

# A Research on Health Care Sector with Special Reference to Health Insurance in India



T. Mohanasundaram, P.Karthikeyan . P.Deepika

**Abstract—** Health care industry is one of the prominent one across the world irrespective of economic, social and cultural background. India, too have bigger and vibrant market for the health care services. Given the challenges, the sector is seeing an enormous growth not just because of health problems but mainly due to growing health awareness and preventive measures taken by the people. For any country, health of its people is an important aspect and for providing healthy life-style, government undertakes many programmes and offers social welfare measures. Health index of a country becomes vital indicator in measuring the nation’s overall development. In this study, we attempt to explore the progress and issues pertain to health care sector with special attention for health insurance policies and the governments’ role in that. The paper covers wide-range of health aspects with regards to measuring the prevailing scenario in health care sector and health insurance in particular.

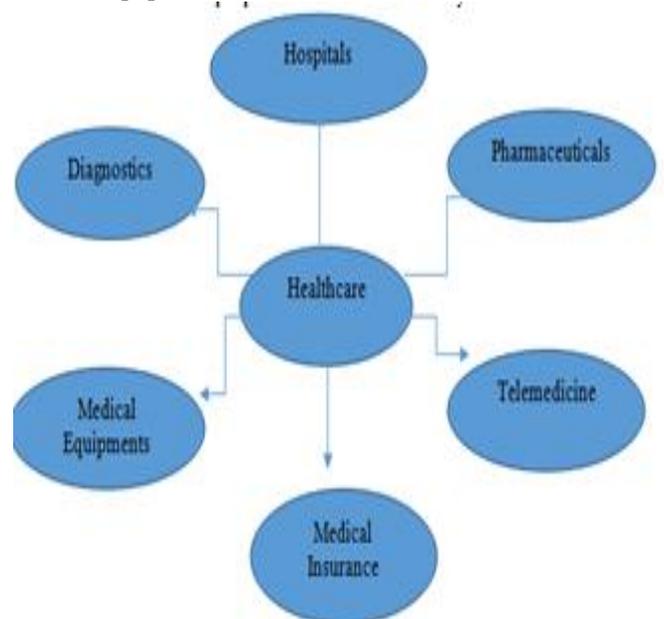
**Keywords:** Health, Insurance, Government, policies

## I. INTRODUCTION

At present, Healthcare sector is the fourth largest employment provider in India<sup>1</sup> and is challenging firmly to be in the biggest three healthcare markets in the globe. Government of India’s schemes like Ayushman Bharat, National Health Protection schemes are expected to generate more jobs in the sector. Though, India’s ranks far behind in the accessibility and quality of healthcare services, there is a tremendous scope for improving healthcare services. India is enjoying the brand for low-cost medical tourism by drawing patients from different parts of the world. The rising awareness of health, rising income level of the people are expected to bring greater demand for the Indian healthcare services industry in future. Government of India plays a significant role in the development of healthcare industry by creating favourable policies for attracting FDI and providing tax benefits which had helped the industry to lure foreign players and venture capitalists.

The word ‘Health’ is best assumed as an essential basis for describing a person’s sense of well-being. Our overall triumph regarding longevity and other major health indicators are remarkable but in many aspects there exists uneven progress across the states. Accessibility towards modern healthcare facilities has also contributed towards the better progress of healthcare services industry in India. However, the supply side limitation remains an issue as public expenditure on healthcare is limited which in turn, provides an opportunity to private healthcare service providers. However, advanced and efficient healthcare services remains concentrated.

India, is having a huge prospects in healthcare services because it will require more than million doctors to achieve the doctor – population ratio of 1:1,000.



**Fig.1: Healthcare Market Functions**

In India, Health care services are mainly delivered through two channels viz., Government and Private. Private sector occupies the major share compared to Government. In Private delivery system, small level clinics, mid-size hospitals and Corporate hospitals are providing services. On the other hand, Government also provides health service in three levels viz., Primary health centres which includes sub-centres, District hospitals and Government funded Tertiary hospitals.

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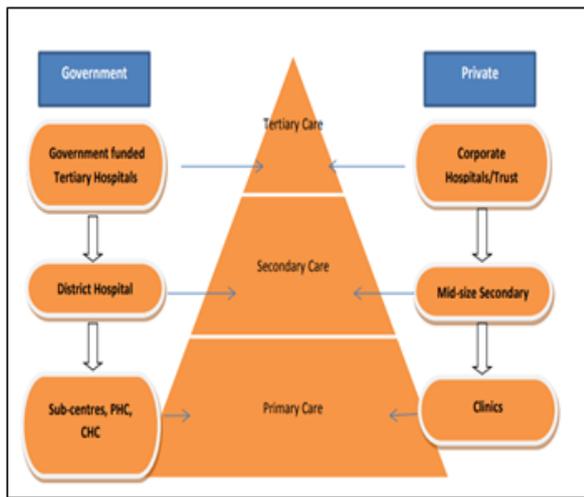


Fig.2: Healthcare Delivery System structure in India

Source: Healthcare Services industry in India, Care Ratings, September 2018.

