also this sector handles more than 60 percent of freight traffic and more than 80 percent of the passenger traffic.

Road Transport generates huge number of employment opportunities in country. Construction of roads creating the huge scope for employment. This Sector also plays an important role in industrial development of the country as the establishment of big modern industries has been possible because of well-developed road network.

Roadways by acting as the link between the rural and urban areas, the State Highways and Major District Roads contribute significantly to the development of the rural economy and industrial growth of India.

Critical Challenges in Roadways

Keeping in mind the vastness in dimensions of the country and the fast growing passenger and freight traffic, the road network is quite inadequate as lakhs of villages are still waiting the roads to reach them.³⁷

Another problem is that a little less than half of the roads (40 percent) are unsurfaced and they become muddy and unfit for transportation during the rainy season. They can be used only in fair weather.

Besides, there are other problems like weak road safety measures, insufficient road pavement thickness, too many railway crossings and lack of wayside amenities.

Table 5.9: Activities Related to the Various Public Departments	
Department	Activities
PWD	Formulation of road network projects, construction, maintenance; physical marking of extent of encroachment of road space (for removal by urban development institutions).
Transport	Registration of different types of vehicles; licensing of different categories of drivers; collection of road tax, and fee, passenger and goods transport, issuance of permits for special purpose and specific destination commercial vehicles.
Medical & Public Health	Post-accident emergency and trauma care of the accident victims
Police	Enforcement of intra and inter-city, inter-district and inter-state traffic on local roads, state and national highways; checking of vehicles and drivers for compliance of MV act and rules; road safety education; rescue, first aid, and transport of accident victims to emergency and trauma care facilities; filing of FIRs, accident investigation and pursuing prosecution in road accident cases

Road Accidents and Government's Move to Ensure Safety

Road Accidents – Threatening Facts

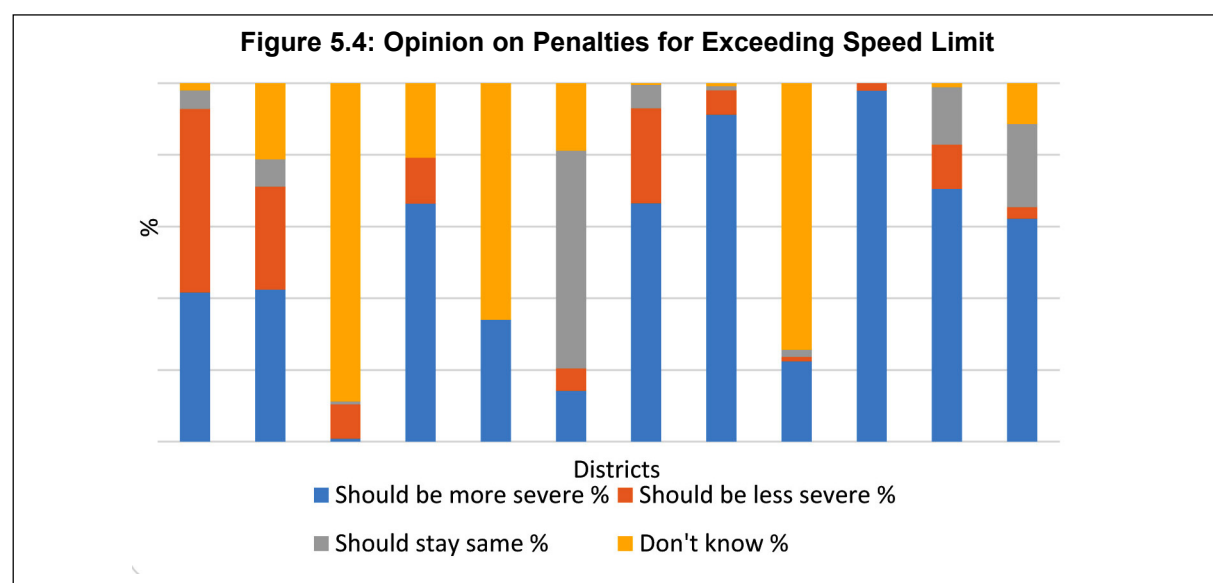
In the past decade, over 1 million people in India have been killed in road accidents and over 5 million have been left seriously injured or permanently disabled. In the year 2007, India surpassed China to Become World number one in road accident deaths and continues to maintain the dubious distinction with 15 deaths every hour on an average.

Approximately, 1,374 crashes and 400 deaths take place every day on Indian roads which translates into 57 accidents and loss of 17 lives on an average every. 54.1 percent of all persons killed in road crashes were in the 15-34 years of age group 77.1 percent road crashes attributed to driver's fault. Speeding reported to cause 47.9 percent crashes and 44.2 percent road deaths.³⁸

The total number of road accidents increased by 2.5 percent from 489,400 in 2014 to 5,01,423 in 2015. The total number of persons killed increased by 4.6 percent from 139,671 in 2014 to 146,133 in 2015. Road accident injuries have also increased by 1.4 percent from 493,474 in 2014 to 500,279 in 2015. Accident severity (number of persons killed per 100 accidents) has gone up from 28.5 in 2014 to 29.1 in 2015.¹²³

During the calendar year 2015, the total number of Hit and Run cases were 57,083 which are 11.4 percent of the total. It has been found that nearly 34 children are killed every day in road accidents in India. Table 5.10 presents the data related to the state of annual accidents under the various age groups.

Table 5.10: Annual State of Accidents	
Age	No. of Accidents (Annual)
6-9	1680
10-14	3523
15-17	6652



According to a 2015 report of the WHO, India lost 3 percent of the GDP due to road accidents that amounts to a whopping ₹3.5 lakh crore. Considering this for a country like India, whose defence budget is ₹2 lakh crore, health and education budget is ₹37,000 crore, and rural development budget is ₹80,000 crore. This money could have been utilised for other developmental projects.

Table 5.11: Opinion on Penalties for Exceeding Speed Limit						
State	District	Should be more Severe (in %)	Should be Less Severe (in %)	Should Remain Same (in %)	Not Aware (in %)	Total
Assam	Guwahati	41.60	51.20	5.20	2.00	250
	Jorhat	42.40	28.80	7.60	21.20	250
Madhya Pradesh	Bhopal	0.80	9.60	0.80	88.80	250
	Gwalior	66.40	12.80	0.00	20.80	125
Rajasthan	Jaipur	34.00	0.00	0.00	66.00	50
	Udaipur	14.12	6.27	60.78	18.82	255
Tamil Nadu	Chennai	66.53	26.53	6.53	0.41	245
	Coimbatore	91.20	6.80	1.20	0.80	250
Uttar Pradesh	Ghaziabad	22.40	1.20	2.00	74.40	250
	Lucknow	97.93	2.07	0.00	0.00	241
West Bengal	Jalpaiguri	70.59	12.30	16.04	1.07	187
	Kolkata	62.20	3.25	23.17	11.38	246
Total		50.63	14.51	11.54	23.32	2599

Higher number of respondents unanimously agreed on penalty ‘should be more severe’ with 50.63 percent. Approximately, 23.32 percent of the respondents answered saying that they were unaware.

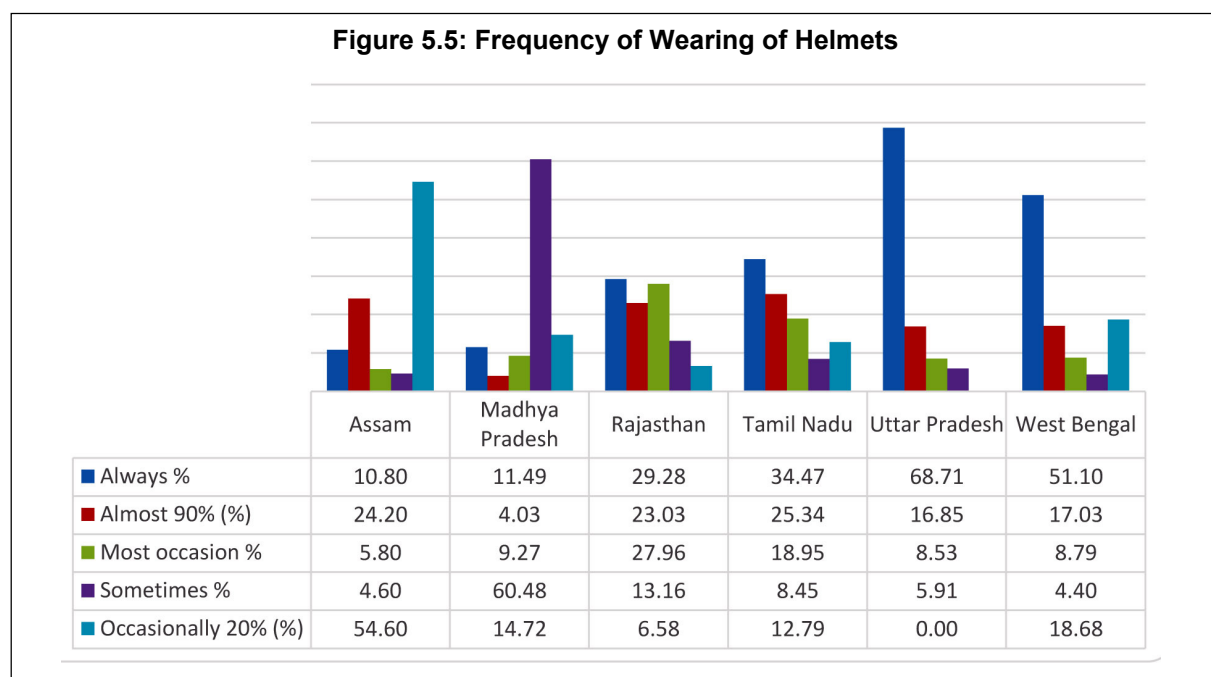


Table 5.12: State-wise Practice of Use of Helmets						
State	Always %	Almost 90% (%)	Most occasion (in)%	Sometimes (in %)	Occasionally 20% (in %)	Total
Assam	10.80	24.20	5.80	4.60	54.60	500
Guwahati	12.80	18.40	6.00	3.60	59.20	250
Jorhat	8.80	30.00	5.60	5.60	50.00	250
Madhya Pradesh	11.49	4.03	9.27	60.48	14.72	496
Bhopal	0.00	2.80	11.20	80.00	6.00	250
Gwalior	23.17	5.28	7.32	40.65	23.58	246
Rajasthan	29.28	23.03	27.96	13.16	6.58	304
Jaipur	22.00	60.00	18.00	0.00	0.00	50
Udaipur	30.71	15.75	29.92	15.75	7.87	254
Tamil Nadu	34.47	25.34	18.95	8.45	12.79	438
Chennai	55.04	20.17	13.45	10.50	0.84	238
Coimbatore	10.00	31.50	25.50	6.00	27.00	200
Uttar Pradesh	68.71	16.85	8.53	5.91	0.00	457
Ghaziabad	75.86	19.40	4.74	0.00	0.00	232
Lucknow	61.33	14.22	12.44	12.00	0.00	225
West Bengal	51.10	17.03	8.79	4.40	18.68	182
Jalpaiguri	11.48	31.15	19.67	11.48	26.23	61
Kolkata	71.07	9.92	3.31	0.83	14.88	121
Total	31.89	18.09	12.54	18.30	19.18	2377

Mixed response was received on question related to use of helmet while driving a two-wheeler. Highest response was received for 'always' with 31.89 percent; Rajasthan 29.28 percent, Tamil Nadu 34.47, Uttar Pradesh 68.71 percent and West Bengal 51.10 percent answered with 'always'. Similar percent of responses received for 'almost 90 percent', 'sometimes' and 'occasionally' with 18.09 percent, 18.30 percent and 19.18 percent respectively.

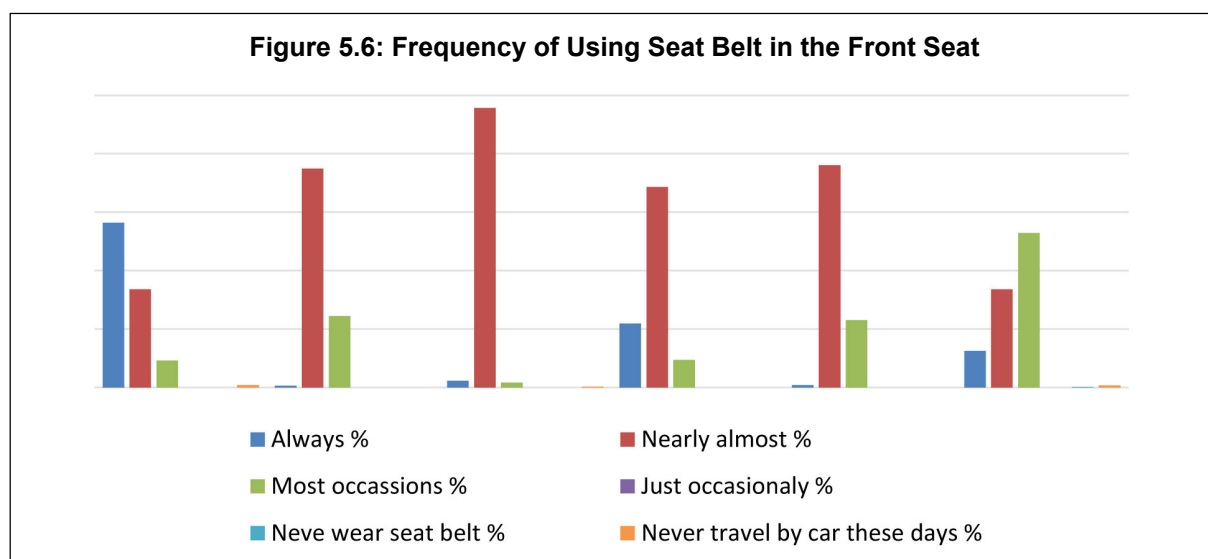


Table 5.13: Practice of Wearing Seat Belts								
State	District	Always (in%)	Nearly Almost (in %)	Most Occasions (in %)	Just Occasionally (in %)	Never wear seat belt in front seat (in %)	Never travel by car at present (in %)	Total
Assam	Guwahati	69.60	19.60	9.60	1.20	0.00	0.00	250
	Jorhat	43.20	47.60	8.80	0.40	0.00	0.00	250
Madhya Pradesh	Bhopal	0.40	95.60	3.60	0.00	0.00	0.40	250
	Gwalior	0.81	53.66	45.53	0.00	0.00	0.00	246
Rajasthan	Jaipur	14.00	76.00	10.00	0.00	0.00	0.00	50
	Udaipur	0.00	99.61	0.00	0.00	0.39	0.00	255
Tamil Nadu	Chennai	50.00	36.27	13.73	0.00	0.00	0.00	102
	Coimbatore	9.25	83.26	7.49	0.00	0.00	0.00	227
Uttar Pradesh	Ghaziabad	0.00	50.00	50.00	0.00	0.00	0.00	148
	Lucknow	1.36	93.64	5.00	0.00	0.00	0.00	220
West Bengal	Jalpaiguri	22.71	43.48	33.82	0.00	0.00	0.00	207
	Kolkata	2.44	24.39	73.17	0.00	0.00	0.00	205
Total		17.39	61.29	21.08	0.17	0.04	0.04	2410

The consumers on being asked questions regarding the use of seat belt in the front seat of car, 61.29 percent of respondents indicated 'nearly almost'. This response was received from 74.95 percent consumers from Madhya Pradesh, 95.74 percent from Rajasthan, 68.69 percent from Tamil Nadu, and 76.09 percent from Uttar Pradesh responded 'Nearly 56.40 percent from Assam and 21.88 percent from Tamil Nadu responded mentioning that they 'always wore' the seat belts (see Table 5.13).

For India's exceptionally high number of road accidents, there are many causes, such as lack of rapid trauma care, weak enforcement of traffic laws, bad road user behaviour, flaws in road engineering and design.

The sole statute governing Road Safety in India, the Motors Vehicle Act, 1988 (MVA Act) has proved ineffective in addressing abovementioned causes. There has been no amendments in the Act from last 13 years and considering such an exceptional high number of accidents this Act is deficient legislation.

India is a signatory to Brasilia Declaration and is committed to reduce the number of road accidents and fatalities by 50 percent by 2020. However, with one of the highest motorisation growth rate in the world accompanied by rapid expansion in road network and urbanisation over the years, our country is faced with serious impacts on road safety levels.

Government's Role in Ensuring Road Safety

Developing safe roads which connect destinations and cities is a key foundation to infrastructural development in a country with a high population is a major issue of concern for the Indian Government. Some Government interventions in this direction include:

Raising awareness about issues related to road safety

The Government would escalate its efforts to endorse awareness about road safety and all its aspects. This includes the implications of road accidents and the steps which have to be taken to reduce the number of incidents. The purpose of this is to enable and empower people on the road in order for them to take on a meaningful role in promoting road safety.

Launch a road safety information database

The Government would help with increasing the quality of data collection, transmission, analysis and crash investigation by extending a hand to Union Territories, States and local bodies.

Safer road infrastructure

There will be measures taken by the Government to ensure better standards in terms of design and safety of urban and rural roads. Intelligent Transport Systems (ITS) is to be put in use to ensure efficient and safe transport system, which will be on par with international best practices.

Safer vehicles

The vehicles on the roads must be signed off as in line with international standards, so that they pose least threat in terms of safety on the roads and harm to the environment. For this, the safety features must be monitored from the stage of design, production, operation and maintenance of vehicles.

Safer Drivers

The government will take measures to ensure that only highly capable and competent drivers are behind the wheel by making the system of driver licensing stricter.

Safer conditions for vulnerable road users

The needs of people on the road (including the physically challenged, the vulnerable and non-motorised transport) will be taken into account during the design and construction of all road facilities. Town planners, highway, engineers, traffic engineers and architects will have to keep 'best practices' while working on roads.

Road traffic safety education and training

Publicity campaigns, training and education will be used to create awareness and instil road safety knowledge among the population (both in the community and in educational institutions).

Safety laws enforcement

Various state and other governments will be aided by the Government of India to strengthen enforcements. This will make safety law implementation more uniform and effective. Highway Patrolling on National and State Highways will also be increased in number and frequency.

Emergency medical amenities for road accidents

There will be all efforts made from the government to ensure that everyone who is involved in accidents on the road will get quick, superior medical care. The main features of such medical care include efficient rescue operations and conducting first aid at the accident site, as well as

transporting the injured to the hospital for further care. Further, the Government will ensure that all hospitals near National Highways/State Highways are prepared to care for those who are injured in road accidents sufficiently.

HRD and research for road safety

Programmes of road safety research will be encouraged by the Government. These include identifying priority areas, funding research, founding research and academic institutions etc. The results of such research will be disseminated by the Government through workshops, training, publication, conferences and websites.

Limitations in Road Safety Policy

There are a number of flaws in the existing Road Safety Policy. They are as following:

- Lack of stringent laws to ensure that maximum people abide by traffic rules
- Most of the penalties for violation of traffic rules are very low
- Lack of policy implementation on safer road infrastructure for pedestrians and cyclists
- Lack of strong policy to ensure stricter driver licensing norms and
- Stricter laws need to be made to ensure that all the manufacturers incorporate mandatory safety features in passenger vehicles.

Recent Developments in Roadways and Steps to Reduce Road Fatalities

The Ministry of Road Transport and Highways constituted Empowered Group of Ministers (EGOM) Committee for the purpose of giving a report on the future of Road Transport and the EGOM is on the verge of recommending a series of measures to strengthening the road safety aspects in the Motor Vehicle Act amendments. A sub-committee has also been set up under EGOM to look into specific aspects of the measures to be taken to micro manage the stringent provisions to be recommended.

Road deaths and injuries are a global problem of massive proportions. Of all the systems that people of India have to deal with on a daily basis, road transport is the most complex and the most dangerous. There are certain rules and regulations that need to be incorporated in order to reduce the number of fatalities arising out of road crashes. These comprise:

- One of the main reasons behind high road crashes in India is the lighter penalties for violation and absence of a comprehensive, adequate and stringent law to deal with violation of traffic rules and crime related to road crashes.
- Statutes for protection of cyclists, pedestrians and other vulnerable road users (VRUs).
- Speeding and drink driving are the most common reasons behind road traffic deaths and injuries in India. Stringent punishment for speeding and drink driving needs to be incorporated in the law.
- Two-wheeler riders and pillion riders are the most vulnerable road users in India and constitute around 25-26 percent of total road crash deaths and injury. Majority of these deaths and injuries is caused due to not wearing helmet or wearing poor quality of the helmets. Stringent punishment for violation of helmet and seat belt use needs to be incorporated in the law.
- Establishment of an independent and empowered lead agency for road safety.
- Mandatory safe driving training for all people.
- Statutes for protection of children during commute and
- Strict regulations for heavy motor vehicles (HMTVs), such as trucks, buses and lorries.

In 2016 to make Indian roads safer for motorists and pedestrians and also saving thousands of lives each year, the Cabinet has approved the Motor Vehicle (Amendment) Bill 2016. In the present Motor Vehicle Act, there are 223 Sections out of which the Bill aims to amend 68 sections. The Bill also proposes insertion of 28 new Sections in the same.

The amendments mainly focus on issues relating to improving road safety, citizens' facilitation while dealing with the Transport Department, strengthening rural transport, last-mile connectivity and public transport, automation and computerisation and enabling online services. ³⁹

Table 5.14: Motor Vehicles Amendment Bill		
Proposed Amendments		
Penalties	Present (₹)	Proposed (₹)
Drunken Driving	2,000	10,000
Driving Without License	500	5,000
Driving without wearing seatbelts	100	1,000
Riding without helmets	100	1,000 (Disqualification of license for 5 Months)
Driving despite Disqualification	500	10,000
Unauthorised use of vehicles without license	1,000	5,000
Vehicle without permit	5,000	10,000
Dangerous driving	1,000	Up to 5,000
Over speeding	400	1,000 (for LMV) 2,000 (for Medium Passenger Vehicle)
Compensation for Hit and run case	25,000	2,00,000 (10,00,000 in case of fatalities)
Racing	500	5,000
Not providing way for emergency vehicles	New	10,000
Aggregators	New	25,000 to 1,00,000
Offences committed by enforcing authorities	New	Twice the penalty under relevant section
Oversized vehicle	New	2,000

Road Safety Recommendation in the Motor Vehicles (Amendment) Bill, 2016

- Establishment of Electronic monitoring for traffic violations will result in reduction in human intrusion and the associated corruption such systems are speed cameras, closed-circuit televisions cameras, speed guns and such other technology will ensure violations being captured at a greater scale.
- Insertion of new sub-section in Bill, which gives the Power to State Governments to regulate the activities of pedestrians and non-motorised road users in a public place. These activities would include designated special zones for the safety of pedestrians, children and special lanes for non-motorised transport, such as cyclist.
- Increasing the compensation for hit and run cases will enable immediate monetary assistance to the victim/victim families.
- A good samaritan will not be held criminally or civilly accountable for helping an accident victim.

- In this bill State Governments have the power to increase penalty in their jurisdiction by up to ten times the amount specified in the Act Penalty Multiplier.
- The amended section can ensure that transport vehicles are not left stationary on National Highways because stationary vehicles killed around 4000 people in 2015.

Between 2013 and 2015, 179,006 deaths were caused due to over-speeding. Increase in penalty in the Amendment Bill is proposed from the existing ₹400/ to ₹1000/ and ₹2000/ for the first and subsequent offences respectively.

In the amendment bill there is an increase in penalty is proposed from the existing ₹2000 to ₹10,000. The increase in penalty in the Amendment Bill for two wheelers is from the existing ₹100 to ₹1000 along with disqualification of licence for three months.

Currently, contractors get away with faulty roads as there is no liability framework in place. The addition of a section to penalise contractors for faulty road design and engineering will ensure a accountability framework besides improving the quality of the roads.

State of Road Safety across the Globe

Sustrans is the pioneer of the safe routes concept in the UK. It promotes sustainable transportation, specifically, healthier, cleaner and cheaper journeys. Sustrans encourages children to walk or bike to school. For example, organising bicycle races to get children interested in cycling, installing bike racks so there is storage while children are in class, and designing safer paths to school at 700 schools in 2012.⁴⁰

Box 5.2: Road Safety in Other Countries

Graduated Driver Licensing Systems

Graduated Driver Licensing Systems (GDLS) are designed to provide new drivers of motor vehicles with driving experience and skills gradually over time in low risk environments. There are typically three steps or stages through which new drivers pass. They began by acquiring a learner's permit, progress to be restricted, provisional or probationary licences, followed by receipt of a full driver's license. In different states in Australia, the GDL system is followed with certain variations.

Usually, stage one is a learner license with the requirement to complete 120 hours of supervised driving, stage two is one year P1 probationary license (with red P Plates) and stage three us a three year P2 probationary licence (with green P Plates). Usually, in the initial 2 stages, drivers cannot carry more than a restricted number of passengers.

The Safe Road Trains for the Environment (SATRE) Project

It is a European Commission funded project investigating implementation of platooning on unmodified European motorways. The project begun in September 2009, and vehicle platooning, as envisaged by the SARTRE project, is a convoy of vehicles in which a professional driver in a lead vehicle heads a line of closely following vehicles. Each following vehicle autonomously measures the distance, speed and direction and adjusts to the vehicle in front.

Once in the platoon, drivers can do other things while the platoon proceeds towards its long-haul destination. All vehicles are detached and can leave the procession at any time. SARTRE carried out in January 2011 the first successful demonstration of its vehicle platooning technology at the Volvo Proving Ground near Gothenburg, Sweden, with a lead truck followed by single following car.

Automated highway system

The US has developed a prototype automated roadway, to reduce driver fatigue and increase the carrying capacity of the roadway. Roadside units participating in future Wireless vehicle safety communications networks have been studied. An automated highway system (AHS) or Smart Road is a proposed intelligent transportation system technology designed to provide for driverless cars on specific rights-of-way. It is most often recommended as a means of traffic congestion relief, on the grounds that it would drastically reduce following distances and headway, thus allowing a given stretch of road to carry more cars.

The US Department of Transportation (US DOT) sponsored National AHS Consortium (NAHSC) project, a prototype automated highway system, was tested in San Diego County, California in 1997 along Interstate 15. However, despite the technical success of the programme, investment has moved more toward autonomous intelligent vehicles rather than building specialised infrastructure.

Box 5.3: Consumer Case Laws – Road Transport Sector⁴¹

Case Law: Jyanthi S Shetty vs. P Shivji Shetty, 3(2003) ACC 586 (Karnataka)

Death of the driver due to miserable conditions of the road. The son died while driving the car of the father. Awarded 50,000/.

Case Law: P Varalakshmi Reddy v. Karnataka State Road Transport Corp., 2(2004) ACC 372. (Karnataka)

Case is related to cyclist and Bus Driver. As per decision of the court the road is for the Bus and if the cyclist is in the centre of line for bus he is contributory negligent.

Case Law: N.I. Co. Ltd. v. Ashen K Chauhan, 3(2003) ACC 628 Jharkhand.

Motor cyclist crossing the bus after getting the signal, from front an auto rickshaw dashed the motor cycle. Both the bus and the auto rickshaw drivers are negligent.

Case Law: Ganga Ram vs. Mahip Narain Singh, 2(2004) ACC 551 All

The court here observed that a child is not expected to have an understanding of road safety issues. He/she cannot be held liable for contributory negligence.

Recommendations

For any developed country to maintain a sustainable growth, transportation network, such as ‘Roads, Rail and Airports’ are key factors. As sustainable and safe transport requires a comprehensive multi-sectoral approach, some of the main strategies and possible policy options that authorities might consider are outlined below.

- Formulation of Strong laws and effective implementation of the same is of utmost importance for the safety of the consumers while availing such services. As of now, consumers are not aware of existing safety measures and there is huge gap of understanding between consumers and various authorities about existing safety measures/facilities available for them.
- All concerned people should work towards zero-fatality policy with respect to road, rail, and air safety and implement appropriate road design and infrastructure, speed control, traffic calming strategies, strict driver licensing, motor vehicle registration, insurance requirements, and better post-accident care oriented to significant reductions in accidents and injuries.

- Strong Infrastructure building and use of effective technologies in all the three sectors and information availability about them to consumers is challenging task but required to ensure safety of consumers. Effective communication can help implementation of various consumer safety measures. In addition, coordination among various government authorities and partnership with public private sector can bring fruitful results in improving overall consumer safety in all the three sectors.
- Encourage widespread distribution of information and awareness on safety while availing transports to all levels of government and to the public through outreach, promotional campaigns, and participatory processes. For the same recognise NGOs working in the area of road, rail and air transport safety, and assist them in promoting overall safety of the consumers.
- Lastly, to promote monitoring of the health impacts from transport emissions and noise, especially with regard to incidences of asthma, pulmonary diseases, and heart disease. To assess the economic impacts of air pollution and noise, and devise mitigation strategies, especially aiding sensitive populations near high traffic concentrations. Pollution is also a major safety risk for consumers.

Conclusion

Over the following few years, security considerations will result in changes in how transportation is planned, designed, implemented and operated. Transportation goals, planning processes, databases, analytical tools, decision-making considerations, and organisational structures will change due to security concerns. Transportation will be on the front line in responding to security and safety risks. Changes in the policies related to the security and safety concerns among the most complex and important challenges to transportation professionals.

While it may be too early to begin changing our long-range infrastructure network plans in response to security risks, there will be changes in expenses in the near term and most probably over a longer period of time. For achieving this, all the stakeholders have to come together for the challenges and stronger law provisions and strict execution are requisite.

Endnotes

- 1 <https://www.iata.org/policy/Documents/Benefits-of-Aviation-India-2011.pdf>
- 2 <http://www.ibef.org/industry/indian-aviation.aspx>
- 3 <http://indianexpress.com/article/blogs/the-challenges-facing-indias-civil-aviation-sector-2782618/>
- 4 <http://www.aviation-defence-universe.com/india-aviation-should-be-a-platform-to-discuss-challenges-and-threats-to-the-sector-and-not-glorify-the-industry/>
- 5 http://www.civilaviation.gov.in/sites/default/files/Final_NCAP_2016_15-06-2016-2_1.pdf
- 6 http://dipp.gov.in/English/policies/FDI_Circular_2016.pdf
- 7 <http://forbesindia.com/article/special/breaking-the-shackles-of-indias-aviation-sector/43589/1#ixzz4DRKYVQUZ>
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6

Consumer Safety in Public Utilities: Survey Report

Executive Summary

Universal Declaration of Human Rights (UNHR) considers ‘safety’ as a Human Right. Right to safety means the right of the consumer to be protected against products, production processes and services, which are hazardous to health or life.¹

A right to safety can be possible only when a relationship exists between those who use (consumers) and those who provide a product or service (traders, dealers, and service providers).

Providing access to safe environment and encouraging adherence to safety norms prescribed by the regulatory bodies is of prime importance. Consumers as well as service providers should aim at achieving and providing a safe environment in all the surveyed sectors namely energy, health, housing, public amusement park and transportation. All prescribed norms for a particular service industry should be followed without leaving any scope of gap or default; this will help in achieving a safer environment for all users.

In order to achieve this, stringent steps should be taken to strictly follow the basic safety mandates like regular safety check-ups, supervisory visits, review and appraisal of service providers, regular training of safety personnel, creating awareness among consumers through mock drills, public campaigns, advertisements in local language in local newspapers, SMS or any other medium which would ensure that consumers are well aware of the safe practices.

Energy concerns are related to choice of consumers at the time of purchasing electrical gadgets, upkeep of electrical wiring, issues related to response during emergencies, information on authorised dealers and role of service providers. There was a high percentage of responses from consumers wherein they expressed that they are unaware of the safety norms. For instance, in Rajasthan and Madhya Pradesh, higher consumers responded they are not aware of the perception towards role of the electricity department. In case of emergencies too, most of the consumers said that they are not satisfied with the response rate of the service provider. Specific to usage of gas as a source of energy, consumers seemed more or less unaware of the safety norms across all states.

1. Report on State of the Indian Consumer 2012

Regarding *Health* sector consumers feel safer when it comes to availability of *safe food and safe supply of drinking water*. In most instances they responded 'safe' for queries related to food and water, except in Assam where 60.6 percent and West Bengal where 37.4 percent said they found restaurant food to be unsafe. Respondents from Assam and West Bengal also had concerns related to safety of supply of drinking water. Overall, there is a need to create more awareness among consumers and service providers when it comes to safety related to food and water. When discussing the scenario and safety norms of *medicines and hospitals*, a gap could be observed in provision of safer environment for users, especially with upkeep of hospitals and medicines stocks, as it is directly related to health of consumers and there is an urgent need to focus on gaps. In Rajasthan, 41.45 percent of respondents were not happy with the service at government hospitals and 43.44 percent with private hospitals. While in other states, respondents had average satisfaction with services provided.

In *Housing* industry also the level of awareness amongst consumers is low. The findings show that most of the buildings are old as 10-15 years, and the service providers are conducting regular inspection of the buildings and its maintenance. Even medical kits are placed in many buildings. However, in West Bengal it was found that service providers are not conducting regular inspection visits. Likewise, poor construction was reported in Madhya Pradesh, Rajasthan and West Bengal. The buildings do not fulfill all criteria of safety norms. For instance, no water hydrant has been installed in Assam and Rajasthan as informed by service providers. Not many activities are being done to generate awareness amongst the consumers like mock drills or awareness campaigns.

With regards to *Public amusement parks*, general awareness on hygiene of water rides amongst the users seems to be too low. Majority of responses are under 'don't know' proving that consumer does not consider hygiene levels as an important concern that they should be aware of. There is a need to increase the general awareness levels of consumers on their rights while visiting such parks and other amusement services. Likewise, while consumers are aware of the utility of lifeguards and do ensure that they are available at public amusement locations, it can be interpreted from responses that there have been instances where lifeguard has been absent from places of public amusements.

Also, the awareness levels in relation to presence of Medical Emergency Kits at Theme Parks on an average seem to be low as majority of responses fell under the category of 'don't know'. It could be related to respondent's lack of understanding to whether a Medical Emergency Kit should be available at theme parks or not. However, awareness levels in Madhya Pradesh, Tamil Nadu and Uttar Pradesh in case of cinema hall are higher as compared to theme parks. In Rajasthan and Uttar Pradesh, higher number of respondents observed the presence of a Medical Emergency Kit in cinema halls.

The awareness was highest among consumers under *Transportation* sector as compared to other service industries that were surveyed. The consumers were well aware of the safety norms and regulations that are applicable in use of transportation related services, such as roads, railway and aviation. Where personal safety is concerned, consumers are aware of benefits of using helmet and seat belt. The need of more zebra crossings and pavements for pedestrians was also highlighted in discussions with consumers. Raising the general awareness of the public within this sector is done through announcements, and display on hoardings. There is no awareness mechanism to reach out to consumers on one-to-one basis.

Overall, there is a need to emphasise on the response time in relation to action taken by regulatory bodies or service providers in railway and road sector. Under aviation sector, rules are set and states are bound to follow those protocols, hence, there is no much discrepancy when it comes to rules followed by the service providers under aviation.

Key Findings

Qualitative

There are no regular set of activities that are conducted in relation to spreading general awareness or training on consumer safety. Various departments have their standard norms, which they follow, namely through posters or hoardings or announcements. It can be concluded that there is not much one to one interaction with consumers. There is a need for more work to ensure that road and rail safety seems to be the key area apart from health that is seeking the attention of officials.

Most of the departments do not receive grievance and complaints from consumers' end, so service providers assume that their consumers are satisfied with the services provided by them. Lack of infrastructure and manpower are major impediments towards effective implementation and monitoring of consumer safety rules and regulations.

Assam: Extensive works are being claimed by service providers in Assam towards creating consumer safety awareness for disasters, i.e. earthquakes and floods

Uttar Pradesh: Amusement sector is getting a major focus to ensure effective safety measures at place

Madhya Pradesh and Rajasthan: Medicine and Hospitals are key areas where a lot of initiatives are being taken to curb spurious drug supply

Tamil Nadu: Focus is on development and creating awareness across sectors. However, Food and Health seem to be the prime focus areas for ensuring consumer safety

West Bengal: Health sector has been given more focus in the State at present wherein, a lot of safety related initiatives are being implemented but overall confidence of general consumers were found to be low

Quantitative

General Perception: The perception of safety was highest for Medicines, which accounted for 38.11 percent followed by Gas (35.02 percent), Water (26.58 percent) and Hospital (25.13 percent). While the calamities such as earthquake (36.04 percent) and fire (31.34 percent) were considered to be a major safety concern among the consumers interviewed.

None of the sectors in targeted states conducted any trainings or mock drills for consumers to generate their awareness and preparedness during unforeseen incidents that may put their life and safety at risk.

About 38 percent consumers opt for ISI mark electrical appliances across states. Around 40-45 percent stakeholders are dissatisfied towards State Electricity Board (SEB) services. Nearly 45 percent responded that there is no response from service providers in case of electrical or fire emergency. 30 percent responded that there is a low maintenance of lifts in buildings across states. High incidence of spurious drugs was reported by respondents in few states. Almost 15-20 percent of respondents in Madhya Pradesh and Rajasthan reported about prevalence and supply of spurious drugs. 25 to 30 percent highlighted that there is a lack of faith on safety measures in hospitals – government as well as private across states. Over speeding and drunken driving were major reason of road accidents, according to 40 percent of those surveyed.

Low adherence to use of helmets and seat belts was reported while driving in Assam and Madhya Pradesh. Only 15-20 percent consumers were found to be wearing helmets for more than 90 percent on the occasion when they reported to be driving. West Bengal reported to be only around 50 percent on wearing seat belts while driving vehicles.

In Assam, 86.96 percent of respondents said they ‘don’t know’ about the presence of Medical Emergency Kit at cinema halls. 48.67 percent in Tamil Nadu and 48.18 percent in Madhya Pradesh said they are not aware. 60.31 and 39.67 percent of respondents in Rajasthan and Uttar Pradesh respectively said that they have observed the presence of Medical Kit in cinema halls.

In West Bengal, 72.68 percent of respondents said that there are ‘much less pavements than what is required’, followed by Rajasthan where 53.36 percent of respondents held a similar opinion. Higher percentage of respondents from Uttar Pradesh (23.12 percent) and Madhya Pradesh (18.88 percent) said ‘no pavements at all’.

Safety at railway crossing is a major concern across states. Around 38.98 percent in Madhya Pradesh and 48.48 percent in Tamil Nadu said that they have safety concerns at rail crossings. Assam (80.80 percent), Madhya Pradesh (49.15 percent), Tamil Nadu (51.52 percent), Uttar Pradesh (97.52 percent) and West Bengal (33.33 percent) answered ‘no’.

1. Introduction

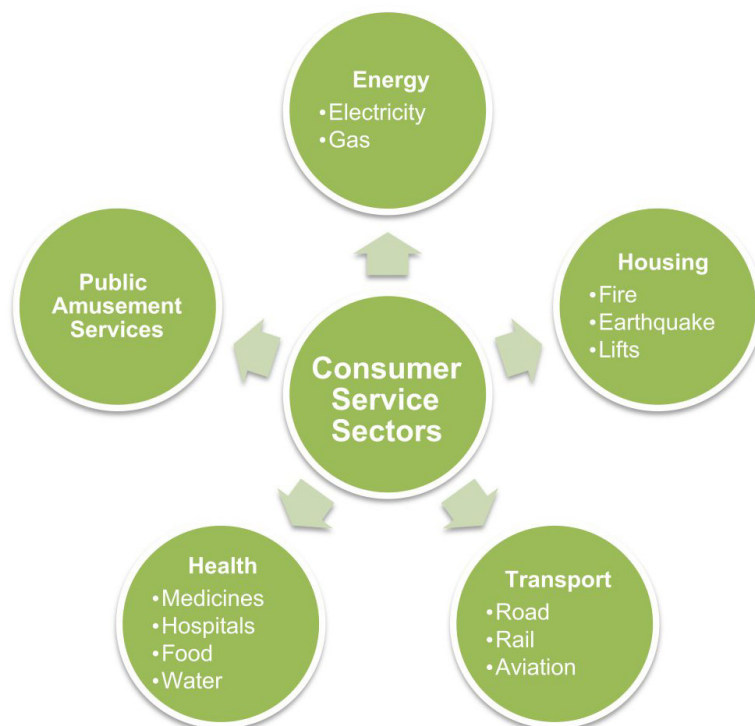
Study Background

As per Consumer Protection Act 1986, “Consumer” means any person who buys or avails of any service for a consideration which has been paid or promised or partly paid and partly promised under any system of deferred payment etc.

