

HEALTH INSURANCE COVERAGE ASYMMETRY IN TAMILNADU

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Abstract: Background: Health insurance is paramount today, perhaps more than motor, house or travel insurance. Preservation of health and therefore life is critical not just for wellness of the human being but also for society at large. **Purpose/Objectives:** The purpose of the study was to document the prevailing scenario of health insurance policies, coverage of major ailments and asymmetry. **Design/Methodology/Approach:** Analytical research was employed. Patients suffering from communicable and non-communicable diseases for which hospitalisation was required were surveyed using a structured interview schedule in three cities in Tamil nadu, South India. The patient as well as hospital estimates of expenses for such diseases was documented and variance was computed. Asymmetry between mean hospital expenses and insurance coverage was also ascertained. **Findings:** Health care policies from various service providers for communicable and non-communicable diseases exist but all of them do not exhibit positive asymmetry. **Research limitations:** Study is periodic in nature and findings cannot be extrapolated for future. Geographical area limitations exist with study in three cities only (Chennai, Coimbatore and Madurai). Hospitalisation expenses and health insurance schemes are subject to change and/or revisions. **Practical implications:** Major Hospitals are under the ambit of Government accreditation and this necessitates bureaucrats to be alert while engaging in policy making initiatives to foster greater match between hospitalisation expenses in reality and those covered by health insurance schemes. **Originality/value:** Study is value-addition to literature and health insurance service providers as it not only documents hospitalisation expenses in detail for communicable and non-communicable diseases from both patients' and hospitals' versions but also establishes asymmetry information.

Keywords: Health Insurance, Asymmetry, Diseases, Tamilnadu.

1. INTRODUCTION

1.1. Background

Health insurance in India is a growing segment of India's economy. In 2011, 3.9% of India's gross domestic product was spent in the health sector. According to the World Health Organisation (WHO), this is among the lowest of the BRICS (Brazil, Russia, India, China, South Africa) economies. Policies are available that offer both individual and family cover (WHO, 2013).

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Launched in 1986, the health insurance industry has grown significantly mainly due to liberalization of economy and general awareness (Financial Express, 2013). By 2010, more than 25% of India's population had access to some form of health insurance.

There are standalone health insurers along with government sponsored health insurance providers. Until recently, to improve the awareness and reduce the procrastination for buying health insurance, the General Insurance Corporation of India and the Insurance Regulatory and Development Authority had launched an awareness campaign for all segments of the population.

Five private sector insurers are registered to underwrite policies exclusively in Health, Personal Accident and Travel insurance segments. They are Star Health and Allied Insurance Company Limited, Apollo Munich Health Insurance Company Limited, Max Bupa Health Insurance Company Limited, Religare Health Insurance Company Limited and Cigna TTK Health Insurance Company Limited.

Despite the access to health insurance still a lot has to be done to make health insurance effective. Government hospitals mostly cover only the primary health care only and only district hospitals cover some life taking casualties. Predominant of the population still relies on the private hospitals paying out of pocket during their casualties.

There is a vast mismatch between the hospitalisation charges charged by these private hospitals for both communicable diseases and non-communicable diseases and the insurance cover taken by the patients. Lack of adequate income is making the people to be under insured with regard to health. Many families have lost their bread earning members due to inability to pay for the hospitals during critical casualties.

India rightly brands itself as incredible. The country's remarkable political, economic and cultural transformation over the past few decades has made it a geopolitical force. Healthcare is one of the industries that marks this strengthened global presence. As per industry reports, healthcare is poised to grow at an estimated annual rate of 19 per cent to reach USD 280 billion by 2020 (Charaka, 2008) with India being recognized as a destination for world class healthcare.

However, these exciting opportunities often mask certain urgent predicaments. The healthcare sector in India is currently at a cusp. Issues of access, affordability, quality of care and efficiency remain significant. A number of reports have been published about the poor health status of India, compared to its Low and Middle Income Country (LMIC) peers. In terms of vital statistics like infant mortality (IMR) and maternal mortality, India has lagged behind significantly. Even life expectancy, at 62 years, is three years below the LMIC average. According to the Global Burden of Diseases 2010 study, total Disability Adjusted Life Years (DALYs) lost are

518,879,000 years for the Indian population (Lancet, 2010). The economic cost of these illnesses to the country is a staggering 600 billion dollars (approximately) (Deloitte, 2013).