II. LITERATURE REVIEW:

Kavitha (2012) studied about Indian healthcare industry and the role of government in improving the healthcare. The outcome of the study revealed that poor sanitation and inadequate safe drinking water were the primary causes for poor health. Burns (2014) analysed Indian healthcare system through certain methods and suggested different measures for the betterment. Kakkar and Aggarwal (2019) examined the healthcare scenario in India and informed that cost, access and quality are three important pillars for effective health care development services. Madhan Gopal (2019) recommended strategies for ensuring quality health care in India. Parente (2019) investigated about the health care cost and preventive measures for healthy life.

There were also many studies available pertaining to health insurance. Wagner (2016) studied the cost and services of Medicaid and the lower insurance cost compared to other insurers. Domapielle (2014) explored four dimensions of health care accessibility including geographic accessibility, availability, affordability and acceptability of services. The study also suggested that the policy makers have to pay attention to these prominent dimensions. Anitha (2008) explored the emerging trends in health insurance in India with reference to various schemes and models. Swathi and Anuratha studied the health insurance in India and provided a detailed overview of the industry. Nagaraju (2014) investigated the performance of health insurance schemes in India and found that health insurance schemes reduced the burden of the poor. Dubay et al. (2006) analysed the benefits of health insurance and the share of uninsured Americans and conclude that large percentage of uninsured adults need help in purchasing the health insurance.

Apart from a comprehensive studies about Indian healthcare industry, there were numerous disease and treatment specific studies were undertaken by the researchers. Jemimah et al. (2015) investigated the demographic features and treatment measures specific to leprosy patients. Banik (2017) compared the success experiences of Bangladesh, Nepal and Sri Lanka in the aspect

of improving maternal health and concluded that Bangladesh was able to achieve sustainable development goal for health. Ramesh Masthi et al. (2019) discussed about risk of rabies associated with exposure to animals in India.

III. HEALTHCARE INFRASTRUCTURE, GOVERNMENT INITIATIVES, FACTS AND TRENDS

The average medical expenditure per hospitalization case in India is Rs.6,120 in public hospital and Rs.25,850 in private hospital<sup>2</sup>. Per Capita healthcare expenditure is rising every year at a greater phase mainly because of better accessibility of high-quality treatment and greater awareness of preventive health and fitness issues. The number of medical colleges in India is growing every year owing to a greater demand and governments push towards health care reachability to every corner of the country.

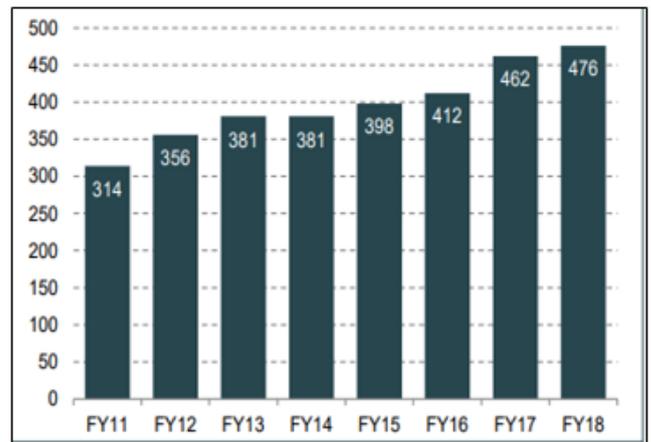


Fig.3: No.of Medical Colleges

Source: IBEF

Not only the medical colleges, but also the number hospitals, beds for in-patients, number of doctors, qualified nurses and accessibility etc. are also improving tremendously. The increase in medical colleges paves way for many to pursue medical education and make career in that profession.