Consumer Protection Act, 1986 is an Act of the Parliament of India enacted in 1986 to protect the interests of consumers in India. It makes provision for the establishment of consumer councils and other authorities for the settlement of consumers’ disputes and for matters connected therewith.²

The present study lays emphasis on five sectors of services utilised by consumers namely Health, Housing, Public Amusement Services, Energy and Transport.

Figure 6.1: Services Sectors Utilised by Consumers



Consumers expect safety from various hazards and related issues occurring across the above five sectors. This need to address issues, experiences and challenges of various consumers while utilising services and ensuring their safety have been felt by Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India. Thus, the same has been made the principle of the present study.

Study Objective

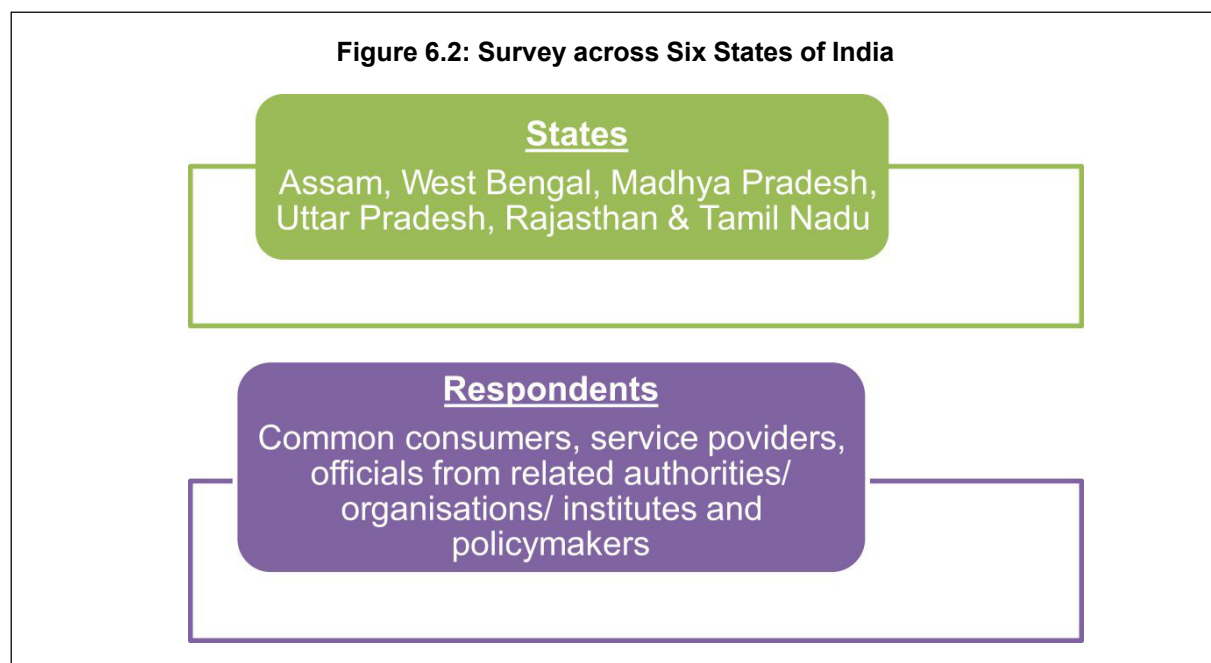
The overall objective of the study is to enhance consumer safety in India and promotion of consumer interest contributing towards the national interest. Under the project the main activity is to conduct comprehensive research on the state of consumers' safety in selected sectors and come up with a research report on the 'State of the Consumer Safety Report'.

2 <http://web.archive.org/web/20110721172525/http://ncdrc.nic.in/>

Scope and Coverage

Study Target Areas and Respondents

The survey was conducted in six states namely Assam, Madhya Pradesh, Rajasthan, Uttar Pradesh, Tamil Nadu and West Bengal with two districts in each State. As depicted in Figure 6.2 from each of the six states, respondents were selected from amongst consumers, service providers and officials of related authorities, organisations/institutes and policy makers.



The tools developed for the survey were customised for three target groups namely consumers, service providers and officials from various regulatory and implementing government bodies.

2. Methodology

Sample Size and Sampling Design

Vimarsh adopted a mixed method approach to carry out the study. The quantitative (Questionnaire) and qualitative (In-depth Interviews) methods were utilised to gather relevant information from the target respondents. The essential indicators on which the survey and interview schedule were based upon have been listed in the table.

S. No.	Respondents	Tool	Indicators
1.	Common Consumers	Structured Questionnaire (Survey)	<ul style="list-style-type: none">Awareness levels regarding consumer safety issuesPersonal experiences with respect to services from five sectorsSuggestions for improvements
2.	Service Providers		
3.	Officials from related authorities/ organisations/institutes and policy makers	In-depth Interviews	

As per the Request for Proposal, the survey samples need to be collected from 12 districts of six states (two districts per State) to obtain essential information regarding the consumer safety issues witnessed within five service sectors. Since these sectors pertain to the urban population of states, the sample size have been calculated keeping in view that these two districts are the most populated towns/cities of the respective states.

The Training of Trainers was held at Gurgaon during January 28-29, 2016. The respective State coordinators conducted State level training during February 12-19, 2016 in respective states and field work commenced on February 22, 2016 and ended on April 10, 2016.

Sample Size			
S. No.	Stakeholders	No. of Respondents	Total
State 1	Assam		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/organisations/ institutes and policymakers	8 per district	16
State 2	West Bengal		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/organisations/ institutes and policymakers	8 per district	16
State 3	Madhya Pradesh		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/organisations/ institutes and policymakers	8 per district	16
State 4	Uttar Pradesh		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/ organisations/ institutes and policymakers	8 per district	16
State 5	Rajasthan		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/ organisations/ institutes and policymakers	8 per district	16
State 6	Tamil Nadu		536
1.	Common Consumers	250 per district	500
2.	Service Providers	2 per sector per district	20
3.	Officials from related authorities/organisations/ institutes and policymakers	8 per district	16
	TOTAL		3216

Sample Design

The sample for consumers were derived from all the four zones of the towns, as we required different kinds of consumers, i.e. from different social, religious, economical, geographical, educational backgrounds etc. for the study.

Purposive sampling techniques were used to identify consumers and service providers of respective sectors. Five locations per town including malls, hospitals, movie theatres, bus stops, railway stations etc. were selected from these zones and 50 respondents (consumers who may have utilised services from all five aforementioned sectors) were interviewed per location. This would account for 250 consumer interviews per town as per the Request for Proposal criteria.

Also, a list of officials from related authorities/organisations/institutes and policymakers were obtained and respondents for the same were approached as per their availability for the in-depth interview.

3. Consumer's Profile

This chapter focusses on the type of consumers that were surveyed in six states namely; Assam, Madhya Pradesh, Rajasthan, Tamil Nadu, Uttar Pradesh and West Bengal. A total of 3025 samples were collected for the purpose of the study, however, the analysis is based on total samples varied in every sector due to removal of outliers. The break-up of sample size based on the methodology is detailed in Table 6.1.

Table 6.1: State-wise Break-up Total Sample Size	
State	Total
ASSAM	500
Guwahati	250
Jorhat	250
MADHYA PRADESH	496
Bhopal	250
Gwalior	246
RAJASTHAN	530
Jaipur	275
Udaipur	255
TAMIL NADU	498
Chennai	248
Coimbatore	250
UTTAR PRADESH	501
Ghaziabad	251
Lucknow	250
WEST BENGAL	500
Kolkata	250
Jalpaiguri	250
Grand Total	3025

Age

Table 6.2: State-wise Age Distribution							
State	Total	18-29 (%)	30-42 (%)	43-54 (%)	55-66 (%)	67-78 (%)	79-90 (%)
Assam	500	30.00	37.14	18.16	8.98	5.10	0.61
Madhya Pradesh	496	68.66	26.19	4.33	0.82	0.00	0.00
Rajasthan	530	39.41	40.59	12.55	5.10	1.57	0.78
Tamil Nadu	498	21.97	45.38	21.36	8.01	3.08	0.21
Uttar Pradesh	501	35.27	40.25	12.86	9.54	1.87	0.21
West Bengal	500	21.44	40.00	23.71	11.75	2.47	0.62
Total	3025	36.13	38.28	15.48	7.35	2.35	0.41

A total of 3025 people were interviewed under this survey. Maximum number of respondents who participated in the survey belonged to the age range of 30-42 years with 38.28 percent, followed by those in the age range of 18-29 years with 36.13 percent. Around 15.48 percent of respondents were in the age range of 43-54 years.

Gender

Table 6.3: State-wise Gender Distribution					
State	Male		Female		Total
	N	%	N	%	
Assam	309	14.7	191	19.8	500
Madhya Pradesh	398	19.4	98	10.2	496
Rajasthan	415	20.1	115	11.9	530
Tamil Nadu	286	13.9	212	21.9	498
Uttar Pradesh	352	17.2	149	15.6	501
West Bengal	301	14.7	199	20.6	500
Grand Total	2061	100	964	100	3025

Both male and female respondents were selected to participate in the survey. Breakup of male-female participation was 2061 to 964. Higher number of male respondents (20.1 percent) participated from Rajasthan while maximum number of female respondents (21.9 percent) participated from Tamil Nadu.

Education

Table 6.4: State-wise Distribution of Education

State	Illiterate %	Literate but without formal schooling	Up to IX th standard %	Matric-X th standard %	Higher secondary – XII th standard %	Technical/ Diploma/ Vocational %	Graduate %	Post-graduate %	M.Phil./PhD %	Total
Assam	0.00	1.00	27.40	18.20	25.80	1.80	22.60	1.80	1.40	500
Madhya Pradesh	6.65	8.67	3.83	2.22	16.53	20.77	28.83	12.30	0.00	496
Rajasthan	9.06	12.26	8.68	18.68	19.25	6.79	12.45	6.79	5.28	530
Tamil Nadu	1.41	3.82	27.51	25.30	8.84	11.45	16.47	4.82	0.40	498
Uttar Pradesh	2.00	5.19	8.98	17.37	21.96	1.20	24.55	12.97	4.79	501
West Bengal	1.40	7.00	38.40	19.00	17.00	0.40	14.40	2.00	0.20	500
	3.47	6.38	19.04	16.83	18.25	7.04	19.80	6.78	2.05	3025

The participants of the survey were a mixed group. It consisted of participants who have received no education to some who hold a M.Phil./PhD degree. 19.80 percent of respondents were graduates, 19.04 percent had studied up to IXth standard while 18.25 percent had completed education till XIIth standard. Out of the total 3025 respondents, 3.47 percent were illiterate.

Occupation

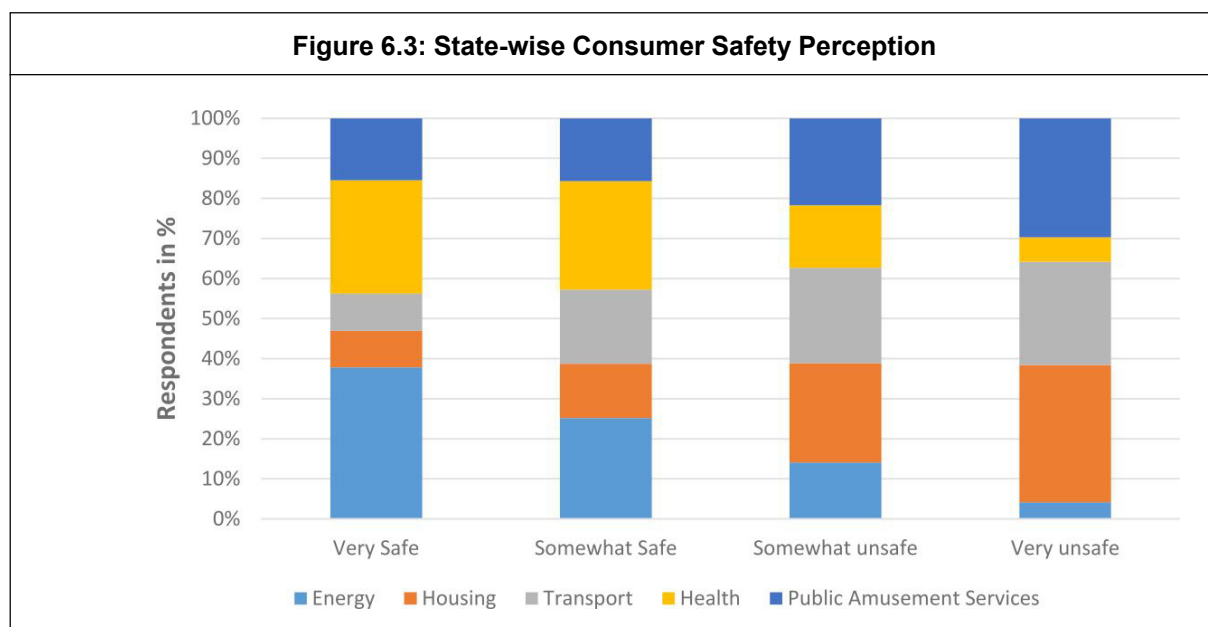
Table 6.5: State-wise Distribution of Occupation (in percent)

State	Cultivator	Petty Traders	Shop Owners	Business	Self-employed	Causal wage labour	Regular salaried employee	Student	House wife	Earnings from other source like rent	Retired	Total
Assam	0.20	6.20	4.40	10.80	2.80	14.80	16.80	6.80	29.60	0.60	7.00	500
Madhya Pradesh	1.61	7.06	7.06	2.42	9.68	17.74	14.92	36.09	2.02	1.01	0.40	496
Rajasthan	1.89	10.75	12.64	3.77	8.68	9.43	7.55	18.11	21.13	1.89	2.26	530
Tamil Nadu	0.40	0.60	9.64	6.02	17.07	9.64	24.10	5.62	21.49	1.41	3.41	498
Uttar Pradesh	6.19	4.59	7.98	7.58	9.18	3.99	14.97	16.17	25.55	1.00	2.79	501
West Bengal	2.20	2.20	2.20	11.40	14.60	12.80	15.20	3.80	30.20	1.40	4.00	500
Total	2.08	5.29	7.37	6.98	10.31	11.37	15.50	14.45	21.69	1.22	3.31	3025

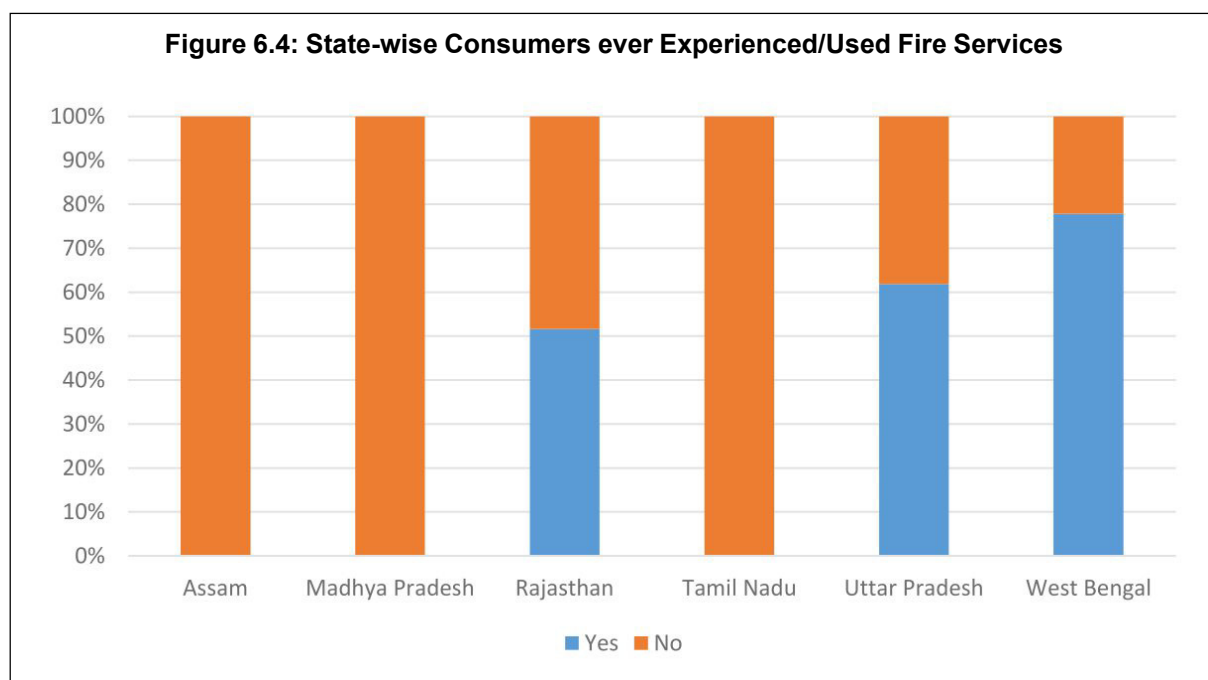
The responses were collected from a heterogeneous group of people, their source of income varied. From the total respondents, 2.08 percent were involved in farming. Highest percentages of respondents were housewives with 21.69 percent, followed by 15.50 percent who belonged to 'regular salaried employee', 14.45 percent of respondents were students. Other categories included shop owners, people into petty trade, casual labour, business, retired and self-employed.

Perception of Safety

The perception of safety was highest for Medicines, which accounted for 38.11 percent followed by Gas (35.02 percent), Water (26.58 percent) and Hospital (25.13 percent). The Aviation sector was perceived as the unsafe amongst service sectors by 37.13 percent of consumer respondents. While the calamities, such as earthquake (36.04 percent) and fire (31.34 percent) were considered to be a major safety concern amongst consumers interviewed.



Safety Issues Experienced



Majority of respondents have not experienced or used any fire services. Only in West Bengal, Uttar Pradesh and Rajasthan, respondents experienced or used safety issues related to fire services.

Training attended on Safety Measures

The highest proportion of those who ever attended these training services was in Udaipur, Rajasthan (14 percent) and Jalpaiguri, West Bengal (13.77 percent). While in Madhya Pradesh none of respondents ever attended any of the consumer training services. These training services were attended in either the earthquake or disaster management programme, which accounted for 0.34 percent and 98.80 percent respectively, of which 0.86 percent attended both the programme. Details are illustrated in Table 6.6.

Table 6.6: Attendance on Consumer Safety Camp/Demonstration/Mock Drill					
State	Yes		No		Total
	N	%	N	%	
Assam	3	0.60	495	99.40	498
Madhya Pradesh	0	0.00	494	100.00	494
Rajasthan	36	6.94	483	93.06	519
Tamil Nadu	1	0.20	488	99.80	489
Uttar Pradesh	21	4.87	414	96.06	435
West Bengal	41	8.28	452	91.31	493
Total	102	3.49	2826	96.58	2928

The attendance in consumer safety camp/demonstration/mock drill has been significantly low. If all states are combined together, then only 102 of the interviewed 2928 consumers had attended a safety exercise like mock drill/camp/demonstration. More than 96 percent of consumers who participated in the interview have not been a part of any camp/demonstration/mock drill.

There is grave need to motivate more and more number of consumers to attend such safety drills/demonstrations/camps. The service provider should mandate or frequently schedule such events and encourage consumers to attend them. Lack of awareness about safety measures will certainly prove fatal for consumers under adverse scenarios.

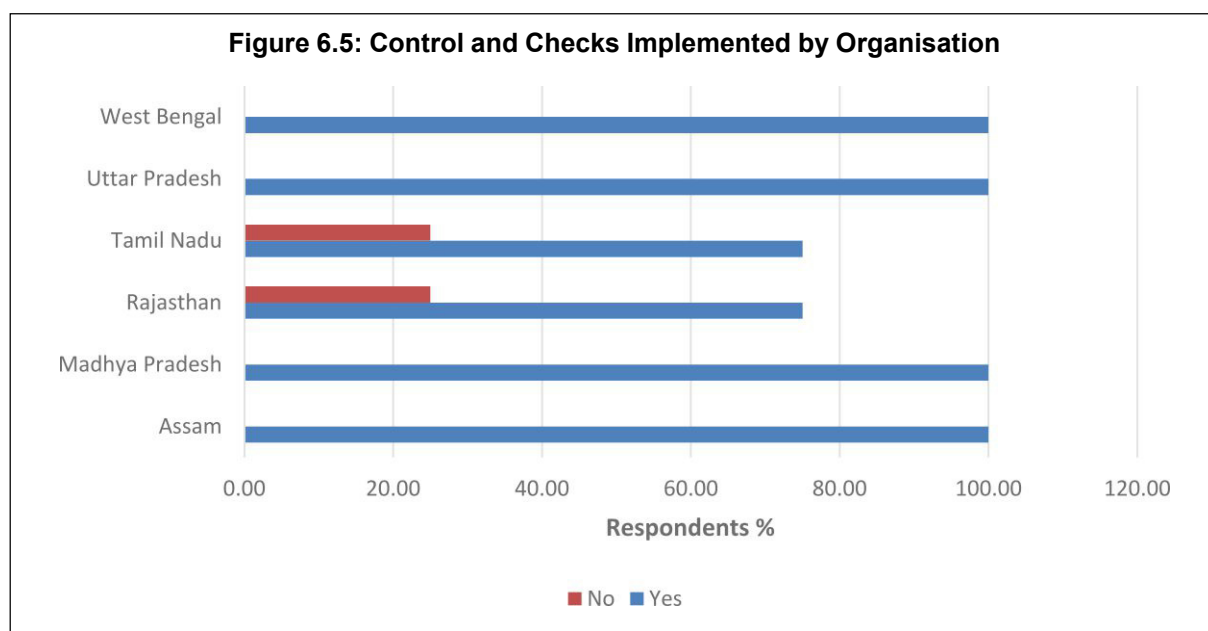
4. Service Providers

Service providers from all five sectors were interviewed namely: Energy, Health, Housing, Public Amusement Services and Transport.

- Service Providers, Officials from related authorities/organisations/institutes and policymakers

All respondents from the participating states said that they are aware of their organisations' safety standards and regulations. The service providers have been implementing and ensuring that the safety norms are being followed in their respective states. Very few of the service providers are new to the service industry, most of them have been around for more than 10 years.

Various authorised dealers and certified service providers were interviewed.



Service providers from various states were asked about their experiences and job responsibilities. They were specifically asked about checks and controls that their organisation implement in order to ensure safety of consumers.

The service providers were given two options to answer the question: through supervisory visits and with action taken against the offenders. They mostly make supervisory visits to review and appraise checks and controls that should be in place to ensure consumer's safety. Only 25 percent of responses from Rajasthan said that they take action against the offenders.

5. Energy: Perception of Consumer and Service Providers

This chapter deals with responses received from consumers, service providers and findings of interviews conducted with officials from various government departments from all five sectors. The tools were designed in a way as to measure the awareness, knowledge and skills that exist within the system when it comes to consumer safety. Hence, all three categories of participants were asked questions revolving around their awareness levels on the existing consumer safety norms, their knowledge levels on the services provided by various service providers and the skillsets that are needed in the system to address the grievance of consumers.

An effort has been made to understand the perception and understanding of consumers, service providers and officials on the consumer safety by discussing with them various issues related to energy, health, housing, public amusement services and transportation.

Energy: Consumer Perception

Purchasing pattern and behaviour of a consumer

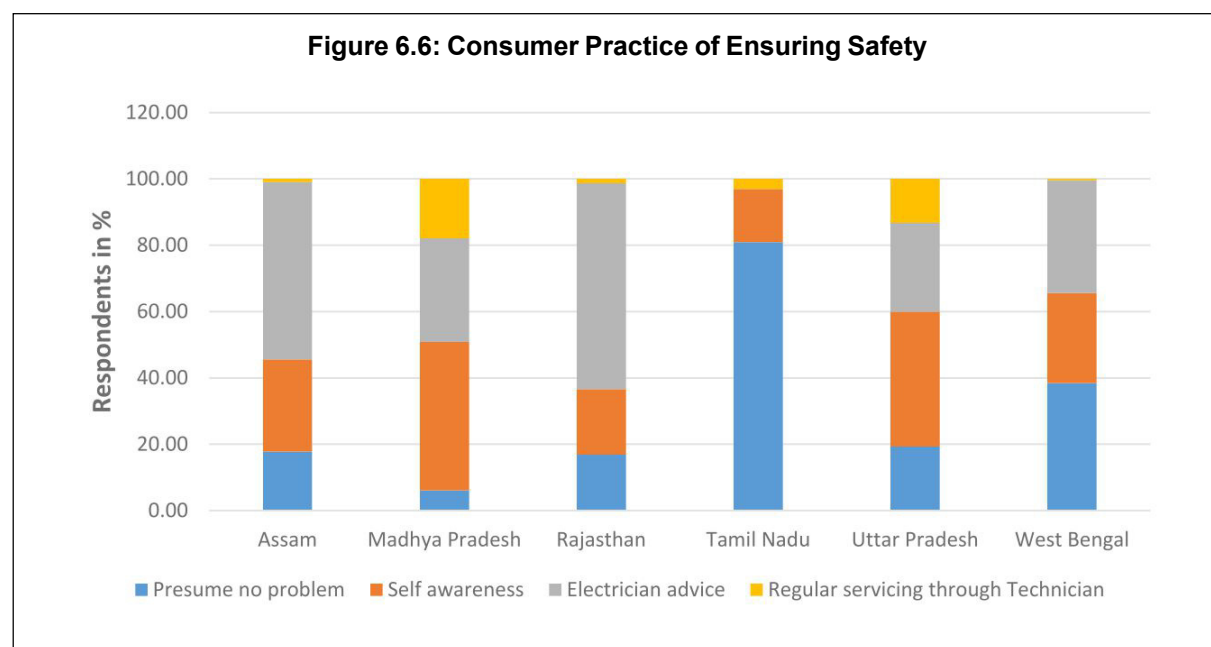
The choice of ISI marked electronic appliances were considered a safe purchase by 38.5 percent overall. An inter-State comparison shows that the preference for ISI marked electronic items is highest in Tamil Nadu (89.8 percent) and Uttar Pradesh (55.9 percent). The suggestion of the electrician for an appliance is considered as a preferred parameter for purchase in West Bengal

(45.4 percent), Rajasthan (44.7 percent), Madhya Pradesh (38.9 percent) and Assam (33.4 percent). The look and design of an electronic item was important for the respondents at Madhya Pradesh (39.5 percent) and Rajasthan (30.2 percent) while the budget was not a major criterion for a purchase of electronic appliances in any of the states.

Table 6.7: Purchasing Behaviour of Consumers of Electronic Appliances (in percent)						
State	Fancy look & Design	Suggested by Electrician	ISI marked	Any brand	As per Budget	Total
Assam	2.81	33.33	29.92	27.11	6.83	498
Guwahati	5.24	63.31	16.13	6.45	8.87	248
Jorhat	0.40	3.60	43.60	47.60	4.80	250
Madhya Pradesh	39.47	39.07	17.21	3.85	0.40	494
Bhopal	11.20	77.20	6.40	4.80	0.40	250
Gwalior	68.44	0.00	28.28	2.87	0.41	244
Rajasthan	30.58	44.81	7.69	9.42	7.50	520
Jaipur	1.11	85.93	11.48	0.00	1.48	270
Udaipur	62.40	0.40	3.60	19.60	14.00	250
Tamil Nadu	4.29	1.02	89.78	0.00	4.91	489
Chennai	5.67	0.81	88.26	0.00	5.26	247
Coimbatore	2.89	1.24	91.32	0.00	4.55	242
Uttar Pradesh	7.13	8.35	55.19	0.81	28.51	491
Ghaziabad	9.16	11.55	42.63	0.00	36.65	251
Lucknow	5.00	5.00	68.33	1.67	20.00	240
West Bengal	6.68	45.34	32.19	14.37	1.42	494
Jalpaiguri	10.61	51.43	24.08	12.65	1.22	245
Kolkata	2.81	39.36	40.16	16.06	1.61	249
Grand Total	15.30	28.87	38.28	9.31	8.24	2986

Table 6.8: State-wise Safety Practice for Electronic Appliances (in percent)					
State	Presume no problem	Self - awareness	Electrician advice	Regular servicing through Technician	Total
Assam	17.80	27.80	53.40	1.00	500
Madhya Pradesh	6.05	44.76	31.25	17.94	496
Rajasthan	16.89	19.73	62.05	1.33	527
Tamil Nadu	80.89	16.10	0.00	3.02	497
Uttar Pradesh	19.32	40.64	26.76	13.28	497
West Bengal	38.43	27.16	34.00	0.40	497
	29.76	29.26	34.87	6.10	3014

A State-wise comparison highlights a stark consumer practice across the States. The presumption of ‘no problem’ in the electronic appliances is ‘nil’ in 80.9 percent in Tamil Nadu. While a regular servicing of the electronic appliances by a technician is miniscule with the lowest proportion in West Bengal (0.04 percent). A State-wise safety practices is illustrated in Table 6.8.



Around 3014 consumers were inquired on their practices of ensuring safety in relation to electricity and electronic gadgets. Across all six states, respondents said that they are self aware of practices of ensuring safety when electricity is concerned. 44.76 and 40.64 percent of respondents from Madhya Pradesh and Uttar Pradesh respectively considered themselves aware of practices to ensure safety. In five states except Tamil Nadu (0 percent), respondents expressed that they depended on electrician’s advice in practice of ensuring safety. In Tamil Nadu, 80.89 percent of respondents presume there is no problem when it comes to practicing safety measures in relation to electricity and electronic equipment.

Perception of Consumers towards Service Provider’s Role

Maximum percentage of responses were collected from Madhya Pradesh, Rajasthan and Uttar Pradesh against most indicators under safe supply of electricity by SEB. The perception of safe supply of electricity by SEB varied from State to State. For instance, in Madhya Pradesh 79.56 percent of respondents answered ‘don’t know/can’t say in response to this question. Similarly in Rajasthan 70.02 percent of respondents expressed that they ‘neither agree or disagree’ on safe supply by the electricity board. In Uttar Pradesh, the response has been mostly negative while speaking about the role of Electricity Board in safe supply of electricity.

Figure 6.7: Perception on Safe Supply of Electricity by State Electricity Board

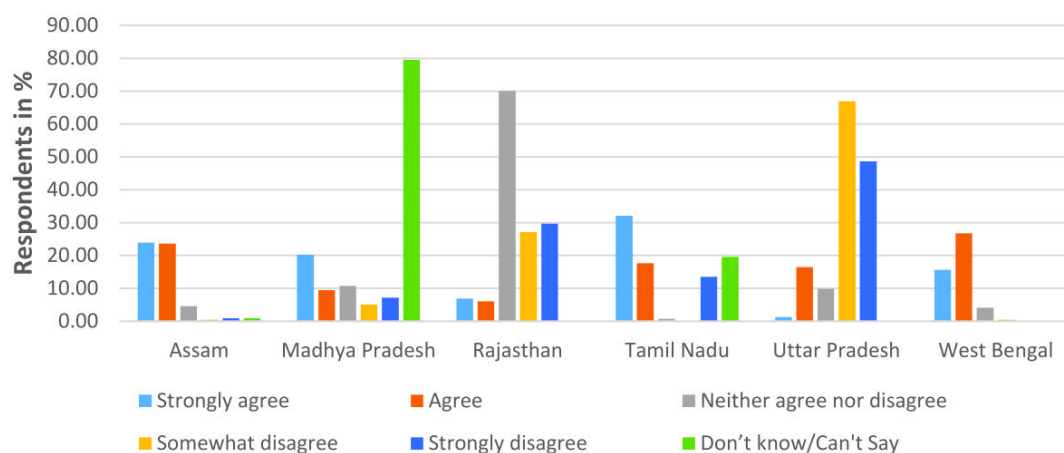


Table 6.9: State-wise Emergency Contact in case of Accidents or Fire Due to Electrical Supply (in percent)

State	Electricity Board	Fire Brigade	Police Station	Others	Don't know	Total
Assam	68.90	13.01	17.89	0.20	0.00	492
Guwahati	38.31	25.81	35.48	0.40	0.00	248
Jorhat	100.00	0.00	0.00	0.00	0.00	244
Madhya Pradesh	86.70	0.00	0.00	0.00	13.30	406
Bhopal	100.00	0.00	0.00	0.00	0.00	232
Gwalior	68.97	0.00	0.00	0.00	31.03	174
Rajasthan	3.85	1.92	1.92	61.54	30.77	52
Jaipur	2.38	0.00	0.00	69.05	28.57	42
Udaipur	10.00	10.00	10.00	30.00	40.00	10
Tamil Nadu	34.49	14.98	0.00	50.52	0.00	574
Chennai	0.00	0.00	0.00	100.00	0.00	247
Coimbatore	60.55	26.30	0.00	13.15	0.00	327
Uttar Pradesh	56.82	43.18	0.00	0.00	0.00	132
Ghaziabad	100.00	0.00	0.00	0.00	0.00	17
Lucknow	50.43	49.57	0.00	0.00	0.00	115
West Bengal	56.63	11.99	1.28	0.00	30.10	392
Jalpaiguri	59.76	10.57	0.00	0.00	29.67	246
Kolkata	51.37	14.38	3.42	0.00	30.82	146
Total	58.01	12.45	4.59	15.77	9.18	2048

The response of service providers during electrical accidents, fire or emergencies is good with highest proportion in Udaipur, Rajasthan with 76 percent, 64 percent in Guwahati, Assam and 53.41 percent in Kolkata, West Bengal. Overall, 47.21 percent of respondents felt there was good response from the electricity service providers, while 44.04 percent felt there was no response during electrical emergencies especially in Tamil Nadu, Uttar Pradesh and West Bengal (see Table 6.9).

Figure 6.8: State-wise Response of Service Providers to Electrical Emergencies, Fire and Accidents

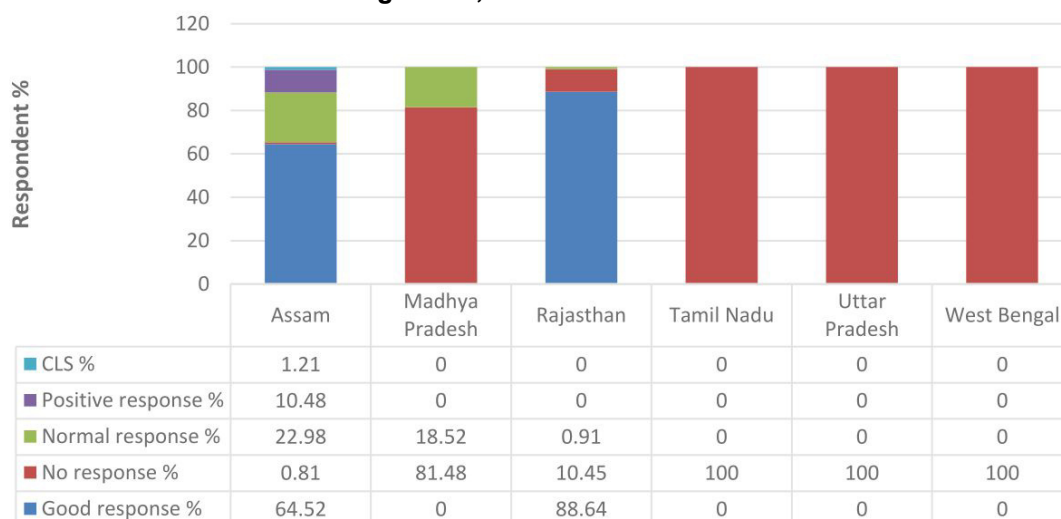
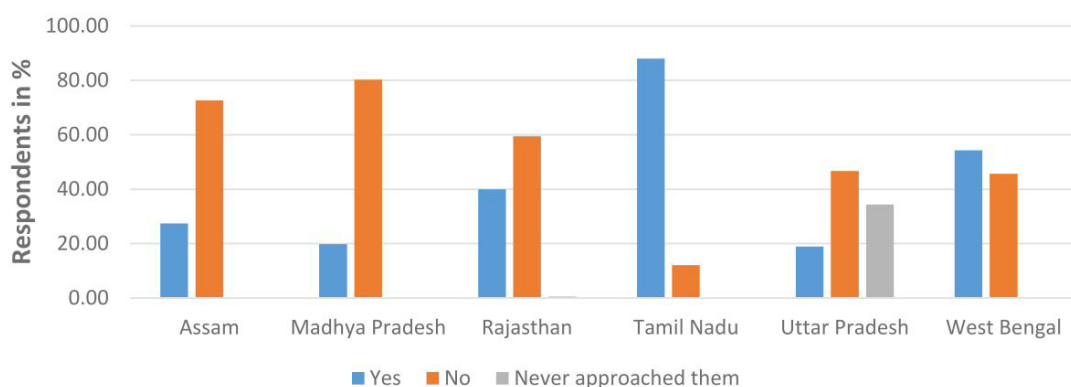


Figure 6.9: Satisfaction with Local Electrical Board



The respondents who were very satisfied with the electrical board's response towards their queries/concerns related to electrical safety or issues were overall 9.9 percent, while 62.12 percent were not satisfied with the service and 27.0 percent never approached the electric board. The highest proportion who were satisfied with the service were Udaipur (43.23 percent), Rajasthan, followed by Coimbatore (27.69 percent), Tamil Nadu and Lucknow (24.37 percent), Uttar Pradesh. The dissatisfaction with the electric board response were evidently high in Gwalior (99.59 percent), Madhya Pradesh, Jorhat (96.40 percent), Assam and Jalpaiguri (94.79 percent) and West Bengal (54.31 percent).

About 29 percent reported the incidence of gas leakage in Assam and around 28 percent in Rajasthan. The leakage was reported in significant proportion in Jaipur (87.41 percent), Rajasthan and Guwahati (68.95 percent), Assam. In contrast, all respondents from Gwalior, Madhya Pradesh, had never experienced gas leakage; similarly 92.56 percent in Lucknow reported the same. The action taken following a gas leakage attributed 53.36 percent who switched off the gas supply, 31.96 percent called an emergency number, 9.53 percent called the gas provider and 2.99 percent approached the neighbours for help.

