

AYUSHMAN BHARAT-Flagship Healthcare Programme by Government of India- A CRITICAL³⁶⁰ REVIEW

¹N.S. Prakash, ²Dr. Raghavendra

ABSTRACT

Introduction: Government of India has initiated a mega community health scheme under the banner 'Ayushman Bharat' (AB) which is arguably a biggest scheme in the world with steep increase in medical cover for economically vulnerable section from Sep 2018. This aims to provide secondary and tertiary care to approximately 40% of the population who are in the lower economic strata. This community health insurance scheme is on the lines of earlier similar schemes of Central and several State Governments but much wider in terms of cover.

Objectives: The scheme being very ambitious, this paper attempts to do programme evaluation and understand whether the overall objective is met in terms of covering the most needed requirements of poor people in all respects. Given the Vision of 'Health for All' within the defined group of people, how well the challenges are addressed is explored.

Methods: A very exhaustive survey of all literatures and published data including the information on the official web site of AB is made and compared with earlier schemes and similar schemes across other parts of globe.

Results: The scheme has been fairly successful in terms of providing treatment to vast majority of people, who otherwise cannot afford major treatments. There is a strong need to scale up the infrastructure and increase coverage.

Conclusions: With the larger objective of 'Universal Health', the beneficiaries list need to be reviewed as the current list nine years old. The scheme should provide more emphasis on preventive care and look at bringing down the out of pocket expenses.

Key words: Community health scheme, Health care inflation, Out of pocket expenses, Secondary health care, Tertiary health care, Hospitalization, Group Health, Group Health Insurance.

¹Associate Dean-General Insurance, Manipal Global Academy of BFSI, Bangalore

²Associate Professor, Department of Commerce, Manipal Academy of Higher Education, Manipal

I. Introduction:

AyushmanBharat (AB) also called as Prime Minister's Jan ArogyaYojana (PM-JAY) is a very big Community Health Programme aimed to cover 107.40 Million families thus covering 500 Millionpopulation which is approximately 40% of the population in India. It is an initiative of Government of India implemented in Sep 18 with many state Governments slowly joining the scheme in a phased manner. The scheme has been reasonably successful towards the end of two years in terms of number of beneficiaries who have availed the treatment in hospital under the scheme. Nevertheless, like any other scheme initiated by Government, this too is certainly riddled with number of problems apart from initial teething problem and hence it calls for serious review at this juncture. Human Capital is the strongest asset in any Country as is recognized by World Bank. India is expected to have largest workforce by 2027. With medical inflation, it will be a bigger problem as each year pass by.¹It is very essential we ensure quality life for the people and thereby good productivity through good physical and mental wellbeing of the population. Since, vast majority of the population is considered for the programme with hospitalization cover up to INR 500,000 per family, this can be considered to be on the lines of Right to Health which is expected to be next major initiative for the Government.

Objectives of the Study:

Going by, vast size of the population intended to be covered under the AB scheme, it is one of the biggest programme globally. Therefore, the amount being set aside is huge. However, the past initiatives of the Government in respect of Community Health Programmes have not yielded the desired result. In view of the same and also due to complex nature of varied mix and size of population, there is strong need for close study of AB with regard to its success or otherwise.

II. Literature Survey:

Number of published articles have been studied in detail in respect of similar schemes and also AB scheme in particular. Apart from various specific points noted above from different publications, the few important points which merits further references are as below.

