International Labour Organization

Accessing medical benefits under ESI Scheme

A demand-side perspective

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Preface

The Employees' State Insurance Scheme (ESIS) provides social security and social health protection coverage to nearly 10 per cent of India's population, mostly from households of formal sector workers. It is further poised to cover millions of new beneficiaries from the informal sector as envisaged in the Code on Social Security 2020. Moreover, as medical benefits form the major focus of the ESIS, it is bound to play a crucial role in India's recovery from the COVID-19 pandemic and its path to Universal Health Coverage (UHC). With more than seven decades of experience in providing social security with statutory backing and a tripartite governance system, the ESIS is uniquely placed to rise to this challenge. At the core of this challenge lies translating legal coverage into effective coverage. In other words, the Employees' State Insurance Corporation (ESIC) must guarantee quality service delivery to every entitled person.

Despite a number of measures taken to improve service delivery, the ESIS persists with low rates of utilization of its medical benefits, and simultaneously high unspent financial reserves. Most existing analysis has attempted to identify supply side issues hampering utilization of ESIS services. The ILO has contributed to such analysis through its project "Technical support to ESIS for improving and expanding access to healthcare services in India – A transition to formality". As part of this project, based on inputs from organizations of employers and workers, the ILO has carried out the present study titled, "Accessing medical benefits under ESI Scheme: A demand-side perspective" in 2020-21. The present study brings together comprehensive primary evidence from four states of India supplemented by an analysis of relevant secondary data, to identify obstacles and incentives faced by beneficiaries in accessing ESIS services.

The evidence in this study captures the health-seeking behaviour of beneficiaries, as well as awareness and attitude of the insured persons and employers registered with the ESIS. The findings of this study underscore differential experiences and perceptions of beneficiaries in diverse implementation context of four states of India. The study highlights that while the ESIS beneficiaries appreciate the extensive benefit package, especially the medical benefits, there is still substantial scope of strengthening the effectiveness of the service delivery. At the same time, the beneficiaries themselves would gain from stronger awareness of their entitlements under ESIS. An important area of focus for increasing overall service utilization would be the provision of primary healthcare services. ESIS offers better financial protection than other similar schemes in India. However, it can contribute in a much larger way to India's goal of Universal Health Coverage by increasing out-patient and in-patient healthcare service utilization at its facilities. One way to do this, as the study indicates, would be to actively track and improve the levels of beneficiary satisfaction.

Based on its findings, the study has developed a theory of change with specific recommendations for strengthening ESIS performance in service delivery and utilization. In sum, the study emphasises the need for the ESIC to track and utilize beneficiary satisfaction parameters in advancing its reform cycles, including on the supply side. The ILO hopes that this study and its recommendations will enrich the ongoing efforts for strengthening the ESIS. The ILO will continue to work with the ESI Corporation of India and its tripartite constituents to improve the health outcomes for the workers and their families. A robust social health protection system in the ESIS would be critical for a human-centred recovery from the COVID-19 pandemic in India.

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The report has been reviewed by Indranil Mukhopadhyay (O P Jindal Global University), Mariko Ouchi (Senior Technical Specialist on Social Protection, ILO) and Nina Siegert (Chief Technical Advisor, ILO). The authors would like to thank Florence Bonnet, Labour Market and Informal Economy Specialist, ILO for her methodological inputs. The authors are grateful to the Employees’ State Insurance Corporation (ESIC) of India for their support. The report has immensely benefitted from the insights and feedback from ILO constituents representing the workers and employers of India.

[1] + Public Health Foundation of India
[2] * International Labour Organization

Executive Summary

Historically, the Employees State Insurance Scheme (ESIS[1]) has been among the largest social protection schemes for formal sector workers in India.

The Employees State Insurance Scheme

India's Employees State Insurance Scheme (ESIS) is one of the oldest and the largest Social Health Insurance (SHI) schemes for formal sector workers worldwide. Currently, the ESIS covers 35 states and union territories spanning 566 districts. It covers about 34 million employees, with a beneficiary population of 132 million. Its comprehensive benefits include in-patient/ out-patient and preventive services. Its other social security cash benefits include supporting maternity, sickness, disability, unemployment, and so on. ESIS is implemented in non-seasonal units that employ ten or more persons in factories and other service sectors including shops, hotels, restaurants, cinemas, and so on. The monthly income of the employees eligible to avail scheme benefits should be ≤ Rs. 21,000. Contributions are made by the employers, the employees and the state governments. The ESIC operates its own hospitals and dispensaries, besides purchasing curative care from private health facilities for hospitalization and out-patient services through the empanelled IMPs (Insurance Medical Practitioners).

A necessary demand-side perspective

Despite having impressive performance over the last 70 years, several weaknesses and gaps still persist in the functioning of ESIS. The population coverage is lesser than the potential ESIS holds. The service coverage is poor leading to underutilization of its facilities, weak access to facilities, and unavailability of defined packages. Given its wider scope of cost coverage, beneficiaries continue to spend out-of-pocket and receive far fewer cash benefits than their potential. In the past, the government's audit reports, parliamentary committees, and other peer-reviewed articles have pointed to systemic weakness and poor performance of the system. While the focus of these reports and evidence has largely corroborated the issues around the supply side, evidence is scarce on the demand side. The evidence on the demand side that exists is from a small number of micro-studies, mostly at district and industrial cluster levels, regarding the obstacles faced by the beneficiaries in accessing the ESI Scheme benefits. This report tries to provide a wider perspective with evidence from four states of the country.

> ESIS covers 35 states and union territories with about 34 million employees, with a beneficiary population of 132 million. Its comprehensive benefits include in-patient/ out-patient and preventive services.

It seeks to analyse the following:

- Beneficiaries' knowledge, attitude and awareness levels in relation to ESIC entitlements;
- Employers' knowledge, attitude and awareness about ESIS;
- Identify and suggest potential solutions that can be used to design services, deepen service coverage and improve ESIS performance.

Methodology of the study

This research seeks to achieve the above objectives by employing a mixed-method approach with a two-stage stratified random sampling method. The supply-side dimensions were analysed by compiling and assessing the ESIS performance for the past decade. This analysis was done by organising its evidence base from publicly available data: (a) ESIC annual reports; (b) National level sample surveys including Periodic Labour Force Survey (PLFS) 2017-2018 and Health Surveys of 2017-2018. The demand-side evidence was gathered based on field level survey from four Indian states of Tamil Nadu, Rajasthan, Haryana and Jharkhand. It employed tools to cover both quantitative and qualitative data from the field. The quantitative data were collected from 3,339 employees and 553 employers across these four states. The qualitative data through Key-Informant Interviews (KIIs) were obtained from ESIC officials, trade union leaders, employers' associations, and healthcare providers.

Key findings

Limitations of rapidly expanding legal coverage

The quantitative evidence from secondary data highlights several achievements and weaknesses of the ESIS in terms of its performance. The evidence shows rapid and significant growth, signalling a five-fold rise in the number of enterprises (from 0.22 million in 1999-2000 to 1.03 million during 2018-2019) with a corresponding rise in the number of employees covered from 7.86 million to 31.17 million. Against three per cent of the total population covered in 1999-2000, ESIS currently covers approximately one tenth of India's population. With about 31 million employees registered in 2018-2019, they accounted for about 91 per cent of the total 34.02 million workers in the formal employment category. This shows appreciable coverage by the ESI under the formal employment category in the formal sector. Nearly half of the workers who can potentially be included under the ESI are denied benefit due to their not meeting the inclusion criteria in the definition of workers. Presumably, such an employment is largely linked to the contractual work that is provided directly by the employer or provided through a contractor.

Limited awareness of the entitlements: insured persons

Several insights emerge from the field-level analysis of data. The survey findings reveal a higher level of awareness among employees in relation to ESIC's medical benefits (89 per cent) than on cash (46 per cent) and disability benefits (32 per cent). Studies also showed that understanding about the medical benefits is relatively greater among employees in Haryana (94 per cent) than in Jharkhand (75 per cent). This could plausibly be due to the varying socio-economic and educational status of the respondents. Although enrolment is mandatory for employees, the proportion of enrolment of households in the ESI scheme includes its insured persons (IPs) (85 per cent), while this share drops to 78 per cent after excluding the employees. Thus, over one in five household members did not enrol in the scheme, whereas over three fourths of the households and employees had ESIC cards.

Limited awareness of entitlements: employers

In terms of employers' knowledge, a sizeable share of them is aware of employees' medical benefits (92 per cent), followed by cash benefits (62 per cent), medical aid (57 per cent), disability benefits (41 per cent), and far less on funeral expenses (20 per cent) and unemployment benefits (14 per cent). Prior to reforms initiated in 2020 whereby the registration process was made simple, employers were often faced with several challenges. Nearly one of two employers reported a lengthy process of insurance number generation, whereas 41 per cent of the employers

surveyed indicated the difficulties surrounding the biometric enrolment process for obtaining an ID card. The survey further highlighted that 30 per cent of employer respondents appear to face challenges in the online registration process, while 28 per cent of them reported having faced the challenge of submitting documents, including the quantum and processing of documents required. Expectedly, only about half of employers were aware of grievance redressal mechanisms, and an equal number of them had used telephonic mode in the past as a mechanism to reach out to the authorities. Barely one in three employers were cognizant about Suvidha Samagam, while inspections from ESIC officials were reported by one fourth of the employers as a mechanism for grievance redressal.

Variable health-seeking behaviour among beneficiaries

Healthcare utilization patterns showed that one in five persons reported at least one illness in the past 15 days with females reporting a slightly higher rate of illness than males, with considerable variation in illness reporting across states. Over half of the sick individuals sought treatment. Yet, the average among the four states hides significant differentials in treatment-seeking as 94 per cent of beneficiaries in Tamil Nadu sought care against 10 per cent in Jharkhand. The share of beneficiaries seeking treatment in Haryana and Rajasthan was 60 per cent and 38 per cent, respectively. Substantial differences in utilization of health care across states highlight variations in treatment-seeking behaviour, suggesting the availability or lack of healthcare facilities. Although 82 per cent of beneficiaries did not seek care due to the illness not being considered serious enough, about 7 per cent of the beneficiaries did not seek treatment due to the lack of nearby health facilities. Also, 8 per cent of beneficiaries forewent treatment owing to unsatisfactory health service provision. The gross underreporting suggested by the field survey could be due to the COVID-19 pandemic, and associated restrictions, placed during the field survey period. Patients were under the influence of fear and stigmatization. This forced them to not report even if they faced simple ailments of fever, cold, cough, and so on. Yet, barely one in four OP visits were sought in ESIC dispensaries/hospitals and a similar share was accounted for by private non-empanelled facilities.

Improving in-patient utilization and weak out-patient utilization

In respect of the performance of healthcare utilization, the rate of hospitalization enhanced significantly from 1.3 per cent in 1999-2000 to 2.8 per cent in 2017-2018. Thus, utilization rates reflect similar levels recorded in national sample surveys. Outpatient utilization rate per 1,000 beneficiaries, dropped significantly from 609 to 208 for the same period due to inadequacy in facility expansion. Similarly, the rate of investigations (diagnostics) per 1,000 beneficiaries also dropped substantially from 37 to 15 for the referred period. The survey findings in respect of the hospitalization episodes revealed that 62/1,000 beneficiaries sought treatment, with significant variation among states: Tamil Nadu (104/1,000 persons), Rajasthan (28/1,000 persons), Haryana (67/1,000 persons), and Jharkhand (49/1,000 persons). The survey reported a slightly higher rate of hospitalization episodes, indicating a higher level of hospitalization when ESIC, empanelled and non-empanelled hospitalization were considered. In respect to the type of facilities chosen, one in three hospitalizations occurred in an ESI hospital: (i) about 15 per cent hospitalization in a government hospital; (ii) barely 5 per cent of the hospitalizations occurred in a private empanelled facility; (iii) the rest nearly half of the hospitalization episodes were treated in private hospitals that were not empanelled. Since some of the ESIC hospitals were designated for COVID-19 care, it is highly unlikely that the beneficiaries would have sought treatment in the ESIC hospitals.

Lower yet significant out-of-pocket expenditure by beneficiaries

Despite generous medical and cash benefits, ESI beneficiaries appear to incur costs, though relatively far less than other insurance schemes. The average expenditure incurred by households covered by the ESI scheme was Rs. 38,668 annually, while CGHS beneficiaries paid out Rs. 50,470. On the contrary, households covered by private health insurance schemes paid nearly double the expenditure than that incurred by ESI beneficiary households.

A relatively lower level of households' out-of-pocket (OOP) expenditure could be because households may be accessing secondary-level nursing homes or other less expensive facilities. A large share of this spending could potentially be used for buying medicines, diagnostics and consultations. The field survey further reveals an episode of treatment for hospitalization, the mean spending works out to Rs. 23,834, but with significant variation depending upon which facilities beneficiaries choose from. Beneficiaries ended up paying barely Rs. 2,426 for an episode of in-patient service at ESIC facility as against Rs. 34, 372 when beneficiaries sought treatment from the private non-empanelled hospital. On the other hand, even though only 7 per cent of ESI beneficiaries sought treatment in a private empanelled hospital, yet they were forced to pay Rs. 13,409, about 5 times than when they sought care in ESI facilities. The field evidence suggests that a considerable share of beneficiaries seek treatment in private non-empanelled hospitals and by doing so were exposed to a serious level of OOP spending. Similarly, per episode out-patient treatment in private non-empanelled facilities costed beneficiaries Rs. 1,021 as against Rs. 157 when beneficiaries sought treatment in ESI dispensaries. Even in a private empanelled facility, beneficiaries ended up paying a relatively high OOP at Rs. 842. Notwithstanding the treatment and cost associated, the pattern observed here corroborates the evidence presented in the previous section. It highlights that ESIS beneficiaries were less prone to incurring catastrophic spending than those covered by the government-funded health insurance schemes or even the private health insurance schemes. The evidence indicates that medicines' shortage remains a major issue in ESIC hospitals. The non-availability of the comprehensive diagnostics services is yet another critical factor accounting for OOP incurred by the beneficiaries. As far as the child delivery services are concerned, one out of three child deliveries occurred in ESIC facilities, similar to the numbers in private non-empanelled hospitals. About 10 per cent each was accounted for by the public hospitals and private empanelled ones. This implies a significant gap in the provision of the child delivery services within ESIC or empanelled facilities.

Low beneficiary satisfaction with ESI services

The study showed that only 50 per cent of the employees were satisfied with the information provided by ESI regarding cost, treatment and reimbursement. In respect of the availability of staff/medicines, about 61 per cent of respondents remained satisfied and two in three patients appear to have been satisfied with the quality of services provided in ESIC hospitals. In respect to dissatisfaction levels, the field findings painted a grim picture of the hospital behaviour as only 47 per cent of hospitalization cases were considered satisfactory. It implies that an adequate room exists to improve behaviour as over half of such hospitalization events turned out to be unsatisfactory. In 52 per cent of hospitalization cases, beneficiaries wanted to visit again for treatment.

Survey results identified several reasons for dissatisfaction:

- Respondents were not aware of the benefits available for the beneficiaries (17 per cent),
- Partial coverage of payment (13 per cent),
- Technical problems (11 per cent),
- The problem in claim settlement (10 per cent), and
- Unavailability of medicines/equipment (9 per cent) and so on.

Moreover, 6 per cent and 5 per cent of the respondents complained about non-cooperation from the employers and non-submission of funds from the employer, respectively. Analysis of the reasons for dissatisfaction in non-empanelled private hospitals shows that the major reasons are partial coverage of payment, problems in claim settlement, and lack of awareness about the benefits of ESI.

The comprehensive set of evidence presented here based on field-level data, available secondary data, and feedback from the social partners point to the imperative of addressing each of the issues identified from the supply and demand side. First, the imperative of an outcome-focused awareness strategy is critical at this stage. This mission would have a two-fold purpose – outreach to the beneficiaries beyond their workplaces and training of both the beneficiaries and the concerned ESI staff in improved access and delivery systems. Second, there is a need for significantly improving ESI healthcare service utilisation. Improving primary healthcare provision should be accorded the highest priority in the ESI reforms agenda. The ESI should engage with more state governments, to expand the IMP system for better availability of primary healthcare services. Moreover, there is a need to move away from a demand-based approach to a population-based approach. This would entail expanding services beyond those who directly approach ESI facilities. One way of doing this would be to increase focus on the preventive health programmes that reach out to beneficiaries in their places of work and living; Third, there is an urgent need to improve financial risk protection measures for the ESI beneficiaries. This can be achieved by improving the efficiency of existing facilities, providing additional services over the above what is being provided, and perhaps recruiting specialists, doctors, nurses and other healthcare workers, besides avoiding shortages and stock-outs of drugs and diagnostic facilities. Fourth, periodic beneficiary satisfaction surveys should be considered as a device to track the effectiveness of all reform measures discussed here. Such surveys should also take into account the internal diversity of the beneficiary base as well as the varying implementation environments across different regions. Ideally, such a survey should generate periodic performance matrices for different implementing actors, within the ESI system. In the similar vein, this study has developed a model composite index of ESI performance of different states. The findings from this index have been revealed in the anomalous performance of states like Maharashtra and Tamil Nadu.

The ESIC may consider further developing this index as per their specific needs for an annual public ranking of states by their performance in delivering ESI services. Finally, generating additional evidence for ESI transformation is called for here. This may include further research on the demand side including determinants of health-seeking behaviour of ESI beneficiaries; mapping of wider stakeholder ecosystem at the state level; understanding local healthcare provision landscape; assessment of non-empanelled providers' capacity and willingness to empanel with the ESI Scheme; and review of the functioning of tripartite governance structures at various levels in the states. The evidence and information thus generated can be systematically utilized in developing more responsive reforms with measurable impact on local level utilization of ESI health services.

Contents

List of Figures

List of Tables

List of Boxes

Abbreviations

CSO	Central Statistics Office
CGHS	Central Government Health Scheme
DIC	District Industries Centre
EPFO	Employees' Provident Fund Organisation
ESIC	Employees' State Insurance Corporation
ESIS	Employees' State Insurance Scheme
FGD	Focused Group Discussions
GST	Goods and Services Tax
IP	Insured Person
IMP	Insured Medical Practitioner
IDI	In-depth interview
KII	Key-informant interview
NSSO	National Sample Survey Office
OOP	Out-of-Pocket
PAC	Public Accounts Committee
TNMSC	Tamil Nadu Medical Services Corporation
PLFS	Periodic Labour Force Survey
PHFI	Public Health Foundation of India
PCNL	Percutaneous nephrolithotomy
PMJAY	Pradhan Mantri Jan Arogya Yojana
RMSC	Rajasthan Medical Services Corporation
RSBY	Rashtriya Swasthya Bima Yojana
SHI	Social Health Insurance
TAT	Turn Around Time
VAT	Value-added Tax

1. Background, objectives and sample design

Historically, the Employees' State Insurance Scheme (ESIS[1]) has been among the largest social protection schemes for formal sector workers in India.

1.1. Background

In its comprehensive gamut of social security benefits, medical benefits occupy a place of prominence given the level of expenditure and the depth of coverage. With this, the ESI Scheme performs the role of a typical social health insurance scheme. Resources are mobilized from employers and employees with limited contributions received from state governments. Currently, for every insured employee, the employer and employee contribute 3.25 per cent and 0.75 per cent, respectively, of the employee's wage. The ESI Scheme covers 35 states and union territories spanning 566 districts. The scheme is applicable to non-seasonal units engaging 10 or more employees in factories besides covering shops, hotels, restaurants, cinemas, transport undertakings, newspaper units, insurance and non-banking financial establishments, and so on. Employees eligible for social security coverage are those earning Rs≤. 21,000 per month. However, employees earning Rs. <137/- a day as daily wages are exempted from payment of such contributions. The income level for eligibility of persons with disability for availing ESIC Benefits is Rs. 25,000.

According to the ESIC's annual report 2019-2020, the scheme approximately covers >34 million employees spread across 1.2 million employers, w ith a total beneficiary population of more than 132 million (including insured persons (IPs) and their families). The ESIC operates its own hospitals and dispensaries, besides purchasing curative care from private health facilities for hospitalization and out-patient services through the empanelled IMPs (Insurance Medical Practitioners). The risk-pooling underlying ESI is large, national in character but largely confined to formal sector enterprises. One defining characteristic of ESI is its comprehensiveness and all-inclusive benefits by way of not only providing care for in-patient/ out-patient and preventive services but also other social security cash benefits (such as, maternity, sickness, disability, unemployment, and so on)[2]. Out of the total 566 notified districts (381 fully implemented districts and 185 partially implemented districts, leaving 156 districts as non-implemented districts), ESIC hospitals are present in about 150 districts, while the beneficiaries are also entitled to access hospital care from other empanelled hospitals. With respect to out-patient and preventive care, services are provided through approximately 10,000 medical units (consisting of ESI dispensaries and IMPs). As the healthcare service provider network of the ESI evolves to cater to a rapidly growing beneficiary population spread across India, at present, the facilities remain unevenly distributed across districts.

With the above features, the ESI Scheme remains one of the largest actors in the Universal Health Coverage (UHC) agenda for India. The present study is an effort to understand the ground-level challenges in increasing utilization of ESI healthcare services, for the scheme to fully realise its potential.

1.2. Key objectives

The overall objectives of this study are:

- To assess the health-seeking behaviour, needs and perceived challenges of current beneficiaries (workers and economic units) regarding their ESI health care insurance, access to services in ESIC's own and empanelled healthcare service providers;

- To assess the beneficiaries' (workers' and employers') knowledge about ESI benefits and, in general, benefits of a health insurance coverage; and
- To identify and suggest potential solutions that can be used to design services, which would deepen service coverage and facilitate beneficiaries, employers, and healthcare providers underlying ESI health insurance schemes.

Overall, the present study would map the perspectives of the current beneficiaries of the ESI Scheme on various aspects of their participation and entitlements in the Scheme.

For the insured persons (workers), the study examines the following:

- The beneficiaries' perception of ESI health insurance, their expectations and behaviour relating to healthcare service utilization;
- The beneficiaries' level of information about their health insurance benefits and entitlements;
- The beneficiaries' level of satisfaction with ESI services, particularly related to health care coverage; and
- The beneficiaries' attitudes towards ESI facilities as compared to other public and private healthcare service provision facilities.

For the ESI-affiliated employers, the study examines:

- The level of information employers have about ESI benefits and entitlements;
- Their experience with ESI and their perception of the quality of services provided; and
- Their behaviour and motivation to enrol their workers into ESI.

[1] ESI and ESIS have been interchangeably used throughout this report to refer to the ESI Scheme in general.
[2] The full list of ESI benefits can be seen on the ESIC website: https://www.esic.nic.in/information-benefits

The current study has also gathered some supplementary information from other stakeholders of the ESI system.

For selected ESI healthcare service providers, the study attempts to understand their perception regarding the performance of the ESI in implementing social health insurance.

In realizing the above objectives, the study has additionally focused on illustrating the diversity of needs, experience and outcomes for female insured persons and family members.

In conclusion, this study recommends improvement in the quality and utilization of ESI services for its diverse beneficiary base.

1.3. Methodology

The study employed a mixed-methods approach for obtaining both quantitative and qualitative data from stakeholders in the four states, focused on existing ESI-insured workers and their families, ESI-affiliated employers and healthcare providers. The quantitative data were generated through a large-scale survey of employers and workers registered in the ESI Scheme. Qualitative data were generated using Key Informant Interviews (KIIs) with other stakeholders including healthcare providers (both in ESIC's own and empanelled facilities), trade union representatives, and employer associations' representatives.

This study attempts to understand their perception regarding the performance of the ESI in implementing social health insurance.

We adopted a two-stage stratified random sampling method. The first stage was the selection of states, as outlined in the next section. The second stage involved the selection of ESI-registered employers (enterprises) and insured persons (employees) associated with those enterprises. This is further described in Section 1.3.2.

The study was complemented by an analysis of existing national survey data, such as PLFS 2017-2018 and 2018-2019) and health surveys conducted by the National Sample Survey Office (NSSO), latest Economic Census data, besides assessing ESI scheme details. The analysis from secondary data complements the findings of the field-based survey. Evidence from the secondary analysis is outlined in Chapter 2, while Chapter 3 highlights key evidence emerging from the field survey.

1.3.1. Selection of states for ESI beneficiary survey

The study carried out a broad ranking of the states by assessing several indicators of the ESI's functioning in respective states, and combining them in regional groupings. It is important to note that this composite index may not represent the full performance matrix of the states in the ESI scheme. In order to have such a performance ranking a more detailed assessment and organization of relevant variables with suitable weightages where necessary, would be required. The purpose of the present composite index is simply to achieve a broad categorization of states to be selected for this study.

The selected indicators represent five different dimensions of the ESI's functions in different states. These dimensions are: (i) level of participation of economic units of the state in ESI; (ii) beneficiary coverage; (iii) health infrastructure available for ESI beneficiaries; (iv) utilization rates of health care by the ESI beneficiaries; and (v) per capita expenditure on beneficiaries by the ESIC. In four such dimensions, two representative indicators were selected, while the fifth included one indicator. The indicators used for preparing a composite index for each state are as follows:

- **Level of the participation of the economic units of a state in ESI**
  - Percentage of ESI-registered employers among total non-agricultural enterprises
  - Number of employees per ESI-registered employer
- **Beneficiary coverage**
  - Number of beneficiaries per employer
  - Number of beneficiaries per IP

- **Health infrastructure**
  - Number of hospitals (ESIC and empanelled) per 100,000 beneficiary population
  - Number of dispensaries (ESIC and empanelled) per 100,000 beneficiary population
- **Utilization rates**
  - Hospitalization rate
  - Outpatient visit rate
- **Expenditure**
  - Per capita expenditure

The values of the indicators for 23 major states are presented in Table 1.1 These indicators were obtained for the year 2017-2018 from the Annual Report of ESI. The union territories were grouped with the neighbouring major states and all the North-East Indian states were merged with Assam. The five sets of indicators were used to construct a simple (unweighted) index for different states. The values for each state and each indicator were standardized (scaled) using variance method formulas (1) and (2) as given follows:

Scaled value (S) of indicators = $(X_i\text{-Mn})^*100/(Mx\text{-Mn})$= ..... (1)

The composite index = $(\sum S_i /n)$ ..... (2)

Where 'X_i' denotes the value of any indicator for any state; Mn is the minimum value of any particular indicator across states; Mx is the maximum value of the particular indicator across states, and 'n' indicates the number of indicators. The index value of each indicator along with the average composite index for each state is given in Table 1.1 given below. Finally, all the 23 major states were ranked in descending order based on the value of the composite index and were classified into four major groups. The index value from the high to low indices represents the states with the strongest to the weakest intensity of the ESI's functioning[3] in respective states. The threshold values for classifying the states based on index measures into groups have been taken to represent a generally declining gradient of 'intensity' across states. For instance, Group I includes states having an Index value of ≥40. Group II includes states having index value between 30 and 40. Group III states have index values <30. Figure 1.1 below presents a list of states in the four groups along with the estimated composite indices.

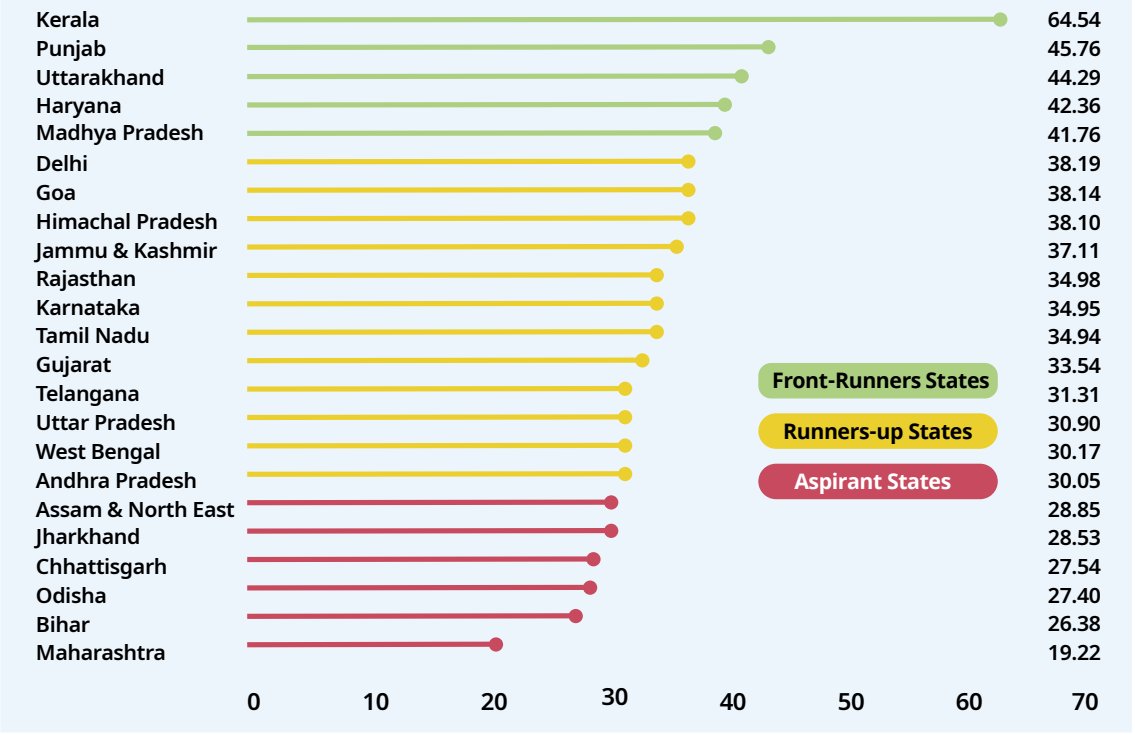
Table 1.1. Number of employers and insured family units covered and sample selected for the survey

States	Number of employers	Number of IPs covered	Sample number of employers selected	Sample number of IPs selected
Jharkhand	17 796	3 78 250	38	193
Haryana	1 32 878	48 21 000	150	1 013
Tamil Nadu	1 15 193	42 72 920	173	1 000
Rajasthan	1 48 258	45 94 170	192	1 133
All-India	10 33 730	3 43 31 300	553	3 339
4 States Total (Numbers)	4 14 125	1 40 66 340	553	3 339
Percent Share (4 States)	40	41	0.13	0.02

Source: Number of employers and IPs units are from ESIC Annual Report 2017-18

[3] The 'intensity of the ESI's functioning' is meant to represent the general level of activities and presence of ESI infrastructure and services in a particular state. It is not meant as an indicator of ESI performance at the state level.
[4] The sampling exercise is based largely on ESIC data from 2017-2018 annual report as it was carried out in early 2020, when newer data had not been released.

Figure 1.1. Classification of states based on the composite index



Source: Based on data from ESIC Annual Report 2017-2018

States selected for the survey

In selecting the states from the composite index, the criteria of regional distribution were also given due consideration. Haryana was selected from Group I representing a northern state. From the middle range category involving Group II, Tamil Nadu and Rajasthan were selected as medium performers, representing a southern and a western state, respectively. Besides, the survey covered one poor-performing state. For reasons of feasibility, Jharkhand was chosen to represent an eastern state from Group III.

1.3.2. Sample size

The universe for sample selection from states, is ESI scheme participants, that is enterprises registered with the ESI scheme and their workers enrolled as insured persons (IPs). Additional respondents include healthcare providers (i.e., ESI hospitals, dispensaries, empanelled hospitals, and insured medical practitioners (IMPs), trade unions and employer associations. The number of the employers enrolled in the ESI scheme during 2017-2018[4] is reported to be approximately 10.33 lakhs. The number of IPs/family units covered under the scheme is approximately 3.43 crores across 25 states covering about 441 districts fully and 85 districts partially.

In respect of the four states studied, namely Jharkhand, Haryana, Tamil Nadu and Rajasthan, the total number of enterprises enrolled under the scheme was about 4.14 lakhs out of 10.33 lakhs, constituting approximately 40 per cent of all employers in the scheme (Table 1.1). They employed approximately about 1.40 crores out of 3.43 crores, accounting for nearly 41 per cent, including beneficiary family units during 2017-2018. From this universe, we picked a sample from each state for the survey among employers and employees. The total number of employers selected for all four states was approximately 553 and the respective workers' sample was six times more at 3,339 insured persons (workers).

▶ **Table 1.2. Number of healthcare providers and samples selected**

States	Number of districts fully implemented	Number of ESIC hospitals and samples	Number of ESIC dispensaries and samples	Number of IMPs and samples
Jharkhand	24 (2)	3 (1)	21 (4)	0 (0)
Haryana	22 (3)	7 (3)	76 (13)	0 (0)
Tamil Nadu	14 (3)	13 (3)	216 (30)	0 (0)
Rajasthan	22 (4)	13 (3)	64 (11)	501 (10)
All-India	441	151	1500	980
4 States Total (Numbers)	85 (12)	36 (10)	402 (58)	526 (13)
Per cent Share (4 States)	19 (15)	21 (5)	27 (14)	54 (1.3)

Source: ESIC (2018), ESI Annual Report, 2018

Note: Figures in parentheses denote samples drawn and surveyed

The total number of samples for each state worked out to approximately 0.13 per cent of total employers equally, while the number of sample employees to be selected was six times the employers. This sample is considered reasonable and robust. Since this survey is primarily about beneficiaries' awareness, a larger sample among workers (employees/households) was planned. The samples for each state were statistically significant justifying a reasonable degree of blowing up samples to represent the universe. The sample size considered here was expected to be representative as it meets the minimum threshold of samples required to represent the entire universe. The number of samples collected is therefore relatively larger than the minimum threshold required. The sample size is determined by using a robust sample calculator at a 95 per cent confidence interval and a 5 per cent margin of errors. The sample survey units for Jharkhand were the least (38 enterprises, 180 workers), followed by Tamil Nadu and Haryana. Rajasthan had the maximum number of samples collected with 192 employers and 1,133 employees. The distribution by percentage of samples is Jharkhand (5 per cent), Haryana (32 per cent), Tamil Nadu (27 per cent) and Rajasthan (35 per cent). The number of employers and in-patients were found relatively larger in Rajasthan, than in Tamil Nadu, followed by Haryana and Jharkhand, so the proportionate allocation of samples was accordingly decided which yielded a sample structure wherein the number of enterprises and workers were highest in Rajasthan, followed by Tamil Nadu, Haryana and Jharkhand. Within each state, samples were allocated proportionately according to the sectoral composition of enterprises. Having selected enterprises, a random number of 3–4 workers (depending upon the size of workers in an establishment) was identified for interviews. Each enterprise selected was first interviewed (owner or manager), followed by the randomly selected ESI-enrolled workers in that enterprise.

Table 1.2 above outlines provider survey samples selected from four states.

▶ **Table 1.3. Sample distribution by states across employers, employees, providers, unions/ associations, officials in the four select States**

States	Employers	Employees	Providers	Unions/ association (IDIs)	District/ ESIC officials	Total
Jharkhand	38	193	5	1	1	238
Haryana	150	1 013	16	1	2	1 182
Tamil Nadu	173	1 000	33	2	4	1 212
Rajasthan	192	1 133	24	1	2	1 352
Sum	553	3 339	78	5	9	3 984

The number of the districts surveyed involving the employers and the employees along with the providers, are spread across eight districts in four states. The number of the sample hospitals surveyed was approximately 10, while 58 ESIC dispensaries and 13 IMPs were selected for the survey. Notably, although the IMP sample should be larger given that there are an estimated 980 IMPs across the country, in two sample states there were no IMPs. Therefore, the sample selection remained limited to two states for IMP selection.

1.3.3. Sampling design

Using the estimates of a total number of the enterprises and the workers at a disaggregated level, size class of the employment and industrial sectors, a two-stage stratified random sampling process was utilized to arrive at an adequate sample size to be representative at the state levels. The total number of each size class of enterprises and its workers were selected from the ESIC database. Since the universe is clearly defined and the identification of sample units are known, a two-stage stratified sampling was taken up. The enterprises' lists for each sampled district were obtained from the ESIC. The enterprises' list consisted of sectoral distribution of enterprises as well as the size class (number of employees). The employers were identified based on a random sampling approach wherein every fourth enterprise was selected and interviews conducted until the maximum sample size was reached for each state. About 3–4 workers (depending upon the size class of enterprises) associated with these enterprises were chosen for interviews.

1.3.4. Data collection methods

1.3.4.1. Quantitative data: collected using a pre-coded survey tool

Beneficiaries (employee-level) questions

The survey documented the family profile, awareness about health insurance, healthcare needs, healthcare utilization patterns, the health-related financial burden on households, and so on. The recall period was one year for hospitalization episodes and 15-days for out-patient visits for insured persons or their family members. In specific, data/information was obtained from beneficiaries about different features of the ESI scheme, the medical benefits they offers, the challenges they face in terms of access to care, utilization and additional out-of-pocket (OOP) expenses they incur, if any. Household-related information was also obtained directly from the insured persons. Unlike other national surveys where the household head is the respondent, this survey design was intended to capture respondents who are not necessarily the heads of their households, but one of them (or the sole) earning members of the household. In this study, information was collected on all the members of the household, who were dependent on the respondent worker, staying with the worker or staying elsewhere. It included people who are currently away but have lived with the respondent for more than half of the previous year and those who died during the previous year. Overall, it included information on all the household members the respondent considered to be in his/her family and who were dependent on him/her so that the utilization of the

ESI scheme can be captured. With this approach, the study does include information and analysis of migrant workers' experience with the ESI Scheme. However, given the wider focus of the study, migrants in ESI Scheme do not form a core area of analysis.

Enterprises (employer-level) questions

The study collected information related to the number of workers, wages and salary structure, size of business (annual turnover), provision of social security of workers, and so on. Specifically, information about the employer's awareness, attitude and knowledge in relation to ESI scheme benefits was collected.

Health care providers

Healthcare providers are a critical link in healthcare access and utilization for ESI beneficiaries. Quantitative information/data were extracted from healthcare providers about the services they offer, gaps in the provision of services, supply-side challenges they face, payment, and other problems they encounter in dealing with ESIC (especially the empanelled ones). The current study covered four categories of healthcare facilities: ESI Hospitals, ESI dispensaries, empanelled private hospitals, and IMPs.

1.3.4.2. Qualitative data collection

As far as the qualitative data are concerned, we used In-Depth Interviews (IDIs). IDIs were carried out among several stakeholders, and in specific among local trade unions representing workers and associations representing enterprises. The IDIs were also carried out among a few district-level ESI officials who maintained records of enterprises, ESI officials in districts, and other stakeholders.

1.3.5. Factoring in the impact of COVID-19 pandemic

Potential influence of the pandemic on survey methods and analysis

Survey bias: It is often the cause for overestimation or underestimation of the underlying indicators, even if well-developed tools and survey strategies are put in place. Certain survey biases can be identified: selection bias, response bias and recall bias, all of which are described in brief in the context of COVID-19 pandemic scenarios.

> Healthcare providers are a critical link in health care access and utilization for ESI beneficiaries. Currently ESI covers four health care facilities.

Selection bias: The survey was planned to be a multi-stage stratified random sampling technique with states and enterprises along with employees chosen for interviews. Although district-level ESI authorities provided a list of enterprises and employees enrolled in the scheme, many missing/non-available contacts at the address mentioned were to be replaced by alternate contacts. Even though the alternate units were identified based on the unit list, several replacements had to be made to ensure the collection of adequate samples. For instance, the restrictions on the movement of people even within a district led to a situation where replacement units were chosen based on purposive sampling. Thus, due to missing 'units' as per the list, the snowballing technique was adopted. This was more so when surveys were conducted in a restricted area, where one unit within a vicinity of a sub-regional area was picked along with an existing unit as listed in the master list provided by ESIC.

Besides, healthcare providers' interviews, and KIIs plus Focused Group discussions (FGDs) were originally planned. As strict instructions were in place by authorities and also due to stringent ethical rules specified by the Public Health Foundation of India (PHFI) institutional Board mandates, no FGDs were conducted. All the FGDs were converted into IDIs with stakeholders including trade union leaders, enterprise associations' chiefs, ESIC functionaries, and so on. Facility-level interviews which were planned in initial phases had to be dropped, especially those facilities that were converted into COVID-19 facilities and were replaced by non-COVID-19 facilities.

Response bias: Self-reports of a respondent (in this case, ESIC beneficiaries who responded for himself/herself and also for the households that he or she represented) reporting about ill-health and health-seeking behaviour involving treatment facilities were difficult to collect. For instance, the type of facilities visited/hospitalized for out-patient (OP) and in-patient (IP) patients were 'not known' in 40 per cent and 33 per cent of cases reported, respectively. While such a scenario is not ruled out even in normal circumstances, but in a pandemic, that involved stringent norms and regulations in conducting interviews, the time limit of interviewees is often weighed in seeking responses. Constant and long-term exposure of the interviewer and interviewee to COVID-19 related risks were key reasons for shortening interview time.

But one of the key themes of the survey, healthcare utilization pattern, involving assessment of self-reported out-patient and in-patient utilization of healthcare facilities might have been influenced by demand- and supply-side reasons. The pandemic has shaped both demand-side behaviours such as stigma and fear of reporting and the supply-side factors of disruption in the normal functioning of hospitals/clinics and isolating COVID-19 only hospital/health facilities. This has implications for reporting of both IP and OP visits. The stigma and fear of reporting fear, cough, cold and other symptoms associated with COVID-19 had made people nervous and circumspect about reporting of such events, leading to a gross undercount of OP visits in particular, as reported in the survey. The Survey in three states, namely Haryana, Jharkhand and Rajasthan, before was carried out during the COVID-19 peak period in mid-2020 resulting in such gross underestimation yielding biased estimates.

Moreover, in Tamil Nadu, although the Survey was carried out during the receding pandemic period of the first wave (late 2020), the survey period coincided with the monsoon and post-monsoon phases. Such phases of monsoon are fairly well associated with high rates of common illnesses, such as fever, cold, cough, and other common ailments. The Survey had thrown relatively higher OP rates in Tamil Nadu than in the other states. However, the in-patient incident rates remained less influenced by the pandemic in all the four states that were surveyed.

Recall bias: Recall bias is frequently cited as a major reason for underestimation/overestimation of indicators being investigated even in normal circumstances. Due to the short window period of interviews due to COVID-19 restrictions, the recall errors could not be extensively probed. While assessments relating to awareness, knowledge, and satisfaction levels of beneficiaries, may not be subject to severe recall bias, reporting of illness and healthcare utilization levels of beneficiaries do get influenced by recall bias.

Potential influence of the pandemic on field plan

The pandemic had a major impact on the implementation of the project beginning with recruitment, training, re-training, field visits, and conducting interviews with the respondents. After initial project kick-off meetings when the first set of recruitments were completed, few field staff had to leave fearing COVID-19 impact as they were supposed to go to the field. Even when lockdown restrictions were removed nationally, many states including the four study states continued to impose restrictions on movement. This affected the smooth training of field staff. Although initially, one training was to be conducted in each state. Due to the evolving situation, we had to move Jharkhand and Haryana field staff training to Jaipur, Rajasthan; whereas for Tamil Nadu, one set of training was imparted. A new set of recruitment of the field staff had to be made in Tamil Nadu halfway into the survey because many of the original team members suffered ill-health. Eventually, the second round of training was imparted to train the new set of field staff. This forced the field team to conduct purposive sampling followed by snowballing techniques to reach the intended beneficiaries. Enterprises were not only hesitant to allow the field surveyors but when allowed, had laid restrictions in terms of the period of the survey, thus shortening the survey time. Due to constant exposure, in some cases even employees were reluctant to endure a longer interview time, forcing field staff to compromise on the number of responses, leading to poor quality of data captured.