Figure 6.10: Incidence of Gas Leakage Ever Experience

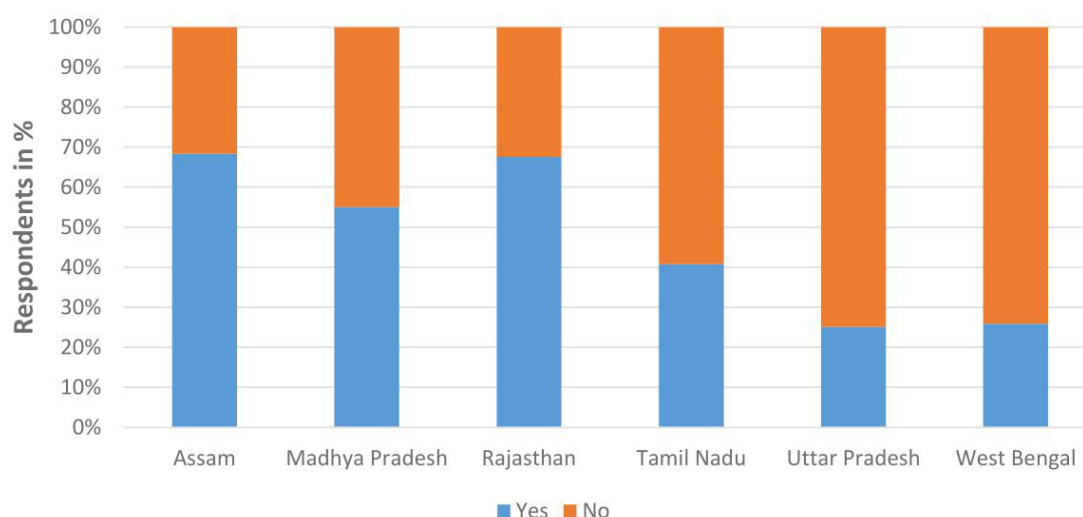
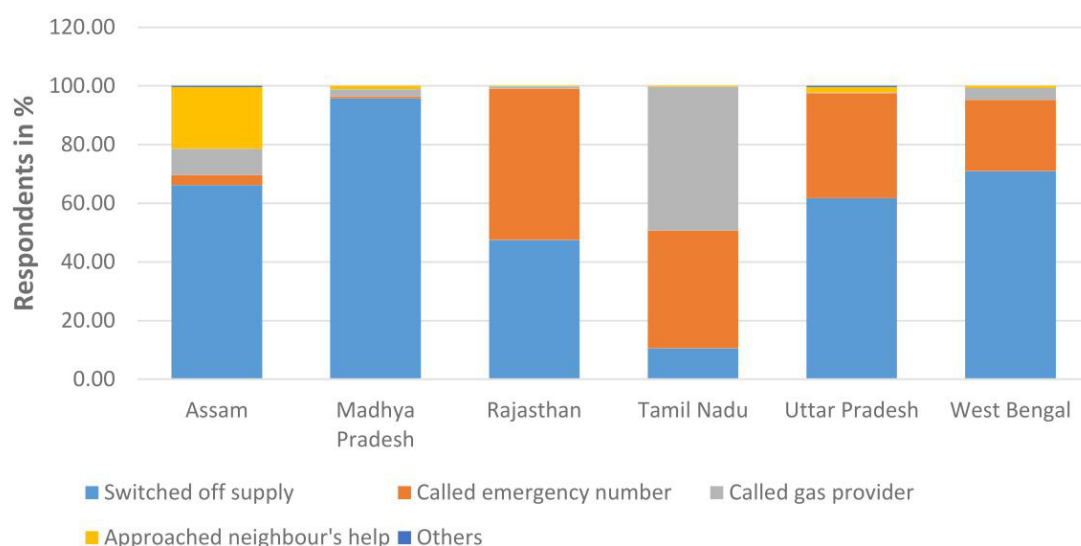
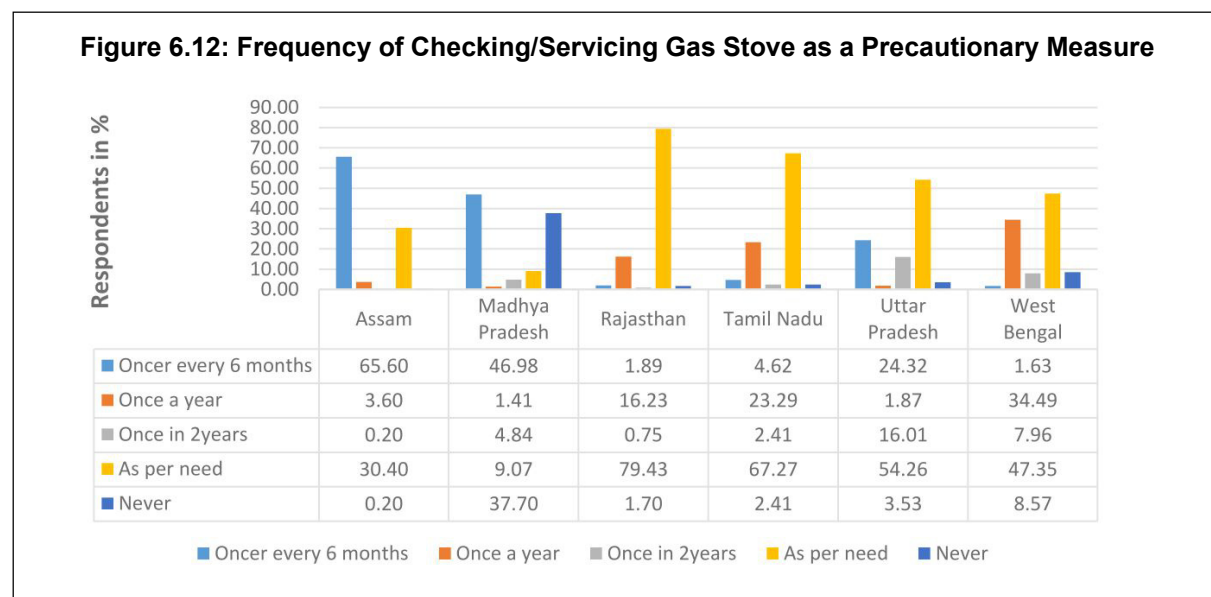


Figure 6.11: Action Taken on Detection of Gas Leakage



Experience in Safety Measures Related to Cooking and Gas

The receipt of gas cylinder with seal accounted for 94.7 percent and without seal was reported by 4.89 percent of respondents. Similarly, the delivery of a gas cylinder without valve was in low proportion (1.45 percent) in the states of Assam (1.40 percent), Rajasthan (0.57 percent), Uttar Pradesh (2.20 percent) and West Bengal (4.60 percent). The confirmed low weight cylinder delivery was highest in Uttar Pradesh (43.51 percent) while it was 'nil' in Madhya Pradesh. The contact numbers of the gas agency were saved with 48.53 percent of respondents.



Under the indicator, checking/servicing the gas stove as precautionary measure across states' respondents have agreed that they get it done 'as per need'. More than 50 percent of respondents in Rajasthan (79.43 percent), Tamil Nadu (67.27 percent) and Uttar Pradesh (54.26 percent) shared that they get the gas stove serviced or checked only when needed. This was followed by West Bengal with 47.35 percent respondents getting checked or serviced only when needed. A significant high percentage of respondents in Assam (65.50 percent) said that they get it checked or serviced 'once in every six months'; followed by Madhya Pradesh with 46.98 percent and Uttar Pradesh 24.32 percent of respondents who get gas stove checked or serviced 'once in every six months'. Around 8.57 percent of respondents in West Bengal mentioned that they have 'never' got gas stove serviced/checked. In remaining five states there is minimal or nil response against 'never' serviced/checked the gas stove.

There was a mixed response from consumers with regard to changing the rubber tube of gas stove. In states like Madhya Pradesh and Uttar Pradesh, 48.79 percent and 52.02 percent respectively reported to have it changed in less than three months. Whereas in most states namely Assam (62.25 percent), Rajasthan (79.52 percent), Tamil Nadu (86.71 percent) and West Bengal (54.28 percent) consumers used a rubber tube for more than a year. In case of West Bengal, a significant percentage of consumers also change the rubber tube in less than a year (37.58 percent).

Madhya Pradesh, Tamil Nadu and Uttar Pradesh show stark variations in the frequency of gas stove rubber tube replacement. In case of Madhya Pradesh, there were high percentage of respondents who stated that they have changed rubber tube once a year; there still remains a

higher percentage of respondents who do not recall the last time they changed the rubber tube. In case of Uttar Pradesh, approximately 60 percent of respondents changed the rubber tube once in three years compared to approximately 20 percent who changed it once in a year. A high percentage of respondents from Assam, Rajasthan and West Bengal shared that they change the rubber tube whenever it is required. In Tamil Nadu, a significantly high percentage of respondents informed that they replace the rubber tube once in two years (62.78 percent).

Understanding of services available

Figure 6.13: State-wise LPG/CNG Car Ownership

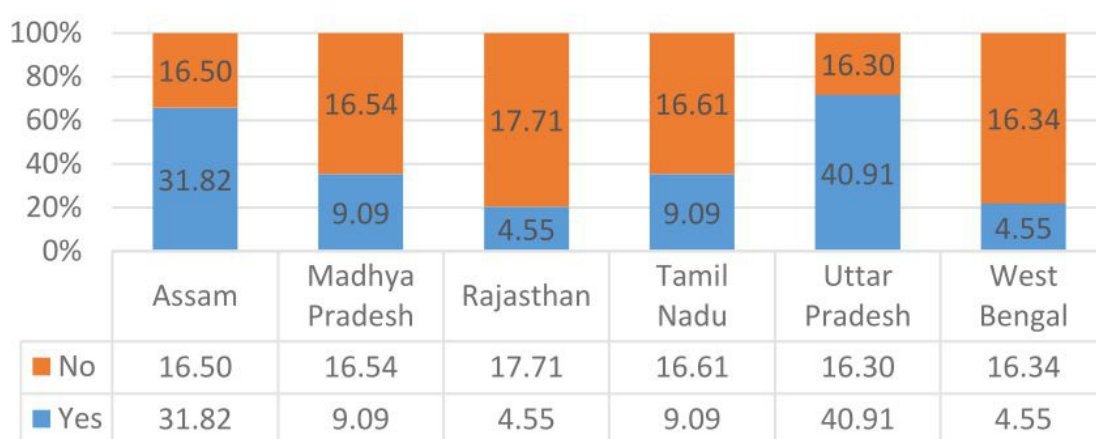
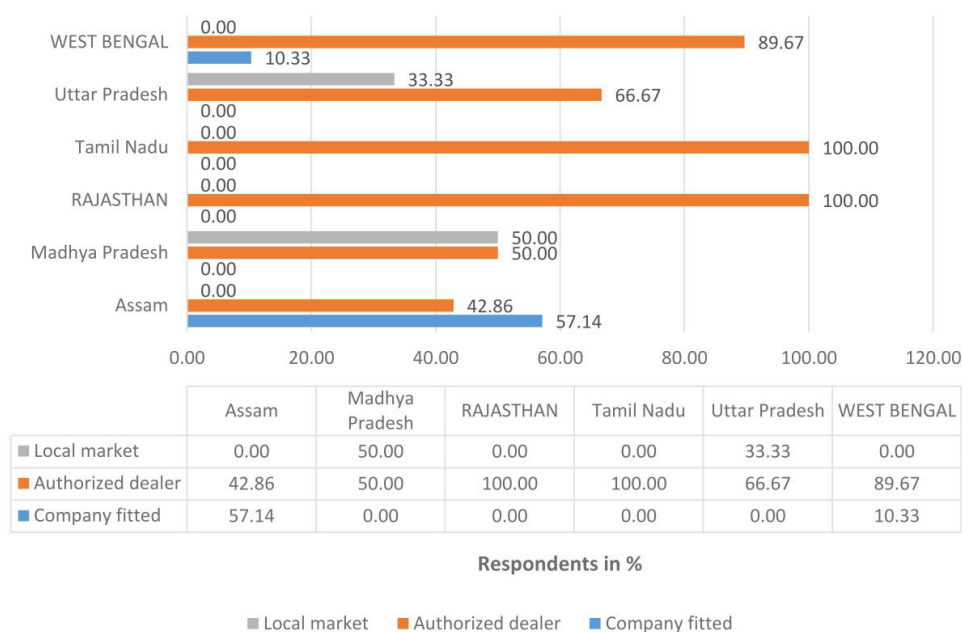
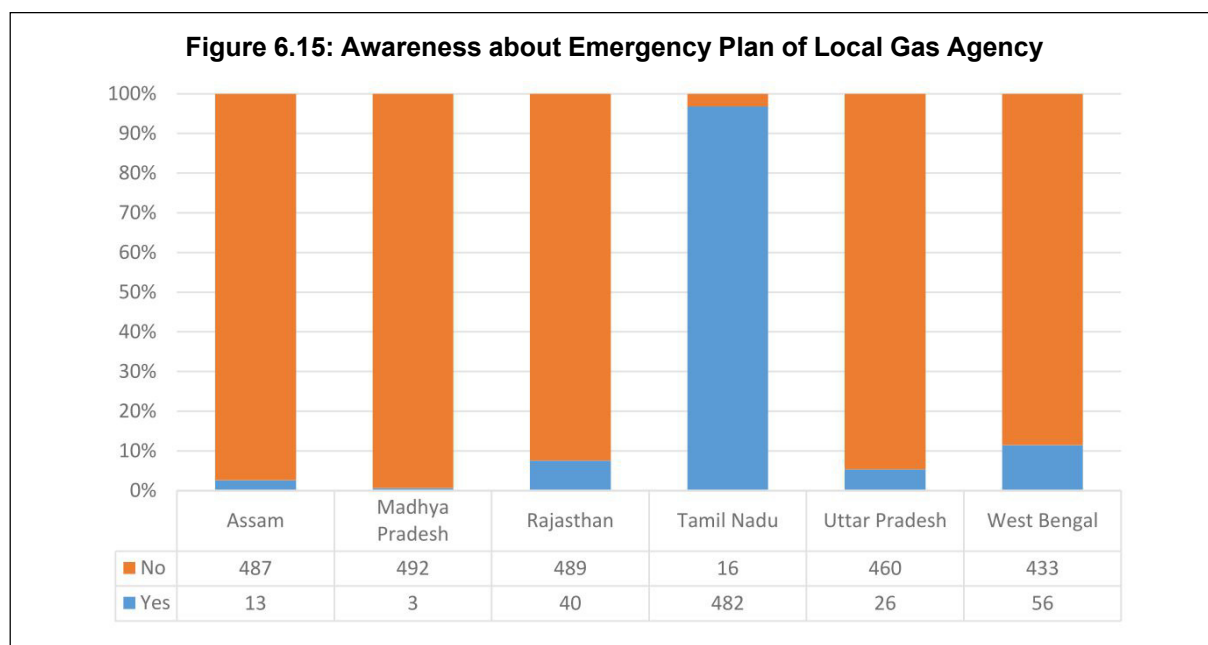


Figure 6.14: LPG/CNG Kit Installation



In regard to installation of CNG kit from the local market, 3.06 percent tried to contact an authorised dealer while the remaining 96.94 percent did not get in contact. Installation through an authorised dealer was expensive for 0.44 percent, time consuming for 96.70 percent, too far for 2.64 percent and the staff not supportive was a reason given by 0.22 percent respondents.

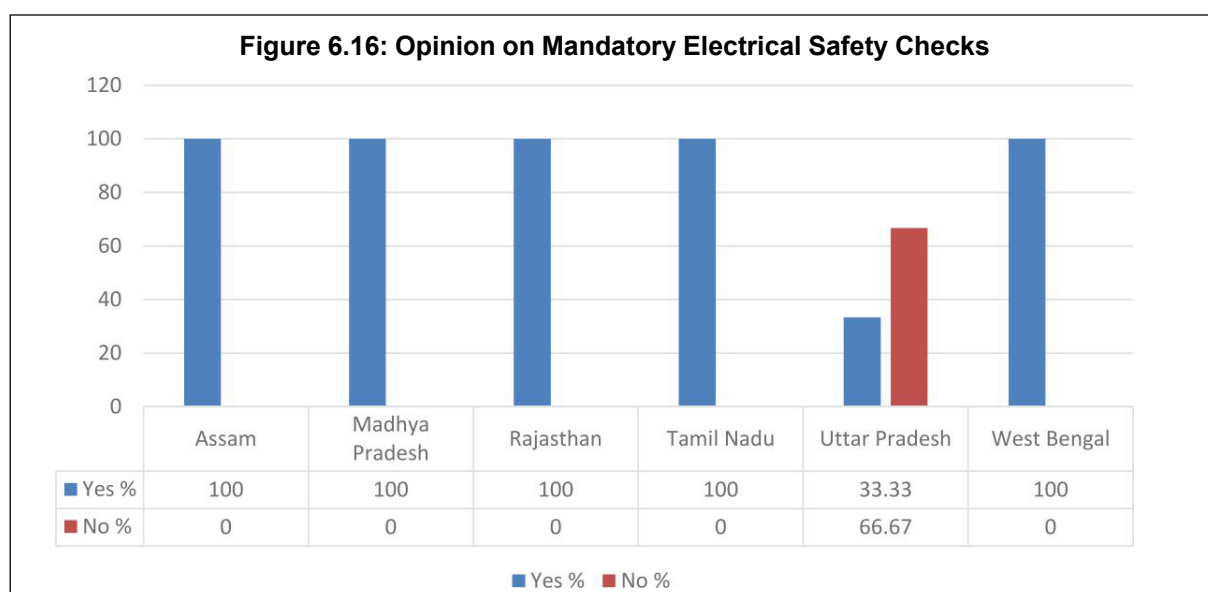
The CNG car owners in the study sought their services from the local dealer (56 percent) and company authorised dealer (44 percent).



Energy: Service Provider

Service providers were asked about the existing safety norms for consumers to avail and their role in making it available to consumers. All service providers recommended that the electrical wires, household fittings and appliances should be checked regularly.

Existing safety checks



A 100 percent ‘yes’ was the answer from Assam, Madhya Pradesh, Tamil Nadu and West Bengal except 33.33 percent from Uttar Pradesh with regards to mandatory electrical safety checks. The remaining 66.67 percent from Uttar Pradesh said ‘no’.

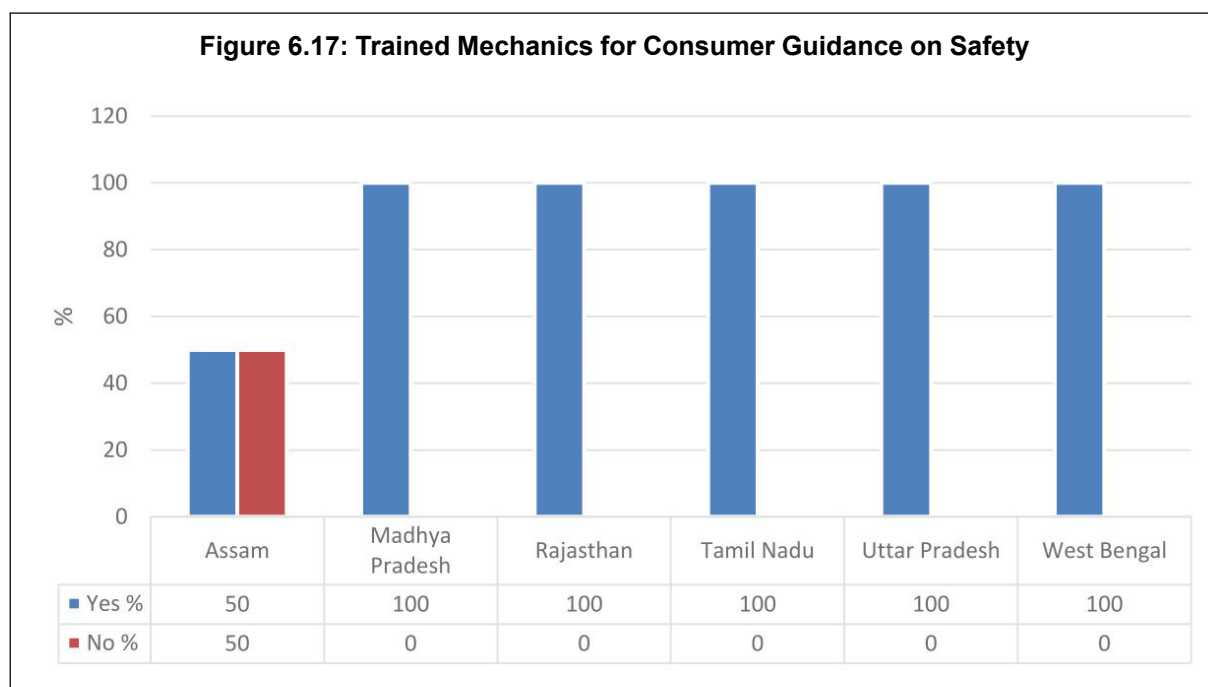
Table 6.10: State-wise Opinion on Safety of Transformers Installed on Streets and Open Wirings					
State	Very safe %	Safe %	Not safe%	Very unsafe%	Total
Assam	33.33	33.33	0.00	33.33	3
Guwahati	0.00	0.00	0.00	100.00	1
Jorhat	50.00	50.00	0.00	0.00	2
Madhya Pradesh	0.00	0.00	50.00	50.00	2
Bhopal	0.00	0.00	100.00	0.00	1
Gwalior	0.00	0.00	0.00	100.00	1
Rajasthan	100.00	0.00	0.00	0.00	2
Jaipur	100.00	0.00	0.00	0.00	1
Udaipur	100.00	0.00	0.00	0.00	1
Tamil Nadu	100.00	0.00	0.00	0.00	2
Chennai	100.00	0.00	0.00	0.00	1
Coimbatore	100.00	0.00	0.00	0.00	1
Uttar Pradesh	0.00	33.33	66.67	0.00	3
Ghaziabad	0.00	0.00	100.00	0.00	1
Lucknow	0.00	50.00	50.00	0.00	2
West Bengal	0.00	50.00	50.00	0.00	2
Jalpaiguri	0.00	50.00	50.00	0.00	2
Kolkata	0.00	0.00	0.00	0.00	0
Total	25.00	25.00	33.33	16.67	14

On safety of transformers installed on streets and open wings, service providers expressed a mixed opinion. In Assam 33.33 percent each said it is ‘very safe’, ‘safe’ and ‘very unsafe’ respectively. In Madhya Pradesh, 50 percent each said it is ‘not safe’ and ‘very unsafe’. No responses were recorded from Rajasthan. 100 percent from Tamil Nadu expressed it was ‘very safe’. 33.33 percent from Uttar Pradesh and 50 percent from West Bengal said it was ‘safe’ whilst 66.67 percent in Uttar Pradesh said it to be ‘not safe’ as against 50 percent from West Bengal.

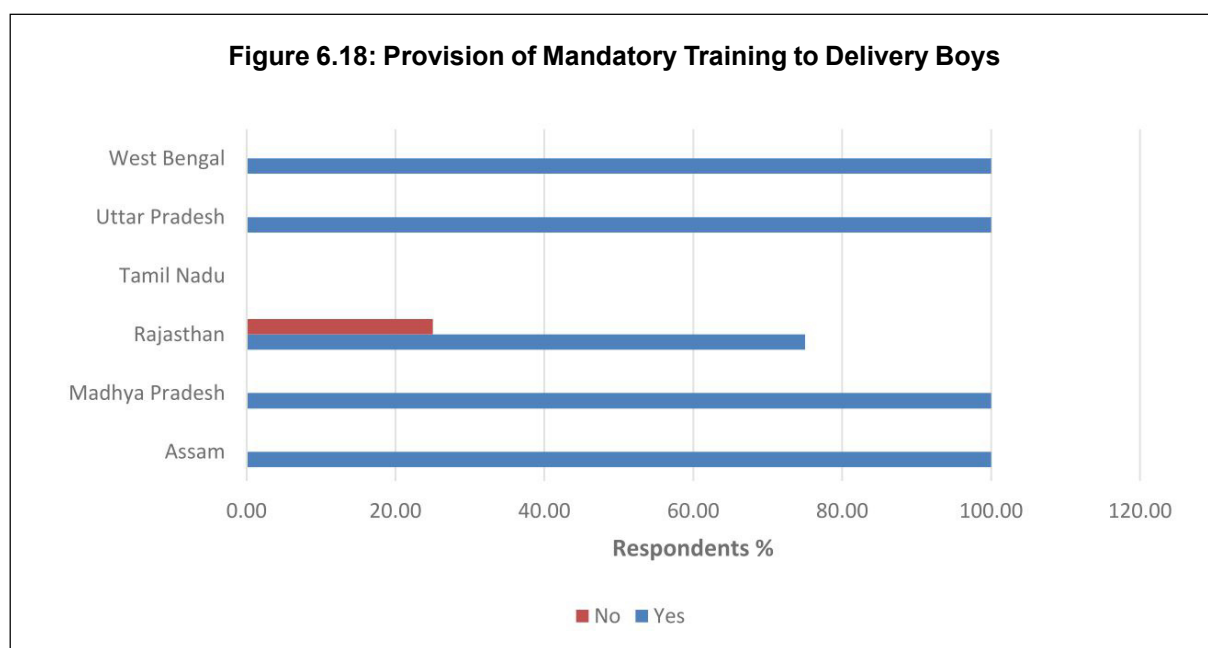
The entire participants (service providers) stated that they have a planned LPG consumer safety guideline in place.

Service providers were asked about the frequency of safety check visits made by them to homes and restaurants. 50 percent from Assam, 50 percent from Madhya Pradesh, 100 percent from Tamil Nadu, 25 percent from Uttar Pradesh and 100 percent from West Bengal said the visits were made annually. Responses for the range of 2-3 years were given as response in Rajasthan (25 percent). Rajasthan and Uttar Pradesh responded 50 percent for every three-five years’ range. A safety check done on consumer’s request in Assam was 50 percent, Madhya Pradesh 50 percent, Rajasthan (25 percent) and Uttar Pradesh (25 percent).

Systems to Meet Consumer Grievances



Five out of six states responded that they have trained mechanics for consumer guidance on safety. Only in Assam, 50 percent of the respondents replied 'no' to the question.



The service providers were asked about the provision of mandatory training to delivery boys, to which in all states the service providers said 'yes' except Rajasthan where 25 percent of the respondents said 'no'.

After inquiring on the provision of training for new recruits, service providers were asked about the frequency of trainings provided to delivery boys. In Assam service providers replied 50 percent each to 'once' and 'more than once' under provision of training for delivery boys. In Rajasthan, 33.33 percent said 'more than once' and 66.67 percent said 'never'. In Uttar Pradesh, 100 percent responses were received for 'never'. Respondents in West Bengal said new recruits are provided trainings. In Madhya Pradesh and Tamil Nadu, 0 percent responses were received.

Table 6.11: State-wise Frequency of Conducting Training on Consumer Safety in Agencies					
State	Annually %	2-3 years%	3-5 years %	5-10 years %	Total
Assam	50.00	0.00	0.00	50.00	2
Guwahati	0.00	0.00	0.00	100.00	1
Jorhat	100.00	0.00	0.00	0.00	1
Madhya Pradesh	0.00	100.00	0.00	0.00	1
Bhopal	0.00	100.00	0.00	0.00	1
Gwalior	0.00	0.00	0.00	0.00	0
Rajasthan	0.00	0.00	100.00	0.00	1
Jaipur	0.00	0.00	100.00	0.00	1
Udaipur	0.00	0.00	0.00	0.00	0
Tamil Nadu	100.00	0.00	0.00	0.00	2
Chennai	100.00	0.00	0.00	0.00	1
Coimbatore	100.00	0.00	0.00	0.00	1
Uttar Pradesh	0.00	0.00	0.00	0.00	0
Ghaziabad	0.00	0.00	0.00	0.00	0
Lucknow	0.00	0.00	0.00	0.00	0
West Bengal	0.00	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0.00	0
Total	50.00	16.67	16.67	16.67	6

The frequency of trainings conducted by consumer safety agencies was recorded in this section: in Tamil Nadu, the response was 100 percent and Assam 50 percent under annual trainings. In Madhya Pradesh, 100 percent responded to two-three years' as the frequency of conducting such trainings. In Rajasthan, 100 percent responded under three-five years. Uttar Pradesh and West Bengal did not conduct such trainings as it cannot be derived from 0 percent responses received from these states.

Findings from Interview with Officials

The officials serving the respective departments were interviewed. The questions were related to administrative procedures, consumer relations like grievance/complaints and awareness generation.

Policies

When asked about design and implementation policies of building in relation to consumer safety, officials responded that the safety of the consumer while using the service is given utmost

importance. There are meetings conducted with staff and training is provided to them. The senior management takes all policy level decision.

Rules and regulations

Officials were also asked about rules and regulations for providing services to consumers while addressing safety issues, to which they responded that the consumer is asked to check the services at the time of delivery in front of the delivery boys or staff. The consumer is advised to use fittings from reliable manufacturers. ISI mark products are always recommended to consumers.

Consumer concerns and satisfaction

Officials were asked about the primary issues raised by consumers to which they responded that consumers have concerns over the voltage of supply of power. To avoid the problem, the department requests consumers not to tamper with the meter. As such there are no complaints from consumers.

Awareness generation among consumers

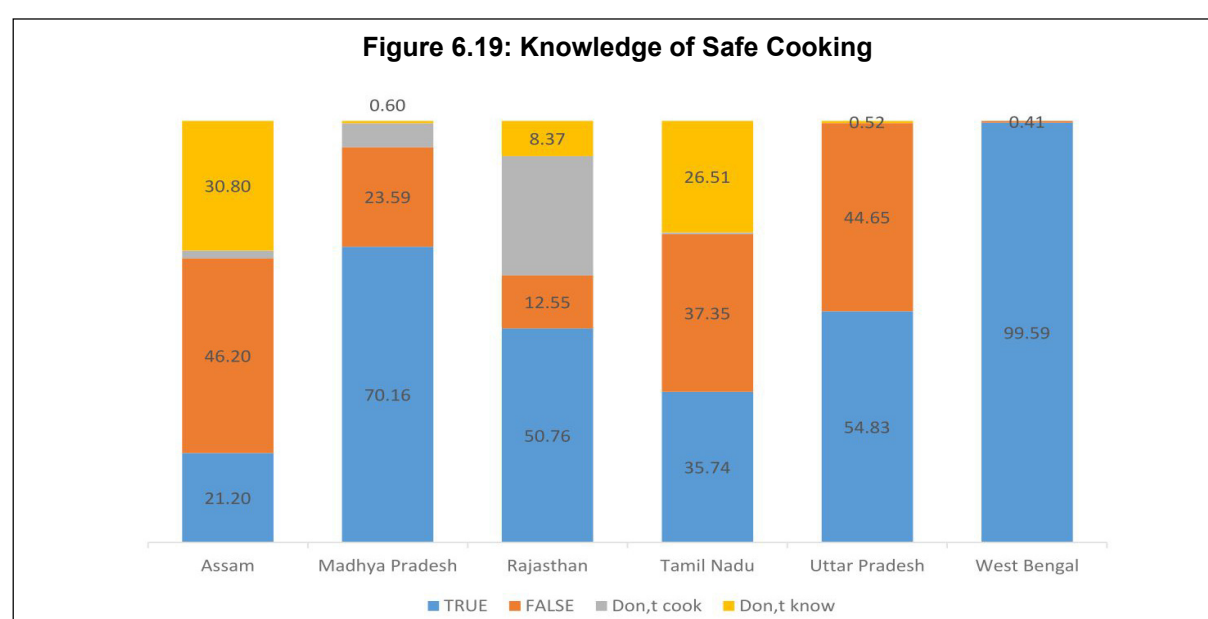
The interview also consisted of officials' views on addressing safety of consumers and trainings provided in view of keeping the consumer safe. The officials informed that the authorised dealers conduct regular trainings with consumers and the safety instructions are also mentioned on the printed bills provided to consumers. At times, updates through SMS are also sent to the consumer's mobile phones.

6. Health: Perception of Consumer and Service Providers

Consumers were asked about the safety measures adopted in matters of food and water safety. Questions asked were related to safe cooking practices, safety standards related to food in restaurants and availability of safe drinking water.

Understanding on safe food and water

State-wise perceptions of consumer respondents regarding safe cooking is illustrated in Figure 6.19.



Respondents were asked to share their views on safe cooking. Across all states, respondents said they were aware of safe cooking practices. 99.59 percent of respondents from West Bengal considered themselves aware of safe cooking practices, followed by 70.16 percent in Madhya Pradesh, 54.83 percent in Uttar Pradesh and 50.76 percent in Rajasthan. In Assam and Tamil Nadu, 21.20 percent and 35.74 percent of the respondents respectively shared that they are aware of safe cooking practices. Except West Bengal in all other states a certain percentage of respondents expressed that there is not anything like safe cooking practices; hence they responded to the question as ‘false’. 46.20 percent in Assam, 44.65 percent in Uttar Pradesh, 37.35 percent in Tamil Nadu, 23.59 percent in Madhya Pradesh and 12.55 percent in Rajasthan responded to the question as ‘false’.

Figure 6.20: Perception on Food Safety of Restaurants

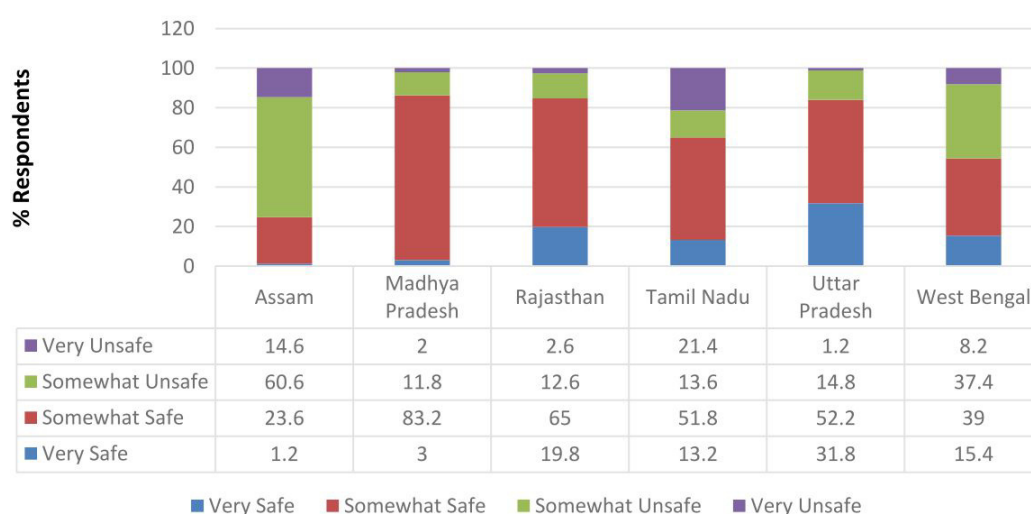
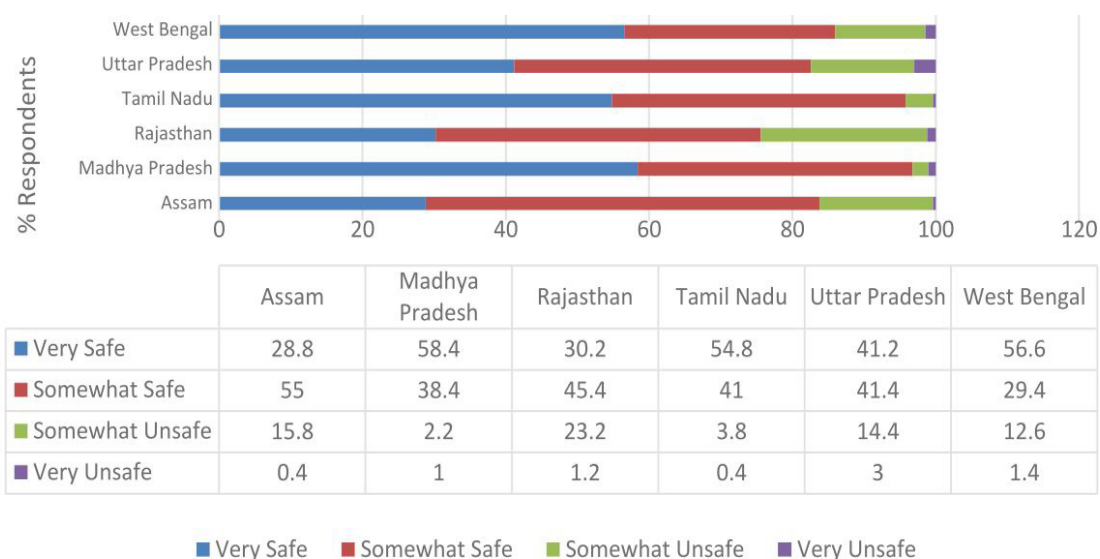
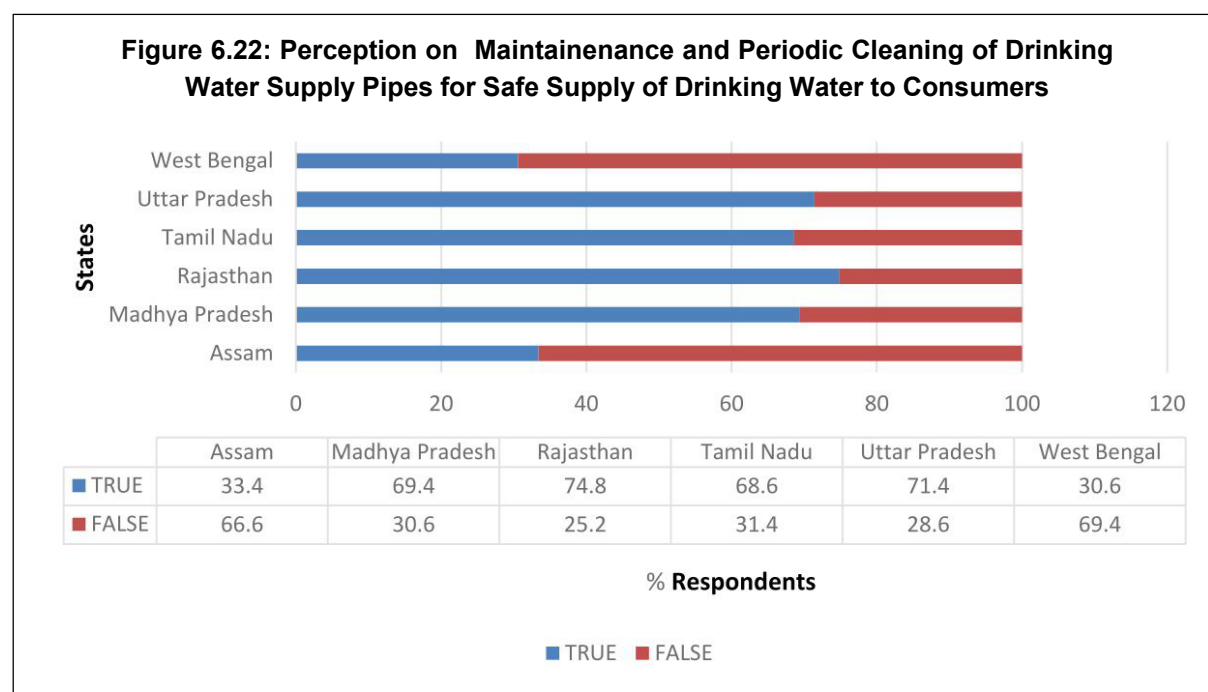


Figure 6.21: Perception on Safety of Drinking Water Supplied



Consumers were enquired about food safety in restaurants. 60.6 percent reported restaurant food as somewhat unsafe in Assam while in Bengal it was 37.4 percent. Safe food was reported highest in Uttar Pradesh while lowest safe food was in Assam at 1.2 percent and Madhya Pradesh at 3 percent. Highest safety 31.8 percent was reported in Uttar Pradesh followed by 19.8 percent in Rajasthan. In West Bengal and Tamil Nadu, it was 15.4 and 13.2 percent respectively.

Overall perception on safety of drining water was found to be around 30-55 percent. Highest safe drinking water was reported in Madhya Pradesh followed by West Bengal while unsafe was around one percent across states.



Consumers were asked about their perception on periodic maintenance and cleaning of drinking water supply pipes. In Assam, only 33.4 percent reported about maintenance and cleaning while 67 percent reported as not happening. Similarly in West Bengal maintenance and cleaning was reported to be very low at 30.6 percent. Rajasthan reported highest maintenance of the supply water at almost 75 percent followed by Uttar Pradesh and Madhya Pradesh at 71.4 percent and 69.4 percent respectively.

More than 50 percent of consumers from six states responded 'yes' to checking food labels with Assam 89.36 percent, Madhya Pradesh 67.21 percent, Rajasthan 66.99 percent, Tamil Nadu 96.32 percent and Uttar Pradesh 75.10 percent. Only in West Bengal, 37.65 percent of consumers said 'yes' for checking food labels against 62.35 percent who said 'no'.

Thereafter, consumers were asked what all do they check the packaging. Each State responded to 'date of expiry'; with highest responses from Assam 58.39 percent, Madhya Pradesh 90.06 percent and Tamil Nadu 95.29 percent. Consumers from all states also mentioned 'ingredients' as one of the components they checked on the packaging: Rajasthan 59.74 percent, Uttar Pradesh 44.98 percent and West Bengal 14.56 percent. Around 50.97 percent of respondents from West Bengal and 29.08 percent from Assam said they checked the 'manufactures name' on the packaging.

Respondents in Rajasthan seem to be more cautious and particular to check ingredients and nutirent compositions rather than expiry dates because of spurious or fake products. Prevalance of spurious drugs or lack of confidence has led to respondents say more about checking of compositions and nutritional value.