India is also facing an unprecedented pressure due to the poor reach of quality healthcare to millions of its citizens due to issues of access and affordability. The Indian healthcare sector has faced shortages of workforce and infrastructure. There were 1.65 trained allopathic doctors and nurses per 1000 population, compared to the World Health Organization recommended guideline of 2.5 per 1000 population (WHO, 2012).

Total hospital bed density in the country (0.9 per 1000 population) was well below the global average (3.0) and the WHO guideline of 3.56. Total healthcare expenditure in India was only 3.9 per cent of GDP, compared to 8.9 per cent for Brazil, 6.2 per cent for Russia and 5.2 per cent for China (World Bank, 2011). Out of this amount, out-of-pocket expenditure was 61 per cent and only 26 per cent of Indians are covered by health insurance with share of private being only 3-5 per cent.

1.2. Literature Review

Manu (2011) reported that according to an announcement from the Insurance Regulatory and Development Authority (IRDA) in India, health insurance policies will be portable from the first of July 2011. A recent report from the regulator says that when a policyholder moves from one region to another or from one employer to another, he may be penalized or lose his health insurance covers, therefore portability is important for them.

John (2009) reports on the introduction of the Rashtriya Swasthya Bima Yojana (RSBY) or National Health Insurance Scheme (NHIS) in India in 2009. It states that RSBY will offer quality health facilities to people in rural areas lacking access to basic healthcare. The scheme provides more selections to the poor and saves them to fall as prey to corrupt practices of government officials and moneylenders

Bhattacharjya and Sapra (2008) suggested that over the past five to ten years, the amount of health insurance premiums collected has grown at an average rate of 34 percent in India and 43 percent in China. A variety of public and private insurance schemes play important roles in enabling health care provision for unique populations in these two countries.

Banerji and Ramdeo (2007) state that the health insurance market in India is very limited covering about 10% of the total population. The existing schemes can be categorized as:

- (1) Voluntary health insurance schemes or private-for-profit schemes;
- (2) Employer-based schemes;

- (3) Insurance offered by NPOs / community based health insurance, and
- (4) Mandatory health insurance schemes or government run schemes (namely Employees' state insurance scheme, central government health scheme)

John (2007) looks at the entry of several new foreign players, which has changed the witnessed revamp on the health insurance market industry in the Mediclaim system in India. An overview of the issues faced by Mediclaim and the Third-party administrators (TPAs) is offered. Moreover, the entry of the private health insurers, which promises high-quality service and efficiency, is said to not only assist the increasing coverage but provide the quality of the system to focus on disease management.

Ramachandran *et al.* (2007) stated that Urban and rural diabetic subjects spend a large percentage of income on diabetes management. The economic burden on urban families in developing countries is rising, and the total direct cost has doubled from 1998 to 2005.

According to Ramesh and Nishant (2006), the knowledge and awareness on the working of health-insurance (in the time of risk and uncertainty) in India plays an imperative role in the decision on the purchase of insurance products.

Mull (2004) discusses the health care system in India. Ability of the health care system to meet medical demands of an insurable population; Initiative for the improvement of private health care services; Problems associated with the country's health care system.

WHO (2002) states that in many countries treatment in hospital is the main focus of healthcare for the elderly, with a heavy reliance on more expensive acute care services rather than primary or secondary prevention.

Brody (1988) felt that the rapidly increasing older adult population in low and middle income countries provides a challenge for the provision of sufficient healthcare to this group. Elderly populations have a higher prevalence of chronic diseases, spend a larger amount on medicines and demand a greater range of hospital services.

2. STATEMENT OF PROBLEM

Whenever casualty occurs the patients belonging to middle class prefer private hospitals over Government hospitals for recovery. The middle class individuals do have some sort of insurance cover which is short of their hospitalisation needs. Individuals below poverty line (BPL) and others are covered by the government schemes such as *Arogya Swastha Bema Yogana* and others which are still inadequate to meet the hospitalisation expenses during casualty. High income individuals take

adequate health insurance cover to manage the expenses during casualty. The problem of meeting the hospitalisation expenses is a heavy burden for the individuals who belong to middle class and poor class.