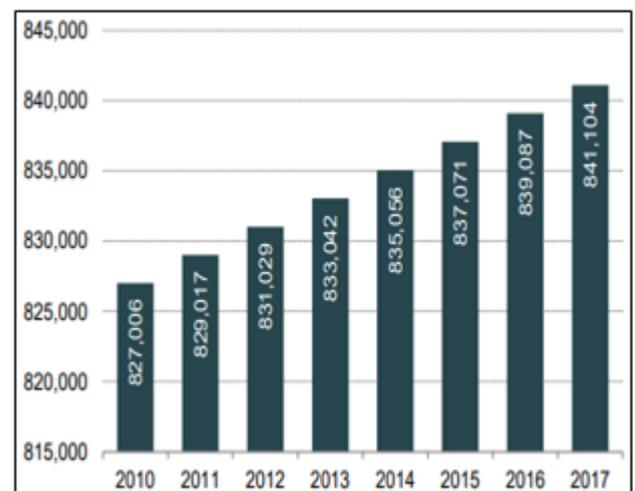


Fig. 4: No. of Doctors

Source: IBEF

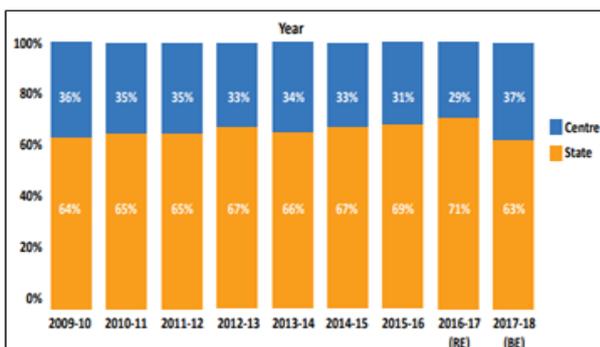
Owing to Urbanization and modern life styles, health problems pertaining to lifestyle are increasing and overtaken the communicable diseases. This leads to a shift from traditional diseases to lifestyle related health problems. Realizing the demand for quality health services, chain hospitals have started focusing on Tier 2 and Tier 3 cities in India. Telemedicine sector helps in bridging the urban-rural gap in health services. Artificial Intelligence (AI) based applications help patients to interact directly with doctors and get benefited. Health insurance in India is gaining momentum as it contributes more than 25% of total premium income by non-life insurance companies. Many mergers & acquisitions are happening in the healthcare industry as it witnessed 23 deals worth US\$ 679 million in the first half of 2018. India has highly qualified doctors and medical professionals along with world-class hospitals with low cost for treatment etc., made India as desired medical tourism destination. India also has a rich heritage in offering traditional methods of treatment apart from offering services like yoga, meditation and Ayurveda which attracts patients from other parts of the world.

Year	Public Expenditure on Health (in Rs. Crores)†	Population (in Crores)‡	GDP*	Per capita Public Expenditure on Health (in Rs.)	Public Expenditure on Health as Percentage of GDP (%)
2009-10	72536	117	6477827	621	1.12
2010-11	83101	118	7794115	701	1.07
2011-12	96221	120	8736039	802	1.10
2012-13	108236	122	9951344	890	1.09
2013-14	112270	123	11272764	913	1.00
2014-15	121600.23	125	12433749	973	0.98
2015-16	143054.55	126	13764037	1112	1.02
2016-17 (RE)	178875.63	128	15253714	1397	1.17
2017-18 (BE)	213719.58	129	16751688	1657	1.28

Source:  
 † Public expenditure on Health from "Health Sector Financing by Centre and States/UTs in India 2015-16 to 2017-18", National Health Accounts Cell, Ministry of Health & Family Welfare.  
 ‡ "Report of the Technical Group on Population Projections May 2006", National Commission on Population, Registrar General of India  
 \* GDP from Central Statistics Office.

**Table.1: Trends in Public Health Expenditure on Health**

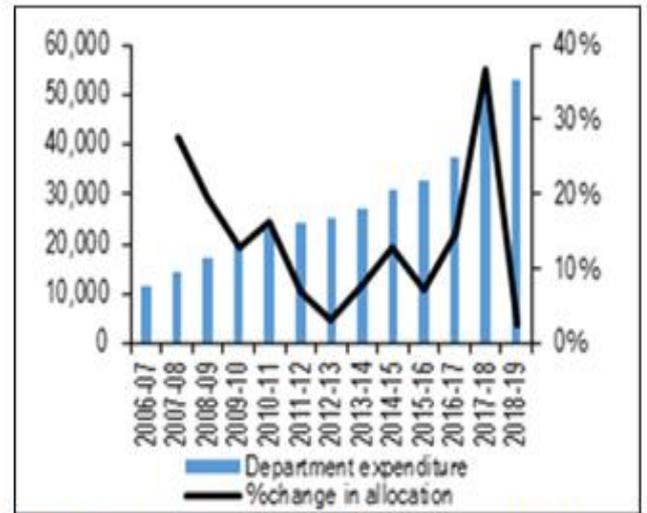
Government of India, realizing the importance of public health, started increasing its budgetary allocation sharply in the recent years. It is observed that health expenditure to GDP has increased from 1.07 to 1.28 per cent from 2010-11 to 2017-18. The Union government has taken more health expenditure share (37%) in 2017-18 compared to 29% in 2016-17. The fig. 5 shows the share of total public expenditure between the centre and states since 2009-10.