Figure 6.23: Practice of Checking Food Labels by Consumers

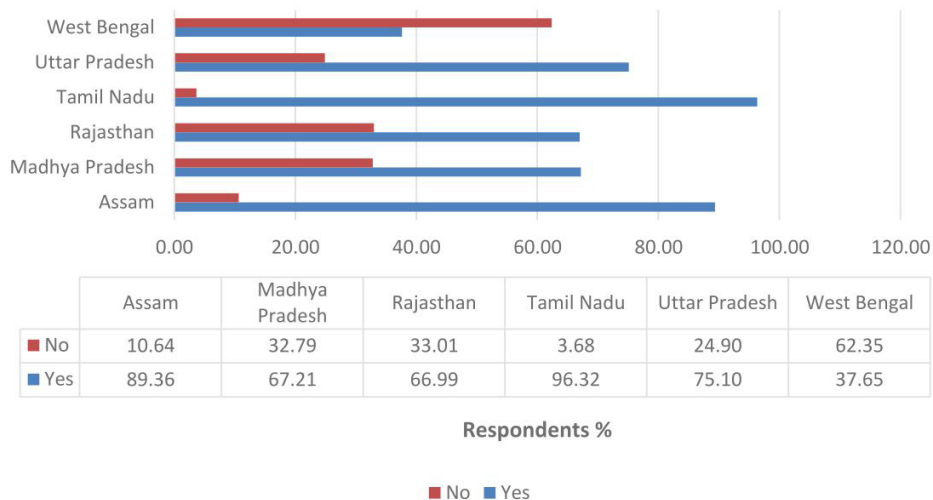
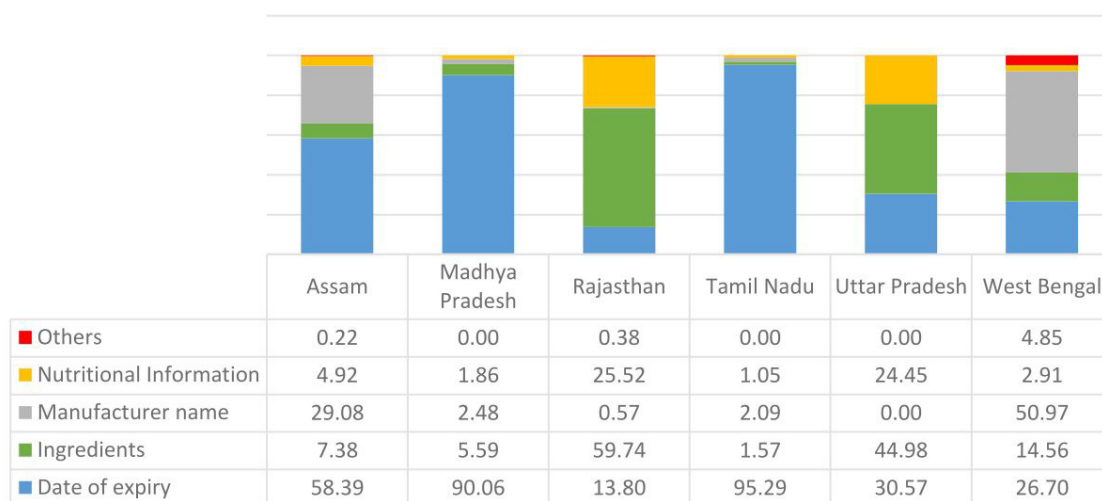
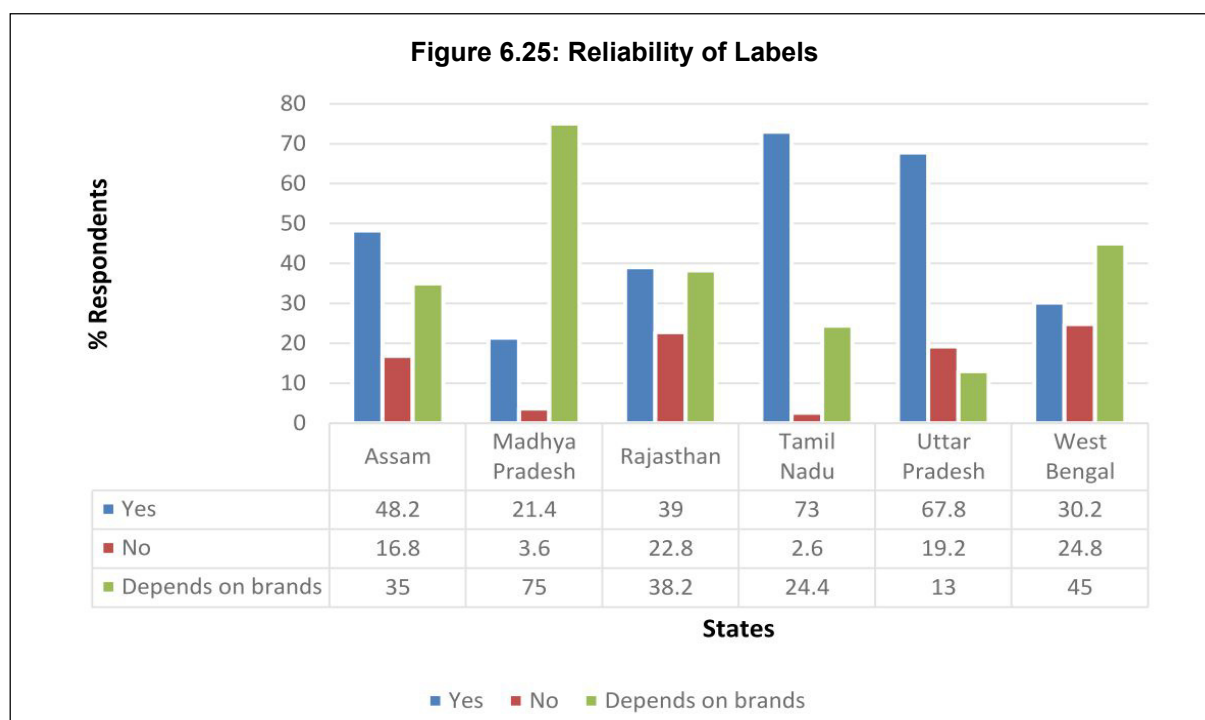


Figure 6.24: Reason for Checking Label Information





Respondents were asked about reliability of the labels. Nearly 73 and 67.8 percent respondents in Tamil Nadu and Uttar Pradesh respectively, stated that labels are reliable. While in Madhya Pradesh and West Bengal, 21.4 and 30.2 percent respondents respectively stated that the labels are not reliable. Across all states the label credibility is attributed to the brand name because 25 percent to as high as 75 percent (Madhya Pradesh) respondents find the brand name as an important factor in denoting the reliability of a product which has a huge psychological bearing on safety consideration amongst consumers although Uttar Pradesh is found to be lowest in terms of depending on the brand name at 13 percent.

Laws and preventive measures in place

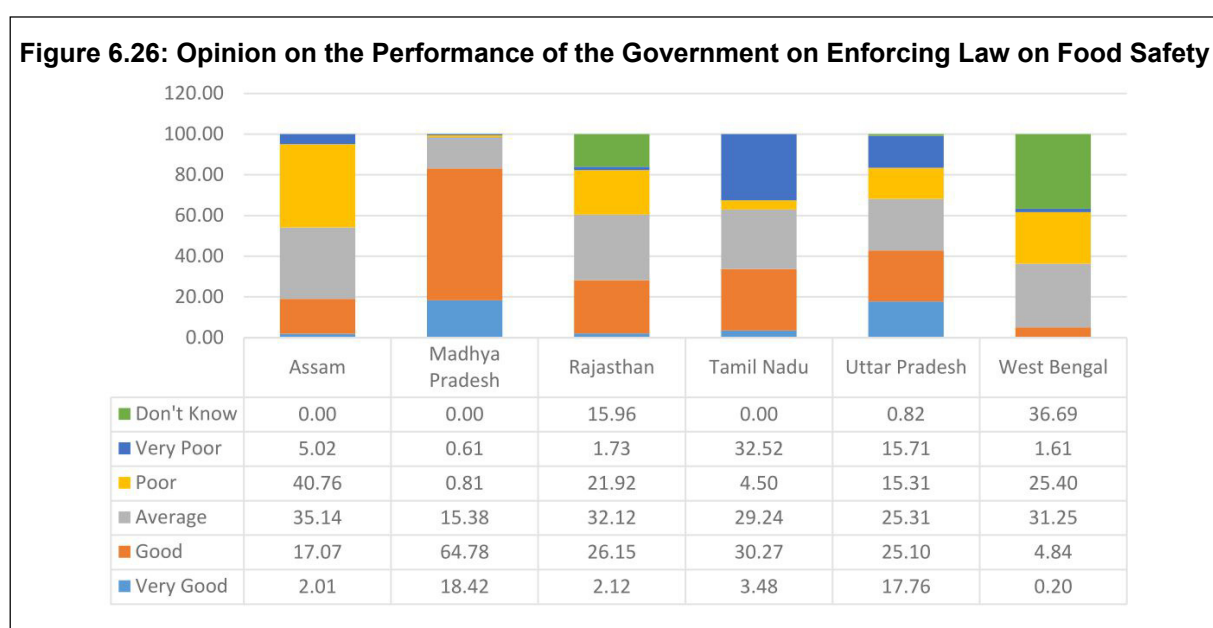
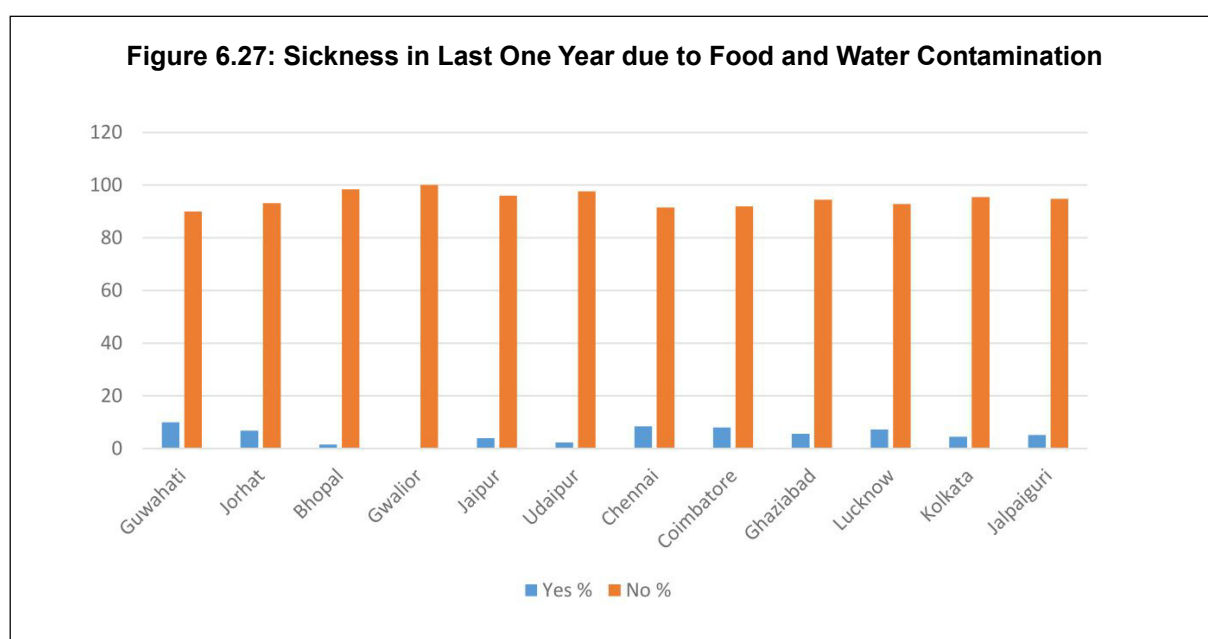


Table 6.12: State-wise Performance of the Government – Law Enforcement								
State	District	Total	Very Good %	Good %	Average %	Poor %	Very Poor %	Don't know %
Assam	Guwahati	500	4.50	44.50	100.00	37.50	13.50	0.00
	Jorhat		0.40	7.20	27.60	64.40	0.40	0.00
Madhya Pradesh	Bhopal	496	1.20	88.00	8.80	1.60	0.40	0.00
	Gwalior		36.18	40.65	22.36	0.00	0.81	0.00
Rajasthan	Jaipur	530	4.04	54.24	62.87	42.85	3.81	32.18
	Udaipur		0.00	0.00	100.00	0.00	0.00	0.00
Tamil Nadu	Chennai	498	5.65	43.15	21.77	3.63	25.81	0.00
	Coimbatore		1.50	33.00	74.50	9.50	81.50	0.00
Uttar Pradesh	Ghaziabad	501	0.40	5.98	40.24	24.30	27.89	1.20
	Lucknow		36.00	44.80	9.20	5.60	2.80	0.40
West Bengal	Kolkata	500	0.00	8.90	70.68	44.27	5.37	70.78
	Jalpaiguri		0.40	4.80	30.80	23.60	1.20	39.20
Total		3025	7.34	27.93	28.13	18.08	9.49	8.93

Consumers under ‘very good’ gave lesser responses however under ‘good’ more responses were captured in Madhya Pradesh (64.78 percent), Rajasthan (26.15 percent), Tamil Nadu (30.27 percent) and Uttar Pradesh (25.10 percent). On an average, higher responses received on ‘average’ from all states namely Assam (35.14 percent), Rajasthan (32.12 percent), Tamil Nadu (29.24 percent), Uttar Pradesh (25.31 percent) and West Bengal (31.25 percent). Highest percentage of consumers from Tamil Nadu (32.52 percent) said the government’s performance is ‘very poor’ when it comes to enforcing law on food safety.

Sickness due to consumption of contaminated water/food

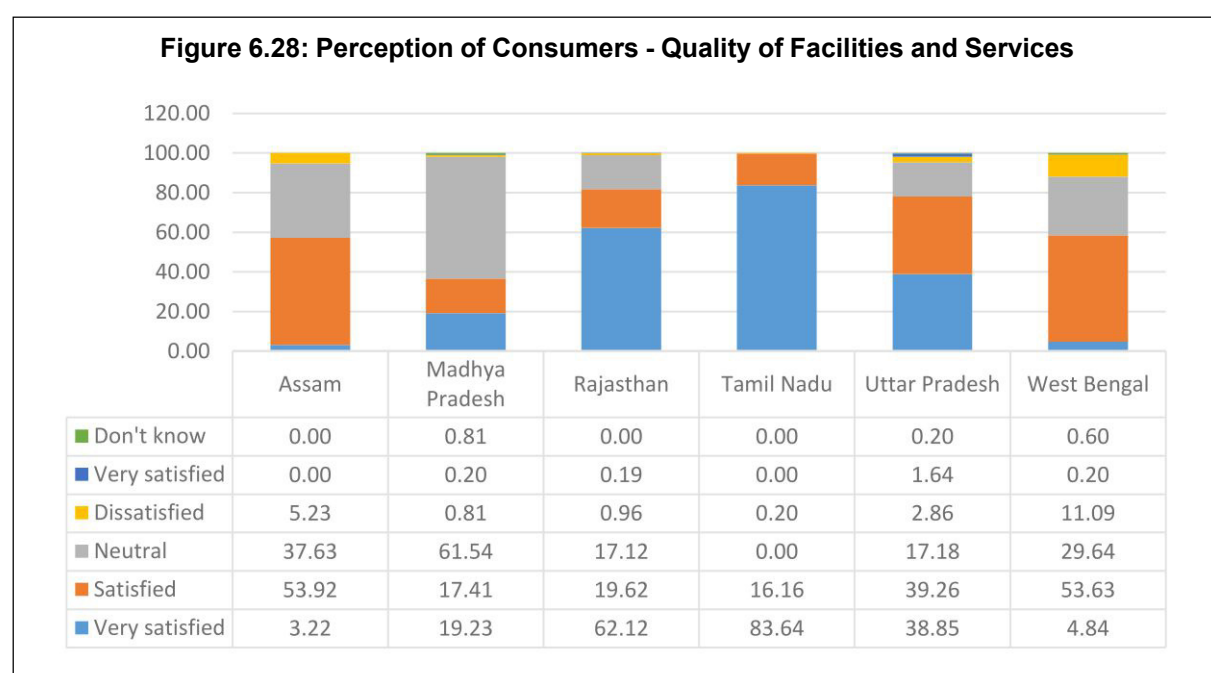


Consumers were asked about instances when they had fallen sick due to consumption of contaminated food or water in the last one year. Response against ‘yes’ was very low yet in states like Assam and Tamil Nadu more than five percent agreed on having experienced sickness due to consumption of contaminated food/water. However, a significant proportion of consumers said ‘having never experienced’ sickness due to bad food or water.

Health (Hospital and Medicine): Consumer Perception

The health section has been divided into two groups: food and water which have been clubbed together and hospital and medicine forms the second group. Under this section, the discussion will revolve around the medical facilities and infrastructure related questions. Perception of consumers on the available health related facilities have been captured and analysed.

Quality of Services and Facilities



Consumers from Tamil Nadu (83.64 percent) and Rajasthan (62.12 percent) have responded ‘very satisfied’ under quality of facilities and services. 53.92 percent from Assam and 53.63 percent from West Bengal said they are ‘satisfied’ with the quality of facilities and services. Views were found to be ‘neutral’ in Assam (37.63 percent) and Madhya Pradesh (61.54 percent). For remaining perception levels, there were not much varied responses recorded from consumer’s end.

Consumers from Rajasthan (78.08 percent), Tamil Nadu (79.35 percent) and Uttar Pradesh (61.63 percent) have responded ‘very satisfied’ for the quality of medicines supplied. Highest response against ‘satisfied’ was recorded from Assam (67.87 percent), Madhya Pradesh (47.57 percent) and West Bengal (74.55 percent). Assam and Madhya Pradesh responded higher on ‘neutral’ in comparison to other states with 20.28 percent and 31.98 percent respectively.

Figure 6.29: Perception of Consumers - Quality of Medicines Supplied

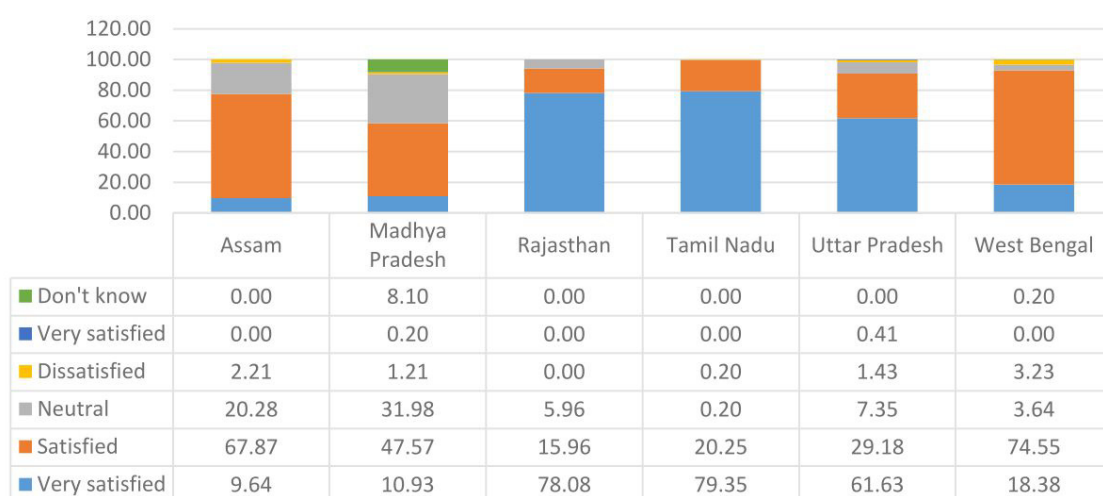
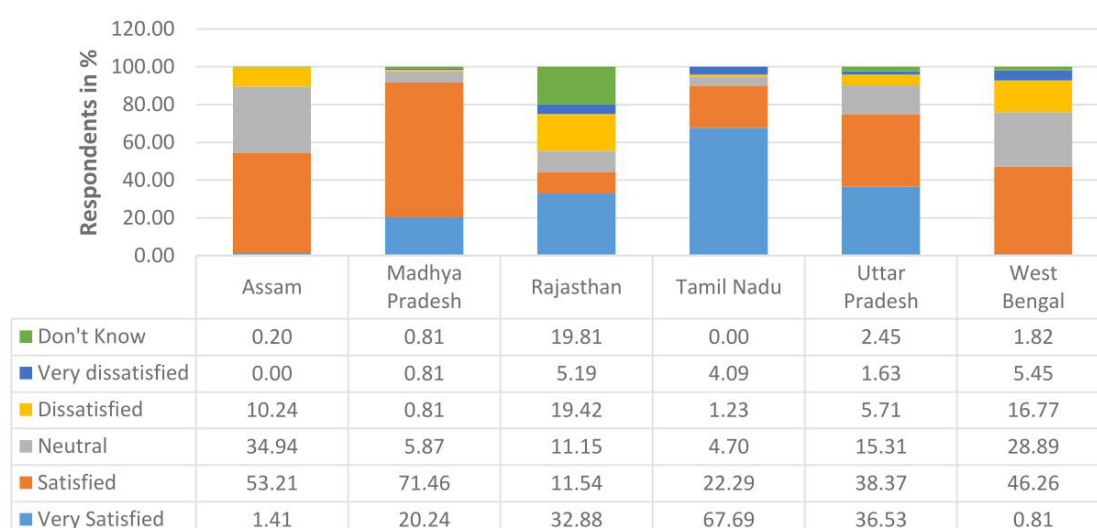


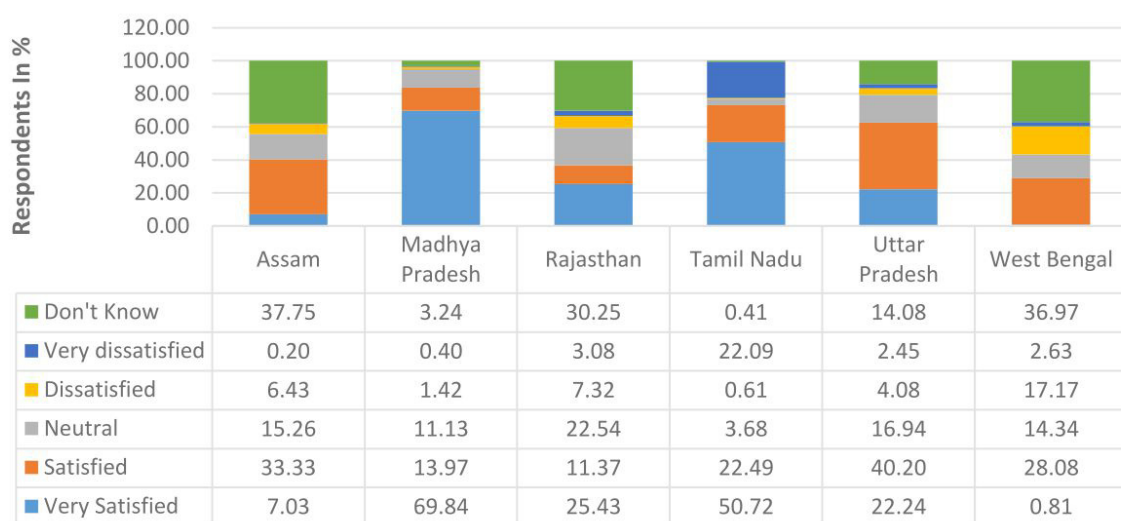
Figure 6.30: Perception of Consumers: Hospital Response on Emergency



Understanding on response in case of emergency, drugs availability and infrastructure

Consumers seem more or less satisfied with the response of the hospitals in case of emergencies. All responses under 'dissatisfied' and 'very dissatisfied' are less than 20 percent. 53.21 percent in Assam said they are satisfied with the response. Similarly, 71.46 percent from Madhya Pradesh, 38.37 percent from Uttar Pradesh and 46.26 percent from West Bengal answered 'satisfied'. 32.88 percent from Rajasthan, 67.69 percent in Tamil Nadu and 36.53 percent from Uttar Pradesh expressed they are 'very satisfied' with the emergency response.

Figure 6.31: Perception of Consumers: Maintenance and Safety of Operation Table



Questions related to the maintenance and safety at hospitals were asked in response to which 69.84 percent consumers from Madhya Pradesh, 25.43 percent from Rajasthan, 50.72 percent from Tamil Nadu and 22.24 percent from Uttar Pradesh said they are 'very satisfied' with it. Consumers from Assam (33.33 percent), Tamil Nadu (22.49 percent), Uttar Pradesh (40.20 percent) and West Bengal (28.08 percent) said they are 'satisfied' with the maintenance and safety issues at hospitals. A large portion of consumers seemed unaware of the situation. Except Tamil Nadu with 22.09 percent saying 'very dissatisfied', no other State shared any negative feedback.

Figure 6.32: State-wise Knowledge of Staff for Side Effects in Drug Store

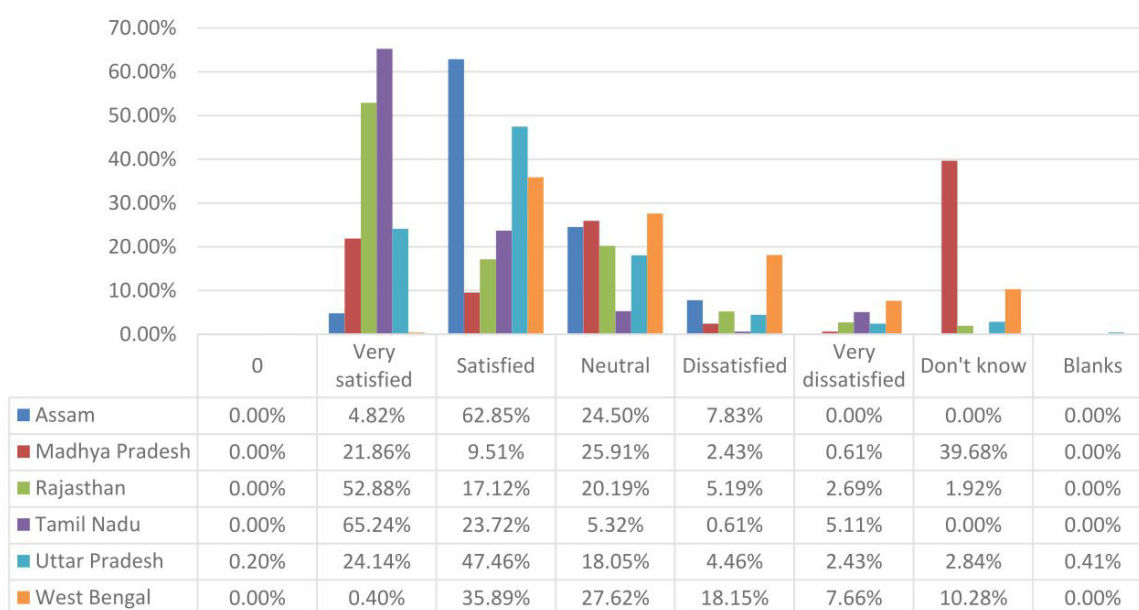
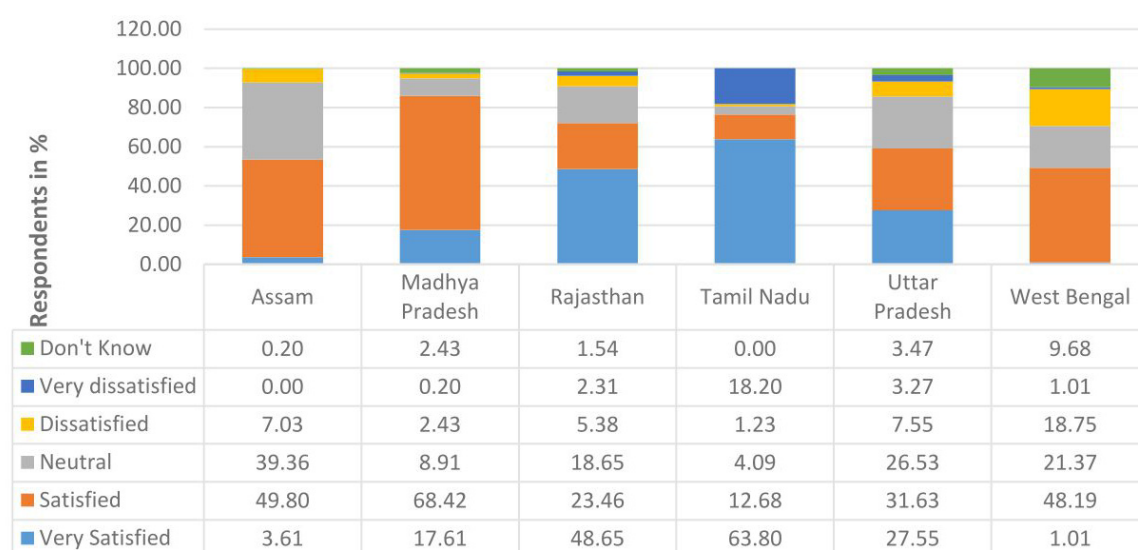
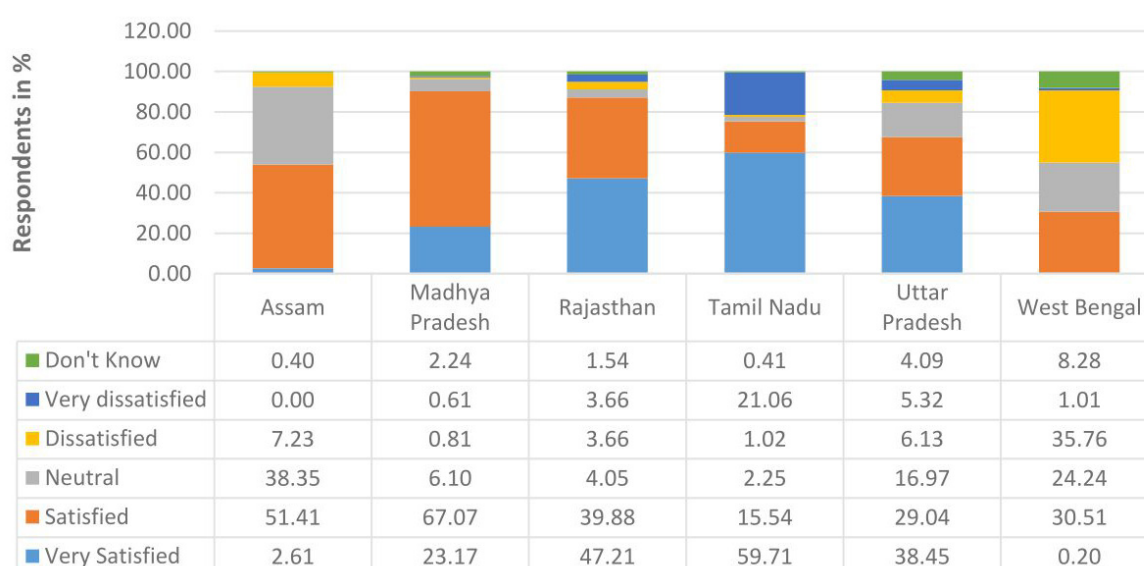


Figure 6.33: State-wise Maintenance of Outlet/Store Dealing with Medicines

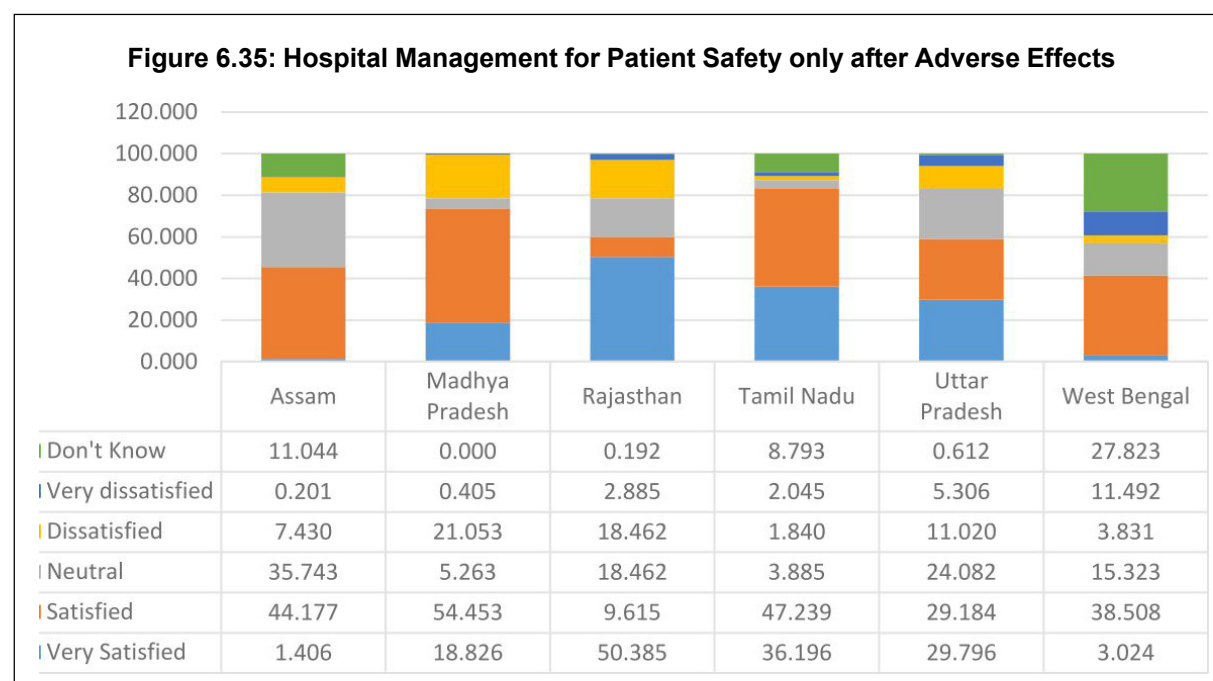


Consumers were asked to share their views on the understanding of the drug store staff on the side effects. Proportionately higher response were given by consumers on 'satisfied' and 'very satisfied' except in Madhya Pradesh where the highest percentage of response was recorded against 'don't know' to be 39.68 percent. Assam 62.85 percent, Rajasthan 17.12 percent, Tamil Nadu 23.72 percent, Uttar Pradesh 47.46 percent and West Bengal 35.89 percent answered 'satisfied'. In Madhya Pradesh 21.86 percent, Rajasthan 52.88 percent, Tamil Nadu 65.24 percent and Uttar Pradesh 24.14 percent of consumers responded 'very satisfied'.

Figure 6.34: State-wise Availability of Life Saving Drugs



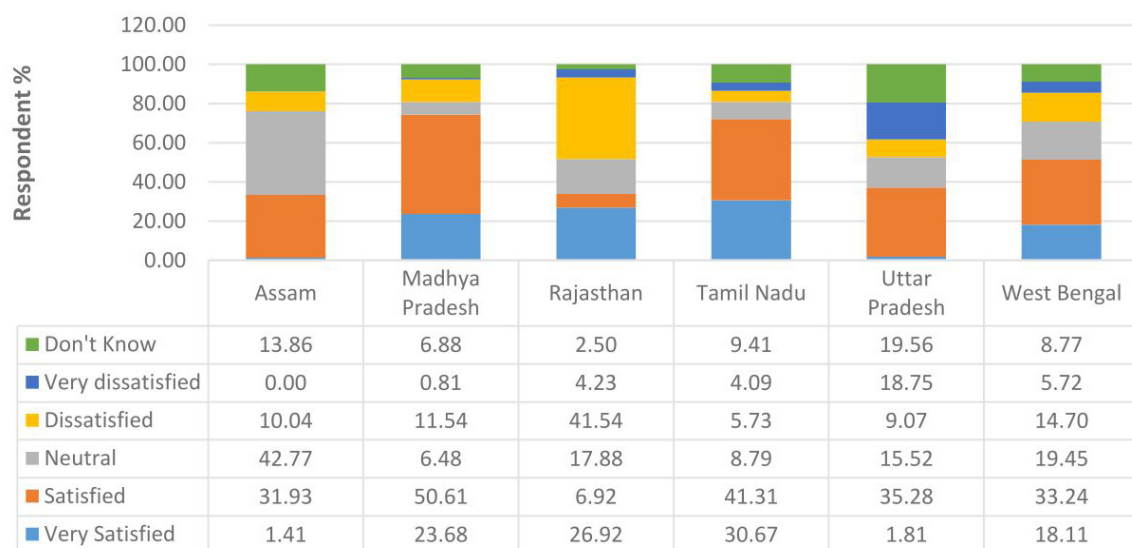
Questions were asked related to maintenance of outlet/store that deal with medicines to which in Rajasthan (48.65 percent), Tamil Nadu (63.80 percent) and Uttar Pradesh (27.55 percent) consumers answered 'very satisfied'. In Assam (49.80 percent), Madhya Pradesh (68.42 percent), Rajasthan (23.46 percent), Uttar Pradesh (31.63 percent) and West Bengal (48.19 percent) of consumers were 'satisfied'. Almost 39.36 percent of consumers in Assam and 26.53 percent in Uttar Pradesh replied as 'neutral'.



The question was asked to assess the availability of life saving drugs. Most of the responses in relation to this question has been under 'very satisfied', 'satisfied' and 'neutral' except West Bengal (35.76 percent) under dissatisfied and Tamil Nadu under 'very dissatisfied' (21.06 percent). 51.41 percent consumers from Assam, 67.07 percent from Madhya Pradesh, 39.88 percent from Rajasthan, 29.04 percent from Uttar Pradesh and 30.51 percent from West Bengal shared they are 'satisfied' with the availability of life-saving drugs. Rajasthan (47.21 percent), Tamil Nadu (59.71 percent) and Uttar Pradesh (38.35 percent) said that they were 'very satisfied'.

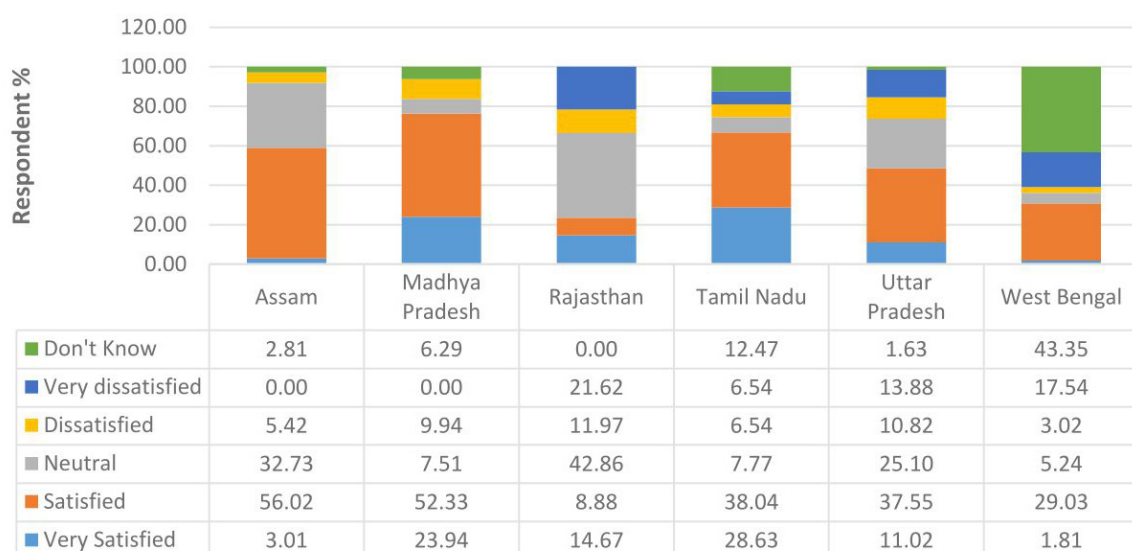
Consumers were asked about their perception on the response of the hospital management for patient safety after adverse effects. 50.38 percent Rajasthan, 36.19 percent from Tamil Nadu and 29.79 percent from Uttar Pradesh consumers said they were 'very satisfied'. From Assam (44.17 percent), Madhya Pradesh (54.45 percent), Tamil Nadu (47.23 percent), Uttar Pradesh (29.18 percent) and West Bengal (38.50 percent) consumers were 'satisfied'. 35.74 percent in Assam and 24.08 percent in Uttar Pradesh said 'neutral' to the response of hospital management in case of patient safety.

