Summer Training

At

Public Health Foundation of India, New Delhi

(April 7, 2020 to June 30, 2020)

A project report on: -

Assessment of the ESIC beneficiaries: - Revenue and Expenditure of ESIC over the years

Submitted By: -

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(PART -A)

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To whomsoever it may concern

This is to certify that **Ms Abhisikta Biswas** has successfully completed her internship from **07 April 2020 to 30 June 2020** with Public Health Foundation of India (PHFI). During her internship she worked under **"Assessment of ESIS Beneficiaries"** project.

She was found to be hardworking and sincere during this period.

We wish her the very best in all her future endeavours.

For **Public Health Foundation of India**

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SUMMARY

Since the day of its inception, the Employee State Insurance Corporation Act has been around for 68 years now as the one of the first social security insurance schemes for blue collar workers in the country. It provides a comprehensive package of financial assistance in the form of medical benefits and cash benefits in certain conditions like maternity, temporary or permanent disability, dependant expenses, funeral expenses etc. at a low price. A fixed monthly premium is contributed by both employers as well as employees. State government also contributes by providing medical benefits to the IPs.

This is a boon to working class people as it reduces the out of pocket expenditure drastically for them. However, the success of the scheme has been debated over the years in terms of its awareness among people, utilisation rate, the quality of services provides, and the satisfaction level of the employees covered under the scheme.

The total number of people insured under the scheme has increased over the years and is about 3.49 crores and the annual expenditure on medical benefit was around 8721 crores in the year 2018-2019. The ESIC scheme has also been instrumental in promoting medical training and education and continues to contribute in the construction of hospitals, dispensaries, and rehabilitation centers.

A much bigger question to be answered as well is the proper utilisation and allocation of the funds in the corporation. The yearly collection of revenue by the premium levied is double of what is invested for the services and the benefits that they claim to provide. Massive funds have been earmarked for the construction of medical hospitals and institutions without any focus on utilizing these provisions on providing these benefits. A trend of surplus funds being generated has been seen in the past couple of years and lesser expenditure made in comparison.

This indicates gross miscalculation and poor implementation process on the corporation’s part.

In this study we intent to segregate and list the various revenue sources and the expenditure incurred by the corporation over the year since its inception and interpret the patterns wherein the corporation is lacking to implement effect and efficient ways to provide social security to the labor class.

TABLE OF CONTENT

ACRONYMS & KEYWORDS

ACRONYMS	
IPs	Insured Persons
ESIC	Employee State Insurance Corporation
TSU	Techincal Support Unit
NACO	National Aids Control Organization
KEYWORDS	
Social Security	
ESI Benefits	
Health Insurance	
ESIC	
Medical Benefits	
Cash Benefits	

SECTION 1- ABOUT THE ORGANISATION

The Public Health Foundation of India (PHFI) was established as a response to various concerns over emerging public health challenges in India. PHFI recognizes the fact that for a sustained and holistic response to the public health concerns in the country the need to address huge shortfall of health professionals is essential. It was established in response to recommendation of a national consultation appointed by Government of India, which recommended setting up of a foundation to rapidly advance setting up of institutes which provide public health education, training, advocacy and research.

PHFI was thus then launched on March 28th, 2006 at New Delhi by the then Prime Minister Dr, Manmohan Singh. PHFI is a public private initiative which is registered as a society under Societies Registration Act 1860. It is governed by an independent General Body which constitutes of representatives from Government of India, Scientific community, Indian and International academic experts, private sector and civil society.

PHFI is bringing change in health sector by:

- Building a public health workforce by providing them world-class training and providing students with educational courses and training program that are relevant to Indian Public Health scenario. The courses are being provided through 5 Indian Institutes of Public Health located at Delhi NCR, Hyderabad, Bhubaneswar, Gandhinagar and Shillong.
- Providing support to public health programmes such as AIDS Prevention, Immunization, Capacity building through technical assistance to Government of India and to the state governments.
- Extending support to the ‘Mission Indradhanush’ by Government of India, with a target to increase immunization from present 65% to 90% immunization rate among children of India.
- Implementing programmes related to Infectious Disease surveillance and control and Maternal and Child Health.

