

PUBLIC HEALTH AND ECONOMIC DEVELOPMENT IN INDIA

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ABSTRACT

Health is basic to learning, to happiness, to success, to effective citizenship, and to worthwhile living. There is a very famous dictum by Aristotle that "Sound mind lives in sound body." This paper analysis about the health status of India by studying about Common Diseases which is further divided into three segments Communicable and Non- Communicable Diseases and accidents and Suicides which are biggest cause of death and injury and are neglected in most of the researches and this study also shows about the direct relationship between health, economic development and economic growth in India. The mode of data is secondary in Nature and is supported by National Health Profile, Central Crime Bureau Report, and World Health Report 2014.

Key Words: Communicable and Non-communicable diseases, Accidents and Injuries.

INTRODUCTION

The term 'Health' means "Freedom from disease, sound body and mind etc.; that condition in which functions of body and mind are duly discharged". Earlier health was considered as a state of being healthy and hearty. Health plays an important role in each and every section of the society as well as country. Health is man's greatest wealth, he who has health must cherish with care, lest he should lose it because "Health of the country depends on its working people". The strength of a nation rests upon the health of the people and future of the health of the people depends on what is done to promote, improve and preserve the health, as health is a fundamental human rights. There is a strong and direct relationship between health, economic development and economic growth. Health stands for the total outcome of the organic, neuro-

muscular, interpretive, and emotional development. Therefore, if a person will be healthy his working hours and marginal productivity will increase and which will increase the economic development. The word economic development means the development of economic wealth of countries or regions for the well-being of their inhabitants. Economic development refers to the effort that seek to improve the economic well-being and quality of life for a community by creating or retaining jobs and supporting or growing incomes and the tax base. Economic growth is the increase in value of goods and services produced in the economy and growth is measured in terms of GDP, Per capita, Employment, Education, Housing and Amenities. In words of Virginia Henderson "Health is a quality of life it is basic to human functions. It requires independence and interdependence. The promotion of health is more important than care of sick. Individuals will

achieve or maintain health if they have necessary strength of will and knowledge."So, when people will be healthy then economic growth will already increase by their working capacity. Angus Deaton a noble prize winner in his famous book "The Great Escape" explained the concept of Preston Curve which shows the relationship between development and health. The curve shows a sustained correlation between health outcomes with growth and a logarithmic relationship for the same degree of increase in the GDP per capita. There is a two way relationship that not only is economic growth related to better health, but the bend in Preston curve shows the point of epidemiological transition when non-communicable diseases start becoming the main cause of death, increasingly dwarfing persistent contributions from declining deaths due to maternal and common childhood diseases.

India has witnessed a phenomenal growth in economy since the last decade, with the contribution of one-sixth of the world population, developments in India touch upon the global performance in a significant way. India accounts for a substantial part of the global burden of disease, with 18% of global deaths and 20% of disability life-years^[1]. While the growing burden of chronic disease accounts for 53% of deaths (44% of daily), 36% of deaths (42% of daily) are attributable to communicable diseases, maternal and perinatal conditions, and nutritional deficiencies suggesting a protracted epidemiological transition^[2]. One-fifth of maternal deaths and one quarter of child deaths in the world occur in India^{[3][4]}. Life expectancy at birth is 63 years for males and 66 for females, and the under-5 mortality rate of 69 per 1000 births in India falls behind the South East Asia regional average^[5]. Health indicators are like a piece of a puzzle contributing to an overall picture. When indicators are tracked over time, they allow us to see how the health of the population is changing. This chapter provides a prevalence of common-communicable and non-communicable diseases and goals and targets of sustainable development. UN conference on sustainable development (Rio+20 conference), the open Working Group on Sustainable

development Goals (OWG) was established in January 2013 to prepare a proposal on sustainable developments goals for consideration by the general Assembly at its 68th session.

Health is such an issue which means each and every section of the society should be benefited but keeping in mind about less out of pocket expenditure and universal health coverage. Universal Health coverage aims that all people should have access to need primitive, preventive, curative and rehabilitative health services, of sufficient quality which should be effective; while on other hand it should be effective, whereas it should be ensuring that people do not suffer financial hardship when paying for these services^[6]. Therefore, Government of India is playing a vital role and is trying its level best for gaining "Healthy lives for all and Wellbeing At All Ages".

HEALTH

Health is basic to learning, to happiness, to success, to effective citizenship, and to worthwhile living. There is a very famous dictum by Aristotle that "Sound mind lives in sound body." This chapter analysis about the health status of India by studying about Common Diseases which is further divided into three segments Communicable and Non-Communicable Diseases and accidents and Suicides which are biggest cause of death and injury and are neglected in most of the researches. Besides that study also shows about direct relationship between health, economic development and economic growth. The mode of data is secondary in Nature and is supported by National Health Profile 2018, Central Crime Bureau Report, and World Health Report 2014.

COMMON DISEASES

A disordered or incorrectly functioning organ part structure or system of the body resulting from the effect of genetic or developmental errors, infections poisons nutritional deficiency or imbalance toxicity, or unfavourable environmental factors; illness,

sickness, epidemics, ailment, pregnancy and delivery infant care are known as common diseases. Generally common diseases are of two types Communicable and Non-communicable.

COMMUNICABLE DISEASES

Communicable disease means an illness caused by an infectious agent or its toxins that occurs through the direct or indirect transmission of the infectious

agent or its products from an infected individual or via an animal, vector or the inanimate environment to a susceptible animal or human host [7]. These diseases spread from animal to a person. The spread often happens via airborne viruses or bacteria but also through blood or any bodily fluid. The term infectious and contagious are used to describe communicable diseases. E.g. - hepatitis, HIV/AIDS, Influenza, Malaria, Polio, Tuberculosis, Pneumonia.