Gopichandan (2019) says the public healthcare spending must increase to 3% for achieving the Universal Health Care goal ². Banerjee (2020) says that, huge programme as currently envisaged can be successful only if there a extremely strong political will ³. Angel et al (2019) feels that, Indian Health System has huge short coming in respect of Man Power, Infrastructure, availability of services- its range and quality which needs to be addressed for AB to be successful ⁴. Bhojwani et al (2018) opines that, data management with web-based interface and enhanced importance to IT as main points to community schemes. Schemes should move from Hospital based approach to Patients based approach ⁵. Rao et al (2019) talks about revamping the Corporate Social Responsibility (CSR)

provisions to direct the resources for community health schemes ⁶. Gibb (1998) while referring to Australian experience emphasizes the need for strong regulation ⁷. Ranson et al (2007) talks about the importance involvement of local communities ⁸. Singh et al (2020) say there is serious shortage of people who can handle epidemics like Covid 19 ⁹. Kakkar et al (2019) are of the opinion that, Government of India's ambition to make India Five Trillion Dollar economy with doubling the allocation to public health care to 2.5% of GDP will be very important step for sustainable development goal in health sector. Cost, Access and Quality of Health care are three key elements in this direction. ¹⁰

Objectives of the Scheme:

Indian population across all levels be it social or economic status, face severe health problems for various reasons. As high as 62.60% of the Indian population pay themselves for treatment with huge hardship. Thus, vast majority of these people are pushed backwards in their economic or financial status meaning the lower middle-class people are forced to become Poor. ¹¹ 4.6% of the population size are pushed downwards to below poverty line annually ¹². Hence, it is extremely essential for the most vulnerable group to be provided with quality health care and in time.

Coverage available under the Scheme- Benefits and Beneficiaries:

This scheme will cover all hospitalization expenses of secondary and tertiary care procedures and therefore takes care of complete hospital charges. It does not have any limit in terms of number of family members and/or age.

Free hospitalization treatment up to INR Five Hundred Thousand per family is provided. This includes as many as 1350 surgeries including number of Day care procedures. ¹³

The beneficiaries under the programme are those whose names appear in SECC (Socio Economic Caste Census data of 2011 and also those who are part of RSBY (Rashtriya Swasthya Bima Yojana) scheme earlier even though their name may not figure in SECC Data of 2011. ¹³

The treatment is available free on Cashless basis in all Government Hospitals and also in empaneled Private Hospitals including for pre-existing diseases.

It operates on Eligibility basis and not on Enrollment basis unlike earlier schemes. If the name of the beneficiary is there in the list of SECC or RSBY they are automatically entitled.

Current concerns in India with regard to Health Care:

While global average of public health care spending is over 6% of GDP, it is just 1.4% in India ¹⁴

The per capita Public spending in India is very low at USD 65 against a global average of 1077 while it is USD 159 in Sri Lanka, 116 in Indonesia. ¹⁴

The cost of inpatient treatment has increased by 300% in last 10 years¹⁵

Shift from High mortality to Low mortality and Low morbidity to High morbidity. Resultantly, it is expected that, the percentage of elderly citizen will increase from current 8% to 20% by 2050.¹⁶

Decrease in Communicable Diseases but with steep increase in Non-Communicable Diseases.¹⁷

On Healthcare delivery and quality parameters, India ranks 145 out of 195 countries even below Bangladesh¹⁸

Currently in India, the Out of Pocket expenses is as high as 62% whereas even South Africans spend as low as 6.5 percent.¹⁹

India ranks 120 amongst 131 countries in female labour force participation rates. In India, women constitute 48.5% of the total population however 96 percent of working women are employed in the informal sector.²⁰

Current financial concerns with regard to Ayushman Bharat in India:

Budget allocation has been a concern always. There has been lot of uncertainty with regard to budget allocation both as regards to expectation (INR 74000 Million for 19-20), initial allocation (INR 72000 Million for 19-20) and revised allocation later (INR 64000 Million for 19-20). The allocation for 20-21 also remains same despite the huge target planned to achieve. Likewise, the funds allocation till Mar 19 was initially INR. 31350 Million which was subsequently reduced to INR. 24000 Million for 18-19 which shows inconsistency and shortfall.²¹ The RSBY scheme despite being a cover for small amount of INR. 30,000 per family, the delay in disbursement of funds caused huge problem in programme reaching last person earlier.