There is a mismatch between the hospitalisation charges charged by the private hospitals and the insurance cover taken by the study respondents. This asymmetry is affecting the lives of many individuals who belong to middle class and poor class.

3. SCOPE OF RESEARCH

The study belongs to the social sector that covers all the sections of people who are under insured with regard to health. The study belongs to the Financial Management area of Management science with stress on health insurance sector. The study results are helpful to the health ministry to know the asymmetries in health insurance sector, with regard to insurance cover. It also acts as a guide for the private hospitals to determine the affordability of the respondents with regard to hospitalization expenses.

4. MATERIALS AND METHODS

4.1. Design and Objectives

The study is an analytical research, and uses the data collected from the patients and the private hospitals to analyse: (i) critical communicable and non-communicable diseases, (ii) type of health insurance policies possessed; and (iii) the asymmetries in health insurance for such communicable and non-communicable diseases.

4.2. Sampling

The research employed judgment sampling to select the patients and hospitals. Any patient who had or was having treatment for catastrophic diseases (non-communicable and communicable) in cities of Chennai, Coimbatore and Madurai were surveyed. Any hospital providing treatment to all or few of the catastrophic diseases (non-communicable and communicable) in cities of Chennai, Coimbatore and Madurai were surveyed.

The sampling frame comprised hospital network accredited to Tamilnadu Government employees' new health insurance scheme.

The sample size for Patients was 640, and was sourced from three cities of Tamilnadu that have main clusters of hospitals as shown in Table 1.

Table 1
City-wise Patient Sample

<i>Cities in Tamilnadu</i>	<i>Sample size</i>	<i>Percentage</i>
Chennai	224	35.0
Coimbatore	208	32.5
Madurai	208	32.5
Total	640	100

The sample size for Hospitals was 90, and were taken from three cities of Tamilnadu with clusters of hospitals as shown in Table 2.

Table 2
City-wise Hospital Sample

<i>Cities in Tamilnadu</i> <i>(major cluster of hospitals)</i>	<i>Sample size</i>	<i>Percentage</i>
Chennai	30	33.33
Coimbatore	30	33.33
Madurai	30	33.33
Total	90	100

4.3. Data Collection

Survey was undertaken in the premises of private hospitals wherein structured interview schedule was administered to insured patients as well as hospital senior doctors.

The pilot study comprising 52 patients and doctors entailed cronbach value of 0.873, greater than acceptable value of 0.7 (Nunally, 1978).

4.4. Research Limitations

The study had the following limitations: (i) study is periodic in nature, so the views presented may not hold good in the future; (ii) study has place limitations (limited to 3 cities: Chennai, Coimbatore and Madurai), (iii) hospitalisation expenses and health insurance schemes are subject to change and/or revisions.

5. ANALYSIS AND DISCUSSION

5.1. Diseases and Health Policy

57.5% of the total respondents preferred Hospitalization policy, 25% preferred Hospitalization policy and Hospital daily cash benefit policy, 12.5% preferred Hospitalization policy and critical illness benefit policy, and 5% preferred Hospital Daily Cash Benefit policy.

25% of the total respondents have enjoyed Surgical Cash Benefit and cashless facility, 22.5% have enjoyed Cashless facility and Surgical Expense Benefits, 20% have enjoyed Cashless facility, 12.5% have enjoyed Surgical Cash Benefit, cashless facility and Surgical Expense Benefit, 7.5% have enjoyed Cashless facility and critical illness benefit, 5% have enjoyed Surgical Expense Benefits, and 2.5% have enjoyed Critical Illness benefit, Cashless facility and hospital cash and Surgical Cash Benefit, cashless facility and hospital cash respectively.

62.5% of the total respondents have taken family floater policy, 22.5% have taken individual policy, and 15% have unit linked policy.

75% of the total respondents have taken policy from a public limited company, 15% of have taken policy from a private limited company, and 10% have taken policy from both public limited and private limited companies.