TABLE:1 Status of communicable diseases in India

Year	2012		2013		2014		2015		2016		2017	
Diseases	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death	Cases	Death
Kala-Azar	3.11	2.24	4.62	3.25	6.94	5.9	7.55	13	10.28	0	11.15	0
Acute Encephalitis	7.37	6.18	7.86	6..10 0	5.68	4.52	6.24	6.14	5.28	5.96	4.72	7.68
Dengue	10.99	5.2	7.44	7.49	13.65	9.61	5.525	5.77	4.27	5.13	3.49	4.97
Japanese Encephalitis	12.17	10.42	8.35	7.22	5.48	5.0	5.24	5.01	5.41	5.15	4.16	5.79

Source: Monthly Health Condition Reports from Directorate of Health Services of State/UT.

From the table it is quite evident that Malaria has been problem in India from centuries. Malaria is an intermittent and remittent fever caused by a protozoan parasite which invades the red blood cells and is transmitted by mosquitoes in many tropical and subtropical regions. At one time a rural disease, diversified under the pressure of development into various ecotype. These ecotypes have been identified as forest Malaria, Urban Malaria, Rural Malaria, industrial Malaria, Border Malaria and migration Malaria; the latter cutting across the boundaries of various epidemiological [8]. In India the overall prevalence of the disease is that cases recorded in 2017 cases were 23.52% and death recorded was 18.44%. Although death rate is decreasing but still disease is not dismissed. Therefore, according to sustainable and development the new malaria goals and targets are proposed as part of the processing developing a

global technical strategy which was initiated in 2013 at the request of the World Health Assembly. The proposed target for Malaria in 2030, with 2015 as the baseline year, is: (a) 90% reduction in global malaria mortality rate. (b) 90% reduction in global malaria case incidence. (c) Eliminate Malaria from at least 35 countries in which transmission occurred in 2015. (d) Prevent re-establishment in all countries that are Malaria free. (7.) Kala-Azar is the second largest parasitic killer in the world. In India Leishmaniandonovani is the only parasitic that causes this disease. In India in 2016 the no of cases recorded were 10.28% and 0% death cases and 2017 out 11.15% cases and 0% death cases was found. There was less prevalence of this disease in India and the total number of cases and death due to acute encephalitis were 4.72% and 7.68% death cases in 2017 which is showing an increase in the disease respectively. Dengue out breaks has continued since

the 1950's severity of this disease has increased in the last two decades. On other hand cases of Japanese Encephalitis has also been increased by 4.16% and 5.79%. The impact of National Rural Health Mission and the previous two decades of public Health systems intervention on the control of communicable disease are mixed. It is still too early to celebrate, the achievements are fragile, and set back is easy- but still there is a long way to go ahead. The single success in Polio is a great achievement of this period, but there the challenges are the exit policy from the campaign mode and the rising cost

of sustaining the grains. Progress in vector control is mixed. Malaria has also shows a significant declines but still lot of work has to be done for its dismissal and with a range of new tools becoming available, a confidence is gathering to transit to Malaria elimination Programme. Potentially this is a disease that could fall below the elimination threshold in 10 to 15 years. Kala- Azar is an anachronism. It should have been eliminated by now, the deadline having been re-set repeatedly. Meanwhile, new vector borne diseases have emerged- notably Dengue which also requires a proper focus for its dismissal.

Table: 2 Major communicable- diseases in India

Year	2016						2017							
	Gender		Male		Female		Total		Male		Female		Total	
Diseases	case s	Deat h												
Acute diarrhoeal	1.75	1.45	1.9	2.08	3.65	3.53	1.91	1.75	2.09	2.32	4.0	4.07		
Typhoid	1.87	1.62	2.15	2.38	4.02	4.0	1.87	1.62	2.14	2.59	4.01	4.21		
Acute Respiratory infection	1.93	1.67	2.06	2.48	3.99	4.15	1.92	1.65	2.07	2.52	3.99	4.17		
Tetanus Neonatal	1.31	2.77	1.81	7.18	3.12	10.0	1.78	1.5	2.27	2.92	4.05	4.42		
Diphtheria	3.79	1.46	4.39	1.97	8.18	3.43	1.78	1.87	2.28	2.14	4.06	4.01		
Measles	1.38	1.47	1.75	2.0	3.13	3.5	1.77	2.0	2.28	2.0	4.05	4.0		
Viral Hepatitis	1.94	1.61	2.49	3.70	4.43	5.01	1.83	1.50	2.19	2.96	4.02	4.79		
Pneumonia	1.69	1.56	2.13	2.55	3.82	4.11	1.78	1.64	2.26	2.55	4.04	4.19		
Whooping Cough	0.31	0.06	0.43	0.01	0.74	0.07	1.78	0.53	0.02	0.46	1.8	0.99		
Cholera	1.37	3.0	1.37	1.5	3.07	4.5	1.7	1.5	2.42	3.0	4.12	4.5		

Source: Monthly Health Condition Reports from Directorate of Health Services of State/UT

An infectious and often fatal bacterial disease of the small intestine typically contracted from infected water supplies and causing severe vomiting and diarrhoea infectious and often fatal bacterial disease of the small intestine, typically contracted from infected water supplies and causing severe vomiting and diarrhoea. In case of Acute Diarrhoeal total cases recorded in 2016 were 3.65% and in 2017

were 4.0% there is increase in number of cases and still there is a long way to go for the cure of acute diarrhoeal disease. An infectious bacterial fever with an eruption of red spots on the chest and abdomen and severe intestinal irritation is known as Typhoid in 2016 no of cases recorded was 4.02% and in 2017 a slight decrease to 4.01%. On other hand Acute Respiratory Infection has been constant in 2016 no of cases recorded was 3.99% and in 2017 it is 3.99%.