**Fig.5 : Trends in Centre-State share (%) in Total Public Expenditure on Health**

Source: National Health Accounts Cell, Ministry of Health and Family Welfare

The union government is increasing the budget allocation every year. The rate of increase varies drastically between 25 to 37% during the last 12 years. The money allocated was only around Rs.10,000 crore for the Department of Health and Family welfare during 2006-07 and the same increased to around Rs.55,000 crore during 2018-19.



**Fig. 6: Budget allocation to the Department of Health and Family Welfare (2016-18)**

\*Amount is Rs. Crore; Source: Union Budgets, 2006-07 to 2018-19; PRS

In 2018, Indian Government launched Pradhan Mantri Jan Arogya Yojana (PMJAY), to offer health insurance cover of Rs.500,000 to Indian families. This is considered to be the world's largest health welfare scheme. Government of India is also offering tax exemption for healthcare studies and training programmes. In 2018-19 Union budget, GoI has allocated Rs.52,800 crores for Health ministry which is 11% higher than the previous year allocation. Government of India is promoting the National Health Mission programme by providing huge corpus. To provide comprehensive antenatal check-ups to pregnant women, Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) programme was launched. GoI launched the world's largest government funded health scheme, Ayushman Bharat in 2018. In 2019-20 budget, Government has allocated Re.61,398 crore for healthcare sector and out of this Rs.6,00 crore earmarked for the health insurance scheme AB – PMJAY.

India's 2018 GDP per-capita at current prices was US\$ 2,134. The quality treatment and easy accessibility to healthcare services lead to longevity of life.

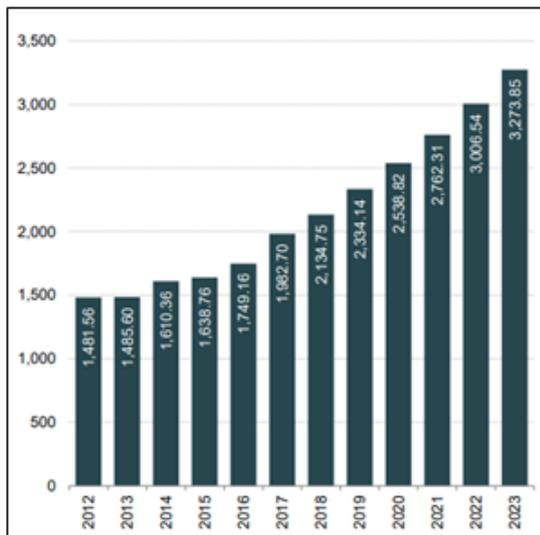


Fig. 7: GDP per capita (Current Prices)

Source: IBEF (Projected figures: 2019 to 2023)

#### IV HEALTH INSURANCE SCENARIO IN INDIA & RESULTS

Understanding the importance of health insurance, non-life insurance companies in India started issuing health policy covers to the people. This mitigates the financial burden for the people in the event of unexpected health issues which may arise suddenly. There are different kind of health policies offered by the providers. The premium varies according to the coverage of diseases, age, health history of the purchaser etc. Gross premium on health policies are increasing due to awareness and improvement in affordability factor.

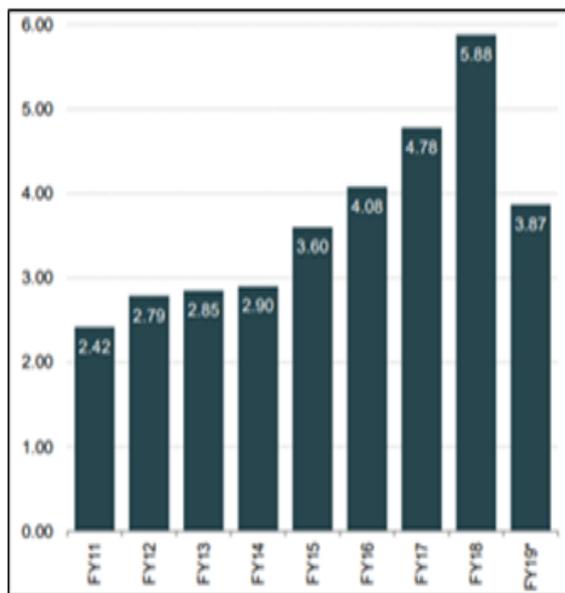


Fig.8: Trends in Health Insurance premium collection

\*only for Apr-Nov 2018-19 period

In FY 2018, US\$5.88 billion is the gross premium collected in India. The health insurance premium was grown at a rate of more than 20% CAGR is last decade.