75% of the total respondents have taken policy with the sum assured less than Rs.300000, and 25% have taken policy with the sum assured between Rs.3,00,000-Rs.5,00,000.

67.5% of the total respondents felt that the sum assured is not enough, 27.5% felt that the sum assured is just enough, and 5% felt that the sum assured is more than enough.

62.5% of the total respondents felt that the premium was high, 27.5% felt that the sum assured was normal, and 15% felt that the premium was low.

72.5% of the total respondents felt that they were not able pay the premium, and 27.5% of the total respondents felt that they were able pay the premium.

Overall ranking of both communicable and non-communicable diseases with regard to causing death indicated that kidney problems were ranked first, cancer second, hepatitis A is third, heart diseases fourth, cholera fifth, pregnancy casualties sixth, malaria seventh, cholesterol eighth, HIV/AIDS ninth, brain tumour tenth, diabetics eleventh, tuberculosis twelfth, other communicable diseases thirteenth, and Chikungunya and any other non-communicable diseases fourteenth.

Overall ranking of communicable diseases with regard to causing death indicated that Kidney problems was ranked first, cholera second, malaria third, HIV/AIDS fourth, Cholera fifth, typhoid sixth, tuberculosis seventh, any other communicable diseases eighth, and chikungunya ninth.

Overall ranking non-communicable diseases with regard to causing death showed that hepatitis A was ranked first, Cancer second, Heart diseases third, Pregnancy casualties fourth, Cholesterol fifth, Brain tumour sixth, Diabetes seventh, Hypertension eighth, and any other non-communicable diseases ninth.

5.2. Estimation of Hospital expenses and Insurance coverage

53.3% of the total respondents (hospitals) were having 51-75 beds, 26.7% of the total respondents were having less than 50 beds, and 20.5% were having more than 75 beds.

50% of the total hospitals interviewed treated non communicable diseases, 30% treated communicable diseases, and 20% treated both non-communicable and communicable diseases.

The maximum expenses, incurred by the patients, for communicable diseases was Rs.5,27,000 with a mean expense of Rs.3,15,760. The maximum expenses, incurred by the patients, for non-communicable diseases was Rs.11,28,000 with a mean expense of Rs.3,24,765.58.

As per the data provided by the hospitals the maximum expenses, incurred by the patients, for communicable diseases were Rs.5,08,900.85 with a mean expense of Rs.1,48,881.26. The maximum expenses, incurred by the patients, for non-communicable diseases was Rs.7,36,969.33 with a mean expense of Rs.4,25,020.86.

Table 3
Asymmetry Results for Communicable diseases

Communicable disease	Estimation of hospitalisation expenses				
	Based on Hospital data	Based on Patients view	Average	Variation%	Asymmetry
Chikungunya	46082.7	92165.5	69124.1	100.01	180875.88
Cholera	56323.1	72963.6	64643.3	29.54	185356.68
Diarrhea	28016.5	26546.5	27281.5	-5.24	222718.50
Hepatitis A	45508.3	59795.7	52652	31.4	197348.00
HIV/AIDS	72789.7	84250.4	78520	7.3	171479.99
Malaria	26368.8	32331.9	29350.3	22.61	220649.67
Tuberculosis	37714.3	40616.1	39165.2	7.69	210834.81
Typhoid	26172.9	29787.1	27980	13.8091	222020.02
Average	42372.02	54807.09	48589.56	25.88989	201410.44

All the communicable diseases are showing positive asymmetry. The average asymmetry for all the communicable diseases was positive to the tune of Rs.201410.44. So, it could be understood that the communicable diseases are adequately covered by the health insurance.

Cholesterol, Diabetics, Hypertension and Pregnancy are showing positive asymmetry, whereas Brain tumor, Cancer, Heart diseases and Kidney problems are showing negative asymmetry. The average asymmetry for all the communicable diseases was negative to the tune of Rs. 38810.01.