Statistical Achievements of the Scheme as on 7th October 20:

Number of Hospitals empaneled: 23,348

Number of Beneficiaries Admitted in Hospital for Treatment: 13,153,729

Number of E Cards issued: 126,005,526

(Source: PM-Jay Dash board: <https://www.pmjay.gov.in/>)

Modus-Operandi of the scheme:

NHA- National Health Agency now called as National Health Authority-Governing body is chaired by Union Minister of Health. NHA administers the programme and finalizes the policies and guidelines

The cost sharing between the Centre and State happens in the ratio of 60:40 except northeastern states and three Himalayan states viz Jammu and Kashmir, Himachal Pradesh and Uttarakhand for which it is 90:10.

Policies and guidelines are done by NHA, implementation is done by the State Health Agency (SHA) who have lots of flexibility for implementation.

Compared to earlier schemes, the guidelines and circulars documented does encompass over lot of minute things such as usage of software and addressing problems when there is intermittent connectivity or no connectivity, Grievance redressal etc. It is a very comprehensive scheme spelling out solutions for every small areas of the scheme at least on records. The point to note is it has envisaged all possible scenarios in various operational areas including fraud control.

Community Health Insurance (CHI) Schemes outside and within India & A look at few NGOs role in identifying possible areas to be brought in to ambit of AB:

For long time, CHI schemes have been more a political process with political ambitions than anything else as the design of the programme and the means of implementation speaks.

The CHI globally focusses on promotive, preventive, curative, rehabilitative covers either free or at lowest cost. WHO in its 2008 report for total protection of individuals looks at Breadth- meaning size of the population, Depth- meaning service or type of coverage offered and Height -meaning financial coverage,

An attempt has been made to understand what many NGOs are doing that can be built in to AB scheme. The cursory glance at some of the NGOs gives list of following additional points that can support Government initiative.

Some community health insurance programmer like Kiruna Trust, in Karnataka way back in 2002 offered compensation for income loss also in association with Public Sector insurance company.²²

Increased access to Inclusive Micro Insurance and affordable scheme. The operation of the same can be on lines of Self Health Group from guidance from NGOs. They also build firewalls against natural catastrophes

Increased knowledge of household priorities and financial management amongst the economically lower people will bring in more health consciousness.

Current Challenges being faced, and deficiencies noticed in AB:

Currently, the scheme is for beneficiaries as identified in 2011 SECC data and RSBY enrolled members. Hence, the list is quite outdated. SECC data also takes in to account only people working in select areas of unorganized sectors and couple of economic criteria which needs to be revisited to ensure all needy people are brought under the scheme.

Poor health infrastructure like ratio of Population to number of Hospital beds, Proximity, availability of all types of medical facilities is also an issue.

Package rates which is being allowed to Hospitals are not being feasible to many Private Hospitals. This is despite hospital industry being extremely capital intensive and Indian Medical Association endorsing the same based on Pricewaterhousecoopers study for quality health care.

While hospital empanelment is a challenge in view lower package rates, each hospital is to be recognized by State Health Agency. Instead there can be uniform empanelment process with common standards for entire India.

Building awareness amongst the beneficiaries with regard to they being part of this scheme and about the details of the scheme is a challenge in view of vast spread of the population right in to Tier III cities, Tribal areas, floating nature of the population based on occupation they are in to etc.

Challenges associated with life style diseases like Diabetes, BP, Mental disorders, Physical disability, etc which may not require hospitalization but cause huge out of pocket expenses to individuals are equally a big concern. These are not covered in AB.

India currently has more or less, adequate number of healthcare professionals, but their distribution across the country is rather lopsided. World Health Organization's (WHO) has prescribed a minimum threshold of 22.8 doctors and nurses per 10,000 population. Despite 71 per cent of the country being predominantly rural, the proportion of doctors and nurses in rural areas are 34 per cent and 33 per cent, respectively. More than 80 per cent of the doctors and 70 per cent of the paramedics' work in the private sector²³.