Whereas, there was a slight decrease in the prevalence of Tetanus Neonatal cases recorded in 2016 are 3.12% and in 2017 it has increased to 4.05%. Diphtheria is an acute and highly contagious bacterial disease causing inflammation of the mucous membranes, formation of a false membrane in the throat which hinders breathing and swallowing, and potentially fatal heart and nerve damage by a bacterial toxin in the blood. It is now rare in developed countries owing to immunization^[9]. There was a decline in the case of Diphtheria cases recorded in 2016 is 8.18% and in 2017 with a decrease it is 4.05%. On the other hand cases of Measles Disease in 2016 are recorded 3.13% and in 2017 it is 4.05% which shows a slight increase in the number of cases. Recently, technical work is going on goals and targets for the elimination of Hepatitis as a public health issue: "towards a Hepatitis free generation, zero deaths and zero infections". Target proposed for 2030: (a) 90% reduction in incidence of Hepatitis infection (b) zero babies infected and (c) 60-70% reduction in mortality by 2030. Cases recorded in 2016 for Hepatitis are 4.43% and in 2017 it is 4.02% which show a decrease in number of cases. There was a slight change in the case of Pneumonia in 2016 it was 3.82% and in 2017 it is 4.04%. Cases recorded for whooping cough in 2016 is 0.74% and 2017 is 1.8%. Cases recorded for Cholera disease in 2016 is 2.74% and 2017 it is 4.12%.

However, deaths due to all diseases under national disease control programmes are less than 6% of all mortality. Most deaths due to infectious diseases are due to Diarrhoea and respiratory infections especially in children and a number of other germs that do not have the same epidemic potential but have significant prevalence. Taking all communicable deaths together, they still account for less than 30% of mortality.

NON- COMMUNICABLE DISEASES

Non-communicable disease (NCD) is a medical condition or disease that is non-infectious or non-transmissible. NCDs can refer to chronic diseases

which last for long periods of time and progress slowly. Non-communicable diseases are the number of cause of death and disability in the world. The non-communicable Disease refers to a group of conditions that are not mainly caused by acute infection, result in long-term health consequences and often create a need for long-term health consequences and often create a long-run treatment and care. These conditions include cancers cardiovascular disease diabetes and chronic lung illness^[10]. Following the Political Declaration on Non-Communicable Diseases (NCDs) adopted by the UN General Assembly in 2011, WHO developed a monitoring framework to enable global tracking of progress in preventing and controlling major non-communicable diseases- Cardiovascular disease, cancer, chronic lung disease and diabetes- and their key risk factors. The framework comprises of nine global targets and 25 indicators and was adopted by Member States during the World Health Assembly in May 2013. The Mortality target- a 25% reduction in premature mortality from non-communicable disease by 2025- has already been adopted by the World Health Assembly in May 2012. Member states are encouraged to consider the development of National NCD targets and indicators building on global framework. The 2030 targets were set by extending the 25 by 25 target. The nine voluntary global targets are aimed at combating global mortality from the four main NCDs, accelerating action against the leading risk factors for NCDs and strengthening national health system responses^[11].

The NCD global targets for 2025, with a 2010 baseline are:

- A 25% relative reduction in the risk of dying between ages 30 and 70 from cardiovascular diseases, cancer, diabetes, or chronic diseases.
- A 30% relative reduction in mean population intake of salt/ sodium.
- A 30% relative reduction in prevalence of current tobacco use in persons aged 15+
- A 10% relative reduction in prevalence of insufficient physical activity.

- At least 10% relative reduction in the harmful use of alcohol, as appropriate, within national context.
- A 25% relative reduction in the prevalence of raised blood pressure or contains the prevalence of raised blood pressure, according to national circumstances.
- Halt the rise in diabetes and obesity.
- At least 50% of eligible people receive drug therapy and counselling (including glycaemia control) to prevent heart attacks and strokes.
- An 80% availability of the affordable basic technologies and essential medicines, including generics, required to treat major non-communicable diseases in both public and private facilities^[12].

STATUS OF NON- COMMUNICABLE DISEASES IN INDIA

Table shows status of non-communicable diseases in India. The highest cases of diabetes 301,015, hypertension 345,770 cardio-vascular 26,471 and 2,745 of stroke was recorded in the state of Rajasthan. Gujarat was the state with highest common cancer 3,939 diseases. The status of total number of diseases in India was recorded as 35,723,660 of people attended non-communicable disease clinic in which 3,006,443 no of people were suffering from diabetes, 3,654,099 no of people from hypertension, and 134,348 from cardiovascular diseases, 134,348 from strokes and 39,635 of the patient were suffering from common cancer diseases.