- Promoting promoting and programme related research by identifying and filling gaps, and to conduct health impact assessment and to evaluate innovations for improving the effectiveness and outreach of health systems in the country.
- Launching action against air pollution, its health effects and advocating initiatives for advancing promotion and implementation of Universal Health Coverage.
- Supporting Government of India as TSU for proper implementation, monitoring and evaluation of NACO programme, which works for prevention and control of HIV/ AIDS in India.
- Bringing Affordable Technologies in health care sector by– introducing 'Swasthya Slate' for better Primary Health care in rural areas. Which is an affordable, portable, tablet based diagnostic platform for health workers in remote areas and rural areas, it is being used in RMNCH+A programme in J&K.
- Helping rural communities by making SHGs which help them in various Behaviour Change Programmes, which has helped rural health workers in introducing maternal and neonatal health interventions 100 talukas (blocks) in the state of Uttar Pradesh.

Vision	To strengthen India's public health institutional and systems capability and provide knowledge to achieve better health outcomes for all
Mission	• Developing the public health workforce and setting standards • Advancing public health research and technology • Strengthening knowledge application and evidence-informed public health practice and policy
Values	Transparency • Uphold the trust of our multiple stakeholders and supporters • Honest, open and ethical in all we do, acting always with integrity
	Impact • Link efforts to improving public health outcomes, knowledge to action • Responsive to existing and emerging public health priorities
	Informed • Knowledge based; evidence driven approach in all we do • Drawing on diverse and multi- disciplinary expertise, open to innovative approaches
	Excellence • Aim for highest standards in all aspects of our work • Encourage, recognise and celebrate our achievements
	Independence • Independent view & voice, based on research integrity & excellence

	• Support academic and research freedom, contributing to public health goals and interest
	Inclusiveness • Strive for equitable and sustainable development, working with communities • Collaborate and partner with other public health organisation

SECTION 2- SUMMER TRAINING REPORT

I. BACKGROUND

Humans have always been living in societal setup and are also known as a Social Animal. A person has so many social duties to fulfil. Like looking up after their children, paying for their education, marrying them, taking care of their parents, spouse, etc. And as due to the introduction of technology, experiences, lifestyles in the post-industrialization era, there has been an increased demand for a robust social security system to provide the worker with adequate medical, cash benefit, etc. in the time of need.

Throughout history if one can remember, people have been dealing with the uncertainties and qualms of being able to provide the basic sustenance and needs for oneself and their families. So, these deep-rooted insecurities are brought about by unemployment, illness, disability, old age, and death. These are also known as treats to economic security. From the Ancient Greeks who considered amphorae of olive oil as means of social security to the time in Medieval Europe where the feudal lord and the serfs (cheap laborer) depended on one another for each other's economic security, provide us an understanding and knowledge about the existence of social security since centuries. With the rise and development in civilization and agriculture, Europe was one of the first to implement guilds and friendly societies which provided benefits to people under those associations. The "poor laws" formulated by the English in the 1601 provided security and looked after the needs if the poor of the community was replicated in America soon after.

International Labor Organization describes 'Social security as a right which responds to the universal need for protection against social sides and life risks. Social security systems that

guarantee health protection and income security, contributing to the reduction of inequality and poverty, and promoting social inclusion and human dignity'. They do that by providing the provision in form of cash benefits or in kind, they also ensure access to health services and medical care, providing unemployment benefits in the event of unemployment, maternity, family responsibilities, employment injury, illness, loss of the family, as well as during old age and retirement.

