

LIFE, DEATH, AND PHARMA IN INDIA: A CASE STUDYGAYATHRI R¹, VIJAYABANU C²¹Department of MBA, School of Management, SASTRA University, Thanjavur, Tamil Nadu, India. ²Department of MBA, School of Management, SASTRA University, Thanjavur, Tamil Nadu, India. Email: gayathri@mba.sastra.edu

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ABSTRACT*"The health of the people is really the foundation on which all their happiness and all their powers as a state depend." - Benjamin Disraeli.*

A healthy society is obviously a healthy nation. Being healthy is a result of various factors such as lifestyle, income, choices, society, access to medical facilities, culture, and family. The life expectancy (LE) (i.e., average years a person is anticipated to live has almost doubled) in the past century and medical breakthroughs had a profoundly positive impact on human LE. The average LE of the people in India was 49.7 years during 1970-1975 gradually increased to the level of 68.45 years in 2016 according to the world LE reports. The objective here is to understand the factors determining LE and whether there are any possibilities for considerable improvements in LE in India due to various economic policies by the government. Statistical reports from various organizations are analyzed, and the conclusion is that the government spending on health care and awareness is to be enhanced.

Keywords: Life expectancy, Health care, Mortality, Birth rate, Death rate, etc.© 2017 The Authors. Published by Innovare Academic Sciences Pvt Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>) DOI: <http://dx.doi.org/10.22159/ajpcr.2017.v10i2.15566>**INTRODUCTION**

India is a land of villages. According to the reports from the Government of India, 2011, the Annual Exponential Growth Rate of India's population is 1.21 billion of which 623.72 million are males (51.54%) and 586.46 million females (48.46%), as compared to the population of 381 million in 1951. The majority of the people live in villages and the rural and urban population constitute 68.9% (83.3 crore) and 31.1% (31.1 crore) respectively of the whole population of the country [1].

There is a major improvement in the life expectancy (LE) of the people in India over the last century. Bhat (1987) has identified the reasons like reduction in the death rates (DRs) of children, mothers, and infants [2]. Saikia and Thomas (2011), in their study, have pointed out that LE in India has drastically changed due to declining DRs among elders and adults [3].

WHAT CAUSES DEATH?

In India, there are many reasons for death to occur, but some of the common reasons are 38% of the death is due to a communicable disease such as malaria, tuberculosis, maternal, prenatal, and nutritional disorders. 10% of the death is due to injuries and 52% of the death is due to noncommunicable diseases (NCDs) such as diabetes, mental illness, hypertension, and cancer which is more common among the elderly group. Due to environmental and socioeconomic factors, developing countries like India are very much prone to virus related diseases such as Zika, HINI, and SARS [4] Fig. 1.

HOW MUCH DO COUNTRIES SPEND ON HEALTH CARE?

The total health-care spending varies across countries and US ranks high as 17% of the gross domestic product (GDP) is spent on the health care, whereas the level of spending as a percent of GDP has increased from 3.8% to 4.3% in India, in 2012. The basic health needs are met at least when a country spends at least 5-6% of its GDP on health care [5] Table 1.

It is evident that a country needs to contribute more on social health care and 73% of the current health expenditure (CHE) is contributed by the households. Individuals pay from out of pocket (OOP) and that accounts to 69% by households. High OOP spending is due to the lack of government spending on health, constituting just 1.15% of GDP which accounts to 30% of CHE - lowest among the BRICS nations.

In 2013-2014, the total health-care expenditure (THE) of India was Rs. 4.5 lakh crores, a third of all money Rs. 1.5 lakh crores (35.7%) was spent in pharmacies. Rs. 88.5 thousand crores 21% was spent in private hospitals, almost double compared to that of government hospitals which consume 41.7 thousand crores (9.9%). Around Rs. 28 thousand crores (6.7%) was spent in labs and medical diagnostics. The estimated total government health expenditure in FY 2013-2014 is Rs. 129,778 crores. This equates to 1.15% of GDP, 3.8% of General Government Expenditure, 28.6% of THE, and Rs. 1042/capita. The Union Government share of the total government health expenditure (including health insurance schemes through union government) is Rs. 44,564 crores, which equates to 0.4% of GDP, 34% of the total government health expenditure and Rs. 358/capita. The share of the total government health expenditure of States/UT's and local Governments (combined) and health insurance schemes through state government is estimated at Rs. 85,215 crores, which equates 0.75% of GDP, 66% of total government health expenditure and Rs. 684/capita.

HOW HEALTHY IS INDIA?