Table: 3 Status of Non- Communicable Diseases in India (2017)

01.01.2017 to 31.12.2017

Out of those screened at NCD Clinics, no. of persons diagnosed with						
State	No of person attended NCD Clinic	Diabetes	Hypertension	CVDs	Stroke	Common Cancer*
INDIA	35,723,660	3,006,443	3,654,099	134,348	134,348	39,635
Bihar	152,240	55,816	11,371	697	200	87
UP	1,824,013	296,552	310,256	20,011	1,753	911
Haryana	625,035	63,664	89,992	1,256	345	504
Andhra Pradesh	986,284	271,912	270,812	8,437	4,993	803
Rajasthan	3,091,378	301,015	345,770	26,471	2,745	1,358
Uttarakhand	1,824,013	296,552	310,256	20,011	1,753	911
Assam	213,309	31,508	58,502	2,612	1,294	417
Jammu & Kashmir	112,756	9,289	18,821	1,183	643	393
Kerala	3,334,252	108,759	98,362	2,778	730	589

Andhra Pradesh	986,284	271,912	270,812	8,437	4,993	803
Gujarat	3,223,688	211,573	237,729	7,094	3,793	3,939
Karnataka	1,630,353	130,706	132,989	4,470	1,792	3,523
Madhya Pradesh	449,959	105,383	104,049	5,904	2,195	1,810
Maharashtra	2,940,779	155,377	196,548	5,594	2,658	1,840
Odisha	606,709	126,329	148,148	2,231	1,019	1,418
Punjab	1,687,476	183,010	212,570	8,328	2,227	1,280
Jharkhand	386,321	30,283	28,646	2,259	1,071	155

Source: National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS), Dte. GHS,

Ministry of Health & Family Welfare.

Note:

* Common Cancers including Oral, Cervical and Breast Cancer.

NR - Not Reported

STATE WISE TARGETS & ACHIEVEMENT FOR VARIOUS EYE DISEASES DURING 2016 –17

Table shows state wise targets and achievements for various eye diseases in the year 2016-17. In Uttar Pradesh 808305 cases were recorded for cataract operations and 969891 were achieved, 84280 of free spectacles to school children were distributed in Maharashtra and achievement was of 30535. Target for collection of donated eyes was 6500 highest in

Gujarat and 8447 was achieved for other diseases Other Eye Diseases (Diabetic Retinopathy, Glaucoma, Squint, ROP etc.) 11363 was target and 0 was the achievement. If we see in the case of India then 6600000 was the target for cataract operation and achievement was 6481435 and 900000 were targeted for free spectacles to school children and achievement was 757906, in the case of collection of donated eyes was targeted at 50000 and achievement was 65135 and for Other Eye Diseases (Diabetic Retinopathy, Glaucoma, Squint, ROP etc.) Target was of 71997 and achievement was of 404677.

TABLE 3 State wise Targets & Achievement for various eye diseases during 2016 – 17

	Cataract Operations		Free Spectacles to school children		Collection of donated eyes		Other Eye Diseases (Diabetic Retinopathy, Glaucoma, Squint, ROP etc.)	
State	Target*	Achievement	Target *	Achievement	Target *	Achievement	Target *	Achievement
INDIA	660000 0	6481435	90000 0	757906	50000	65135	71997	404677
Bihar	421309	310296	50000	5290	300	0	6228	0
UP	808305	969891	15000 0	149961	1000	857	11363	0
Haryana	167330	204852	15000	1550	1500	2189	1521	5281
Andhra Pradesh	327688	334104	70000	11481	5000	3454	2963	28200
Rajasthan	453999	251242	51466	15021	1200	1517	4117	2086
Uttarakhand	40973	55674	8000	5702	500	205	607	1331
Assam	205717	67398	23377	33442	400	215	1870	168
Jammu & Kashmir	82331	23409	2000	3966	200	0	753	52703
Kerala	136120	151774	20000	8139	1700	1973	2003	18358
Andhra Pradesh	327688	334104	70000	11481	5000	3454	2963	28200
Gujarat	399632	817308	75000	139068	6500	8447	3623	107722
Karnataka	404563	366737	40000	45553	3500	3367	3668	8551
Madhya Pradesh	480244	508083	54448	113596	1000	3710	4356	7447
Maharashtra	456011	678908	84280	30535	7000	7514	6742	10472
Odisha	276853	132088	31261	51245	700	1346	2517	7967
Punjab	183948	203969	20778	23657	700	1257	1662	9729
Jharkhand	217577	78197	2000	7423	200	12	1978	599

Source: National Programme for Control of Blindness, Dte.GHS, Ministry of Health & Family Welfare

***Note:**

1 Figures of physical performance for the year 2016 -17 is based on reports received from SPOs (NPCB)

2 NR = Not Reported

3 Targets for donated eyes in respect of states where eye banks are functional

4 Target under Grand Total has been rounded.

DEATHS DUE TO INJURIES AND ACCIDENTS

An undesirable or unfortunate happening that occurs unintentionally and usually results in harm, injury, damage, or loss; casualty; mishap: automobile accidents. Such a happening results in form of injury and there is no way the fault of the injured person but it causes death and disability. There can be certain reasons of injuries and accidents which are empirically explained in the table.

Table shows that in 2005 cases of death and injury due to natural calamity was recorded as 22415 and in 2015 it was recorded as 10510 which show a decreasing trend. Cases due to un-natural calamities like drowning in 2005 was 23571 and in 2015 was 29822 which shows an increasing trend, cases of

electrocution in 2005 was 6987 and in 2015 was 9986 which also shows a increasing trend, cases due to fall was recorded in 2005 was 9132 and in 2015 it was recorded as 16759, in 2005 847 people were killed by animals and in 2015 it increased to 951. Cases recorded due to poisoning were 20800 in 2005 and in 2015 it increased to 26173. Traffic accidents have also shown an increasing trend in 2005 no of cases recorded was 118265 and in 2015 it was 177423. On the other hand there is an increase in death for which reasons are unknown in 2005 it was recorded as 14514 and in 2015 it was 15165. There are some other reasons also which are not defined but also has shown an increasing trend in 2005 it was 31389 and in 2015 it was 15165. Total number of death cases recorded due to natural and unnatural calamities in 2005 was 29417 but in 2015 it has increased to 413457.