One of the key challenges faced by the field team was with respect to the data gathered from healthcare providers. Field staff were often faced with the prospect of contracting the virus in

healthcare facilities, as hospitals and clinics were engaged in treating patients. Most of the bigger ESIC hospitals were turned into COVID-19 only hospitals. Therefore, the field staff had to reassess the healthcare provider list and revise the original schedules of the planned visit to a particular ESIC facility. Hence, finally, the team dropped the idea of collecting information from COVID-19 treating facilities, whether ESIC or empanelled hospitals.

Originally, the idea was to conduct FGDs with communities and healthcare workers besides trade union leaders. Given the COVID-19 protocol and restrictions imposed by the authorities and also to comply with Institutional Ethics protocol, FGDs had to be dropped. The FGDs were replaced by In IDIs with ESIC officials, trade union representatives, and employers' association representatives.

▶ A note on institutional ethics approval

As an institutional requirement, the PHFI obtained institutional Ethics Committee approval to conduct this study. The study team obtained an exemption from full review from the institutional ethics board of the PHFI since the research did not involve the clinical involvement of a patient. The exemption was provided based on the understanding that respondents' identities would be kept confidential during the reporting and in the write up of the analysis.

1.4. Characteristics of the samples

1.4.1. Employees (insured persons)

The total sample for the survey consisted of 3,339 employees spread across four states of Jharkhand, Haryana, Rajasthan and Tamil Nadu. Two districts from each state were chosen.

The manufacturing sector followed by the Wholesale Retail and Transport Accommodation sectors contributed to almost half of the sample, each contributing to >10 per cent. Across the states, the manufacturing sector accounted for the highest contributor except for Jharkhand, where the wholesale and retail sector remains the largest contributor to the sample. The detailed sector-wise distribution across states is given in Table 1.4.

1.4.1.1. Sample distribution of employees by employee size class

The samples were distributed by employee size class, with enterprises having >100 employees with the maximum percentage of 22 per cent followed by the enterprises having 11 to 20 employees (19 per cent). Smaller enterprises with <10 employees constituted 10 per cent of the sample. The majority of the Jharkhand employees in the sample belonged to enterprises with <10 employees. Also, <5 per cent of employees were

▶ Table 1.4. Distribution of employee samples by the sector of employment

Sectors of employment	Sectors of state				
	Jharkhand	Haryana	Rajasthan	Tamil Nadu	Total
Manufacturing	23 (12%)	786 (78%)	446 (39%)	419 (42%)	1674 (50%)
Construction	21 (11%)	37 (4%)	59 (5%)	51 (5%)	168 (5%)
Wholesale and Retail	54 (28%)	19 (2%)	237 (21%)	85 (9%)	395 (12%)
Transportation and Accommodation	34 (18%)	57 (6%)	154 (14%)	84 (8%)	329 (10%)
Education and Health	42 (22%)	64 (6%)	141 (12%)	61 (6%)	308 (9%)
Others	19 (10%)	50 (5%)	96 (8%)	300 (30%)	465 (14%)
Total	193 (100%)	1 013 (100%)	1 133 (100%)	1 000 (100%)	3 339 (100%)

from enterprises with >100 employees. Further, the majority of Haryana employees belonged to enterprises with >100 employees with almost 55 per cent of the employees in Haryana from enterprises with >50 employees. The samples from Rajasthan and Tamil Nadu showed a similar distribution to the overall sample.

1.4.1.2. Sample distribution of employees by gender and age

Over one in every two of the employees surveyed was in the age group of 21 to 30 years followed by 31 to 40 years age group (27 per cent) and 41 to 50 years (17 per cent). Notably, 81 per cent of the employees were males and 19 per cent were females. Our sample captured a relatively higher share of females as against 13 per cent enrolled in ESI. In terms of age group distribution, 73 per cent of the males were in the 21-40 years age group. Also, 68 per cent of the females belong to the age group of 21 to 40 years. Across the states, for both Rajasthan and Haryana, females constituted <15 per cent of the sample while for states of Jharkhand and Tamil Nadu the percentage of females was around 30 per cent. Table 1.6 shows the detailed percentage.

▶ Table 1.5. Distribution of employee sample by employee size class

Employee size class	Jharkhand	Haryana	Rajasthan	Tamil Nadu	Total
0-10	54 (28%)	61 (6%)	120 (11%)	115 (12%)	350 (10%)
11-20	34 (18%)	134 (13%)	218 (19%)	250 (25%)	636 (19%)
21-30	37 (19%)	171 (17%)	182 (16%)	169 (17%)	559 (17%)
31-50	22 (11%)	99 (10%)	204 (18%)	177 (18%)	502 (15%)
51-100	38 (20%)	197 (19%)	177 (16%)	153 (15%)	565 (17%)
more than 100	8 (4%)	351 (35%)	232 (20%)	136 (14%)	727 (22%)
Total	193 (100%)	1 013 (100%)	1 133 (100%)	1 000 (100%)	3 339 (100%)

▶ Table 1.6. Gender and age distribution of employee sample

Age group (years)	Male	Female	Total
18 to 20	44 (2%)	28 (4%)	72 (2%)
21 to 30	1 275 (47%)	255 (40%)	1 530 (46%)
31 to 40	711 (26%)	174 (28%)	885 (27%)
41 to 50	445 (16%)	110 (17%)	555 (17%)
51 to 60	160 (6%)	21 (3%)	181 (5%)
61 to 70	14 (1%)	3 (0%)	17 (1%)
above 70	2 (0%)	0 (0%)	2 (0%)
Total	2 709 (100%)	630 (100%)	3 339 (100%)

1.4.1.3. Sample characteristics of beneficiary households

The average household size in our sample households was 3.18. Overall, 46 per cent of the household members were females with slight variations across states. Haryana with 43 per cent reported the least percentage of females among household members while Tamil Nadu reported the highest percentage at 49 per cent. Almost three in four of the employee household members were aged between 15-59 years, followed by age groups 5 to 14 years (11 per cent). Only 7 per cent of the household members were in the age group of ≥60 years, clearly reflecting the national average of the elderly population. The age distribution across the states, except for Tamil Nadu is almost the same. In Tamil Nadu, >16 per cent of the employee household members were aged >60 years. This age group is reported to be relatively higher than the census figures suggested for Tamil Nadu.

As far as educational qualifications are concerned, the surveyed households reported a literacy rate of 90.61 per cent with the majority share of the persons having education up to higher secondary level (42.8 per cent) followed by primary level (21.32 per cent) and graduate and above (20.48 per cent). Analysis of the state-wise distribution of samples revealed that Haryana reported the highest literacy rate amongst employee households (94 per cent) but almost one fourth of these have primary education levels. Jharkhand reported a literacy level of 93 per cent with only 12 per cent at graduate-level and above. Both Rajasthan and Tamil Nadu reported >10 per cent of illiteracy levels among households. Amongst the educated, Rajasthan reported the highest percentage of graduate household members (Table 1.8).

▶ **Table 1.7. Gender and age distribution of employee households by states**

State	Females (%)	Age group (%)					
		0-4	05-14	15-29	30-59	60 and above	Total
Jharkhand	45.17	2.8	4.98	37.69	52.02	2.49	100
Haryana	43.08	4.02	8.84	41.11	44.43	1.59	100
Rajasthan	45.86	5.3	13.07	34.39	43.18	4.06	100
Tamil Nadu	48.8	2.7	9.43	23.65	47.95	16.27	100
Overall	45.95	4.1	10.57	33.18	45.23	6.91	100

▶ **Table 1.8. Percentage distribution of individuals by their education statuses**

State	Illiterate (%)	Educated				
		Primary (%)	Higher Secondary (%)	Diploma (%)	Graduate and above (%)	Overall (%)
Jharkhand	6.54	14.64	60.75	5.61	12.46	93.46
Haryana	5.83	21.79	43.55	10.35	18.48	94.17
Rajasthan	10.03	23.07	40.08	2.99	23.83	89.97
Tamil Nadu	12.13	19.32	44.86	5.91	17.77	87.86
Overall	9.38	21.32	43.17	5.92	20.2	90.61

▶ **Table 1.9. Distribution of employee households by religion and caste**

State	Social group (%)					Religion (%)		
	General	SC/ST	OBC	Others	Total	Hindu	Minority	Total
Jharkhand	43.01	48.7	7.77	0.52	100	80.31	19.69	100
Haryana	48.77	25.67	25.47	0.1	100	96.25	3.75	100
Rajasthan	36.19	52.07	11.65	0.09	100	95.15	4.85	100
Tamil Nadu	50.1	23.2	19.9	6.8	100	86.6	13.4	100
Overall	44.56	35.22	18.09	2.13	100	92.06	7.94	100

With respect to the distribution of samples by religion and caste, overall, 18 per cent of the households belonged to Other Backward Classes (OBC), about 35 per cent belonged to Scheduled Caste (SC) or Scheduled Tribe (ST), and >44 per cent to General category (Table 1.9). In Jharkhand, 8 per cent of the households belonged to OBC, about 49 per cent to SC or ST, and 43 per cent to the General category. In Haryana, 25 per cent of the households belonged to OBC, about 25 per cent to SC or ST, and 49 per cent to the General category. In Rajasthan, >11 per cent of the households belonged to OBC, about 52 per cent to SC or ST, and 36 per cent to General category.

In Tamil Nadu, almost 20 per cent of the households belonged to OBC, about 23 per cent to SC or ST, and 50 per cent to the General category.

1.4.2. Enterprises (employers)

The total employer sample consisted of 553 employers with the largest share of enterprises from Rajasthan (35 per cent) followed by Tamil Nadu (31 per cent), Haryana (27 per cent) and Jharkhand (7 per cent). In terms of ownership status, over two in three of the enterprises sampled were proprietary in nature, with an additional 17 per cent of the enterprises in partnership mode and another 12 per cent belonging to public or private limited companies. Haryana reported the highest percentage of proprietary enterprises and the least percentage for public or private limited companies. Further, in Rajasthan, 62 per cent of the proprietary ownership amongst its enterprises and highest percentage for public or private limited companies. More than 99 per cent of the sample belonged to the urban sector whereas the rest was from the rural sector.

As far as enterprise size is concerned, the majority of the samples (55 per cent) comprised small enterprises (< 10 employees). About 19 per cent of the sample was from bigger enterprises (>50 employees). Across states, Haryana reported the least percentage of enterprises with <10 employees and the highest percentage amongst sampled states for enterprises with >100 employees. Almost two thirds of the enterprises in the states except Haryana had enterprises with < 20 employees. (Table 1.11). The majority of the employers are Males (93.5 per cent) with only 6.5 per cent of employers being females. State-wise, Tamil Nadu reported the highest percentage of female employers (11 per cent) whereas Haryana reported the least percentage (3 per cent) of female-headed enterprises. (Table 1.12)

In respect to sample distribution of enterprises by broad industrial sectors, the manufacturing sector contributed to half of the sample followed by the wholesale/retail sector and transport/ accommodation sector (14 per cent and 13 per cent, respectively) (Table 1.13). Across states, Jharkhand has a more equitable distribution for various sectors whereas in other states, like Haryana manufacturing constitutes almost two thirds of the sample. For the sub-sector distribution, retail trade enterprises constituted around 9 per cent of the sample, followed by hotels and restaurants (8 per cent), rubber and plastic products (6 per cent). The detailed distribution for various sub-sectors across states is given in Table 1.14. It shows the representation of enterprise samples across all major industry sectors. Overall, a reasonable share of major sub-sectors of the industry is present in the sample making it a well representative sample across sectors.

Table 1.10. Percentage distribution of enterprises by ownership and sector as reported by the employer

State	Types of ownership					Sector	
	Proprietary	Partnership	Cooperatives/ trust/other non-profit organizations	Public/ private limited company	Employers' household	Rural	Urban
Jharkhand	73.68	5.26	2.63	10.53	7.89	0.00	100.00
Haryana	83.33	12.67	1.33	2.67	0.00	0.00	100.00
Rajasthan	61.98	16.15	3.65	18.23	0.00	0.52	99.48
Tamil Nadu	60.12	24.28	2.89	12.14	0.00	1.73	98.27
Overall	67.99	17.00	2.71	11.57	0.54	0.72	99.28

Table 1.11. Distribution of enterprises by employment size

States	Employment size class						
	0-10	11-20	21-30	31-50	51-100	>100	Total
Jharkhand	22	7	4	1	3	1	38
Haryana	26	20	19	15	32	38	150
Rajasthan	139	11	10	6	6	20	192
Tamil Nadu	116	26	12	3	8	8	173
Total	303	64	45	25	49	67	553

Table 1.12. Percentage distribution of enterprises by employment size and gender of employers

States	Employment size class						Employer's gender	
	0-10	11-20	21-30	31-50	51-100	>100	Male	Female
Jharkhand	57.89	18.42	10.53	2.63	7.89	2.63	92.11	7.89
Haryana	17.33	13.33	12.67	10.00	21.33	25.33	97.33	2.67
Rajasthan	72.40	5.73	5.21	3.13	3.13	10.42	94.79	5.21
Tamil Nadu	67.05	15.03	6.94	1.73	4.62	4.62	89.02	10.98
Total	54.79	11.57	8.14	4.52	8.86	12.12	93.49	6.51

Table 1.13. State-wise distribution of enterprises sector wise

State	Manufacturing	Construct	Wholesale	Transport	Education	Others	Total
Jharkhand	5	4	9	8	7	5	38
Haryana	103	5	13	15	6	8	150
Rajasthan	74	14	33	33	21	17	192
Tamil Nadu	100	5	23	18	10	17	173
Total	282	28	78	74	44	47	553

Table 1.14. Percentage distribution of enterprises by major industry sectors across states

Industry sector	Jharkhand	Haryana	Rajasthan	Tamil Nadu	Total
Retail trade	18.42	3.33	10.42	10.4	9.04
Hotels and restaurants	5.26	6.00	14.06	2.31	7.59
Rubber and plastics products	2.63	2.67	13.02	2.89	6.33
Other manufacturing	0.00	10.00	2.60	6.36	5.61
Fabricated metal products	2.63	13.33	3.13	1.16	5.24
Food and beverage services	15.79	3.33	2.60	7.51	5.24
Education	2.63	2.00	8.85	4.05	5.06
Construction of buildings	10.53	3.33	5.73	1.73	4.16
Textiles	0.00	7.33	2.60	3.47	3.98
Leather and related products	2.63	1.33	6.77	2.89	3.80
Wearing apparel	0.00	1.33	5.21	4.62	3.62
Food products	0.00	2.00	1.04	8.09	3.44
Wholesale trade, except motor vehicles	0.00	9.33	0.52	1.73	3.25
Electrical equipment	0.00	3.33	5.73	1.16	3.25
Human health activities	0.00	5.33	1.56	2.31	2.71
Other transport equipment	13.16	2.00	2.08	1.73	2.71
Wholesale and retail trade of motor vehicles	2.63	8.00	0.00	0.58	2.53
Pharmaceutical and so on	5.26	2.00	1.04	1.73	1.81
Computer, electronic	0.00	2.00	0.52	2.31	1.45
Machinery and equipment	0.00	2.00	0.52	1.73	1.27
Others	18.42	10.00	11.98	19.65	14.29
Missing	0.00	0.00	0.00	11.56	3.62
Total	100	100	100	100	100

1.4.3. Employee households' income and consumption expenditure

As far as household income and the consumption expenditure patterns are concerned, the sample showed that the average household income across all four states was estimated at Rs. 16,599 and the per-person consumption expenditure was at Rs. 5,376. Jharkhand reported the least average household income (Rs. 14,307). Contrarily, Rajasthan reported the least consumption expenditure per person (Rs. 3,967). Tamil Nadu reported the highest household income as well as highest per person consumption expenditure among the states (Table 1.15), reflecting the mean income and consumption expenditure as reported by the Central Statistics Office (CSO) and National Sample Survey Office (NSSO).

Importantly, the respondents in this study are wage/salary earners (working in a formal setting). Therefore, they are expected to have a higher income as compared to the average population, which includes the formal and informal sector, as well as the self-employed and unemployed population. We had collected self-reported total household consumption expenditure and income data of the household. National household surveys (such as NSSO) normally collect information about the consumption expenditure of the households, rather than household income. Obtaining data about income from households is often considered unreliable and inconsistent as underreporting is frequently resorted by households. However, the larger problem with data collection is the seasonal nature of such income, especially in the informal sector. In India, with nearly half of the workers being involved in the agricultural and allied sectors, income data capture was abandoned by the NSSO replacing it with consumption data. This is often considered a more reliable indicator. The consumption expenditure reported from the present survey and NSSO is not significantly different. Moreover, since income figures reported from this survey are solely from a formal population group, seasonality in reporting income may not be a key influence. Hence, income data could be more reliable and unbiased.

1.4.4. Enterprises' registration status by the types of registration

It may be further observed that nearly two in three enterprises reported having registered under Factories Act, Shop and Establishments Act, Employees' Provident Fund Organisation (EPFO), and other excise tax/ value-added tax (VAT) act. Almost 56 per cent of the enterprises reported their registration under the District Industries Centre (DIC) whereas > 90 per cent of the enterprises reported their registration for Income tax and Goods and Services Tax (GST) acts. Variations were found across states for

▶ **Table 1.15. Average employee household income and average per person consumption expenditure across states**

State	Average per capita household income (INR)	Average per person consumption expenditure (INR)	Average per person consumption expenditure from NSSO 2017-18 (INR)
Jharkhand	11382 (10237 - 12527)	5922 (5277 - 6567)	3928 (3632 - 4225)
Haryana	8551 (8088 - 9013)	5258 (4994 - 5522)	4374 (4074 - 4674)
Rajasthan	5375 (5159 - 5591)	3967 (3796 - 4138)	3852 (3707 - 3999)
Tamil Nadu	9324 (8937 - 9710)	7159 (6838 - 7479)	4197 (4087- 4307)
Overall	7825 (7608 - 8041)	5376 (5229 - 5523)	4161 (4123 - 4199)

Note: The figures in the parenthesis show a 95% confidence interval

registrations under different acts (Table 1.16). In Jharkhand, only 34 per cent of the enterprises reported their registration under the Factories Act whereas two thirds of the enterprises reported that they were registered under Shop and Establishments act, DIC, and excise tax/ VAT acts. Less than 45 per cent reported registration under EPFO and almost 90 per cent for GST. Around 97 per cent reported registration under income tax and 78 per cent under ESI. In Haryana, >80 per cent reported their registration under the Factories Act, shop and establishments act, and EPFO while >90 per cent for ESI and Excise tax/VAT. Almost 100 per cent of enterprises reported registration for Income tax and GST; only 56 per cent reported their registration under DIC. In Rajasthan, >50 per cent of enterprises reported their registration under the Factories Act, Shop and Establishments act, EPFO, DIC, and Excise Tax/ VAT acts whereas >90 per cent for ESI, Income tax and GST. In Tamil Nadu, <50 per cent of enterprises reported their registration under the Factories Act and Shop and Establishments Act while >50 per cent reported for DIC and Excise tax/VAT Acts. Almost two thirds reported registration under EPFO whereas >85 per cent reported ESI registration. Over 90 per cent of enterprises reported GST and Income tax registrations.

Regarding the year of registration, we divided the period into three categories – before 2009, 2010 to 2019, and 2020. Overall, around 6 per cent of the enterprises sampled had registered themselves under ESI in 2020 whereas almost two thirds of the enterprises had registered before 2009 with another 31 per cent during the period of 2010-2019 (Table 1.17). State-wise, around 15 per cent of the enterprises in Jharkhand, followed by 11 per cent in Haryana, 2 per cent in Rajasthan and 5 per cent in Tamil Nadu had registered themselves in 2020. About 84 per cent of the enterprises sampled in Haryana had registered before 2009, followed by 66 per cent in Rajasthan, 47 per cent in Jharkhand, and 43 per cent in Tamil Nadu. Around 52 per cent of the sampled enterprises in Tamil Nadu had registered under ESI in the previous decade, followed by 37 per cent in Jharkhand, 32 per cent in Rajasthan, and only 55 per cent in Haryana.

> Distribution of average turnover of enterprises according to employment size class and states revealed many variations across states.

1.4.5. Distribution of enterprises' turnover across employment size by states

Distribution of average turnover of enterprises according to employment size class and states revealed many variations across states (Table 1.18). Overall average figures of turnover were low among the three states of Haryana, Rajasthan and Tamil Nadu whereas figures for Jharkhand were exceptionally high, probably due to the less and highly skewed sample size distribution in Jharkhand. Enterprises with <10 employees reported an average turnover of 3.6 crores in the previous financial year. Across states, Haryana' enterprises reported the least average turnover (0.8 crores) among the states whereas Rajasthan' enterprises reported the largest average turnover. In enterprises with 11 to 20 employees, the average turnover reported was 1.7 crores, less than the enterprises having ≤10 employees. Rajasthan and Tamil Nadu enterprises, reported, abnormally low turnover of < 0.5 crores in the previous financial year whereas Jharkhand enterprises reported an average turnover of >10 crores. Among the enterprises with 21-30 employees, the average turnover figure reported was 5.1 crores with the states like Rajasthan and Tamil Nadu reporting an average turnover of around 1 crore and Jharkhand enterprises of >20 crores. In enterprises with 31-50 employees, the average turnover figure reported was 4.5 crores with Haryana and Tamil Nadu reporting exceptionally low figures of average turnover and Jharkhand the highest at 35 crores. Similarly, among enterprises with > 50 employees, the average turnover figures reported were 8.2 and 26.4 crores, respectively. Jharkhand once again reported high average turnover as compared to the other three states.

Table 1.16. Percentage of enterprises registered under various acts

State	Factories act	Shop and Establishments act	EPFO	ESI	DIC	Income tax	GST	Excise tax/VAT
Jharkhand	34.21	65.79	44.74	78.38	63.16	97.37	89.47	64.86
Haryana	87.16	87.16	83.89	97.30	55.7	100	99.33	91.33
Rajasthan	59.16	57.89	55.21	97.91	55.50	93.62	94.74	52.08
Tamil Nadu	43.35	48.55	64.74	85.55	54.91	91.86	93.06	58.38
Total	60.00	63.39	65.22	92.53	55.90	95.07	95.10	65.58

Table 1.17. Percentage distribution of enterprises by the time of registration with ESI across states

Year since enrolled in ESI	Jharkhand	Haryana	Rajasthan	Tamil Nadu	Total
before 2009	47.37	84.00	66.15	43.35	62.57
2010 to 2019	36.84	4.67	32.29	52.02	31.28
2020	15.79	11.33	1.56	4.62	6.15
Total	100	100	100	100	100

Table 1.18. Average yearly turnover for different employment size classes across states in INR (crores)

Employment size class	Jharkhand	Haryana	Rajasthan	Tamil Nadu	Overall
0-10	1.6	0.8	4.6	3.6	3.6
11-20	10.2	1.1	0.1	0.4	1.7
21-30	20.1	4.9	1.7	1.0	5.1
31-50	35.0	1.8	5.3	0.2	4.5
51-100	57.5	1.7	3.5	4.4	8.2
>100	250.0	23.6	16.1	19.9	26.4

2. Role and performance of employee state health insurance scheme in India, 1999-00 to 2018-19

A large and sustained informality in India's workforce is a matter of concern not only for job insecurity but also due to the absence of social security benefits.

2.1. Introduction

Designing policies and programmes towards a secure job and social benefits has meant that several initiatives were taken to reduce informality in the recent past in India. Chief among them are employment guarantee programmes Mahatma Gandhi National Rural Employment Guarantee Act (MNREGA) and health insurance schemes (such as Rashtriya Swasthya Bima Yojana (RSBY) in 2007, which was converted into Pradhan Mantri Jan Arogya Yojana (PMJAY) later in 2018). Recognizing the importance of an existing scheme like ESI and the larger role, it can play in enlarging health benefits to its population, the governments have been intervening in this segment, to not only enlarge the coverage of the population but also attempt to improve its functioning. Nevertheless, several questions remain unaddressed and require deep investigation.

This analytical exercise draws on a conceptual framework involving Universal Health Coverage (WHO, 2010). It will unravel several themes in this chapter involving broadly the breadth of coverage (employee/beneficiary population), depth of coverage (benefit/service coverage) and the cost of coverage (financial risk protection to employees/beneficiaries), besides the dimension around strategic purchasing. Thus, we aim to address a few policy and programme questions that are directly related to ESI functioning. Some of these questions were identified based on the literature review of available audit reports (Comptroller and Audit General of India, 2013), parliamentary committee reports (Public Accounts Committee 2007-2008, 48th Report; Standing Committee on Labour 2017-2018, 39th Report, Lok Sabha), peer-reviewed publications, and so on.

- What is the extent of the under-coverage of the ESI scheme among formal sector employees?
- How effective is the coverage against nominal coverage of intended beneficiaries?
- What share of the formal and the informal employees can be potentially brought under ESI?
- How comprehensive are the health benefits provided to its beneficiaries?
- Did the health facilities and the services accelerate corresponding to a rise in population coverage?
- Did primary and secondary care services accelerate commensurately with the expansion in tertiary care services?
- What is the extent of financial protection provided by the ESI Scheme?
- How well are the benefits able to mitigate catastrophic health expenditure and related impoverishment?
- Do the current purchasing mechanisms ensure efficient returns on investments?
- How well and rapidly can the ESI scheme be integrated into a national UHC framework?

The above-described analytical framework is examined with an equity perspective involving state-level variations. Other equity stratifiers such as gender, age, economic sectors and regions/states are also being investigated. This is complemented by taking recourse to time-series data of 20 years (2000-2019) to facilitate inter-temporal comparisons and performance. Various databases and documents are used to investigate

the policy questions, including the following but not limited to: (i) ESIC Annual Reports; (ii) NSSO Periodic Labour Force Surveys (PLFS, 2017-2018 and 2018-2019 along with Employment Rounds of 2011-2012); and (iii) NSSO Social Consumption Round conducted during 2017-2018.

2.2. The breadth of coverage by ESI

India's oldest social security scheme, the ESI, owes its origin to the Employees' State Insurance Act, 1948[5] (ESI Act). The ESI Act mandates establishments employing 10 or more employees and those earning less than Rs. 21,000 to be covered under the Act. Although originally the Act envisaged employees in industrial factories to be provided with the social security measures, several State governments in the past have enlarged the scope of coverage to include shops, hotels, restaurants, cinemas, road motor transport undertakings, newspaper establishments, educational and medical institutions. Such an extension was an outcome of tertiary sector growth, which currently contributes to over half of India's national income and over a third of the employment.

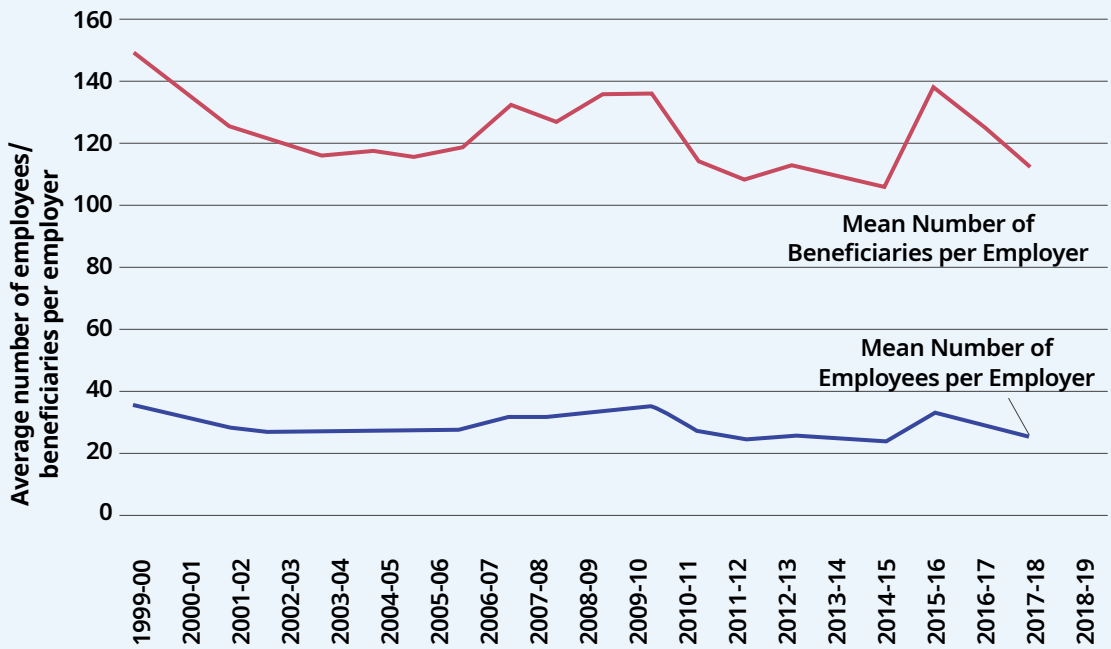
For a large part of the period that ESI has been functional, the coverage was rather restricted even among the eligible population due to limiting criteria used, such as restricting coverage to an area where there was a large presence of insured persons or industrial units were operating (industrial clusters). Further, the State governments responsible for setting up and administering medical facilities, have an uneven record in strengthening the service delivery over the years. Currently, ESI is operational in 35 states and union territories, whereas the Scheme is fully implemented in 325 districts, 93 district headquarters and 83 districts, it is partially implemented.

[5] The authors are aware that the Scheme may see potential transformations in its role and performance owing to the provisions of the Code on Social Security, 2020. However, this report mainly deals with the functioning of the ESI Scheme until 2019-2020. Hence it does not include a discussion on the Code and its potential implications. Such a discussion can be found in another report of the ILO authored by Prof. Ravi Srivastava titled, "ESIC in the Social Security Code 2020 and Establishing a Social Protection Floor in India (2021)".

Even with the mandatory registration of the economic units in notified areas, employers report insufficient incentives, for registering their establishments with the ESI. Possible reasons for the cases of evasion include larger issues of enforcement of labour laws, perceived low returns on contributions in terms of availability and quality of services, and challenges in compliance procedures. Further, within the complex and diverse organization of industrial relations in different sectors, employers have also been found to be underreporting the number of eligible employees. Nonetheless, ESIC has taken steps in recent years, to mitigate this problem through computerized inspection systems, digitized registration, enrolment and compliance procedures and increased supply of healthcare services, through empanelled facilities in newly covered regions.

As with the rapid growth of the Indian economy, the last two decades witnessed significant growth of enterprises registered under ESI. The growth was over five times from 0.22 million in 1999-2000 to 1.03 million during 2018-2019. Correspondingly, the number of employees covered under the scheme accelerated steeply from 7.86 million to 31.17 million during the corresponding period. Consequently, the average number of the employees per establishment has declined gradually from nearly 35 in 1999-2000 to approximately 26 in 2018-2019 (Figure 2.1). Since family members are eligible for availing of health benefits, the beneficiary base equally expanded from 33.37 million to 137.30 million during the study period. The average number of beneficiaries per insured person (including employees) works out to approximately 4.4, reflecting a larger beneficiary base. In terms of total beneficiaries, ESI eligible beneficiaries account for about a one tenth of the total population in 2018-2019 as against 3 per cent of the population in 1999-2000. The share of women workers in respect of total insured persons remained low in the range of 12-17 per cent during the last twenty years, in sharp contrast to a relatively higher share of female employment proportions among regular/wage salaried (21 per cent in 2017-2018 as per the 75th NSSO Round).

▶ Figure 2.1. Average number of employees/beneficiaries per employer

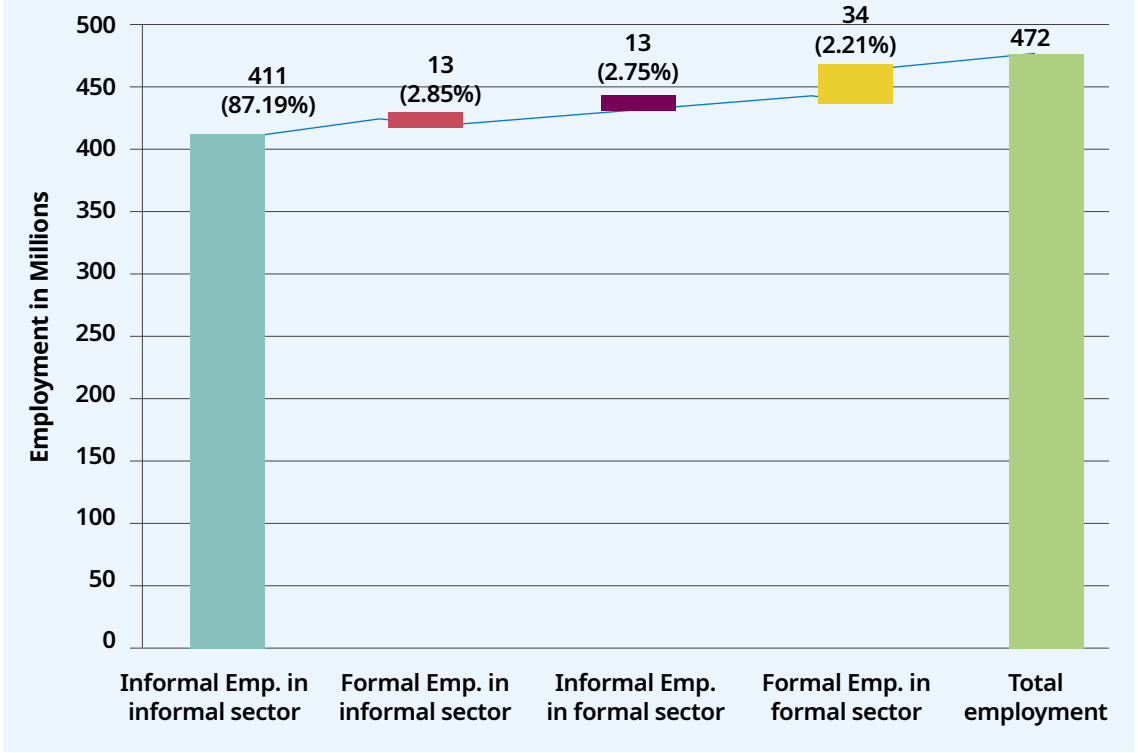


Source: Authors' estimates from ESI annual reports, respective years

Notwithstanding the larger beneficiary base, a core point of interest has been for the ESI to cover most segments of formal employees, and subsequently reach out to informal employees. While this is certainly a long-standing vision of employment policies in India, the emerging evidence, however, points towards the under-coverage of ESI even of those in the formal sector. Arguably, this throws up the question of how well ESI is directed towards facing up the challenge of informality in employment. Conversely, this can be examined in four dimensions: (i) informal employment in the informal sector; (ii) formal employment in the informal sector; (iii) informal employment in the formal sector; and iv) formal employment in the formal sector. In India's workforce of 472 million during 2018-2019, informal employment in the informal sector accounted for the bulk of the workforce at about 87.19 per cent, followed by formal employment in the formal sector at about 7.21 per cent, while formal employment in the informal sector and informal employment in the formal sector accounted for 2.85 per cent and 2.75 per cent, respectively (Figure 2.2).

Predictably, ESI does well in the category of formal employment in the formal sector. With about 31 million employees registered under the scheme in 2018-2019, it accounted for about 91 per cent of the total 34.02 million workers in this category. It is plausible that some of the ESI coverage may fall into formal employment in the informal sector or informal employment in the formal sector. By extension of this logic, likely the share of ESI in the category of formal employment in the formal sector is <91 per cent. Consequently, if we were to assume that the potential for ESI coverage extends to categories (ii), (ii) and (iii) as defined above, the scope of coverage will be >60 million workers, leading to a deficit of nearly half of those who are currently covered. Thus, nearly half of the workers who can potentially be included under the ESI, remain uncovered under the current eligibility criteria and levels of compliance by employers. Particularly, the current income ceiling of Rs. 21,000 per month, can be considered as a driver for lower coverage.

▶ Figure 2.2. India's current employment structure, 2018-2019



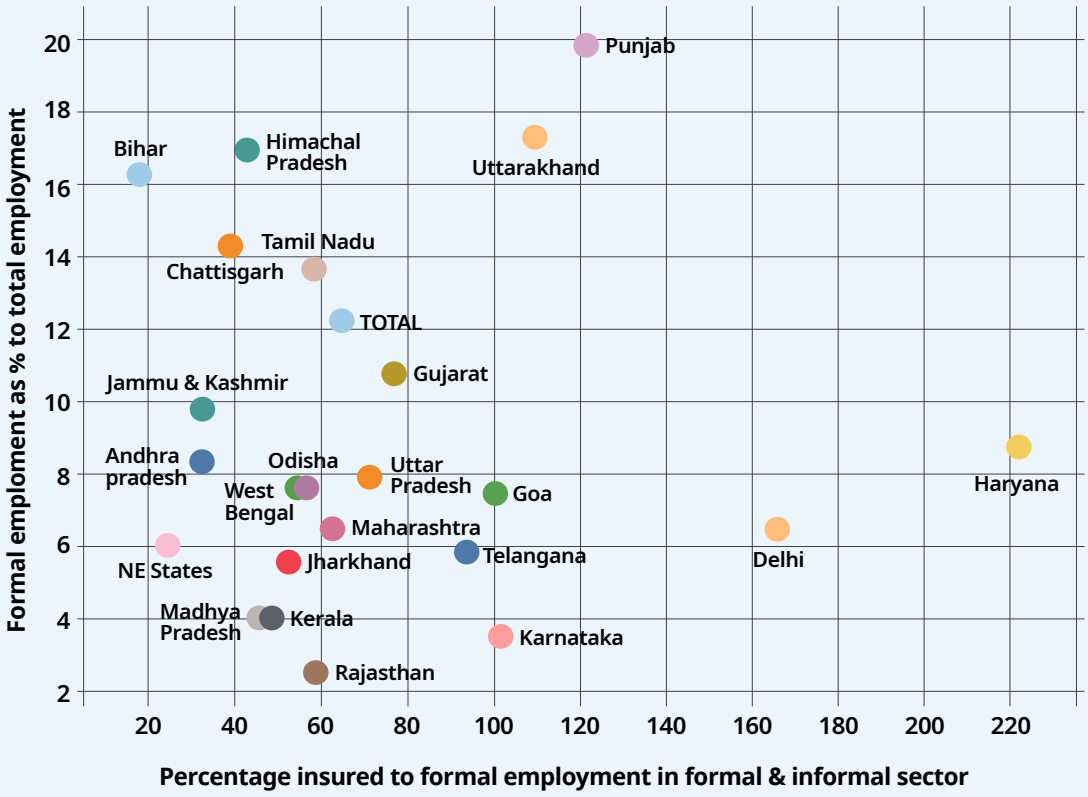
Source: Authors' estimate from National Sample Survey Organisation (2019), Periodic Labour Force Survey 2018-19, Ministry of Statistics and Programme Implementation, Government of India

In the formal sector jobs involving informal employment, close to about 13 million workers can be considered. About 88 per cent of these categories of workers are concentrated in utilities (electricity, gas, water supply, and so on), public administration, education and health sectors. Presumably, such employment is largely linked to the contractual work that is provided directly by the employer or provided through a contractor. Although in principle, employers/contractors were mandated to provide cover, clearly the above evidence demonstrates the lack of coverage. One other factor that hinders coverage expansion is that the accountability of registering workers lies with employers and not with ESIC.

Similarly, as evident from 2017-2018 PLFS, another set of workers involving informal sector but who possess formal employment (about 13 million) are also the ones who seem to be denied the healthcare benefit through the ESI route. They are largely concentrated in information and communication, finance & insurance, personal, scientific & technical activities (such as legal and accounting services, architecture and engineering services, advertising and market research, and so on) and administrative support activities (such as, renting & leasing activities, placement agencies, travel agencies, private security agencies, and so on).

State-level evidence about formality in the employment can provide insights into whether ESI coverage is guaranteed by being in formal employment. The scatter plot in the accompanying Figure 2.3 provides a vital clue about the emerging relationship between ESI coverage and formal employment. By combining insured persons (percentage) as reported in ESIS annual reports and PLFS 2017-2018 survey, we gain an understanding of the current coverage of ESI vis-à-vis formal employment, as captured by the PLFS survey. The Y-axis captured the dimension of formal employment as a share of total employment (formality), while the X-axis captured the share of those insured by ESIC as a percentage of total formal employment (formal employees in both formal and informal sectors).

▶ Figure 2.3. ESI and formal employment, 2017-2018



Source: Authors' estimate from National Sample Survey Organisation (2019), Periodic Labour Force Survey 2018-19, Ministry of Statistics and Programme Implementation, Government of India

2.3. Depth of coverage by ESI

Since its inception, the defined benefits under ESI have continued to deepen from preventive, promotive, curative care and rehabilitative services underlying medical, maternity, disability and funeral support. From providing medical services, the scheme from its inception started to provide cash benefits during illness, funeral and disability. However, the scheme extended its health benefits outside its health facilities, by empanelling IMPs and private hospitals.

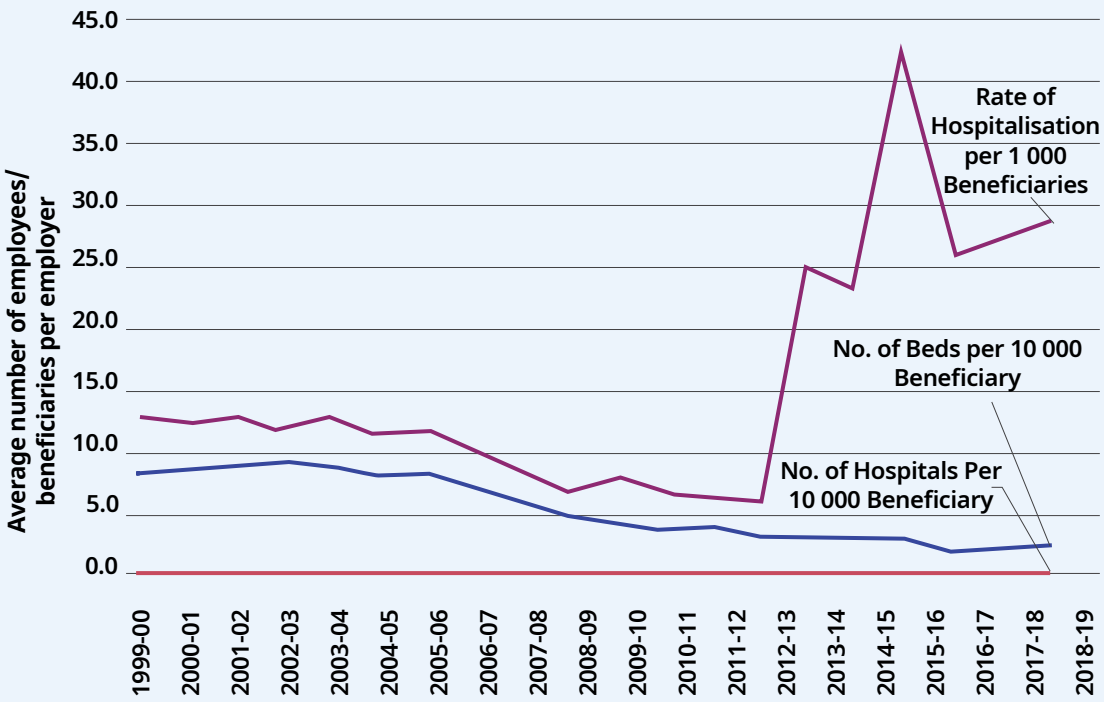
Comprehensive curative services are provided by the ESI and other empanelled healthcare facilities. These include cashless and free primary, secondary and tertiary care services involving out-patient, diagnostics, drugs and in-patient care facilities. Besides allopathy, the services include AYUSH care. The ESI facilities range from dispensaries (1,489), annexes (42), to diagnostic centres, hospitals (159) and medical colleges (6). During 2017-2018, about 28,174 beds were available in ESIC facilities, with about 24,859 beds in ESI hospitals, 520 in annexes, and about 2,795 are available in government hospitals.