In 2018, more than 13 Million people were diagnosed with waterborne diseases in India, according to data reported from the CBHI & Ministry of Health. Moreover, 2,439 people also lost their lives to waterborne diseases like typhoid, cholera, viral hepatitis, and acute diarrheal diseases²⁴. AB should come to rescue of such people irrespective of fact whether it requires hospitalization or not.

Rapidly increasing popularity of the government's flagship AB scheme has also made it equally vulnerable to frauds like any other Government scheme. Though lot seems to have been done both on paper and implementation on this count, this nevertheless, always remains a challenge being a Government scheme.

Few noteworthy steps in Health care system and Ayushman Bharat in particular:

Employees State Insurance Corporation (ESIC) has allowed other than its subscribers to utilize including AB beneficiaries. If Government can align these hospitals for Ayushman Bharat, this may go a long way as ESIC has 150 hospitals with approximately 17000 beds. Likewise, the decision to utilize Railway Hospitals across the country will give boost to this ambitious programme. Also, the attempt to integrate with Central Government Health Scheme (CGHS) apart from ESIC for comprehensive health insurance scheme is step in the right direction.²⁵

Providing complete infrastructure and making the medical facilities available in Tier II and III cities is turning to be a reality in view of birth of Speciality and Super Speciality hospitals. Few State of Art public hospitals have now surfaced which includes Sardar Vallabhbhai Hospital at a cost of INR. 7500 Million with all modern facilities and provision for air ambulance as well in Ahmedabad run by Ahmedabad Municipal Corporation. The public health infrastructure is being upgraded in most of the hospitals in India.

First Heart transplant was performed in Coimbatore through Chief Minister's Comprehensive Health Insurance Scheme which is aligned to AB.

The AB/PM-JAY can now be accessed through Google Play store with multiple use thus has proved to be technology friendly. However, how many can make use of this remains a question.

Embracing AYUSH lines of treatment and connecting to Wellness centers has paved way for treatment of people as per their faith. It is believed that, willpower or faith does more wonders than medicine.

The scheme offers National Portability which means any beneficiary can avail treatment from any place including Best of the Hospitals anywhere with Best Doctors.

Enrolling of few small-scale hospitals through simplified digitization methods and facilitating them for accreditation with National Accreditation Board and National Healthcare organizations has also helped in more hospitals in semi-urban areas.

Development of a grid for digital networking of hospitals to enable better consultation with experts for complex cases and running a 'Virtual Tumor Board' from Tata Memorial Hospital, Mumbai which should help in treatment of dreaded cancer better is a very big positive step. The NHA and the National Cancer Grid (NCG) have inked a MoU to develop uniform standards of patient care to battle cancer²⁶

The government's plan to take feedback from at least 70,000 beneficiaries of the Ayushman Bharat scheme, after nearly 2.9 Million people got free medical treatment in first nine months facilitating corrective measures. The feedback is planned to be recorded digitally.

'Chief Minister G. H. Rongpi' (CHMT)- Manipur has embraced e-interface model under Ayushman.

Future challenges in successful implementation of the scheme:

Proper identification of really needy people apart from SECC Data which is very old and RSBY is important. The current list is based on only certain identified occupation category and economic status which is not very exhaustive.

Fraud control has to be taken up on larger scale with 100% control from all angles through Use of Best of Data analytics and/or Artificial Intelligence as frauds are potentially a big threat in any Government initiated health scheme. Use of Tech powered value proposition with wearable tech, Internet of things (IoT) also stand out as most important in this direction.

Encouraging private investment through establishment of hospitals in underserved areas with all types of equipments and facilities for diagnosis and conducting of procedures should be given due emphasis.