According to the WHO Report of 2019 on Global Health spending, there is reduction in out -of-pocket expenditure on Health and an increase in public spending globally by 60 % from 2000-2017 but still half of the population of the world still does not have full coverage on essential Health services. In India more than half of the population are pushed towards below poverty line post one hospitalization. Thus, is of utmost importance that individuals should be protected from the financial risks of using Health Services. The inception of Universal Health Coverage (UHC) aims at achieving this by the year 2030.

Health as defined by WHO can be achieved only when people of the community are both Healthy and economically secured and to achieve that there are a number of social security schemes and associations running in the country for the underprivileged and poorer sections of the Country. One such Act is the **Employees State Insurance Corporation Act of 1948** (ESIC) which is first and oldest legislation schemes providing social security and medical benefits for the blue-collar workers of India.

ESIC Act of 1948 and benefits provided.

The Employee State Insurance Corporation Act was the first social security scheme which focused on providing financial aid and certain medical benefits to the labor-class post-independence. It came into being on 24th February 1952 and was inaugurated by out the Prime Minister Pandit Jawahar Lal Nehru in Kanpur. He was also the first honorary beneficiary under the Scheme. Initially the centers were present at Kanpur and Delhi covering about 1,20,000 employees under the scheme. In its 68 years of existence, ESIC has successfully catered to several benefits which include Health security insurance covering sickness, temporary and permanent disablement and from certain occupational hazards. It also provides maternity and vocational rehabilitation benefits

and services. There are several hospitals and dispensaries under the scheme which provides these benefits.

Salient features of ESI Act.

- It is applicable to whole India, provided that the State Government shows its intention to implement the provision of the act in their State.
- The following list of establishments come under ESI Coverage, with the condition that they should have 10 or more employees.
    i. Shops
    ii. Hotels and Restaurants engaged only in sales
    iii. Road Motor Transport Establishments
    iv. Cinema Theatres
    v. News Paper Establishments
    vi. Private Educational Establishments run by individuals, trustees, societies, or Medical Institutions (including Corporate, Joint Sector, charitable, trust etc.)

- ESI Act is not applicable to: -
    i. Seasonal Factories
    ii. Government owned factories where employees are getting better benefits
    iii. Indian Army, Navy, Air Force.
    iv. Factories with less than 10 workers are employed
    v. Factories less than 20 workers working without the aid of power.
    vi. Mines
    vii. Employees earning more than a specified amount of wage monthly. (Present limit is Rs 21000 per month).
- The contribution rate of employees (as of 01.07.2019) is 0.75% of the wages and that of employer's is 3.25% of the wages paid in respect of the employees. Employees those who earn up to Rs 176/- a day are exempted from payment of contribution.
- There are two contribution and benefit periods which are given as under:

Contribution Period	**Cash Benefit Period**

1st of April to 30th of September	1st of January of the following year to 30th of June
1st of October- 31st of March of following year	1st of July- 31st of December

Social security benefits provided under the ESIS Act

Benefit: -	**Features**
Medical Benefit	Full medical coverage to the insured person and the family at annual premium of Rs 120/-
Sickness Benefit	Cash benefit to the insured person of about 70% of the wages for a span of certified sickness of 91 days.
Maternity Benefit	The insured person will receive cash benefit for the period of 26 weeks during the pregnancy.
Dependent Benefit	The family or spouse of the insured person receives 90% of the wages monthly post the death of the IP.
Disablement Benefit	The insured person is entitled to 90 % of the wages for as long as the disability continues in terms of Temporary disablement Benefit. The insured person is entitled to 90% of the wages monthly depending on the extent of disablement.
Others	These include funeral charges and confinement charges given to the IP's wife or insured women as reimbursement where ESIC facilities are not present

Other Need based benefits provided to the Insured Persons (IP)

Benefit	**Features**
Vocational Rehabilitation	Vocational training provided to permanently disabled IPs
Physical Rehabilitation	Rehabilitation provided for disablement by injury related to employment
Old Age Medical Care	Medical care provided to Insure person post retirement

Funding of ESIC

Since the day of its initiation, the ESIC has come a long way. Today, according to the 2018-2009 annual report there are up to 12,11,174 factories. The total number of people insured under the scheme has increased over the years and is about 3.49 crores and the annual expenditure on medical benefit was around 8721 crores in the year 2018-2019. The ESIC scheme has also been instrumental in promoting medical training and education and continues to contribute in the construction of hospitals, dispensaries, and rehabilitation centers.