Figure 6.36: Good Hospital Service Reserved for Upper Middle Class

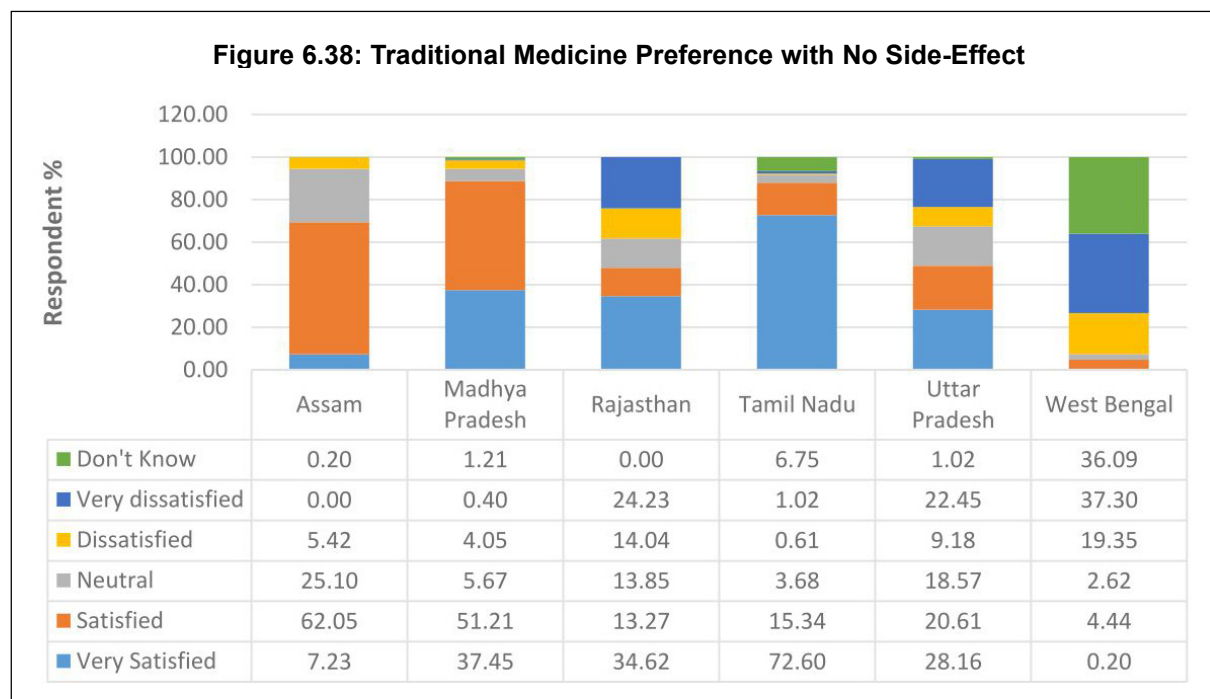


About 23.68 percent consumers in Madhya Pradesh, 26.92 percent in Rajasthan and 30.67 percent in Tamil Nadu answered 'very satisfied' to the question on good hospital service reserved for upper middle class. Assam (31.93 percent), Madhya Pradesh (23.68 percent), Rajasthan (26.92 percent) and Tamil Nadu (30.67 percent) said 'satisfied'. Only from Assam 42.77 percent consumers responded stating 'neutral'. 41.54 percent consumers from Rajasthan responded as 'dissatisfied' with good hospital service reserved for upper middle class.

Figure 6.37: Common Side Effects of Drugs Prescribed



When asked on common side effects of prescribed drugs, consumers from Madhya Pradesh (23.94 percent) and Tamil Nadu (28.63 percent) said 'very satisfied'. 56.02 percent from Assam, 52.33 percent from Madhya Pradesh, 38.04 percent from Tamil Nadu, 37.55 percent from Uttar Pradesh and 29.03 percent from West Bengal said they are 'satisfied' with drugs prescribed to them. Only in Rajasthan, 21.62 percent of consumers responded 'very dissatisfied' with the prescribed drugs.



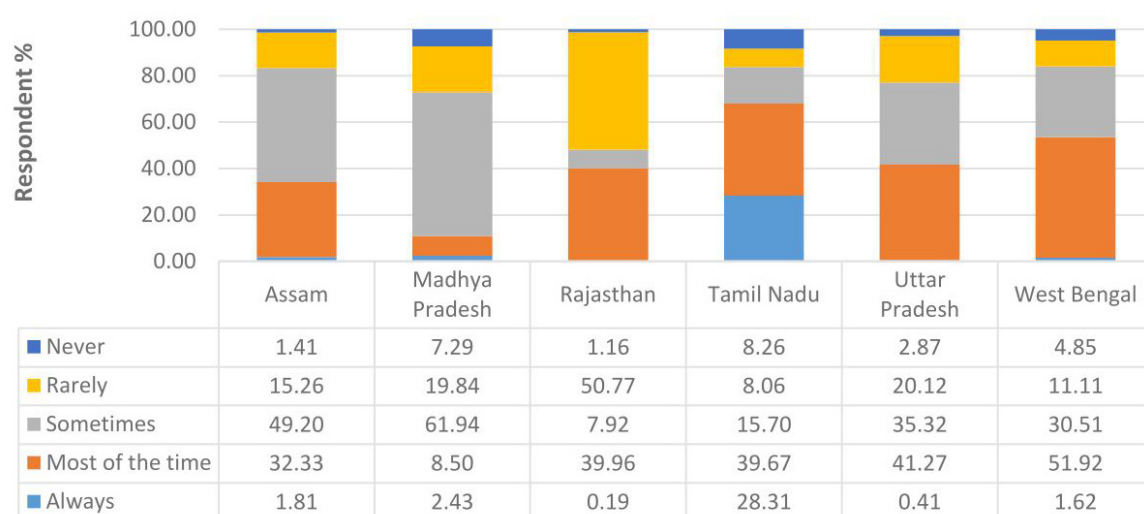
A mixed response was recorded in relation to the preference to traditional medicine with no side-effects. Traditional medicine is mostly preferred in Madhya Pradesh (37.45 percent), Rajasthan (34.62 percent) and Tamil Nadu (72.60 percent). In West Bengal, only 0.20 percent of respondents expressed being 'very satisfied' with traditional medicines. 51.21 and 62.05 percent of respondents in Madhya and Assam respectively expressed being 'satisfied' with traditional medicine.

The finding is that consumers are opting for traditional medicines. However, preferences and levels of satisfaction varies from State to State. West Bengal is the only State where majority of respondents, which have answered 'very dissatisfied' are 37.30 percent and 'don't know' are 36.09 percent respectively.

Safety concerns in hospitals

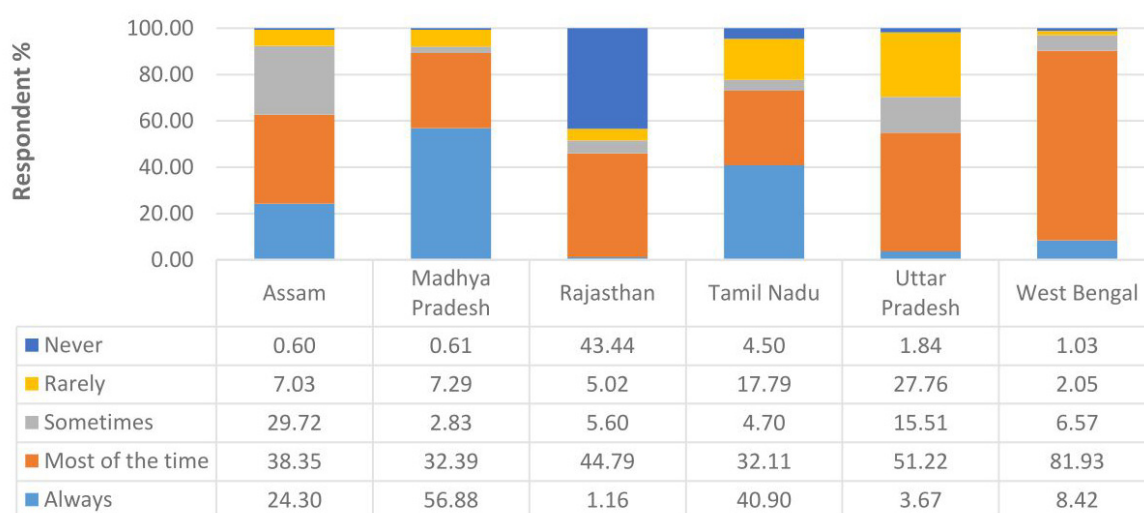
In this section consumers were asked to share their experiences while using a health infrastructure: both government and private. The responses of consumers have been recorded. The focus of the discussion was on the feeling of safety in these set-ups.

Figure 6.39: State-wise Feeling of Safety on visiting Government Hospital

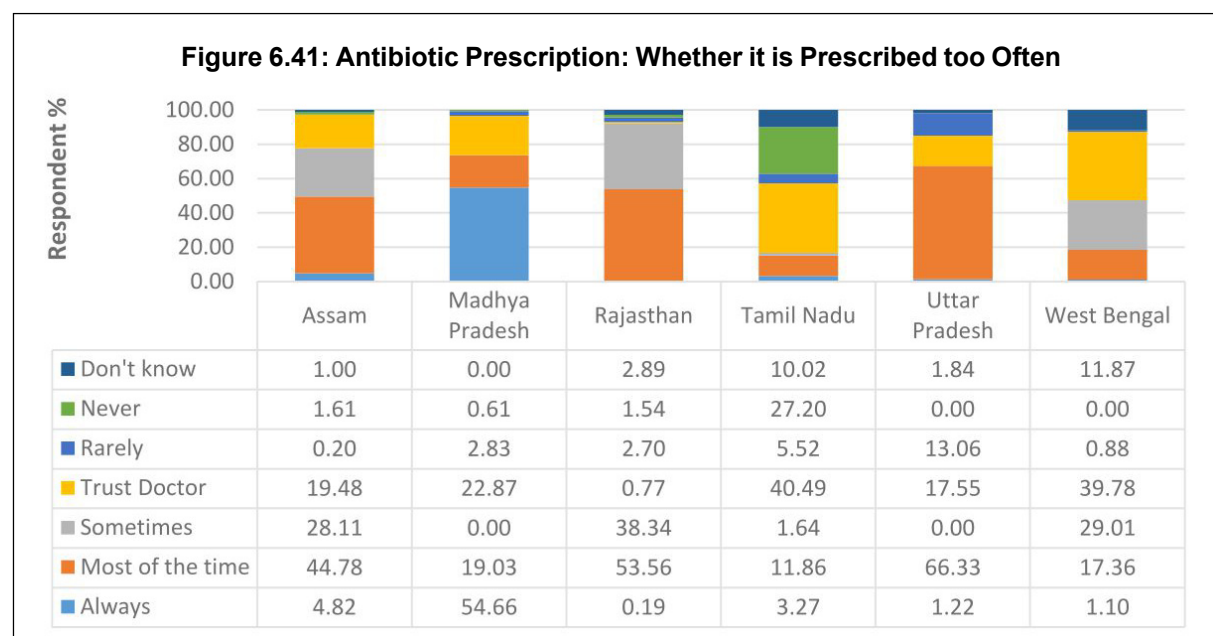


More respondents answered ‘most of the time’ and ‘sometimes’ when asked about feeling safe when visiting government hospitals. Assam (49.20 percent), Madhya Pradesh (61.94 percent), Uttar Pradesh (35.32 percent) and West Bengal (30.51 percent) said they ‘sometimes’ felt safe while visiting government hospitals. ‘For most of the time’ was answered by 32.33 percent in Assam, 39.96 percent in Rajasthan, 39.67 percent in Tamil Nadu, 41.27 percent in Uttar Pradesh and 51.92 percent in West Bengal.

Figure 6.40: State-wise Perception of Safety on visiting Private Hospital



Except in case of Rajasthan, Uttar Pradesh and West Bengal where only 1.16 percent, 3.67 percent and 8.42 percent of the respondents said they ‘always’ opt for private hospitals, nearly 43.44 percent in Rajasthan shared that they have ‘never’ opted for private hospitals. Majority of the responses can be categorised under ‘most of the time’: Assam (38.35 percent), Madhya Pradesh (56.88 percent), Rajasthan (44.79 percent), Tamil Nadu (31.11 percent), Uttar Pradesh (51.22 percent) and West Bengal (81.93 percent).



In Assam, 44.78 percent of respondents shared they agreed to antibiotic prescription ‘most of the time’, 28.11 percent of respondents said ‘sometimes’ and 19.48 percent said they ‘trust the doctor’. Only 4.82 percent of respondents in Assam said they ‘always’ opted for antibiotic prescription. In Madhya Pradesh 54.66 percent of respondents said they ‘always’ took antibiotic prescriptions. This was followed by 66.33 percent and 53.56 percent in Uttar Pradesh and Rajasthan respectively in regard to ‘most of the time’ opting for antibiotic prescription. 38.34 percent in Rajasthan said ‘sometimes’ in response to antibiotic prescription.

Table 6.13: Perception of Safety on visiting Private Hospital						
State	Always %	Most of the time %	Sometimes %	Rarely %	Never %	Total
Assam	24.30	38.35	29.72	7.03	0.60	498
Guwahati	6.85	56.45	32.66	4.03	0.00	248
Jorhat	41.60	20.40	26.80	10.00	1.20	250
Madhya Pradesh	56.88	32.39	2.83	7.29	0.61	494
Bhopal	78.40	0.80	5.20	14.40	1.20	250
Gwalior	34.84	64.75	0.41	0.00	0.00	244
Rajasthan	1.16	44.79	5.60	5.02	43.44	518
Jaipur	0.00	6.34	9.33	1.87	82.46	268
Udaipur	2.40	86.00	1.60	8.40	1.60	250
Tamil Nadu	40.90	32.11	4.70	17.79	4.50	489
Chennai	31.98	25.10	5.26	32.39	5.26	247
Coimbatore	50.00	39.26	4.13	2.89	3.72	242
Uttar Pradesh	3.67	51.22	15.51	27.76	1.84	490
Ghaziabad	3.59	33.07	27.89	31.87	3.59	251
Lucknow	3.77	70.29	2.51	23.43	0.00	239
West Bengal	8.42	81.93	6.57	2.05	1.03	487
Jalpaiguri	7.14	81.51	7.98	3.36	0.00	238
Kolkata	9.64	82.33	5.22	0.80	2.01	249
Total	22.41	46.71	10.82	11.09	8.97	2976

Health: Service Providers

All service providers were aware of Bureau of Indian Standards (BIS) for selling medicines. All the service providers agreed that the consumer safety of medicines should be top priority.

Safety standards in place *vis-à-vis* Hospitals and Medicines

Service providers were asked about their role in monitoring and supervising the medical stores to which 100 percent from Assam answered 'agreed'. 50 percent from Madhya Pradesh 'strongly agreed' while remaining 50 percent 'disagreed'. In both Rajasthan and Uttar Pradesh 33.33 percent 'strongly agreed' and 66.67 percent 'agreed'. In Tamil Nadu, the response was distributed across three options with 33.33 percent.

Table 6.14: Medicine Store Monitored and Supervised for Quality Check by Health Department				
State	Strongly agree %	Agree %	Disagree %	Total
Assam	0.00	100.00	0.00	1
Guwahati	0.00	100.00	0.00	1
Jorhat	0.00	0.00	0.00	0
Madhya Pradesh	50.00	0.00	50.00	2
Bhopal	0.00	0.00	100.00	1
Gwalior	100.00	0.00	0.00	1
Rajasthan	33.33	66.67	0.00	3
Jaipur	0.00	100.00	0.00	1
Udaipur	50.00	50.00	0.00	2
Tamil Nadu	33.33	33.33	33.33	3
Chennai	0.00	100.00	0.00	1
Coimbatore	50.00	0.00	50.00	2
Uttar Pradesh	33.33	66.67	0.00	3
Ghaziabad	100.00	0.00	0.00	1
Lucknow	0.00	100.00	0.00	2
West Bengal	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0
Total	33.33	50.00	16.67	12

Table 6.15: Periodic Training of Staff for Supply and Storing of Medicines					
State	Strongly agree %	Agree %	Neutral %	Disagree %	Total
Assam	0.00	100.00	0.00	0.00	1
Guwahati	0.00	100.00	0.00	0.00	1
Jorhat	0.00	0.00	0.00	0.00	0
Madhya Pradesh	100.00	0.00	0.00	0.00	2
Bhopal	100.00	0.00	0.00	0.00	1
Gwalior	100.00	0.00	0.00	0.00	1
Rajasthan	66.67	33.33	0.00	0.00	3
Jaipur	100.00	0.00	0.00	0.00	1
Udaipur	50.00	50.00	0.00	0.00	2
Tamil Nadu	33.33	0.00	33.33	33.33	3
Chennai	0.00	0.00	0.00	100.00	1
Coimbatore	50.00	0.00	50.00	0.00	2
Uttar Pradesh	100.00	0.00	0.00	0.00	3
Ghaziabad	100.00	0.00	0.00	0.00	1
Lucknow	100.00	0.00	0.00	0.00	2
West Bengal	0.00	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0.00	0
Total	66.67	16.67	8.33	8.33	12

The service providers were then inquired about the periodic training of staff for supply and storing of medicines. In Assam 100 percent 'agreed', while from Madhya Pradesh and Uttar Pradesh 100 percent of service providers 'strongly agreed'. From Rajasthan 66.67 percent service providers 'strongly agreed' while 33.33 percent 'agreed'. In Tamil Nadu 33.33 percent 'strongly agreed', 33.33 percent 'neutral' and 33.33 percent said 'disagreed'.

Table 6.16: Cash Memo provided with Medicines Purchased				
State	Strongly agree %	Agree %	Neutral %	Total
Assam	0.00	100.00	0.00	1
Guwahati	0.00	100.00	0.00	1
Jorhat	0.00	0.00	0.00	0
Madhya Pradesh	50.00	0.00	50.00	2
Bhopal	0.00	0.00	100.00	1
Gwalior	100.00	0.00	0.00	1
Rajasthan	66.67	33.33	0.00	3
Jaipur	0.00	100.00	0.00	1
Udaipur	100.00	0.00	0.00	2
Tamil Nadu	33.33	0.00	66.67	3
Chennai	100.00	0.00	0.00	1
Coimbatore	0.00	0.00	100.00	2
Uttar Pradesh	100.00	0.00	0.00	3
Ghaziabad	100.00	0.00	0.00	1
Lucknow	100.00	0.00	0.00	2
West Bengal	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0
Total	58.33	16.67	25.00	12

Service providers were asked if a cash memo is provided at the time of medicine purchase; 100 percent from Assam and 33.33 percent from Rajasthan 'agreed'. 50 percent in Madhya Pradesh, 66.67 percent from Rajasthan, 33.33 percent from Tamil Nadu and 100 percent from Uttar Pradesh 'strongly agreed', whereas 50 percent from Madhya Pradesh and 66.67 percent from Tamil Nadu responded as 'neutral'.

Table 6.17: Occasional Receipt of Spurious or Expired Medicines					
State	Strongly agree %	Agree %	Neutral %	Disagree %	Total
Assam	0.00	100.00	0.00	0.00	1
Guwahati	0.00	100.00	0.00	0.00	1
Jorhat	0.00	0.00	0.00	0.00	0
Madhya Pradesh	50.00	0.00	50.00	0.00	2
Bhopal	0.00	0.00	100.00	0.00	1
Gwalior	100.00	0.00	0.00	0.00	1
Rajasthan	0.00	0.00	0.00	100.00	3
Jaipur	0.00	0.00	0.00	100.00	1
Udaipur	0.00	0.00	0.00	100.00	2
Tamil Nadu	0.00	0.00	0.00	100.00	3
Chennai	0.00	0.00	0.00	100.00	1
Coimbatore	0.00	0.00	0.00	100.00	2
Uttar Pradesh	66.67	0.00	33.33	0.00	3
Ghaziabad	0.00	0.00	100.00	0.00	1
Lucknow	100.00	0.00	0.00	0.00	2
West Bengal	0.00	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0.00	0
Total	25.00	8.33	16.67	50.00	12

In Assam 100 percent 'agreed' to having occasionally handed over a spurious or expired medicines. 50 percent in Madhya Pradesh, 66.67 percent in Uttar Pradesh 'strongly agreed'. 100 percent from Tamil Nadu and Rajasthan 'disagreed' on handing over of spurious or expired medicines.

Health: Findings from Interview with Officials

The officials serving the respective departments were interviewed. The questions were related to administrative procedures, consumer relations like grievance/complaints and awareness generation.

Policies

When asked about design and implementation policies of building in relation to consumer safety, the interviewed officials informed that all precaution is taken before hand when patient checks into the hospital at the time of visit and operation. There is a back-up plan ready for making same blood group available in case of emergency. The relatives of the patients are also kept in loop.

Rules and regulations

Officials were also asked about rules and regulations specified for providing sector services to consumers while addressing safety issues. They responded that if till now any such serious concern has come to surface it is due to the ignorance of the consumer. The department from its end tries the best to avoid any such safety concerns from arising. There is a regular inspection of food products by the department.

Consumer concerns and satisfaction

Officials were asked about the primary issues raised by consumers. They do not receive any complaints from them. Consumers behave in civil manner with officials. Some ignorant consumers get into arguments sometimes.

Initially, there were only three food inspection officers in the department. However, to reach out to more and more number of consumers the department has now expanded to 12 officers. Very soon the department will have 21 food officers. This effort has been initiated more with intent to augment patient care services and provide best services.

Bhama Shah Swasthya Bima Yojana launched in 2015 in Rajasthan is indeed doing well and ensuring best coverage of patients in terms of healthcare as well as patient safety.

The above Health Insurance Scheme is a Budget Declaration for the year 2014-15. The scheme was visualised in order to provide quality healthcare to all National Food Security Scheme (NFSS) families and also to reduce the workload on government health institutions. Moreover, benefits like hassle free cash less treatment, improved quality of care with efficiency etc., are also envisaged. The basic aim of the scheme is improvement in health indicators; however, some other expectations are:

- reduction in ‘out of pocket’ expenses and providing financial security to the poor against illnesses;
- hedge the financial risk of excess expenditure on healthcare by using insurance as a tool;
- successfully roll out government’s vision of *maximum governance and minimum government*;
- create a wide health database, which may be used in making policy level changes/decisions in future; and
- bring a revolution in healthcare in rural areas – by providing stimulus to private sector to open hospitals in rural areas and reducing the increasing burden on government facilities.

Beneficiaries

- The scheme envisages benefits for the NFSS beneficiaries and *Rashtriya Swasthya Bima Yojana* (RSBY) beneficiaries (as RSBY is proposed to be taken over by Health Department from October 15).
- Implementation of the scheme shall be done through Bhamashah Cards, but till the time *Bhamashah* cards are issued, identity related to NFSS and RSBY shall also be honoured.

Cover

- Health Insurance Cover of ₹30,000 for general illnesses and ₹3 lakh for critical illnesses shall be given to a family on floater basis in one year for IPD procedures
- 7-day pre-hospitalisation and 15 days post hospitalisation
- Transport allowance of ₹100-500 for cardiac and polytrauma cases
- Patients shall be benefitted for 1045 packages under general illnesses, 500 packages under critical illnesses, and 170 packages reserved for government hospitals

Awareness generation among consumers

Patients were communicated the ways of leading a healthy and safe lifestyle. The effort is to help every consumer in order to lead a healthy life. In case of any epidemic, advertisements are printed for awareness generation among consumers.

Box 6.1: Case Study of Health in Food

In one of the famous restaurants of Lucknow, consumers were served food from the unhygienic kitchen, which could affect their health. Service was too slow, as waiters were untrained. Vehicular pollution right at the kitchen was also noticed with abundance of dust. Moreover, the kitchen was on the road side. Dustbins were placed right besides eating table. The conclusion is the staff concerned for serving and hygiene takes back seat.

Box 6.2: Case Study of Health in Hospital

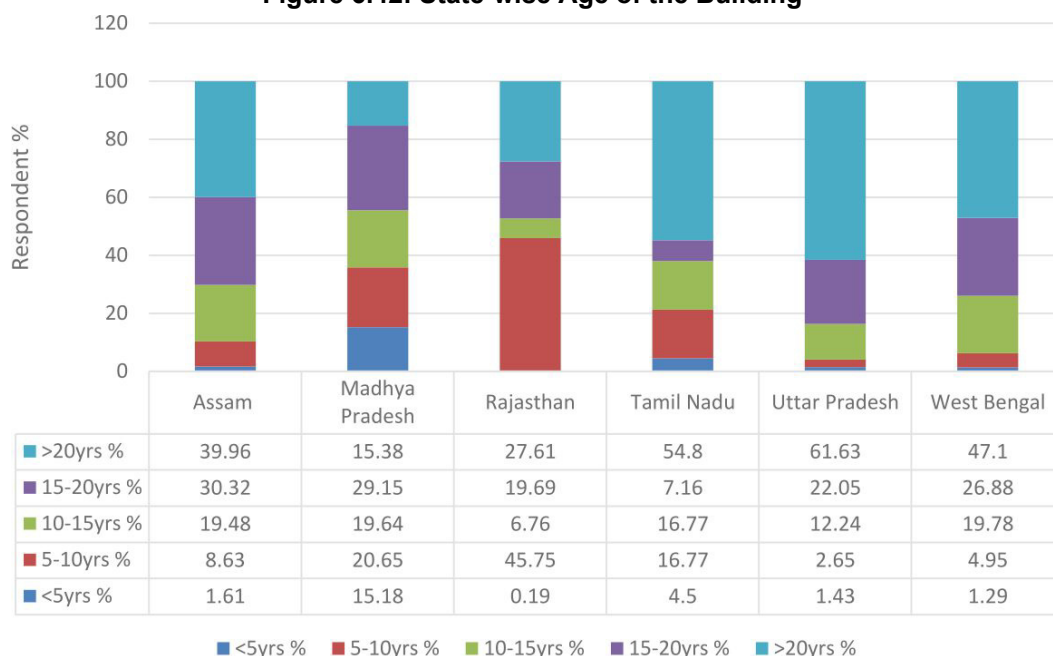
One of the leading government hospitals of Kolkata was overcrowded in waiting and emergency areas and as a result, safety/comfort of patients being compromised. Patients in case of emergency were taken on a stretcher inside a lift, which was also over-crowded. It was also seen that attendants were taking patients to concerned departments/doctors in the absence of hospital staff. Thus, overcrowding was leading to lack of space for attendants.

7. Housing: Perception of Consumer and Service Providers

In housing sector, queries related to safety standards focussed largely in relation to fire safety, earthquake resistance and preparedness and the effective use and maintenance of lifts in buildings.

Safety Standards in Buildings

Figure 6.42: State-wise Age of the Building

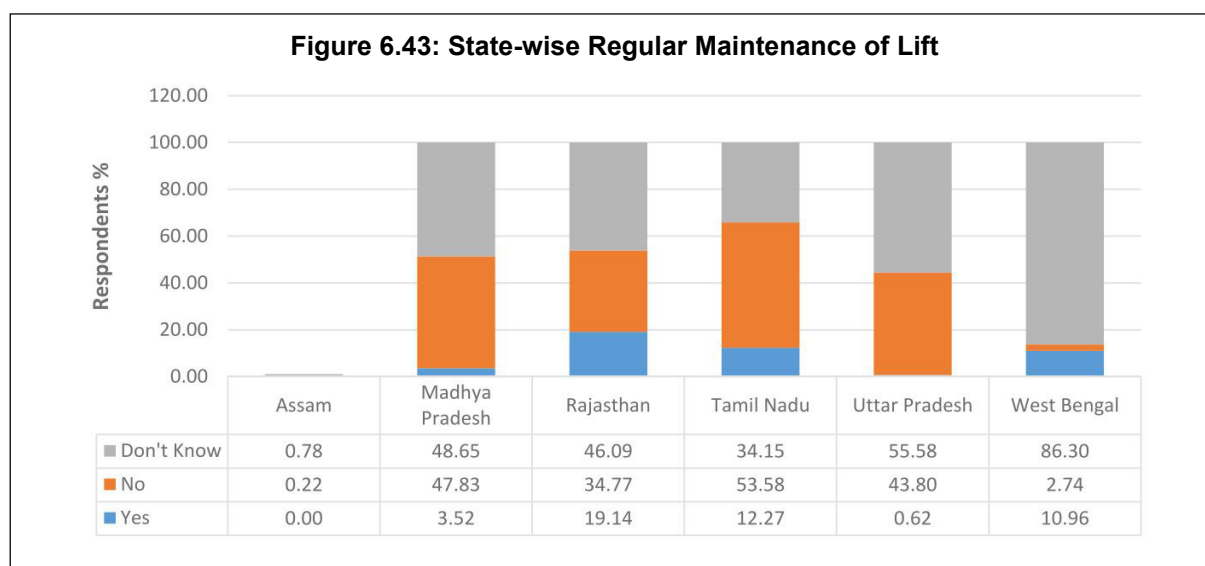


Under the section of housing, respondents were asked about the age of the building. Larger percentage of respondents from four states namely Assam, Madhya Pradesh, Tamil Nadu, Uttar Pradesh and West Bengal reported the building to be more than 10 years old. In Rajasthan, 45.75 percent of respondents shared that the building was in the range of 5-10 years old. In Uttar Pradesh 61.63 percent, Tamil Nadu 54.81 percent, West Bengal 47.10 percent and 39.96 percent of respondents in Assam informed that the building was more than 20 years old. Except Madhya Pradesh with 15.18 percent of building less than 5 years old, rest all four states have reported less than 5 percent of the buildings under 5 years old.

Table 6.18: State-wise Age of House

State	<5yrs %	5-10yrs %	10-15yrs %	15-20yrs %	>20yrs %	Total
Guwahati	0.81	11.29	35.08	46.77	6.05	248
Jorhat	2.40	6.00	4.00	14.00	73.60	250
Bhopal	0.40	13.60	37.20	19.60	29.20	250
Gwalior	12.5	18.5	29.39	38.93	1.68	244
Jaipur	9.2	15.9	28.4	29.5	17	269
Udaipur	0.40	7.63	10.84	24.50	56.63	249
Chennai	1.21	18.22	8.50	0.81	71.26	247
Coimbatore	3.5	15.25	29.24	14.01	38	242
Ghaziabad	2.79	5.18	23.90	39.84	28.29	251
Lucknow	0.00	0.00	0.00	3.35	96.65	239
Jalpaiguri	2.75	9.17	32.57	36.70	18.81	218
Kolkata	0.00	1.21	8.50	18.22	72.06	247
Total	4.03	16.93	15.67	22.51	40.86	2954

Figure 6.43: State-wise Regular Maintenance of Lift



There were negligible responses received from Assam in relation to 'regular maintenance of lift. In other states, majority of responses included 'no' and 'don't know' in relation to regular maintenance of the lift. In West Bengal, 86.30 percent of respondents did not have information regarding the maintenance of the lift, followed by 55.58 percent in Uttar Pradesh, 48.65 percent in Madhya Pradesh and 46.09 percent in Rajasthan. This is an important aspect to be worried about since a consumer should be aware of the maintenance of lifts installed in his/her building.

Housing: Views of Service Providers

Steps taken to ensure safety

Table 6.19: Regular Inspection after Construction			
State	Yes %	No %	Total
Assam	100.00	0.00	1
Guwahati	100.00	0.00	1
Madhya Pradesh	100.00	0.00	4
Bhopal	100.00	0.00	2
Gwalior	100.00	0.00	2
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Tamil Nadu	100.00	0.00	1
Chennai	100.00	0.00	1
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
West Bengal	0.00	100.00	2
Jalpaiguri	0.00	100.00	1
Kolkata	0.00	100.00	1
Total	80.00	20.00	10

Note: Sample for Lift Service providers from four districts namely Jorhat (Assam), Udaipur (Rajasthan), Coimbatore (Tamil Nadu) and Lucknow (Uttar Pradesh) not covered.

Service providers follow regular safety inspection during construction in all other states except West Bengal.

Reviews and Assessments

Table 6.20: Frequent Safety Meetings			
State	Yes %	No %	Total
Assam	0.00	100.00	1
Guwahati	0.00	100.00	1
Madhya Pradesh	100.00	0.00	4
Bhopal	100.00	0.00	2
Gwalior	100.00	0.00	2
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Tamil Nadu	100.00	0.00	1
Chennai	100.00	0.00	1
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
West Bengal	50.00	50.00	2
Jalpaiguri	0.00	100.00	1
Kolkata	100.00	0.00	1
Total	80.00	20.00	10

Table 6.21: Rating on Builders/Contractor's Work			
State	Excellent %	Good %	Total
Assam	100.00	0.00	1
Guwahati	100.00	0.00	1
Madhya Pradesh	100.00	0.00	4
Bhopal	100.00	0.00	2
Gwalior	100.00	0.00	2
Rajasthan	0.00	100.00	1
Jaipur	0.00	100.00	1
Tamil Nadu	100.00	0.00	1
Chennai	100.00	0.00	1
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
West Bengal	0.00	100.00	2
Jalpaiguri	0.00	100.00	1
Kolkata	0.00	100.00	1
Total	70.00	30.00	10

All respondents felt it is very important for safety awareness amongst the top management, project managers and employees. They also considered the presence of an adequate number of safety supervisors to be very important.

Service providers were asked about rating of the work done by builders and contractors. Service providers of Assam, Madhya Pradesh, Tamil Nadu and Uttar Pradesh were satisfied with the work done by builders and contractors. They categorised them as excellent. However, service providers in Rajasthan and West Bengal categorised their work as 'good'.

Table 6.22: Report on Poorly Constructed Building in the Past Five Years			
State	None %	1-2 reports %	Total
Assam	100.00	0.00	1
Guwahati	100.00	0.00	1
Madhya Pradesh	75.00	25.00	4
Bhopal	100.00	0.00	2
Gwalior	50.00	50.00	2
Rajasthan	0.00	100.00	1
Jaipur	0.00	100.00	1
Tamil Nadu	100.00	0.00	1
Chennai	100.00	0.00	1
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
West Bengal	50.00	50.00	2
Jalpaiguri	100.00	0.00	1
Kolkata	0.00	100.00	1
Total	70.00	30.00	10

Service providers were asked to share their views regarding any report they received on poor construction of the building in the past five years. In Assam, Tamil Nadu, and Uttar Pradesh they did not receive any such reports in the past five years. In Madhya Pradesh (75 percent) and West Bengal (50 percent), complaints were received against the construction of the building in the past five years. In Madhya Pradesh (25 percent), Rajasthan (100 percent) and West Bengal (50 percent) one or two reports were received on poor construction of buildings.

Safety Provisions in Buildings

The service providers were asked questions related to five-safety provisions in buildings namely water hydrants, emergency exit, regular check, display of exit points and fire alarm. In Guwahati (Assam) 100 percent of respondents agreed that fire alarm was placed in the buildings. In Madhya Pradesh, 25 percent of respondents informed about water hydrants, emergency exists and regular checks. 100 percent respondents from Tamil Nadu (Chennai) and Uttar Pradesh (Ghaziabad) said 'water hydrants' were installed in buildings. 100 percent of respondents in Jaipur (Rajasthan) said that 'display of exit points' was available in buildings. In West Bengal, 50 percent respondents informed about 'water hydrants' and 'regular check'.

Table 6.23: Provision of Fire Safety in Building						
State	Water hydrants %	Emergency exits %	Regular check %	Display of exit points %	Fire alarm %	Total
Assam	0.00	0.00	0.00	0.00	100.00	1
Guwahati	0.00	0.00	0.00	0.00	100.00	1
Madhya Pradesh	25.00	25.00	25.00	0.00	0.00	4
Bhopal	0.00	50.00	0.00	0.00	0.00	2
Gwalior	50.00	0.00	50.00	0.00	0.00	2
Rajasthan	0.00	0.00	0.00	100.00	0.00	1
Jaipur	0.00	0.00	0.00	100.00	0.00	1
Tamil Nadu	100.00	0.00	0.00	0.00	0.00	1
Chennai	100.00	0.00	0.00	0.00	0.00	1
Uttar Pradesh	100.00	0.00	0.00	0.00	0.00	1
Ghaziabad	100.00	0.00	0.00	0.00	0.00	1
West Bengal	50.00	0.00	50.00	0.00	0.00	2
Jalpaiguri	100.00	0.00	0.00	0.00	0.00	1
Kolkata	0.00	0.00	100.00	0.00	0.00	1
Total	40.00	10.00	20.00	10.00	10.00	10

Table 6.24: Provision of Earthquake Safety in Building				
State	Emergency exits %	Mock drill %	Medical/first aid %	Total
Assam	0.00	0.00	100.00	1
Guwahati	0.00	0.00	100.00	1
Madhya Pradesh	75.00	0.00	0.00	4
Bhopal	100.00	0.00	0.00	2
Gwalior	50.00	0.00	50.00	2
Rajasthan	0.00	100.00	0.00	1
Jaipur	0.00	100.00	0.00	1
Tamil Nadu	100.00	0.00	0.00	1
Chennai	100.00	0.00	0.00	1
Uttar Pradesh	100.00	0.00	0.00	1
Ghaziabad	100.00	0.00	0.00	1
West Bengal	100.00	0.00	0.00	2
Jalpaiguri	100.00	0.00	0.00	1
Kolkata	100.00	0.00	0.00	1
Total	70.00	10.00	20.00	10

Provisions for senior citizens/physically challenged/children/women in buildings were reported only in Chennai, Tamil Nadu and Gwalior, Madhya Pradesh.

Building: Findings from Interview with Officials

The officials serving the respective department were interviewed. The questions were related to administrative procedures, consumer relations like grievance/complaints and awareness generation.

Policies

When asked about design and implementation policies of building in relation to consumer safety, officials responded that the buildings are planned in a safe manner. These are stable and eco-friendly buildings are being constructed.

Rules and Regulations

Officials were also asked about rules and regulations specified for providing efficient services to consumers while addressing safety issues. Most of those interviewed underlined that the stability of building is of utmost concern and that it is earthquake-resistant. To make a stable building all provisions under the government rules are followed. There are set of guidelines and procedures for it.

Consumer concerns and satisfaction

Officials were asked about the primary issues that are raised by consumers, to which they said that it is mostly related to the height of the building and the area in which it is constructed. There are hardly any complains that they receive from consumers and the overall feedback is 'very good' from them.

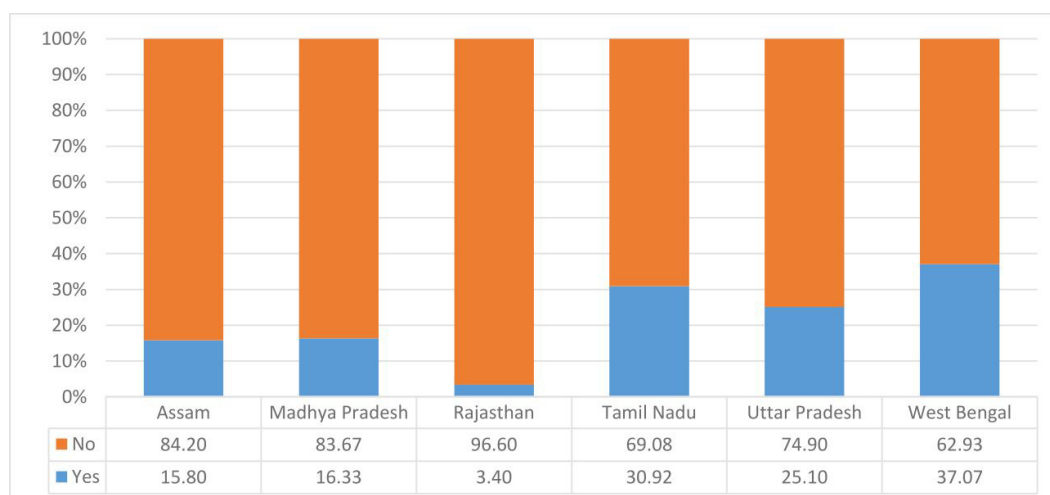
Awareness generation among consumers

The interview also consisted of officials' views on addressing safety of consumers and trainings provided in view of keeping the consumer safe. They informed that there are set of activities conducted by the department, namely placement of messages on hoarding, distribution of pamphlets and advertisement in newspapers.