TABLE: 4 Trends of Deaths of Accidents in India during 2005-2015

Causes	Years												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015		
Natural Calamity	22415	21502	25153	23993	22255	25066	23690	22960	22759	20201	10510		
Un- Natural Causes													
Collapse of Structures	2718	2399	2623	2833	2847	2682	3161	2682	2832	1821	1885		
Drowning	23571	25571	27064	27206	25911	28001	29708	27558	30041	29903	29822		
Electrocution	6987	7619	8076	8067	8539	9059	8945	8750	10218	9606	9986		
Falls	9132	9821	10497	10637	10622	11571	11867	12319	12803	15399	16759		
Factory/ Machine Accidents	671	869	836	858	1044	1043	1091	1007	955	797	695		
Fire	19093	19222	20772	22454	23268	24414	24576	23281	22177	19513	17700		
Fire Arms	2254	2161	2046	1639	1504	1688	1250	1217	1203	633	736		
Sudden Deaths	18519	19450	21311	22738	24836	27364	26649	28961	31278	26526	35023		
Killed by Animals	847	864	1007	827	962	981	1233	959	998	886	951		
Mines or Quarry	456	409	435	371	423	355	385	359	387	210	118		

Disaster											
Poisoning	20800	23434	25447	24261	26634	28012	29478	30748	29249	20587	26173
Suffocation	1549	1696	1313	1496	1257	1400	2013	2075	2187	178	480
Traffic Accidents	118265	131652	140560	144587	1526896	161732	165071	168301	166506	169107	177423
Other Causes	31389	32478	35992	35135	35096	40057	39473	41611	45917	112375	67740
Causes not known	14514	14713	16907	13962	17534	20591	21254	21707	20113	21551	15165
Total	271760	293202	315641	318316	3347663	359583	367194	41611	45917	431556	402947
Total (Natural+ Unnatural)	294174	314704	340799	342303	3563359	384649	390559	394987	400517	451757	413457

Source: Accidental Deaths & suicides in India 2013, National Crime Records Bureau (NCRB), Ministry of Home Affairs

Note: For 2014, 'Un-Natural Causes' include the causes other than un-natural accidents as published in Accidental Deaths and Suicides in India 2014

RATES OF ACCIDENTAL DEATHS AND SUICIDES IN INDIA DURING 2000 TO 2015

The table shows the trend of accidental and suicides from year 2000 to 2015 among Male, Female and Transgender. Result shows a decreasing trend but it has been found that accident cases are higher in males which was recorded as 186324 in 2000 and

328241 in 2015 whereas, accidental cases in case of females were 69559 in 2000 and 85169 in 2015. In the case of transgender it was 47 in 20015. On the other hand it was observed that in the case of suicides female rate was low in comparison to males in 2000 it was recorded as 42561 and in 2015 it was 42088 and in the case of Males it was recorded as 66032 in 2000 and in 2015 it has increased up to 91528. In the case of transgender it was recorded as 7 in 2015.

TABLE: 5 Rates of Accidental Deaths and Suicides in India During 2000 to 2015

Accidental Deaths				Suicides				
Year	Male	Female	Transgender	Total	Male	Female	Transgender	Total
2000	186324	69559		255883	66032	42561		108593
2001	196124	74890		271019	66314	42192		108506
2002	194850	65272		260122	69332	41085		110417
2003	197285	62340		259625	70221	40630		110851
2004	210190	67073		277263	72651	41046		113697
2005	224806	69369		294175	72316	40998		113914
2006	241210	73494		314704	75702	42410		118112
2007	262918	77876		340794	79295	43342		122637
2008	263809	78500		342309	80544	44473		125017

2009	276333	80688		357021	81471	45680		127151
2010	298262	86387		384649	87180	47419		134599
2011	302420	88464		390884	87839	47746		133385
2012	306061	88921		394982	88453	46992		135445
2013	322670	87841		400517	90453	44256		134799
2014	354573	97078	106	451757	89129	42521	16	131666
2015	328241	85169	47	413457	91528	42088	7	133623

Source: Accidental Deaths & suicides in India 2013, National Crime Records Bureau (NCRB), Ministry of Home Affairs

GOVERNMENT POLICIES

After completion of 68 years of independence, our country has noticed striking advancement in the health status of its population. However, over past few decades, there has been major transition in the country resulting in significant collision on health. Improvement has been seen in economic development, nutritional status and fertility and mortality rates. Consequently, disease profile has been changed. Though there has been achievement in controlling communicable disease, still they contribute to disease burden of the country. The Constitution of India makes health as an important responsibility of state governments, rather than the central federal government. But both state and Central Government plays an important role regarding the health of the country. It makes every state responsible for "raising the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties". The National Health Policy was implemented by the Parliament of India in 1983 and upgraded in 2002^[13]. The National Health Policy is being worked upon further in 2017 and a draft for public consultation has been released^[14]. The Government of India has been making endeavours to reach out the health care to the people since inception through various schemes.

POLICIES OF NATIONAL HEALTH MISSION

A few of the major policies of National Health Mission (NHM) mentioned here:

ACCREDITED SOCIAL HEALTH ACTIVISTS

Accredited Social Health Activists (ASHAs) are being engaged under the mission for establishing relationship between the community and the health system. Accredited social health activists is the initial strategy of health problems of poor people demands particularly women and children, who have no access to health system in rural areas. ASHA Programme is enlarging across States and has particularly been successful in bringing people back to Public Health System and has enlarge the utilization of outpatient services, diagnostic facilities, institutional deliveries and inpatient care.