Alongside, when ESI's own facilities are unavailable owing to the lack of the presence of facilities or the beneficiaries are limited in numbers in a locality, they are being provided with the option of choosing empanelled IMP clinics and private hospitals. The IMPs function as primary care providers involving a private doctor with the clinic that includes a consultation room and a dispensary. Under this arrangement, each IMP covers about 2,000 IP family units. The ESIC pays an IMP a capitation payment amounting to Rs. 500 per insured person annually, which includes consultation, basic laboratory services, and cost of medicines. The IMP system is in operation in about nine states with a larger number of them functional in Maharashtra alone and some in West Bengal. On the other hand, in respect of tertiary care services, the demand for these services is met through private empanelled hospitals, with tie-up across the country in over 1,000 hospitals. The packages include consultation, diagnostic services, surgeries, specialist services and medicines. These tie-up services are provided as packages and their rates are linked to Central Government Health Scheme (CGHS) package rates.

▶ Box 1. A weak linkage in the level of formalization and ESI coverage

State-level evidence about formality in employment can provide insights into whether ESI coverage is guaranteed by being in formal employment. States such as Uttarakhand and Punjab which enjoy high formal employment in total employment are also the ones that have ESI coverage significantly high of over 100 per cent (percentage of ESI coverage to formal employment in the formal and informal sector). However, it is equally plausible that states with the highest formality in employment, such as Bihar, Himachal Pradesh and Chhattisgarh have continued to underperform in ESI coverage (18 per cent, 43 per cent and 39 per cent). On the other end of the spectrum are outliers including Delhi and Haryana with 7 per cent and 9 per cent formal employment, respectively, and yet could achieve tremendous ESI coverage (166 per cent and 223 per cent), respectively. The ESIC coverage in these states is relatively far higher as compared to formal employment estimates. Since ESIC is expected to cover those in the formal sector, a significantly higher coverage highlights more than its potential to cover by ESIC. This is potentially plausible due to ESIC coverage of those formal employees even in the informal sector. Given that the informal sector employs both formal and informal workers, it was able to provide coverage to the latter. This has deepened the coverage phenomenally.

▶ Figure 2.4. Number of hospitals beds and rate of hospitalization, 1999-2,000 to 2018-2019

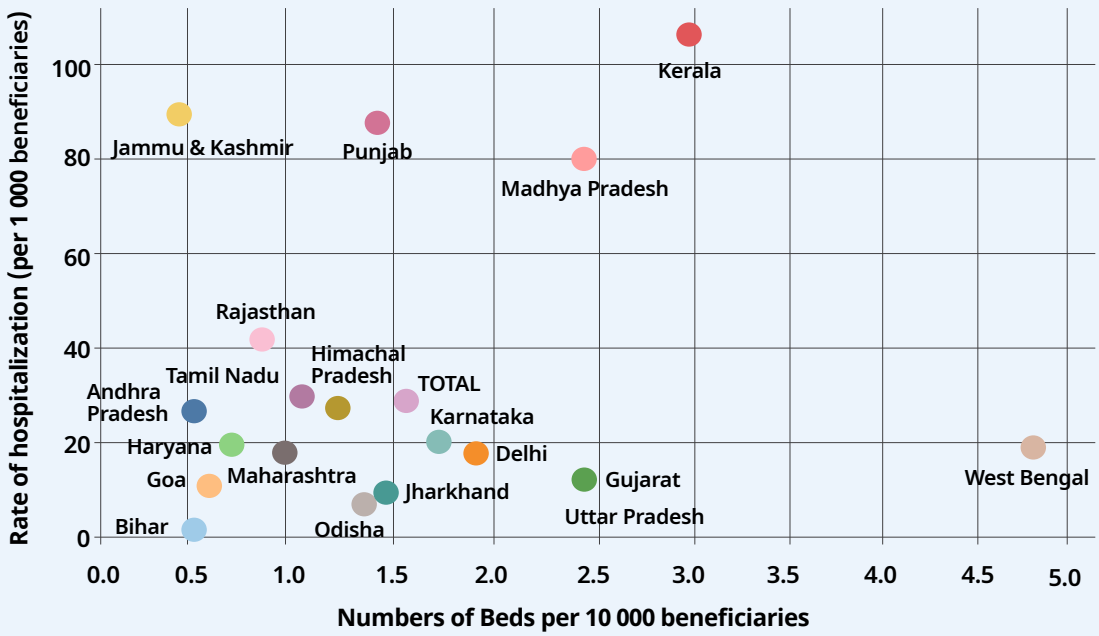


Source: Authors' estimates from ESI annual reports, respective years

The utilization of health services and the other benefits offered by the ESI can serve as an indicator to assess its performance. Some of the indicators examined here include number and rates of hospitalization, rates of out-patient visits, rates of investigations, and so on. Along with the rise in beneficiary base, it is expected that the services provided are likely to increase. For the period between 1999-2000 to 2018-2019, the number of cases admitted in hospitals increased from 0.42 million to approximately 3.89 million. While one would expect an absolute increase in the hospitalization, due to the expansion in coverage of the employees, the rate of hospitalization enhanced significantly from 1.3 per cent to 2.8 per cent for the period under consideration (28 per 1,000 beneficiaries), see Figure 2.4. During 2017-2018, the NSSO results also revealed the number of hospitalization cases per 1,000 persons annually to be 29, reflecting similar rates of in-patient utilization. Such an acceleration in hospitalization can presumably be expected due to three factors: (i) rise in the number of ESIC own hospitals and beds; (ii) increase in the number of tie-ups with private empanelled hospitals/beds and (iii) expansion in capacity utilization of beds in hospitals.

It may be observed that the number of ESIC hospitals has enhanced from 136 in 1999-2000 to about 159 in 2018-2019 with a corresponding number of beds in the ESIC facilities accelerated from 22,947 to about 28,174. Notwithstanding a gradual expansion in ESIC hospitals and a relatively modest augmentation of bed capacity, given the ever-expanding beneficiary base, the number of beds per 10,000 beneficiaries declined significantly from 7.9 to 2.1 during this period. Furthermore, the number of hospitals per 10,000 beneficiaries also dropped from 0.04 to 0.01. Ideally, at a broader level, if health needs were to be considered, identifying norms and comparing them with available services against shortage, is expected to provide a clue to the level of shortages. During 1999-2000, the bed requirement as per norms was 34,404 while a combined bed strength of only 26,390 was available (ESI benchmark for

▶ Figure 2.5. Rates of hospitalization and number of beds



Source: Authors' estimates from ESI annual reports, respective years

establishing a 100-bed new hospital is 25,000 insured persons, that is 250 insured persons per bed). As against this, during 2018-2019, as per the norms, the bed strength was supposed to be 1,41,520 beds but only 28,174 were available in ESIC facilities[6], with about 24,859 beds in ESI hospitals. Thus, the shortage of beds during 2018-2019 was about 1,13,346 as against only 8,014 during 1999-2000.

The issue of the bed capacity is even more revealing at the State level (Figure 2.5). While states such as Kerala and Madhya Pradesh have relatively better bed capacity (3 and 2.5 beds per 10,000 beneficiaries, respectively) and could cope up with high rates of hospitalization per 1,000 beneficiaries (108 and 80 per 1,000 beneficiaries, respectively). But Jammu & Kashmir and Punjab with high rates of hospitalization suffer from a low bed ratio per 10,000 beneficiaries. West Bengal appears to be an outlier with a relatively larger bed capacity (4.75 beds per 10,000 beneficiaries) with lower rates of hospitalization at 18 per 1,000 beneficiaries, signifying gross underutilization of bed capacity.

Although a significant shortage of beds was reported, the question of whether bed capacity was utilised to the maximum requires investigation. In the absence of state-wise or national-level indicators of bed capacity utilization, we present utilization patterns in the top 58 hospitals, ranked by the number of hospital visits. The Public Accounts Committee (PAC) of the Parliament in 2006-2007 noted deficient management resulting in underutilisation of bed capacity. It noted "that there were many hospitals that had less than 50 per cent bed occupancy on account of shortage of medical/paramedical staff including specialists, lack of back facilities like drinking water in some hospitals, closure of factories, accessibility of other hospitals and other local factors". Six years later, the CAG audit in 2012-2013, brought out the continuing neglect of low performance in bed occupancy, stating that "two out of three hospitals with more than 500 beds were having

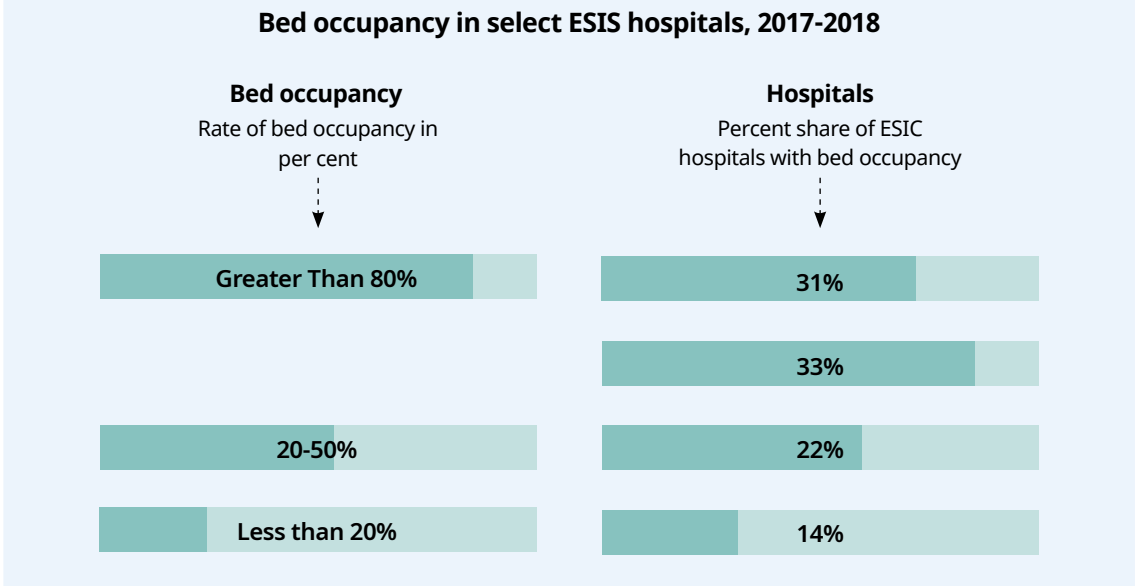
[6] Here ESIC facilities refer to hospitals directly run by the ESIC whereas ESI hospitals/facilities refer to those run by concerned state governments.

bed-occupancy less than 60 per cent. Similarly, 6 out of 19 hospitals with 250-500 beds, 33 out of 58 hospitals with 100-250 beds and 43 out of 60 hospitals with <100 beds were under-utilised, that is operated with < 60 per cent bed occupancy. About 35 per cent of the hospitals had bed occupancy levels of < 40 per cent and were thus underutilized. ESIC stated (May 2014) that the reason for low occupancy was the shortage of manpower and the quality of health services being rendered."

A relative comparison of the bed occupancy across facilities that have differential bed capacity reveals varied performance. Of the 58 hospitals (about one third of ESIC hospitals) analysed, 14 per cent performed the worst in terms of bed occupancy highlighting the need for a complete overhaul of the capacity utilization (see Figure 2.6). During 2017-2018, the average bed occupancy for the ESI hospitals was about 52 per cent, wherein ESIC hospitals (68 per cent) exceeded performance over ESI hospitals (41 per cent). Over one fourths of all hospitals are placed in the category of lower performers (20-50 per cent bed occupancy), while about one in a third of them are moderately better (50-80 per cent bed occupancy) and close to about one third are reported to have performed exceedingly well (over 80 per cent bed occupancy). The key factors contributing to poor performance are the lack of trained medical personnel including specialists, poor physical access to facilities owing to distance factor, and so on.

Primary healthcare provision in the ESI scheme is currently provided by a network of nearly 1,500 dispensaries and annexes, about 9,000 Insurance Medical Officers (IMOs) and Insurance Medical Practitioners (IMPs) along with hospitals catering to out-patient visits. However, the number of these facilities, remained stagnant or has even declined in the last 20 years despite a five-fold rise in beneficiary base. During 1999-2000, there were 1,443 dispensaries and about 9,530 IMOs/IMPs existed. Consequently, the number of dispensaries per 10,000 beneficiaries fell sharply from 0.43 in 1999-2000 to 0.11 during 2018-2019. Similarly, during the same period, the number of IMOs/IMPs declined considerably from 2.86 to 0.68 per 10,000 beneficiaries indicating a significant deficiency in the expansion of primary care facilities. Resultantly, the corresponding rate of out-patient visits per 1,000 beneficiaries dropped from 609 to 208, a sharp drop that could be explained by inadequacy in facility expansion.

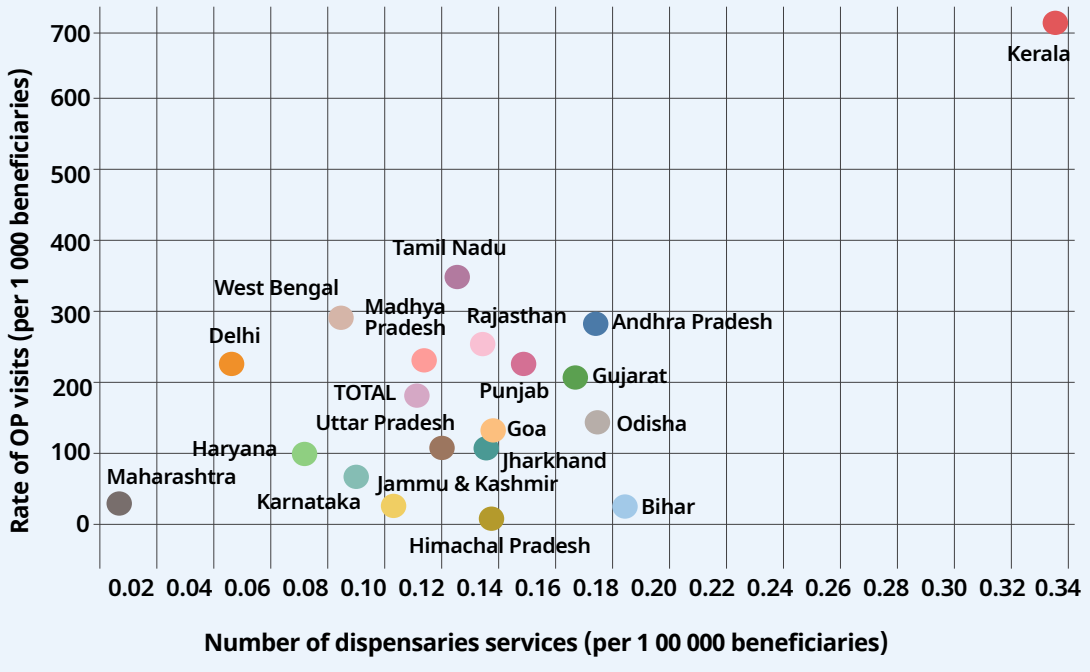
▶ **Figure 2.6. Bed occupancy in select ESI hospitals, 2017-2018**



Source: Authors' estimates from ESI annual reports, respective years

The role of IMOs/IMPs is largely concentrated in two states, accounting for 87 per cent of the total 980 in India. Maharashtra had about 501 IMPs and West Bengal approximately 356 IMPs during 2017-2018, suggesting that primary care in other states is dependent on ESIC dispensaries alone. Similarly, the rate of investigations (diagnostics) per 1,000 beneficiaries also went down substantially from 37 to 15. Notwithstanding the continuous decline over the years in out-patient care visits underlying ESI beneficiaries, a comparison with the National Sample Survey (NSS) of 2017-2018 reveals that overall population-level out-patient visits were about 75 per 1,000 population as against ESI's 208 per 1,000 beneficiaries, over two and half times higher than the population level utilization of out-patient care services in India. Further, it may be observed that at the population level reported by NSS, the elderly population were observed to utilize a similar rate of out-patient visits at the all-India level (277 per 1,000 population for 60+ ages, 328 per 1,000 for 70+ ages) while Kerala's population level OP visits were much closer (245 per 1,000 population) to ESI utilization. On a relative basis, ESI appears to march ahead of population-level utilization but on an inter-temporal basis, the utilization has witnessed a gradual decline, pointing to the need for expanding primary care facilities at the catchment area of beneficiaries. This is further corroborated by the ESI data at the state level suggesting states such as Bihar, Odisha, and Jharkhand are struggling to cope with a relatively lower number of dispensaries that were to serve 10,000 beneficiaries (Figure 2.7). The availability of the dispensaries is relatively low in states, such as Delhi and Haryana, where the highest rate of OP visits have been recorded. Maharashtra presents itself on the other end of the spectrum where the number of dispensaries served per 10,000 beneficiaries is higher and yet with the lowest rate of OP visits per 1,000 beneficiaries. However, it is highlighted that out-patient visits happen at both dispensaries level and ESI hospitals, perhaps a much larger number in the latter than in the former.

▶ Figure 2.7. Rate of OP visits and the number of dispensaries



Source: Authors' estimates from ESI annual reports, respective years

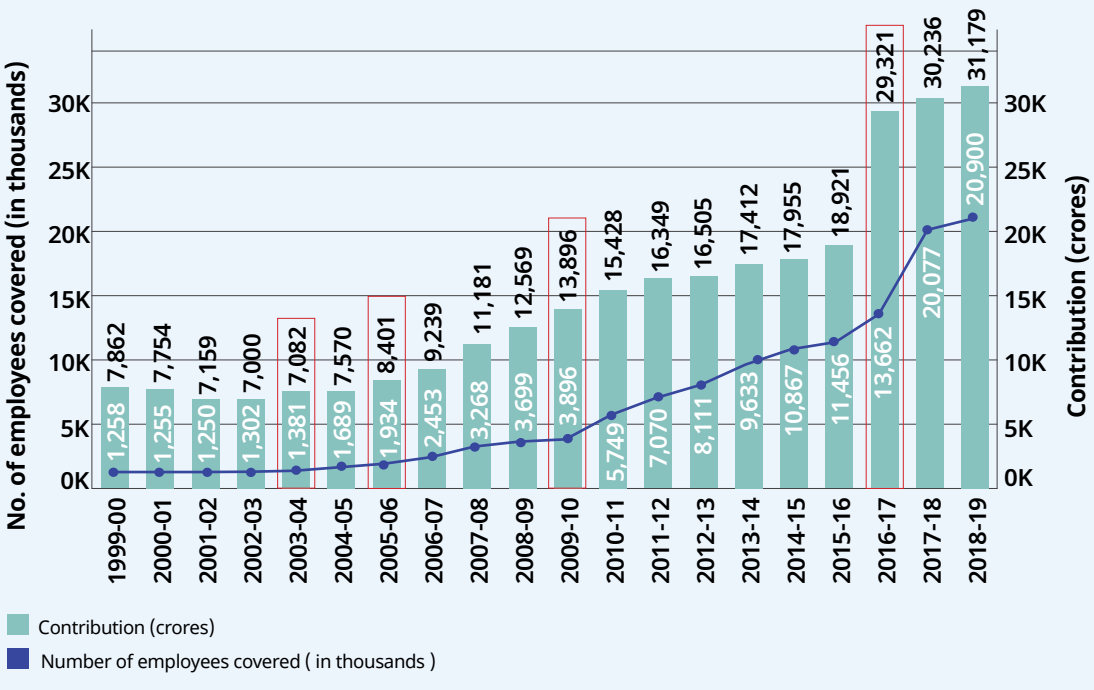
2.4. Cost coverage by ESI

ESI scheme is a comprehensive social health insurance programme with the resources largely mobilized from the employees and the employers themselves, along with the supplementary income from the state governments since its inception. Over the years, the cumulative surplus is also contributing by way of significant interest earnings, adding to the ever-increasing cash flow and surplus accumulation. Since the contingent liabilities by way of meeting potential future pay-outs for retirees when the workforce matures may add far more retiree beneficiaries, it is important to accumulate surplus The other key factor contributing to huge surplus, is the recent rise in the worker base of the scheme with an increase in wage limit from Rs. 15,000 to Rs. 21,000, pushing up revenue mobilization efforts of the scheme. Notwithstanding robust revenue base that the scheme could mop up, ESIC faces the uphill task of providing adequate, quality services to its rapidly expanding beneficiary base. The growing mismatch between accumulating surplus on the one hand and low delivery rates of benefits on the other, requires deeper investigation.

During 2018-2019, the scheme mobilized Rs. 25,077 crores as against Rs. 1,577 crores in 1999-2000, a 15-fold rise in nominal terms (Figure 2.8). Consequently, the average premium contribution per employee accelerated four-fold from Rs. 1,600 in 1999-2000 to Rs. 6,703 in 2018-2019, although the actual rise would have been less significant. Figure 2.8 further illustrates continuous revision in wage limits and the resulting spike in contributions from employees and employers. Since 1999-2000, the wage rates were revised five times, with limits enhanced from Rs. 6,500 per month in 1997, to Rs. 7,500 per month in 2004, to Rs. 10,000 per month in 2006, to Rs. 15,000 per month in 2010, to Rs. 21,000 per month in 2017.

The share of the employee and the employer contribution to the total income of the ESI scheme accounts for the bulk 83 per cent. Another key contribution was made by interest income (16 per cent) and the rest by way of rent, and so on. And this share remained nearly constant over the last 20 years. One of the positive developments in recent years has been the continuous rise in the share of expenditure on benefits as a percentage of total expenditure, which increased from

▶ Figure 2.8. Number of employees covered and their contribution, 1999-2000 to 2018-2019



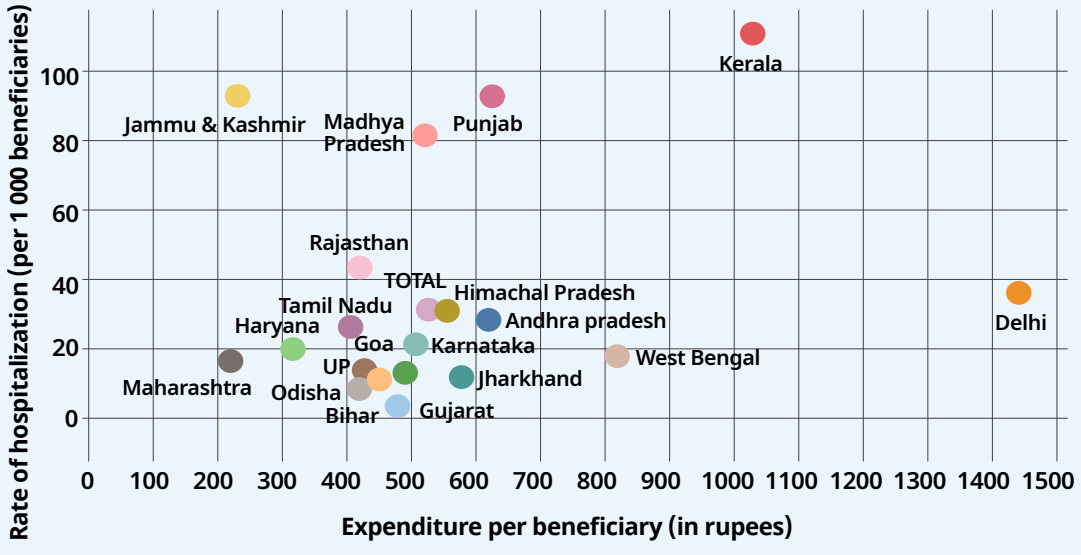
Source: Authors' estimates from ESI annual reports, respective years

81 per cent in 1999-00 to about 88 per cent in 2018-19, reflecting several efforts in improving the uptake of services. As a result, out of total ESI expenditure, medical benefits accounted for the largest share (79 per cent) followed by cash benefits (8 per cent). It may also be observed that the proportion of medical benefits to cash benefits has undergone considerable change over the last two decades, from 2:1 during the early 2000s to about 9:1 in 2018-19, mirroring a relative improvement in medical service provision. Additionally, it may also be noted that administrative expenses, now account for just one tenth of total expenditure, which declined significantly from about 17 per cent two decades ago, reflecting continuing efforts in improving service provision accompanied by a reduction in administrative expenses.

On average, the per beneficiary expenditure underlying ESI worked out to about Rs. 1,161 annually during 2018-2019, with medical and cash benefits amounting to Rs. 921 and Rs. 98, respectively, per annum. However, the national average often hides significant variation that exist across Indian states. Several states including Delhi, Kerala, Telangana and West Bengal, are among the leading states with higher mean spending per beneficiary. They have more than double the national average with Delhi's expenditure nearly three times that of the national average. Although not a perfect link, there appears to be a reasonable degree of correlation between rate of hospitalization/rate of out-patient utilization to average expenditure per beneficiary (Figures 2.9 and 2.10). For instance, Kerala, one of the leading states with highest spending per beneficiary, is placed so high due to a higher rate of hospitalization and out-patient visits. Similarly, Delhi and West Bengal's per capita beneficiary spending, is among the top states whose out-patient visits are equally high although not its hospitalization rates.

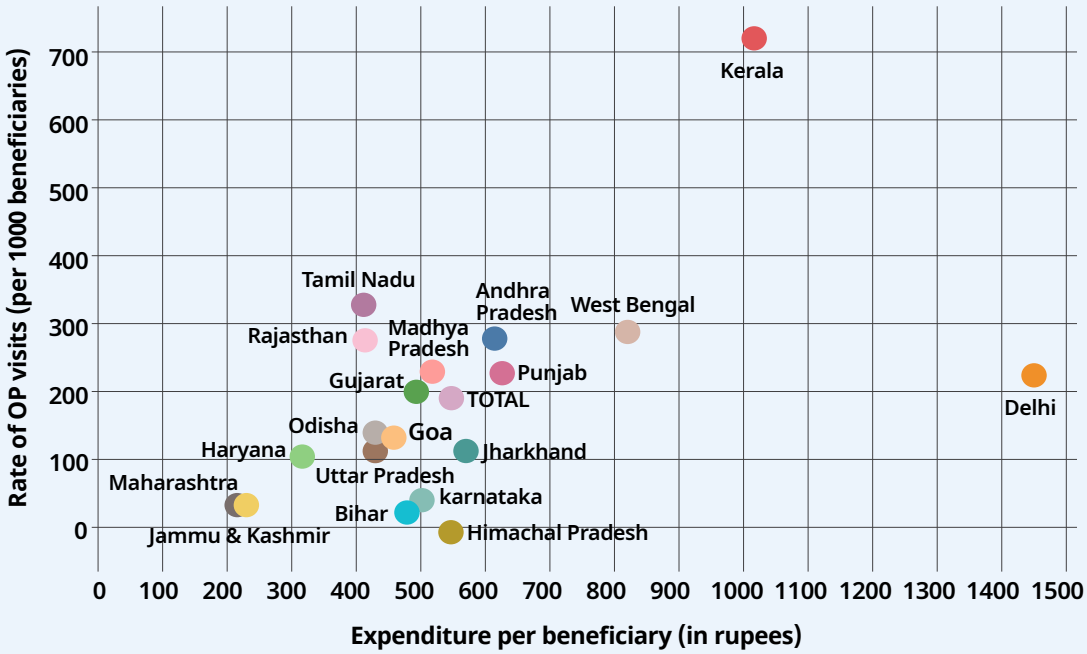
> Kerala, one of the leading states with highest spending per beneficiary, is placed so high due to a higher rate of hospitalization and out-patient visits.

Figure 2.9. Rate of hospitalization and expenditure per beneficiary



Source: Authors' estimates from ESI annual reports, respective years

Figure 2.10. Rate of out-patient visits and expenditure per beneficiary



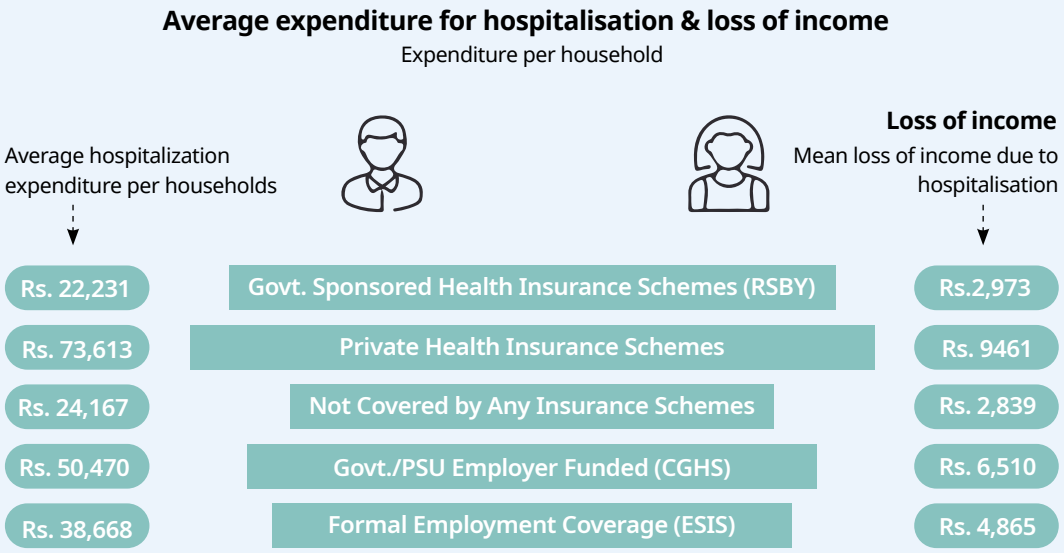
Source: Authors' estimates from ESI annual reports, respective years

The shallowness of the health insurance coverage is often reflected in the magnitude of households' expenditure, over and above the cost covered by the scheme per se. OOP expenditure by households is common even after they are covered by insurance schemes. Despite generous medical and cash benefits, ESI beneficiaries appear to be incurring costs but lesser than other insurance schemes. As per the NSSO 2017-2018 data, the average OOP expenditure incurred by households covered by ESI scheme, ended up spending about Rs. 38,668 annually, while CGHS beneficiaries paid out Rs. 50,470 and households covered by private health insurance paid nearly double the expenditure incurred by ESI beneficiary households (Figure 2.11). Those who are covered either by tax-funded insurance schemes (such as RSBY or state government funded schemes) or not covered (accessing public facilities) spend in the range of Rs. 22,231 – 24,167. A relatively lower level of households' OOP expenditure could presumably be because households may be accessing secondary level nursing homes or other less expensive facilities. It is equally possible that the large share of this spending could be potentially used up for buying medicines, diagnostics and consultations.

One of the key intended objectives of health insurance programmes is to provide financial risk protection to households. Besides lowering households' OOP expenditure, financial risk protection is expected to bring down the level of catastrophe and impoverishment among households. Emerging evidence from the national sample survey of 2017-18 clearly reveals the relative performance of several insurance

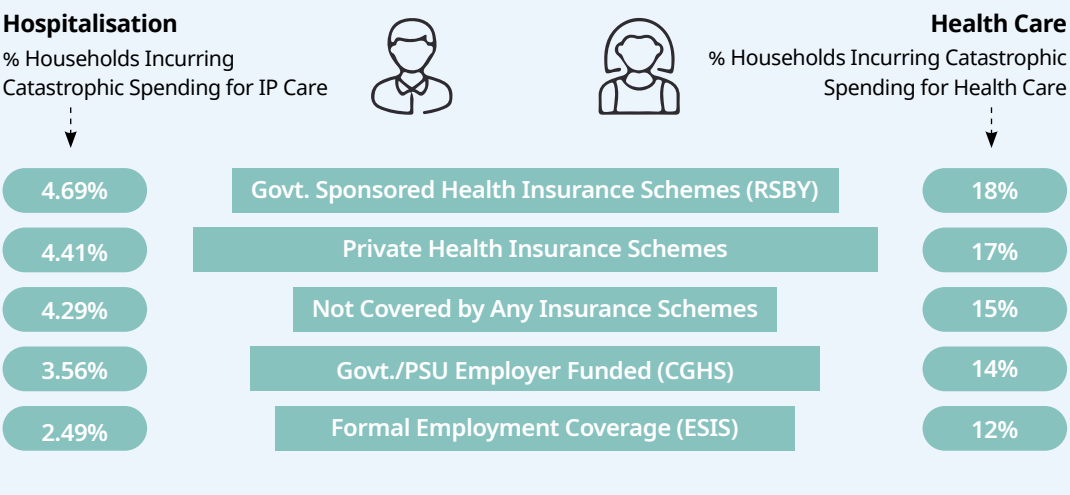
> Out-of-pocket (OOP) expenditure by households is common even after they are covered by insurance schemes.

Figure 2.11. Average expenditure for hospitalization and loss of income, 2017-2018



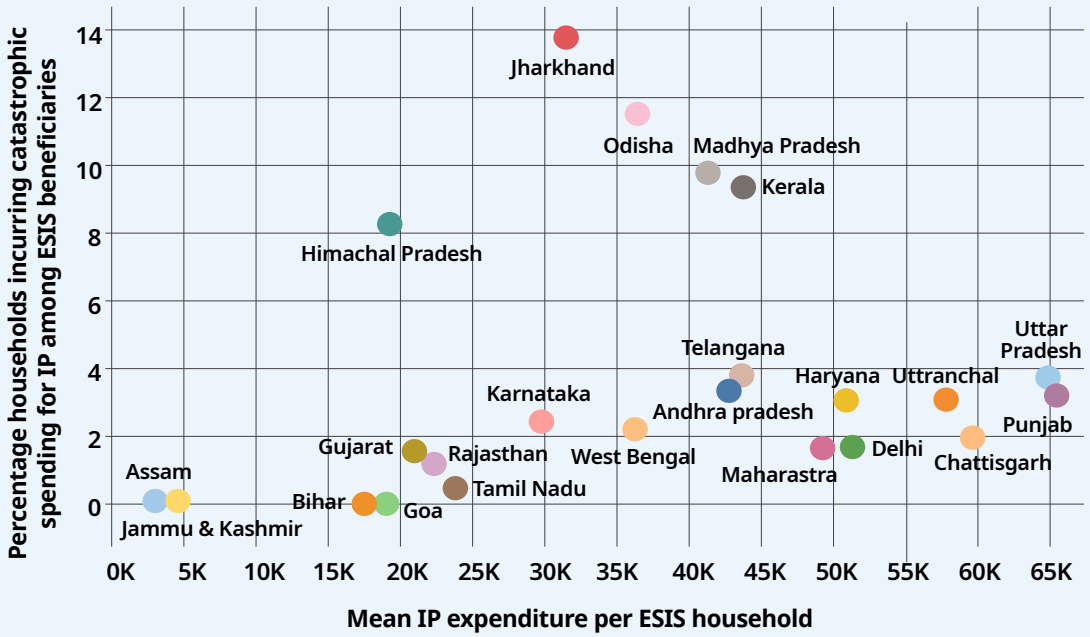
Source: Authors' estimate from national sample survey organisation (2018), survey of social consumption-health, 2017-18, Ministry of Statistics and Programme Implementation, Government of India

Figure 2.12. Percentage of households incurring catastrophic spending for hospitalization and health Care, 2017-2018



Source: Authors' estimate from National Sample Survey Organisation (2018), Survey of Social Consumption-Health, 2017-18, Ministry of Statistics and Programme Implementation, Government of India.

Figure 2.13. Households' catastrophic expenditure for hospitalization and average expenditure per ESI households, 2017-2018



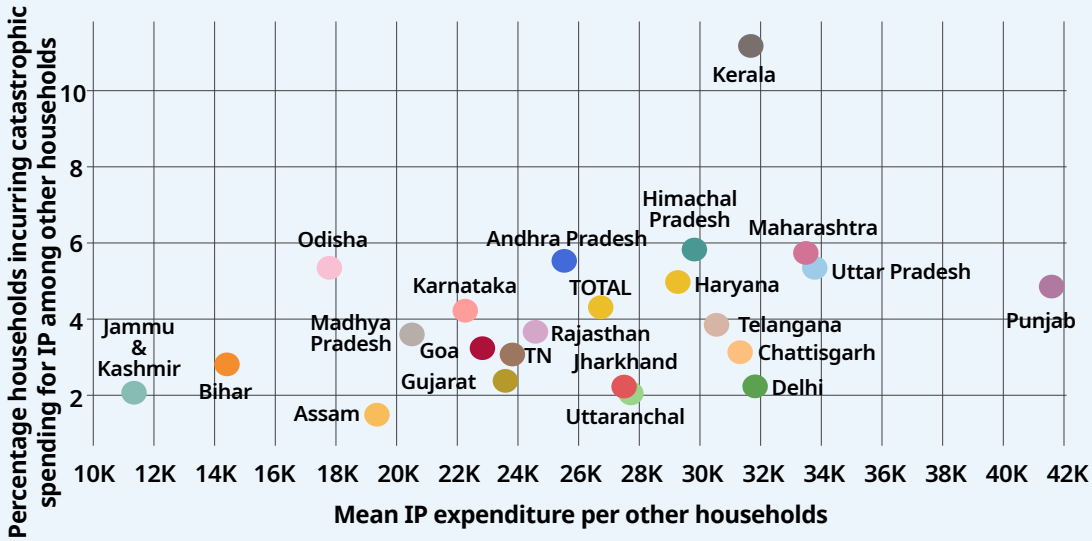
Source: Authors' estimates from National Sample Survey 2017-18, NSSO.

schemes including ESI to that of households not covered by any schemes. Assuming a 10 per cent threshold of healthcare spending to overall households' expenditure per annum, about 15 per cent of households are reported to be incurring catastrophic expenditure during 2017-2018. During the same period, a relatively lesser share of households covered by ESI (12 per cent) were suffering from catastrophic health spending. This is far more evident among hospitalization episodes where ESI insured reported only half of catastrophic payments compared to other insurance programmes. Counterintuitively, it may be observed that private health insurance whose focus is largely providing in-patient treatment with a far higher premium and benefits, had reported nearly a two-percentage point higher catastrophy than ESI. What is even more striking is the percentage of households, incurring loss of income due to in-patient treatment. About 5 per cent of households covered under ESI recorded loss of income compared to nearly double among households not covered by any insurance programme.

A further analysis involving NSSO health survey of 2017-2018, presented in Figure 2.13 highlights the link between those households that incur huge spending and average expenditure incurred during a hospitalisation episode. No clear pattern emerges from state level analysis of households incurring catastrophic spending due to hospitalization. Average expenditure for the hospitalization per ESI households are reportedly lower in states such as Bihar, Jammu & Kashmir, Assam, and so on which also reported a relatively lower percentage of households incurring catastrophe (Figure 2.13). At higher level of mean expenditure for hospitalization, states such as Punjab, Uttar Pradesh and Uttaranchal are reporting a higher share of households incurring catastrophic expenditure. Some of the outlier states such as Jharkhand, Odisha, Madhya Pradesh and so on have moderate mean expenditure but reported a higher level of catastrophic payments by households, which requires further investigation.

On the other hand, a relatively clear pattern emerges from overall healthcare utilization and the catastrophe associated with it. At the lower end of the spectrum are states such as Jammu and Kashmir, Bihar, Assam and so on whose average households' spending is not only lower but also the lowest catastrophic spending by

Figure 2.14. Households catastrophic expenditure for healthcare and average expenditure per ESI households, 2017-2018



Source: Authors' estimates from NSSO, 2017-18

households (Figure 2.14). At the higher end of average expenditure for health care, several states such as UP, Maharashtra, Telangana, Haryana, and so on have reported a larger level of households incurring catastrophic payments. Kerala predictably is an outlier while Punjab with the highest level of mean spending reported a moderate level of catastrophe.

2.5. How strategic is ESIC purchasing?

Strategic purchasing denotes a process by which a purchaser (government or an autonomous agency) procures health services using pooled funds, in order to provide them to a defined population (population covered by the scheme). Strategic purchasing facilitates institutions by promoting efficiency, effectiveness, equity, and quality of healthcare delivered. While purchasing can be passive or strategic depending upon the functions and goals of a purchaser. Three sets of principles underscore strategic purchasing decisions: (i) which type of services or interventions be purchased? (ii) how are these services procured? and (iii) from which providers the services are purchased? A large part of ESI service provisions was integrated for a long time since its inception wherein the healthcare provider and purchasing functions were carried out by ESIC, with its own dispensaries and hospitals. In recent times, it has enlarged its scope of coverage to provide beneficiaries with the benefit of out-patient and in-patient services. Given the paucity of primary care providers and tertiary care facilities in the areas where beneficiaries live, empanelled ambulatory care providers (IMP) and private hospitals fill the potential gap that exists in ESIC provision. In view of the lack of tertiary care facilities, ESIC has been procuring services from private empanelled hospitals. Table 2.1 highlights several insurance schemes, including CGHS, ESIS, PMJAY and private health insurance. The benefits package description, the number of benefits packages, the number of healthcare facilities along with criteria for selection of empanelled providers are provided in Table 2.1. While PMJAY and private health insurance, largely confine their benefits to only in-patient treatment coverage, the benefit packages purchased remain limited. But ESIS provides much larger benefits from preventive to promotive to curative care, besides covering other costs of insured persons and their beneficiaries. Although the number of healthcare providers empanelled as part of PMJAY and other schemes appear larger, and yet even if limited compared to other schemes for hospitalization benefit, the scope of benefits and therefore the number of providers is much larger under ESIC.