8. Public Amusement: Perception of Consumer and Service Providers

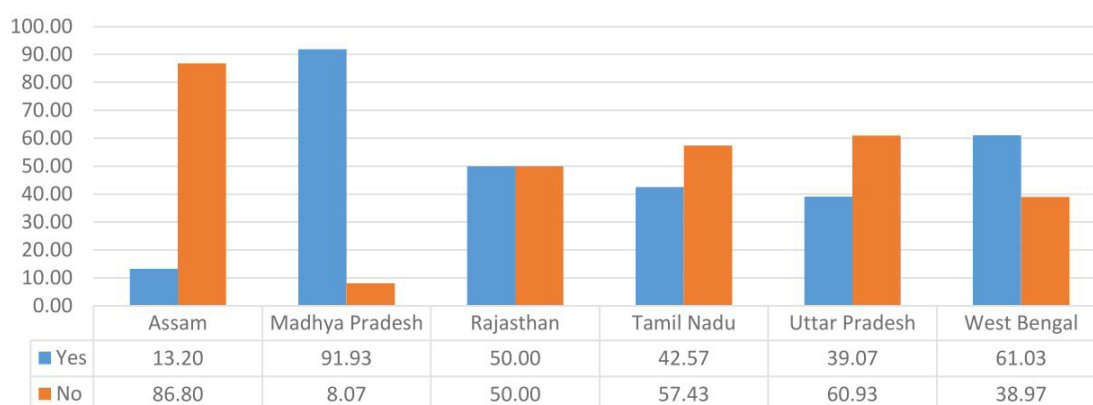
Use and Opinion of Public Amusement Services

Figure 6.44: Do you visit Theme Parks?



To get a basic understanding of the consumer's practices, few general questions were posed to the consumers. On question related to whether the respondent has visited theme parks, the majority of respondents said 'no'. The response was as high as 96.60 percent in Rajasthan followed by 84.20 percent in Assam, 74.90 percent in Uttar Pradesh, 69.08 percent in Tamil Nadu and 62.93 percent in West Bengal. States where respondents confirmed having visited a theme park are West Bengal with 37.07 percent, Tamil Nadu with 30.92 percent and Uttar Pradesh with 25.10 percent.

Figure 6.45: Do you visit Cinema Halls?



Questions related to visiting cinema halls were also asked under Public amusement section. The respondents were asked whether they visit cinema halls. In Madhya Pradesh (91.93 percent) and West Bengal (61.03 percent) respondents said that they have visited cinema halls. While in Assam (86.80 percent), Uttar Pradesh (60.93 percent) and Tamil Nadu (57.43 percent) more number of respondents have not been to cinema halls.

Table 6.25: Opinion on Hygiene of Water Rides

State	Yes %	No %	Don't Know %	Total
Assam	14.00	1.80	84.20	500
Guwahati	24.80	3.20	72.00	250
Jorhat	3.20	0.40	96.40	250
Madhya Pradesh	1.62	4.85	93.54	495
Bhopal	0.40	2.00	97.60	250
Gwalior	2.86	7.76	89.39	245
Rajasthan	3.96	10.00	86.04	530
Jaipur	7.64	16.00	76.36	275
Udaipur	0.00	3.53	96.47	255
Tamil Nadu	25.70	11.04	63.25	498
Chennai	18.00	7.50	74.50	200
Coimbatore	30.87	13.42	55.70	298
Uttar Pradesh	17.10	7.04	75.86	497
Ghaziabad	5.69	8.54	85.77	246
Lucknow	28.29	5.58	66.14	251
West Bengal	90.78	8.74	0.49	206
Jalpaiguri	92.86	7.14	0.00	28
Kolkata	90.45	8.99	0.56	178
Total	18.31	7.12	74.58	2726

Respondents were asked about their opinion on hygiene levels in water rides. Except West Bengal (90.78 percent) where highest number of respondents said they are aware of hygiene levels in water rides, in the remaining states higher number of responses were 'don't know'. 84.20 percent in Assam, 93.54 percent in Madhya Pradesh, 86.04 percent in Rajasthan, 63.35 percent in Tamil Nadu and 75.86 percent in Uttar Pradesh responded 'don't know' to the question on opinion on hygiene of water rides.

Thus, general awareness on hygiene of water rides amongst users seems to be low. As higher responses are under 'don't know' it proves that consumers do not consider hygiene levels as an important concern which they should be aware of.

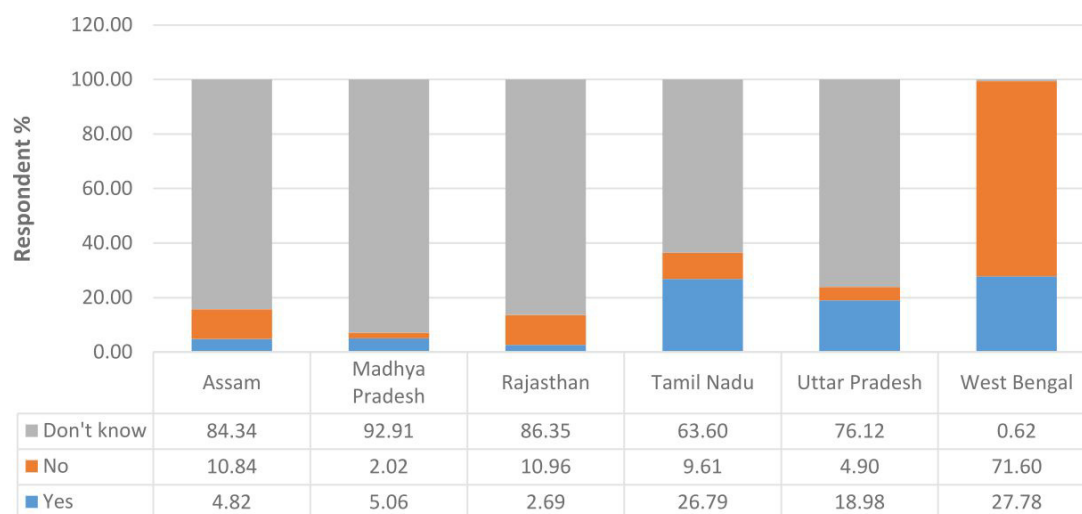
Safety measures at Public Amusement Services

Table 6.26: Opinion on Presence of Life Guards				
State	Yes %	No %	Don't Know %	Total
Assam	29.51	70.49	0.00	122
Guwahati	28.44	71.56	0.00	109
Jorhat	38.46	61.54	0.00	13
Madhya Pradesh	44.68	55.32	0.00	47
Bhopal	33.33	66.67	0.00	12
Gwalior	48.57	51.43	0.00	35
Rajasthan	12.12	87.88	0.00	132
Jaipur	14.04	85.96	0.00	114
Udaipur	0.00	100.00	0.00	18
Tamil Nadu	43.31	56.69	0.00	254
Chennai	39.39	60.61	0.00	165
Coimbatore	50.56	49.44	0.00	89
Uttar Pradesh	75.18	24.82	0.00	137
Ghaziabad	86.81	13.19	0.00	91
Lucknow	52.17	47.83	0.00	46
West Bengal	11.99	8.05	79.96	1118
Jalpaiguri	2.96	1.25	95.79	642
Kolkata	24.16	17.23	58.61	476
Total	23.20	27.40	49.39	1810

The respondents were asked about safety measures at public amusement; hence a question was asked related to presence of lifeguard. There has been a mixed response to the question. Except West Bengal where 79.96 percent of respondents said 'don't know', for the rest of states the responses were in 'yes' and 'no'. In Assam, 29.51 percent of respondents were aware about presence of life guards as against 70.49 percent who said 'no'; 44.68 percent said 'yes' in Madhya Pradesh against 55.32 percent who answered 'no'; in case of Rajasthan 12.12 percent said 'yes' and a very high percentage of 87.88 respondents answered as 'no'.

It can be considered said that consumers are aware of the utility of lifeguards and do ensure that they are available at public amusement locations. However, based on responses during the interview it can be interpreted that there have been instances where lifeguard has been absent from places of public amusements.

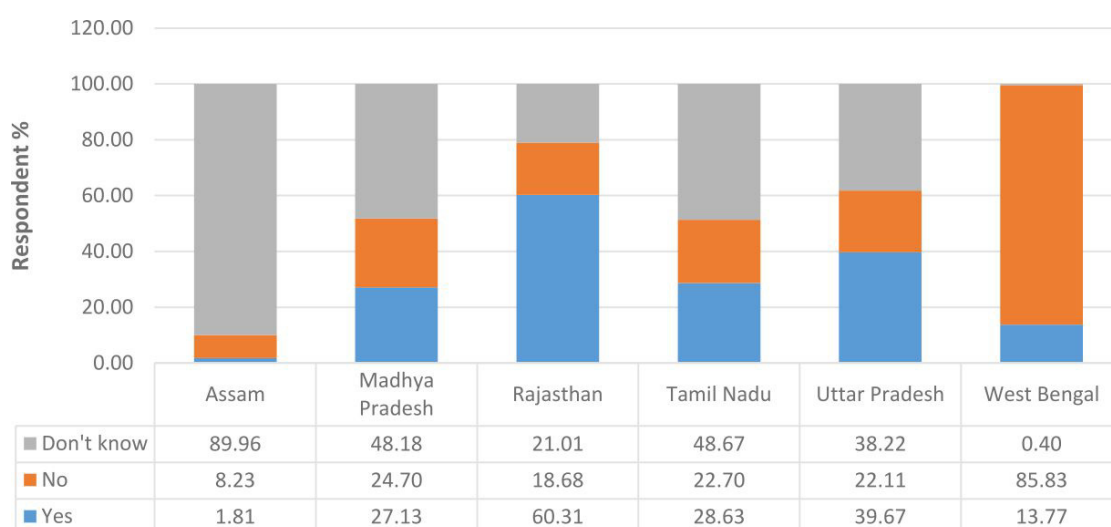
Figure 6.46: Opinion on Presence of Medical Emergency Kit – Theme Park



Majority of respondents in West Bengal (71.60 percent) were aware that the Medical Emergency kit was not present in theme parks. Followed by Rajasthan (10.96 percent) and Assam (10.84 percent) respondents were aware that the Medical Emergency kit was not present in theme parks. Respondents from Tamil Nadu (26.79 percent) and 18.98 percent from Uttar Pradesh were aware of presence of Medical Emergency kit in theme parks.

The awareness levels in relation to presence of Medical Emergency Kit at Theme Parks on an average seem to be low. Majority of responses fell under the category of 'don't know'. It could be related to respondent's lack of understanding to whether a Medical Emergency Kit should be available at theme parks or not.

Figure 6.47: Opinion on Presence of Medical Emergency Kit – Cinema Hall

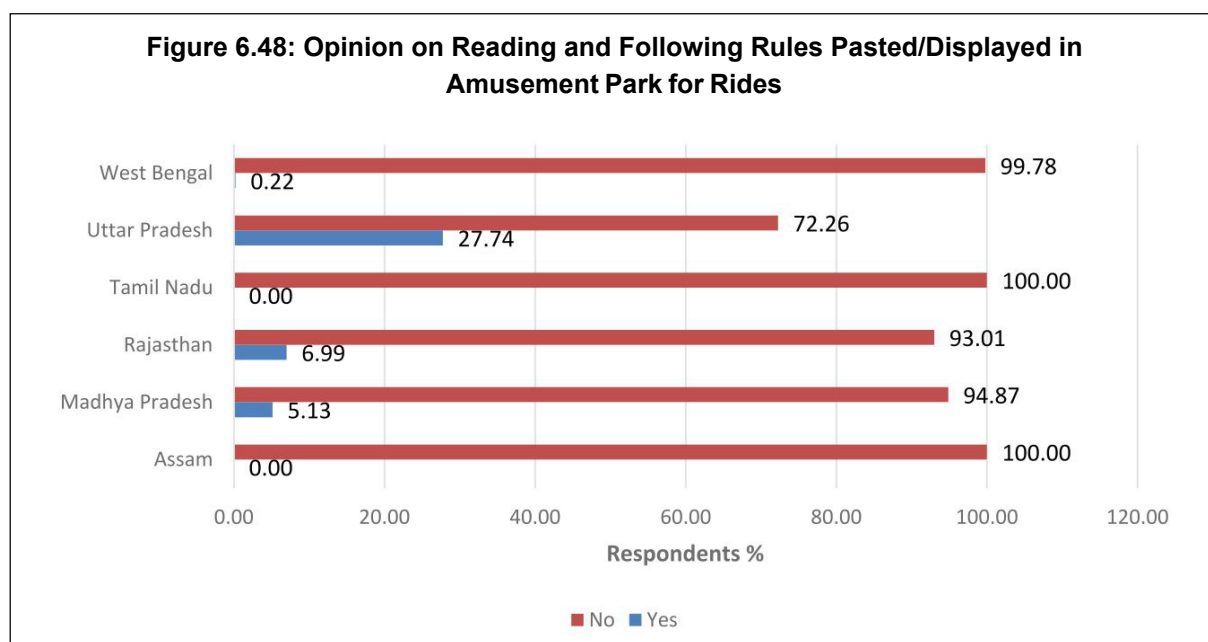


In Assam, 86.96 percent highest percentage of respondents said they ‘don’t know’ about the presence of Medical Emergency kit at cinema halls. 48.67 percent in Tamil Nadu and 48.18 percent in Madhya Pradesh said they are not aware. 60.31 percent and 39.67 percent of respondents in Rajasthan and Uttar Pradesh respectively said they have observed the presence of Medical Kit in cinema halls.

The findings on presence of Medical Emergency Kit in cinema halls are also similar to that of theme parks however, responses vary from State to State. Awareness levels in Madhya Pradesh, Tamil Nadu and Uttar Pradesh in case of cinema halls are higher as compared to theme parks. In Rajasthan and Uttar Pradesh higher number of respondents observed the presence of a Medical Emergency Kit in cinema halls.

Table 6.27: Opinion on Display of Emergency Exits				
State	District	Yes %	No %	Total
Assam	Jorhat	77.78	22.22	9
	Guwahati	74.29	25.71	70
Madhya Pradesh	Gwalior	86.36	13.64	22
	Bhopal	50.00	50.00	10
Rajasthan	Udaipur	0.00	100.00	9
	Jaipur	27.69	72.31	65
Tamil Nadu	Coimbatore	88.06	11.94	67
	Chennai	80.53	19.47	113
Uttar Pradesh	Lucknow	61.11	38.89	36
	Ghaziabad	75.31	24.69	81
West Bengal	Kolkata	95.03	4.97	181
	Jalpaiguri	90.63	9.38	32
Grand Total		76.98	23.02	

Higher percentage of respondents said ‘yes’ regarding display of emergency exit: Assam 76.03 percent, Madhya Pradesh 68.18 percent, Tamil Nadu 84.29 percent, Uttar Pradesh 68.21 percent and West Bengal 92.83 percent. In Rajasthan, the responses to ‘No’ were on the higher side with approximately 86 percent.

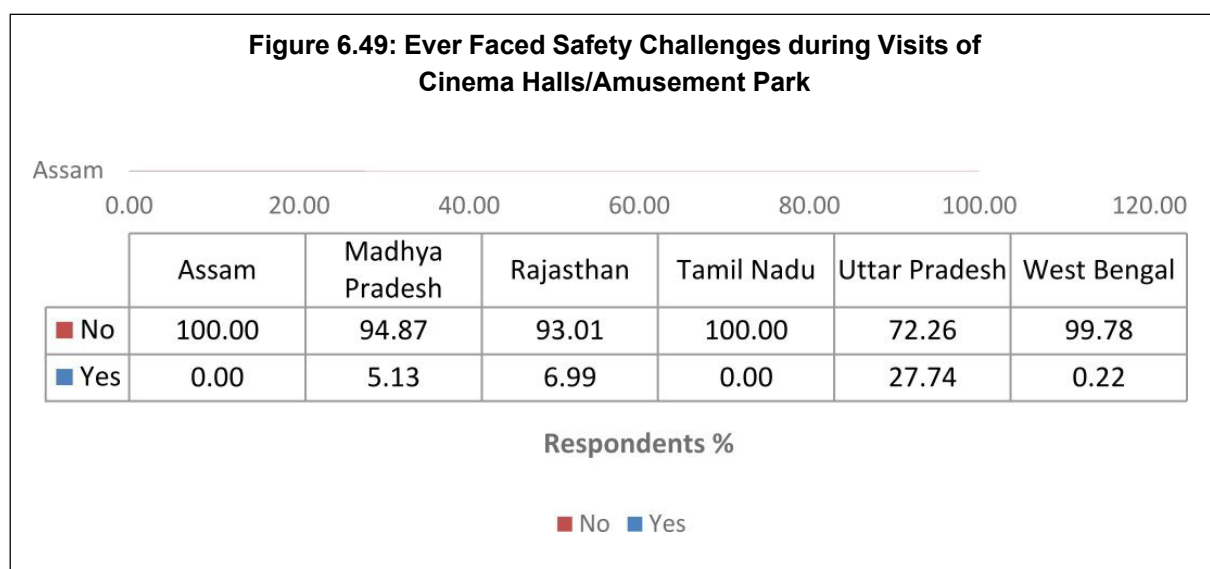


State	Yes %	No %	Total
Assam	10.56	89.44	483
Guwahati	17.48	82.52	246
Jorhat	3.38	96.62	237
Madhya Pradesh	4.38	95.62	251
Bhopal	4.25	95.75	212
Gwalior	5.13	94.87	39
Rajasthan	19.09	80.91	241
Jaipur	0.00	100.00	17
Udaipur	20.54	79.46	224
Tamil Nadu	54.73	45.27	497
Chennai	35.18	64.82	199
Coimbatore	67.79	32.21	298
Uttar Pradesh	70.00	30.00	270
Ghaziabad	72.57	27.43	237
Lucknow	51.52	48.48	33
West Bengal	74.72	25.28	265
Jalpaiguri	64.47	35.53	76
Kolkata	78.84	21.16	189
Total	38.22	61.78	2007

Table 6.29: Opinion on Why Consumers do not Read Rules Pasted in Amusement Park?						
State	Staff will take care %	Believe no harm will come to me %	Time waste & spoils fun %	Responsible for self %	Others %	Total
Assam	0.00	5.71	42.86	51.43	0.00	35
Guwahati	0.00	0.00	45.16	54.84	0.00	31
Jorhat	0.00	50.00	25.00	25.00	0.00	4
Madhya Pradesh	0.00	20.00	32.00	48.00	0.00	25
Bhopal	0.00	20.00	32.00	48.00	0.00	25
Gwalior	0.00	0.00	0.00	0.00	0.00	0
Rajasthan	0.00	54.84	0.19	44.78	0.19	527
Jaipur	0.00	18.61	0.00	81.02	0.36	274
Udaipur	0.00	94.07	0.40	5.53	0.00	253
Tamil Nadu	0.00	50.00	0.00	50.00	0.00	2
Chennai	0.00	50.00	0.00	50.00	0.00	2
Coimbatore	0.00	0.00	0.00	0.00	0.00	0
Uttar Pradesh	0.58	0.00	0.00	99.42	0.00	171
Ghaziabad	0.58	0.00	0.00	99.42	0.00	171
Lucknow	0.00	0.00	0.00	0.00	0.00	0
West Bengal	0.00	100.00	0.00	0.00	0.00	4
Jalpaiguri	0.00	0.00	0.00	0.00	0.00	0
Kolkata	0.00	100.00	0.00	0.00	0.00	4
Total	0.13	39.40	3.14	57.20	0.13	764

Negligible percentage of respondents answered ‘staff will take care’ and ‘others’. 54.84 percent from Rajasthan, 50 percent from Tamil Nadu, and 100 percent from West Bengal ‘believed no harm will come to me’. Respondents answered ‘Time wasted and spoils fun’ from Assam (42.86 percent) and Madhya Pradesh (32 percent). Assam 51.43 percent, Madhya Pradesh 48 percent, Rajasthan 44.78 percent, Tamil Nadu 50 percent and Uttar Pradesh 99.42 percent of respondents said ‘responsible for self’ as answer to reading the rules pasted in amusement parks.

Safety Related Challenges



Consumers were asked to share their experiences regarding safety challenges faced during visit to cinema halls/amusement parks. Except Uttar Pradesh (27.74 percent), Rajasthan (6.99 percent) and Madhya Pradesh (5.13 percent) saying ‘yes’, rest all other states respondents said ‘no’.

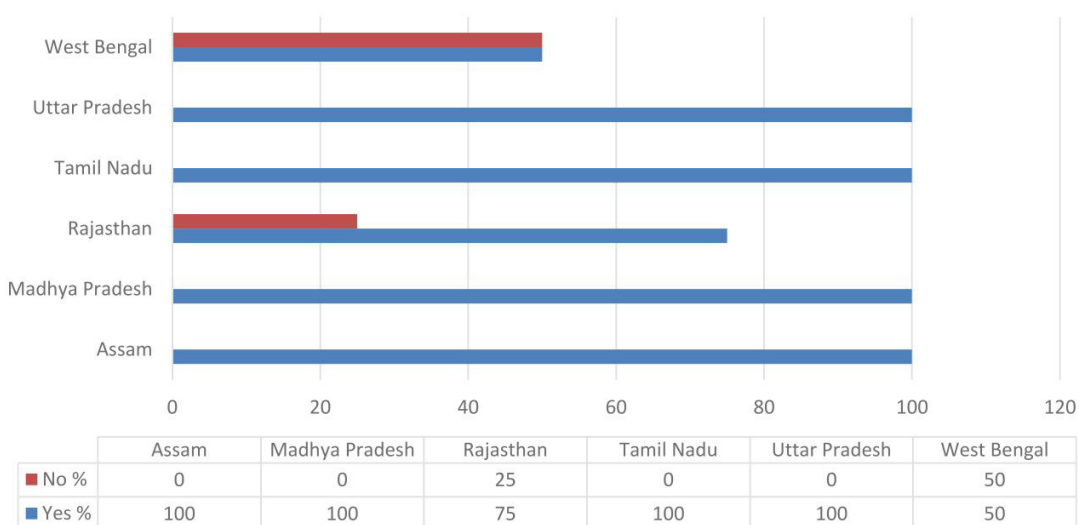
Table 6.30: Type of Safety Challenges Faced by Consumers						
State	No immediate help %	Blame game %	Refused to take complaint %	Told to contact Police %	Others %	Total
Assam	0.00	0.00	0.00	0.00	0.00	0
Guwahati	0.00	0.00	0.00	0.00	0.00	0
Jorhat	0.00	0.00	0.00	0.00	0.00	0
Madhya Pradesh	0.00	25.00	25.00	0.00	50.00	4
Bhopal	0.00	25.00	25.00	0.00	50.00	4
Gwalior	0.00	0.00	0.00	0.00	0.00	0
Rajasthan	16.39	82.95	0.00	0.66	0.00	305
Jaipur	100.00	0.00	0.00	0.00	0.00	50
Udaipur	0.00	99.22	0.00	0.78	0.00	255
Tamil Nadu	0.00	0.00	0.00	0.00	0.00	0
Chennai	0.00	0.00	0.00	0.00	0.00	0
Coimbatore	0.00	0.00	0.00	0.00	0.00	0
Uttar Pradesh	0.00	100.00	0.00	0.00	0.00	170
Ghaziabad	0.00	100.00	0.00	0.00	0.00	170
Lucknow	0.00	0.00	0.00	0.00	0.00	0
West Bengal	0.00	100.00	0.00	0.00	0.00	9
Jalpaiguri	0.00	100.00	0.00	0.00	0.00	5
Kolkata	0.00	100.00	0.00	0.00	0.00	4
Total	10.25	88.73	0.20	0.41	0.41	488

Consumers were asked about their experience with regard to the help extended by service providers in matters of safety. 16.39 percent from Rajasthan said that they received ‘no immediate help’. 82.95 percent from Rajasthan, 100 percent from Uttar Pradesh and 100 percent from West Bengal shared that it was like a ‘blame game’. 25 percent of respondents from Madhya Pradesh shared that the authorised body ‘refused to take complaint’.

Public Amusement Services: Service Provider

It is priority for service providers to ensure consumer safety, as it is frequently used by public. Service providers were asked questions related to the safety norms, such as signboards, labels, safety checks, and presence of trained staff etc. as methods to ensure safety.

Figure 6.50: Follow-up of Mandatory Safety Procedures



Safety procedures in place

Service providers were asked about following mandatory safety procedures. In Assam, Madhya Pradesh and Tamil Nadu 100 percent of respondents answered 'Yes'. In West Bengal, the response was 50 percent 'Yes' and 50 percent 'No'. In Rajasthan, 75 percent of respondents said 'Yes' and the remaining 25 percent said 'no'.

Table 6.31: State-wise Frequency of Review of Safety

State	Twice a year %	Annually %	Total
Assam	0.00	100.00	1
Guwahati	0.00	100.00	1
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	3
Bhopal	100.00	0.00	2
Gwalior	100.00	0.00	1
Rajasthan	75.00	25.00	4
Jaipur	100.00	0.00	2
Udaipur	50.00	50.00	2
Tamil Nadu	0.00	0.00	0
Chennai	0.00	0.00	0
Coimbatore	0.00	0.00	0
Uttar Pradesh	0.00	0.00	0
Ghaziabad	0.00	0.00	0
Lucknow	0.00	0.00	0
West Bengal	100.00	0.00	1
Jalpaiguri	0.00	0.00	0
Kolkata	100.00	0.00	1
Total	77.78	22.22	9

Service providers were asked about the frequency of review of safety measures. In Assam, 100 percent of respondents shared that it is done on an annual basis. In Madhya Pradesh (100 percent), Rajasthan (75 percent), and West Bengal (100 percent) service providers said it is done on a six-month basis.

Table 6.32: State-wise Frequency of Review of Safety Protocol				
State	Semi-annual %	Annually %	2-5 years %	Total
Assam	0.00	100.00	0.00	1
Guwahati	0.00	100.00	0.00	1
Jorhat	0.00	0.00	100.00	1
Madhya Pradesh	100.00	0.00	0.00	2
Bhopal	66.67	0.00	33.33	3
Gwalior	50.00	50.00	0.00	4
Rajasthan	50.00	50.00	0.00	2
Jaipur	50.00	50.00	0.00	2
Udaipur	0.00	100.00	0.00	1
Tamil Nadu	0.00	100.00	0.00	1
Chennai	0.00	100.00	0.00	1
Coimbatore	0.00	0.00	0.00	0
Uttar Pradesh	100.00	0.00	0.00	2
Ghaziabad	100.00	0.00	0.00	2
Lucknow	0.00	0.00	0.00	0
West Bengal	0.00	100.00	0.00	1
Jalpaiguri	0.00	0.00	100.00	1
Kolkata	0.00	100.00	0.00	1
Total	50.00	41.67	8.33	12

Public Amusement Services: Findings from Interview with Officials

The officials serving the respective departments were interviewed. The questions were related to administrative procedures, consumer relations like grievance/complaints and awareness generation.

Policies

When asked about design and implementation policies of building in relation to consumer safety, the interviewed officials informed that individually they do not make any policy level decisions, if department as a whole has to make changes the decision is taken. The aim is to provide consumers with a safe and healthy environment. The department follows issued guideline for day-to-day functioning.

Rules and regulations

Officials were also asked about rules and regulations specified for providing amusement services to consumers while addressing safety issues. Most of them responded that the no objection certificate (NoC) is given individually by each department.

Consumer concerns and satisfaction

Officials were asked about the primary issues raised by consumers, to which they said that there is no such complaint from consumers and the feedback till now has been good.

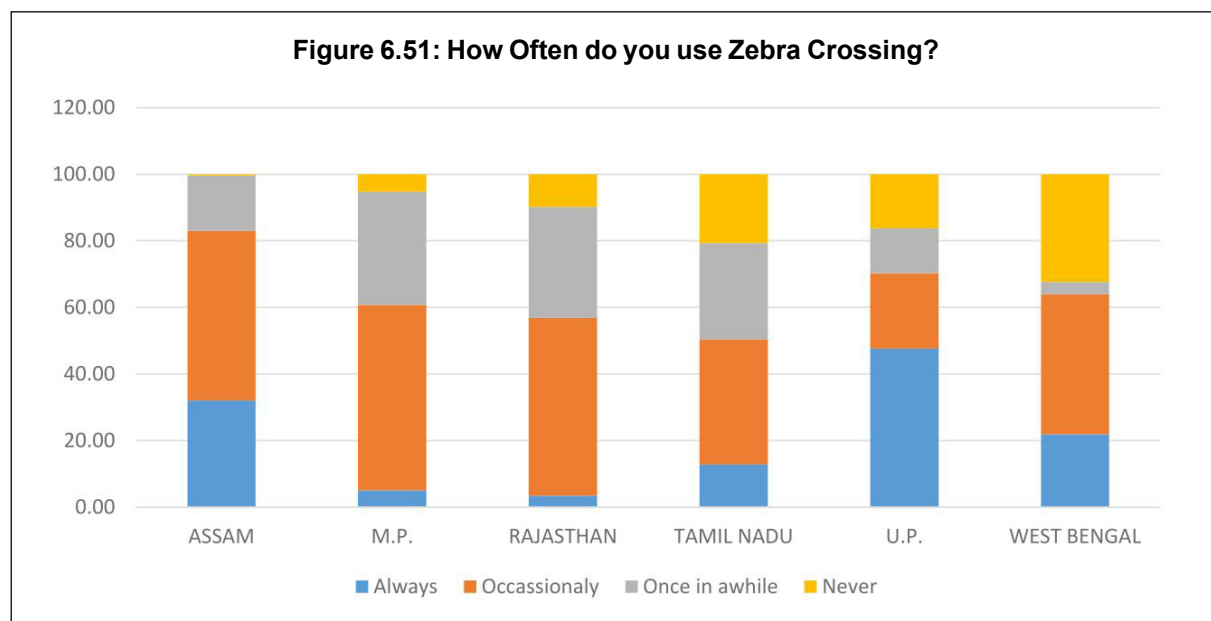
Awareness generation among consumers

The officials informed that NoC is a security measure that is considered for consumer's safety. As such there is no one-to-one awareness of consumers that is done by the department. If at all there is any need to spread awareness, the advertisement or campaign is showcased in theatres and cinema halls.

Transportation: Perception of Consumer and Service Providers

In this section, questions related to mode of transportation and uses of various safety methods adopted were asked. Consumers, service providers and officials were asked questions pertaining to use of signals/symbols while using road, railways or aviation.

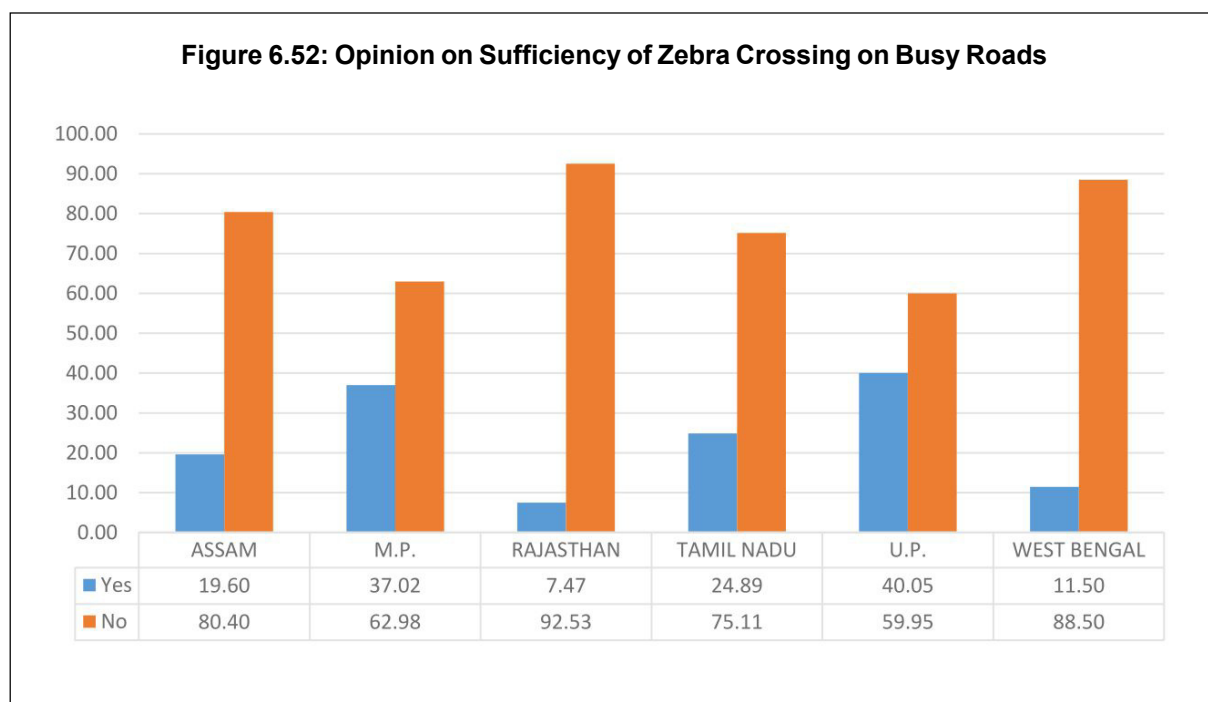
Availability of and adherence to safety measures



On road safety, consumers were inquired about their road using habits. Consumers from all five states were asked if they use the Zebra crossing. Cumulatively, maximum responses fell under the category of 'occasionally'. In Assam 51 percent, Madhya Pradesh 55.70 percent, Rajasthan 53.50 percent, Tamil Nadu 37.55 percent, Uttar Pradesh 22.61 percent and West Bengal 42.05 percent of respondents said 'occasionally'. In Madhya Pradesh and Rajasthan response against 'always' were below 5 percent. However, in Assam 32 percent, Tamil Nadu 12 percent, Uttar Pradesh 47.66 percent and West Bengal 21.93 percent respondents expressed that they 'always' use Zebra crossing. Highest responses for 'never' were recorded in West Bengal 32.39 percent, followed by Tamil Nadu with 20.68 percent and Uttar Pradesh with 16.29 percent.

Table 6.33: Opinion on Number of Pavements for Pedestrians						
State	District	Sufficient %	Much less than what is required %	No pavements at all %	No pavements at all %	Total
Assam	Guwahati	35.20	54.40	8.40	2.00	250
	Jorhat	60.40	18.00	21.20	0.40	250
Madhya Pradesh	Bhopal	82.00	7.20	9.60	1.20	250
	Gwalior	12.24	46.94	28.16	12.65	245
Rajasthan	Jaipur	2.55	88.69	8.03	0.73	274
	Udaipur	3.92	18.04	21.18	56.86	255
Tamil Nadu	Chennai	36.03	32.39	4.86	26.72	247
	Coimbatore	51.20	21.20	4.80	22.80	250
Uttar Pradesh	Ghaziabad	15.20	37.20	39.20	8.80	251
	Lucknow	82.16	10.79	7.05	0.00	241
West Bengal	Jalpaiguri	5.24	69.76	16.53	8.47	248
	Kolkata	8.40	75.60	6.40	9.60	250
Grand Total		32.48	40.42	14.58	12.52	3011

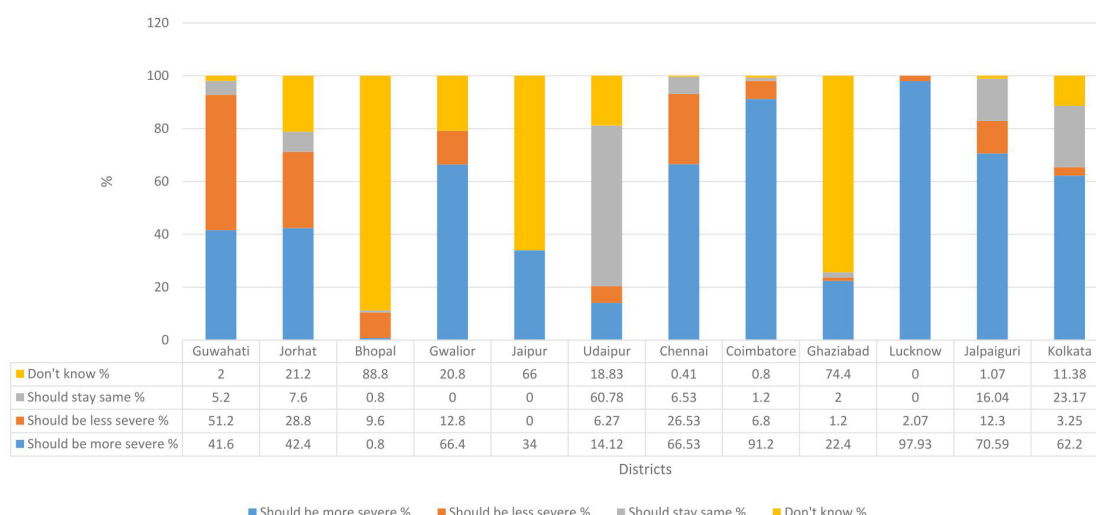
Higher proportion of respondents shared that there are lesser number of pavements for pedestrians than what is actually required. In West Bengal, 72.68 percent of respondents said that there are ‘much less pavements than what is required’, followed by Rajasthan where 53.36 percent of respondents held a similar opinion. Higher percentage of respondents from Uttar Pradesh (23.12 percent) and Madhya Pradesh (18.88 percent) said ‘no pavements at all’. Lowest response to ‘sufficient’ was recorded in two states, namely Rajasthan with 3.23 percent and West Bengal with 6.82 percent.



The respondents were asked about the ‘sufficiency of Zebra Crossing on busy roads’, top three positive responses were from Uttar Pradesh 40.05 percent, Madhya Pradesh 37.02 percent and Tamil Nadu 24.89 percent. In Assam 80.40 percent, Rajasthan 92.53 percent and West Bengal 88.50 percent of respondents said ‘no’ to ‘sufficiency of Zebra Crossing on busy roads’.

Measures to curb accidents

Figure 6.53: Opinion on Penalties for Exceeding Speed



Higher number of respondents unanimously agreed that the penalty ‘should be more severe’ with 50.63 percent. Approximately, 23.32 percent of respondents answered ‘don’t know’.