Cancer is the second leading cause of death after heart disease in India. The integration of the scheme to provide total cover including without hospitalization need to be examined. A report also pointed out that actual cancer incidence can be between 150 and 200 per 100,000 population. According to data from the National Institute

of Cancer Protection and Research (NICPR), 2.25 million people in India are currently living with cancer and each year about 1.15 million new cases get added to the list.²⁷

Three people out of Ten above the age of 30 suffer from a lifestyle disease which eventually lead to critical health issues.²⁸ This will lead to huge spike in number of hospitalization cases which requires exponential increase in financial support from Government.

Scaling up of digital solutions with state of art Information Technology. This is extremely important for managing huge amount of data effectively both for control and analysis.

Coverage granted under the scheme shall encompass over specific problems of people affected in different areas. It is said that, 1 in 4 has some serious mental health problems at some point of time or other during one's life time.²⁹ The AB pays for claim only in case of hospitalization. The expenses for mental treatment even for just consultation or medicines are very high. Likewise, there are number of ailments which require prolonged treatment or terminal care and warrant extensive support from Government as by very nature of treatment required, they are very expensive.

The success of the scheme lies in roping in and utilizing more Private Hospitals with maximum facilities as the quality care can better be ensured by them. Hence, the Government should win their confidence to get their services at reasonable cost and in all locations.

The dependency on AB scheme will come down with more focus on Preventive and promotive health care services. Promotion of more WellnessCenters should contribute to healthy state though 150,000 centers are planned.

As said above, with yearly medical inflation at 15% per year, this calls for corresponding increase in the limit of the cover year on year basis.¹ Hospitals do expect frequent revision in the package charges allowed.

The government is looking at bringing in a law to implement AB(PMJAY). It has started the process to draft a legislation for the same. The NHA has now started the process to identify experienced legal consultancies and firms in this regard.

Suggestions:

To improve the focus on Primary health care so that, necessity for secondary care and tertiary care comes down drastically. In the long run, it pays better with more investments in Primary Health care, the quality of life goes up and thus the need for secondary care etc reduces.

To have the incentives for different stakeholders (Public, Beneficiaries, Government, Insurers, Doctors, Hospitals, Diagnostic centers, Day care centers, Volunteers/ArogyaMitras, Pharmaceutical company, etc) as payment of incentives have long proved to be good means for successful execution.

To introduce a system which does include Outpatient treatment and prolonged treatment at home. On a regular basis, individuals do spend huge money on outpatient treatment which includes Doctors consultancy fee, Medicines, Diagnostic charges etc.

The Health care system designed for Medical management should take in to account Lifestyle factors, Environmental Factors, Genetic factors, Socio economic factors, Size of the Population in a given area, Death Rate and causes, Sickness rate and causes, Disability rate and causes, Physical, Social and Mental wellbeing, General nutritional status of the people etc. Hence in a vast country like India, there is a strong need for having need-based plan and package for different regions with integrated approach.

Complete integration of all state programmes with AB may be aimed so that, no state is left out. However, the scheme needs to have flexibility marginally to take care of location specific problems and also exposure to specific diseases based on predominant occupation of the people are engaged in to or climatic exposure.

Currently, the scheme does not cover the hospitalization expenses of Organ Donor. Expenses incurred in connection with hospitalization of the Donor for the purpose of harvesting, the donor needs to be covered so that, the noble job for which the people volunteer should not cost them and get penalized.

III. Conclusion:

Better Health Outcome and Satisfaction levels will lead to complete wellbeing of the individuals and thus good quality of life.

“Scaling up of Ayushman Bharat will ensure access to preventive and curative medical care with appropriate quality and will safeguard people from financial distress. To create a robust healthcare ecosystem, a priority sector status and budgetary provisions for universal health insurance would play a critical role.”