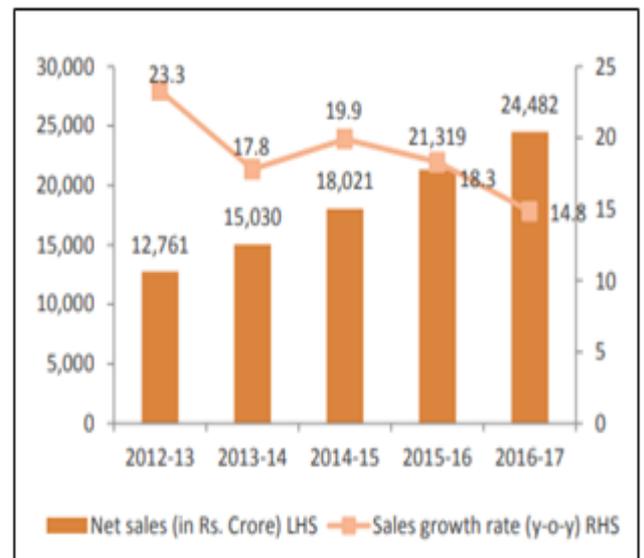


Fig.9: Sales and Y-O-Y sales Growth rate (108 companies)

Source: Ace Equity

Fig.9 depicts that insurance sales is on the rise in all the years since 2012-13. The double digit growth of insurance sales has registered during all these years. Maximum sales was in 2016-17 for Rs.24,482 crores. The trend shown here indicates that there is a huge potential market available for health insurance service providers in India.

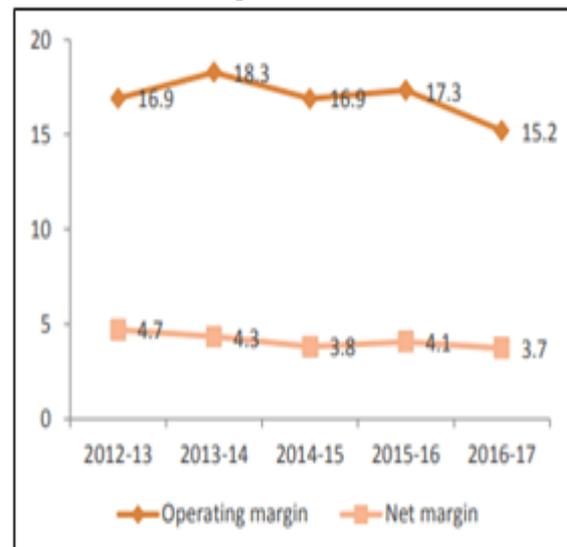
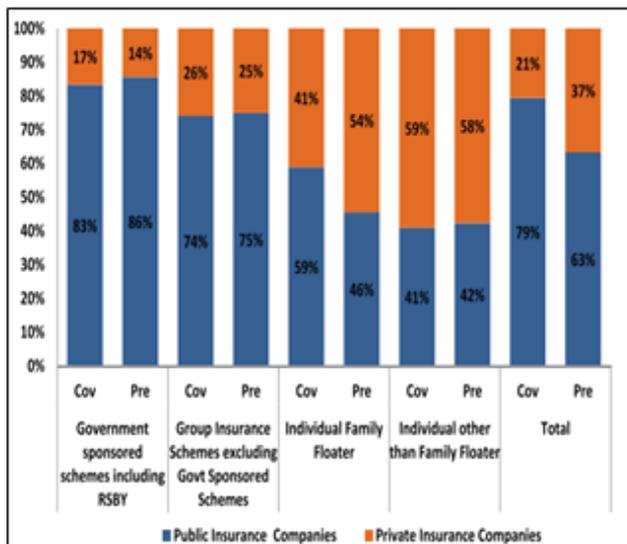


Fig.10 : Operating and net profit margin (in %)

Source: Ace Equity

Both the operating margin and the net profit margin are under pressure as they are in down trend. The operating profit was higher in 2013-14 at 18.3 percent and was lower at 15.2 percent in 2016-17. The net profit margin has fall from 4.7 percent in 2012-13 to 3.7 percent in 2016-17.

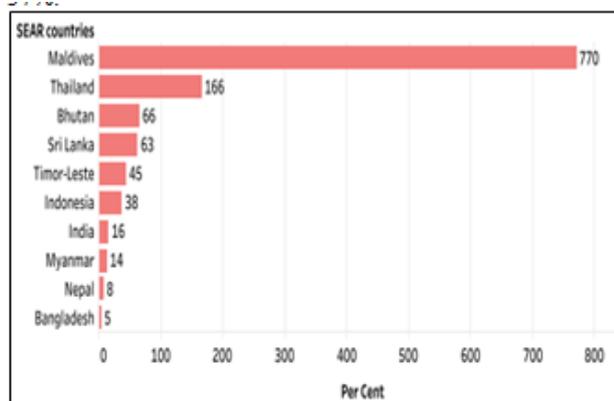


**Fig.11: Share of Coverage and Premium across Insurance Type and Provider (2016-17)**

Source: IRDAI Annual report, 2016-17

Notes: "Cov" stands for No. of persons covered and "Pre" stands for Premium

The fig.11 represents that private insurance companies are mainly focused on individual family floater and individual other than family floater schemes. On the other hand, public insurance companies are active in Government sponsored schemes and Group insurance schemes. Overall, Public insurance companies cover 79% of insured with the premium income share of 63% compared to private insurance companies coverage of 21% and premium income share of 37%.