ROGI KALYAN SAMITI (PATIENT WELFARE COMMITTEE) / HOSPITAL MANAGEMENT SOCIETY

The Rogi Kalyan Samiti is a programme based on management structure that navigates as a group of trustees for the hospitals to administer the affairs of the hospital. Financial assistance is being provided to these Committees through untied fund to tackle the activities for patient welfare^[15]. Some instances include: enhanced productiveness of Auxiliary Nurse Midwives (ANMs) in the domain that can now manage better antenatal care and other health care services.

Village Health Sanitation and Nutrition Committees (VHSNC) have used untied grants to increase their participation in their local

communities to mark the requirements of poor households and children.

HEALTH CARE CONTRACTORS

NRHM is aiming to provide health care services to contractors to underserved areas, which are engaged in training programmes to enhance the skill set of doctors who are strategically located and recognized by the states. Similarly, importance is given to capacity building of nursing staff and supplementary workers such as ANMs. NHM also reinforce co-location of AYUSH services in Health facilities such as PHCs, CHCs and District Hospitals.

JANANI SURAKSHAYOJNA (JSY)

Janani Suraksha Yojna aims to minimize maternal mortality among pregnant women by stimulating them to deliver the babies in government hospitals. Besides this cash assistance is provided to desirable pregnant women for giving birth in a government health facility. Large scale demand side funding under the Janani SurakshaYojana (JSY) has fetched the poor households from public sector health facilities on a scale that has never been spotted before.

NATIONAL MOBILE MEDICAL UNITS (NMMUS)

National Mobile Medical Units (NMMUs) covers many un-served areas that have been never covered beforehand.

NATIONAL AMBULANCE SERVICES

Free ambulance services are being bestowed in each and everycorner of the country which is connected by a toll free number and reaches within 30 minutes of the call.

JANANI SHISHU SURAKSHA KARYAKRAM (JSSK)

As part of current in sentiveness and further moving in the route of universal healthcare, Janani Shishu Suraksha Karyakarm (JSSK) was launched to assign free to and fro transport, free drugs, free diagnostic, free blood, and free diet facilities to the pregnant women who come for giving birth to infants in public health institutions and sick infants up to one year.

RASHTRIYA BALSASTHYA KARYAKRAM (RBSK)

A Child Health Screening and Early Intervention Services have been introduced in February 2013 to safeguard the diseases which are specific to childhood, developmental delays, disabilities, birth defects and deficiencies. The plan will cover about 27 core children between 0–18 years of age and also bestow free treatment including surgery for health problems which are diagnosed under this plan.

MOTHER AND CHILD HEALTH WINGS (MCH WINGS)

With an objective of reducing maternal and child mortality, devoted Mother and Child Health Wings with 100/50/30 bed capacity have been licensed in high case load district hospitals and CHCs which would fabricate additional beds for mothers and children.

FREE DRUGS AND FREE DIAGNOSTIC SERVICE

A new strategy is launched under the National Health Mission to fabricate Free Drugs Service and Free Diagnostic Service with a rationale to reduce the out of pocket expenditure on health services.

DISTRICT HOSPITAL AND KNOWLEDGE CENTRE (DHKC)

District Hospitals are being nourished to provide a Multi-specialty health care facility which includes

dialysis care, intensive cardiac care, cancer treatment, mental illness, emergency medical and trauma care etc. These hospitals will play an important role to provide knowledge support for clinical care in prerequisites below it through a tele-medicine centre directed in the district headquarters and also developed as centres for training of paramedics and nurses.

NATIONAL IRON+ INITIATIVE

The National Iron+ Initiative is an endeavour to look at Iron Deficiency Anaemia in which inherit ors will receive iron and folic acid supplementation according to their Iron/Hb status. This strategy will simultaneously bring the prevailing programmes (IFA supplementation for: pregnant and lactating women and; children in the age group of 6–60 months) and will initiate new age groups.

- Enhanced efficacy of Auxiliary Nurse Midwives (ANMs) in the area that can now manage better antenatal care and other health care services.
- Village Health Sanitation and Nutrition Committees (VHSNC) have used untied grants to enlarge their participation in their local communities to mark the needs of poor households and children.

MISSION INDRADHANUSH

Mission Indradhanush was launched by Ministry of Health and Family Welfare (MOHFW) Government of India on 25th December, 2014. The objective of this mission is to ensure that all children under the age of two years as well as pregnant women are fully immunized with seven vaccine preventable diseases. The Mission Indradhanush depicts seven colours of the rainbow, targets to immunize all children against seven vaccine preventable diseases, namely:Diphtheria, Pertussis (Whooping Cough), Tetanus, Tuberculosis, Polio, Hepatitis and Measles .In addition to this, vaccines for Japanese Encephalitis (JE) and haemophilic influenza type B

(HIB) are also being provided in selected states. Full immunization coverage to be expanded from 65% to 90% children of the country [16].All vaccines are available at free of cost under the Universal Immunization Programme.

The High Level Expert Group report reveals that there is an increase in public expenditure on health from 1.58 per cent of GDP currently to 2.1 per cent of GDP. However, it is still far lower than the global median of 5 per cent [17]. The lack of extensive and adequately funded public health services pushes large numbers of people to incur heavy out of pocket expenditures on services purchased from the private sector. Out of pocket expenditures arise even in the public sector hospitals, since lack of medicines means that patients have to buy them. Whereas, there are certain facilities which are not available in government hospitals in order to seek them out of pocket expenditure increases. This results in a very high financial burden on families in case of severe illness [18]. Though, concern over high out-of-pocket (OOP) expenditure, does not give any target or time frame for reducing this expense. OOP can be reduced only by increasing public expenditure on health and by setting up widespread public health service providers [19]. But the planning commission is planning to do this by regulating private health care providers. It takes consolation from the High Level Expert Group report which admits that, "the transformation of India's health system to become an effective platform for Universal Health Coverage is an evolutionary process that wills several years". Instead of developing a better public health system with enhanced health budget, Government is willing to hand over health care system to private institutions. Rashtriya Swasthya Bhima Yojana is being used as a channel to hand over public funds to the private sector through an insurance route. This has also induced some unnecessary treatment which will increase costs and premiums after a certain period of time. There have been lots of complaints regarding high transaction cost for this scheme due to insurance pacemakers. RSBY does not take into contemplation of state specific variation in disease profiles and health needs. There is no source to