The ESIC has been an integral part in reducing the out-of-pocket expenditure on medical and health services for the blue-collar workers. The funding for the scheme comes from mostly the contributions from employers (4.75% of the monthly salary) and employees (1.75% of the monthly salary) on a monthly basis at a fixed percentage of the worker's salary and also from the state government's contribution towards the medical benefits scheme.

There has been new revision in the rules and regulations recently which points out 5 points, namely: -

- The employees who earn a monthly salary for INR 21,000 or less are entitled to pay premium with an exception made for employees earning a daily wage of INR 176 or less.
- For online registration, a minimum of 10 days is required to process the application.

- Companies/organizations having an employee base of more than 20 should be registered under the scheme.
- The companies need to re-work the salaries of employees with an INR 21,000 or less.
- The contribution for scheme has been revised and brought down to employees' contribution to 0.75% and the employer's share up to 3.25%, bringing the total share up to 4 %.

Even after its enormous success in coverage and accessibility for the industrial workers, studies have proven that there are still a great deal of work to be done in terms of reaching more and more employees and increasing utilization and satisfaction of the same. The purpose of this report is to investigate the past annual reports over the span of almost two decades and evaluate the trends and patterns of expenditure and revenue and the difference in them.

II. REVIEW OF LITERATURE

So far not much of literary work has been focused on studying the expenditure and revenues sustained by the ESIC over the years but the a lot of work has been done on the utilization awareness prevailing among the employees and satisfaction level of the workers towards the scheme and its available benefits. Although, the utilization of capitol and revenue can be estimated by looking into the annual reports and the financial reports available to be accessed at their website.

The standing committee of labor in their recent report of 2017-2018 has presented some useful insights and recommendations based on their observation to the ESIC to be followed. These observations are as follows: -

- There is a duality in the functioning of ESIC where the premium is collected by the Central government, but the benefits are being provided by the State Government. This duality leads to being ineffective in implementing the necessary services appropriately.
- The yearly collection of revenue by the premium levied is double of what is invested for the services and the benefits that they claim to provide. Only a handful of the states fully utilize the funds earmarked for these benefits and the rest return it back to ESIC as "Unspent Funds."
- The ESIC has not been able to finalize the teaming up with Ayushmann Bharat yet.
- There should be special audit for screening of the employees' eligibility to avail the scheme.
- A provision of regulatory system to be introduced in the ESIC as mandatory for all insurance schemes
- A check on the surplus corpus fund to be done.
- Massive funds have been earmarked for the construction of medical hospitals and institutions without any focus on utilizing these provisions on providing these benefits.
- Exemption from the scheme provided to organizations who claim to provide better benefits and services should be scrutinized for swindling.

Another study done on the ESIC by the Environics Trust in 2019 interpreted the same conclusions based on their study. The trust pointed out that the funds raised as compared to spend has been

significantly higher and that these funds if utilized well would be sufficient in providing world class healthcare services. Another aspect pointed out by the trust was the excessive outstanding arrears which were not recovered. The total amount of unrecoverable arrears mounted 30% increase from the year 2008-09 to 2012-13. This indicated to a faulty recovering mechanism of the scheme. The Environics trust in their report also mentioned the faulty budget allocation over the years has resulted in a great disparity in the sanctioned amount and the amount utilized. This causes underutilization of the funds to its capacity and indicated faults in the audit system in place.

All this points us to the fact that there is no shortage of funds rather the surplus of funds. Then the problem lies in the implementation strategies and audit systems which are gravely underutilizing the resources and investing in areas which do not need the immediate attention.