The health statistics have shown considerable progress over time and by 2013 there was a gradual decrease in birth rate, death rate, total fertility rate, maternal mortality ratio and infant mortality ratio when compared to the vital statistics of 1951. The Life expectancy of male in 1951 was 36.1 years has considerably improved to 65.8 by 2013 (Table 2). The "Technical Group on Population Projections" has anticipated that by 2020 LE of male is expected to arrive at 68.8 years and 69.8 years by 2025 from the existing level. The LE of female population is expected to reach 71.1 years by 2020 and 72.3 years by 2025.

THE INDIAN PHARMACEUTICAL COMPANIES

India is the fastest and the fifth biggest economy in the world according to the reports of Euromonitor. The Indian Pharmaceutical Industry occupies a significant position globally, and Indian companies enjoy a strong presence in the US generics market, commanding a share of 19% in 2014 as against 13% in 2010. It is ranked eighth by value (USD 29 bn) and continues to intensify high growth rate, between 15 and 20%, strongly in competition with China [6]. As on 31st March 2015, there are 153,655 sub centers, 5396 community health centers, and 25,308 primary health centers implemented in the country to

cater to the needs of the people [7]. The Government of India plays a steadfast role in implementing the "Health for All" program. The Indian Pharmaceutical Market (IPM) has developed enormously and is now anticipated that the IPM will touch around USD 55 billion by 2020. The top ten pharma companies from India have captivated the global markets (Table 3). Statistics show that investments in research and development of the top 25 Indian companies have grown from INR 5060 crores (USD 1012 million) in FY 2012-2013 to INR 6103 crores (USD 1110 million) in FY 2013-2014 [7]. India is the fourth leading manufacturer of medical equipment in the Asian continent after Japan, China, and South Korea [8]. The inclination of pharmacoeconomics is in designing affordable health-care packages for India [9].

A GLIMPSE OF THE INITIATIVES OF THE GOVERNMENT TO ENHANCE HEALTH SECTOR

Recent policy decisions taken by the Ministry of Health and Family Welfare have yielded creditable results. The outflow in health care is Rs. 22,476 crore for the year 2013-2014 and the projected expenses for the year 2016-2017 are Rs. 31,300 crore. The focus is on providing standard health-care facilities to all sectors of the society at affordable rates.

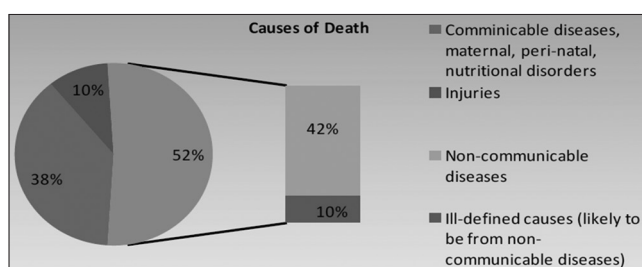


Fig. 1: Causes of death in India, Government of India, The Ministry of Health and Family welfare

Table 1: Health spending and governmental health spending, 2000 and 2012

Countries	Total health spending as % of GDP		Government health spending		
	2000	2012	Percentage of total health spending		Percentage of total government spending
			2000	2012	
India	4.3	3.8	27.0	30.5	4.3
Germany	10.4	11.3	79.5	76.7	19.3
Mexico	5.1	6.1	46.6	51.8	15.8
China	4.6	5.4	38.8	56.0	12.5
Singapore	2.7	4.2	45.0	35.9	11.1
United Kingdom	6.9	9.3	79.1	84.0	16.2
United States	13.1	17.0	43.0	47.0	20.0

Source: WHO. World Health Statistics, 2015. Accessed June 27, 2015. GDP: Gross domestic product

Table 2: Vital statistics on BR, DR, LE, TFR, MMR, IMR

S. No.	Parameters	1951	1981	1991	2001	Current levels
1	Birth rate (per 1000 population)	40.8	33.9	29.5	25.4	21.4 (2013)
2	Death rate (per 1000 population)	25.1	12.5	9.8	8.4	7.0 (2013)
3	TFR	6.0	4.5	3.6	3.1	2.3 (2013)
4	MMR (per 100,000 live births)	NA	NA	398 (1997-1998)	301 (2001-2003)	167 (2011-2013)
5	Infant mortality rate (per 1000 live births)	146 (1951-1961)	110	80	66	40 (2013)
6	Life expectation at Birth (in years) Person	NA	55.4	59.4	63.4	67.5
	Male	37.1	55.4	59.0	62.3	65.8
	Female	36.1	55.7	59.7	64.6	69.3
		(1951)	(1981-1985)	(1989-1993)	(1999-2003)	(2009-2013)

Source: The office of the Registrar General and Census Commissioner, India. http://apps.who.int/iris/bitstream/10665/170250/1/9789240694439_eng.pdf?ua=1&ua=1. NA: Not available, BR: Birth rate, DR: Death rate, LE: Life expectancy, TFR: Total fertility rate, MMR: Maternal mortality ratio, IMR: Infant mortality ratio

"Kayakalp" an innovative scheme was launched in 2015 to provide enhanced hygiene and sanitation facilities to the public at government health centers. More than Rs. 140,376 crores released to the States/UTs as grants-in-aid till 31st March 2016, to support the State Governments and the Union territories to upgrade health systems.