nutrition as key element of health and for universal Public Distribution System (PDS) in the High Level Expert Group recommendation. In the section of National Rural Health Mission (NRHM) in the document, the commitment is to provide 30- to 50-bed to Community Health Centres (CHC). It was easy for the government to enrol poor women as ASHA (Accredited Social Health Activist) workers but it has failed to bring doctors, nurses and specialist in this area. The ASHA workers who are coming from a poor background are given incentive based on performance. These people lose many days job undertaking their task as ASHA worker which is not incentivised properly and there is no consolation for the losses by Government. Successive administrative and political reforms have conveniently bypassed training citizens and local bodies to actively participate in healthcare. In a situation where people are not enabled to identify poor quality, speak up and debate. There is dire need for the health system to fill that role on behalf of the people and can be easily done by decentralisation of healthcare governance. Therefore, Government has to take some efficient steps in order to achieve the targets of the schemes and programmes implemented by them because it is not only for individuals but for the welfare of the whole society.

PUBLIC EXPENDITURE ON HEALTH

Government plays an important role by keeping public health in mind as financing of health care is

one of the key factors in delivery of health care. It is very difficult and challenging for any Government to deal with such a huge population so, to overcome with the problems Government fixes some goals and targets and allocates funds for the country people to reduce their out-of-pocket expenditure and tries to maintain equality among the people so that each and every person can be benefitted. Total health care expenditure in India is about 4 Per cent of GDP and the Government runs a large public health care system. There is a strong relationship between economic growth and better health so, to gear up the policies and work out with health priorities to achieve the targets Government has set up with Millennium Development Goals and Sustainable Development Goals. The sustainable Development goals were endorsed on 25 September, 2015 at the UN Sustainable Summit, attended by the heads of States and Governments, to carry the work done under Millennium Development Goals (MDGs) forward and to guide global development over the next 15 years. The United Nations General Assembly formally adopted the universal integrated and transformative Agenda for Sustainable Development, along with a set of 17 Sustainable Development Goals and 169 associated targets. The 17 SDGs focuses upon Poverty, Hunger, Health education, Gender equality, Water and Sanitation, energy, work and economic growth, industry and infrastructure, inequalities, cities, responsible consumption, climate, life below water, life on land, peace and strong institutions, and the partnership [20].

TABLE:6 Trends in public expenditure on health 2009-18

YEAR	Public expenditure on health (In Rs crores)	Population (In crores)	GDP (In Rs crores)	Per capita public expenditure on health (in Rs)	Public expenditure on health as percentage of GDP [1/3*100]
2009-10	72,536	117	6,477,827	621	1.12
2010-11	83,101	118	7,784,115	701	1.07
2011-12	96,221	120	8,832,012	802	1.09
2012-13	108,236	122	9,988,540	890	1.08

2013-14	131,052	123	11,345,056	1,069	1.16
2014-15	159,42	125	12,653,762	1,280	1.26
2015-16	140054.55	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.

Note:

GDP figures from 2011-12 to 2015-16 released vide press note dated 31st January, 2017 were subsequently revised by incorporating the

new series of Index of Industrial Production (IIP) and Wholesale Price Index (WPI) released on 31st May, 2017 are available at Central

Statistics Office, Ministry of Statistics & Programme Implementation. Second revised estimates of GDP are given in 2011-12, 2012-13, and 2013-14.

It is evident from the table that within the passage of time public expenditure on health is increasing and GDP with per capita public expenditure on health and percentage of GDP is increasing with respect to increase in the Population. In 2009-10 public expenditure recorded was 72,536 with population of

117 which is increased to 213719.58 in the year 2017-18 with the population of 129. Gross Domestic product in 2009-10 was 6,477,827 with Per Capita Public Expenditure on health is 621 with 1.12% and in 2017-18 it was 16751688 with 1657 with Per Capita Public Expenditure on health with 1.28%.

TABLE:7 Public Health Expenditure on Health 2015-18 (Actuals in Rs. Crores)

S. No.	Heads	2015-16
	State Budget including Central Grants (including Treasury Route)	115933.76
1	State Budget (Own Expenditure)	95310.95
2	Centre MOHFW	35189.49
	Central Grants Through Treasury	20622.81
	3601	20379.49
	3602	243.31
	Other (Central Govt. Hospitals/Institutions, etc.)	14566.69
3	Other Central Ministries*	8642.18
4	UTs	911.92
5	Grand Total (1+2+3+4)	140054.55

Source: "Health Sector Financing by Centre and States/UTs in India 2015-16 to 2017-18", National Health Accounts Cell, Ministry of Health & Family Welfare

Table shows expenditure on health from 2015-16 in crores. Expenditure on state budget including central grants (including Treasury Route) is 115933.76, state budget (own Expenditure) is 95310.95, central

MOHFW is 35189.49, central grants through treasury is 20622.81 and other central ministries is 8642.18 and UT's is 8642.18 and the total grand total is 140054.55.