Some other researches have been done which shed light on the various other aspects of the ESIC functioning and its coverage. The work published on the IJSRD on "Employees Awareness on ESI benefit" (Saranya, 2018) divulged into the aspect of employees awareness and satisfaction level towards the benefits provided by the ESIC. It concluded that there was not enough awareness among the general employees about the provisions of benefits provided by the ESI as social security and medical benefits. It was suggested that awareness and knowledge about the same could be dispersed through seminars, workshops, print and visual media etc., the services should be made more approachable and based on cash benefits more to attract the working class.

The study conducted on the performance of ESIC with special reference to Tuticorin district of Tamil Nadu (Lakshmi, 2014). The study focuses on performance of ESIC and the perception of employees of the hospitals by the same. The primary data was collected and analyzed using various statistical tools like averages, F-statistics, Chi-square test and Garett ranking. The study concluded that the ESI run hospitals were not functioning to their full potential and there is a scope of improvement in the way things are being run.

Another similar study published in the journal JETIR February 2020 edition (Prakash, 2020) on the "Employees' awareness and utilization towards ESI Benefit". The study was conducted on 187 participants from Coimbatore using a pre-determined questionnaire and the data acquired was analyzed using weighted averages and percentages. The study concluded that with the recent developments and efforts made by the ESI for promoting and generating awareness about the

scheme, about 98.4% of the employees are fully aware and utilize their social security benefits regularly. Even though it is a great accomplishment but we also need to keep in mind that this is the scenario of a few states and that majority of the other states are still suffering from to generate ample awareness and hence a good utilization rate of the benefits and services provided by the ESIC.

Some other relevant studies done on the ESIC which targeted on the understanding of the workings and the extent to which the ESIC has its influence among people gives us an knowledge not only about the operational technicalities of the corporation but also to their efficacy of performance in different demographic locations.

In a study published in Social Research Foundation by Deblina Mitra, 2017, India titled Effectiveness of Medical Benefits under ESI Scheme: A Study on the Employees of Organized Sector in Kolkata. The objective of the study was to analyze the knowledge, awareness, perception of medical benefits received by the insured persons. In the study it was found that 60% of the IPs of the factories and 72% of IPs in the establishment had taken in patient treatment. Only 67% percent had taken further treatment from ESI Hospital, the main reason that came out was that the respondents were dissatisfied with large number of formalities to be fulfilled for claiming benefits under the ESI scheme.

Dash and Muraleedharan (2011) In their study, ―How Equitable is Employees‘ State Insurance Scheme in India?: A Case Study of Tamil Nadu, in which they tried to assess the utilization pattern of the ESI facilities and the extent of ESI Scheme to lower the out of pocket expenditure of the IPs. The findings of the study were that the utilization rate of the scheme was very low due to the perception of the IPs that the quality drugs of is very low, another reason long was long waiting periods, rude and disrespectful behavior of the hospital employees, delay in reimbursement of money spent on treatment.

Sekar and Jeyakodi (2012) in their article “A Study of the Performance of ESI Sickness Benefit Schemes in Madurai District” have written that majority of the IPs are ignorant of the benefits that they are entitled to, under ESI scheme. The reason that was found to be was there was lack of awareness amongst the employees of the ESI Hospital/ Dispensary.

A Study on the Working of the Employees State Insurance Corporation by Jose, K Mathew in 2013 examined the effectiveness of the benefits provided by the Corporation to the insured persons and it was found that the ESI Corporation is not giving adequate information to the employee, employer and IPs about the benefits of the Scheme, the quality of medical care is very poor, the amount of cash benefit is very less and is received very late. The insured persons do not get the benefits, the working of the corporation is very unsatisfactory for the IPs, the main concern of the corporation remains to be collection of contribution from the IPs rather than providing them their entitles benefits.