**Fig.12: Per capita public expenditure on Health (US\$) for SERO nations 2015**

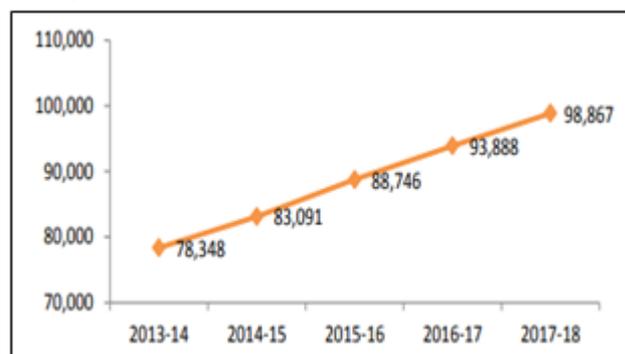
Source: Global Health Expenditure Database, World Health Organization

**Table.2: Sources of Financing for Health Expenditure**

Sources	Percentage of Funds
Household Revenues	71%
State Govt. Funds	13%
Union Govt. funds	8%
Other Revenues	7%
Local body funds	1%
<b>Total</b>	<b>100%</b>

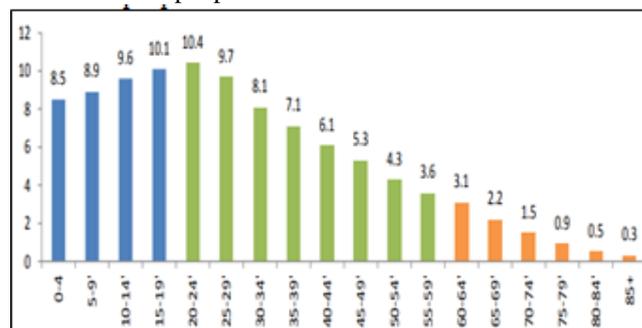
Source: National Health Accounts, 2014-15; PRS

The source of financing for health expenditure in India is portrayed in the table.2. 71% of the total health expenditure is met by the household revenues. This indicate that people are highly depleting their hard-earned money when it comes to health expenditure. This is mainly because of absence of health insurance policies and inadequate health insurance coverage. Only 13% and 8% are state government and central government percentage contribution. This reveals that governments' contribution is inadequate in meeting out the health expenses.



**Fig. 13: Trends in Per Capita GDP (at constant prices)**

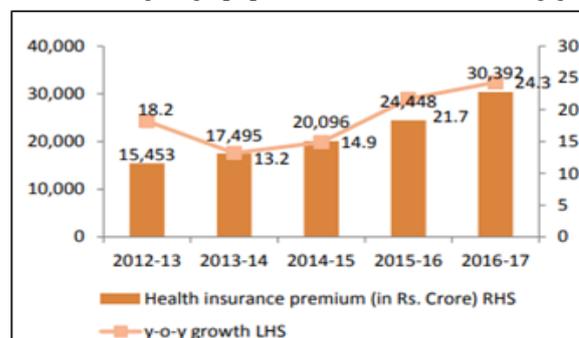
India's per capital GDP is growing year after year at a steady rate. The rise in per capita GDP will be highly useful in getting better health insurance cover and improve the health care of the people



**Fig. 14: Population percentage distributed by Age group**

Source: National Health profile, 2018.

Around 55% of the Indian population is in the age group of 20 – 59. This is a great advantage as the nation enjoys the benefit of having large population size in the working group.

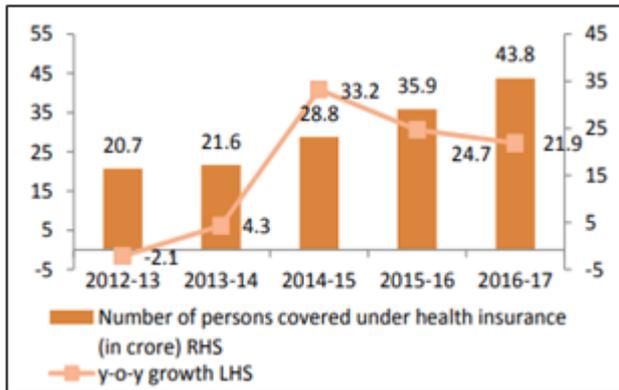


**Fig. 15: Trends in Health Insurance Premium**

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Source: IRDAI

The premium collected for health insurance plans are increasing every year which signifies that more and more people are started to opting health insurance package. The rise in the premium is mainly attributed to increase in awareness and concentrated effort by the government in making the people to purchase health insurance policies by offering the coverage at low cost.