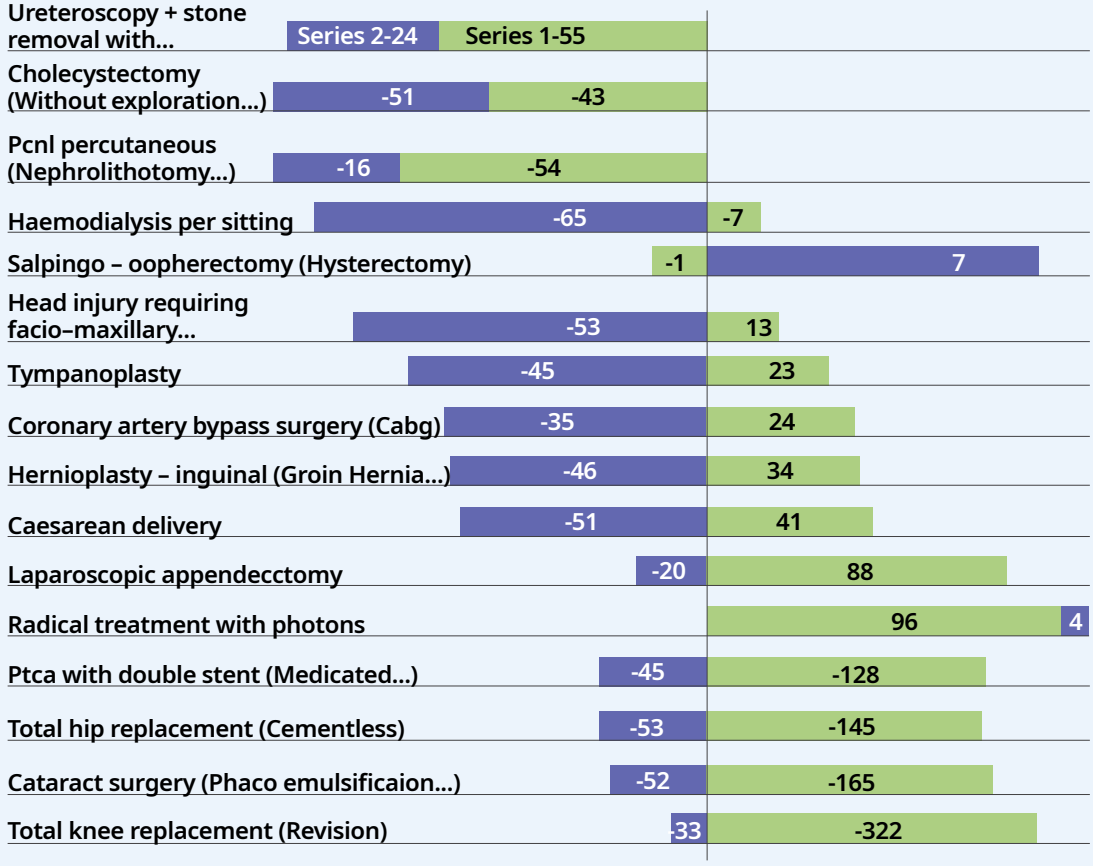
Table 2.1. Number of benefit packages, their description and providers in ESI vs other comparable health insurance schemes

Schemes	Benefit package description	Number of benefit packages purchased	Number of healthcare providers empanelled	Technical criteria for selecting empanelled providers
ESI	OPD including medicines, IP, investigations at ESIC/govt. & empanelled hospitals, reimbursement of expenses, RMNCH, AYUSH Facilities; Cash benefits for maternity, illness, disability and funeral	Over 1 900 packages	The scheme covered through 151 own hospitals and 42 annexes, 1 489 dispensaries, in addition to 7 828 Insurance Medical Officers and 950 Insurance Medical Practitioners (IMPs)	1.Empanelled hospitals must be accredited by NABH (National Accreditation Board for Hospitals & Health Care Providers) 2. Aggregate bed capacity of hospitals empanelled for secondary/tertiary care services should be such that up to 10 times of the daily average need of that specialty is catered to. 3. Secondary care empanelled hospitals are mandated to have 100 beds (25 beds in some states with specialty services in addition to 24 hours emergency services along with laboratory & radiology services)
CGHS	OPD including medicines, IP, investigations at government & empanelled hospitals, reimbursement of expenses, RMNCH, AYUSH facilities	Over 1 900 packages	About 1 389 empanelled hospitals; Over 214 empanelled diagnostics centres	
PMJAY	Only IP admissions in Govt. and empanelled private hospitals	1 394 packages (some packages are reserved for govt.)	About 23 512 hospitals	Mandatory requirement of at least 10 IP beds 2. Round-the-clock availability (or on-call) of Surgeon and anesthetists, obstetrician, pediatricians; 3. Round-the-clock availability of support systems & ambulance facilities 4. Emergency services 24X7 by technically qualified staff and functional Operation Theatre
Private Health Insurance	Mostly IP admissions in private empanelled hospitals			

Source: Authors' mapping from respective schemes

One of the key purchasing functions is how payments are made by the purchaser to providers. This is critical to ensure that resources are optimally utilised, bring in efficiency in resource use and distribute funds equitably. More importantly, payment mechanisms must provide an incentive structure that reasonably contributes to providers' services ensuring that irrational and unnecessary services, procedures and dispensing are avoided. ESI employs a retrospective payment mechanism through 'package rates' to reimburse private healthcare providers for the provision of hospitalization services. Payment mechanisms and pricing of packages are critical from the viewpoint of the purchaser (ESI) while purchasing services from providers, thereby shaping the latter's behaviour. A close-ended package rates often facilitate the purchaser to prevent cost escalation and help contain cost by removing incentives for hospitals to provide unnecessary services or longer stay in hospitals. Such case-based payments facilitate purchasers to fix the amount to be paid per case irrespective of variation in services or procedures provided. A package rate normally includes room charges, professional fees, drugs and consumables, diagnostics, and so on. This is superior to the fee-for-service mechanism that is often charged by private providers from patients who do not have insurance coverage. The accompanying Figure 2.15 highlights the price difference that exists in different settings with a comparison of package rates between ESI and PMJAY in Delhi; ESI and Medanta Hospital (private tertiary care hospital in Gurgaon, NCR Delhi), all comparable costs as in Delhi. It may also be observed that ESI has linked packages and its rates those of CGHS. The rates for Medanta Hospital specified in the table only capture the shared bed price while single, deluxe and suites vary in cost by 3–4 times.

▶ Figure 2.15. Package rates under different insurance schemes for hospitalization



Source: Estimate from respective schemes – ESIC, PMJAY and private hospital packages.

Table 2.2. Number value of referrals, and total medical benefits, 2017-2018

States	Number of referrals	Value of referrals (crores)	Value of medical care benefit (crores)	% Share of referrals to total medical benefits*
Andhra Pradesh	25 071	37.49	279.93	13.39
Assam	0.00	36.45	95.14	38.31
Bihar	1002	14.30	43.91	32.57
Chhattisgarh	1593	13.18	63.60	20.72
Delhi	61 070	156.30	1 061.96	14.72
Gujarat	25 568	47.01	297.74	15.79
Goa	0.00	0.08	42.58	0.19
Haryana	38 340	79.5	356.98	22.27
Himachal Pradesh	3 752	2.96	67.88	4.36
Jammu & Kashmir	3 955	3.06	24.88	12.30
Jharkhand	3 127	17.45	83.72	20.84
Karnataka	26 526	141.88	677.88	20.93
Kerala	21 212	90.15	432.47	20.85
Madhya Pradesh	5 344	26.49	190.06	13.94
Maharashtra	9 669	97.72	387.79	25.20
Orissa	7 316	38.15	110.87	34.41
Punjab	13 859	62.61	283.48	22.09
Rajasthan	13,143	23.39	224.26	10.43
Tamil Nadu	9 811	38.11	672.66	5.67
Uttar Pradesh	25 800	37.26	348.38	10.70
Uttarakhand	4 474	16.30	103.52	15.75
West Bengal	38 540	76.35	617.08	12.37
Telangana	15 601	68.31	632.49	10.80
Others	548	1.81	77.76	2.33
TOTAL	3 55 321	1 125.31	7 177.02	15.68

Source: Authors' estimates from data provided by ESI, Delhi for respective years
* Total medical benefits include cash benefits.

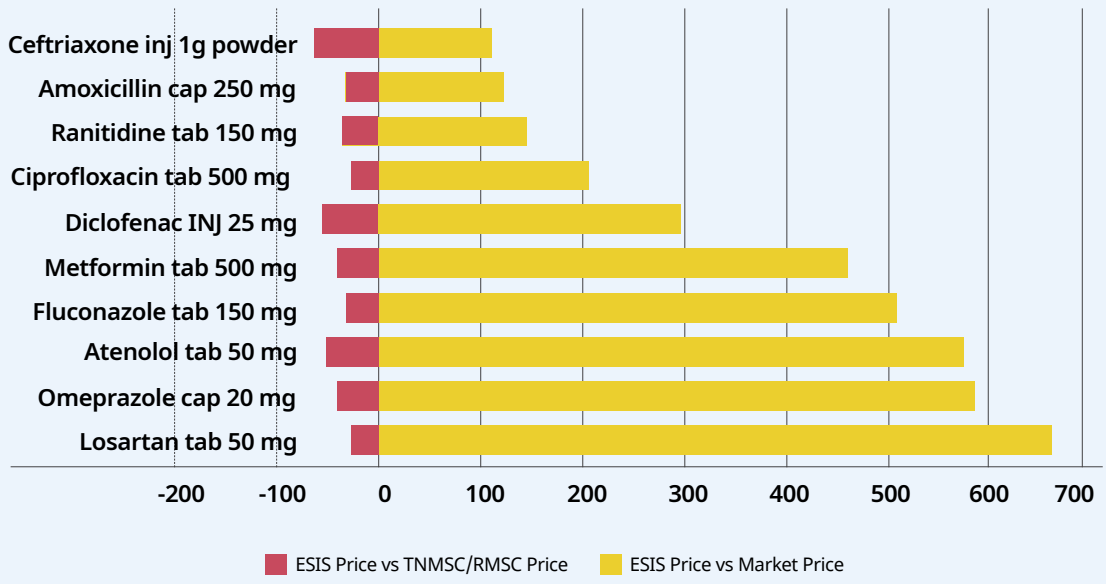
Box 2. Strategic purchasing in ESIC: a note

Strategic purchasing of services, especially those relating to hospitalization services from empanelled private hospitals appear to account for a major chunk in recent years. The number of referrals to empanelled hospitals, the value of referrals along the value of total medical benefits are provided in Figure 2.16. It can be observed that the total medical benefits include cash benefits besides out-patient and in-patient care expenditure. If we were to simply estimate the share of referrals to empanelled hospitals from ESIC in value terms with total medical benefits, it accounted for over 15 per cent (Table 2.2). It is highly likely that the actual share will be relatively far higher if we were to consider only total hospitalization benefits as the denominator. In the absence of such data, it reveals that in several states such as Bihar, Assam and Odisha, the share is already much higher at nearly a third of the total medical benefits, indicating the larger role played by referrals in empanelled hospitals. This reinforces the fact that ESIC hospitals were largely focussed on secondary care while tertiary care services had to be referred to private hospitals. Moreover, it also highlights the unavailability of services in a large part of the districts (just about 150 hospitals in districts out of over 742 districts). And even in those 151 hospitals, not all secondary services were available due to the absence of specialists. These are also the states where the rate of hospitalization is significantly far less (in Bihar and Odisha the rate of hospitalization is 4 and 8 per 1,000 beneficiaries against 26 at the national level). The number of beds available in ESI hospitals in these states is far fewer facilities (0.54 and 1.34 beds per 10,000 beneficiaries in Bihar and Odisha, respectively), reflecting poor access and therefore the need for accessing empanelled hospitals. Drug Procurement by ESI: How efficient?

The packages are identified based on high-value or high-volume transactions underlying PMJAY and other government-funded insurance schemes. Considerable price disparity exists between package rates offered in different schemes. Predictably, for most packages, PMJAY pays the least while ESI packages attract reasonably competitive rates. For two cardiac procedures, namely, PTCA with stents and CABG (coronary artery bypass grafting), ESI offers a nearly double rate. For CABG, the most expensive of all packages listed, is nearly Rs. 30,000 more than the PMJAY rates, while the rates offered in a top-end Tertiary Care Hospital in Gurugram are over Rs. 80,000. While for some procedures, such as and in place of, hysterectomy the rates are similar, but for a large number of packages, the rates fixed by ESI are relatively higher in the range of 13-322 per cent compared to those offered under PMJAY. The rates for certain procedures such as cholecystostomy, stone removal, percutaneous nephrolithotomy (PCNL), and so on. ESI has obtained a relatively better deal by way of lower rates. On the other hand, relatively higher rates are observed in a Private Tertiary Care Hospital (Gurugram) with a price ranging from 20 – 65 per cent, indicating several factors. Since ESI is a large purchaser unlike an individual, it can reap the advantage of economies of scale with a relatively better-negotiating power, something a household is unable to achieve. Moreover, households end up paying fee-for-service payments in a private hospital, while ESI pays up an agreed package fee, preventing unnecessary and inappropriate care.

Reaping monopsony power combined with large economies of scale, government procurement agencies often find the best prices while purchasing medicines, a well-established practice in some Indian states. A well-functioning drug procurement agency, such as Tamil Nadu Medical Services Corporation (TNMSC), Rajasthan Medical Services Corporation (RMSC), among others has reported in the past to obtain the best medicines prices. They are modelled on pooled procurement system wherein funds from different agencies within the States (health & family welfare department, medical education department, animal husbandry department, police department, and so on) are pooled together to procure medicines by an independent agency. Similarly, the ESI prepares and updates an essential medicines list, which is utilized for obtaining a rate contract. This rate is used to procure generic drugs from the manufacturers for the supply to various medical

Figure 2.16. How efficient are medicines procurement by ESI, 2019-20



Source: Authors' estimates from respective schemes – ESI, TNMSC, RMSC medicines price list.

institutions under the ESIC. One core indicator often employed to examine the efficiency of the procurement models is its price for each drug. For a common basket of medicines, we analyzed prices obtained by ESI, with a relative comparison to TNMSC/RMSC prices while also attempting to compare the same with private market prices. The common basket of the medicines, is identified here which are generics in nature (branded generics in the case of private market prices), whose dosage, strength and unit (pack size) are uniquely comparable.

Predictably, prices obtained by the RMSC in the range of 27-68 per cent for the common basket of key medicines. While, on the other hand, compared to market prices, ESIC has certainly managed to discover a relatively better price, with a price difference ranging from 100 — 657 per cent. Although ESIC has managed to achieve a better result with competitive prices that it can obtain from the manufacturers/suppliers, the comparable evidence demonstrates that it is yet to achieve the potentially ideal price. Therefore, the need to benchmark ESIC prices of key medicines to TNMSC/RMSC is critical to saving additional funds that can run into several crores of rupees to ESIC exchequer. Moreover, it is also observed that despite central rate contracts, local purchase by ESIC facilities continues to play a significant part, which hampers it from achieving the desired level of economies of scale. Local purchase is often allowed when certain essential medicines are not part of the ESIC rate contracts and other specialty drugs that are not part of ESIC rate contracts. Of the overall allocation to medicines, such local purchases by institutions are allowed to the extent of about 15-20 per cent. A statutory audit carried out by Comptroller and Auditor General (CAG) in 2013 suggested that medical institutions are often found bypassing central rate contracts and procuring from local purchase from

> The ESI prepares and updates an essential medicines list, which is utilized for obtaining a rate contract.

▶ **Table 2.3. Composite index of performance of ESI in States**

Front-Runners		Runners-up		Aspirants	
States	**Composite index**	**States**	**Composite index**	**States**	**Composite index**
Kerala + (Lakshadweep)	64.54	Delhi	38.19	Assam & NE States	28.85
Punjab	45.76	Goa	38.14	Jharkhand	28.53
Uttarakhand	44.29	Himachal Pradesh	38.10	Chhattisgarh	27.57
Haryana	42.36	Jammu & Kashmir	37.11	Odisha	27.40
Madhya Pradesh	41.76	Rajasthan	34.98	Bihar	26.38
		Karnataka	34.95	Maharashtra	19.22
		Tamil Nadu	34.94		
		Gujarat + (DNH)	33.54		
		Telangana	31.31		
		Uttar Pradesh	30.90		
		West Bengal	30.17		
		Andhra Pradesh	30.05		

Source: Authors' estimate based on ESI data for 2017-18

empanelled local chemists, forgoing significant savings that could have been achieved. One other perception, which appears dominant, among end-users and prescribers of the ESIC facility is the quality of medicines prescribed and dispensed. Presently, the ESIC follows a procedure of picking 10 per cent of samples to be sent to empanelled laboratories for quality testing. Such procedures are still lackadaisical compared to a relatively robust method of picking samples from each batch of supplies for quality testing, as was done by TNMSC/RMSC. The prescribers and end-users must be assured that the drugs for supply in the ESIC health facilities are of good quality and meet the global standard without compromising the safety and efficacy of the drugs supplied.

2.6. Key observations

Evidence from the last two decades of the ESI performance shows rapid and significant growth, reflecting a five-fold rise in the number of enterprises from 0.22 million in 1999-2000 to 1.03 million during 2018-2019 with a corresponding increase in the number of employees covered from 7.86 million to 31.17 million. As a result, ESI eligible beneficiaries now account for about a tenth of the total population in 2018-2019 as against three per cent of the population in 1999-2000. However, the share of women workers in respect of total insured persons remained low in the range of 12-17 per cent during the last twenty

years, in sharp contrast to a relatively higher share of female employment proportions among regular/wage salaried (21 per cent in 2017-18 as per 75th NSSO Round). With about 31 million employees registered under the scheme in 2018-19, it accounted for about 91 per cent of the total 34.02 million workers in the formal employment category, implying ESI does reasonably well in the category of formal employment in the formal sector. Whereas, nearly half of the workers who can potentially be included under the ESI are denied benefit due purely to the definition of workers. Presumably, such employment is largely linked to contractual work that is provided directly by the employer or provided through a contractor. State-level evidence about formality in employment can provide insights into whether ESI coverage is guaranteed by being in formal employment. States such as Uttarakhand and Punjab which enjoy high formal employment in total employment are also the ones that have ESI coverage significantly high of over 100 per cent (percentage of ESI coverage to formal employment in the formal and informal sectors). However, it is equally plausible that states with the highest formality in employment, such as Bihar, Himachal Pradesh and Chhattisgarh, have continued to underperform in ESI coverage (18 per cent, 43 per cent, and 39 per cent). On the other end of the spectrum are outliers including Delhi and Haryana, with 7 per cent and 9 per cent formal employment and yet could achieve tremendous ESI coverage (166 per cent and 223 per cent).

In respect to the performance of healthcare utilization, the rate of hospitalization enhanced significantly from 1.3 per cent to 2.8 per cent for the period under consideration, with utilization rates reflecting similar levels recorded in national sample surveys. In respect to out-patient utilization rates, per 1 000 beneficiaries dropped from 609 to 208, a sharp drop that could be explained by inadequacy in facility expansion, and similarly, the rate of the investigations (diagnostics) per 1000 beneficiaries also went down substantially from 37 to 15. The shallowness of the health insurance coverage is often reflected in the magnitude of households' expenditure, over and above the cost covered by the scheme per se. Despite generous medical and cash benefits, ESI beneficiaries appear to be incurring costs, but far less than other insurance schemes. The average expenditure incurred by the households covered by the ESI scheme ended up spending about Rs. 38,668 annually, while the CGHS beneficiaries paid out Rs. 50,470 and households covered by private health insurance paid nearly double the expenditure incurred by ESI beneficiary households. A relatively lower level of the households' OOP expenditure could presumably be because households may be accessing secondary-level nursing homes or other less expensive facilities. It is equally possible that the large share of this spending could be potentially used up for buying medicines, diagnostics and consultations. Correspondingly, a relatively lesser share of households covered by ESI (12 per cent) were suffering from health spending catastrophe, which is only half of catastrophic payments compared to other insurance programmes. Moreover, emerging evidence also indicates that about 5 per cent of households covered under ESI recorded a loss of income compared to nearly double among households not covered by any insurance programme.

> Lack of health infra structure availability hospitals, out-patient facilities, diagnostic facilities, and so on appears to be one of the key factors hindering access.

2.7. Preparing for next steps

Overwhelming evidence above points to potentially large scope for enlarging the coverage of enterprises and employees and bringing them into ESI's fold. Given the large surplus that ESIC has managed to accumulate in the past, resource availability is far less a factor than making available health facilities and services and deepening coverage benefits. Lack of health infrastructure availability – hospitals, out-patient facilities, diagnostic facilities, and so on appears to be one

of the key factors hindering access. Even after contracting with the private sector – in-patient and out-patient visits – utilization of healthcare facilities has been far short of the potential. Purchasing of healthcare services is still found to be fragmented and sub-optimal, raising serious questions about efficiency, effectiveness and quality of services provided. In order to investigate the reasons and factors that hinder coverage, lack of facilities, underutilization of services, and so on there is a need for eliciting the current knowledge, behaviour and utilization pattern of the ESI scheme from its stakeholders. While the questions of 'what' and 'how' were addressed in this chapter from a supply-side perspective, the next chapter attempts to address the question of 'why' and reasons for the existing gap in the system, largely through the demand side. The next section highlights key findings from the survey of several ESI constituencies including employees, employers, health facilities, trade unions, community, and so on. The evidence presented in this section and the one highlighted in the next section is expected to facilitate in formulating a design and implementation plan that can reconfigure the current ESI scheme.

> Purchasing of health care services is still found to be fragmented and sub-optimal, raising serious questions about efficiency, effectiveness and quality of services provided.

3. Key findings from the field survey among beneficiaries

The ESI is the oldest and the largest scheme covering over 133 million people in the formal sector until 2018-19. Its benefit packages perhaps go beyond the healthcare realm, by providing other social security benefits.

3.1. Introduction

Notwithstanding the breadth and depth of its coverage in the nearly 70 years of its existence, several problems pose a challenge to improvements and uptake of the scheme among its beneficiaries. The previous chapter identified those challenges with evidence drawn from available literature, scheme database, available national surveys conducted by NSSO involving PLFS and health surveys. This chapter provides key highlights emerging from the field survey of four states, conducted among employees, employers, providers, other stakeholders such as trade union leaders, and enterprise associations. While previous reviews of the scheme were conducted based on data from the supply side including the previous chapter, analysis of demand-side issues, especially from the beneficiaries' angle has largely been missing till now. This piece of research attempts to fill this gap that has been due for a long time. The research design, including sample size, its distribution among employees, employers, healthcare providers, trade union representatives, association representatives, and so on are outlined in Chapter 1 of this report. The analysis that follows is purely from the field data, both quantitative data and qualitative interviews from various stakeholders. The survey investigated several questions and responses elicited from different constituencies. These are organized in the following themes:

1. Awareness, knowledge and attitude of stakeholders underlying ESI benefits:
   - (a) Knowledge and awareness involving enrolment and registration
   - (b) Enrolment pattern and scheme coverage among beneficiaries
   - (c) Knowledge about employer and employee contribution; and
   - (d) Awareness and knowledge levels underlying grievance redressal mechanisms
2. Healthcare Utilization Pattern among ESI Beneficiaries
   - (a) Reporting of illness by beneficiaries
   - (b) Treatment pattern of out-patient care visits
   - (c) Treatment pattern of in-patient episodes;
3. Financial Risk Protection Measures
   - (a) Maternity, child delivery and OOP payments
   - (b) Workday and wage loss due to hospitalization
4. COVID-19 and its Associated Knowledge
   - (a) Compensation of wage loss to employees due to COVID-19
5. Occupational Hazard and Safety Measures faced by Employees
   - (a) Levels of health risks faced by employees, including types of health risks
   - (b) Employers' knowledge about occupational hazards
   - (c) Treatment sought for occupational hazards – by type of health facilities used and states
   - (d) Measures taken by employers to prevent work site accidents
6. Satisfaction levels of employers/employees
   - (a) Patient satisfaction levels for healthcare

3.2. Awareness and knowledge about different aspects of ESI

3.2.1. Awareness and knowledge about ESI benefits

Health insurance literacy remains a central tool to coverage and its uptake. This is more so underscoring voluntary health insurance schemes, such as government-funded health insurance (PMJAY), private health insurance and community-based health insurance. However, in a mandatory health insurance plan like the ESI, since every beneficiary is covered, awareness levels about its enrolment may appear less significant. Despite this seemingly logical conclusion, evidence emerging from this survey points to the contrary. Awareness levels are critical at every stage – from enrolment in the scheme, creating ID and receiving cards by employees and its dependents, understanding the benefits, the types of benefits available, location of facilities, utilization of facilities, and so on. Knowledge and awareness are vital not only among beneficiaries but also among other key stakeholders, including employers, trade union representatives, enterprises associations, and so on. Inadequate literacy among one constituency can hamper enrolment and uptake of scheme benefits. For instance, even if employees are aware of the benefits and if employers have less knowledge, delays in enrolment or denial of specific benefits may occur.

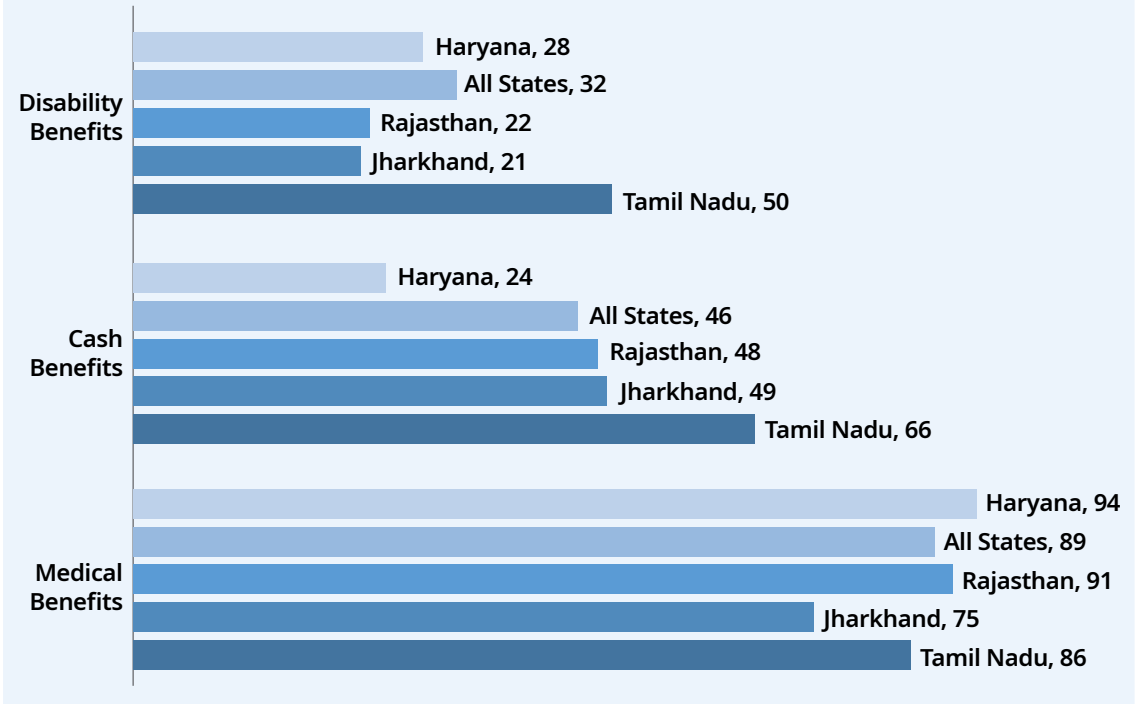
And what do the survey findings reveal? The survey results show that awareness about medical benefits that ESI offers is much higher (89 per cent) among employees, but far less on cash (46 per cent) and disability benefits (32 per cent) (Figure 3.1). No clear pattern emerges across states in terms of awareness about different benefits. The study further confirms that the understanding is relatively greater among employees in Haryana (94 per cent) but in Jharkhand, only three in four employees know about the medical benefits. A higher level of awareness could be attributed to the socio-economic and educational status of the respondents. Since four in five sample respondents were employees receiving a relatively higher salary in the range of Rs. 10,000 and above, besides the fact that over two in three of them possessed secondary level education and/or a graduate, one could conjecture that this may

perhaps be the contributing factor in a higher level of awareness. Although awareness levels among beneficiaries are relatively higher in the ESI scheme, available literature suggests that the tax-funded voluntary scheme such as RSBY, appear to have performed even worst. A study of RSBY in Maharashtra suggested that just about 30 per cent of eligible beneficiaries were aware of the scheme benefits. It implies that social exclusion plays a negative role where the socio-economic and educational background of the households contribute to awareness levels. Confirming this trend even in an urban setting in Delhi, a recent study of RSBY highlighted that just about 19 per cent of households studied were aware of health insurance, with substantial variation in their knowledge among various socio-economic groups, as barely 9 per cent of recent migrants compared to settled-migrants (21 per cent) had knowledge about health insurance. However, in Karnataka in 2011, 85 per cent of the respondents in a survey confirmed their awareness level about RSBY and over two third of the eligible population were enroled in the RSBY scheme. But the findings from the survey in Karnataka also highlighted

> Investigating the association between socio-economic and education correlates to health insurance awareness.

the challenges of putting to use the membership benefits, in terms of how and where to obtain treatment offered by the scheme. Investigating the association between socio-economic and education correlates to health insurance awareness. Another study conducted in Bangalore, India, suggested that these correlates are critical in the uptake of health insurance. Another study dealing with the voluntary Community Based Health Insurance scheme underscored the success of awareness campaigns among the treatment groups. This occurred since as against control groups, the

▶ Figure 3.1. Employees' awareness about medical, cash and disability benefits (figures in per cent to total)



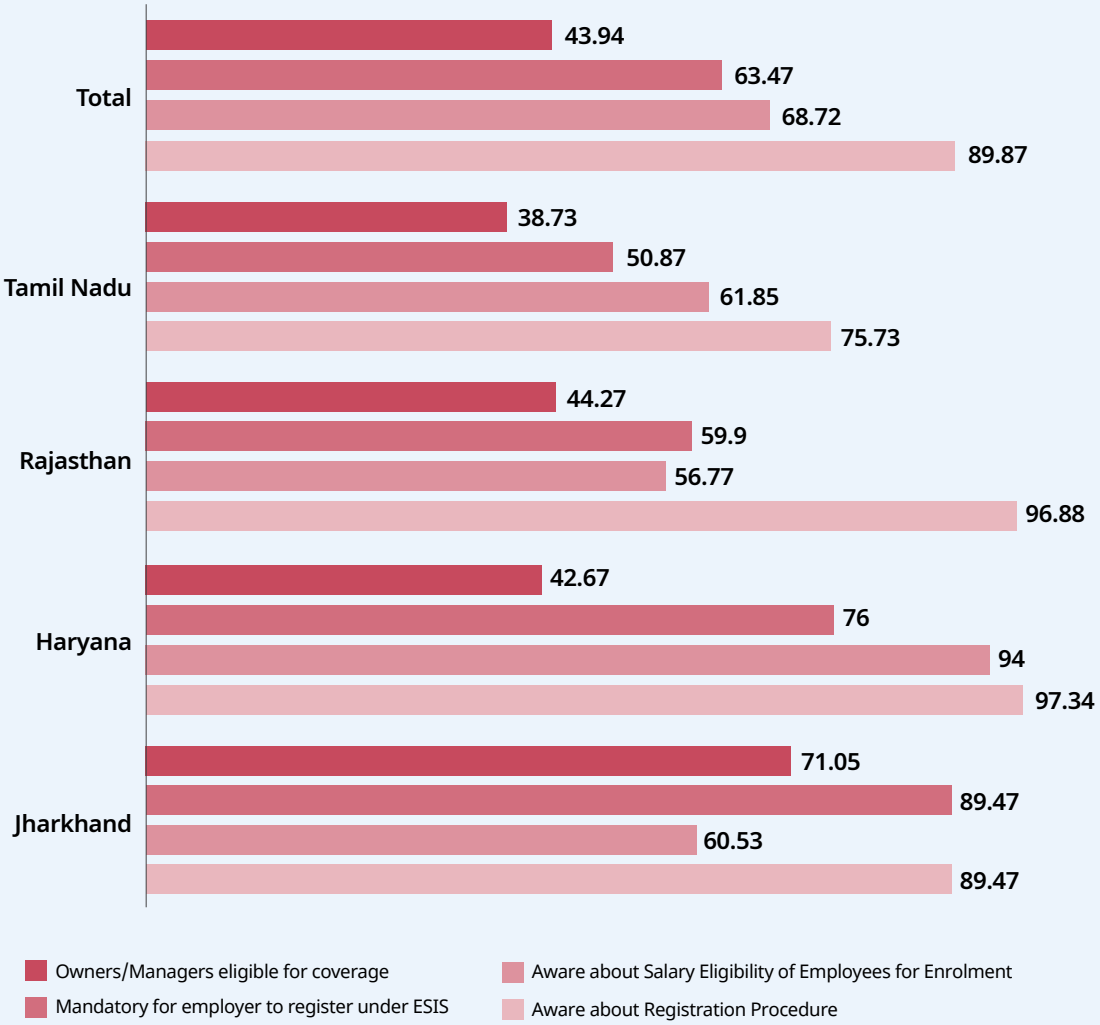
insurance understanding of the beneficiaries among treatment groups increased substantially than those who were not exposed to awareness campaigns. The study concludes that enhancing awareness levels among the beneficiaries prior to the enrolment was a critical contributing factor in accelerating knowledge, about the insurance and its uptake. Conversely, mounting Information and Education Campaign (IEC), alone is unlikely to result in the higher enrolment as another study dealing with RSBY revealed.

To assess the awareness level of the employees about the benefits available under the programme, the employees were asked about their knowledge about different benefits (like cash benefits, medical benefits, disability benefits, funeral expenses, unemployment benefits, and so on) provided under the ESIS programme. In terms of cash benefits, employees in Tamil Nadu (66 per cent) appear to know more about cash benefits than Haryana employees (24 per cent). Whereas, employees' awareness about ESI scheme benefits increases with the size of the enterprises. Employers' knowledge about the benefits employees receives also reflect a similar pattern, wherein a sizeable share of the former is aware of medical benefits (92 per cent), followed by cash benefits (62 per cent), medical aid (57 per cent), disability benefits (41 per cent) and far less on funeral expenses (20 per cent) and unemployment benefits (14 per cent) (Figure 3.1). No significant differentials existed across industrial sectors, in terms of employers' knowledge of medical and cash benefits. The larger base of beneficiaries, unlike other insurance schemes, is another unique feature of ESI. In it, the benefits accrue to dependents of the enroled employee. Over two-thirds of the employers identified employees' spouses, parents and children as beneficiaries. Nearly 18 per cent of employers reported that all members of the employee are provided benefits, about 11 per cent did not know the benefits provided to employees' families. A majority (71 per cent) of these enterprises, where employers do not have awareness about the coverage of employee household members is small. The number of employees is less than 10. In order to understand the perceptions and knowledge among various stakeholders and their involvement, interviews among ESI officials, trade union leaders and employers' associations were conducted. As per the interviews conducted among ESI officials, it emerges that for employees working in industries and establishments, outreach awareness programs are regularly carried out for employers, employees and trade union leaders at workplaces. Regular meetings, seminars and interactive workshops are organized at the construction sites and branch offices. Pamphlet distribution and advertisement at leading newspapers about ESI benefits are another mode of communication utilised in Tamil Nadu. In Haryana, all officials mentioned that in order to create awareness about the scheme and for wide circulation and implementation "numerous seminars/workshops were organized at Hisar, Sohna, Jharli, Bahadurgarh, and so on at regular intervals.

According to one of the trade union leaders from Tamil Nadu, "There is not much exposure regarding the scheme among the employees. As we have a union, only those companies who have at least 30 eligible persons come under the ESI scheme. In one such company, we have generated awareness by organizing camps and even forced the employees to get the benefits of the scheme such as maternity services, accidents, and so on. For companies in industrial areas, ESI conducts meetings and medical camps for awareness generation". According to an enterprise association member from Tamil Nadu, "No efforts are being made by ESI for creating awareness among employees about the scheme and its benefits, the department only comes in terms of making employees follow the rules. Further, ESI should circulate printed materials about the scheme and its benefits, through the associations so that they could circulate it to the employees and employees should be asked to update their records once in a year".

In Haryana, as per a trade union leader, details about the ESI are informed to the members of the union. These members are also sensitized during the Committee Meetings and GATE meetings. Besides, information is also provided through different committees of ESI like Hospital committee, the Local Committee, and *Suvidha Samagam*. One of the trade union leaders from Jharkhand mentioned lack of awareness as one of the main reasons as to why benefits do not reach the beneficiaries and why they prefer private facilities to ESI. According to him, "Awareness is very important to make ESI more efficient. Employees should at least know

Figure 3.2. Employers' awareness about registration and enrolment

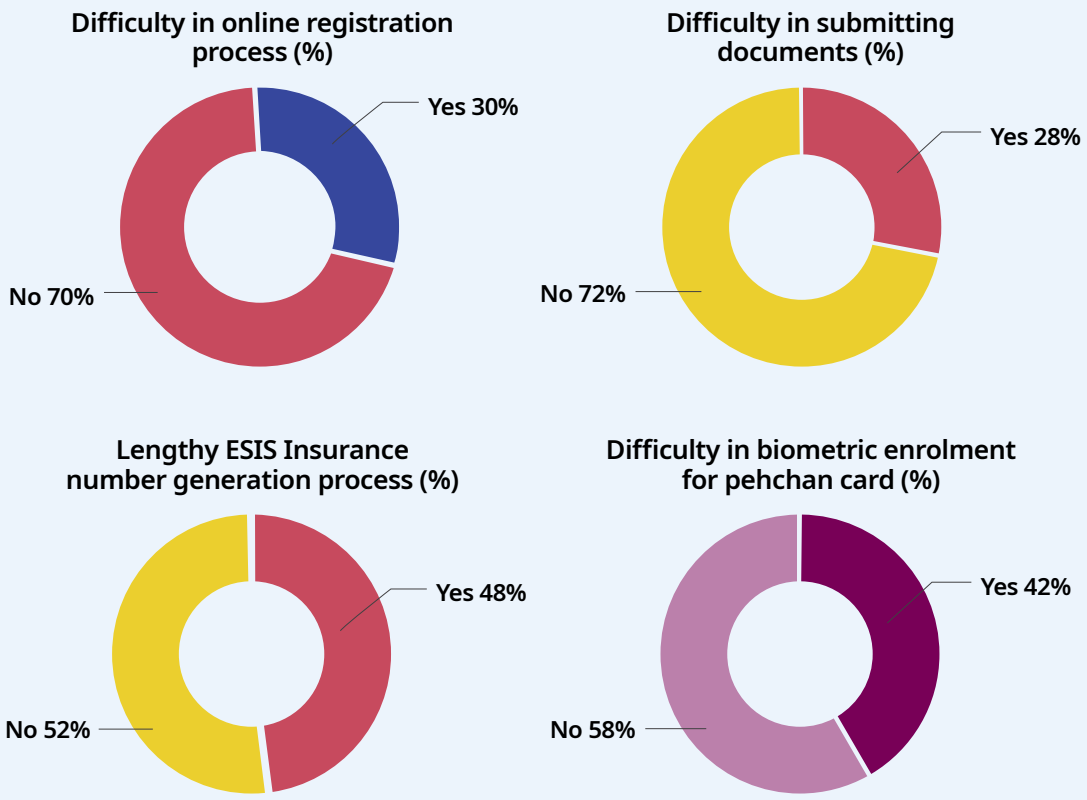


about the available resources the government has." He further mentioned, "Digitalization is a very good system but employees are not aware of the process. Facilitators should be appointed to assist the enrolment process in each city. NGOs should come forward and should take initiative for the same. There are many employees like delivery boys and so on, who do not have any idea regarding this. So, the process needs to be made easy and awareness generation camps should be organized".

3.2.2. Knowledge and awareness involving enrolment and registration

Prior to the reforms initiated in 2020, whereby the registration process was made simple, employers were often faced with several challenges. They relate to enrolment, registration of the units and their employees in the ESI ranges from insurance number generation, IT-related online registration & biometric enrolment to documentation-related issues. In order to register a new IP, as a pre-

Figure 3.3. Difficulties faced by employers in enrolment and registration



requisite, the employer was required to register the mobile number and bank account details of the employee. Nearly one in two employers, reported a lengthy process of the insurance number generation, on average. However, striking inter-state variations were found in which over two thirds of employers in Haryana. The latter faced the issue of a lengthy number generation process, as against only one fourth of employers in Tamil Nadu.

Similarly, significant inconvenience was reported by employers in biometric enrolment for *pehchan* card (Identification Card) of its employees. About 41 per cent of the employers surveyed indicated the difficulties surrounding the biometric enrolment process for obtaining *pehchan* card, as employers in Tamil Nadu (24 per cent) complained relatively less than those in Haryana (67 per cent) (Figure 3.3). The 17-digit unique ID card serves as verification and authentication of Insured Persons (IPs) and their families while availing treatment in ESI hospitals or dispensaries across the country, given its portability feature even if employees change their job. One ID card is issued to every IP and one for each member of the dependents who are entitled to benefits. In view of the difficulties faced in obtaining *pehchan* card, ESIC considers IP's *aadhaar* number, as a permanent identity card in lieu of a biometric *pehchan* card. However, in the absence of the *aadhaar* number, IPs are mandated to obtain either the *aadhaar* number or a biometric *pehchan* card by visiting any *Pehchan* Camp, which is required for availing medical treatment beyond 30 days of registration of IPs.

For any establishment that employs 10 or more workers, ESI registration is mandatory. Considering the difficulties faced by employers, transparency and simplification of procedures were being carried out timely by the ESIC. Despite these efforts, employers continued to complain about these procedures being cumbersome and time-consuming. The survey highlighted that 30 per cent of employer respondents appear to face challenges in the online registration process, although it varied from one to another. A huge proportion of employers from Haryana (58 per cent) faced this difficulty, followed by Jharkhand (26 per cent), Rajasthan (19 per cent) and Tamil Nadu (18 per cent). Similarly, the survey further revealed that 28 per cent of the employers reported having faced the challenge of submitting documents, including the quantum of documents required and the process of submission of those documents. Again, the challenges faced by employers across states differed, with employers in Haryana facing a higher share of challenges (56 per cent) as against those in Tamil Nadu (14 per cent).

Employers are also required to submit the following documents, although they can do so online: (i) registration certificate of the unit, (ii) articles of association and memorandum of association of the company, (iii) employee list, (iv) PAN card details of the company, (v) compensation details of all employees, (vi) cancelled cheque of the bank account, (vii) attendance register of employees, and (viii) employer's registration form which are downloaded online and uploaded on the ESIC website. Covering note from employer is mandatory while issuing pehchan card, with particulars of the employer code number, employer details, date of handover of declaration form of employees, number of declaration forms, list of IPs, date of acknowledgement by ESI official, name of the ESIC field inspector. Such procedures were simplified in 2020 making them online with only a few pages of information sought from employers. However, a potential reason for a higher reporting of challenges during registration was due mainly to the year of registration. The field survey pointed out that only about 6 per cent of the employer respondents registered for ESI in 2020, whereas nearly one in three of them were registered during 2010-2019, the rest (63 per cent) did so before 2009.

3.2.3. Enrolment pattern and scheme coverage among beneficiaries

Although mandatory for the employees, an evidence about the enrolment of employees and their dependents from the survey reveals interesting patterns. The proportion of the enrolment of the households in the ESI scheme including its IPs, worked out to 85 per cent, while the share dropped to 78 per cent excluding employees. Thus, over one in five household members, who are the potential beneficiaries, did not enrol in the scheme, despite it being universal among the ESI households. The survey further highlighted that over three fourths of the households and employees were in possession of ESIC cards. Among those employees, who responded to the enrolment status, about 2.5 per cent did not enrol until the day of the survey, the rest enrolled in the scheme. Notwithstanding the compulsory nature of the scheme, for its employees, and universally applicable to its dependents, one fifth of the respondents did not enrol in the scheme. This could plausibly be due to the time of joining the job by the employee and the resulting delays in obtaining the ESIC card by them and its dependents. Since a large number of dependents was not living with the employees, their enrolment could have been delayed.

However, available evidence, especially in the context of publicly-funded health insurance schemes such as RSBY, points out socioeconomic and institutional determinants influence enrolment of beneficiaries. One study revealed a strong influence of institutional factors (poor quality of governance of a district) that explains variation in participation and enrolment in RSBY. It also reported that, districts that were socioeconomically backward were not only less likely to participate, but their enrolment rates were also lower. Summing up the phenomenon of notionally high coverage and yet relatively lower enrolment, a critical observation comes from another study. It highlighted that although wage contribution was paid but was not actively enrolled since ESI smart cards were not issued in time.