All these studies give us an understanding towards the workings of the ESI corporation and where they lack in the implementation of these services. Although there has been an upsurge in the awareness about the existence and utilization of the said social security scheme among the employees over the years but there is a long way to go in organizing and appliance of proper administration and resource allocation mechanisms.

There seems to be inadequacy in matters of financial management and allocation. Enormous unspent funds, great disparity among the forecasted and actual expenditure, earmarked excessive funds as administration and construction expenses and excessive mismanaged and unrecovered arrears are some of the serious issues faced by the ESIC. The purpose of this study is to evaluate these parameters and analysis the said patterns.

III. METHODOLOGY

The present study was designed to assess the Employees state insurance scheme in India. ESI annual reports have been used to know about the sources of income of the scheme and expenditure of the ESI scheme. Let us look into certain data provided by the annual reports of ESIC over the years and analyze the trends and patterns.

Sources of Data: - Annual Reports of ESIC from 2000-2018, journals and articles on ESIC, literary papers on the ESIC, was collected in tabular form for descriptive analysis.

Study period- The study covers a period of eighteen years from 2000 to 2018.

Data analysis- The collected data has been analyzed by using Descriptive Statistics and CAGR.

IV. OBJECTIVE: -

- **Broad objective: -**

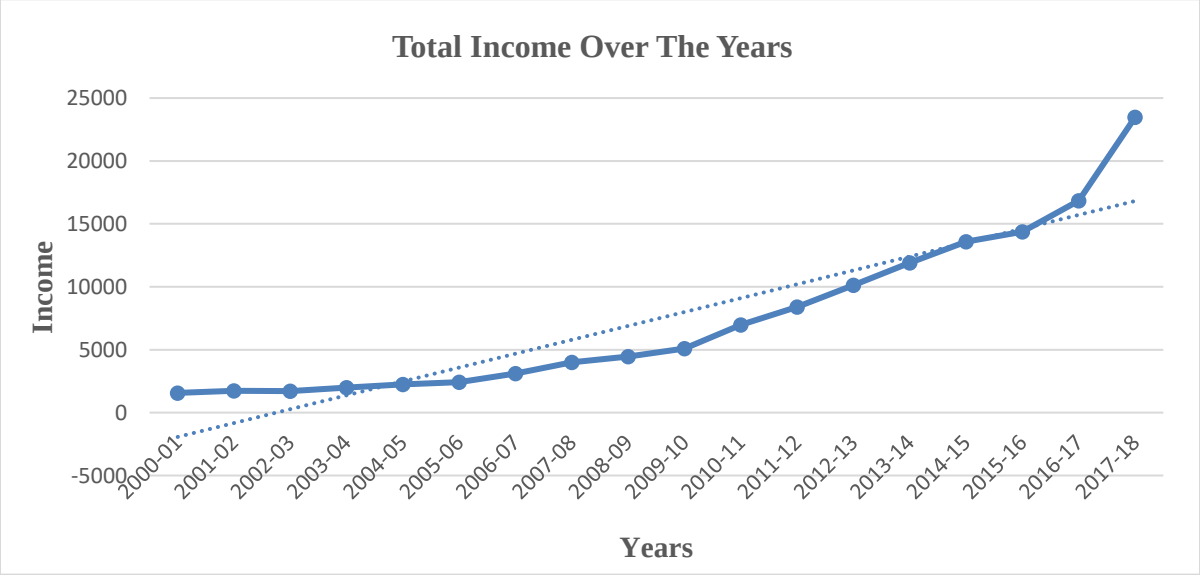
The objective of the study is to segregate and list the various revenue sources and the expenditure incurred by the corporation over the year since its inception and interpret the patterns wherein the corporation is lacking to implement effect and efficient ways to provide social security to the labor class.

- **Specific Objective: -**
  - Assessing the gaps for low rate of expenditure in ESIC.
  - Income and Revenue trend and pattern.
  - Descriptive Analysis of revenue and expenditure trend over the years.
  - To review the corpus of unrecoverable arrears over the years.
  - Comparative study analysis on the returns and investments on ESIS.