Figure 6.54: Frequency of Wearing of Helmet – Two Wheeler Driver

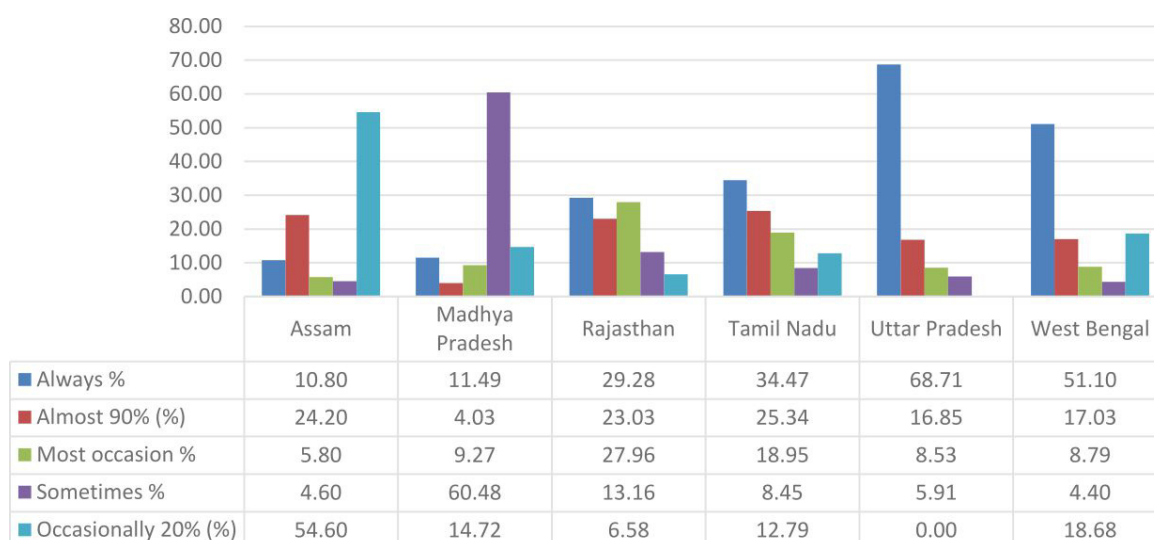
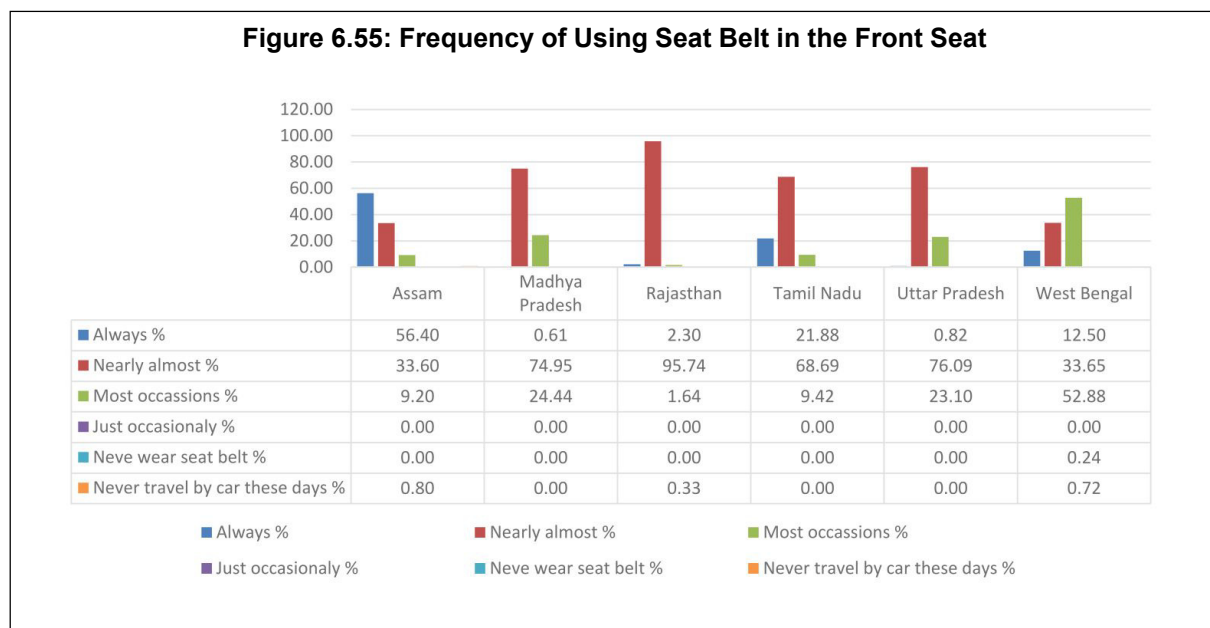


Table 6.34: State-wise Practice of Wearing Helmet – Two Wheeler Driver						
State	Always %	Almost 90%	Most occasion %	Sometimes %	Occasionally 20%	Total
Assam	10.80	24.20	5.80	4.60	54.60	500
Guwahati	12.80	18.40	6.00	3.60	59.20	250
Jorhat	8.80	30.00	5.60	5.60	50.00	250
Madhya Pradesh	11.49	4.03	9.27	60.48	14.72	496
Bhopal	0.00	2.80	11.20	80.00	6.00	250
Gwalior	23.17	5.28	7.32	40.65	23.58	246
Rajasthan	29.28	23.03	27.96	13.16	6.58	304
Jaipur	22.00	60.00	18.00	0.00	0.00	50
Udaipur	30.71	15.75	29.92	15.75	7.87	254
Tamil Nadu	34.47	25.34	18.95	8.45	12.79	438
Chennai	55.04	20.17	13.45	10.50	0.84	238
Coimbatore	10.00	31.50	25.50	6.00	27.00	200
Uttar Pradesh	68.71	16.85	8.53	5.91	0.00	457
Ghaziabad	75.86	19.40	4.74	0.00	0.00	232
Lucknow	61.33	14.22	12.44	12.00	0.00	225
West Bengal	51.10	17.03	8.79	4.40	18.68	182
Jalpaiguri	11.48	31.15	19.67	11.48	26.23	61
Kolkata	71.07	9.92	3.31	0.83	14.88	121
Total	31.89	18.09	12.54	18.30	19.18	2377

Mixed response was received on question related to use of helmet while driving a two-wheeler. Highest overall response was received for ‘always’ with 31.89 percent. Rajasthan 29.28 percent, Tamil Nadu 34.47 percent, Uttar Pradesh 68.71 percent and West Bengal 51.10 percent answered ‘always’. Similar percent of responses were received for ‘almost 90 percent’, ‘sometimes’ and ‘occasionally’ with 18.09 percent, 18.30 percent and 19.18 percent respectively.



Question on usage of seat belts while sitting in the front seat of the car was asked to consumers. 61.29 percent of the total respondents answered 'nearly almost'. 74.95 percent from Madhya Pradesh, 95.74 percent from Rajasthan, 68.69 percent from Tamil Nadu, and 76.09 percent from Uttar Pradesh responded 'nearly almost'. 56.40 percent from Assam and 21.88 percent from Tamil Nadu answered with 'always'.

Railway: Consumer Perception

Table 6.35: Opinion on Ease of Complaint Resolving Mechanism						
State	Very satisfied %	Satisfied %	Dissatisfied %	Very dissatisfied %	Don't know %	Total
Assam	10.80	44.60	31.60	0.40	12.60	500
Guwahati	21.60	43.20	24.80	0.80	9.60	250
Jorhat	0.00	46.00	38.40	0.00	15.60	250
Madhya Pradesh	12.90	71.98	11.09	0.60	3.43	496
Bhopal	2.00	83.20	7.60	1.20	6.00	250
Gwalior	23.98	60.57	14.63	0.00	0.81	246
Rajasthan	7.17	60.19	30.94	0.75	0.94	530
Jaipur	9.45	44.36	45.09	0.73	0.36	275
Udaipur	4.71	77.25	15.69	0.78	1.57	255
Tamil Nadu	3.01	67.87	20.48	1.81	6.83	498
Chennai	3.69	77.85	16.11	0.67	1.68	298
Coimbatore	2.00	53.00	27.00	3.50	14.50	200
Uttar Pradesh	24.04	44.65	23.84	6.26	1.21	495
Ghaziabad	7.57	46.22	37.45	6.37	2.39	251
Lucknow	40.98	43.03	9.84	6.15	0.00	244
West Bengal	0.40	32.26	56.05	2.22	9.07	496
Jalpaiguri	0.00	36.84	49.80	1.62	11.74	247
Kolkata	0.80	27.71	62.25	2.81	6.43	249
Total	9.68	53.67	29.02	1.99	5.64	3015

Consumers were asked about ease of solving problems by railway authorities at the times of receiving a complaint. Most of respondents said they are 'satisfied' with the response rate of the railway authority at 53.67 percent. It was 44.60 percent in Assam, 71.98 percent in Madhya Pradesh, 60.19 percent in Rajasthan, 67.87 percent in Tamil Nadu, 44.65 percent in Uttar Pradesh, and 32.26 percent in West Bengal respectively. This was followed with 29.02 percent of respondents saying 'dissatisfied'; 31.60 percent in Assam, 30.94 percent in Rajasthan, 20.48 percent in Tamil Nadu, 23.84 percent in Uttar Pradesh and in West Bengal 56.05 percent of respondents answered 'dissatisfied'. Of the total interviewed respondents 9.68 percent responded 'very satisfied'.

Table 6.36: Opinion on Food Safety of Train						
State	Very satisfied %	Satisfied %	Dissatisfied %	Very dissatisfied %	Don't know %	Total
Assam	1.00	17.40	58.60	11.40	11.60	500
Guwahati	1.20	26.40	60.40	4.40	7.60	250
Jorhat	0.80	8.40	56.80	18.40	15.60	250
Madhya Pradesh	19.96	48.39	30.85	0.00	0.81	496
Bhopal	2.80	41.60	55.60	0.00	0.00	250
Gwalior	37.40	55.28	5.69	0.00	1.63	246
Rajasthan	7.18	50.47	31.00	10.78	0.57	529
Jaipur	11.27	53.82	32.36	1.82	0.73	275
Udaipur	2.76	46.85	29.53	20.47	0.39	254
Tamil Nadu	2.61	36.75	27.51	21.89	11.24	498
Chennai	2.35	39.93	27.52	23.15	7.05	298
Coimbatore	3.00	32.00	27.50	20.00	17.50	200
Uttar Pradesh	22.27	32.79	34.01	7.89	3.04	494
Ghaziabad	1.59	30.68	52.59	9.16	5.98	251
Lucknow	43.62	34.98	14.81	6.58	0.00	243
West Bengal	0.20	25.15	59.76	8.65	6.24	497
Jalpaiguri	0.00	17.81	69.23	4.05	8.91	247
Kolkata	0.40	32.40	50.40	13.20	3.60	250
Total	8.83	35.30	40.21	10.12	5.54	3014

Regarding food safety, majority of responses were recorded against 'dissatisfied'- cumulative of 40.21 percent from six states. Highest rate of dissatisfaction was from West Bengal with 59.76 percent followed by 58.60 percent from Assam, 34.01 percent from Uttar Pradesh and 31 percent from Rajasthan. Second highest response was received under 'satisfied' with 35.30 percent; Madhya Pradesh 48.39 percent, Rajasthan 50.47 percent, Tamil 36.75 percent and Uttar Pradesh 32.79 percent.

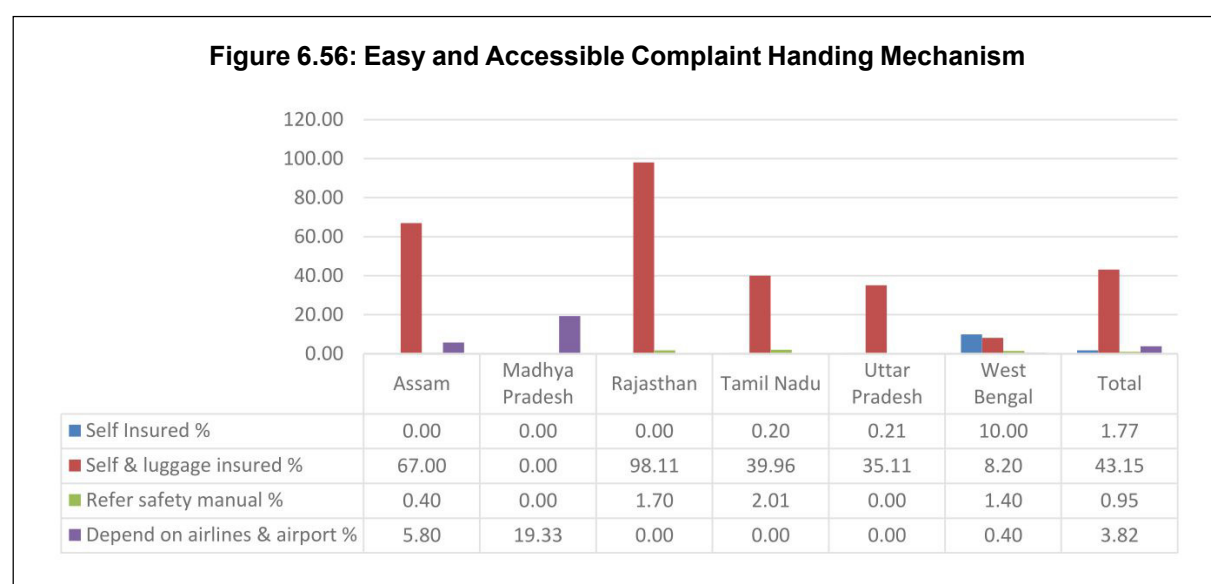
Table 6.37: Response of Railways to Complaints						
State	Very satisfied %	Satisfied %	Dissatisfied %	Very dissatisfied %	Don't know %	Total
Assam	11.80	48.60	25.60	2.00	12.00	500
Guwahati	21.20	41.60	25.20	3.60	8.40	250
Jorhat	2.40	55.60	26.00	0.40	15.60	250
Madhya Pradesh	25.81	58.27	14.92	0.20	0.81	496
Bhopal	2.40	71.20	26.00	0.40	0.00	250
Gwalior	49.59	45.12	3.66	0.00	1.63	246
Rajasthan	7.17	54.15	27.74	1.32	9.62	530
Jaipur	9.45	53.45	34.91	1.09	1.09	275
Udaipur	4.71	54.90	20.00	1.57	18.82	255
Tamil Nadu	6.43	73.69	11.65	1.81	6.43	498
Chennai	5.03	78.19	13.42	1.34	2.01	29
Coimbatore	8.50	67.00	9.00	2.50	13.00	200
Uttar Pradesh	25.71	31.38	31.17	8.91	2.83	494
Ghaziabad	1.99	33.07	49.40	10.36	5.18	251
Lucknow	50.21	29.63	12.35	7.41	0.41	243
West Bengal	0.40	46.68	42.86	2.01	8.05	497
Jalpaiguri	0.00	48.58	40.08	2.43	8.91	247
Kolkata	0.80	44.80	45.60	1.60	7.20	250
Total	12.80	52.17	25.67	2.69	6.67	3015

Table 6.38: Opinion on Safety Concerns of Rail Crossings				
State	Yes %	No %	Don't know %	Total
Assam	16.00	80.80	3.20	125
Guwahati	7.41	88.89	3.70	27
Jorhat	18.37	78.57	3.06	98
Madhya Pradesh	38.98	49.15	11.86	118
Bhopal	74.19	3.23	22.58	62
Gwalior	0.00	100.00	0.00	56
Rajasthan	0.70	15.44	83.86	285
Jaipur	0.00	5.93	94.07	236
Udaipur	4.08	61.22	34.69	49
Tamil Nadu	48.48	51.52	0.00	33
Chennai	64.00	36.00	0.00	25
Coimbatore	0.00	100.00	0.00	8
Uttar Pradesh	0.00	97.52	2.48	121
Ghaziabad	0.00	98.31	1.69	118
Lucknow	0.00	66.67	33.33	3
West Bengal	0.00	33.33	66.67	42
Jalpaiguri	0.00	35.14	64.86	37
Kolkata	0.00	20.00	80.00	5
Total	11.60	48.62	39.78	724

In Assam 48.60 percent, 58.27 percent in Madhya Pradesh, 54.15 percent in Rajasthan, 31.38 percent in Uttar Pradesh and 46.68 percent in West Bengal consumers said they are ‘satisfied’ with the response on complaints. 25.81 percent and 25.71 percent from Madhya Pradesh and Uttar Pradesh respectively answered ‘very satisfied’. ‘Dissatisfied’ was answered by 25.60 percent in Assam, 27.74 percent in Rajasthan, 31.17 percent in Uttar Pradesh and 42.86 percent in West Bengal.

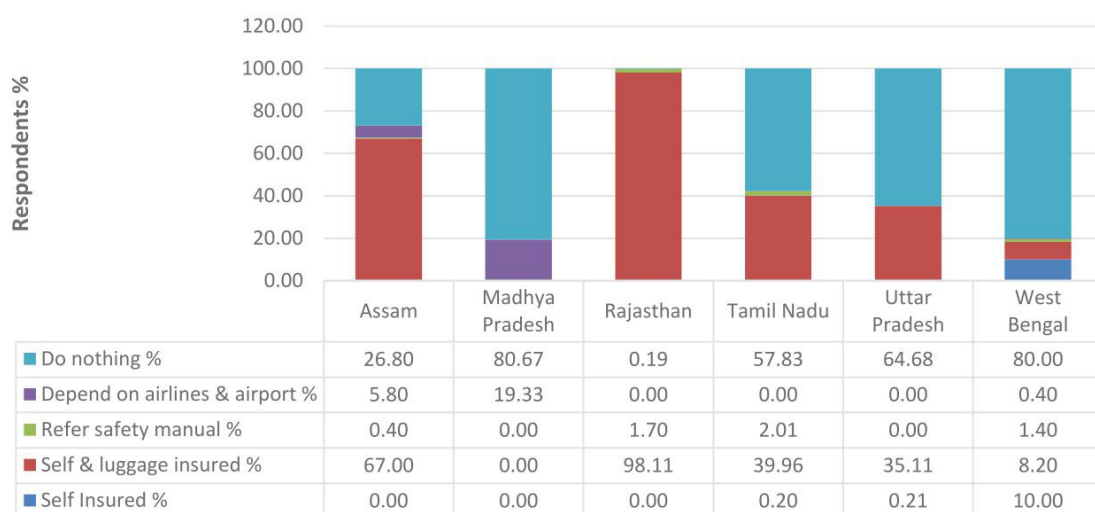
Consumers were asked about their opinion on safety at rail crossings. The consumers were expected to respond against ‘yes’, ‘no’ and ‘don’t know’. 38.98 percent in Madhya Pradesh and 48.48 percent in Tamil Nadu said they have safety concerns at rail crossings. Assam (80.80 percent), Madhya Pradesh (49.15 percent), Tamil Nadu (51.52 percent), Uttar Pradesh (97.52 percent) and West Bengal (33.33 percent) answered ‘no’. 83.86 percent from Rajasthan and 66.67 percent from West Bengal said they ‘don’t know’.

Aviation: Consumer Perception



Consumers were asked about the accessibility of complaint handling mechanism at airports, to which higher number of responses came under the ‘self and luggage insured’ category. In Assam, it was 67 percent, 98.11 percent in Rajasthan, 39.96 percent in Tamil Nadu and 35.11 percent in Uttar Pradesh.

Figure 6.57: Response of Airport Officials in Emergencies



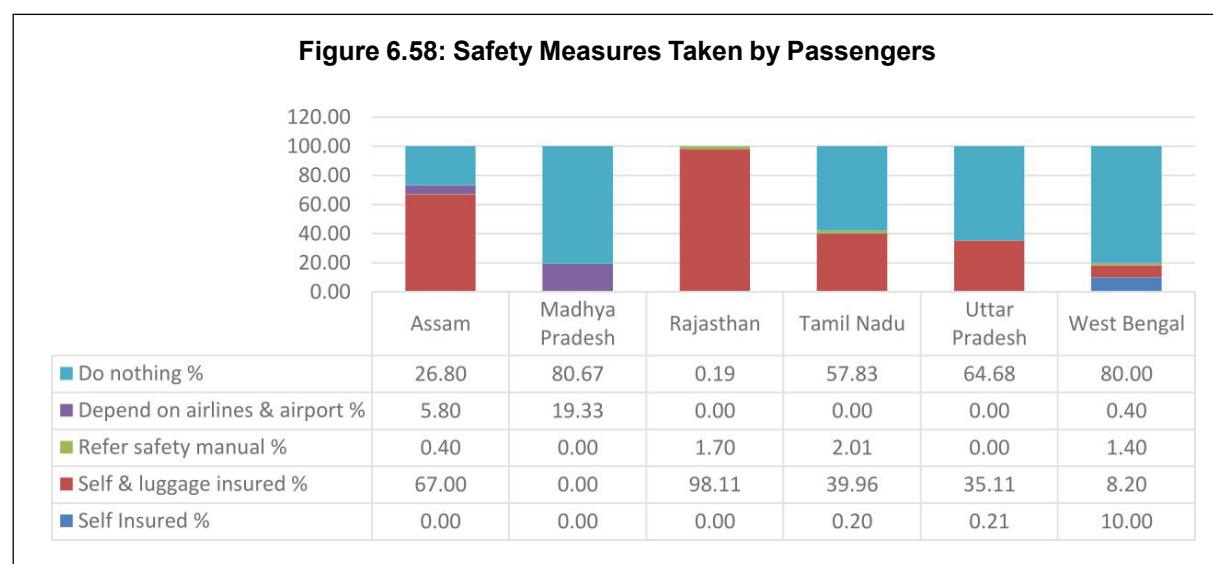
Consumers were inquired about their experiences with response of the aviation authorities to the complaints made. Many consumers from Assam (67 percent), Rajasthan (98.11 percent), Tamil Nadu (39.96 percent) and Uttar Pradesh (35.11 percent) responded with ‘self and luggage insured’. 26.80 percent from Assam, 80.67 percent from Madhya Pradesh, 57.83 percent from Tamil Nadu, 64.68 percent from Uttar Pradesh and 80 percent from West Bengal said that the airline authorities ‘do nothing’.

Table 6.39: Maintenance and Safety at Airports

State	Very satisfied %	Satisfied %	Dissatisfied %	Very dissatisfied %	Don't know %	Total
Assam	2.20	4.00	0.20	0.20	93.40	500
Guwahati	3.60	8.00	0.40	0.40	87.60	250
Jorhat	0.80	0.00	0.00	0.00	99.20	250
Madhya Pradesh	0.00	0.00	0.00	0.00	100.00	496
Bhopal	0.00	0.00	0.00	0.00	100.00	250
Gwalior	0.00	0.00	0.00	0.00	100.00	246
Rajasthan	40.00	7.55	0.00	0.00	52.45	530
Jaipur	0.00	3.64	0.00	0.00	96.36	275
Udaipur	83.14	11.76	0.00	0.00	5.10	255
Tamil Nadu	2.21	0.60	0.00	0.00	97.19	498
Chennai	3.36	1.01	0.00	0.00	95.64	298
Coimbatore	0.50	0.00	0.00	0.00	99.50	200
Uttar Pradesh	4.66	0.40	0.00	0.00	94.94	494
Ghaziabad	0.00	0.00	0.00	0.00	100.00	251
Lucknow	9.47	0.82	0.00	0.00	89.71	243
West Bengal	13.20	0.40	0.00	0.00	86.40	500
Jalpaiguri	1.20	0.80	0.00	0.00	98.00	250
Kolkata	25.20	0.00	0.00	0.00	74.80	250
Total	10.70	2.22	0.03	0.03	87.01	3018

Most of consumers were unaware of the maintenance and safety norms at the airport. Majority of answers were ‘don’t know’: Assam 93.40 percent, Madhya Pradesh 100 percent, Rajasthan 52.45 percent, Tamil Nadu 97.19 percent, Uttar Pradesh 94.94 percent and West Bengal 86.40 percent. Only 40 percent from Rajasthan said that they are ‘very satisfied’ with the safety services at airports.

Table 6.40: Opinion on Safety Measures taken by the Service Provider							
State	District	Very satisfied%	Satisfied%	Dissatisfied%	Very % Dissatisfied	Don't Know%	Total
Assam	Guwahati	0.00	34.80	0.40	11.20	53.60	250
	Jorhat	0.00	99.20	0.40	0.40	0.00	250
Madhya Pradesh	Bhopal	0.00	0.00	0.00	0.40	99.60	250
	Gwalior	0.00	0.00	0.00	88.00	12.00	50
Rajasthan	Jaipur	0.00	96.72	3.28	0.00	0.00	274
	Udaipur	0.00	99.61	0.00	0.00	0.39	255
Tamil Nadu	Chennai	0.00	0.00	4.03	0.00	95.97	248
	Coimbatore	0.40	79.60	0.00	0.00	20.00	250
Uttar Pradesh	Ghaziabad	0.00	0.00	0.00	0.00	100.00	251
	Lucknow	0.42	72.46	0.00	0.00	27.12	236
West Bengal	Jalpaiguri	0.40	14.80	0.00	0.40	84.40	250
	Kolkata	19.60	1.60	2.80	0.40	75.60	250
Grand Total		1.85	44.95	1.00	2.70	49.50	2814



Consumers were also asked about other than airport authorities providing safety to them, how do consumers themselves ensure their safety. 26.80 percent from Assam, 80.67 percent from Madhya Pradesh, 57.83 percent from Tamil Nadu, 64.68 percent from Uttar Pradesh and 80 percent from West Bengal said they ‘do nothing’. Many consumers also indicated ‘self and luggage insured’ namely in Assam 67 percent, Rajasthan 98.11 percent, Tamil Nadu 39.96 percent and Uttar Pradesh 35.11 percent.

Transportation: Service Provider

Table 6.41: Maintenance of Road Crash Data			
State	Yes %	No %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	0.00	100.00	1
Bhopal	0.00	0.00	0
Gwalior	0.00	100.00	1
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	0.00	0
Chennai	0.00	0.00	0
Coimbatore	0.00	0.00	0
Uttar Pradesh	0.00	100.00	1
Ghaziabad	0.00	100.00	1
Lucknow	0.00	0.00	0
West Bengal	100.00	0.00	1
Jalpaiguri	100.00	0.00	1
Kolkata	0.00	0.00	0
Total	50.00	50.00	4

Service providers from only four states responded to the query on maintenance of road crash data. Rajasthan and West Bengal answered 100 percent ‘yes’ to the query.

Table 6.42: Drunk and Driving is a Cause of Accident?			
State	Yes %	No %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	0.00	0
Chennai	0.00	0.00	0
Coimbatore	0.00	0.00	0
Uttar Pradesh	0.00	100.00	1
Ghaziabad	0.00	100.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

Service providers were asked to share their opinion on drunk driving being a cause of accidents. 100 percent of service providers from Madhya Pradesh and Rajasthan answered ‘yes’ to drinking being the cause of accidents.

Table 6.43: Opinion on Increasing Speed >10 km will Increase the Probability of Accident			
State	Strongly agree %	Don't know %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	0.00	0
Chennai	0.00	0.00	0
Coimbatore	0.00	0.00	1
Uttar Pradesh	0.00	0.00	1
Ghaziabad	0.00	0.00	0
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	00.00	3

Table 6.44: Opinion on Responsibility of Road Safety					
State	Traffic police %	Concerned Ministries %	Civil society organisation %	Others %	Total
Assam	0.00	100.00	0.00	0.00	1
Guwahati	0.00	0.00	0.00	0.00	0
Jorhat	0.00	0.00	0.00	0.00	0
Madhya Pradesh	100.00	0.00	0.00	0.00	0
Bhopal	0.00	0.00	0.00	0.00	0
Gwalior	100.00	0.00	0.00	0.00	0
Rajasthan	100.00	0.00	0.00	0.00	1
Jaipur	100.00	0.00	0.00	0.00	1
Udaipur	0.00	0.00	0.00	0.00	0
Tamil Nadu	0.00	0.00	0.00	0.00	0
Chennai	0.00	0.00	0.00	0.00	0
Coimbatore	0.00	0.00	0.00	0.00	0
Uttar Pradesh	100.00	0.00	0.00	0.00	1
Ghaziabad	100.00	0.00	0.00	0.00	1
Lucknow	0.00	0.00	0.00	0.00	0
West Bengal	0.00	0.00	0.00	0.00	0
Jalpaiguri	0.00	0.00	0.00	0.00	0
Kolkata	0.00	0.00	0.00	0.00	0
Total	66.67	33.33	0.00	0.00	3

100 percent of service providers from Madhya Pradesh and Rajasthan ‘strongly agreed’ that increasing speed limit by 10 km will increase the probability of road accidents.

100 percent service providers from two states answered ‘traffic police’ to question related to responsibility of road safety. 100 percent of service providers from Assam said ‘concerned ministry’ should be responsible for road safety.

Table 63: Frequency of Inspection of Public Transport Fitness			
State	Every year %	3-5 years %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	100.00	0.00	1
Jaipur	100.00	0.00	1
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	0.00	0
Chennai	0.00	0.00	0
Coimbatore	0.00	0.00	0
Uttar Pradesh	0.00	100.00	1
Ghaziabad	0.00	100.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

Service providers were asked about the frequency of inspection of public transport fitness, 100 percent from Madhya Pradesh and Rajasthan responded under ‘every year’ and 100 percent from Uttar Pradesh said ‘every 3-5 years’.

Railway: Service Provider Perception

Table 6.46: How Old are the Rail Coaches?			
State	> or < 3 years %	> or < 5 years %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	0.00	0.00	0
Jaipur	0.00	0.00	0
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	100.00	1
Chennai	0.00	100.00	1
Coimbatore	0.00	0.00	0
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

100 percent from Madhya Pradesh and Uttar Pradesh responded that the coaches are less than three years old. In Tamil Nadu 100 percent of service providers answered that the coaches are less than five years old.

Table 6.47: Frequency of Checking Fitness of Trains/Coaches			
State	Twice a year %	Every year %	Total
Assam	0.00	0.00	0
Guwahati	0.00	0.00	0
Jorhat	0.00	0.00	0
Madhya Pradesh	100.00	0.00	1
Bhopal	0.00	0.00	0
Gwalior	100.00	0.00	1
Rajasthan	0.00	0.00	0
Jaipur	0.00	0.00	0
Udaipur	0.00	0.00	0
Tamil Nadu	0.00	100.00	1
Chennai	0.00	100.00	1
Coimbatore	0.00	0.00	0
Uttar Pradesh	100.00	0.00	1
Ghaziabad	100.00	0.00	1
Lucknow	0.00	0.00	0
West Bengal	0.00	0.00	0
Jalpaiguri	0.00	0.00	0
Kolkata	0.00	0.00	0
Total	66.67	33.33	3

100 percent of service providers from Madhya Pradesh and Uttar Pradesh said the fitness of the train coaches is checked once every two years. However, 100 percent from Tamil Nadu answered with 'every year'.

Aviation: Service Provider

The service providers were interviewed regarding the safety norms followed, systems in place and various capacity building requirements that are taken care of by the aviation sector. Universal rules have been drawn and specific operational policies have been created for safety management. These rules are applicable throughout India.

The service providers informed that the staff/personnel on duty has proper skills and are trained for discharging their responsibilities, which includes the safety related concerns as well. These personnel also guide the service providers. There are regulatory authorities that ensure proper functioning of safety systems.

Highlights of the discussion:

- Safety norms are set at acceptable levels for all aviation-related operations within each State. These are also evaluated against the safety performance indicators.
- Communication is maintained with service providers at all times and quick resolution is provided in matters of safety concerns.
- As per the mandate, operators and service providers should establish and maintain the Safety Management System (SMS) in their day-to-day operations.

- Policy set by DGCA should be in place. All safety norms and standards should be broadcasted well. All those involved in aviation related activities should abide by all safety norms.
- Consumers should also be provided with all safety related awareness and encouraged to avoid hazardous activities while using the aviation services.

Transportation: Findings from Interview with Official

The officials serving the respective departments were interviewed. The questions were related to administrative procedures, consumer relations like grievance/complaints and awareness generation.

Policies

When asked about design and implementation policies of building in relation to consumer safety, the interviewed officials informed that departments follow the policies formulated by the Ministry. All safety norms related to manufacturing/construction is taken care of by the manufacturers and not the department officials.

Rules and regulations

Officials were also asked about rules and regulations specified for providing sector services to consumers while addressing safety issues. Most responded that manuals are developed for everything and the department follows those guidelines. The condition of coaches and roads is checked at regular intervals to insure safety of passengers/users.

Consumer concerns and satisfaction

Officials were asked about primary issues raised by consumers. As such there are no complaints from consumers. Consumer satisfaction is the primary concern of the department.

Awareness generation among consumers

Awareness generation is done through TV/radio. On railway stations, announcements are made on platforms. Any urgent information is shared with passengers through announcements related to delay in train, or accident or change of platform.

Box 6.3: Case Study of Road, Kolkata

There is gross violation of traffic rules, which lead to accidents. Zebra crossing has been proved to be meaningless and traffic police is playing the role of a mute spectator. In this context, pedestrians were randomly asked about the safety factor on the road. Their responses were not encouraging and stated that they face difficulty in crossing the road, as there is no sense of traffic rule compliance.

Box 6.4: Case Study of Sealdah Railway Station, Kolkata

Sealdah railway station is one of the major railway stations serving Kolkata. Passengers are boarding running trains which is very risky and loose live electrical wire is hanging on the platform. Moreover, there are *yellow* lines on the platform, which are difficult for passengers to identify exactly these denotes. This was observed over a period of two days during the course of fieldwork undertaken.

Conclusion and Recommendations

Energy Sector

Consumers do not follow prescribed instructions regarding electricity, gas (CNG/LPG) and their repair and take care. In some states (Madhya Pradesh and Uttar Pradesh) consumers get installations of CNG kit with the help of local market mechanics than opting for trained staff or authorised dealers.

About query on 'mandatory electrical safety checks, though not prevalent yet some respondents from Uttar Pradesh said the safety checks are not done on a regular basis or at regular intervals. Even the service providers said that the safety levels followed in relation to transformers installed is low and emphasis should be laid on making it safe. High percentage of respondents from Uttar Pradesh and Madhya Pradesh said it is very unsafe/ or not safe.

There are trained personnel available to look into the matters of emergency related to energy-related complaints. They are also oriented regarding safety norms to be followed. Though in some states the staff does not get training at regular intervals (Madhya Pradesh, Rajasthan and Assam).

Health

1. Food and water

Consumers were interviewed about the safety standards followed at restaurants with regard to food and water; and adherence to safety norms in hospitals and supply of medicines. Mixed responses were received from six states. It can be said that consumers were not very satisfied with the quality of food and water made available to them. Proportionately lower responses were received for 'very safe' across all six states. Even regarding cleaning of pipes for drinking water, in none of the states responses recorded were more than 80 percent.

Consumers are in habit of checking labels while purchasing products. The reasons behind checking labels stated by consumers were either to check the date of expiry or the ingredients. Consumers gave very less emphasis on checking the nutritional value of the packaged product. The decision made by consumers depends a lot on 'brand' of the product. The perception towards law enforcement agencies on an average is mixed in all states in matters of action taken by the law on safety.

2. Hospitals and medicines

Overall consumers have given a satisfactory response in regard to questions on medicine and hospital set-ups. Across all states, the response on an average has been positive and not extreme negative feedback.

In Tamil Nadu 22.09 percent of respondents were 'very dissatisfied' with the maintenance and safety in hospitals. For 'availability of life saving drugs', 21.06 percent respondents in Tamil Nadu were 'very dissatisfied'. In Madhya Pradesh, 21.05 percent of respondents were 'dissatisfied' with the hospital management.

Diverse responses were recorded for query on use of 'traditional medicine'. In states like Madhya Pradesh, Rajasthan and Tamil Nadu, respondents were 'very satisfied' with the traditional medicines; on the contrary in West Bengal 37.30 percent of respondents were 'very dissatisfied'

with it. On prescribing of antibiotics, higher responses were recorded in Assam, Madhya Pradesh, Rajasthan and Uttar Pradesh.

On feeling of safety at government hospitals many respondents from Assam, Madhya Pradesh and Uttar Pradesh said they did not feel safe in government hospitals. On the contrary respondents felt safer visiting private hospitals, except in Rajasthan where 43.44 percent of respondents did not feel safe in private hospitals.

In Madhya Pradesh and Tamil Nadu, service providers showed concern towards supply and storage of medicines, training of staff and provision of cash memo at the time of purchase.

Housing

Consumers informed that the lift maintenance is not done on a regular basis: 47.83 percent in Madhya Pradesh, 34.77 percent in Rajasthan, 53.58 percent in Tamil and 43.80 percent in Uttar Pradesh. Regarding regular inspection of constructed buildings, service providers from all states except West Bengal informed that it is done regularly. Post-construction the rating of builder's work is not done in Rajasthan and West Bengal. On reporting of poorly constructed buildings, in Rajasthan 1-2 reports have been filed and in Madhya Pradesh 25 percent of respondents also agreed about 1-2 reports being filed in the past five years. In none of the states all provisions for fire safety have been implemented or followed. In Assam none of the provisions are being followed. In other states one or two out of five provisions are in place.

Conducting mock drills and availability of medical kits for safety during earthquakes were absent from most states except Assam (Medical Kit) and Madhya Pradesh (Mock Drill). However, in Assam and Madhya Pradesh there was no provision of emergency exit reported by service providers.

Public Amusement Services

General awareness on hygiene of water rides amongst the users seems to be low. As higher responses are under 'do not know' proving that consumer does not consider hygiene levels as an important concern they should be aware of.

It can be said that consumers are aware of the utility of lifeguards and do ensure that they are available at public amusement locations. However, based on the responses during the interview it can be interpreted that there have been instances when lifeguard has been absent from places of public amusements.

The awareness levels in relation to presence of Medical Emergency Kit at Theme Parks on an average seem to be low. Majority of the responses fell under the category of 'don't know'. It could be related to respondent's lack of understanding to whether a Medical Emergency Kit should be available at theme parks or not.

The findings on presence of Medical Emergency Kit in cinema hall are also similar to that of theme parks however the responses vary from State to State. Awareness levels in Madhya Pradesh, Tamil Nadu and Uttar Pradesh in case of cinema hall are higher as compared to theme parks. In Rajasthan and Uttar Pradesh, higher number of respondents observed the presence of a Medical Emergency Kit in cinema halls.

Transportation: Public Experiences and Observations

1. Roads

The overall observation has been that consumers are dissatisfied with the available safety system/ protocols in place. Though a significant number of the responses were that they use a zebra crossing, however, there still remain a proportionately high number of consumers who said that they do not use the zebra crossing while crossing the road. Also consumers said that they find that there is not enough number of zebra crossings on busy roads. In Assam 80.40 percent, Rajasthan 92.53 percent and West Bengal 88.50 percent of respondents said there are not sufficient zebra crossings on busy roads. Similarly, for use of pavements by pedestrians, many of them responded that they do not use it as there are not sufficient numbers of pavements on roads. Except Bhopal and Lucknow all other districts have responded less than 80 percent for 'sufficient' of pavements.

When asked about speed-related penalties, consumers expressed that the penalty should be increased, which will imply that the vehicle users adhere to the speed limits and drive safe.

On questions related to adhering safety norms, respondents were found to be following the rules in most states except in Assam where 54.60 percent of respondents responded 'sometimes' to the use of helmet on two-wheelers. Use of seat belt was also prevalent in all States. Consumers were found to be following the safety regulations while on road.

2. Railways

Consumers were asked to share their experience with Railway authorities when lodging complaints. The response to the query was a mixed one. Consumers seem to be satisfied with the response from railway authority, however, there were a few consumers who said that their experience has been 'dissatisfactory'; namely responses from West Bengal, Assam and Rajasthan.

Proportionately higher number of respondents answered 'dissatisfied' when asked about food safety on trains. Approximately 30 percent of respondents from all the states were dissatisfied with the food.

Consumers are quite satisfied with the safety at railway crossings. They did not express much grievance however a high proportion of respondents from Rajasthan and West Bengal said that they are unaware of any such implications.

Recommendations

Energy

The awareness campaigns for consumers and service providers should be intensified. Consumers are unaware of safety norms and in certain instances overlooking the ones that have been prescribed by the government and the regulatory authorities. When asked about replacement of spare parts consumers are not vigilant. Despite government instructions of regularly replacing products, consumers tend to use them for the longest duration.

Some consumers also shared that they purchase products without checking the ISI mark. This should be discouraged. The focus of the regulatory bodies should be on creating awareness amongst consumers. The service providers should be attentive to consumer complaints, for

example, in Madhya Pradesh 81.48 percent of respondents did not receive any response at the time of electrical emergencies.

Consumers should be proactive when it comes to addressing concerns related to gas leak, rectification or servicing. In many instances it has been observed that consumers took action only when it was an emergency and were not in regular habit of getting servicing done.

Health

Overall consumers and service providers are satisfied with most of the aspects of Health, except the safety concern in government hospitals. Hence, the focus should be on creating conducive environment for consumers. Emphasis should be given on the storage of medicines. The staff should be trained and sensitised towards safe keeping of medicine stocks.

Housing

The regulatory bodies should ensure regular safety check-ups of the buildings. There are many constructions that are more than 10-15 years old; the maintenance of these buildings should be of primary importance to the regulatory body. The maintenance of lifts in buildings is also not done regularly across all states. Hence, regular checks should be conducted.

There should be a provision for review and appraisal of builders/contractors of buildings. The appraisals could improve the accountability and also the safety of the consumers.

Builders should meet all provision of safety while constructing building, which meet all safety norms during the case of fire and earthquake emergencies.

Public Amusement Parks

Considering many consumers have not visited theme parks there is an overall state of unawareness in relation to the safety provisions available at theme parks. Hence, responses from those who have experienced theme parks are a small portion of the respondents interviewed. On the contrary more number of respondents visited cinema halls.

Absence of lifeguards at water rides and theme parks is a concern in most States. Except Uttar Pradesh, all other States need to appoint lifeguards at theme parks. Similarly, for availability of medical emergency kits, many respondents answered 'no' or 'don't know'. The service providers should be instructed by regulatory bodies to ensure that medical kits (cinema halls and theme parks) and lifeguards are made available. Many consumers visit theme parks and cinema halls, hence the focus should be on making it a safe and secure environment for them. Also the labels and instructions should be clearly spelt out in such places to help create awareness amongst consumer.

The service providers should be instructed to conduct regular safety checks in cinema halls and adhere to norms set by regulatory bodies. The consumer complaints and grievances should be treated with utmost priority.

Transportation

1. Roads

The service providers should conduct a survey to identify these spots that have been mentioned by consumers and assign more safety measure in those locations. This would help enhance safety concerns and create conducive environment for general public.

Consumers agreed to higher penalty for rash driving/speeding. It could form the basis for regulatory authorities to revise penalty norms and help those ensuring better safety standards on roads.

2. Railways

Railway authorities should focus on maintaining food safety standards as it could cause major health hazards to consumers. The complaints from consumers should also be dealt in a sincere manner.