**Fig. 16: Trends in No. of Persons covered under health insurance**

Source: IRDAI

As of 2016-17, 43.8 crore people in India is covered under the health insurance schemes which is much higher than the 20.7 crore people in 2013-13. In the span of four years, the subscribers of health policy is increased more than double which is considered to be a remarkable achievement.

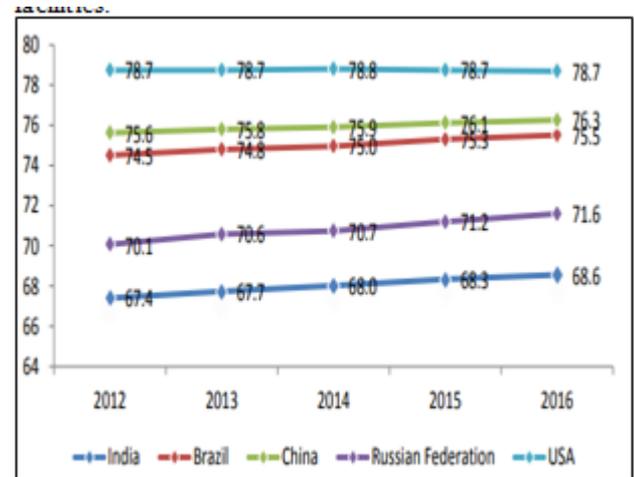
**Table. 3: Insurance Penetration (ratio of premium to GDP in US\$) in 2016**

	Life	Non-Life	Total
India	2.72	0.77	3.49
World	3.47	2.81	6.28

Source: IRDAI

In India, the insurance penetration is very low compared to the world average. This is despite the vigorous effort made by different stake holders including the government. The ratio of insurance premium to GDP in India is just 3.49 compared to the world average of 6.28. This shows that India has to go a long-way in insurance penetration.

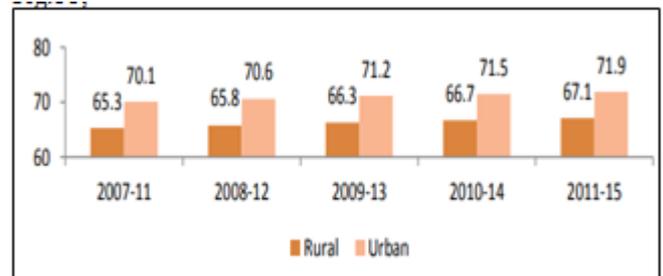
The performance of corporate hospitals can be understood through indicators like ARPOB, ALOS and occupancy ratio. - It is seen that ARPOB for most of the hospitals have been on a rise over the years which indicate higher average revenue realised by a hospital from every occupied bed. - Also it is observed that the hospitals have been trying to reduce their respective ALOS throughout the years. Lower ALOS helps in faster turnaround of beds which result in more patients to be treated from the current facilities.



**Fig. 17: Country-wise life expectancy at birth (in years)**

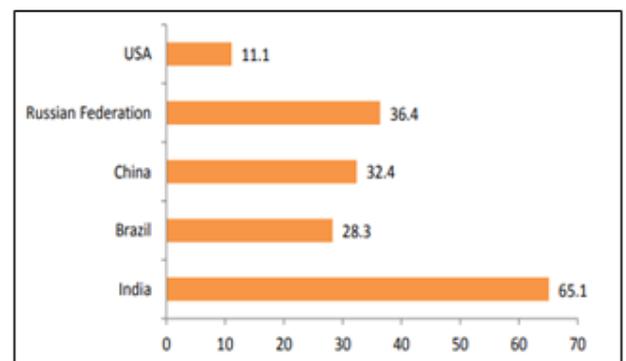
Source: World Bank

The life-expectancy in India is low compared to other BRIC nations and USA. The life expectancy in India id marginally increased from 67.4 years in 2012 to 68.6 years in 2016. The Urban-Rural split-up in life expectancy is shown in Fig.18;



**Fig. 18: India - Life expectancy (in years)**

Source: National Health Profile, 2018



**Fig. 19: Share of Own expenditure in 2015 (% of health expenditure)**

Source: World Bank

The out-of-pocket health insurance expenditure is much higher (65.1%) in India compared to other BRIC nations such as China (32.4%), Brazil (28.3%) and Russia (36.4%). Similarly, in the USA, own expenditure for health care is very low at 11.1%. This implies that India is lagging behind other nations in health insurance as a result spend more of own contribution.