V. FINDINGS

Table 1: Yearly Income in crores (INR) of ESIC through various sources

	Source of Income						
Year	**Contribution**	**Interest**	**Fees, Fines & Forfeitures(a)**	**Rent, Rates & Taxes (b)**	**Other Income(c)**	**Total Other Income (a+b+c)**	**Total Income**
2000-01	1255.44	242.95	3.18	57.17	5.54	65.89	1564.28
2001-02	1249.91	397.28	3.08	56.96	22.96	83	1730.19
2002-03	1302.39	326.98	3.29	58.74	13.4	75.43	1704.81
2003-04	1380.72	513.34	5.69	57.62	18.26	81.51	1975.64
2004-05	1689.08	486.25	5.84	55.3	9.59	70.37	2246.06
2005-06	1933.56	389.4	7.89	56.62	14.15	78.66	2410.62
2006-07	2453.48	578.81	9.07	48.85	17.9	75.82	3108.11
2007-08	3262.84	628.36	10.77	68.22	19.13	98.12	3989.31
2008-09	3698.53	663.27	9.37	65.86	15.41	90.64	4452.45
2009-10	3896	1110.17	10.14	61.4	7.45	78.99	5085.17
2010-11	5748.77	1132.43	7.98	65.6	25.76	99.34	6980.61
2011-12	7070.11	1188.02	25.42	60.64	49.34	135.4	8393.55
2012-13	8111.45	1914.49	15.57	60.93	36.19	112.69	10138.6
2013-14	9632.54	2173.01	28.6	56.81	18.48	103.89	11909.4
2014-15	10867.1	2606.48	29.66	54.47	30.83	114.96	13588.6
2015-16	11455.6	2807.6	33.76	49.39	25.9	109.05	14372.2
2016-17	13662.4	3069.19	32.22	55.71	32.82	120.75	16852.4
2017-18	20077.2	3196.89	36.48	57.52	112.3	206.3	23480.4



Graph 1.1: line graph showing trend line and pattern of total income- Year wise

As per the data in Table 1 and Annexure Table 1.1 it is evident that the total income of the corporation has increase many folds over the years. The major portion of the income comes from the Contribution of employees and Employers, which forms almost 80% of the total income, interest on investments form another 18% of the income, and another 2% comes from various other sources.

Reserve funds of ESIC

ESIC has a huge pool of reserve funds which is formed for various activities such as to disburse various benefits, construction activities, depreciation etc. divided into: -

Earmarked Reserve Funds: It consists of following Capital construction reserve fund, Permanent(partial and total) disablement benefit reserve fund, Dependents benefit reserve fund, ESIC Provident fund, ESIC group insurance fund, Depreciation reserve fund of office building and staff quarters, Depreciation reserve fund of hospital building, Depreciation reserve fund of other assets (staff car replacement), Repair and maintenance reserve fund for office building and staff quarters, Repair and maintenance reserve fund of hospital buildings, Pension reserve fund, Leave encashment reserve fund, Gratuity reserve fund, PMS reserve fund, Depreciation reserve fund for medical education building.

Non-Earmarked Reserve Funds: It consists of Contingency reserve fund, and Investment of ESI General reserve.