Extending coverage benefits by including more informal workers into the scheme, has been

initiated in the past. But by far this initiative has mixed responses. For instance, a proposal has been put forward to reach out to people working in unorganized sector through trade-unions and plans are made to create a guild for major sectors in the unorganized sector e.g, domestic help, street vendors, and so on, as per Regional Director and Deputy Director, ESIC, Chennai. As per the SRO, ESIC, Tamil Nadu, some pilot projects were being implemented. There is a separate Act for unorganized workers and they were being tried to be covered under a pilot project some 5-6 years ago but it did not materialize well because the employers are not very much forthcoming to join the scheme due to the awareness issues.

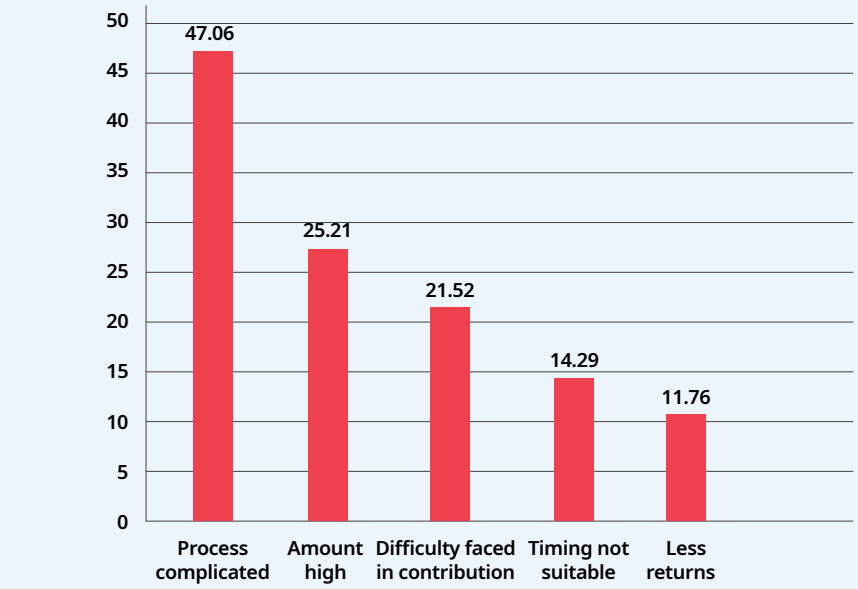
According to the SRO, "the Supreme Court's order says that there is need to cover the construction site workers under the scheme. We initially covered all the construction companies and directed them to comply even for the site workers but once the issue reached the Supreme Court many of the employees, stopped paying the contribution. One or two famous builders in Coimbatore, had initially been making payment for all the site workers. Now they have stopped paying it. From August 2015, ESIC headquarters issued an instruction to cover all the construction workers under the ESI scheme prior to that those people were not brought under the coverage. Unfortunately, the Builder's Association of India, which is a leading organization representing the builders has filed a case in the Supreme Court and obtained a stay against the operation of such instruction. Therefore, until the stay is vacated there is a bar in registering them under the scheme. The Deputy Director, ESIC, Tamil Nadu stated that" if construction workers are brought into the mainstream, they are going to get a host of benefits, but there is an artificial barrier acting there in the form of stay obtained by the builders, they have their own excuses. They say that bringing these people under the scheme adds cost to their projects. But this is a social security scheme that is useful for construction workers because they are vulnerable and more prone to accidents and injuries. The builders must realize this aspect, and should withdraw the case. The scheme is built in such a way that the employer should be there so that the unorganized workers are not being covered under the scheme. Officials from Haryana too shared this view. Besides, a trade union leader from Haryana contended that "The unorganized workers are not being covered as government is not ready to share the contribution and it is a contributory scheme. So, if a person who is earning Rs. 8000/- and contributing 4 per cent premium, and when unorganized workers will be attached to this scheme then who will pay their part of the contribution? If nominal charges are taken from them even then it will be an injustice to those who are contributing regularly under the scheme".

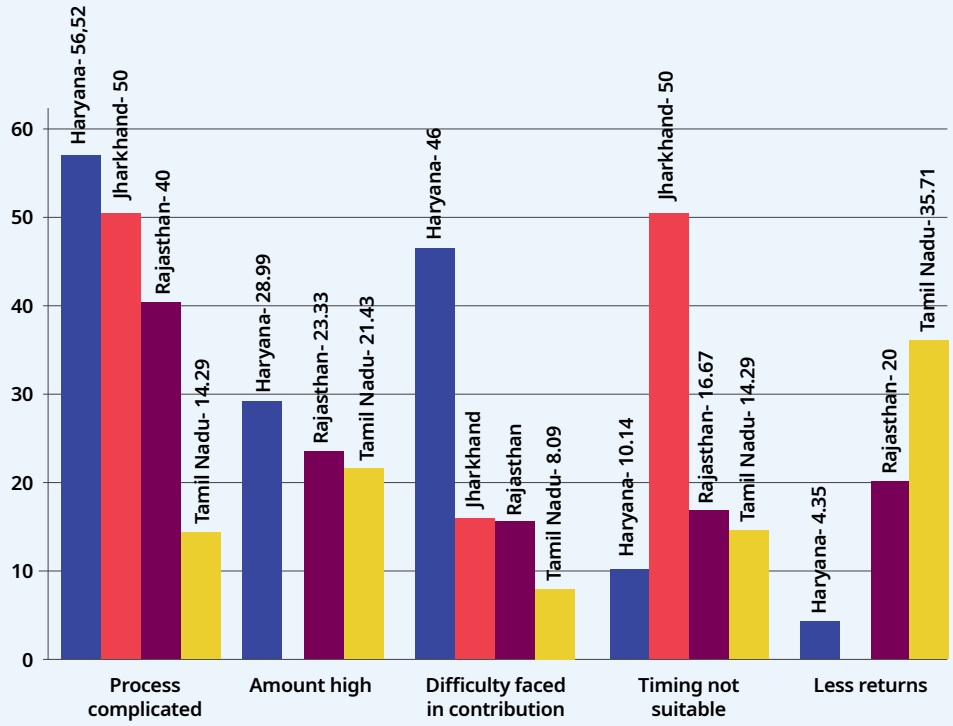
3.2.4. Knowledge about employer and employee contribution

The ESI scheme is purely a contributory scheme in nature, with the employers, employees and the state governments contributing in different proportions. The current contribution range from 3.25 per cent of wages contributing by employers and 0.75 per cent of wages by employees. Over two in three employers surveyed in the field correctly indicated <4 per cent of wages as the current contribution by employers, even though 17 per cent of them misunderstood the contribution to be <5 per cent (Figure 3.4). The knowledge about correct contribution varied from as high as 75 per cent in Rajasthan to as low as 42 per cent in Jharkhand. Wage contributions and their respective shares were to be collected and paid by the employer monthly to ESIC, which is usually paid by the 15th of the following month. The employer has the option of paying the contribution either online as well as cash/cheque. To the question of whether the employer paid online or cash, about three fourths of them, reported having used online payment mode and the rest cash payment mode.

Further illustrates the difficulties faced by employers in paying contribution, where one in five employers highlighted this as an issue. About one fourth of the surveyed employers highlighted that the contribution amount was high, although the process of making contribution every month was found to be a larger problem among 47 per cent of the employers. About 14 per cent of them identified unsuitable timing for making contribution and 12 per cent identified fewer returns as a common problem being encountered by them. Two in three employers, correctly identified and confirmed their knowledge about

Figure 3.4. Challenges faced by employers in making payment contribution





the time limit for wage contribution as 15 days within the last day of the month. About 57 per cent of them are aware of interest penalties leviable on delayed payment. After the initial registration with the ESIC, employers are mandated to submit ESI returns which are expected to be filed by them twice a year. Several documents were required to be submitted by employers which include the attendance register of employees, wage register, Form 6 register, accidents register (information about accidents that occurred in the premises) and monthly returns and *challans*.

In respect of the contributions paid, functionaries from both Tamil Nadu and Haryana opined that the premium collected was reasonable. According to an ESI official from Tamil Nadu, "the premium collected (6.5 per cent) has now been reduced to 4 per cent and it was reasonable, sufficient to cover the costs as well as economical to the beneficiaries". As per one of the branch managers from Tamil Nadu, "beneficiaries pay a minimum premium (0.75 per cent of their wage) and get huge benefits including out-patient treatment and in-patient treatment, disability, sickness and maternity benefits, and so on." An Assistant Director from Haryana, while appreciating the efforts of the scheme, said, "the present measures of the premium collection are appropriate, and the system made for the same is workable. The scheme has the lowest premium and provides a number of benefits". As per a trade union leader, "of the total population in Tamil Nadu, only 20 per cent are employees and 80 per cent work in unorganized segments on contractual basis. A premium of Rs.100, should be collected from all type of vendors, masons, maids, cooks and so on, and the premium could be increased as when they are start utilizing the services", clearly articulating the need for including informal workers in the ESI fold. Overall, there is a lack of knowledge about correct contribution amount by the employers, even in the organizations which are enrolled under ESIS. Among the employers, who are aware, majority are satisfied with the amount of contribution, though their views often differ from trade union members, who advocate for less contribution from employees, who work in informal setup.

> The selected indicators represent five different dimensions of ESI's functions in different states functions in different states.

3.2.5. Awareness and knowledge levels underlying grievance redressal mechanisms

Grievance redressal is an important tool to resolve issues in the functioning of any organization, as this assumes a vital role as an accountability measure. One method of ascertaining the accountability criteria is to assess how well the employers and the employees are aware of the resolution mechanisms in place. Expectedly, only about half of the employers surveyed were aware of different grievance redressal mechanisms that exist currently. A similar share of them had used telephonic mode in the past as a mechanism to reach out to the authorities. Unfortunately, only one in three employers were cognizant about *Suvidha Samagam*, while inspections from ESIC officials were reported by one fourths of the employer as a mechanism for grievance redressal. *Suvidha Samagam*, is considered a one-stop solution and acts as a platform for redressing the grievances of stakeholders including employees, beneficiaries and employers. This platform is organized once a month in ESIC offices or ESIC hospitals. This platform also serves to settle all pending grievances.

Although mechanisms may vary between states, in Tamil Nadu, for instance, an MIS system has been created for registering and monitoring grievances. The Turn Around Time (TAT) has remained at three days. "There is a proper mechanism for public redressal system, and there is an online system so that people need not come directly.

There is a separate module called PG Portal that can be accessed through the online portal and that is very easy to operate, anybody having a complaint can raise the issue. Once the complaint is received it has to be disposed of within a week; however, we try to dispose it of within three days", said an ESI official from Tamil Nadu. In addition, *Shikhayat Adalat* (Courts for Complaints) are also organized periodically for faster settlement of grievances, Post the settlement of grievances a satisfaction survey is conducted to identify areas for improvements. Basically, TAT and the number of successful recoveries completed are a measure of effectiveness as per the DD. According to one of the branch managers, "We have not received any public grievances till date, because every year "*Shikayat Adalat*" is organised at our regional office and wide publicity has been given to that. Whenever people have public grievances either from the medical side or from the branch office, they report it directly and it is settled and there."

As far as Haryana is concerned, "with regard to the public grievances redressal system, ESI PG Portal and RTI are available. At the local level, complaints are replied and redressed in a set mechanized way and in a time-bound manner as per available rules and regulations to resolve issues at the local level" – a point outlined by SSO/Superintendent, Haryana. Conversely, a trade union leader from Haryana did not share this optimism, "since hospitals have their own grievances committee, it is totally up to them what they would do with the complaints received from the IPs. However, unless a tripartite committee is formed nothing will happen. There is a need for such a committee and a process for hearing the complaints and solutions need to be provided, without this no improvements can happen". Echoing similar views, a trade union leader from Jharkhand stated that, "the Government has not assigned any role for us in grievance redressal and in ESI Act too, no role of a trade union is defined. We can only assist, and if any issue arises, we file a written complaint to the deputy commissioner's office". It can be summed up that though there are several initiatives from the administration to address the grievances, the employees are not very much aware of such facilities, and also in view of trade union leaders, there is a lack of institutional support in addressing the issues raised.

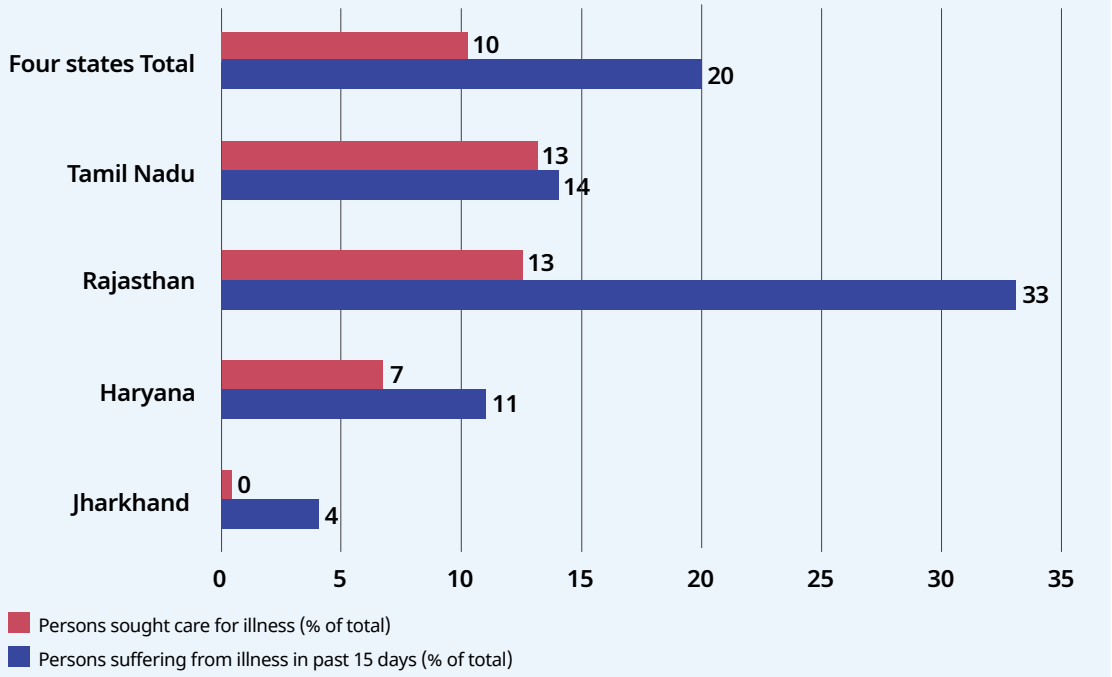
3.3. Healthcare utilization pattern among ESI beneficiaries

3.3.1. Reporting of illness by beneficiaries

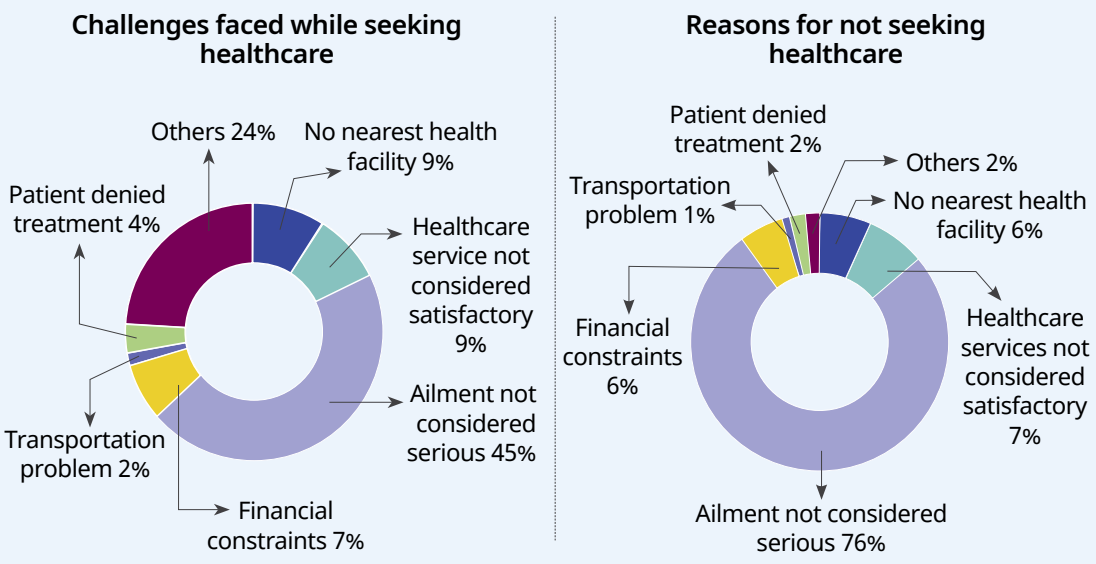
Even though the ESI scheme extends its entitlements to cover a wide range of benefits to its beneficiaries, the core coverage relates to healthcare protection to its employees and their families. The survey captured the proportion of persons suffering from any illness and those who sought treatment for acute, chronic and other interventions. Survey findings reveal that one in five persons reported at least one illness over the past 15 days of the recall period (Figure 3.5). Females reported a slightly higher rate of illness than males. Considerable variations were observed, in illness reporting across states, with only 4 per cent persons reported sick in Jharkhand as against 33 per cent in Rajasthan, while beneficiaries in Haryana and Tamil Nadu reported 11 per cent and 14 per cent disease conditions. About half of those who reported sick, did so for acute illness, whereas 14 per cent of illnesses were reported due to the chronic conditions while the rest one third of the sickness was owing to the other conditions.

The survey further illustrates healthcare-seeking behaviour with over half of those who were sick, sought treatment. Yet, the average among the four states hides significant differentials in treatment-seeking as 94 per cent of beneficiaries in Tamil Nadu sought care as against barely 10 per cent in Jharkhand, while the share of beneficiaries seeking treatment in Haryana and Rajasthan was 60 per cent and 38 per cent, respectively. Substantial differences in utilization of healthcare across states highlight variations in treatment-seeking behaviour and partly point to the availability or lack of healthcare facilities (Figure 3.6). About 7 per cent of beneficiaries did not seek treatment due to the lack of nearby health facility and 8 per cent had to forgo treatment owing to unsatisfactory health service provision. It may further be noted that 82 per cent of the beneficiaries did not seek treatment because the ailment was considered not serious enough to seek care.

▶ Figure 3.5. Persons suffering from illness for the past 15 days and treatment sought



▶ Figure 3.6. Challenges in seeking and reasons for not seeking healthcare

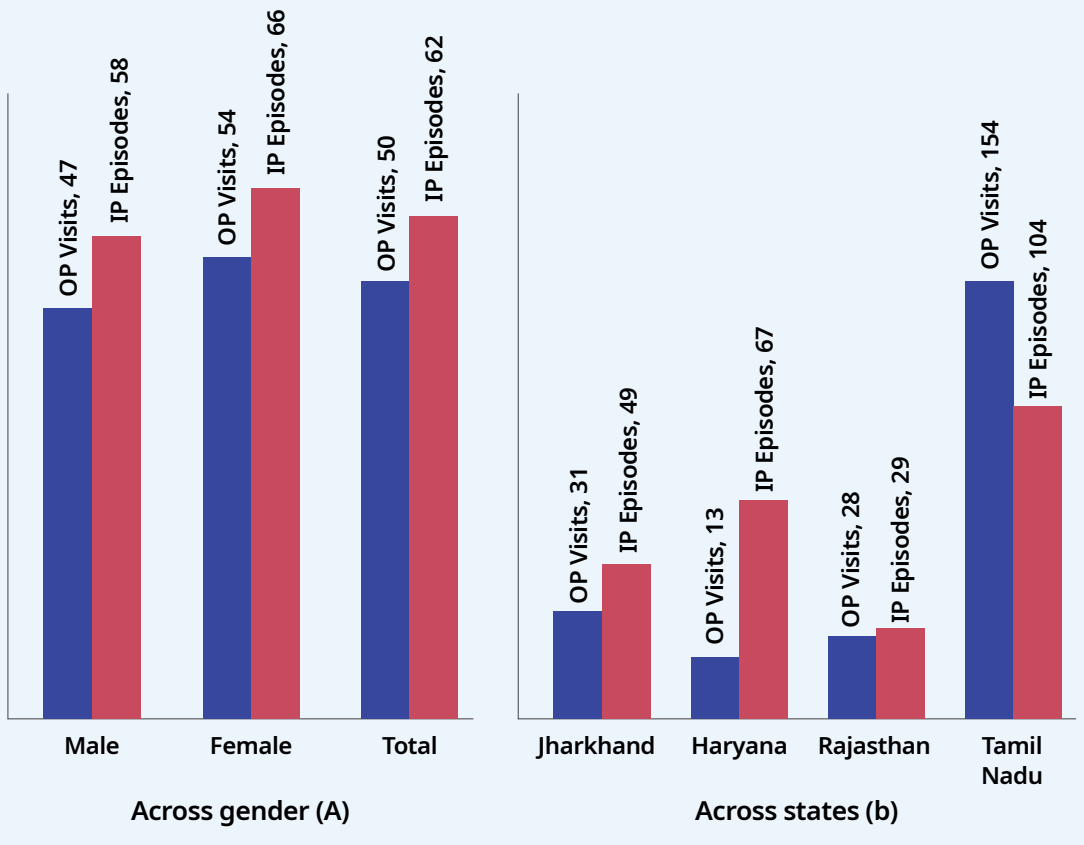


3.3.2. Treatment pattern of out-patient care visits

From those beneficiaries who sought treatment, the rate of the out-patient visits, was observed to be 50 per thousand beneficiaries, with a relatively larger number of the OP visits in Tamil Nadu (150 per thousand) and an abysmally lower number in other states, Haryana (13 per thousand), Jharkhand (31 per thousand), Rajasthan (28 per thousand) (Figure 3.7). The out-patient treatment registered by beneficiaries in the survey appears to be grossly underreported. For instance, the country-wide NSSO morbidity survey carried out in 2017-18 demonstrated that the rate of out-patient visits was 75 per thousand at the all-India level. Whereas, the rate of out-patient visits remained extremely high at 692 per thousand (old and new cases) during 2017-18 and even higher at 900/1000 during 2016-2017, as reported by ESI facilities in its annual reports. It may be observed that this evidence must be read with a caveat, as NSSO OP figures are based on 15 days recall period while ESIC OP reporting is for the entire year. Therefore, this is strictly not comparable but provides a broad direction.

The gross underreporting of out-patient treatment is plausibly due to COVID-19, and associated restrictions placed during the field survey period. The survey in three states, namely Jharkhand, Haryana and Rajasthan was carried out during September-October, 2020, when the COVID-19 pandemic was at its peak. Although no blanket lockdown was in place during this time-period, several restrictions were in place, including limited availability of out-patient care services, reservation of hospital infrastructure for COVID-19 patients rendering non-COVID-19 services virtually unavailable, unless otherwise it was required for emergency use. Patients were under the influence of fear and stigmatization, rendering them to

▶ Figure 3.7. Rates of healthcare utilization by out-patient and in-patient visits



not report even if they faced simple ailments of fever, cold, cough, and so on. Several media and journal articles attest to this trend at the ground level. A National Health Authority (NHA) study confirms the influence of supply and demand-side challenges contributing to a sharp drop in utilization of healthcare services during the COVID-19 pandemic period (On the supply-side, the report showed that hospital activity during the early lockdown period declined by 49 per cent and 37 per cent during the late lockdown period. From the demand side, it was observed that service utilization in empanelled hospitals of PMJAY beneficiaries dropped by 61 per cent during an early lockdown and 46 per cent during the late lockdown, compared to a pre-lockdown month).

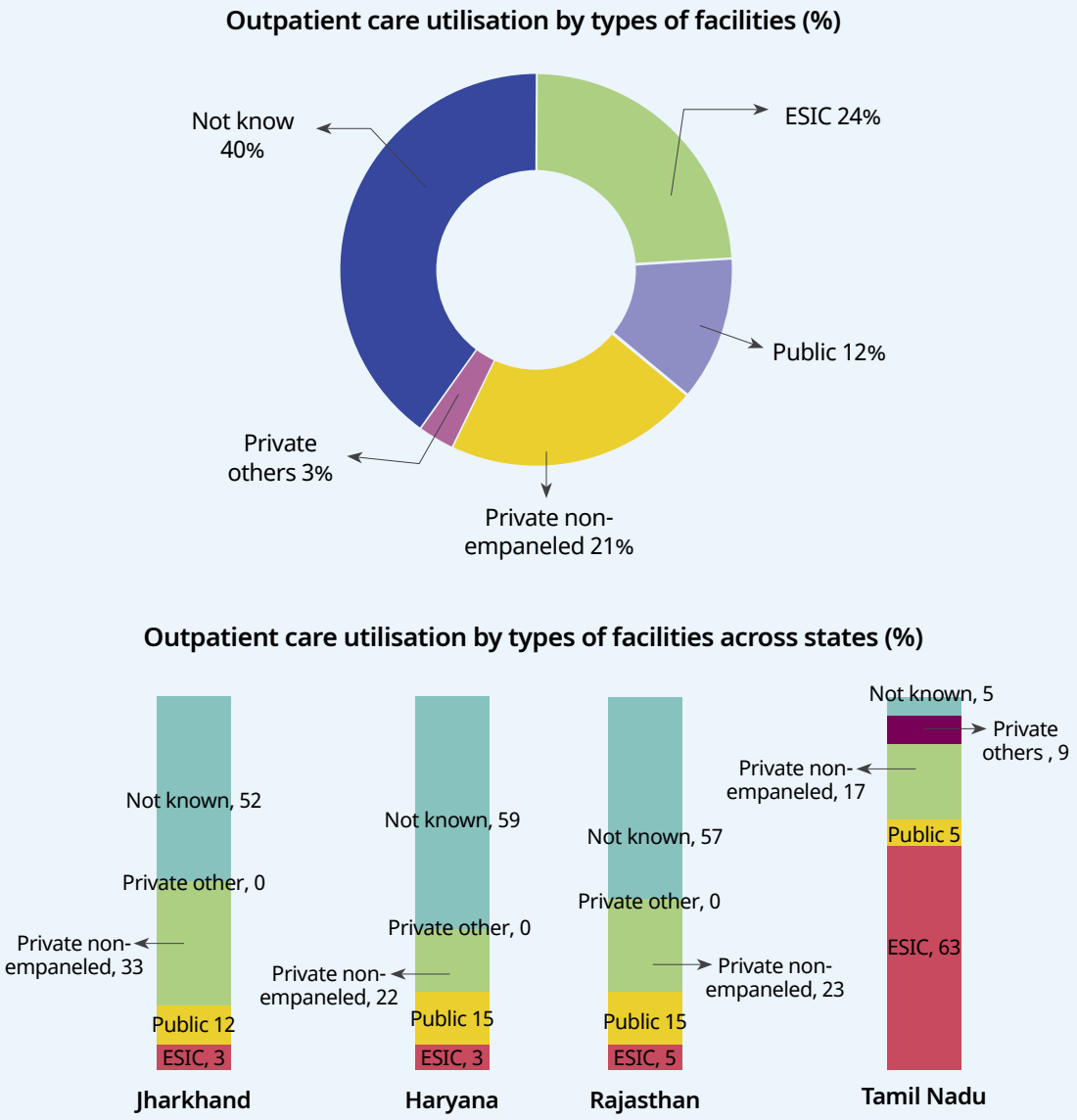
Similarly, national programmes involving reproductive, maternal and child health services, immunization coverage, access to TB, Malaria and HIV/AIDS services were affected substantially leading to less access to prevention and treatment coverage of such services. A rapid national survey of TB programme officers revealed an approximately 80 per cent decline in daily TB notifications during the lockdown period compared to the average daily notifications in previous years (Stop TB Partnership). A decline in the number of the patients, notified by the private and public sector, is reported during the lockdown period, compared to the number of notified cases in the preceding two years ('NIKSHAY' portal, a national government portal that provides information/data about TB prevalence/incidence, DoTs programme and so on). In 2020, only 58 per cent cases were notified by the public and 45 per cent by the private sector; with an overall notification rate of only 53 per cent (public & private sector combined) as compared to 84 per cent in 2019 (more than 30 per cent drop in overall notifications).

Yet, when out-patient care visits occurred, barely one in four out-patient visits were sought in ESIC dispensaries/hospitals. A similar share was accounted for by private non-empanelled facilities, but that is marked by considerable variation among states, as the average is driven by a larger share of out-patient visits by beneficiaries in Tamil Nadu while out-patient treatment in other states recorded a dismal 3-5 per cent in ESIC dispensaries/hospitals (Box 6). An immediate reason for the grossly lower rate of OP visits in states other than Tamil Nadu was partly due to COVID-19 related and the initial period of unlocking that witnessed hesitancy of people accessing care even in dispensaries. As far as other states are concerned, a part of the reason is due to the designation of ESIC hospitals as COVID-19 facilities, rendering them unusable for non-COVID-19 patients. A relatively higher rate of out-patient visits in Tamil Nadu, was partly due to the timing of the survey, as it was conducted during the receding pandemic period of the first peak (November and December), which also coincided with post-monsoon time highlighting seasonal peak of illness such as common cold, fever and cough. Beneficiaries accessing out-patient treatment in government hospitals registered a share of 12 per cent (Figure 3.8). While a sizeable share accounting for about 40 per cent of total out-patient visits was categorized as 'not known' indicating the challenge in respondents' recall period associated with dependents' treatment.

It may be observed that, unlike hospitalization episodes, private empanelled services for out-patient visits were barely found. This is largely due to the near absence of such services except in two state: Maharashtra and West Bengal, where a large share of IMPs (empanelled clinics) function. In the four states surveyed, the IMPs role is very limited. Taking cue from NHM performance, a recent study indicated that in non-EAG states (relatively better performing states), the share of patients visiting government institutions for out-patient visits accelerated in 2017-18 compared to 2014. Conversely, in EAG states it declined marginally during the same time, indicating that when additional services were made available and improved in non-EAG states in government facilities, an increase in-patient footfall was observed. Clearly, the state-level variation in the out-patient and in-patient visits in ESIC-owned facilities and private empanelled and non-empanelled facilities is linked to the availability and quality of services performed in those states.

Resonating the evidence above, according to the officials from both Tamil Nadu and Haryana, the availability of services is satisfactory, but the quality of services needs to be improved. Officials from Tamil Nadu felt dispensaries are concentrated in a particular area that used to have a working population earlier. But with the industries moving out of the city and coming up in the far-away areas, the dispensary network should also be moved out to accommodate such population too. There is a need to further spread the dispensaries across

▶ Figure 3.8. Utilization of out-patient healthcare by types of facilities across states



the district. There is no dedicated cadre of medical officers for the state ESI, and this sometimes is a problem for the beneficiaries because the new interns who come into the ESI scheme are often not aware of the nuances of the ESI act. Officials from Haryana too mentioned the need to develop the existing infrastructure at facilities in smaller locations and enhance treatment facilities provided at ESI dispensaries.

As per a trade union leader in Tamil Nadu, OPD services are obtained at dispensaries and IPD (in-patients) at hospitals. The ESI has integrated systems for patients to cater to the need for all types of services. In case accidents happen in workplace, the patients are transferred to government hospitals after giving first-aid. In the present environment of corporates situation, ESI provides good medical facilities for employees. But this service is not available in the sub-urban areas. The union leader further mentioned the need for 5-10 bedded capacity facilities in all industrial areas. Union leaders from Tamil Nadu and Haryana

felt that there are no doctors and para medical staff available in the hospitals, equipment is not enough and some are not available. Medicines are not available in the dispensaries and IPs have to purchase them from the market. Sometimes they have to wait for 8-10 months to get it reimbursed. A trade union leader from Jharkhand averred that "though the beneficiaries are getting the benefits, the process needs to be made easy for better reach of the scheme. Everyone should be held accountable because even now it takes a lot of effort in the referral process." According to this trade union leader from Jharkhand, some of the reasons for the underutilization of healthcare services including the long waiting time for availing services as the number of hospitals is less and the process of registration, and so on, is not very simple and time-consuming. On other hand, a trade union leader from Tamil Nadu identified poor infrastructure facilities at dispensaries to be the key reason for underutilization.

The presence of an ESIC hospital or a dispensary and its awareness on the part of the employers is another benchmark of how well the system functions even if the employers are not the direct beneficiaries. It may be observed that about 90 per cent of the employers are aware of the presence of an ESIC hospital and dispensary in a district. Except for employers in Tamil Nadu, employers in other surveyed states are well aware of the functioning of the ESIC hospital. But in the case of the dispensary, employers in Jharkhand were relatively less aware (74 per cent) as against those in Rajasthan (94 per cent). However, on the question of whether their employees availed cashless super-specialty treatment, little over one-third of the employers were aware of any such facility being availed in the past. Except for Haryana, where access to super-specialty treatment is relatively higher (70 per cent), barely one in four employers in other states were cognizant of their employees seeking treatment in a super-specialty facility.

3.3.3. Treatment pattern for hospitalization episodes

In respect of the hospitalization episodes, about 62 per thousand beneficiaries sought hospitalization treatment, as per the survey findings. The rate of the hospitalization during one year before the survey in Tamil Nadu (104 per thousand persons) was reported to be significantly higher than other states, with respondents from Rajasthan (28 per thousand persons) reporting the least rate of hospitalization while beneficiaries from Haryana (67 per thousand persons) and Jharkhand (49 per thousand persons) reported an average IP rates closer to the four states' average. During 2017-18, the country wide estimate of hospitalization, as reported by NSSO, provides an estimate that is significantly lower by half times, at 34 per thousand persons. In fact, a similar survey conducted during 2014 by NSSO revealed that the hospitalization rate was about 42 per thousand, signaling a lower rate of hospitalization episodes during 2017-18, chiefly due to a sharp drop in consumption brought about by demonetization and the resulting loss of wages/salaries from several supply and demand-side constraints. ESI scheme data in its annual report also reported a hospitalization episode of 28 per thousand beneficiaries (110 per thousand IPs) in 2017-2018. Moreover, since the recall period used for hospitalization episodes was 365 days prior to the survey, which captured both COVID-19 and pre-COVID-19 utilization patterns, revealing a pattern that is less influenced, unlike out-patient care visits.

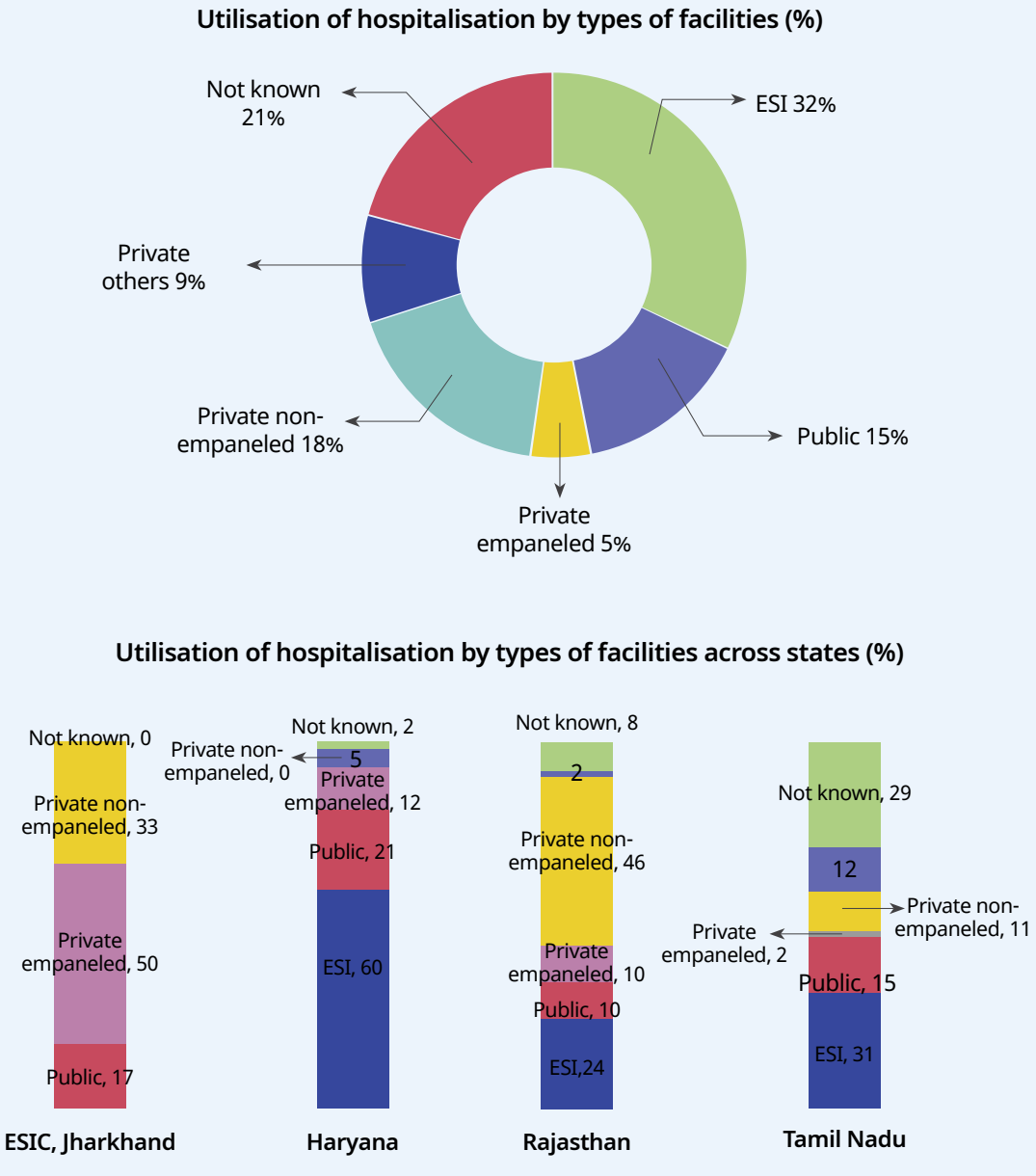
The average length of stay for an episode of hospitalization worked out to five days, with considerable variation across states. For an episode of hospitalization, beneficiaries from Tamil Nadu stayed relatively longer at 6 days as against 3 days by patients in Rajasthan. Whereas, in Jharkhand and Haryana, the mean days were 5 and 4 days respectively. Likely, patients seeking treatment for hospitalization in an ESI/public hospital may stay relatively longer than in private hospitals, even if empanelled due to cost considerations, as private facilities gain by way of longer stays. However, it is equally impossible to speculate the precise reason for a relatively lower length of stay as hospitalization in Rajasthan.

As far as the hospitalization is concerned, ESI beneficiaries have the options, to choose from three alternatives: (i) ESI hospitals which are owned by ESIC or state government-supported ESI hospitals; (ii) empanelled hospitals that included government and private hospitals; and (iii) other facilities that include non-empanelled private, public and not-for-profit hospitals. A significant share of the responses (21 per cent) elicited a response that is 'unknown' as the employees were

not able to recollect the type of hospitals preferred by their dependent family. The four states' survey suggested the following pattern of hospitalization: (i) on average, one in three hospitalizations occurred in an ESI hospital; (ii) about 15 per cent hospitalization occurred a government hospital; (iii) barely 5 per cent of the hospitalization occurred in a private empanelled facility; and (iv) the rest nearly half of the hospitalization episodes were treated in private hospitals that were not empanelled (Figure 3.9).

Despite the availability of ESIC's own hospitals, government facilities and arrangements with private empanelled facilities, nearly half of treatment, requiring hospitalization were sought outside the ambit of ESIC's arrangement. The findings further highlight the inter-state

▶ **Figure 3.9. Utilization of hospitalisation by types of facilities across states**



differentials in access to hospitalization care. In Haryana, nearly one in three hospitalizations was sought in ESIC hospitals, about one in five occurred in a government facility, about 12 per cent in a private empanelled hospital. However, in Rajasthan, beneficiaries chose private non-empanelled hospitals, in close to half of IP treatment, while treatment options in ESIC facility was an option to about one fourths of the patients, 10 per cent of each hospitalizations occurred in government and private empanelled hospitals. The pattern of hospitalizations in Tamil Nadu, demonstrates a far more different pattern, as one in three hospitalizations was carried out in ESIC hospitals, followed by public hospitals in about 15 per cent while private non-empanelled facilities accounted for close to one fourths of all hospitalization by the beneficiary.

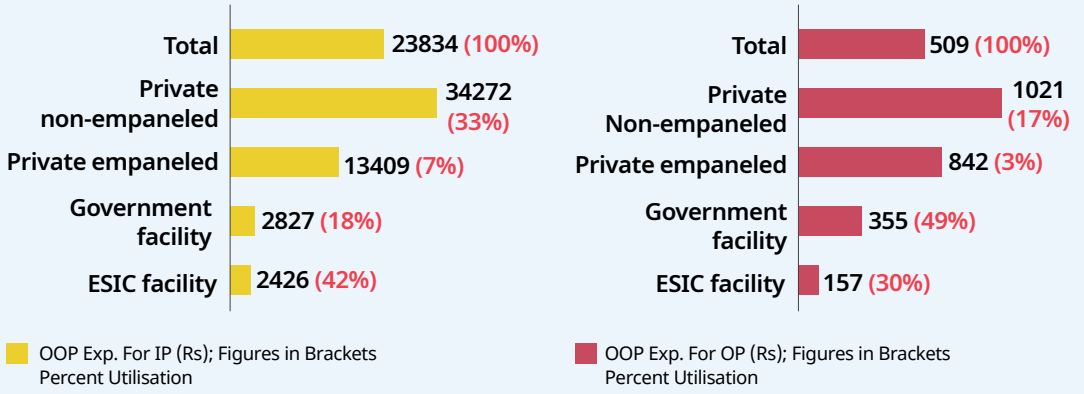
Yet, the preferred option for beneficiaries in Jharkhand were private empanelled hospitals in half of IP treatment. Private non-empanelled hospitals also accounted for one-third of hospitalization, and government hospitals accounted for about 17 per cent of hospitalization, with virtually no hospitalization reported by beneficiaries in ESIC hospitals. The findings presented for Jharkhand must be qualified with caveats, as the number of the total samples surveyed was about 200 employees. Even assuming a 3 per cent rate of hospitalization, the results are unlikely to be robust and its share of distribution underlying utilization between different types of facilities will be equally questionable. Moreover, as the survey was carried out during COVID-19 and the partial lockdown period, a higher level of underreporting can be expected, as the findings from the survey for Jharkhand demonstrates. Since some of the ESIC hospitals were designated for COVID-19 care, it is highly unlikely that beneficiaries would have sought treatment in ESIC hospitals.

Echoing some of the challenges faced at the secondary and tertiary level care, according to the DD, RDI, Tamil Nadu, "To a reasonable extent the quality of available infrastructure is good. I personally feel that we need to build more hospitals at the secondary level and tertiary level. We avail the medical services for OPD, and if you go beyond that say for minor operations such as an operation for fracture, hernia, tonsil, and so on, then secondary medical care is required. In the case of medical services like heart surgery and liver surgery, one will need to approach tertiary care facilities and super specialty. We require more hospitals to come up in the secondary and tertiary categories, as we are having considerable primary level health facilities. Primary level health facility is good as far as ESI is concerned, but more improvement is required at secondary and tertiary level". According to one of the officials from Haryana, "basically, we should improve our own infrastructure. Once basic requirements are met, then there will be less than 20 per cent of cases that will be referred outside. Health infrastructure has a key role in terms of efficiency, access, attracting patients and improving the overall quality of health services. A better-upgraded system provides better services and attracts beneficiaries."