- The government has rolled out a new initiative Affordable Medicine and Reliable Implants for Treatment (AMRIT) that offers cancer and cardiac patients an equal opportunity to undergo treatment without spending too much. AMRIT stores started at AIIMS, New Delhi and to be rolled out in 14 Central Government Hospitals. These stores will sell 202 cancer drugs and 186 cardiovascular drugs and 148 types of cardiac implants.
- The National Health Mission aims at strengthening the health infrastructure by providing free drugs and diagnostics and more than 3061 crore approved in 2015-2016 for free drugs and more than Rs. 265 crore provided for free diagnostics. This would definitely enhance better health standards and reduce the OOP expenditure on health.
- The biggest National Survey in the world for 13 tuberculosis (TB) drugs launched and the procurement of 500 GeneXpert machines for TB detection in all the districts.
- The National Vector Borne Disease Control Program was launched on 11th February 2016 to eradicate Malaria and Kala-azar throughout the nation and especially in sensitive districts or states. The scheme was successful in eliminating 502 out of 625 endemic blocks (80%). Some of the states are Bihar, Jharkhand, West Bengal, and Uttar Pradesh.
- Initiatives for National Programme for Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke to combat NCDs has been established in 195 district cells, 201 district clinics, 65 cardiac care units, 61-day care centers, and 1362 clinics.
- National Dialysis Programme under PPP mode and a new health protection scheme for the common person on a protection cover of Rs. 1 lakh per family and additional top-up of Rs. 30,000 for senior citizens per family.
- National Health Portal was launched on November 14, 2014, as an online repository of all medical solutions and as a final and genuine source of health care related information.
- Project Kilkari was launched with an interactive voice response-based mobile service to enhance awareness among pregnant women, parents of children on institutional delivery, antenatal care, postnatal care, immunization, etc., with 2 minutes long weekly session available in all regional languages.
- Streamlining voluntary blood donation by enhancing safety and quality through E-RaktKosh and linking all licensed blood banks in public and private health care.
- E-Hospital, an online registration system for outpatient department appointments started in 38 hospitals and more than 2.38 lakh online registration-based appointments as on 26 May 2016. This initiative cuts travel expenses, saves man-hours, and delivers greater patient satisfaction.
- M-Cessation for Tobacco is an IT tool designed to deter the use of tobacco products and adopt a healthier lifestyle.
- Sugam an e-Governance portal for Central Drugs Standard Control Organization that has facilities to process import applications, drug

Table 3: Top 10 Pharma companies in India 2016

Ranks	Name of the company	Year of establishment	Market capitalization as on 16 th January, 2016 (in crores)
1	Sun pharmaceuticals	1983	Rs. 189,139
2	Lupin	1968	Rs. 76,613
3	Dr. Reddy's laboratories	1984	Rs. 50,102
4	Cipla	1935	Rs. 48,788
5	Aurobindo	1986	Rs. 47,578
6	Cadila	1951	Rs. 31,541
7	Divis Laboratories	1990	Rs. 28,609
8	GlaxoSmithKline	1924	Rs. 26,954
9	Glenmark	1977	Rs. 23,410
10	Torrent Pharma	1969	Rs. 22,392

Source: Listz.in

registration, and permit to import small quantities of drugs for personal use.

- Swasth Bharat Mobile App provides information on symptoms, disease conditions, treatment, public health alerts, first aid, and healthy lifestyle.
- Mission Indradhanush was launched on December 25, 2014, to ensure full immunization and cover all children up to the age of 2 years [10].

INSIGHT TO THE FUTURE

Countries such as Brazil, Korea, and Thailand had poor health-care systems, OOP spending was too high, low per capita income and so on.

Combating all the challenges, these countries have made significant reforms in their health care and now they are successful in their endeavors. India's health-care needs a tremendous change for its future development and can look up to the success stories of countries that had a turnaround in their strategies. Investments, efficiency, cost burden, sound policy, and public-private partnership in health care is the need of the hour.

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Author Queries???

AQ1: Kindly provide author initial

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