TABLE :8 Public expenditure on health by components across states, 2015-16 (Actual in Rs. Crores)

State/UT	Total State Expenditure on Health (Rs. In Crores)1	Total State Expenditure (Rs. In Crores)2#	Health Expenditure as a % of Total State Expenditure	Population 2015-16 (in Crores)3	GSDP 2015-16 Current Prices (Rs in Crores)4	Per Capita Health Expenditure (Rs)	Health Expenditure as a % of GSDP
	1	2	(3)=(1)/(2)	4	5	(6)@=(1)/(4)	(7)=(1)/(5)
Major (Non EAG) States							
Andhra Pradesh\$	5013	106638	4.70%	4.95	609934	1013	0.82%
Delhi	4183	36520	11.45%	2.1	548081	1992	0.76%
Goa	729	12010	6.07%	0.2	54275	3643	1.34%
Gujarat	7432	126821	5.86%	6.25	1025188	1189	0.72%
Haryana	3055	85037	3.59%	2.73	485184	1119	0.63%
Himachal Pradesh	1894	28373	6.67%	0.71	112852	2667	1.68%
Jammu & Kashmir	2925	49294	5.93%	1.24	119093	2359	2.46%
Karnataka	6980	138715	5.03%	6.21	1012804	1124	0.69%
Kerala	5207	88960	5.85%	3.56	557947	1463	0.93%
Maharashtra	12066	237327	5.08%	11.94	2001223	1011	0.60%
Punjab	3400	57963	5.87%	2.9	391543	1173	0.87%
Tamil Nadu	8543	171349	4.99%	6.92	1161963	1235	0.74%
Telangana	4626	96297	4.80%	3.5	567588	1322	0.82%
West Bengal	7239	135929	5.33%	9.31	n.a	778	
Major (Non EAG) States^			5.34%			1172	0.76%
EAG + 1 States**							
Assam	4992	70428	7.09%	3.23	226276	1546	2.21%
Bihar	5067	128706	3.94%	10.33	226276	491	1.33%
Chhattisgarh	3480	65898	5.28%	2.57	260776	1354	1.33%
Jharkhand	2891	59995	4.82%	3.34	231294	866	1.25%

Madhya Pradesh	5535	132647	4.17%	7.73	530443	716	1.04%
Odisha	3921	81741	4.80%	4.23	330874	927	1.19%
Rajasthan	9858	175589	5.61%	7.25	683758	1360	1.44%
Uttar Pradesh	15872	312811	5.07%	21.64	111986 2	733	1.42%
Uttarakhand	1871	30799	6.07%	1.06	111986 2	1765	1.06%
EAG + 1 States			5.05%			871	1.36%
North East States							
Arunachal Pradesh	673	11740	5.73%	0.13	20433	5177	3.29%
Manipur	536	9841	5.45%	0.26	19233	2061	2.79%
Meghalaya	623	9253	6.73%	0.28	25967	2223	2.40%
Mizoram	645	7731	8.34%	0.11	15339	5862	4.20%
Nagaland	588	10156	5.79%	0.24	19816	2450	2.97%
Sikkim	308	5431	5.66%	0.06	16954	5126	1.81%
Tripura	829	12537	6.62%	0.38	34368	2183	2.41%
North East States			6.30%			2878	2.76%
Union Territories (UT)***							
Andaman & Nicobar	310	n.a	-	0.05	5932	25060	5.23%
Chandigarh	378	n.a	-	0.17	28643	2224	1.32%
Dadra & Nagar Haveli	98	n.a	-	0.04	n.a	2451	-
Daman & Diu	62	n.a	-	0.03	n.a	2073	-
Lakshadweep	60	n.a	-	0.01	n.a	6018	-
Puducherry	534	6062	8.82%	0.16	25060	3340	2.13%
Union Territories (UT)						3137	2.42%

Source:

1. "Health Sector Financing by Centre and States/UTs in India 2015-16 to 2017-18", National Health Accounts Cell, Ministry of Health & Family Welfare.
2. State Finances : A Study of Budgets, Reserve Bank of India
3. "Report of the Technical Group on Population Projections may 2006", National Commission on Population, Registrar General of India

RECOMMENDATIONS AND SUGGESTIONS

"Health is Wealth" is a well quoted dictum. But, it is also a reality that a healthy person is more able to take care of himself and his family, as also, the nation. A nation with a healthy population is more

capable of contributing and achieving its development goals and making India vivid and vibrant. Health and Education are two sectors which are facing funding cuts in the wake of recession. Therefore, Government should try to raise the funds in health sector. Schemes or policy should be made and implemented in such a way that each and every

sector of the person should be benefited as health is the most important factor for country's population. Universal coverage should be strong enough because it is all about people having access to needed healthcare without suffering hardships, thus, encompassing improvements in access, quality and financial protection. Equality is required in the health sector so that people of all caste and creed gets equal treatment as it is seen that inequality is mostly prevalent in lower sections of the society. It has been found that people belonging to low income groups are unhealthier in comparison to higher income groups and their out-of-pocket expenditure is more than what government is bearing and spending on the health services. Sometimes consequences are so trivial that it leads to a depth trap for them, Government should keep in my mind that people should not feel burdensome while spending on health. The process of immunization and vaccination should be fast and efficient that each and every person gets proper vaccination and immunization before the occurrence of epidemic but in India generally immunization and vaccination are provided after the occurrence of epidemic and now it has become a challenge for government to overcome such a huge population with best health services. On other hand, various insurance policies should be launched for helping the people so they do not face any hardship regarding finances. Now the time has come for the Government to raise its funds for health sectors, providing best hospitals with latest technologies and implementing efficient policies so that each and every section of the society is being benefited and is provided with best universal health coverage as "Health of the country depends on its working population."

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