3.4. Financial risk protection measures

Although not an explicit objective underlying ESI, the key goal of any health insurance scheme globally, whether it be social health insurance or tax-funded health insurance scheme, is to provide financial risk protection. This would eventually mean funding a delivery mechanism that takes care of preventive, promotive and curative care services for its beneficiaries in a way they do not place a significant financial burden. This is extremely critical for employees and dependents in the LMIC context like India, where a significant financial burden is incurred by households leading to high OOP, resulting in the impoverishment of people and/or incurring catastrophic spending. The survey results from the field highlight a few notable aspects of the ESI. For an episode of treatment for hospitalization, on average, the mean spending incurred by a household works out to Rs. 23,834 (Figure 3.10), while the median value is Rs. 5,000. However, the average hides considerable differential payment, highlighting the financial cushion provided to ESI beneficiaries when they get hospitalized in ESIC facilities, about 42 per cent of them do so. They ended up paying barely Rs. 2,426 for an episode of in-patient service (median value Rs. 1,000) as against Rs. 34,372 when beneficiaries sought treatment from the private non-empanelled hospital (median value Rs. 7,750). Nearly one in three beneficiaries did so. On the other hand, even though only 7 per cent

Figure 3.10. Levels of OOP expenditure among beneficiaries including utilisation for hospitalisation and out-patient visits



of ESI beneficiaries sought treatment in a private empanelled hospital, and yet they were forced to pay Rs. 13,409 about five times than when they sought care in ESI facilities. It may be noted that the health survey carried out by NSSO during 2017-18 points out that on average, households paid Rs. 26,894 per episode of treatment for hospitalization, reaffirming the financial burden on households. The NSSO survey findings revealed that an episode of hospitalizations in public and private facilities ranged from Rs. 4,874 to Rs. 32,793. The evidence from the field suggests that a considerable share of beneficiaries seek treatment in private non-empanelled hospitals, and by doing so were exposed to a serious level of out-of-pocket spending, rather revealing the imperative for strengthening its facilities, making available facilities in nearby areas and adding more private empanelment of hospitals.

Similar scenarios emerge in respect of out-patient care visits. Although not significant, per episode out-patient treatment in private non-empanelled facilities cost beneficiaries Rs. 1,021 as against Rs. 157 when beneficiaries visited ESI dispensaries. Even in a private empanelled facility, beneficiaries ended up paying a relatively high OOP at Rs. 842. Notwithstanding the treatment and cost associated with it, the pattern observed here corroborates the evidence presented in the previous section. It highlights that ESI scheme beneficiaries were less prone to incurring catastrophic spending, than those covered by government-funded health insurance schemes or even private health insurance schemes. Several studies that investigated the impact of government-funded health insurance had concluded that RSBY did not reduce households' OOP. A systematic review of the studies that examined the impact of tax-funded health insurance schemes on healthcare utilization and financial risk protection also demonstrated no conclusive evidence of a reduction in OOP expenditures or a relatively higher financial risk protection. Similarly, a study that specifically targeted at the effect of RSBY on financial protection confirmed earlier studies demonstrating that the scheme did not affect the likelihood or level of OOP spending on hospitalization nor did it so on reducing catastrophic spending.

Despite the claims made by ESIC underscoring comprehensive coverage involving ESIC'S own facilities, or in private empanelled facilities, and even reimbursement paid to beneficiaries, the survey findings point to (i) continuing financial burden: (ii) a relatively lower level of payment incurred by them even in ESI hospitals; (iii) a higher level of OOP expenditure when they seek treatment from private non-empanelled and empanelled providers. The survey further revealed that beneficiaries incurred both medical and non-medical expenses, accounting for 42 per cent and 58 per cent, respectively when they sought treatment in ESIC hospitals for in-patient treatment.

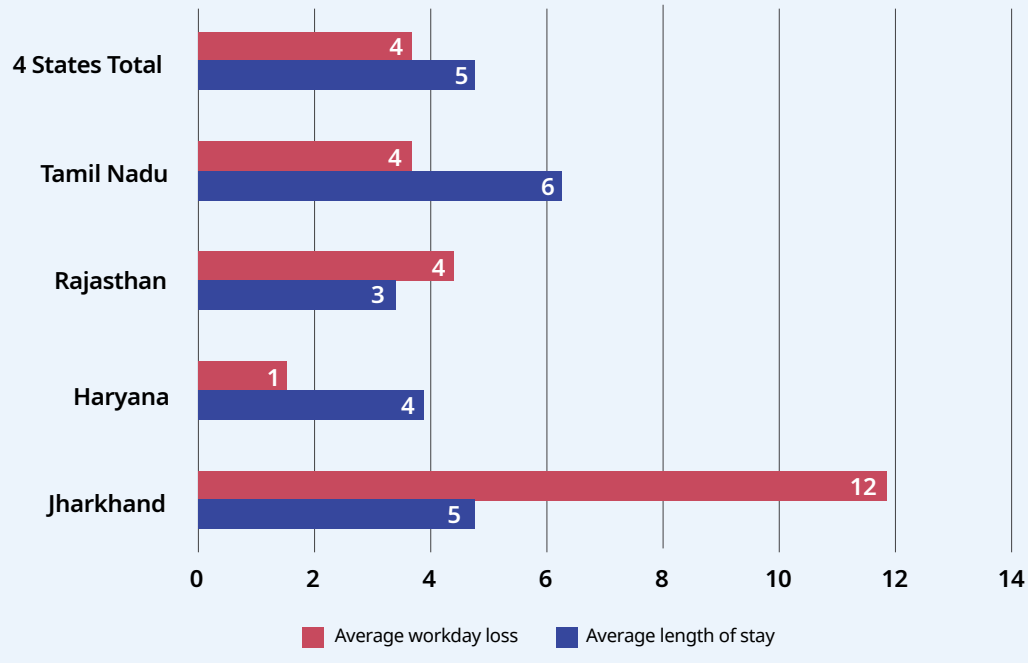
Non-medical expenses included transportation, lodging and food charges for accompanying

patients, and so on while medical expenses largely included medicines (51 per cent), diagnostics (24 per cent), consultations (20 per cent) and bed charges (5 per cent). What this indicates is that medicines' shortage remains a major issue in ESIC hospitals while the non-availability of comprehensive diagnostics services is yet another critical factor accounting for OOP incurred by the beneficiaries. Whereas the largest contributors to OOP for beneficiaries seeking treatment in non-private empanelled hospitals are consultation charges (30 per cent), medicines (26 per cent), diagnostics (24 per cent), bed charges (21 per cent).

3.4.1. Workday and wage loss due to hospitalization

Hospitalization episodes are often associated with loss of work days and wage loss. After removing the outliers, the survey findings confirm that about four days, on average, are lost due to hospitalization-related illness episodes. Beneficiaries in Jharkhand reported a relatively larger number of days of work days' loss at 12 days per annum, while the number of work days lost for beneficiaries in Rajasthan and Tamil Nadu was at four days per annum (Figure 3.11). The higher number in Jharkhand can be attributed to the lower sample size from the state. The survey findings further demonstrated that one in five employees reported wage loss due to hospitalization. Whereas the average wage loss in four states was found to be Rs. 750, with marked variation across states with the lowest wage loss reported by beneficiaries in Haryana while the highest in Rajasthan and Tamil Nadu. This translated into a mean wage loss of approximately 4 per cent as a share of monthly income, whereas the differential in share ranged from 1 per cent in Haryana to approximately 7 per cent in Rajasthan. A relatively significant wage loss compensation provided to employees could perhaps be one of the reasons why the wage loss reported is comparatively lower as compared to NSSO. The national health survey of NSSO, 2017-18, confirmed a relatively lower level of income loss due to hospitalization among ESIC'S households at Rs. 4,965 per episode of hospitalization as against over double the amount Rs. 9,461 incurred by those households who had private health insurance, signaling the cushioning

▶ Figure 3.11. Average work day lost and wage loss due to hospitalisation



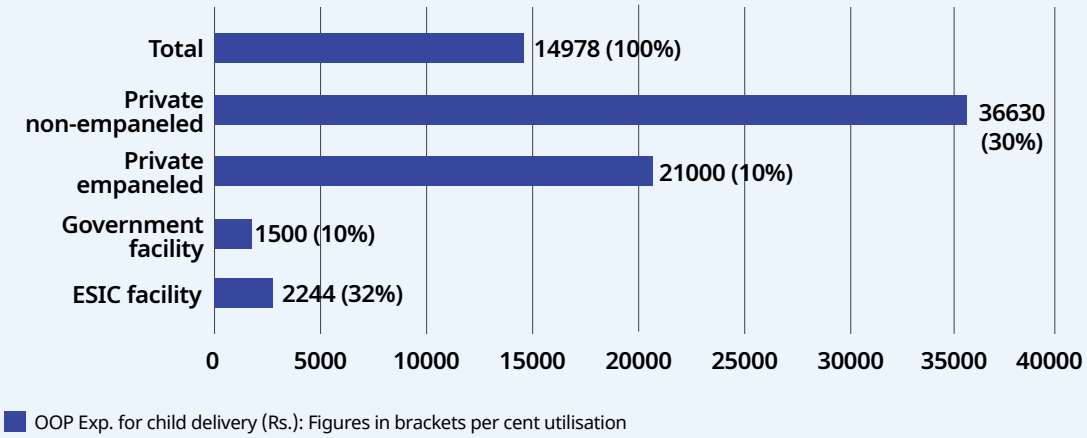
impact of wage loss compensation by ESI. It may be observed that the income loss reported by the NSSO survey for ESI beneficiaries is for the entire households taken into consideration, while the survey findings only considered the employees' wage loss and the associated compensation. However, the survey results reaffirm the evidence presented in the previous section highlighting that ESI households are placed relatively better at receiving compensation to wage loss than those covered by other health insurance schemes.

3.5. Maternity, child delivery and OOP payments

One of the key aspects of the field evidence pertains to reproductive, maternal and child deliveries patterns among women employees and female households. The survey findings point out that one in three child delivery occurred in ESIC facilities, and nearly an equal share was accounted for by private non-empanelled hospitals. About 10 per cent each was accounted for by public hospitals and private empanelled ones. This implies a significant gap in the provision of child delivery services either within ESIC or empanelled facilities.

However, when a pregnant beneficiary delivered in a private empanelled hospital, she had to incur Rs. 21,100 over and above the package ceiling provided by ESI. But she had to pay a far higher amount of Rs. 36,630 per child delivery in a private non-empanelled hospital (Figure 3.12). It is even important to observe that when a pregnant woman delivered at a public hospital, she had paid atleast Rs. 1,500 per delivery, underscoring the improvement in institutional delivery brought about by National Health Mission (NHM). However, the spending for child delivery in ESIS hospital (which includes non-medical expenditure) is though found to be slightly higher (mean Rs. 2,244 and median Rs. 1,100) than this, still it is considerably lower as compared to the overall average expenses for child delivery across facilities (mean Rs. 14,978 and median Rs. 1,500). It may be worth noting that pregnant women are provided conditional cash transfers for ante-natal check-ups and for delivering in an institution. This could be the reason why women delivering in a government hospital are paying by far the least among other facilities, perhaps pointing to the need for ESI to improve not only its facilities but also provide cash compensation for child delivery services. This has a salutary impact in terms of accelerating maternal care and reducing catastrophic health expenditure when women deliver in government facilities. While there is no further scope of segregating between normal and C-section deliveries in the present study, there is a possibility that C-sections are happening more frequently in private facilities, thus driving up the cost as compared to the public facilities.

▶ Figure 3.12. Utilization pattern of child delivery and OOP expenses



3.6. COVID-19 and its associated knowledge, compensation from ESI

The current pandemic caused by COVID-19 brought in a lot of misery not just in terms of health crisis and health system challenges, India's stringent and longest lockdown, and several restrictions that followed rendered workforce both also informal and formal workers in a vulnerable state. The resultant migration of workers, loss of employment and wages for a longer time period meant workers and salary earners had to cut back on basic necessities, borrow or rely on a meagre cash support programmes of the government. The success of a scheme and its resilience during such a pandemic, must be ascertained how well it responded to the needs and aspirations of its employees and its dependents.

The current survey examined this aspect by investigating the knowledge and challenges faced by the employees during the COVID-19 crisis. Nearly one in two employees (45 per cent) confirmed having received communications from ESIC in respect to COVID-19, the preventive measures and restrictions imposed by the lockdowns (Figure 3.13). But this was marked by considerable variation, where over two in three employees (71 per cent) in Haryana received communication from the ESI while only 13 per cent of workers in Jharkhand confirmed so, whereas the respective share of employees was 47 per cent in Tamil Nadu and 26 per cent in Rajasthan. A marked variation could be attributed to the fact that employees in Haryana being closer to the national capital region, could have been receiving a relatively better communication due to its location, as next to the nation's capital and possibly due to efficient functioning of the ESI scheme in a crisis. And the same could not be attributed to Jharkhand, given its standing as hard to reach area and perhaps due to limited capacity to communicate to its employees.

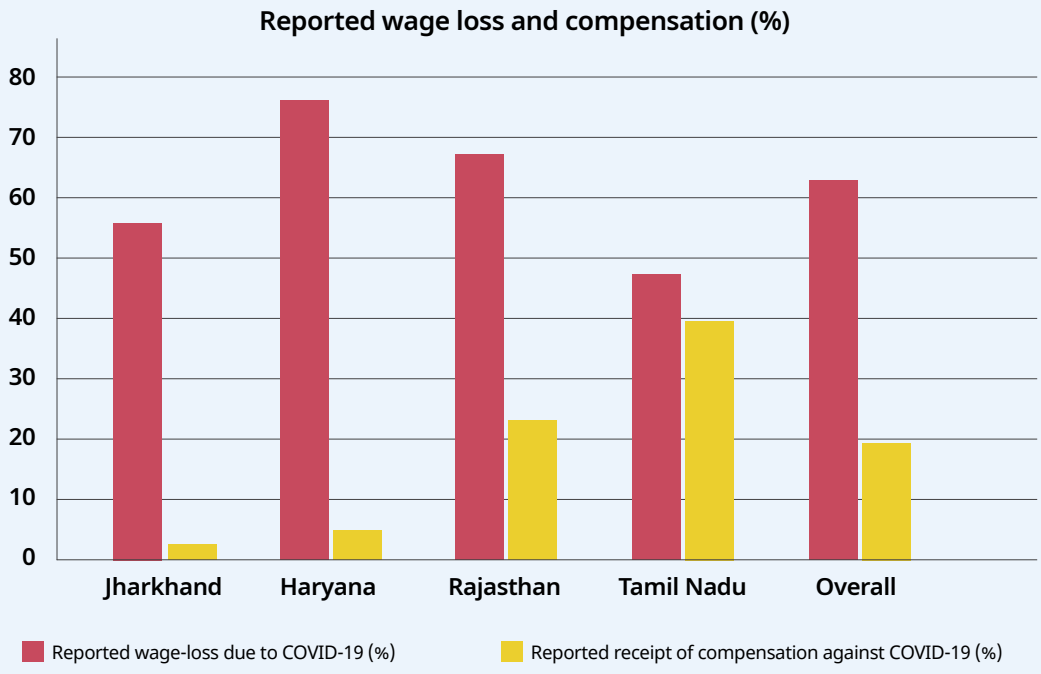
Sadly, only one in four employees felt protected by ESI during this health crisis. About 62 per cent of employees surveyed had incurred wage loss during the lockdown period in specific and during the pandemic overall, with a significant share of employees from Haryana (75 per cent) confirming this so as against only about 45 per cent of employees in Tamil Nadu. The findings from the survey further suggest that only one in five employees who had reported wage loss had received some compensation. At the state level, one finds an inverse relationship, wherein states that reported higher level of wage loss are the ones where least share of employees received compensation as in Haryana, while employees in Tamil Nadu, who relatively faced far less wage loss is also the state in which a higher share of employees (39 per cent) had confirmed receiving wage compensation during the health crisis. Yet, when it pertained to actual wage compensation received, on average, an absolute amount totaling Rs. 11,510 were received as compensation, with employees in Rajasthan receiving a higher level of compensation at Rs. 19,492, whereas Tamil Nadu employees received the least level of compensation at Rs. 3,992, about five times that of the former. This indicates that the employees in Tamil Nadu remained the least in terms of wage loss faced during the COVID-19, but they got a higher level of wage compensation, although the amount they received was the minimum. Employees in Rajasthan, remained one among the most affected but only approximately one fourth of them received compensation, but the compensation amount they received was the highest.

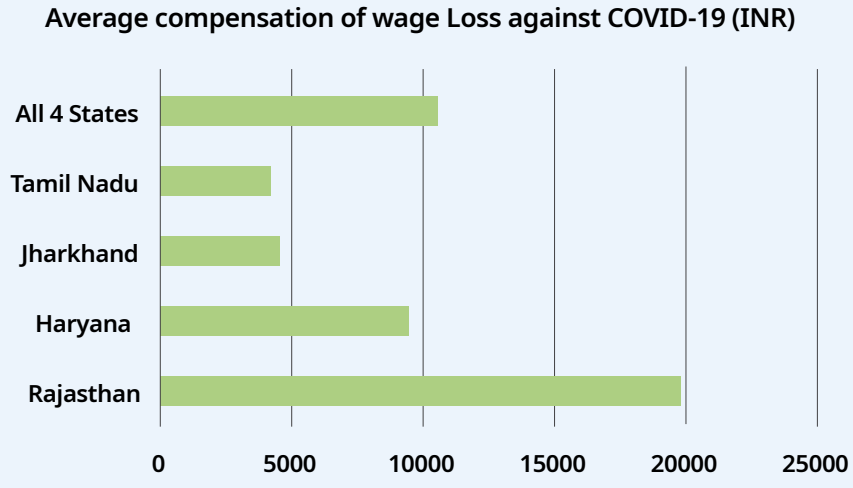
> The success of a scheme and its resilience during a pandemic, must be ascertained by how well it responded to the needs and aspirations of its employees and its dependents.

3.7. Occupational hazards and safety measures faced by employees

Work-related morbidity or mortality not only affects the worker's health and productivity, but also has a direct implication on the welfare of the

Figure 3.13. Mean wage loss and compensation against COVID-19





worker's household, and the society as a whole. Healthy working conditions and workplace safety are of utmost importance to the employees and their families. Working adults spend a significant time of their lifespan in their workplace and their wellbeing is directly influenced by the working atmosphere and their health status. Safety at the workplace along with the provision of healthcare access is significant to ensure greater productivity and better quality of work. It is often emphasized in the literature that poor occupational health can adversely affect the economy and the cost to society,

which includes lost productivity and increased use of medical and welfare services, has been estimated at 2-14 per cent of the GNP in different studies, in different countries (Leigh et al. 1999).

Though India is one of the fastest-growing large economies in the world, around 85 per cent of the non-agricultural workforce is informal. The Indian manufacturing sector is characterized by the existence of a large number of small firms or enterprises, which employs workers in the setup of the informal sector (Mehrotra 2019). Labour laws, though exist, are only applicable to the formal sector and also always not strictly followed. In India, ensuring humane and safe occupational conditions for workers is the responsibility of the Ministry of Labour and other State Labour Departments through constitutional provisions. Additionally, several regulations related to occupational safety and health (OSH) of workers exist in different sectors, namely manufacturing, mining, ports, and construction, which include the Factories Act, 1948 as amended in 1987, the Dock Workers (Safety, Health and Welfare) Act, 1986, the Building and other Construction Workers (Regulation and the Employment and Conditions of Service) Act, 1996, the Child labour (Prohibition and Regulation) Act 1986, the Mines Act 1952, (amended in 1957) and the Mines Rules 1957. The National Policy on Safety, Health and Environment at Workplace was notified in 2009 with the aim of decreasing work related injuries, diseases, fatalities, disasters and promoting preventative safety and health culture at the workplace, through improving data collection to facilitate monitoring, enhancing community awareness on OSH, research and development, and promoting sustainable enterprise development.

Occupational health hazards can be of varying types. They can be broadly classified into physical hazards, chemical hazards, biological and mechanical hazards and psychological hazards. According to the estimates by the International Labour Organization (ILO) in 2003, annually around four lakh people die from work-related causes in India and another 3.56 lakh suffer from occupational diseases (ILO 2008), as compared to the number of deaths being around 55 thousand in the United States during the same year. According to a study by the National Institute of Miners' Health (NIMH), the prevalence of pneumoconiosis opacities in chest radio figures in open cast mine workers in 2011 were in the range of 5.3 per cent to 13 per cent.

With surplus labour in the agricultural sector, labour in India is available at low wage and health and safety at the workplace is often compromised. Despite different initiatives taken by the government, there are still many challenges in establishing occupational health and safety measures in enterprises, especially small enterprises in India. There is also a lack of evidence in this field. A huge extent of undiagnosed and unreported occupational illnesses, leads to a lack of accurate information and data on the scope and extent of occupational diseases. There is indifference and apathy of employers, employees, the general public and other stakeholders to occupational health issues with a lack of awareness about occupational health issues among both employers and employees. In this study, we tried to capture the status of occupational safety and health implemented in enterprises in India, the underlying risk factors and the measures taken to improve the workplace environment and to reduce workplace accidents. Considering the importance of this issue, various information regarding knowledge and awareness about different workplace hazards and safety measures from the employers, as well as the employees, is necessary for the implementation of existing legislations and safety practices.

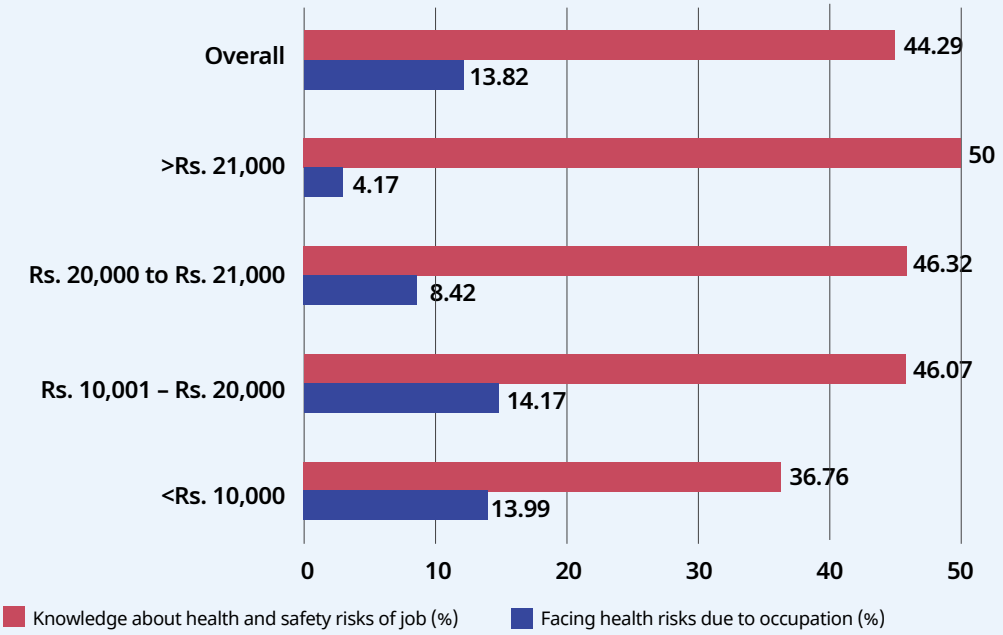
3.7.1. Levels of health risks faced by employees, including types of health risks

From the field data, it emerges that overall 44 per cent of the employees had some knowledge about safety and health risks associated with their job while only 14 per cent of the employees had knowledge about any type of health risk assessment that had been conducted in the past one year at their enterprise (Figure 3.14). The sub-class analysis on the basis of salary and employment size of enterprises showed an association of employees with knowledge about the safety and health risks with salary and employment size. Amongst the states, employees working in Tamil Nadu had the highest knowledge regarding the health risks associated with their job while employees in Jharkhand had the least

▶ Figure 3.14. Health risk due to occupation and knowledge about health and safety risks of jobs

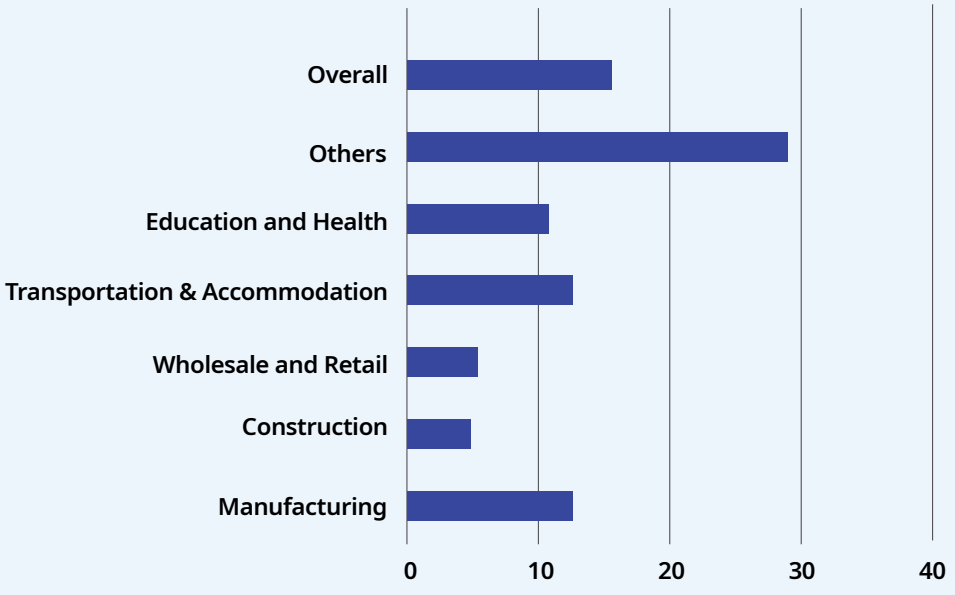
Panel A

Health risks faced due to occupation and knowledge about health and safety risks of job (%) across salary band (Panel A) and health risk assessment at workplace in last 1 year for different industries (Panel B)



Panel B

Health risk assessment at workplace in the last 1 year (%)



knowledge (70 and 4 per cent, respectively). Meanwhile, employees in Tamil Nadu had greater knowledge about health risk assessment at their enterprise (29 per cent) followed by Haryana (14 per cent).

Further, the findings suggest that a large proportion of the employees were not aware of the health risks they faced due to their occupations. As per the self-reporting by the employees, a small share of employees is facing health risks due to their job type (14 per cent). But among those who reported health risks, the majority of them faced a risk of crushing injuries due to their job (20 per cent) (Table 3.1). Moreover, the evidence showed an increase in the percentage of employees reporting health risks due to their occupation with an increase in the employment size of enterprises. Amongst the states, employees working in Tamil Nadu reported a higher percentage of health risks associated with their job (28 per cent) followed by Haryana (14 per cent). Among the reporting employees, 54 per cent in Haryana reported a risk of crushing injuries while 67 per cent in Tamil Nadu reported another type of health risks faced during the occupation.

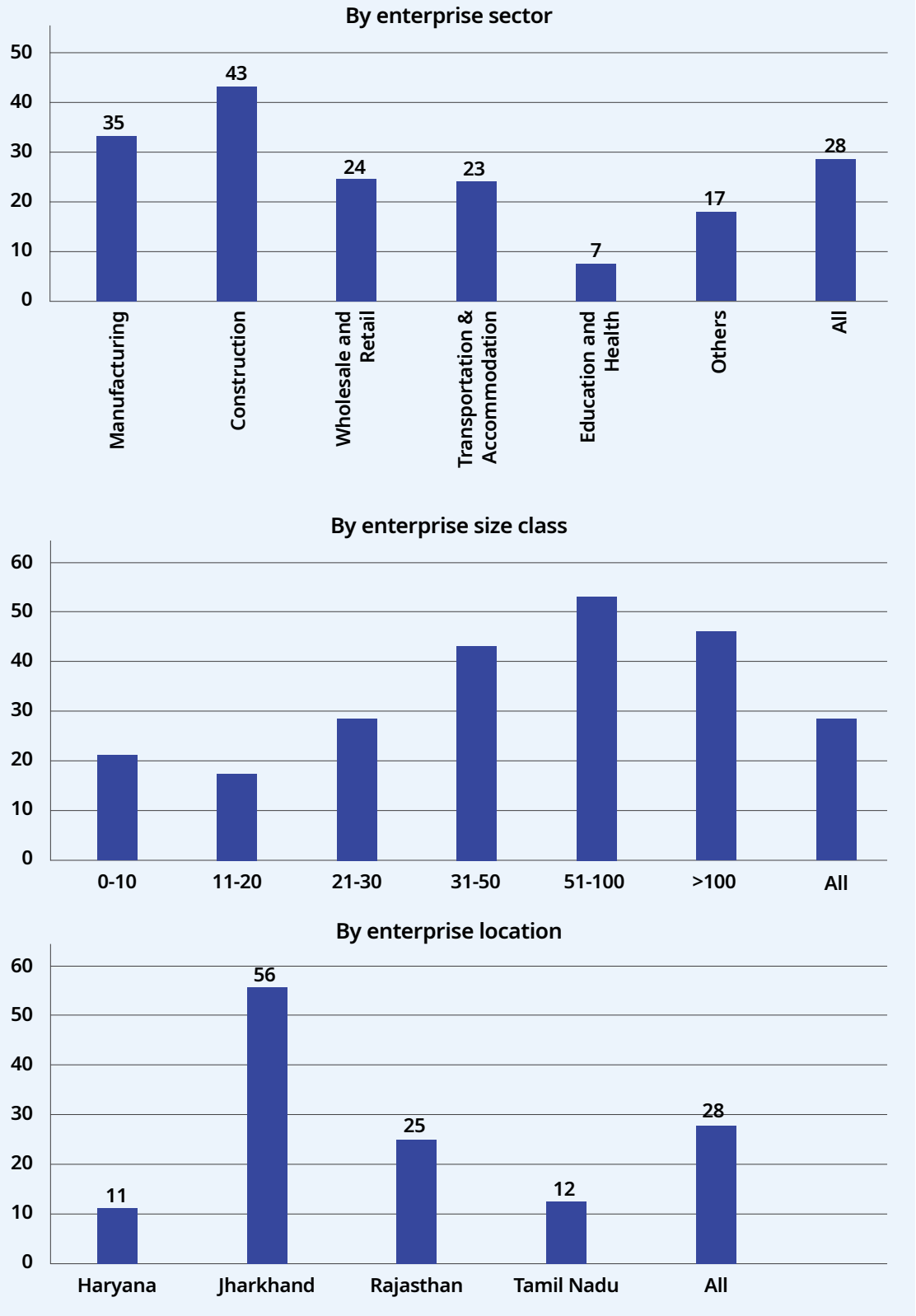
3.7.2. Employers' awareness about occupational hazards

Among the surveyed employers, 28 per cent had identified the presence of any kind of workplace health hazards in their enterprises. Employers involved in the construction industry accounting for 43 per cent of enterprises reported awareness of workplace health hazards. On the contrary, awareness about workplace health hazards is the least among employers in the education and health sector (Figure 3.15, panel I). Panel II of Figure 3.15, shows that in general, employers in large enterprises are more aware of workplace health hazards. However, survey results show that there is a decline in employers' awareness about workplace hazards for enterprises with more than 100 employees as compared to that of enterprises with employees 51 to 100. Employers in Jharkhand had far more awareness about workplace health hazards (56 per cent), followed by Rajasthan (25 per cent), Tamil Nadu (12 per cent), and Haryana (11 per cent) (See Panel III of Figure 3.15). This could perhaps be attributed to the nature of the assignment that they are involved as most of them are either directly or indirectly aware of mines and quarrying activities, which also ties up with the fact that Rajasthan is also another state where mining activities are prominent.

▶ **Table 3.1. Percentage of employees facing different types of health hazards**

Sector	Fractures (%)	Injury (%)	Crushing injury (%)	Burns (%)	Poisoning (%)	Complications of trauma (%)	Communicable disease hazards (%)	Others (%)
Manufacturing	10	7	35	3	2	1	2	40
Construction	33	0	33	0	0	0	22	11
Wholesale and Retail	10	14	14	0	0	5	0	57
Transportation and Accommodation	7	0	5	26	0	2	16	44
Education and Health	13	13	3	0	0	0	3	69
Others	18	6	4	1	2	0	5	64
Overall	13	6	20	4	2	1	4	49

▶ Figure 3.15. Awareness among the employers about workplace hazards (% of employers aware about the presence of occupational hazard in the workplace)



> Larger health-seeking behaviour is reported among employees of enterprises with less than 10 employees as compared to a greater number of employees.

As far as Tamil Nadu is concerned, one would have expected much more awareness but the survey showed no such pattern, as some of the industries like chemicals, fireworks, and so on are present in large numbers in that state.

Further, the findings pointed to a pattern where the majority of the workplace health hazards were due to chemical (27 per cent), ergonomic (35 per cent) and physical reasons (16 per cent). However, there is a wide variation of prevalence of the dominant nature of the health hazards across sectors. For manufacturing enterprises, the most dominant reasons for workplace health hazards are chemical (31 per cent), ergonomic (32 per cent) and Physical (14 per cent), whereas physiologic health hazard is most common for employees in the education and health sector (Figure 3.16).

3.7.3. Treatment sought for occupational hazards by the type of health facilities used and states

When occupational injuries and hazards occur, it is mandatory for the employer to provide health care for its employee. ESI provides the options of super-specialty treatment in case of burns, injuries, and so on, which are reported as the major health risks faced by the employees. The health-care seeking behaviour of the employees for various occupational hazards was estimated and it was found that amongst the employees who developed an illness due to occupational hazards, 5 per cent sought healthcare treatment with almost half of them seeking treatment from a government institution (Figure 3.17). Relatively larger health-seeking behaviour is reported among employees of enterprises with less than 10 employees (8.5 per cent) as compared to a greater number of employees. Over 70 per cent of the employees from the Education-Health and Transport Accommodation sectors sought care from government facilities while the share stood at less than 50 per cent for other sectors. State-wise estimates revealed that healthcare-seeking behaviour is highest among Tamil Nadu employees and lowest among Rajasthan employees (8.5 per cent and 1.7 per cent, respectively). More than 50 per cent of employees in Tamil Nadu and Haryana

Figure 3.16. Distribution of health hazards

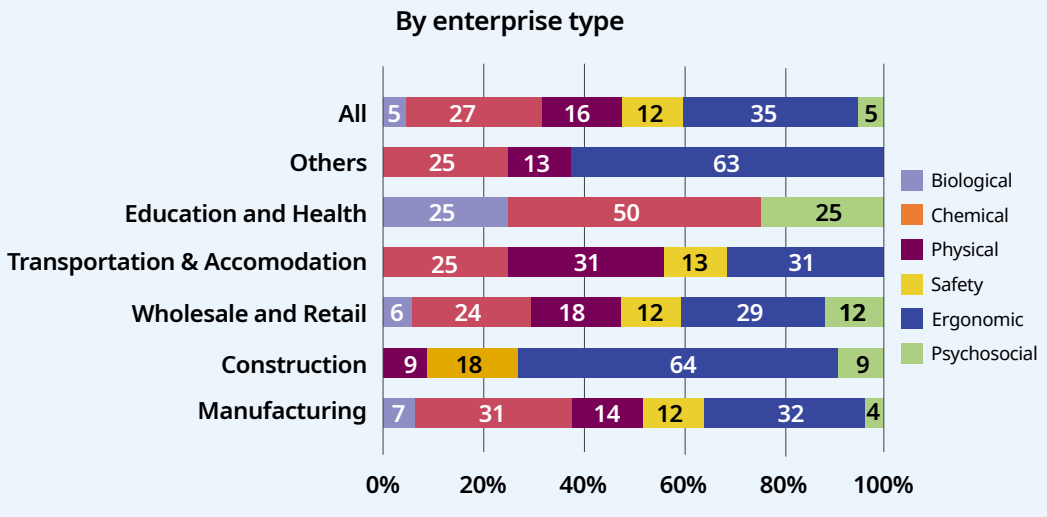


Figure 3.17. Percentage distribution of healthcare sought for the occupational hazards and type of institution

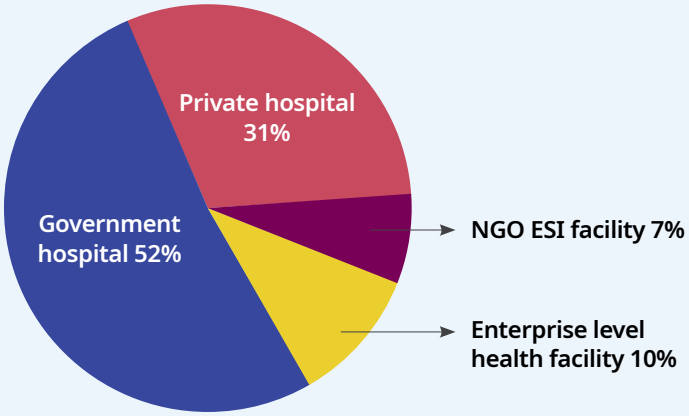
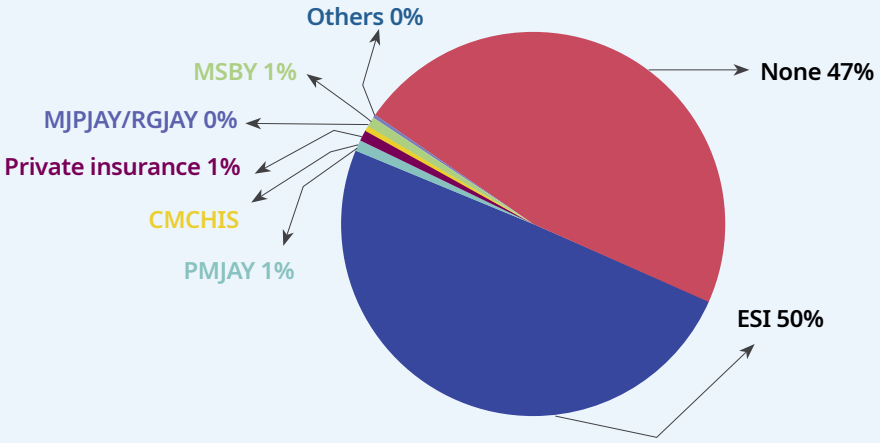


Figure 3.18. Types of cards used for occupational health treatment



preferred government hospitals for treatment. For employees of Jharkhand, the preferable choice for healthcare treatment is private hospitals (62 per cent).

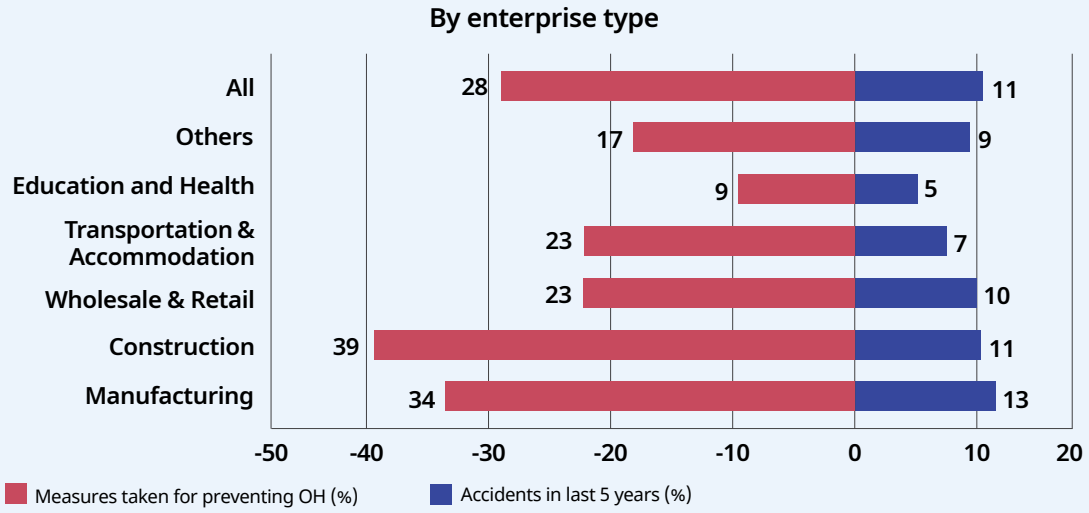
Analysis of the type of cards used for healthcare treatment, demonstrated that almost 50 per cent of the employees who had sought healthcare treatment used ESI cards for treatment while 47 per cent used no card at all. ESI card usage for treatment was least among the lowest salary range of employees (40 per cent) while on the basis of employment size of the enterprises, employees of small enterprises with employment size of <10 reported the least usage of ESI cards for healthcare treatment (25 per cent) (Figure 3.18). Unfortunately, 81 per cent of the employees in Jharkhand didn't use any card for treatment. The same figure stood at 68 per cent for Tamil Nadu. In both States, the utilization of ESI cards was very low. Among those who possessed ESI cards, 58 per cent used them for seeking health care.

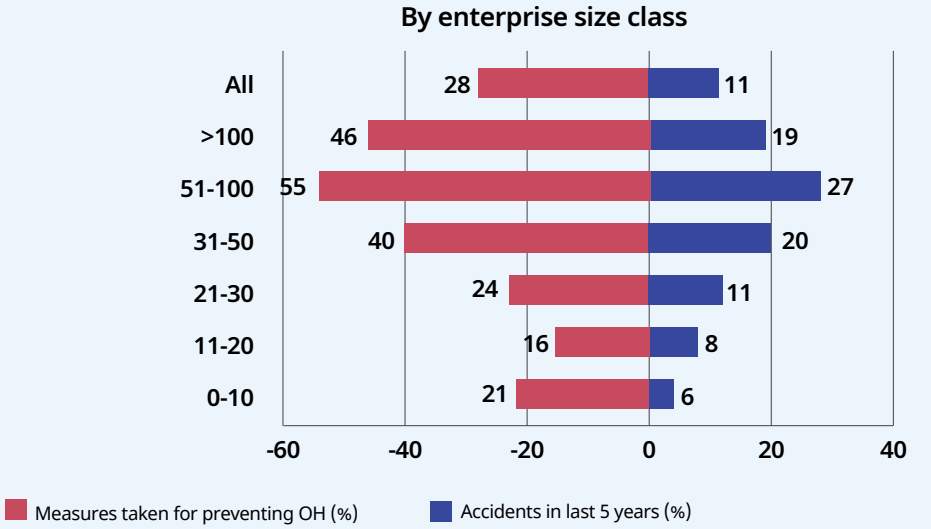
3.7.4. Measures taken by the employers to prevent work site accidents

It may further be noted that 11 per cent of the enterprises reported accidents in the last year. Given the nature of the work involved, the prevalence of accidents remains high among manufacturing enterprises followed by construction enterprises with 13 per cent and 11 per cent, respectively. While health and education sectors (5 per cent) reported the least share of workplace accidents (Figure 3.19, Panel I) Bigger enterprises appear to be relatively more prone to the accident in the work place; 27 per cent and 19 per cent of the surveyed enterprises with employment size 51 to 100 and more than 100, have reported accidents in the last one year. Whereas only 6 per cent of the surveyed enterprises with employment less than 10 had registered accidents in the workplace in the last year (Figure 3.19, Panel II). The findings demonstrated the vulnerable nature of employees in large enterprises. In these enterprises, employees are far more exposed to workplace accidents than in the smaller enterprises, highlighting poor management and inadequate protection measures. Workplace accidents varied in states, a large proportion of the surveyed enterprises in Haryana (27 per cent) had reported accidents in the last year, as compared to enterprises located in Tamil Nadu (5 per cent), Rajasthan (5 per cent), and Jharkhand (3 per cent) (Figure 3.20, Panel III). As regards the question of whether any protection measures were available and implemented in enterprises, 28 per cent of enterprises had put in place measures to prevent occupational hazards in the workplace. This is more so among the construction (39 per cent) and the manufacturing (34 per cent) sectors (Figure 3.20, Panel I). State-wise share of workplace accident prevention measures indicated that 53 per cent of the enterprises surveyed in Haryana took measures to prevent occupational health hazards, followed by Rajasthan (25 per cent), Tamil Nadu (12 per cent), and Jharkhand (11 per cent) (Figure 3.19, Panel III).