Table 4
Asymmetry Results for Non-Communicable diseases

Non-Communicable disease	Estimation of hospitalisation expenses				Asymmetry
	Based on Hospital data	Based on Patients view	Average	Variation%	
Brain tumor	422212.5	598947.9	510580.2	41.86	-260580.2
Cancer	350893.8	364724.5	357809.1	3.94	-107809.1
Cholesterol	14800	16760.34	15780.17	13.25	234219.83
Diabetics	18413.33	18789.55	18601.44	2.04	231398.56
Heart diseases	337118	355159	346138	5.35	-96138
Hypertension	14000	12326.22	13163.11	-11.956	236836.89
Kidney problems	950562.5	948800	949681.3	-0.18542	-699681.3
Pregnancy casualties	92278.56	105175	98726.78	13.97555	151273.22
Average	275034.8	302585.3	288810	8.534266	-38810.01

6. CONCLUSION

The middle class people of the country depend on the private hospitals to meet their hospitalisation requirements during catastrophic hospitalisation situations. Though insurance coverage percentage among the population is growing, there is an asymmetry between the sum insured and the real cost of hospitalisation. This leads to out-of-pocket payment by the patients and this creates a huge economic burden to the patients.

While fixing the premium the insurance companies, Government has to look into this asymmetry and try to reduce it. The hospitals must also see the paying capacities of the patients and see alternate methodologies and medicines to cure the patients and save their lives within their economic capacity.

References

- Banerjee, Amit and Ramdeo, Vishnu (2007), "Health is wealth: can insurance provide safety to this wealth? AHCMJ, vol. 3 (November).
- Bhattacharjya, Ashoke S; and Sapra, Puneet K. (2008), "Health insurance in China and India: segmented roles for public and private financing". *Health Affairs* 27.4, pp. 1005-1015.
- Brody, J.A. (1988), *Ciba foundation symposium 134: Research and the ageing population*. John Wiley & Sons Ltd. Changing health needs of the ageing population, pp. 208-220.
- Charaka (2008), "Indian Healthcare: The Growth Story". Retrieved from http://charaka.hpage.co.in/growth-health-care_90125476.html [April 5, 2016].
- Deloitte (2013), "Sustainable strategies for a healthy India: imperatives for consolidating the healthcare management ecosystem. Retrieved from www.deloitte.com/in [February 18, 2016].
- Financial Express (2013), "Four factors that impacted health insurance industry in 2013". December 30.

- John, Jimmy (2007), "View from India: India's need for health insurers". *Asia Insurance Review*, vol. 8, no. 10, pp. 82-83.
- John, Jimmy (2009), "Health insurance scheme in India offers hope to millions". *Asia Insurance Review*, pp. 80-82.
- Lancet (2010), "Global Burden of Diseases". Retrieved from www.thelancet.com/global-burden-of-disease [February 17, 2016].
- Manu, Kaushik (2011), "Now, Health insurance portability". *Business Today*. Vol. 20, no. 7, p. 14.
- Mull, Rohit (2004), "Health insurance, benefits & compensation". *International*, vol. 34, no. 1, pp. 31-32.
- Nunnally, J. C. (1978), *Psychometric theory* (2nd ed.). New York: McGraw-Hill.
- Ramachandran, Ambady; Ramachandran, Shobhana; Snehalatha, Chamukuttan; Augustine, Christina; Murugesan, Narayanasamy; Viswanathan, Vijay; Kapur, Anil; and Williams, Rhys (2007), "Increasing expenditure on health care incurred by Diabetic subjects in a developing country: a study from India". *Diabetes Care*, vol. 30, no. 2, pp. 252-256.
- Ramesh, Bhat and Nishant, Jain (2006), "Factors affecting the demand for health insurance in micro insurance scheme". Working Paper No. 2002-07-02, IIM, Ahmedabad, India.
- WHO (2002), "Integrating prevention into health care". Retrieved from <http://www.who.int/mediacentre/factsheets/fs172/en/index.html> [March 28, 2016].
- WHO (2012), "World Health Statistics". Retrieved from www.who.int/gho/publications/world_health_statistics/2012 [March 19, 2016].
- World Bank (2011), Global Health Expenditure Database. Retrieved from <http://www.who.int/health-accounts/ghed/en/> [April 5, 2016].
- World Health Organization (2013), "Regional Summary for the South-East Asia Region". Retrieved from www.who.int/tobacco/global_data [March 11, 2016].