Annexure 1: Consumer Safety and Consumer Courts

According to the Consumer Protection Act (COPRA) 1986, the consumer right is referred to as 'right to be protected against marketing of goods and services which are hazardous to life and property'. Whenever there is a violation of the right, the aggrieved consumer has the right to be redressed either through consultation or by approaching designated courts. It is estimated every year that thousands or millions of citizens of India are victimised, killed or gravely injured by unfair practices by service providers.

To address such issues related to consumer grievances and disputes, consumer courts are constituted in District, State and at National level. Set up by the government, these judiciary courts aim to protect the rights of consumers. Their main function is to provide justice to consumers by providing simple and inexpensive redressal against complaints lodged by consumers. An aggrieved consumer can file a case against the seller if he feels that he has been misled, exploited or harassed by the seller. The court after hearing both parties would give the verdict based on proof of exploitation, business malpractice, and other documents. Hence, it is vital for a consumer to have all the legal documents, bills or receipt to be able to file and fight the case in consumer forum. Inability on part of the consumer to submit relevant supporting documents will make it difficult for the consumer to file or win the case.

Below is the summary of certain important cases (sector wise, as identified for the present study) dealt by National Consumer Disputes Redressal Commission (NCDRC).

Health

V. Krishnakumar vs. State of Tamil Nadu
(2015) 9 SCC388

The appellant's wife was admitted to government hospital for Women and Children, Egmore, Chennai for her delivery. She gave birth to a female child weighing 1250 grams in the 29th week of her pregnancy. The baby was kept in the intensive care unit and given 90-100 percent oxygen and also underwent blood exchange transfusion after a week of her birth.

It is said that a premature baby born before completion of 32 weeks of pregnancy and weighing below 1500 grams is prone to Retinopathy of Prematurity (ROP) if given supplemental oxygen and undergoes blood transfusion. This ROP is a disease which can lead to complete blindness. It can only be prevented if detected earlier, i.e. within 2-4 weeks of birth. The baby girl's ROP was detected when she was taken to Mumbai to a paediatrician when she was 4 ½ years old. The doctor without knowing her history and in his naked eye suspected ROP. Feeling helpless, V Krishnakumar and his wife took her to a US doctor but to no avail.

The court held that there was no error in judgment laid down by the NCDRC. It was held that respondents were negligent in their service as screening of that child was mandatory within 2-4 weeks of her birth, but respondents did not do it. Thus, considering V Krishnakumar's daughter, Sharanya's future, education, medical expenses, the inflation in the future medical costs, a total sum of ₹13,800,000 shall be paid by all respondents in the form of fixed deposit in the name of Sharanya who is now 18 ½ years old. It is also said that this total amount would yield an interest of ₹1,200,000 annually.

In the NCDRC's judgment, only two respondents were ordered to pay and two were relieved without stating any proper reason to it. A total amount of ₹13,000,000 shall be paid by first two respondents, i.e. by the State of Tamil Nadu and the Director of the Hospital, while the remaining ₹800,000 shall be paid by other two respondents equally. The past medical expenses amount, i.e. ₹4,287, 921 is to be paid by all respondents. An amount of ₹4,000,000 is to be paid by first two respondents along with an interest of six percent per annum from the date of filing before NCDRC and the remaining amount is directed to be paid by other two respondents along with an interest of six percent per annum from the date of filing before NCDRC.

Two civil appeals were made against the NCDRC judgment for a medical negligence, against the State of Tamil Nadu, its Government Hospital, two government doctors and a sum of ₹500,000 awarded to V Krishnakumar. One appeal is by V Krishnakumar for increment of compensation and one by the State of Tamil Nadu against the judgment of NCDRC. As both appeals are connected, these are disposed of by a common judgment.

Himanchal Kumari vs. Govt. of NCT of Delhi

2015 SCC OnLine NCDRC 6, (decided on January 27, 2015)

While holding doctors of one of the government hospitals, guilty of medical negligence, NCDRC has directed Delhi government to pay a compensation of ₹8 lakh to the legal heirs of a person who died due to excessive dose of radiation field applied on his body during radiotherapy. The said order of the Commission was pronounced on a revision petition filed by wife and children of deceased who were dissatisfied with the compensation of ₹5 lakh awarded by the State Commission.

Another revision petition was also filed in the same matter by Delhi government seeking reprieve from the liability to pay compensation. Earlier, the deceased had undergone an operation for removal of a malignant tumor cell of D-7 Vertebra in G.B. Pant Hospital but as he developed the same symptoms again, he was referred to Lok Nayak Jai Prakash Narain (LNJP) hospital for some tests and radiotherapy. In LNJP, due to lack of proper monitoring and excessive heat on the affected portion of the body during radiotherapy, he suffered paralysis below the chest and ultimately passed away.

The complaint was filed before District Forum alleging medical negligence in the matter by legal heirs. The Forum awarded ₹8 lakh for compensation which was later reduced to ₹5 lakh by the State Commission. After careful perusal of material on record, NCDRC observed that there was not only lack of proper supervision on the part of the treating doctor when the deceased was being subjected to radiotherapy, even the dose prescribed for radiation was excessive, which was the cause of the death of the deceased. The Commission noted that as the negligent doctors were on pay rolls of the government hospital, government is liable to pay compensation.

The NCDRC further noted that “the deceased was employed as an Assistant Engineer in a private company; at the time of his death he was the sole bread earner in the family consisting of four members; the loss of dependency on his death at the young age of about 46 years; the restoration of the amount of compensation of ₹8,00,000/- awarded by the District Forum would be just and adequate compensation”.

Leela G Nair vs. K P Haridas

First Appeal No. 522 of 2008, (decided on 25.3.2015)

A surgery was performed to remove an ovarian cyst and repair of umbilical hernia. By mistake, surgical instrument was left inside and for the same a corrective surgery was performed. The complainant having suffered mental agony and sufferings claimed compensation. Had the requisite diagnostic tests been done when complainant returned to opposite party with some complaints, she would have been spared the pain and suffering of five months. The State Commission allowed the complaint holding doctor and hospital jointly and severally liable to pay compensation of ₹346,000. The amount of compensation was challenged.

The National Forum, enhanced the compensation by ₹300,000. Further, having held it to be a case of gross medical negligence, it also awarded a sum of ₹100,000 as punitive damages. Consequently, the total award amount stands enhanced from ₹346,000 to ₹696,000.

Anamika Sharma, Dr. Shankar Rao Keshav Rao Sonwane vs. Chhattisgarh Hospital

II (2014) CPJ 265 (NC)

Anamika Sharma filed this complaint regarding death of her husband who was 33 years old, working as a Lecturer in Chemical Engineering Department, at Raipur Institute of Technology. He was suffering from low backache and taking physiotherapy by Dr. Shankar Rao Sonawane at the Centre of Chhattisgarh Hospital by paying 20 per day.

One day while receiving physiotherapy (IFT) he suddenly died. Dr. Sonawane had gone somewhere leaving the patient alone during physiotherapy using faulty IFT electric machine. The State Commission held the doctor negligent and directed Hospital to pay ₹5 lakh compensation with interest at 6 percent per annum, along with ₹3000 as costs. Anamika filed an appeal for enhancement of compensation and Dr. Sonawane applied to dismiss the complaint.

After perusing the post-mortem reports the court concluded that the hospital did not take annum maintenance contract for the said machine and failed to provide proper IFT machine which did not regulate flow of electricity in Dia Therapy Machine which caused death of Sharma. The National Commission considered untimely death of Sharma at the age of 33 years and calculated income till the age of 60 and to provide succour to Anamika.

The National Commission enhanced the compensation to ₹15 lakh to be paid by Dr. Sonawane and Chhattisgarh Hospital jointly and Dr. Sonawane to pay 2 lakh and compensation would carry out interest of 6 percent per annum from the date of filling the complaint.

The complainant had been suffering from urinary incontinence since birth and taking treatment in various hospitals. When he approached the respondent Hospital, he had numbness in the legs below ankles. The hospital advised that it was possible to have control over automatic flow of urine by conducting bladder augmentation with appendicular vesicostomy operation. The surgery was performed at the Hospital (a paediatric hospital) by doctor under local anaesthesia, given in the spinal cord as well as under general anaesthesia. Only bladder augmentation was done and appendicular vesicostomy was not done.

It is the appellant's case that his condition worsened after the surgery and that he had numbness in the region below the knees. The percentage of disability, according to him, increased due to the medical negligence of doctors and the Hospital. He filed a complaint before the State Commission which by impugned order dismissed the consumer complaint after dealing with all issues regarding the alleged incomplete surgery, the anaesthesia given and carrying out surgery in a paediatric hospital. Aggrieved by the order, the present appeal has been filed. Appeal partly allowed.

Issues raised and decided

- The contention of the appellant that the surgery should not have been performed at the paediatric hospital was rejected because the complainant approached the hospital of his own free will and requisite permission had been obtained from the Hospital.
- In so far as the surgery part is concerned, the doctor's version that during the course of operation the internal examination of the patient did not permit carrying out of appendicular vesicostomy for technical reasons was accepted. It was held that in any case if the second part of the surgery was not done, it did not amount to medical negligence.
- The charge of medical negligence on the score that anaesthesia was not given properly was held as not proved on the ground that a safe and internationally accepted procedure known as epidural analgesia was given under the direct supervision of a qualified doctor having specialisation in anaesthesia.
- In this case, it was found from the document dated November 06, 2002 entitled 'informed consent' that all possible implications had been explained to the complainant and his mother but the said document had not been signed by the complainant who was an adult major but it was signed by his mother. Relying on the decision of the Hon'ble Supreme Court in *Samira Kohli vs. Dr. Prabha Manchanda & Anr*, [(2008) 2 SCC 1], it was held that the consent obtained cannot be treated as 'valid and real'. To that extent there was negligence on the part of doctor and the Commission decided that doctor should pay a sum of ₹25,000 to the appellant patient for his failure to obtain 'valid and real' consent.
- The present appeal was partly allowed and the order of the State Commission modified to the extent that doctor should pay the appellant a sum of ₹25,000 within a period of four weeks from the date of the order.

Shaminder Kaur and others vs. Batra Hospital Medical Research Centre and others
I (2015) CPJ 428

Tejinder Singh, husband of complainant who suffered a heart attack on October 03, 2000 was treated initially at Amar Hospital, Patiala and was later admitted in Batra Hospital on reference. He was operated on October 16, 2000. While he was still in ICU, he fell in the bathroom on October 21, 2000 and died the next day. The opposite party certified the cause of the death as 'shock due to gastro intestinal hemorrhage and cardiac failure'.

Alleging medical negligence and deficiency in service by the Hospital, this original complaint has been filed praying for total compensation of ₹4,180,000 from the opposite parties. The issues considered were: (1) whether there was any negligence by the doctors in diagnosis and during the treatment of the patient and (2) whether the Batra hospital was deficient in its services during treatment.

Placing reliance on medical literature and the judgements of the Hon'ble Supreme Court in *C P SreeKumar(Dr.) vs. S Ramanujam*, (2009) 7 SCC 130 and *Kusum Sharma vs. Batra Hospital*, it was held that the medical negligence against doctors was not proved. However, it was held that the deficiency in service on the part of the hospital was proved to a limited extent since there was no one, staff or attendant, in the ICU when the patient went to the bathroom late in the night on October 21, 2000 and the patient was unattended. The hospital was held liable for deficiency in service due to laxity of ICU staff. Accordingly, the Hospital was directed to pay the total sum of ₹200,000 to the complainant within 90 days.

Harishbhai Shamjibhai and others vs. Dr. D.C. Gohil
I (2015) CPJ 231; 2015(1) CPR 345

The patient took treatment for pain in throat on May 28, 1997 from Dr. Gohil, an Ayurveda specialist. The doctor gave him some medicines and injection. Since there was no improvement he was referred to a specialist, Dr. Shah, who opined that the doctor has not taken care while giving injection. Hence, it led to infection, septicaemia and gangrene in the hip and whole body. Ultimately, on June 10, 1997, the patient died.

Therefore, the wife of deceased, along with her two sons, Harishbhai and Narendrabhai filed a complaint before the District Forum, Rajkot claiming compensation of ₹3 lakh with 18 percent interest from the opposite party. The District forum allowed the complaint and ordered the Ayurveda Doctor to pay ₹96,000 with interest at 9 percent per annum from the date of complaint and ₹5,000 as costs. Aggrieved by the order of District Forum, the opposite party filed first appeal before the State Commission, Gujarat, which was allowed while dismissing the complaint. Hence, against that order, the Petitioners have filed this revision petition.

- The first contention of the Petitioner was that Ayurveda Doctor was not qualified to give allopathic treatment since he is an Ayurveda Practitioner. His qualification is B.A.M.S. and L.M.P. Ayurveda Doctor having studied one particular system of medicine, cannot possibly, claim complete knowledge about the drugs of other systems of medicine. The transgression into other branches of medicine would tantamount to quackery and amounted to Unfair Trade Practice and also violation of Section 15(2) (b) of the Indian Medical Council Act, 1956. The decision in *Poonam Verma vs. Ashwin Patel and Others* (1996) 4 SCC 332 by Hon'ble Supreme Court is relevant.

- Opposite parties contention that there was no negligence is not accepted. It was held that the decision given in *Dr. Mukhtiar Chand and Ors. vs. State of Punjab and Ors.* (1998) 7 SCC 579 by Hon'ble Supreme
- Court is not applicable to the present case.
- The quantum of award for damages performs two functions; it compensates one who is harmed and it imposes costs on negligent medical service provider. Therefore, the complainants deserve higher compensation.

Revision petition was allowed with cost of ₹300,000. The Ayurveda Doctor was directed to comply with the order within 90 days from the date of receipt of the order, otherwise it will carry interest at 12 percent per annum till its realisation.

Kalpana vs. Dr. K. Ramalakshmi and another

I (2015) CPJ 79; 2015(1) CPR 314

The complainant alleged before the District Forum that she had spent a sum of ₹15 lakh towards hospitalisation, medicine etc. and ₹1 lakh towards other expenses and ₹2 lakh towards extra nourishment in view of the Medical Negligence caused by doctors in the course of surgery performed on her for medical termination of pregnancy and tubectomy.

The District Forum ordered that both doctors are guilty of medical negligence and are liable to pay a sum of ₹1,413,100 to the complainant within 15 days. Doctors filed appeals before the State Commission, which were allowed and the order of the District Forum was set aside. The present revision petition is against the orders of the State Commission. It was held that medical negligence is clearly established and that whole liability of the payment would be on Dr. Ramalakshmi with interest at nine percent per annum from the date of order of District Forum.

Issues raised and decided:

- Dr. Ramalakshmi contended that the operation was performed upon the complainant by her and not by Dr. Niranjana Reddy. She denied that the patient suffered complications involving vomiting, abdomen bleeding, etc. after the operation. She admitted, however, that on May 04, 2008, she referred the complainant to CMC Hospital, Vellore by giving a letter. If any patient develops complication after the tubectomy operation, she has to be referred to higher institutions.
- The doctors advised the complainant to go to Government SVRR (Ruya) Hospital, Tirupati, where her problem could have been rectified free of cost. However, the complainant and her husband insisted that a referral letter should be given in favour of CMC Hospital, Vellore. The doctors provided care to the complainant at CMC Hospital, Vellore as well, and doctor visited CMC Hospital, Vellore several times to see the complainant and inquire about her health condition regularly.
- The State Commission stated that the complainant had not adduced any expert evidence in support of allegations made against doctors. It was held that there could be no better expert.
- Dr. Philip Joseph clearly stated that the patient was found to have perforation in uterus as well as in intestine and that she was in a critical condition when brought to their hospital, just two days after the surgery done by doctors.
- Dr. K Ramalakshmi, as a medical professional, was expected to bring a reasonable degree of skill and knowledge and exercise proper care as held by the *Hon'ble Supreme Court in Kusum Sharma vs. Batra Hospital* reported in [(2010) 3 SCC 480].

- It was held that the medical negligence in the present case was clearly established from the material on record. However, the order passed by the District Forum is ordered to be modified to the extent that there shall be no liability against Dr. Niranjana Reddy because the surgery was done by Dr. K Ramalakshmi. The whole liability of payment of ₹1,413,109 shall be discharged by Dr. K Ramalakshmi along with interest at nine percent per annum from the date of the order passed by the District Forum.

Jai Prakash Mehta vs. Dr. B.N. Rai
[2013] NCDRC 1

Jai Prakash Mehta, in the year 1998, sustained serious burn injuries on his right arm due to an electric shock while working on electrification of a railway line as a contract labourer. An ENT specialist BN Rai in Rohtas, Bihar treated him for over two weeks and thereafter he was referred to Institute of Medical Sciences and S S Hospital, Banaras Hindu University, Varanasi, where he was informed about the gangrene in his right upper limb and therefore advised for the amputation of the right arm to save his life.

Mehta alleged that if he had been properly treated for his serious burn injuries and referred to an appropriate health facility by Dr. B N Rai on time, then gangrene and consequent loss of his right arm could have been avoided. The issue before court was whether there was deficiency in service by doctors of hospitals.

In revision petition filed before NCDRC, the Commission referred the Supreme Court judgments of *Jacob Mathew vs. State of Punjab* and *Indian Medical Association vs. V.P. Shantha* and held the doctor guilty of medical negligence and observed that the doctor being an ENT specialist did not *prima facie* possess medical skills to treat a serious burn injury and therefore liable to pay compensation of ₹2 lakh along with the interest at six percent per annum from the date of filing of complaint and litigation cost.

Public Amusement

Haryana Institute of Fine Arts (HIFA) & another vs. Rajesh Mani Kaushik and others
RP NO 384 of 1999, (decided on February 25, 2008)

A person who goes to a fun and fair is a consumer and if any problem occurs to him because of the organiser's negligence, he is entitled to compensation. This order was passed by the NCDRC in the present case. The complainant sought ₹4 lakh as compensation for injuries and suffering undergone by him and his family on account of an accident involving a merry-go-round put up at a *mela*, Phulwari Children Bazar, in Karnal in 1996.

The complainant had taken his wife and two children to the *mela* and they all decided to go on the ride. However, as the merry-go-round picked up full speed, its seats got detached and the family members went flying into space. As they landed on hard ground 15 yards away, they suffered serious injuries. The Karnal District Consumer Forum in this case awarded a compensation of ₹20,000, but the State Consumer Commission enhanced it to ₹1 lakh and held

not only the owner of the merry-go-round and the operator responsible for the mishap, but also HIFA and its Director and asked them to jointly and severally pay the compensation amount.

It stated that a person who organises such a *mela* would be liable for the deficiency in service rendered by the owner of the merry-go-round. The reason is it is the organiser's responsibility to take precautions in *Mela* that no such untoward incident occurs and such machines are properly installed. This was upheld by the NCDRC.

Housing

Sudhir Kumar Singh & Others vs M/s. Landcraft Developers Pvt. Ltd. & Others

[In the National Consumer Disputes Redressal Commission (NCDRC), Consumer Case No. 328 of 2013] (decided on April 11, 2016)

The residents of River Heights by Landcraft Developers in Raj Nagar Extension, Ghaziabad were aggrieved by the poor quality of construction and pathetic maintenance services by the developer in their society. Out of the two lifts installed by the developers, both would always remain under repair. There was also a persistent problem of water entering the lift pit from below the ground of the lift because of which the same used to become unusable.

Kone, the company, in their maintenance report mentioned that there is a problem of water entering the left pit and because of the same, the metallic parts of the lift were getting rusted and they underlined that any accident because of the above would be at the risk and consequences of the user/complainants. The parking area on the ground floor is structurally defective. Builders have made a park over the roof of the parking area and the roof is constructed with inferior quality of material, due to that, there is constant seepage. The parking area due to rain water and watering done in the park always remains water logged and the roof of the parking area has also swollen because of the same. The swimming pool never became functional, which was constructed over the clubhouse due to a problem of seepage and water logging.

On April 16, 2013, there was an earthquake of a very low intensity. The building suffered major damages and cracks at a number of places, including pillars, rooms, and balconies. The nature and pattern of cracks were common in most of the flats. It reveals the inferior quality of material used and also the defect in the type of constructions. Aggrieved by above mentioned and few more grievances, homebuyers sought the refund of their money at market price along with other damages.

Builder's defence was that at the time of registration of lease deed, homebuyers signed the condition which reads: "That the vacant and peaceful possession of the said apartment hereby sold has been delivered by the Vendor to the Vendee and the Vendee has satisfied himself about the quality, specifications and extent of construction and design of the said apartment and undertakes not to raise any dispute hereto after in connection therewith."

They also signed a maintenance agreement which reads: In this article force majeure circumstances shall include Acts of God, war, terrorism, civil commotion, riot, fire, earthquake, floods, theft, strike etc. and any circumstances beyond the control of the Company and/or FM agency". Thus, Builders argued that they are not liable for the loss occurred due to the earthquake.

The court observed that the buyers have produced certain other photographs, which showed the poor and precarious condition of few flats. There is one newspaper cutting pertaining to Ghaziabad Edition dated June 17, 2013 in the Hindi language, which shows that due to cyclone and rains, some of the trees were uprooted and a balcony had fallen down. The statements of buyers are supported by their affidavits. It is, thus, clear that the developers used inferior material in constructing this project. The buyers are in their houses for a pretty long time. It is not possible either to refund the money or put them in an alternative accommodation. Their grievances can be compensated by payment of costs. The buyers have paid the entire amount in the sum of ₹13,228,400 but as per the prayer clause, they are demanding more amount than the total price of the flats.

The developers are hereby directed to repair both the lifts within 90 days from receipt of the copy of this order. The certificate of their cent percent correction/their being flawless be issued by KONE. The swimming pool should be constructed/repared within 90 days above said otherwise the developers will be liable to pay a penalty of ₹5,000 per day till it is fully repaired and ₹1 lakh each to flat owners. Costs of ₹25,000 to each of flat owners are also granted.

Narender Kumar S Jain vs. Ashok D Adhyapak

[In the National Consumer Disputes Redressal Commission (NCDRC), RP/453/2007] (decided on July 01, 2015)

The petitioners, who are husband and wife, booked two small adjacent flats with the respondent for their bonafide residential use. After the construction of flats, sale deeds were executed in favour of petitioners and they were also put in possession of the respective flats. After taking possession of the flats, petitioners filed two separate complaints in question before the District Forum alleging that there were defects in the construction of the flats.

According to the complainants, there were leakages and cracks in walls. In order to ascertain the truth or otherwise of the complaints, the District Forum appointed a Commissioner to inspect flats and submit a report. The Commissioner after carrying out inspection of the flats submitted a report pointing out that there were certain defects as referred to in the order of the District Forum. After the receipt of the said report, the builder appointed an engineer to rectify e defects in the construction by paying a sum of ₹60,200. The District Forum meanwhile directed the builder to pay ₹40,000 towards repair charges, ₹25,000 towards compensation and ₹2500 towards cost of the complaint. These entire amounts should be paid to the complainant within 30 days from the date of receipt of this order.

The State Commission upheld the relief granted by the District Forum to petitioners. Not satisfied, petitioners filed a revision petition before NCDRC praying for enhancement in the relief granted by the District Forum while partly accepting their complaints and setting aside of the impugned order of the State Commission. The NCDRC, considering above facts and documents produced, directed the builder to pay a further sum of ₹20,000 in respect of each of two flats to complainants/petitioners within a period of four weeks from the date of this order. Rest of the order of the State Commission and the District Forum is maintained without any modification.

Ambience Island Apartment Owners vs. Raj Singh Gehlot & Ors.
Consumer Case No. 93 of 2004, (decided on April 03, 2013)

Ambience Island Apartment Owners alleged that the Developer (Ambience) did not install the full numbers of Elevators, as promised and piled on the agony of the Flat Owners, by not maintaining the already installed lifts throughout the Apartment Complex.

Their grievances are as follows:

- **Inadequate Lifts:** Builder advertised in newspapers to provide Apartments with high-speed Elevators with one lift for every ten Apartments. He further advertised that four Elevators would be provided for each of four Blocks. Builder, despite having chutes for four Lifts, provided only two Elevators in each of the above said four Block.

Poor Maintenance of Lifts: The crux of the whole problem is that, from day one, lifts were very slow and prone to frequent breakdowns. Due to lack of any maintenance, most of the features of the lifts, including, but not limited to the alternate power source have become totally dysfunctional. In the event of power failure, lifts are therefore plunged into darkness till the back-up of power source takes over, thus making it a harrowing experience for the people stuck in the lifts during power cuts. Lift provider, M/s. Scan Elevators, has throughout failed miserably to perform its duties during one year warranty period or subsequent maintenance of the lifts. M/s. Scan Elevators Ltd., was to provide 16 lifts, however, eight lifts were not installed and by not installing the eight lifts, enriched themselves to the tune of ₹12,800,000/.

Developer's argued that there was no deficiency on their part. All the lifts installed therein are of good quality. The lifts were installed before the possession and the occupation certificate was received on December 31, 2001 from Town & Country Planning, Haryana, Chandigarh. The complainants were fully aware on and before the booking of the flats regarding the quality of the lifts in question and the same were installed and maintained by builder. No complaint or representation regarding the above said defects were made to the developer by the residents. Builder buyer agreement supersedes Brochures, Advertisements, Representations, Sale Plans, etc. It was the duty of complainants to go through the Agreement, thoroughly.

Lift manufacturer's argued that they have got no privity of contract with the home buyers/residents. They are neither an agent nor in any way connected with the management of residents or developer. They have even stationed its engineers and team of technicians permanently in the building and were providing 24 hours all-back service, though, the same was never stipulated in the terms and conditions.

The court taking into consideration all documents and material facts ordered that the developer is liable to pay 70 percent of the maintenance charges from November, 2002, till date. The said amount be returned, within 90 days, with interest at the rate of nine percent per annum, from the date of receipt of the order, else, it will carry interest at the rate of 12 percent per annum, till its realisation.

The court also imposed costs on M/s. Scan Elevators Ltd., in the sum of ₹132,000, to be divided by complainants, in the sum of ₹2,000 each. Developers are directed to maintain lifts every day, month and year and maintain the record, in this context. Liability, if any, shall be saddled upon them if there is any accident or mishap. Same order was upheld by Hon'ble Supreme Court too.

The Chairman & Managing Director A.P. Transco and others Vs. Ch.Bhimeswara Swamy, Sr. Manager and others;

I (2015) CPJ 195

Wife of Bhimeswara, died in January 2004, due to electrocution at SIIL Campus, Paloncha. A police case was registered for negligence and non-maintaining high-tension power transmission wires in residential colonies. The complainants demanded compensation in the sum of ₹800,000 through legal notice. An appeal was filed before the State Commission which directed respondents to pay ₹244,000 along with interest of nine percent per annum from the date of filing of the complaint till payment and ₹2,000 towards costs. Aggrieved by that order, petitioners filed the present revision petition.

Petitioner's contention that the deceased was not a 'consumer' was rejected on the basis of the decision in *Rajasthan State Electricity Board vs. Charan Singh, Rajasthan State Commission*, 1(1999) CPJ 162. It also held that opposite parties had admitted that the wires were 25 years old and no effort was made by them to change the same with a new one. This itself showed the negligence on the part of opposite parties. The revision petition was accordingly dismissed with costs.

K G Sathyanarayan vs Bharat Petroleum Corporation

3 (2006) CPJ 8 NC (decided on May 19, 2006)

According to the complainant, at midnight he along with others suddenly heard the noise of gas cylinder explosion. He woke up and switched on the light and the moment he switched on the light, the entire room engulfed in a bowl of fire. The complainant tried to save his wife and daughter. But in this process he got burn injuries. It also caused extensive damage to his house. The complainant was using L.P. Gas Cylinder of Bharat Petroleum Corporation at his residence, supplied by dealer M/s. Rohan Gas Distributors. According to the complainant, the fire took place on account of defective regulator of the cylinder.

The court opined that the cylinder, valve and pressure regulator were in sound condition. Hence, it is unlikely that the above said accident is due to the failure of any of these equipments. However, the rubber tube used is of very poor quality and not suitable for use with LPG. This resulted in the continuous leakage and subsequently accident. The court also took note of the wrong step taken by the complainant in switching on the light after hearing sound, which could have caused this kind of accident.

In view of the evidence on record particularly the report of the Chief Research Manager of the LPG Equipment Research Centre, the Commission opined that the complainant and the distributor both have contributed to the accident by their negligence. By not insisting as changing the tube and installing gas cylinder despite defective tube, gas distributor failed to ensure a duty caste on them under the distributor's agreement to give necessary technical advice.

Thus, the distributor failed to perform its duty to ensure safety of the consumer and, thus, lend assistance in creating an occasion for gas leak which resulted in the accident. The complainant also contributed to the accident by unwittingly switching on the light point when he was not supposed to do it under the safety instructions. Thus, both have contributed to the accident.

However, the distributor had taken the insurance policy to cover the loss of accidental damage to property during installation of gas cylinder by the insured. Thus, Insurance Company would be liable to pay the amount to indemnify the insured distributor under the policy from May 05, 1995-May 04, 1996 to the extent of ₹10 lakh for any accident, and interest thereon for the delayed payment.

Regarding the question as to whether along with the distributor, Bharat Petroleum Corporation should also be held liable or not, the court observed, if the distributor is acting under authority of the government's oil company then the government oil company would not be able to absolve itself from the liability today compensation in such like matters on account of deficiency in service in not properly advising in terms of the agreement in case the trained staff does not perform their duty to check the gas connection and tube etc. and instruct about other safety measures. The Bharat Petroleum Corporation would itself be vicariously liable to pay for compensation in deficiency in service.

In the above circumstances, Bharat Petroleum Corporation Ltd. and Gas Distributor are held jointly and severally liable to pay a sum of ₹74,000 with interest nine percent per annum from the date of complaint. However, Gas Distributor is entitled to be indemnified by New India Assurance Co. Ltd., to extent of amount covered by the policy plus nine percent interest thereon.

Indian Oil Corporation Ltd. vs Om Prakash Seth

First Appeal No. 664 and 759 of 2007, (decided on September 17, 2014)

The case started on a complaint filed by Baldev Seth who said his father Om Prakash Seth, now deceased obtained an LPG connection from IOC. At the relevant time, the LPG cylinder so supplied was being used in the house of Baldev Seth. Om Prakash was not residing in that house. An LPG cylinder was supplied on December 05, 1995. The following day, an explosion took place in the early hours of the day. As a result of the explosion, one wall of the drawing room was blown up and the windows of the flat fell in a park in the neighbourhood. Also a number of gadgets such as VCR, microwave oven, stereo, AC and fridge as well as furniture items and crockery items were damaged.

Expert's report confirmed that the nozzle portion of the cylinder was defective and explosion was caused due to LPG coming in contact with relay system of the refrigerator.

IOC contended that the cylinder was not being used by Om Prakash, in whose name it was supplied, but the Bench held that since Baldev Seth was using the service with the permission of his father, he would fall in the category of 'consumer'.

The State Commission vide impugned order directed as under:

IOC shall pay ₹2.5 lakh as damages for the aforesaid household goods as well as for the mental agony, harassment and distributor shall pay ₹25,000 for its negligence

Being aggrieved from the order passed by the State Commission, IOC as well as its distributor approached NCDRC by way of two separate appeals. The NCDRC, however, modified the compensation amount to be paid by the IOC to ₹1 lakh while absolving the LPG distributor of any liability saying: "This is not the case of the complainant that there was any shortcoming in the

installation of the cylinder on its premises by the mechanic of the distributor. The distributor obviously supplied the LPG cylinder in the same condition in which he received it from the IOC”.

Transportation

Union of India vs. Dr. Shobha Agarwal

Revision Petition No. 602 of 2013

In 1996, the complainant along with her daughter was travelling in a AC second class sleeper with reserved berth from Gorakhpur to Beena by UP Kushinagar Express. It is alleged that there was lot of disarrangement in the reserved AC coach and some suspected person was seen snooping here and there about which a complaint was made to the ticket checker but no action was taken by him. The same suspected person was again seen in reserved coach in the night. When the complainant woke up in the morning, she found that her grey colour suitcase which had been tied under the berth with the help of chain and lock, was missing from there. When the ticket checker was told about the theft, after some initial reluctance he received the complaint but refused to receive the list of the stolen articles. The doctor brought the incident to the notice of the Railway Department and Railway Minister by writing letters to authorities and the railways lodged an FIR a year later.

Alleging negligence on the part of the Railways, the complainant lodged a consumer complaint before the District Forum. The District Forum allowed the complaint and directed Railways to pay Agarwal ₹2 lakh as compensation. Aggrieved by the aforesaid order of the District Forum, the petitioner carried the same before the State Commission but the same was dismissed. Later, the Railways contended before NCDRC that there was no negligence on their part and unless goods were booked with them, they were not liable to pay the compensation. The national transporter claimed that the doctor was responsible for taking care of her luggage. Rejecting the contention of the Railways, the NCDRC said no interference was required in the orders of the State Consumer Commission and the District Forum.

NCDRC Bench of Justice Ajit Bharihoke said “undisputedly, the complainant (doctor) and her daughter were travelling in a reserved coach and it was the duty of the TTE (ticket checker) to ensure that no intruders entered the reserved compartment”. “Since apparently there was a failure on the part of the TTE to prevent entry of unauthorised person in the coach during the night, the fora below were right in holding the petitioner liable for deficiency in service to the respondent (doctor) in this regard”, a bench said.

The Bench also quoted from a judgement in another case on the liability of the railways: “One has to presume that passenger would take reasonable care of his luggage. But, he cannot be expected to take measures against intruders getting easily into reserved compartments and running away with goods, when the railway administration is charged with the responsibility to prevent such unauthorised entry. We have entered the 21st century and we cannot carry on our daily life in the same age old fashion with bearing brunt of indifferent service provided by public authorities like Railways. People expect in the 21st century a modicum of efficient and reliable service, which provides at least safety of person and property while travelling in reserved compartments”.

Geeta Jethani & Ors vs. Airport Authority of India & Ors
Original Petition No. 81 of 2001, (decided on August 05, 2004)

A young child, named, Jyotsna Jethani met with a horrifying accidental death while getting out of escalator maintained by Airports Authority of India (AAI). Her mother and grandfather filed the complaint alleging deficiency in service on the part of the AAI which has resulted in chewing or crushing of their beloved daughter and hence claimed compensation for the irreparable loss.

For highlighting the deficiency in service the findings of the High Level Enquiry Committee, known as Jain Committee, appointed by the Government of India, Ministry of Civil Aviation were summarised as under:

- The escalator was purchased from M/s. OTIS India Ltd. in 1985 and installed in 1986. The OTIS was required to do both preventive as well as call-back maintenance under the supervision of the engineering staff of the AAI. It was found that maintenance of escalator was not being done in a satisfactory manner.
- The contracting of the maintenance work has not been done timely. There was no contract of maintenance of escalator between the parties and there was poor supervision by the AAI
- OTIS did not do maintenance work in a responsible way. Vital parts of the escalator had not been opened for check up for a long time by the OTIS.
- The quality of the engineering personnel of OTIS and the supervisory staff of the AAI was not satisfactory
- Improper documentation of maintenance work
- The engineering staff handling the escalator in the AAI was never trained to handle the equipment either with the OTIS or anywhere else
- Technical examination of the equipment shows that due to negligence in maintenance a hole was created in which some passengers fell and sustained injuries and the girl died
- Even some lifts installed at the airport were not in working condition on several occasions
- The escalator was not upgraded though there is increase in passenger traffic by 85 percent and it was subjected to intensive usage during peak hours. It was not equipped with safety features that were provided for in the later models of equipment.
- Lack of alertness and sensitivity in handling the situation on the part of the staff present at the time of accident
- As per Bindra, an official of AAI, he did not see at the spot either Doctor, Police or any official of AAI, and even the senior officers did not given any direction or instruction to manage the situation with least possible loss to humans. It shows lack of comprehension on the part of the AAI staff
- Absence of the concerned staff at the escalator to switch it off in case of calamity, has really aggravated the situation and this has been the prime reason for the tragedy
- Because of communication gap, the technical/operational staff did not reach the spot in time
- Stand-by support communication system was out of order for three months prior to the accident and this fact was not within the knowledge of seniors
- The concerned authorities had not planned any mock exercises to meet with the contingencies
- Inaction in not extracting the trapped deceased for about 25 minutes was callous and reprehensible

Apart from the inquiry report, the principle of *res ipsa loquitur* (events speak for themselves) is eminently applicable in the instant case.

While awarding the compensation a sum of ₹38 lakh, the NCDRC said that loss of child to arents is irreoupable and no amount of money can compensate them. The Commission criticised the callous and indifferent attitude of AAI denying its responsibility for deficient service and in questioning the compensation for a death – “we have developed the tendency to deny the obvious, in litigation. Except admitting the trapping of young child in the escalator, the AAI has tried to dispute its liability and deficiency in service. We do not know when we would change our Jurisprudence which encourages such attitude of denials and protracts litigation and increases burden on adjudicating forums/courts”. The said order of NCDRC was upheld by Supreme Court in 2008.

About Project

India is one of the largest consumer markets of goods and services. In service sector, being the transition economy, India is still in the process of putting up the required effective and efficient systems in place to protect consumers' right to safety.

The UN Guidelines for Consumer Protection clearly mention the right to safety as one of the inalienable rights of the consumer. Right to safety means the right of the consumer to be protected against products, production processes and services which are hazardous to health or life. It includes concern for consumers' long-term interests as well as their immediate requirements.

The Constitution of India also has provisions regarding the right to safety. Apart from the Constitutional provisions, there are more than 25 numerous legislations, international conventions and various regulations issued by different regulatory agencies on the issue of safety.

Despite all these, the state of consumer safety in India is not very encouraging, as evident from the 'State of Indian Consumer Report 2012' published by CUTS. The 'Safety' comes very low in the priority list of the Indian masses.

To realise the right to safety, it is not enough to just have safety acts and policies in place. It is equally important that acts and policies are implemented well, monitored and popularised among the mass, so that the people too can play a constructive and participatory role to ensure their own safety. By empowering consumers, visibility, accountability and functioning of agencies, mandated to ensure consumers' right to safety in India, would be enhanced and Safety will come in one of the top priorities of the common consumers which is not as yet as per the 'State of Indian Consumer Report 2012' by CUTS.

The project aims to strengthen consumer safety in India and publish the 'State of Consumer Safety in India Report' and thereby take the Indian consumer movement forward. Supported under Consumer Welfare Fund by the Department of Consumer Affairs, Ministry of Consumer Affairs, Food and Public Distribution, Government of India, the project aims to enhance consumer safety through research to find out ground realities, advocacy and by empowering of consumers on consumer safety issues.

This report widely covers five service sectors: Energy (Electricity, Gas); Housing (Fire, Earthquake, Lifts); Public Amusement Services; Health (Medicines, Hospitals, Food and Water) and Transport (Road, Rail, Aviation), with relevant other country experiences and suitable case laws/judgements passed by National Consumer Disputes Redressal Commission.

About CUTS CART

Established in 1983 as a small voluntary group of concerned citizens, Consumer Unity & Trust Society (CUTS) expanded its activities and CUTS Centre for Consumer Action, Research and Training (CUTS CART) was set up in 1996 as a programme centre of CUTS to pursue the cause of common consumers, initially being undertaken by CUTS as the mandate.

In order to contribute in the CUTS' vision of *Consumer Sovereignty*, CUTS CART endeavours through the mission 'To enable consumers, particularly the poor and the marginalised to achieve their right to basic needs, sustainable development and good governance through a strong consumer movement'.

The programmes of the Centre are primarily aimed at generating awareness, creating a more responsible society and encouraging changes at the policy level by advocating with the government machinery and sensitising it to the issues of concern of the common man. The Centre has spearheaded several campaigns and pioneered consumer empowerment.

Continuous pioneering work in the area of consumer protection and good governance found CUTS CART at the forefront in India, South Asia and beyond. Research, evidence based advocacy and networking has been its core strategies of programme implementation and have an active network of more than 1000 civil society organisations.

For more information please visit: www.cuts-international.org/CART/index.htm



CUTS[®]
International

CUTS Centre for Consumer Action, Research & Training (CART)

D-217, Bhaskar Marg, Bani Park, Jaipur 302 016, India

Ph: 91.141.228 2821, Fax: 91.141.228 2485

Email: cart@cuts.org, Website: www.cuts-international.org