Figure 3.20 shows various measures implemented by enterprises to prevent occupational health hazards. Incidence investigation and periodic inspection are the two most common tools for preventing occupational health hazards; 21 per cent and 16 per cent of the enterprises surveyed have reported for these two measures for preventing hazards in the work place. However, routine preventive measures are far more common measures for preventing health hazards in the work place among enterprises in the health and education sector (50 per cent) (Figure 3.20, Panel I). Unlike other states, for enterprises in Jharkhand employee training and hazard control plans are the most common measure for preventing health hazards in the work place (Figure 3.20, Panel II).

▶ Figure 3.19. Accidents in last 5 years and measures taken for preventing occupational hazards





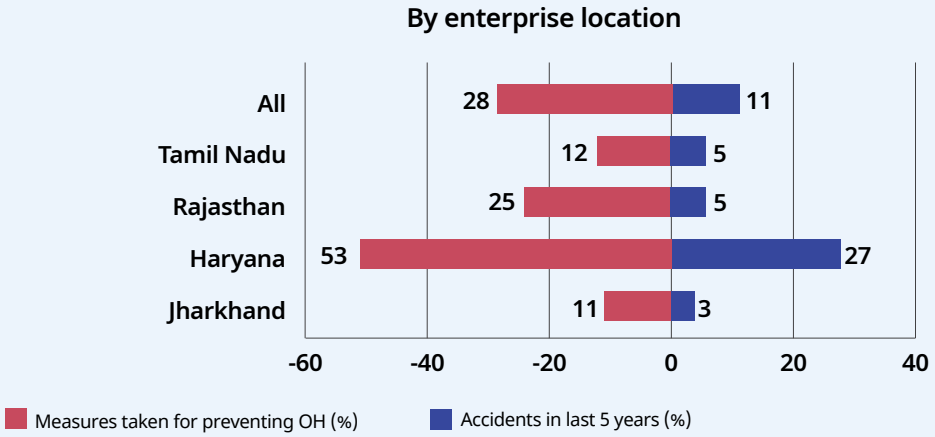
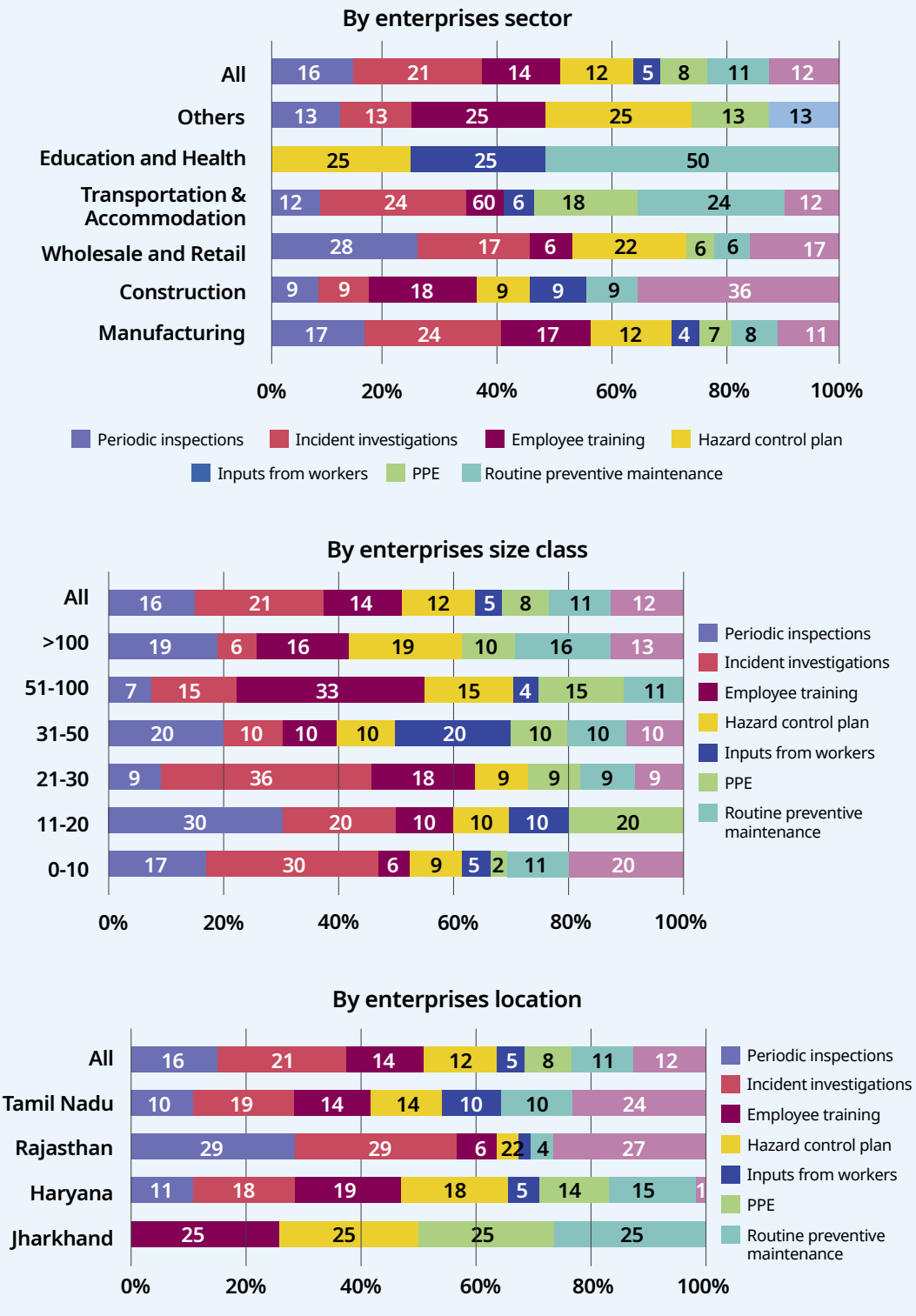


Figure 3.20. Measures taken for preventing occupational hazards, by enterprises types



3.7.5. Enterprises facing accidents and the type of support received

Figure 3.21 depicts the role of ESI as a provider of support to enterprises undergoing and reporting accidents in the workplace. One in five enterprises that experienced accidents submitted a report to ESI, but only 3 per cent of them received any support from ESI. Manufacturing and Construction remain the two most hazardous activities among the six sectors; 26 per cent and 11 per cent of the surveyed enterprises in these two sectors who also experienced accidents said that they reported the accident to ESI. But only 6 per cent of 2 per cent of them got any support from ESI (Figure 3.22, Panel I). Reporting of an accident as well as receiving support from ESI is found to be high among enterprises surveyed in Haryana, as compared to other states (Figure 3.21, Panel II). The majority of the enterprises that received support from ESI are for medical benefits (69 per cent) (Figure 3.21).

▶ Figure 3.21. Percentage of enterprises submitted an accident report and received support (any) from ESI

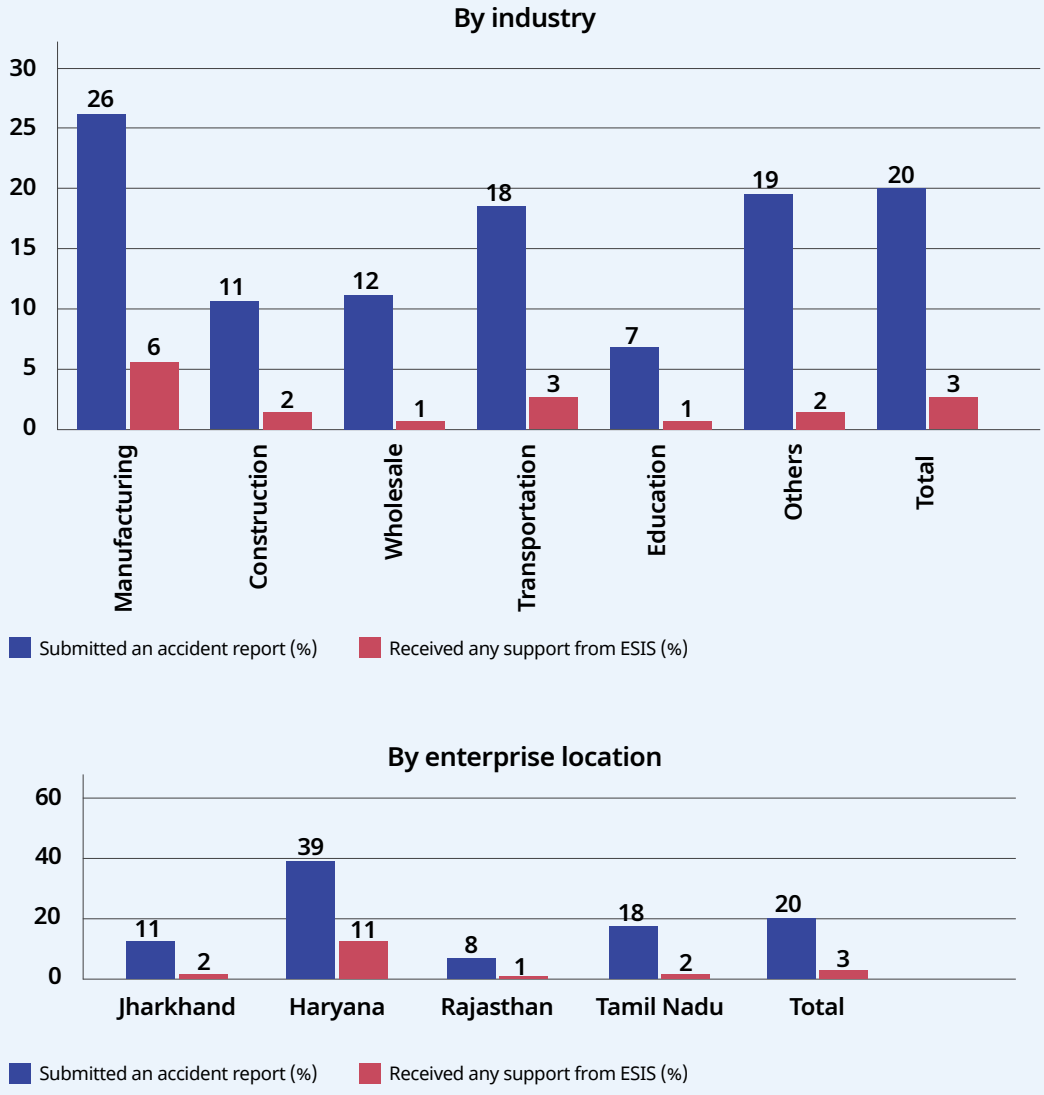
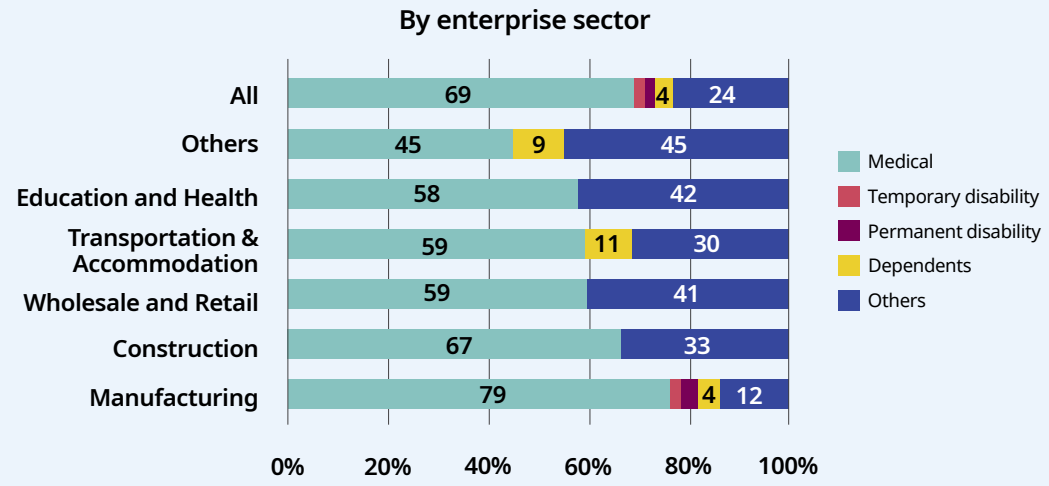


Figure 3.22. Types of benefit received from ESI for reporting accident



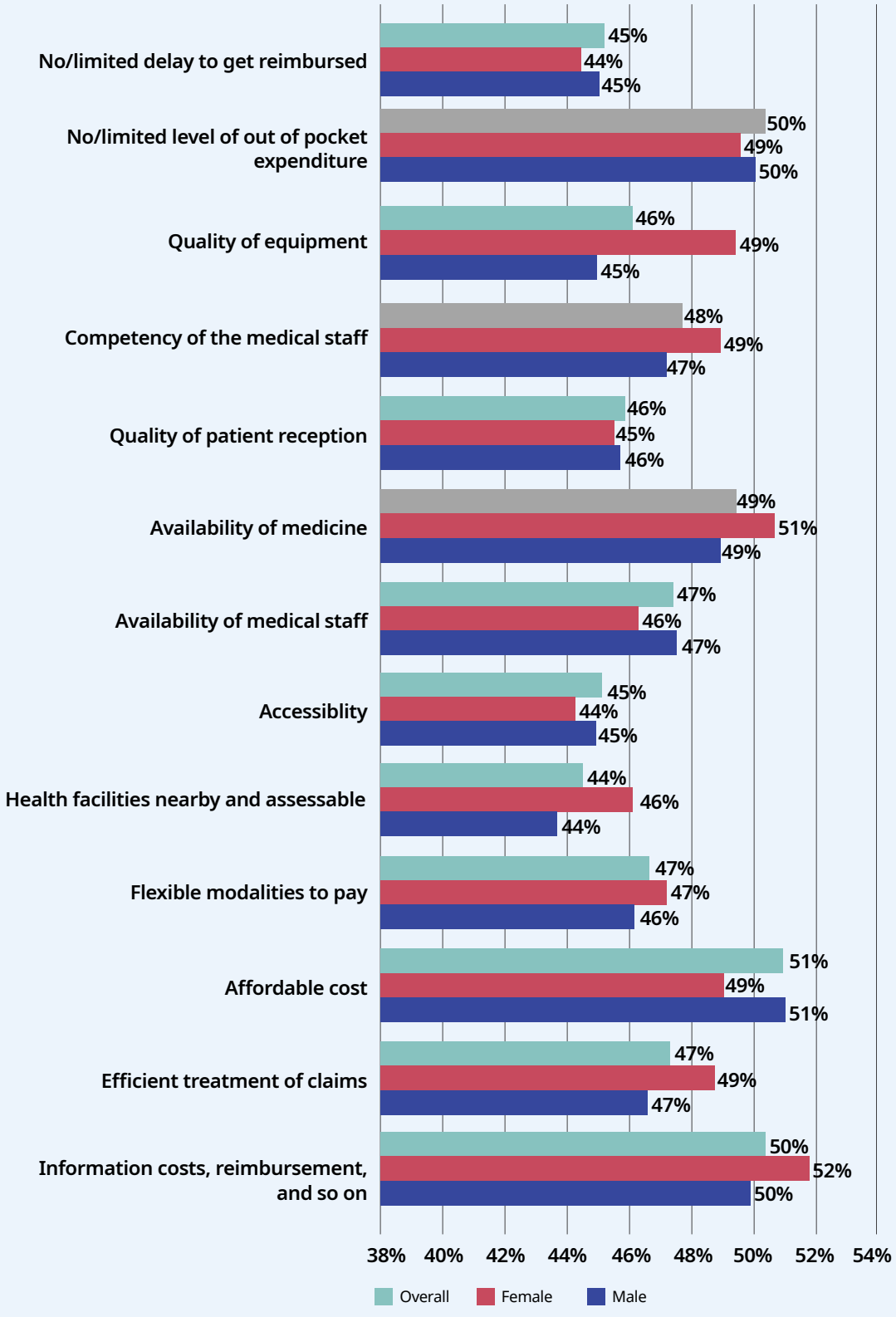
3.8. Satisfaction levels of the employers and employees

This section describes the experience of employers and employees while utilising healthcare services and other benefits. Although subjective, the employee's expression of satisfaction or dissatisfaction remains a vital tool as feedback from beneficiaries, for whom the services are made available. This, in turn, would facilitate identifying the strengths and limitations, of the ESIC system through exploring the challenges that the employees face while utilizing the services. Employer's satisfaction or dissatisfaction level can also be considered as another dimension to capture the challenges faced by them while registering with ESIC or for the compliance, or the grievance redressal. Importantly, there are several initiatives that are taken to ease the system, and as a result, the registration process became a little less cumbersome in recent years. The survey identified several suggestions that employees and employers provided to improve the services and to make them more accessible.

3.8.1. Patient satisfaction level relating to health care

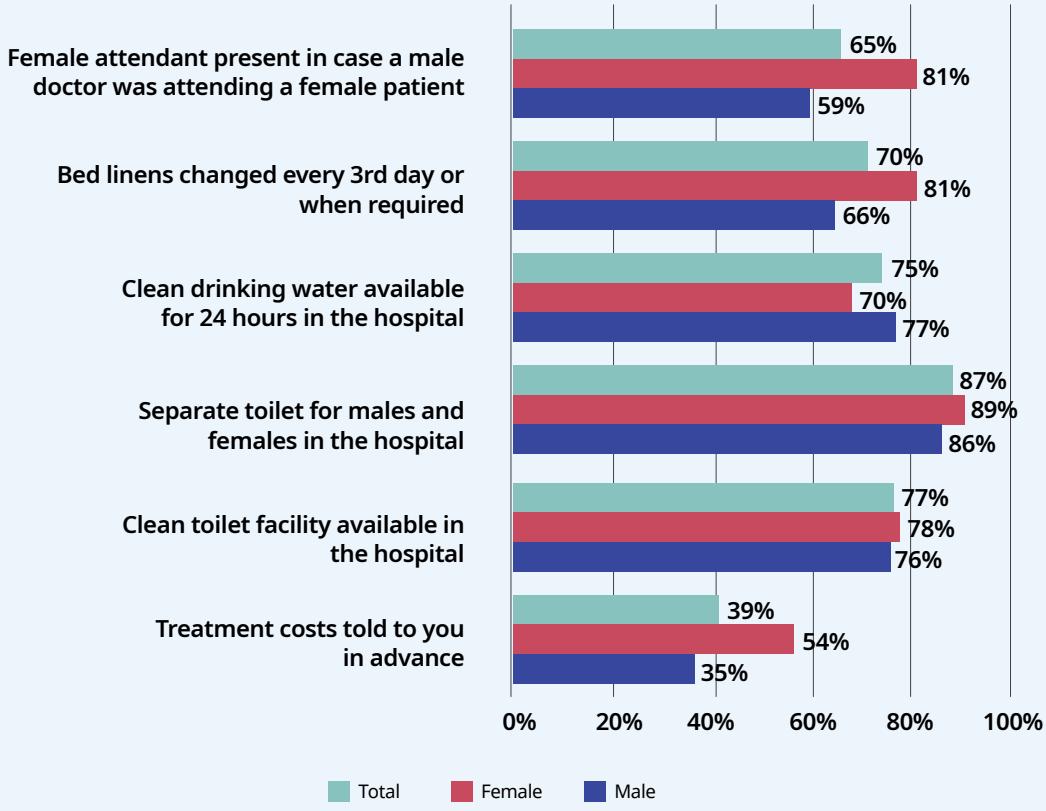
Patient satisfaction is a widely used parameter to assess the quality of health care and is also used as an effective proxy indicator to measure the performance of the healthcare workforce and providers (Prakash, 2010). Indicators for patient satisfaction can be used to identify the quality gap and highlight the practices hampering the delivery of quality care. It points out good practice and identifies the challenges in the provision of services. In this Section, several questions and responses were elicited from the patient to find out-patients's opinion about the experience while seeking healthcare in hospitals. Questions were asked about satisfaction levels involving several dimensions from ESIC hospitals, empanelled and non-empanelled hospitals. The study showed that only 50 per cent of the employees were satisfied with the information provided by ESI regarding cost, treatment and reimbursement. The satisfaction level ranged from 42 per cent, in Jharkhand to 52 per cent in Tamil Nadu, implying that only one in two were satisfied with the healthcare services provided, pointing to the need to substantially improve services. Furthermore, it shows that overall 51 per cent and 47 per cent of the employees were satisfied with cost coverage and flexible modalities, respectively, to pay (Figure 3.23). Among states, satisfaction levels in Jharkhand remain the least (45 and 42 per cent, respectively). Beneficiaries in Tamil Nadu reported relatively a slightly higher level of satisfaction, 52 and 50 per cent, respectively. In respect to the availability of staff/medicines, about 61 per cent of respondents remained satisfied and two in three patients appear to have been satisfied with the quality of services provides in ESIC hospitals.

▶ Figure 3.23. Share of employees reporting various types of ESI hospital satisfaction



Note: no. of male= 2,651, no. of female= 590

▶ Figure 3.24. Conditions of ESI facilities in IP patients' opinion (treated in ESI hospitals)



Note: male= 374, female=103

The survey findings further suggested that for 39 per cent of IP cases, treatment cost was told to the patient in advance (Figure 3.24). However, ideally one would have expected no payments from the beneficiaries since the services were supposed to be cashless and free. This is an aspect where attention needs to be paid by ESI authorities to make sure that ESIC hospitals provide all the services that were supposed to be provided free and cashless. As far as cleanliness and hygiene conditions in hospitals are concerned, 77 per cent opined that a clean toilet facility was available while 87 per cent informed that separate toilets for males and females were provided. Around 75 per cent of the respondents reported that clean drinking water was available for 24 hours in the hospital while 70 per cent informed that hospitals changed bed linens every 3rd day or when required. It is also reported by 65 per cent of the respondents that a female attendant was present in case a male doctor was attending a female patient. Again, there is adequate scope for improvement on this score, given that female security and their rights are critical to bringing in confidence among them.

In respect of the satisfaction levels of beneficiaries, while accessing empanelled hospitals, several dimensions emerge from the field. A little over one in three in-patient cases treated in empanelled hospitals claimed there was a designated ESI reception or help desk (Table 3.2). About half of patients treated in empanelled private hospitals received fast-tracked treatment or were received separately as ESI patients. It is also encouraging to know that among 44 per cent of patients empanelled hospitals did not ask for any document other than the ESI card. As far as performance at the state level is concerned,

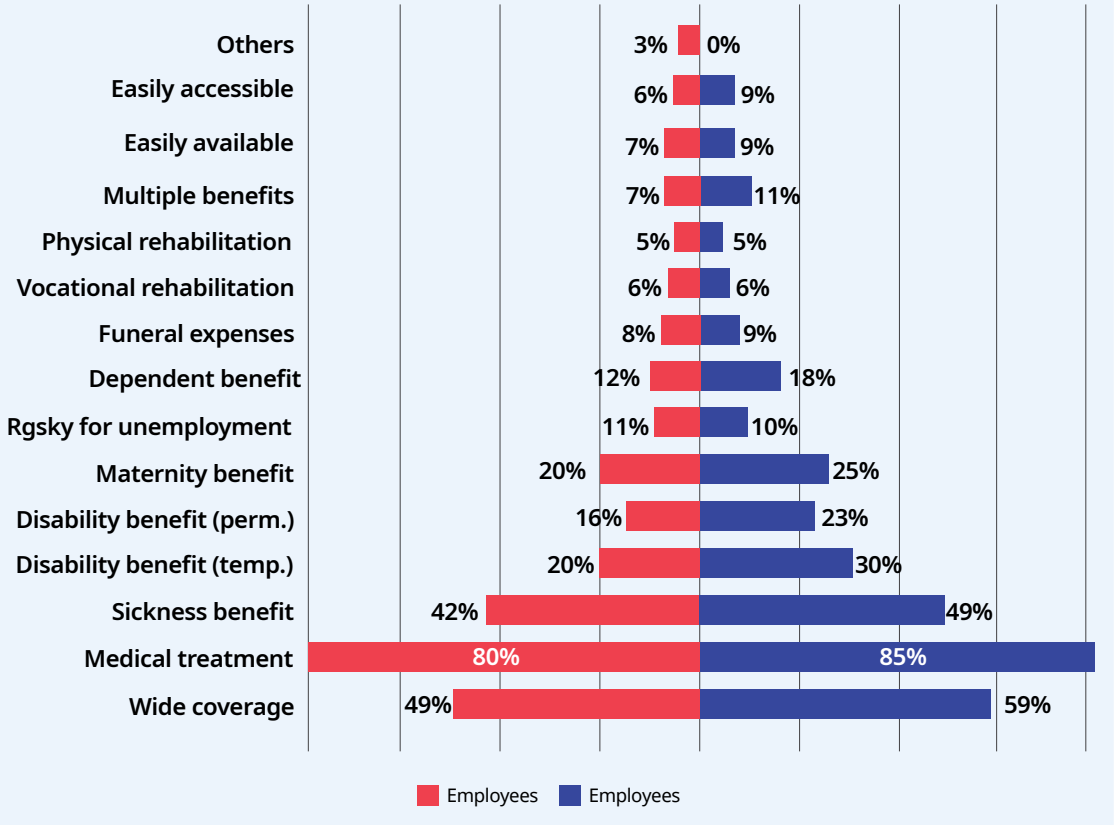
patients from Rajasthan and Tamil Nadu, reported a relatively better experience in these parameters as compared to the beneficiaries from Jharkhand and Haryana.

To the question of positive aspects about ESI (with multiple choices), respondents ranked several aspects of ESI, and among them, the key ones were medical benefits (85 per cent), wide coverage (59 per cent), sickness benefit (49 per cent), disability

▶ **Table 3.2. Experience of IP patients in ESI-empanelled private hospitals**

	Designated ESI reception or help desk	Fast-tracked/ received separately as ESI patient	Hospital asking for any document other than the ESI card	Number of episodes in private empanelled hospitals
Jharkhand	33%	33%	33%	3
Haryana	0	57%	0%	7
Rajasthan	60%	50%	60%	10
Tamil Nadu	40%	60%	80%	5
Total	36%	52%	44%	25

▶ **Figure 3.25. Positive aspects of ESI Scheme in employer's and employee's opinion**



benefit (30 per cent) and maternity benefit (25 per cent) in a decreasing order (Figure 3.25). It is a matter of concern that easy accessibility and easy availability ranked poorly in the list of positive aspects of ESI. Responses elicited from the field also suggested beneficiaries considered unemployment benefit, physical and vocational benefits also ranking very poor in the list of the positive aspects.

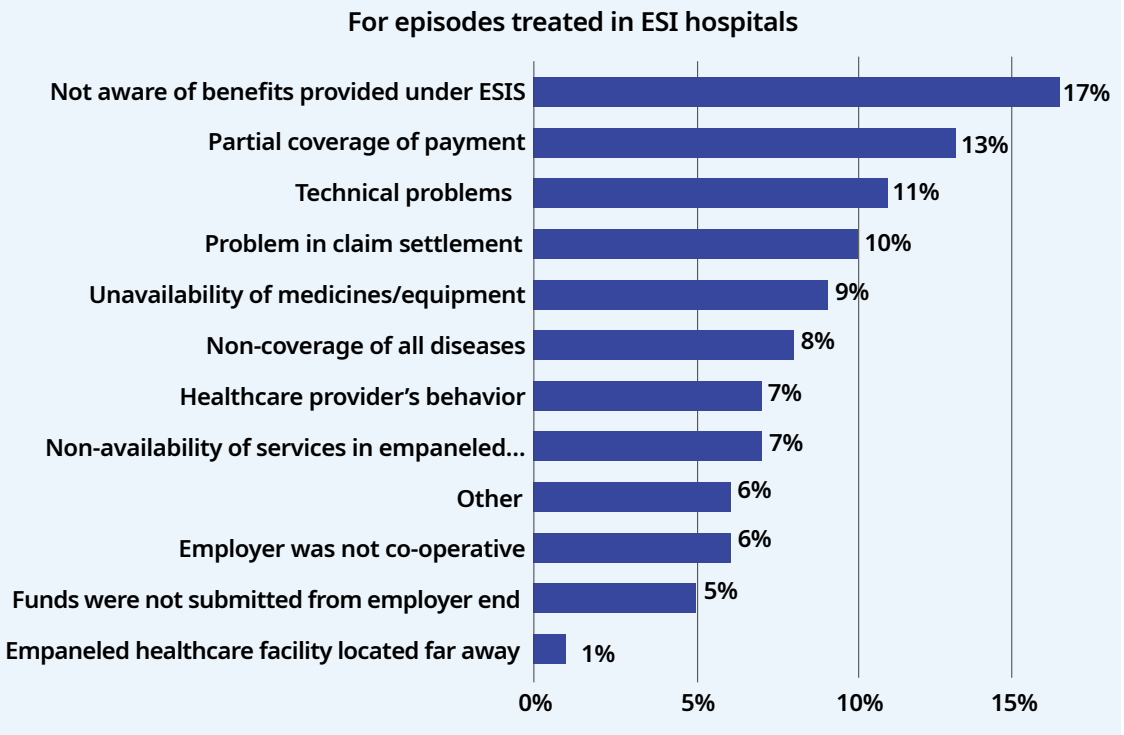
3.8.2. Dissatisfaction levels and reasons for dissatisfaction

ESI scheme differs from other insurance schemes in terms of wide coverage of diseases and financial protection it provides to its beneficiaries. The treatment is supposed to be free and cashless including the medicines. There is a lack of awareness about the available benefits, but implementation is affected by lack of co-operation from the health providers and employers, unavailability of services, or technical difficulties. The field findings revealed that only 47 per cent of hospitalization cases were considered satisfactory, implying that adequate room exists to improve behaviour as over half of such hospitalization events turned out to be unsatisfactory. In 52 per cent of hospitalization cases, beneficiaries were willing to visit again for treatment. We also explored the reasons for the dissatisfaction of patients treated in ESI hospitals and in empanelled private hospitals.

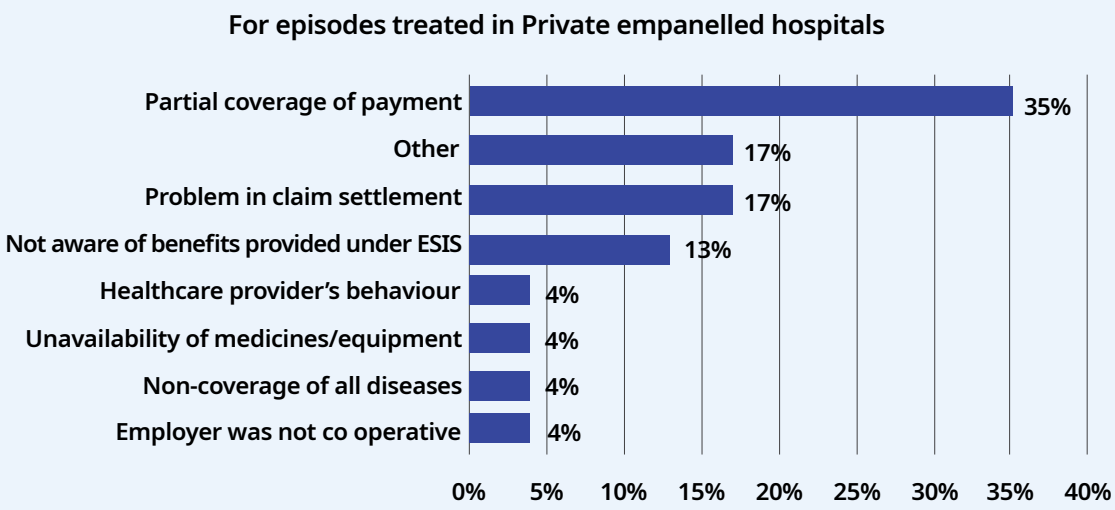
Survey results highlight that the key reasons for the dissatisfaction are the following:

(i) respondents were not aware of the benefits available for the beneficiaries (17 per cent), (ii) partial coverage of payment (13 per cent), (iii) technical problems (11 per cent), iv) problem in claim settlement (10 per cent), v) unavailability of medicines/ equipment (9 per cent), and so on (Figure 3.26). Moreover, 6 per cent and 5 per cent of respondents complained about non-cooperation from the employers and non-submission of funds from the employer, respectively. On the other hand, analysis of the reasons for dissatisfaction in non-empanelled private hospitals shows that the major reasons were partial coverage

▶ Figure 3.26. Reasons of dissatisfaction for hospitalization episodes treated in ESI hospitals



▶ Figure 3.27. Reasons of dissatisfaction for hospitalization episodes treated in private empanelled



of payment, problem in claim settlement, and that lack of awareness about the benefits of ESI (Figure 3.27). Contrary to the claims made by the ESI officials, the survey points out the continuing practice of providers, seeking to charge patients over and above the package rates in the case of empanelled private hospitals, while no justification exists for the ESIC owned hospitals, for exposing beneficiaries to pay for services that are cashless and free.

3.9. Summing up

Findings from the field result pointed to a relatively higher level of awareness about medical benefits that ESI offers (89 per cent) among employees, but far less on cash (46 per cent) and disability benefits (32 per cent), although understanding is relatively greater among employees in Haryana (94 per cent). In Jharkhand, only three in four employees know about the medical benefits. This could plausibly be due to the socio-economic and educational status of the respondents. Since four in five sample respondents were the employees receiving a relatively higher salary in the range of Rs. 10,000 and above, besides the fact that over two in three of them possessed secondary level education and/or a graduate, one could conjecture that this may perhaps be the contributing factor in a higher level of awareness. As far as employers' knowledge was concerned, a sizeable share of them were aware of employees' medical benefits (92 per cent), followed by cash benefits (62 per cent), medical aid (57 per cent), disability benefits (41 per cent) and far less on funeral expenses (20 per cent) and unemployment benefits (14 per cent). Prior to reforms initiated in 2020 whereby the registration process was made simple, employers were often faced with several challenges. Nearly one in two employers reported a lengthy process of insurance number generation, whereas 41 per cent of the employers indicated the difficulties surrounding the biometric enrolment process for obtaining pehchan card. The survey further highlighted that 30 per cent of employer respondents appeared to face challenges in the online registration process, while 28 per cent of them reported having faced the challenge of submitting documents, including

Survey highlighted that 30 per cent of employer respondents appeared to face challenges in the online registration process.

the quantum and processing of the documents required.

Although enrolment is mandatory for the employees, the proportion of enrolment of households in the ESI scheme including its IPs, worked out to 85 per cent, while the share drops to 78 per cent excluding employees. Thus, over one in five household members did not enrol in the scheme, whereas over three fourths of the households and employees had in possession of ESIC cards. In respect to contributions made, two in three employers correctly indicated less than 4 per cent of wages as the, current contribution by employers, even though 17 per cent of them mistook the contribution to be less than 5 per cent. Further, the survey indicated that one in five employers identified the challenges during paying contribution, while one fourth of them pointed to the contribution amount to be high, although the process of making contribution every month was found to be a larger problem among 47 per cent of the employers. About 14 per cent of them identified unsuitable timing for making contribution and 12 per cent identified less returns as a common problem. Expectedly, only about half of employers were aware of grievance redressal mechanisms. Again half of them had used telephonic mode in the past as a mechanism to reach out to the authorities. Unfortunately, barely one in three employers were cognizant about *Suvidha Samagam*, while inspection from ESIC officials were reported by one fourths of employer as a mechanism for grievance redressal.

With respect to healthcare utilization pattern, one in five persons reported at least one illness in the past 15 days with females reporting a slightly higher rate of illness than males. Considerable variations were observed in illness reporting across states, with only 4 per cent persons reporting sick in Jharkhand as against 33 per cent in Rajasthan, while beneficiaries in Haryana and Tamil Nadu reported 11 per cent and 14 per cent disease conditions. Over half of the sick beneficiaries sought treatment. Yet, the average among the four states hides significant differentials in treatment-seeking as 94 per cent of beneficiaries in Tamil Nadu sought care as against barely 10 per cent in Jharkhand. Also the share of beneficiaries seeking treatment in Haryana and Rajasthan was 60 per cent and 38 per cent, respectively. Substantial differences in utilization of healthcare across states highlight variations in treatment-seeking behaviour, partly pointing to the availability or lack of healthcare facilities.

Although 82 per cent of the beneficiaries did not seek care due to the illness not being considered serious enough, about 7 per cent of beneficiaries did not seek treatment due to lack of nearby health facility and an equal percentage of them (8 per cent) had to forgo treatment owing to unsatisfactory health service provision. From those who sought treatment, the rate of out-patient visits was observed to be 50 per thousand beneficiaries, with a relatively larger number of OP visits in Tamil Nadu (150 per thousand) and an abysmally lower number in other states, Haryana (13 per thousand), Jharkhand (31 per thousand), Rajasthan (28 per thousand), reflecting gross underreporting.

The gross underreporting is plausibly due to the COVID-19, and associated restrictions placed during the field survey period. The survey in three states namely Jharkhand, Haryana and Rajasthan, was carried out during September-October, 2020, when the COVID-19 pandemic was at its peak restricting the use of limited availability of out-patient care services, reservation of hospital infrastructure for COVID-19 patients rendering non-COVID-19 services virtually unavailable. Patients on their part were under the influence of fear and stigmatization, rendering them to not report even if they faced simple ailments of fever, cold, cough, and so on. Yet, barely one in four OP visits were sought in ESIC dispensaries/hospitals, and a similar share was accounted for by private non-empanelled facilities. A relatively higher rate of out-patient visits in Tamil Nadu, was partly due to the timing of the survey, as it was conducted during the receding pandemic period of the first peak (November and December), which also coincided with post-monsoon time highlighting seasonal peak of illness such as common cold, fever and cough. Beneficiaries accessing out-patient treatment in government hospitals registered a share of 12 per cent.

The survey findings in respect of the hospitalization episodes revealed that 62 per thousand beneficiaries sought treatment, with significant variation among states; Tamil Nadu (104 per thousand persons), Rajasthan (28 per thousand persons), Haryana (67 per thousand persons) and Jharkhand (49 per thousand persons). The rate of

hospitalization episodes as reported by the survey appears to be slightly on the higher side, indicating a higher level of hospitalization when ESIC, empanelled and non-empanelled hospitalization was taken into consideration. In respect to type of facilities chosen, (i) one in three hospitalizations occurred in an ESI hospital; (ii) about 15 per cent of the hospitalization in a government hospital; (iii) barely 5 per cent of the hospitalization occurred in a private empanelled facility; and (iv) the rest nearly half of the hospitalization episodes were treated in private hospitals that were not empanelled. Despite the availability of ESIC's own hospitals, government facilities and arrangements with private empanelled facilities, nearly half of treatment requiring hospitalization were sought outside the ambit of ESIC's arrangement. Among those who possess ESI cards, 58 per cent used them for seeking healthcare.

The survey also pointed to inter-state differentials in access the hospitalization care. In Haryana, nearly one in three hospitalizations was sought in ESIC hospital, about one in five occurred in a government facility, about 12 per cent in a private empanelled hospital. In Rajasthan, beneficiaries chose private non-empanelled hospitals in close to half of IP treatment, while treatment options in ESIC facility was an option to about one fourth of the patients, 10 per cent of each hospitalization occurred in government and private empanelled hospitals. The pattern of hospitalization in Tamil Nadu demonstrates a far more different pattern, as one in three hospitalizations was carried out in ESIC hospitals, followed by public hospitals in about 15 per cent while private non-empanelled facilities accounted for close to one-fourth of all hospitalization by the beneficiary. Yet, the preferred option for beneficiaries in Jharkhand was a private empanelled hospital in half of IP treatment, while private non-empanelled hospitals also accounted for one-third of hospitalization, and government hospitals accounted for about 17 per cent hospitalization, with virtually no hospitalization reported by beneficiaries in ESIC hospitals. Moreover, as the survey was carried out during COVID-19 and the partial lockdown period, a higher level of underreporting can be expected, as the findings from the survey for Jharkhand demonstrates. Since some of the ESIC hospitals were designated for COVID-19 care, it is highly unlikely that beneficiaries would have sought treatment in ESIC hospitals.

Even though the beneficiaries were supposed to receive health benefits free and cashless at the point of service delivery, the survey results highlight the practice of OOP spending by them. For an episode of treatment for hospitalization, the mean spending works out to Rs. 23,834 but with significant variation depending upon which facilities beneficiaries choose from. Beneficiaries ended up paying barely Rs. 2,426 for an episode of in-patient service as against Rs. 34,372 when beneficiaries sought treatment from the private non-empanelled hospital. Nearly one in three beneficiaries did so. On the other hand, even though only 7 per cent of ESI beneficiaries sought treatment in a private empanelled hospital, and yet they were forced to pay Rs. 13,409, about five times than when they sought care in ESI facilities. The evidence from the field suggests that a considerable share of beneficiaries seek treatment in private non-empanelled hospitals and by doing so were exposed to a serious level of OOP spending.

Similar scenarios emerge in respect of out-patient care visits. Per episode out-patient treatment in private non-empanelled facilities cost beneficiaries Rs. 1,021 as against Rs. 157 when beneficiaries visited ESI dispensaries. Even in a private empanelled facility, beneficiaries ended up paying a relatively high OOP at Rs. 842. Notwithstanding the treatment and cost associated with it, the pattern observed here corroborates the evidence presented in the previous section. It highlights that ESI scheme beneficiaries were less prone to incurring catastrophic spending than those covered by government-funded health insurance schemes or even private health insurance schemes.

> Beneficiaries were supposed to receive health benefits free and cashless at the point of service delivery, the survey results highlight the practice of increased OOP.

The survey further reveals that beneficiaries incurred both medical and non-medical expenses, accounting for 42 per cent and 58 per cent, respectively, when they sought treatment in ESIC hospitals for in-patient treatment. Non-medical expenses included transportation, lodging and food charges for accompanying patients, and so on while medical expenses largely included medicines (51 per cent), diagnostics (24 per cent), consultations (20 per cent) and bed charges (5 per cent). This indicates that medicines' shortage remains a major issue in ESIC hospitals, while the non-availability of comprehensive diagnostics services is yet another critical factor accounting for OOP incurred by the beneficiaries. However, the largest contributors to OOP for beneficiaries seeking treatment in non-private empanelled hospitals are consultation charges (30 per cent), medicines (26 per cent), diagnostics (24 per cent) and bed charges (21 per cent).

As far as child delivery services are concerned, the findings revealed that one in three child deliveries occurred in ESIC facilities, and nearly an equal share was accounted for by private non-empanelled hospitals. About 10 per cent each was accounted for by public hospitals and private empanelled ones. This implies a significant gap in the provision of child delivery services either within ESIC or empanelled facilities. However, when a pregnant beneficiary was delivered in a private empanelled hospital, she had to incur Rs. 21,100 over and above the package ceiling provided by ESI, while she ended up paying a far higher amount of Rs. 36,630 per child delivery in a private non-empanelled hospital. It is even important to observe that when a pregnant woman delivered at a public hospital, she had paid Rs. 1,500 per delivery, underscoring the improvement in institutional delivery brought about by National Health Mission (NHM). It may be worth noting that pregnant women are provided conditional cash transfers for ante-natal check-ups and for delivering in an institution. This could potentially be the reason why women delivering in a government hospital are paying by far the least among other facilities, highlighting the need for ESI to improve not only its facilities but also provide cash compensation for child delivery services.