Government should aim at ‘Health for All’ irrespective of economic strata, occupation, caste, location etc. Healthy citizens are biggest assets and can bring in manifold increase in GDP in number of ways. Health is a state of complete physical, mental and social wellbeing and not merely the absence of disease. Therefore ‘Health for All’ means ‘Happiness for All’

References

1. Ira Dugal and Pallavi Napata, “ The Mystery Of India’s Higher Health Inflation”
Journal of Business Thought, Vol 9, April 2018

2. Gopichandran. V, “Ayushman Bharat National Health Protection Scheme: An Ethical Analysis”, Asian Bioethics Review, Volume 11, Issue 1, 31st March 2019, Page 69-80
3. Amitav Banerjee, “Equity and Quality of Health-Care Access: Where do we stand and the way forward”, Indian Journal of Community Medicine, Jan-Mar 2020, Volume 45 (1), Page 4 -7
4. Angell.B.J, Prinja S, Gupt A, Jha V, Jan S, “The Ayushman Bharat PradhanMantri Jan ArogyaYojana and path to universal health coverage in India: Overcoming the challenges of stewardship and governance”, PLoS Medicine, Volume 16, Issue 3, March 2019,
5. Bhojwani H, Sain G K, Sharma G P, “A Hybrid Connectivity Oriented Telemedician System for Indian Landscape Using Raspberry Pi SBC IOT”, TIMES-iCON 2018 - 3rd Technology Innovation Management and Engineering Science International Conference22 January 2019, Article number 8621799,
6. Rao P, Bhat V, Nagarkar J, “Integrating National Social Missions and infrastructure development in the Indian context : A new direction for CSR expenditure”, International Journal of Innovative Technology and Exploring Engineering, Volume 8, Issue 11 Special Issue, September 2019, Pages 302-309
7. Heather Gibb, “Reform in Public Health: Where does it take nursing?”, Nursing Inquiry, Dec 5(4), 1998, Page 258-267
8. Kent Ranson, MiraiChatterjee, RupalJayswal, Saul S Morris, “Equitable Utilization of Indian Community Based Health Insurance Scheme among its rural membership: cluster randomized control trial”, BMJ, 2007, 334:1309
9. Singh SK, Srivastava VK.” Public Health in Political Dilemma - A Case for Covid-19 Control”.Indian J Community Health. 2020; Vol 32, Issue no. 02, Apr -Jun 20
10. RakeshKakkar, PradeepAggarwal (2019), “Health Care scenario: Health for All to Sustainable Development Goals”, Indian Journal of Community Medicine, Vol 31, Issue no 2, Apr -Jun 19
11. VinothGnanaChellaiyan, HanithaRajasekar, NehaTaneja , (2020), “PradhanMantri Jan ArogyaYojana- Ayushman Bharat” , Indian Journal of Community Medicine, Vol 32, Issue 2, Apr -Jun 20<https://www.iapsmupuk.org/journal/index.php/IJCH/article/view/1412/1042>
- 12 SakthivelSelvaraj, HabibHasanFarooqui, Anup Karan - “Quantifying the financial burden of households’ out-of-pocket payments on medicines in India: a repeated cross-sectional analysis of National Sample Survey data, 1994–2014”-BMJ Open, 2018;8, e018020<http://www.indiaenvironmentportal.org.in/files/file/payments%20on%20medicines%20India%20BMJ%20Study.pdf>accessed on 5th Jul 2020
13. Shrayana Bhattacharya- Senior Economist, Sheena Chhabra - Senior Health Specialist and Owen Smith - Senior Economist at the World Bank, 2019<https://www.hindustantimes.com/india-news/insuring-india-against-health-shocks/story-lifSQEuy2Mp606SPsZYG7L.html>