Infant Mortality Rate (IMR) in India falls in the recent years but pace of change is slowing down. IMR is all about the number of infants below one year dying out for every 1,000 born. IMR is considered as a prominent indicator of the nations' healthcare. The global average IMR is 29 while India's IMR stood at 33 in 2017. Though the number drastically falls from 42 in the year 2012 to 33 in 2017, still India is performing poorly compared to its neighbours viz., Srilanka, Nepal and Bangladesh.

**Table.4 : The best and worst performing Indian states in IMR**

State / Year	2007	2012	2017
<b>Best Performing States</b>			
Kerala	13	12	10
Maharashtra	34	25	19
Delhi	36	25	16
TamilNadu	35	21	16
Punjab	43	28	21
<b>Worst Performing States</b>			
Madhya pradesh	72	56	47
Assam	66	55	44
Odisha	71	53	41
Uttar Pradesh	69	53	41
Chhattisgarh	59	47	38

Source: sample Registration System (SRS), noted in Times of India (Rema Natarajan, June 3, 2019)

According to Medical Council of India, the doctor-to-patient ratio for India is 1: 1,674 compared to WHO's recommendation of 1:1,000. Despite the earnest efforts taken by the government of India, there exists a substantial challenges in providing health service to the people of India. India has a population of 1.3 billion people with many of them residing in rural part of India. Nearly, one-third of the people are living on less than US\$1.25 (PPP) per day. Considering the low public spending on health care, many private health care providers are offering services. Ironically, over 75 percent of medical expenses are supported through out-of-pocket cost which is against lesser than 10 percent out-of-pocket medical expenses in USA.

### V CONCLUSION

The need for higher budgetary allocation towards healthcare sector is evident through this study. Immediate intervention by the Government of India and State governments to improve the insurance penetration, hospital infrastructure, quality of treatment along with technological skill updation in using advanced equipments for doctors and supporting staffs will go a long way in the betterment of healthy India. Considering the fact that healthcare expenses across the world is projected to grow at the rate of 5.4% per annum in 2018-22<sup>3</sup>, it may be wise to bring almost every India under the health coverage. Thus, this study provides a holistic view of health care industry and health insurance facts, trends and progress..

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Dr.T.Mohanasundaram has completed his Doctoral degree in Management from Anna University. He has done his Master of Business Administration (MBA) from Bharathiyar University. He has 15 years of total experience in Industry and Academics. He has published 15 research articles in reputed Journals (indexed in SSCI/ABDC/Scopus/UGC). He has presented many research papers at International Conferences. He is actively involved in research and consultancy works. He has received grants and financial assistances from various agencies like AICTE, AIMS, ICWA, NHRC etc. for research projects and for organising programmes. His favourite subjects of teaching are; International Finance, Financial Management, Banking Management, Financial and Management Accounting, Security Analysis & Portfolio Management and Business Research Methodology. He is a certified financial education Resource Person of Securities and Exchange Board of India (SEBI). Recently, he received the national level 'Best Young Teacher Award-2018' from Association of Indian Management Schools (AIMS)

## A Research on Health Care Sector with Special Reference to Health Insurance in India



P. Karthikeyan awarded Ph.D in Management from Bharathiar University in 2009 and qualified with SET in 2006. Presently he is working as an Assistant Professor in School of Management Studies at Kongu Engineering College. He also had a work experience in Maharaja Arts and Science College, Coimbatore and Velalar College of Engineering and Technology. He has so far produced 12 Ph.D, and 18 M.Phil and nearly 100 MBA Students projects. He has published 120 research papers in the reputed National and International Journals and published 15 articles in ISBN edited Book. He has authored Eight books in the areas of Finance and Management. He has also participated and presented more than 75 papers in various National and International Seminars / Conferences / Symposia. He has delivered 70 visiting lecturers and chaired session for various National/International Conferences. As a Co-ordinator Dr.P. Karthikeyan has organized Three International Conferences, Three National Conferences, many workshops, trainings, FDP programmes for Faculty & Students and various MDP programmes for Industrialists. He has obtained funding from various funding agencies like UGC, ICSSR, AICTE, NHRC, MoEF, AIMS, ICWA and TNSCST. He also does some consultancy works for leading industries. He is an editorial board member/Reviewer for 15 international and National Journals. He has done his FDPM course of 4 Months at Indian Institute of Management, Indore. He has received Ramasamy P. Aiyar Best Young teacher Award from AIMS for the year 2011, P.K.Das Memorial Best Faculty award in the discipline Management for the year 2011 & 2016, Best Teacher award from NFED in the year 2013, Best teacher Award from Kongu Engineering college for the year 2010-11, Best Researcher Award from KEC for the year 2016-17, Best Performing Researcher award for publication and outside interaction from KEC for the year 2014-15 along with many other prizes.