The survey findings further demonstrated that one in five employees, reported wage loss due to hospitalization, with an average wage loss at Rs. 792. This translated into a mean wage loss of approximately 4 per cent as a share of monthly income. Although one would have expected a higher amount of the wage loss given that nearly 20 days were lost due to hospitalization, a relatively significant wage loss compensation provided to employees could perhaps be one of the reasons why the wage loss reported is comparatively lower. Did the pandemic and the associated lockdowns rendered insured persons' job and wage losses? About 62 per cent of the employees surveyed had incurred wage loss during the lockdown period, in the specific and the pandemic overall and that only one in five employees who had reported wage loss, had received some compensation. Yet, when it pertained to actual wage compensation received an absolute amount totalling Rs. 11,510 was received as compensation.

The field data emerges that overall 44 per cent of the employees had some knowledge about safety and health risks associated with their job while only 14 per cent of the employees had knowledge about any type of health risk assessment that had been conducted in the past year at their enterprise. Among those who reported health risks, the majority of them faced a risk of crushing injuries due to their job (20 per cent), fractures (13 per cent), injury (6 per cent), burns (4 per cent), communicable disease hazards (4 per cent), and so on. On their part, employers' awareness about occupational hazards from the field suggested that 28 per cent of them had identified the presence of any kind of workplace health hazards in their enterprises. Employers involved in construction industry accounting for 43 per cent of registered enterprises reported awareness of work place health hazards. Contrarily, awareness about workplace health hazards is the least among employers in education and health sector. In respect of workplace health hazards, the survey results showed that it is due to chemical (27 per cent), ergonomic (35 per cent) and physical (16 per cent) reasons. Further, prevalence of an accident remains high, among manufacturing enterprises followed by the construction enterprises with 13 per cent and 11 per cent, respectively. While health and education sectors (5 per cent) reported the least share of workplace accidents.

Indicators for patient satisfaction can be used to identify the quality gap and highlight the practices that hamper the delivery of quality care. The study showed that only 50 per cent of the employees

> In terms of availability of staff and medicines, about 61 per cent of respondents remained satisfied and two in three patients appear to have been satisfied with the quality of services provided in the ESIC hospitals.

were satisfied with the information provided by ESI regarding cost, treatment and reimbursement. Further, it shows that overall 51 per cent and 47 per cent of the employees were satisfied with cost coverage and flexible modalities to pay respectively. In respect to the availability of staff/ medicines, about 61 per cent of respondents remained satisfied and two in three patients appear to have been satisfied with the quality of services provided in the ESIC hospitals. In respect of the dissatisfaction levels, the field findings painted a grim picture of hospital behaviour as only 47 per cent of hospitalization cases were considered satisfactory, implying adequate room exists to improve behaviour as over half of such hospitalisation events turned out to be unsatisfactory. In 52 per cent of hospitalisation cases, beneficiaries were willing to visit again for treatment.

Survey results identified several reasons for dissatisfaction: (i) respondents were not aware of the benefits available for the beneficiaries (17 per cent), (ii) partial coverage of payment (13 per cent), (iii) technical problems (11 per cent), iv) problems in claim settlement (10 per cent), and v) unavailability of medicines/ equipment (9 per cent) and so on. Moreover, 6 per cent and 5 per cent of respondents complained about non-cooperation from the employers and non-submission of funds from the employer. On the other hand, analysis of the reasons for dissatisfaction in non-empanelled private hospitals shows that the major reasons were partial coverage of payment, problems in claim settlement, and the lack of awareness about the benefits of ESI.

4. Key findings and recommendations

The chapter encompasses the comprehensive synthesis of the key findings and recommendations of the study.

The current study set out to achieve three key objectives:

1. Assess health-seeking behaviour, potential requirements, and expected challenges of beneficiaries in respect to ESI healthcare insurance, access to healthcare services and in respect to views that relate empanelled healthcare providers;
2. Investigate beneficiaries' knowledge, attitude and awareness in relation to ESIC entitlements;
3. Identify and suggest potential solutions that can be used to design services, which would deepen service coverage and facilitate beneficiaries, employers, and healthcare providers underlying ESI health insurance schemes.

It has achieved the first two objectives through a large-scale survey of ESI beneficiaries combined with the collection and analysis of additional qualitative and secondary data. Section 4.2 summarizes the key findings pertaining to the first two objectives.

The third objective has been realized through extensive analysis of the data from this study in correlation with valuable insights and feedback received from ILO's social partners and direct stakeholders in the ESI Scheme – the representative organizations of workers and employers from all over India. A comprehensive synthesis of the findings of this study is presented in sections 4.1 and 4.2 of this Chapter.

Therefore, the ILO has developed a theory of change for ESI reforms (section 4.3) and prepared a set of recommendations (section 4.4) for the ESIC to consider.

4.1. Key synthesis from secondary evidence

ESI covers a tenth of india's population

The performance of ESI as underscored earlier in this study points to rapid and significant growth, signalling a five-fold increase in a number of enterprises from 0.22 million in 1999-2000 to 1.03 million during 2018-2019 with a corresponding rise in the number of employees covered from 7.86 million to 31.17 million. As a result, ESI-eligible beneficiaries now account for about a tenth of the total population in 2018-2019 as against 3 per cent of the population in 1999-2000. However, the share of women workers in respect of total insured persons remained low in the range of 12 per cent–17 per cent during the last twenty years, in sharp contrast to a relatively higher share of female employment proportions among regular/wage salaried (21 per cent in 2017-2018 as per the 75th NSSO Round).

Increased in-patient service utilization and decreased out-patient service utilization in ESI

In respect to the performance of healthcare utilization, the rate of hospitalization enhanced significantly from 1.3 per cent in 1999-2000 to 2.8 per cent during 2017-2018, with utilization rates reflecting similar levels recorded in national sample surveys. In respect to out-patient utilization rates, per 1,000 beneficiaries dropped from 609 to 208 for the same period, a sharp drop that could be explained by inadequacy in facility expansion, and similarly, the rate of investigations (diagnostics) per 1000 beneficiaries also went down substantially from 37 to 15 for the period under consideration.

► Relatively better financial protection under ESI

The shallowness of health insurance coverage is often reflected in the magnitude of households' expenditure, over and above the cost covered by the scheme per se. Despite generous medical and cash benefits, ESI beneficiaries appear to be incurring significant out-of-pocket expenditure even if lesser than in other insurance schemes. The average expenditure incurred by households covered by the ESI scheme ended up spending about Rs. 38,668 annually, while CGHS beneficiaries paid out Rs. 50,470 and households covered by private health insurance paid nearly double the expenditure incurred by ESI beneficiary households. A relatively lower level of households' OOP expenditure could presumably be because households may be accessing secondary-level nursing homes or other less expensive facilities. it is equally possible that the large share of this spending could be used up for buying medicines, diagnostics and consultations. Correspondingly, a relatively lesser share of households covered by ESI (12 per cent) was suffering from health spending catastrophe, which is only half of catastrophic payments compared to other insurance programmes. Moreover, emerging evidence also indicates that about 5 per cent of households covered under ESI recorded a loss of income compared to nearly double among households not covered by any insurance programme.

4.2. Key findings from the field survey

► A necessary demand-side perspective of ESI service utilization

Overwhelming evidence given above points to potentially large scope for enlarging the coverage of enterprises and employees and bringing them into the ESI fold. Given the large surplus that ESIC has managed to accumulate in the past, resource availability is far less a vital factor than making available health facilities and services and deepening coverage benefits. Lack of health infrastructure availability – hospitals, out-patient facilities, diagnostic facilities, and so on and inadequate health workforce besides shortages and stock-out of essential medicines and supplies appears to be the key factors hindering access and

uptake of health benefits. Even after contracting with the private sector – in-patient and out-patient– utilization of healthcare facilities has been far short of the potential. Purchasing of healthcare services is still found to be fragmented and sub-optimal, raising serious questions about efficiency, effectiveness and quality of services provided. In order to investigate the reasons and factors that hinder coverage, lack of facilities, underutilization of services, and so on there was a need for eliciting the current knowledge, behaviour and utilization pattern of the ESI scheme from its stakeholders. Past research and evidence focused on themes that are largely from the supply side. Adequate, robust and reliable evidence from the demand side has been missing about the programme performance.

► Scope of the present study

This piece of research brings out for the first time robust and sufficient evidence about the current challenges afflicting the scheme, purely from the beneficiary side. One of the major objectives of this study was to undertake this exercise among employees, employers, healthcare providers, representatives of trade unions and employers' associations. Employing a two-stage stratified random sampling, the field survey was carried out in four states, namely Tamil Nadu, Haryana, Rajasthan and Jharkhand. A total of 553 enterprises, along with 3,339 employees, plus healthcare providers and representatives constituted about 3,984 samples from the field. The survey covered several themes, among them the core ones are

- Awareness, knowledge and attitude of stakeholders underlying ESI benefits;
- Healthcare utilization pattern among ESI beneficiaries;
- Financial risk protection measures;
- COVID-19 and associated wage loss;
- Occupational hazard and safety measures faced by employees and finally;
- Satisfaction levels of employers/employees.

► Awareness of ESI benefits among beneficiaries

Findings from the field survey suggested a relatively higher level of awareness about medical benefits that ESI offers (89 per cent) among employees, but far less on cash (46 per cent) and disability benefits (32 per cent), although understanding is relatively greater among employees in Haryana (94 per cent) in Jharkhand only three in four of them know about the medical benefits. This could plausibly be due to the socio-economic and educational status of the respondents. Since four in five sample respondents were employees receiving a relatively higher salary in the range of Rs. 10,000 and above, besides the fact that over two in three of them possessed secondary level education and/or a graduate, one could conjecture that this may perhaps be the contributing factor in a higher level of awareness. As far as employers' knowledge is concerned, a sizeable share of them is aware of employees' medical benefits (92 per cent), followed by cash benefits (62 per cent), medical aid (57 per cent), disability benefits (41 per cent), and far less on funeral expenses (20 per cent) and unemployment benefits (14 per cent).

► Registration and compliance issues faced by Scheme members

Prior to recent reforms whereby the registration process was made simple, employers were often faced with several challenges. Nearly one in two employers reported a lengthy process of insurance number generation, whereas 41 per cent of the employers surveyed indicated the difficulties surrounding the biometric enrolment process for obtaining *pehchan card*. The survey further highlighted that 30 per cent of employer respondents appear to face challenges in the online registration process, while 28 per cent of them reported having faced the challenge of submitting documents, including the quantum and processing of documents required.

Although enrolment is mandatory for employees, the proportion of enrolment of households in the ESI scheme including its IPs, worked out to 85 per cent, while the share drops to 78 per cent excluding employees. Thus, over one in five household members did not enrol in the scheme, whereas over three fourths of the households & employees were in possession of ESIC cards. In respect to contributions made, two in three employers correctly indicated less than 4 per cent of wages as the current contribution by employers, even though 17 per cent of them mistook the contribution to be less than 5 per

cent. Further, the survey indicated that one in five employers identified the challenges during paying contribution, while one fourth of them pointed to the contribution amount to be high, although the process of making contribution every month was found to be a larger problem among 47 per cent of the employers. About 14 per cent of them identified unsuitable timing for making contribution and 12 per cent identified less returns as a common problem. Expectedly, only about half of employers were aware of grievance redressal mechanisms, and a similar share of them had used telephonic mode in the past as a mechanism to reach out to the authorities. Unfortunately, barely one in three employers were cognizant about Suvidha Samagam, while inspections from ESIC officials were reported by one fourths of the employer as a mechanism for grievance redressal.

► Variable health-seeking behaviour and medical benefits utilization across states

In respect to healthcare utilization pattern, one in five persons reported at least one illness in the past 15 days with females reporting a slightly higher rate of illness than males. Considerable variations were observed in illness reporting across states, with only 4 per cent persons reporting sick in Jharkhand as against 33 per cent in Rajasthan, while beneficiaries in Haryana and Tamil Nadu reported 11 per cent and 14 per cent disease conditions. Among those who were sick, over half of them sought treatment. Yet, the average among the four states hides significant differentials in treatment-seeking as 94 per cent of beneficiaries in Tamil Nadu sought care as against barely 10 per cent in Jharkhand, while the share of beneficiaries seeking treatment in Haryana and Rajasthan was 60 per cent and 38 per cent respectively. Substantial differences in utilization of healthcare across states highlight variations in treatment-seeking behaviour and partly point to the availability or lack of healthcare facilities. Although 82 per cent of beneficiaries did not seek care due to the illness not being considered serious enough, about 7 per cent of beneficiaries who did not seek treatment was due to lack of nearby health facility and an equal percentage of them (8 per cent) had to forgo treatment owing to unsatisfactory health service provision.

► Out-patient utilization

From those who sought treatment, the rate of out-patient visits was observed to be 50 per thousand beneficiaries, with a relatively larger number of OP visits in Tamil Nadu (150 per thousand) and an abysmally lower number in other states, Haryana (13 per thousand), Jharkhand (31 per thousand), Rajasthan (28 per thousand), reflecting gross underreporting. The gross underreporting is plausibly due to COVID-19 and associated restrictions placed during the field survey period. The survey in three states, namely Jharkhand, Haryana and Rajasthan was carried out during September-October, 2020, when the COVID-19 pandemic was at its peak restricting the use of limited availability of out-patient care services, reservation of hospital infrastructure for COVID-19 patients rendering non-COVID-19 services virtually unavailable. Patients on their part were under the influence of fear and stigmatization, rendering them to not report even if they faced simple ailments of fever, cold, cough, and so on.

Yet, barely one in four OP visits were sought in ESIC dispensaries/hospitals and a similar share was accounted for by private non-empanelled facilities. A relatively higher rate of out-patient visits in Tamil Nadu was partly due to the timing of the survey, as it was conducted during the receding pandemic period of the first peak (November and December). It also coincided with post-monsoon time highlighting seasonal peaks of illness such as common cold, fever and cough. Beneficiaries accessing out-patient treatment in government hospitals registered a share of 12 per cent.

► In-patient utilization

The survey findings in respect of hospitalization episodes revealed that 62 per thousand beneficiaries sought treatment, with significant variation among states; Tamil Nadu (104 per thousand persons), Rajasthan (28 per thousand persons), Haryana (67 per thousand persons) and Jharkhand (49 per thousand persons). The rate hospitalization episodes as reported by the survey appears to be slightly on the higher side, indicating a higher level of hospitalization when ESIC, empanelled and non-empanelled hospitalization was taken into consideration. In respect to type of facilities chosen, (i) one in three hospitalization occurred in an ESI hospital; (ii) about 15 per cent

hospitalization in a government hospital; (iii) barely 5 per cent of the hospitalization occurred in a private empanelled facility; (iv) the rest nearly half of the hospitalization episodes were treated in private hospitals that were not empanelled. Despite the availability of ESIC's own hospitals, government facilities and arrangement with private empanelled facilities, nearly half of treatment requiring hospitalization were sought outside the ambit of ESIC's arrangement. The survey also pointed to inter-state differentials in access to hospitalization care: in Haryana, nearly one in three hospitalizations was sought in ESIC hospitals, about one in five occurred in a government facility, about 12 per cent in a private empanelled hospital. However, in Rajasthan, beneficiaries chose private non-empanelled hospitals in close to half of IP treatment, while treatment options in ESIC facility was an option to about one fourths of the patients, 10 per cent each hospitalization occurred in government and private empanelled hospitals. The pattern of hospitalization in Tamil Nadu demonstrates far more different pattern, as one in three hospitalization was carried out in ESIC hospitals, followed by public hospitals in about 15 per cent while private non-empanelled facilities accounted for close to one fourths of all hospitalization by the beneficiary. Yet, the preferred option for beneficiaries in Jharkhand was a private empanelled hospital in half of IP treatment, while private non-empanelled hospitals also accounted for one-third of hospitalization, and government hospitals accounted for about 17 per cent hospitalization, with virtually no hospitalization reported by beneficiaries in ESIC hospitals. Moreover, as the survey was carried out during COVID-19 and the partial lockdown period, a higher level of underreporting can be expected, as the findings from the survey for Jharkhand demonstrate. Since some of the ESIC hospitals were designated for COVID-19 care, it is highly unlikely that beneficiaries would have sought treatment in ESIC hospitals.

► Out-of-pocket expenditure

Even though beneficiaries were supposed to receive health benefits free and cashless at the point of service delivery, the survey results highlight the practice of OOP spending by them. For an episode of treatment for hospitalization, the mean spending works out to Rs. 23,834 but with significant variation depending upon which facilities beneficiaries choose from. Beneficiaries had to pay only Rs. 2,426 for an episode of in-patient service as against Rs. 34, 372 when beneficiaries sought treatment from the private non-empanelled hospital. Nearly one in three beneficiaries did so. On the other hand, even though only 7 per cent of ESI beneficiaries sought treatment in a private empanelled hospital, and yet they were forced to pay Rs. 13,409, about 5 times than when they sought care in ESI facilities. The evidence from the field suggests that a considerable share of beneficiaries seek treatment in private non-empanelled hospitals and by doing so were exposed to a serious level of out-of-pocket spending. Similar scenarios emerge in respect to out-patient care visits. Per episode out-patient treatment in private non-empanelled facilities cost beneficiaries Rs. 1,021 as against Rs. 157 when beneficiaries visited ESI dispensaries. Even in a private empanelled facility, beneficiaries ended up paying a relatively high OOP at Rs. 842. Notwithstanding the treatment and cost associated with it, the pattern observed here corroborates to the evidence presented in the previous section highlighting that ESI scheme beneficiaries were less prone to incurring catastrophic spending than those covered by government-funded health insurance schemes or even private health insurance schemes. The survey further reveals that beneficiaries incurred both medical-related and non-medical expenses, accounting for 42 per cent and 58 per cent respectively when they sought treatment in ESIC hospitals for in-patient treatment. Non-medical expenses included transportation, lodging and food charges for accompanying patients, and so on. The medical expenses largely included medicines (51 per cent), diagnostics (24 per cent), consultations (20 per cent) and bed charges (5 per cent). This indicates that medicines' shortage remains a major issue in ESIC hospitals, while the non-availability of comprehensive diagnostics services is yet another critical factor accounting for OOP incurred by the beneficiaries. Whereas the largest contributors to OOP for beneficiaries seeking treatment in non-private empanelled hospitals are consultation charges (30 per cent), medicines (26 per cent), diagnostics (24 per cent), bed charges (21 per cent). As far as child delivery services are concerned, the findings revealed that one in three child delivery occurred in ESIC facilities, and nearly

an equal share was accounted for by private non-empanelled hospitals. About 10 per cent each was accounted for by public hospitals and private empanelled ones. This implies a significant gap in the provision of child delivery services either within ESIC or empanelled facilities. However, when a pregnant beneficiary delivered in a private empanelled hospital, she had to incur Rs. 21,100 over and above the package ceiling provided by ESI, while she ended up paying a far higher amount of Rs. 36,630 per child delivery in a private non-empanelled hospital. It is even important to observe that when a pregnant woman delivered at a public hospital, she had paid Rs. 1,500 per delivery, underscoring the improvement in institutional delivery brought about by NHM. It may be worth noting that pregnant women are provided conditional cash transfers for ante-natal check-ups and for delivering in an institution. This could potentially be the reason why women delivering in a government hospital are paying by far the least among other facilities, perhaps pointing to the need for ESI to improve not only its facilities but also provide cash compensation for child delivery services.

► Wage loss and compensation

The survey findings further demonstrated that one in five employees reported wage loss due to hospitalization, with an average wage loss at Rs. 792. This translated into a mean wage loss of approximately 4 per cent as a share of monthly income. Although one would have expected a higher amount of wage loss given that nearly 20 days were lost due to hospitalization, a relatively significant wage loss compensation provided to employees could perhaps be one of the reasons why the wage loss reported is comparatively lower. Did the pandemic and the associated lockdowns rendered insured persons job and wage losses? About 62 per cent of employees surveyed had incurred wage loss during the lockdown period in specific and the pandemic overall and that only one in five employees who had reported wage loss, had received some compensation. Yet, when it pertained to actual wage compensation received an absolute amount totaling Rs. 11,510 was received as compensation.

► Occupational safety and health

Field data show that overall 44 per cent of the employees had some knowledge about safety and health risks associated with their job while only 14 per cent of the employees had knowledge about any type of health risk assessment that had been conducted in the past one year at their enterprise. Among those who reported health risks, the majority of them faced a risk of crushing injuries due to their jobs (20 per cent), fractures (13 per cent), injuries (6 per cent), burns (4 per cent), communicable disease hazards (4 per cent), and so on. On their part, employers' awareness about occupational hazards from the field suggested that 28 per cent of them had identified the presence of any kind of workplace health hazards in their enterprises. Employers involved in the construction industry accounting for 43 per cent of enterprises reported awareness of workplace health hazards. On the contrary, awareness about workplace health hazards is the least among employers in the education and health sector. In respect to workplace health hazards, the survey results showed that it is due to chemical (27 per cent), ergonomic (35 per cent) and Physical (16 per cent). Further, the prevalence of accidents remains high among manufacturing enterprises followed by construction enterprises with 13 per cent and 11 per cent, respectively. While health and education sectors (5 per cent) reported the least share of workplace accidents.

► Beneficiary satisfaction

Indicators for patient satisfaction can be used to identify the quality gap and highlight the practices hampering the delivery of quality care. The study showed that only 50 per cent of the employees were satisfied with the information provided by ESI regarding cost, treatment and reimbursement. Further, it shows that overall 51 per cent and 47 per cent of the employees were satisfied with cost coverage and flexible modalities to pay, respectively. In respect to the availability of staff/medicines, about 61 per cent of respondents remained satisfied and two in three patients appear to have been satisfied with the quality of services provided in ESIC hospitals. In respect of dissatisfaction levels, the field findings painted a grim picture of hospital behaviour as only 47 per cent of hospitalization cases were

considered satisfactory, implying adequate room exists to improve behaviour as over half of such hospitalisation events turned out to be unsatisfactory. In 52 per cent of hospitalisation cases, beneficiaries were willing to visit again for treatment. Survey results identified several reasons for dissatisfaction: (i) respondents were not aware of the benefits available for the beneficiaries (17 per cent), (ii) partial coverage of payment (13 per cent), (iii) technical problems (11 per cent), (iv) problems in claim settlement (10 per cent), (v) unavailability of medicines/ equipment (9 per cent), and so on. Moreover, 6 per cent and 5 per cent of respondents complained about non-cooperation from the employers and non-submission of funds from the employer, respectively. On the other hand, analysis of the reasons for dissatisfaction in non-empanelled private hospitals shows that the major reasons were partial coverage of payment, problems in claim settlement, and lack of awareness about the benefits of ESI.

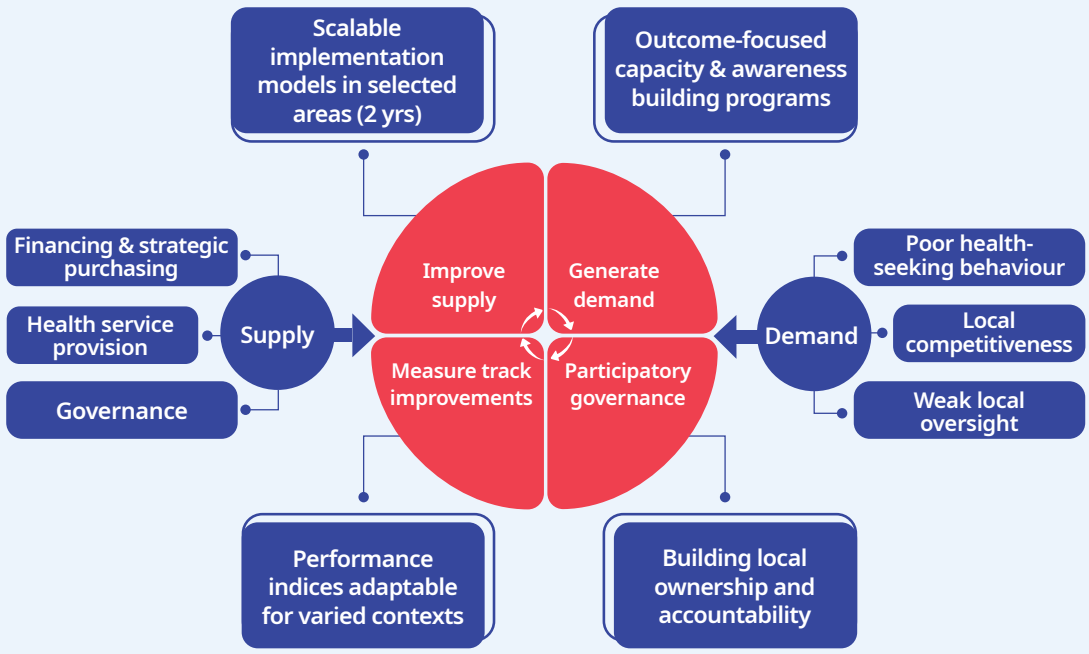
4.3. A theory of change for the ESI Scheme

Based on the present study and the diagnostics submitted to ESIC earlier, the ILO has developed the following theory of change for the ESI Scheme. The ILO emphasizes the following four inter-related pillars of ESI transformation:

1. Improvements in the supply of social health protection services,
2. Tracking, measuring and building upon such improvements,
3. Generating demand for ESI services at the ground level, and
4. Ensuring buy-in of stakeholders through participatory governance systems,

The parameters and strategies for the first two pillars related to supply are presented in detail in the ILO's *Technical Report - Recommendations for Transformative Actions for India's Employees' State Insurance (ESI) – a contribution to Universal*

▶ Figure 4.1. Theory of change for the ESI scheme



Health Coverage (2020). The recommendations in this report focus on time-bound qualitative improvements in three key social health insurance functions of the ESIC, viz. health financing (and strategic purchasing), health service provision and governance. These recommendations provide a phased transformation plan with short-medium and long-term goals for improving supply-side issues.

The remaining part of this chapter focuses on specific recommendations pertaining to pillars 3 and 4. The strengthening of these pillars, in turn, depends on addressing three key issues highlighted by the findings of the present study.

4.3.1. Poor health-seeking behaviour depressing demand

The ESI beneficiary base in general demonstrates poor health-seeking behaviour. A large number of beneficiaries do not opt for treatment based on self-assessment of the health need. At the same time, it is also clear that a range of other social determinants (education levels, gender norms, and so on) and workplace-related challenges (availability of paid leaves, risk of wage loss, and so on) may also be acting as deterrents against the utilization of ESI health services. ESI may need to study some of these factors in detail to assess their relative impact on the health-seeking behaviour of a typical ESI beneficiary. Currently, the findings of the study indicate that such factors may be substantially depressing the demand for ESI health services at the local level.

While many of these factors are beyond the purview of the ESI's functions, they nevertheless need to be accounted for in ESI's strategies for outreach and effective coverage. These factors also underscore the need and potential for ESIC's collaboration with concerned stakeholders such as relevant departments of respective state governments, development agencies, local civil society actors and crucially, the employers.

4.3.2. Local competition to ESI services

The choice of healthcare facilities among those who seek treatment reveals that ESI does not operate in a captive market. Despite paying contributions and having representation in the governance system, the insured persons remain open to making additional payments to access better health facilities. In other words, the availability of ESI facilities in an area by itself may not ensure improved utilization and effective coverage. Quality of services and ease of access remain crucial determinants of ESI beneficiaries' choice of a healthcare facility.

The study reveals that more beneficiaries prefer ESI facilities to other public sector facilities. However, in both in-patient and out-patient care, ESI facilities face stiff competition from non-empanelled private providers at the local level. This reality holds despite the fact of the beneficiaries incurring higher out-of-pocket expenditure in accessing the non-empanelled facilities. It is also worth noting that in the districts covered by the current study, the majority of the beneficiaries were within a 10-kilometre distance.

A key aspect of competitiveness of healthcare facilities is patient satisfaction. The present study has found that among those who used ESI facilities, about half were satisfied with the affordability and quality of the services. However, there is a need for a comparative assessment of quality perceptions between ESI and other non-empanelled health service providers. This may reveal specific aspects of service delivery, which if improved may attract more beneficiaries.

4.3.3. Weak local oversight and stakeholder ownership

The study found that, on the one hand, a significant number of employers faced challenges with the functioning of nodal ESI offices, and on the other, insured persons reported poor access and availability of services. Both these core stakeholders did not report effective support from grievance redressal mechanisms.

In parallel, ILO's consultations with national representatives of the workers and the employers, have revealed the unsatisfactory functioning of tripartite governance structures at the state and local level. Some felt that greater stakeholder participation decentralized governance mechanisms, including in healthcare facilities, were critical to improving beneficiary satisfaction. The ESIC has already stepped forward in this front

with the proposed formation of tripartite local committees at the district level.

The demand-side issues abetting under-utilization of ESI health services can be summed up as follows. ESI caters to a beneficiary base with poor health-seeking behaviour in a competitive local service delivery landscape with weak decentralized mechanisms of oversight to ensure the quality and availability of its own services. In other words, the key issues faced by ESIC in improving health service utilization are:

1. Low demand due to:
   - **(a)** Poor health-seeking behaviour based on various social and labour market determinants
   - **(b)** Lack of strategic collaborations with state and district level actors to address these determinants
2. Local non-competitiveness due to:
   - **(a)** The assumption of a captive market among contribution-making beneficiaries
   - **(b)** The absence of updated knowledge on the local healthcare provision markets in its areas of operation
   - **(c)** The absence of strategic purchasing
3. Weak oversight due to:
   - **(a)** Unsatisfactory functioning of state and local level tripartite governance systems
   - **(b)** Lack of ownership of the Scheme among the stakeholder ecosystem

There are two cross-cutting factors that feed into all three issues:

- **(a)** Lack of awareness of the benefits and access mechanisms of the Scheme among beneficiaries
- **(b)** The limited capacity of ESI institutional actors at various levels of administration and governance to respond to the dynamics of the healthcare provision landscape

A sustainable positive transformation of ESI performance can be achieved by addressing the aforementioned issues on the demand side in conjunction with the supply-side reforms.

> With a decentralized approach, the outreach and training efforts of the mission may be pivoted in existing ESI dispensaries and hospitals.

4.4. Recommendations

Based on the findings of the study and feedback received from social partners, the ESIC may consider the following measures to deepen effective coverage of its existing beneficiaries.

4.4.1. Outcome-focused awareness strategy

The ESIC may consider supplementing its existing awareness programmes with the launch of a results-oriented awareness mission. This mission would have a two-fold purpose – outreach to beneficiaries beyond their workplaces and training of both beneficiaries and concerned ESI staff in improved access and delivery systems. Importantly, besides the promotion of the ESI Scheme in general, the mission should have a special focus on addressing the needs of female beneficiaries. With a decentralized approach, the outreach and training efforts of the mission may be pivoted in existing ESI dispensaries and hospitals. Further, the local tripartite committees should be roped in for building stakeholder ownership and capacity for cascading training methods.

In the wake of the ongoing COVID-19 pandemic, ESI may also use ILO's and its own expertise in addressing issues of OSH. To facilitate the rejuvenation of member enterprises while ensuring the safety of the insured persons, the ESI may launch a dedicated OSH campaign for training enterprises and workers to protect against the risks of COVID-19.

4.4.2. Improving ESI healthcare service utilization

Based on the findings of this study, it is important that ESIC adopts a bottom-up approach for improving services. The same can be attained by progressively incorporating new information and evidence generated on the local implementation environments of the Scheme. An agenda for such evidence generation is laid out in a subsequent recommendation.

In order to achieve synergy of central reforms with on-ground implementation, the central and regional office leadership of the ESI may actively engage with local tripartite committees to identify location-specific sources of inefficiency. As revealed by this study, they may be as simple as the timing of nodal offices or difficulty in using online platforms. Fixing these simple issues may yield quick gains in service utilization.

The present study also underscores the significant role of a weak primary healthcare system in the ESI Scheme in overall lower service utilization and significant levels of out-of-pocket expenditures. Primary healthcare providers should be accorded the highest priority in the ESI reforms agenda. States with functional IMP systems appear to be performing better than those that exclusively depend on ESI's own dispensaries. The ESI should engage with more state governments to expand the IMP system for better availability of primary healthcare services.

Based on the present study, it is further argued that healthcare service provision in the Scheme should shift from a demand-based approach to a population-based approach. In other words, the ESI should aim to expand services beyond those who directly approach their facilities. One way of doing this would be to increase focus on preventive health programmes that reach out to beneficiaries in their places of work and living.

4.4.3. Improving financial risk protection of ESI beneficiaries

The secondary data show that that ESI's scheme design already provides a relatively better level of financial risk protection compared to other public and private health insurance schemes. However, two key findings of the study explain the low overall impact of this positive feature. First, beneficiaries have reported significant levels of out-of-pocket expenditure even when using ESI's own facilities. Second, the overall low levels of utilization of healthcare services indicated an undermining of the advantages of risk pooling. Hence, the desired level of financial risk protection can be achieved by addressing these two realities. The latter issue of low utilization has been dealt with the previous recommendation. The issue of significant OOP expenditures requires further study as laid out in a subsequent recommendation.

> ESI should focus on improving awareness of its financial risk protection benefits as it progresses in increasing the utilization of its services.

Summarily, the ESI should focus on improving awareness of its financial risk protection benefits as it progresses in increasing the utilization of its services.

4.4.4. Improving overall beneficiary satisfaction

As mentioned earlier in this study, patient satisfaction is a widely used parameter to assess the quality of healthcare and used as an effective outcome indicator to measure the performance of the healthcare workforce and providers.

The study contends that periodic beneficiary satisfaction surveys should be considered as an effective device to track the effectiveness of all reform measures discussed here. Such surveys should also take into account the internal diversity of the beneficiary base as well as the varying implementation environments across different regions. Ideally such a survey should generate periodic performance matrices for different implementing actors within the ESI system. For instance, health facilities (both ESI's own and

private empanelled) can be ranked by their performance (in turn strengthening ESI's capacity for strategic purchasing).

Similarly, this study has developed a model composite index of ESI functioning of different states. The ESIC may consider further developing this index as per their specific needs for an annual public ranking of states by their performance in delivering ESI services.

Another key aspect of the Scheme determining beneficiary satisfaction is the effectiveness of the grievance redressal mechanisms. The study has found that the awareness and impact of these mechanisms for beneficiaries are variable across states. A related difficulty reported by users has been the capacity to use ESI's digital platforms. While the objectives and design of grievance redressal systems and ESI's digital interventions are positive, the ESI may want to assess their reception among the target beneficiaries. Such an assessment may help adjust these systems for better utilization overall.

4.4.5. Generating evidence for ESI transformation

As mentioned above, in order for centrally designed reforms to have the desired impacts, the ESI must make such reforms compatible with diverse implementation environments. In other words, supply-side reform measures should be in synergy with demand-side issues reported in this study. To achieve this objective, the study has identified gaps in information and issues warranting additional investigation. Together, these constitute a complementary agenda of further research that has been laid out below.

ESIC may undertake additional research on the following issues:

1. Determinants of health-seeking behaviour of ESI beneficiaries
   - **(a)** As identified in social and labour market environments
   - **(b)** As variable across different regions
   - **(c)** As variable for diverse beneficiary groups such as women, children, the aged and persons with disabilities
   - **(d)** As variable across morbidity patterns
   - **(e)** As owing to patterns of out-of-pocket expenditure on healthcare
2. Map of wider stakeholder ecosystem at the state level
   - **(a)** Identification of public and private sector actors engaged in addressing the determinants of the health-seeking behaviour of ESI beneficiaries
   - **(b)** Exploration of common grounds for collaboration to improve indicators of health-seeking behaviour
3. Understanding local healthcare provision landscape
   - **(a)** In strategically identified regions
   - **(b)** In catering to specific needs of women, children and other vulnerable population groups
4. Assessment of non-empanelled providers' capacity and willingness to empanel with the ESI Scheme
5. Review of the functioning of tripartite governance structures at various levels in the states

The evidence and information thus generated can be systematically utilized in developing more responsive reforms with measurable impact on local level utilization of ESI health services.

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Annexures

Table 1: Values of indicators used for estimating index

	% of ESIC employer to total non-agricultural employers	# of employee per ESIC employer	# of IPs per employee	# of beneficiaries per employer	# of hospital per 100,000 beneficiaries	# of dispensaries per 100,000 beneficiaries	Per capita Expenditure (in Rs.)	Hospitalisation Rate (%)	OP Visits**
Andhra Pradesh	1.40	28.00	1.08	117.00	0.110	1.69	2 561	11.29	251.00
Assam & NE	0.50	19.00	1.06	79.00	0.100	2.59	4 735	0.00	429.00
Bihar	0.70	19.00	1.09	79.00	0.325	1.95	1 998	1.54	23.00
Chhattisgarh	2.70	35.00	1.09	148.00	0.000	1.57	1 295	0.00	369.00
Delhi	8.60	23.00	1.10	97.00	0.055	0.45	5 555	6.72	130.00
Goa	7.20	33.00	1.12	143.00	0.106	1.27	1 604	3.71	99.00
Gujarat (+DNHDD)	2.20	28.00	1.11	123.00	0.196	1.70	1 951	5.00	136.00
Haryana	6.10	45.00	1.12	196.00	0.061	0.67	1 207	7.23	321.00
Himachal Pradesh	2.10	36.00	1.13	156.00	0.164	1.23	2 259	10.30	8.00
Jammu & Kashmir	1.10	50.00	1.04	204.00	0.093	0.93	958.00	37.18	109.00
Jharkhand	2.90	20.00	1.09	82.00	0.204	1.43	2 401	4.69	438.00
Karnataka	4.00	36.00	1.12	156.00	0.074	0.91	1 986	8.00	106.00
Kerala+ (Lakshadweep)	1.90	22.00	1.10	93.00	0.307	3.28	4 281	45.24	1401
Madhya Pradesh	1.40	31.00	1.10	133.00	0.190	1.14	2 182	33.98	596.00
Maharashtra	3.30	28.00	1.10	120.00	0.073	0.36	866	0.62	59.00
Odisha	1.30	28.00	1.08	118.00	0.228	1.75	1 805	0.87	0.00
Punjab	2.90	29.00	1.09	123.00	0.177	1.55	2 490	35.62	815.00
Rajasthan	2.10	27.00	1.11	115.00	0.111	1.55	1 688	16.99	668.00
Tamil Nadu	3.40	34.00	1.10	144.00	0.060	1.27	1 636	10.62	505.00
Telangana	3.10	29.00	1.11	125.00	0.104	1.04	3 725	0.00	0.00
Uttar Pradesh	1.30	28.00	1.12	121.00	0.197	1.22	1 752	4.94	258.00
Uttarakhand	3.40	50.00	1.15	225.00	0.000	0.75	1 598	0.00	403.00
West Bengal	1.20	30.00	1.06	121.00	0.185	0.58	3 291	7.37	605.00
All India	2.30	30.00	1.10	129.00	0.113	1.10	2 165	9.42	322.00

Table 2: Index values of indicators and average composite index

	% of ESIC employer to total non-agricultural employers	# of employee per ESIC employer	# of IPs per employee	# of beneficiaries per employer	# of hospital per 100,000 beneficiaries	# of dispensaries per 100,000 beneficiaries	Per capita Expenditure (in Rs.)	Hospitalisation Rate (%)	OP Visits**	Average composite index
Andhra Pradesh	10.93	29.26	36.52	26.29	33.79	45.62	43.79	24.97	19.28	30.05
Assam & NE	0.00	1.61	18.21	0.00	30.62	76.30	100.00	0.00	32.95	28.85
Bihar	2.60	0.00	45.90	0.04	100.00	54.48	29.25	3.41	1.77	26.38
Chhattisgarh	26.42	51.54	42.14	47.24	0.00	41.39	11.08	NIL	28.34	27.57
Delhi	100.00	13.40	51.40	12.78	16.89	3.22	121.19	14.86	9.98	38.19
Goa	83.16	44.93	72.32	44.04	32.63	31.29	19.07	8.21	7.60	38.14
Gujarat (+ DNHDD)	21.23	30.92	64.07	30.08	60.22	45.79	28.04	11.05	10.45	33.54
Haryana	69.15	83.97	68.81	80.56	18.83	10.47	8.81	15.97	24.65	42.36
Himachal Pradesh	19.10	53.76	77.63	52.95	50.34	29.73	35.99	22.78	0.61	38.10
Jammu & Kashmir	7.05	100.00	0.00	85.64	28.73	19.68	2.36	82.18	8.37	37.11
Jharkhand	30.09	3.21	37.75	2.54	62.83	36.66	39.68	10.37	33.64	28.53
Karnataka	42.63	55.06	67.55	53.14	22.66	18.73	28.95	17.69	8.14	34.95
Kerala+ (Lakshadweep)	17.43	10.06	53.33	9.80	94.37	100.00	88.26	100.00	107.60	64.54
Madhya Pradesh	11.16	40.01	47.57	37.12	58.39	26.70	34.01	75.12	45.78	41.76
Maharashtra	33.98	30.15	52.17	28.38	22.42	0.00	0.00	1.37	4.53	19.22
Odisha	9.79	29.57	36.65	26.59	70.21	47.62	24.27	1.93	0.00	27.40
Punjab	29.31	33.13	40.97	30.21	54.33	40.62	41.96	78.74	62.60	45.76
Rajasthan	19.47	25.20	60.92	24.47	33.99	40.67	21.24	37.56	51.31	34.98
Tamil Nadu	36.13	47.34	54.63	44.60	18.54	31.04	19.90	23.48	38.79	34.94
Telangana	31.56	33.15	56.43	31.54	31.93	23.25	73.89	0.00	0.00	31.31
Uttar Pradesh	9.54	29.14	67.02	28.65	60.65	29.48	22.88	10.92	19.82	30.90
Uttarakhand	35.72	99.73	100.00	100.00	0.00	13.32	18.92	0.00	30.95	44.29
West Bengal	8.40	34.48	10.09	28.80	56.76	7.57	62.67	16.29	46.47	30.17

Table 3: Values of indicators used for estimating composite index

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Jharkhand	2.9	20.00	1.09	82.00	0.204	1.43	2 401	4.69	438.00
Karnataka	4.0	36.00	1.12	156.00	0.074	0.91	1 986	8.00	106.00
Kerala+ (Lakshadweep)	1.90	22.00	1.10	93.00	0.307	3.28	4 281	45.24	1401.00
Madhya Pradesh	1.40	31.00	1.10	133.00	0.190	1.14	2,182	33.98	596.00
Maharashtra	3.30	28.00	1.10	120.00	0.073	0.36	866	0.62	59.00
Odisha	1.30	28.00	1.08	118.00	0.228	1.75	1 805	0.87	0.00
Punjab	2.90	29.00	1.09	123.00	0.177	1.55	2 490	35.62	815.00
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West Bengal	1.20	30.00	1.06	121.00	0.185	0.58	3 291	7.37	605.00
All India	2.30	30.00	1.10	129.00	0.113	1.10	2165	9.42	322.00

End notes

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Suvidha Samagam, is a platform for redressing the grievances of stakeholders including employees, beneficiaries and employers, which is organized once a month in ESIC offices or ESIC hospitals. This platform also serves to settle all pending grievances.

International Labour Organization
ILO DWT for South Asia and Country Office for India
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