14. YarliniBalarajan,SSelvaraj, and S V Subramanian “Health care and equity in India” -HHS Public Access, Lancet, 2011, 5, 377 (9764), 505-515, accessed on 6th July 2020
15. Ayushman Bharat Site-Home Page-National Health Authority <https://www.pmjay.gov.in/about-pmjay> accessed on 6th July 2020
16. Lancet, “Past, present, and future of global health financing: a review of development assistance, government, out-of-pocket, and other private spending on health for 195 countries, 1995–2050”, The Lancet Article, Vol no.393, Issue 10187, P 2233-2260, June 1, 2019
[https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(19\)30841-4/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(19)30841-4/fulltext) accessed on 6th July 2020
17. DivyeshMundra, “Ayushman Bharat -India’s National Health Protection Mission”, Health Management, Volume 18, Issue 3, 2018-National Sample Survey 2015
:<https://healthmanagement.org/c/hospital/issuearticle/ayushman-bharat-india-s-national-health-protection-mission> accessed on 7th July 2020
18. Helpage India Report- “ELDER ABUSE IN INDIA -2018, Changing cultural Ethos and Impact of Technology”, 2018<https://www.helpageindia.org/wp-content/uploads/2018/08/ELDER-ABUSE-IN-INDIA-2018-A-HelpAge-India-report.pdf>accessed on 7th July 2020
19. FICCI, EY, “Distribution 2.0 Improving distribution in health insurance December 2017”, FICCI Health Insurance Conference 2017<http://ficci.in/spdocument/22929/FICCI-Distribution02.pdf> accessed on 7th July 2020
20. Mehta. V, “Ayushman Bharat Initiative: India’s Answer to Universal Health-Care”. Journal of Medical Research and Innovation, Vol 2, No. 1, 2019, e000148<https://jmri.org.in/jmri/article/view/148>accessed on 8th July 2020
21. SakthivelSelvaraj, HabibHasanFarooqui, Anup Karan - “Quantifying the financial burden of households’ out-of-pocket payments on medicines in India: a repeated cross-sectional analysis of National Sample Survey data, 1994–2014”-BMJ Open, 2018;8, e018020<http://www.indiaenvironmentportal.org.in/files/file/payments%20on%20medicines%20India%20BMJ%20Study.pdf>accessed on 5th Jul 2020
22. Annette Dixon, “Women in India's Economic Growth” – World Bank, Speeches and Transcripts, March 16 2018<https://www.worldbank.org/en/news/speech/2018/03/17/women-indias-economic-growth>accessed on 8th July 2020
23. Union Budget downloads
<https://openbudgetsindia.org/dataset/departement-of-health-and-family-welfare-2019-20/resource/16055874-2d7f-476e-bc07-950346bf9d7f>
24. Karnataka Trust, Karnataka

https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1020952

25. TV Jayan, "Distribution of health workers in rural areas anemic: Study", Business Line, 28.05.19-

<https://www.thehindubusinessline.com/economy/distribution-of-health-workers-in-rural-areas-anaemic-study/article27278201.ece> accessed on 10th July 20

26. Lokasabha, Statistics released by Ministry of Health and Family Welfare, Loksabha, Question no. 975, 21.07.17

<http://www.indiaenvironmentportal.org.in/files/file/WATER%20BORNE%20DISEASES.pdf> accessed on 11th July 20

27. CRISIL, "Ayushman Bharat- Improvement in quality of Government infrastructure and leverage private sector at right price to be crucial tasks for the scheme", Research and National Health Profile, July 5, 2018

<https://www.crisil.com/content/dam/crisil/our-analysis/reports/Research/documents/2018/july/CRISIL-Opinion-Ayushman-Bharat-Programme-12July2018.pdf> accessed on 12th July 20

28. "National Health Authority inks partnership with NCG", Bio Spectrum, 24.05.19

<https://www.biospectrumindia.com/news/22/13704/national-health-authority-inks-partnership-with-ncg.html> accessed on 13th July 20

29. National Institute of Cancer Protection and Research (NICPR): <http://www.nicpr.res.in/>

30. Mukesh Sharma, P.K.Majumdar, "Occupational lifestyle diseases: An emerging issue", Indian Journal of Occupational and Environmental Medicine, 2009, Dec, 13 (3), 109-

112 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2862441/> accessed on 14th July 20

31. WHO, "Mental disorders affect one in four people, WHO Report, Geneva, 4th Oct 2001

https://www.who.int/whr/2001/media_centre/press_release/en/