Table 2: Yearly Reserve funds in crores (INR) of ESIC through various sources

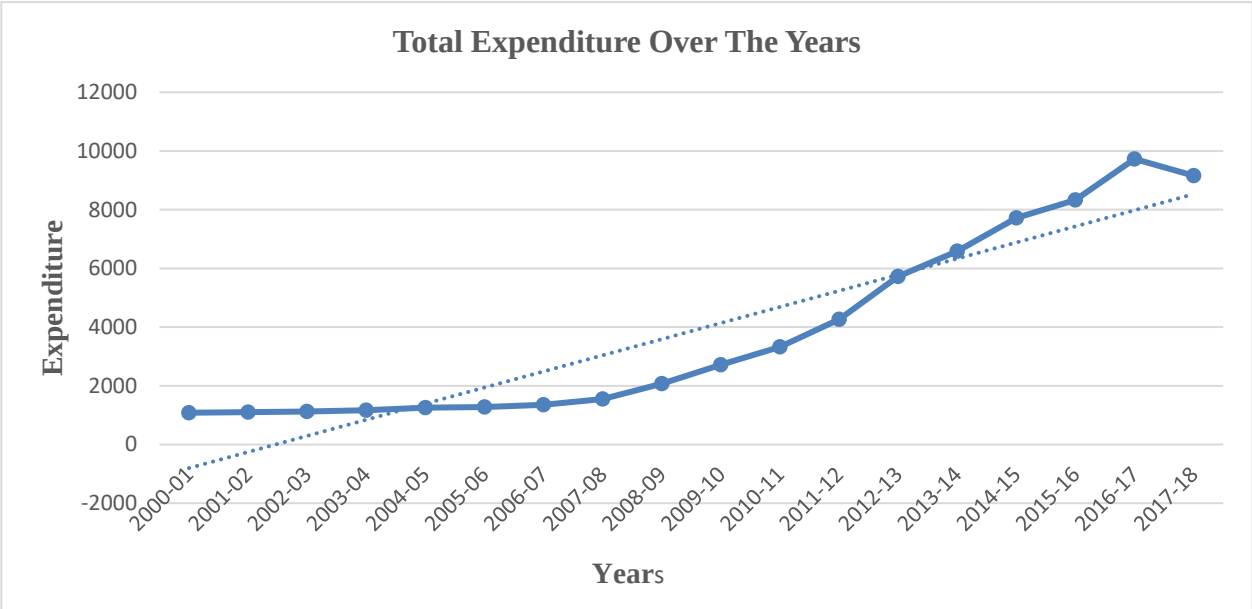
	Types of the Fund			**The funds stand invested as under**		
	Earmarked Reserve Funds	Non-Earmarked Reserve Funds	Total	FD with Public Sector Banks	SD with Central Government	Total
Amount as on 31.03.01	2755.67	3633.03	6388.7	2637.27	3751.43	6388.7
Amount as on 31.03.02	3207.34	4153.74	7361.08	3253.27	4107.81	7361.08
Amount as on 31.03.03	3505.56	4718.25	8223.81	3746.3	4477.51	8223.81
Amount as on 31.03.04	3847.25	5537.88	9385.13	4549.41	4835.72	9385.13
Amount as on 31.03.05	4223.78	6516.21	10739.99	5517.42	5222.57	10739.99
Amount as on 31.03.06	4509.05	7629.8	12138.85	6498.47	5640.38	12138.85
Amount as on 31.03.07	5454.41	8733.26	14187.67	8096.06	6091.61	14187.67

Amount as on 31.03.08	5928.81	11038.43	16967.24	10388.31	6578.93	16967.24
Amount as on 31.03.09	6225.33	13357.83	19583.16	12477.92	7105.25	19583.17
Amount as on 31.03.10	10704.93	10841.51	21546.44	13872.77	7673.67	21546.44
Amount as on 31.03.11	10460.95	14338.41	24799.36	16511.8	8287.56	24799.36
Amount as on 31.03.12	9746.64	18570.35	28316.99	19366.43	8950.57	28317
Amount as on 31.03.13	15988.43	156.5	16144.93	21971.95	9666.62	31638.57
Amount as on 31.03.14	13240.63	23627.75	36868.38	26360.77	10507.61	36868.38
Amount as on 31.03.15	15243.43	27524.08	42767.51	31239.82	11527.69	42767.51
Amount as on 31.03.16	17459.75	31897.87	49357.62	36907.72	12449.9	49357.62
Amount as on 31.03.17	20639.92	38743.06	59382.98	45937.09	13445.89	59382.98
Amount as on 31.03.18	21624.05	52724.38	74348.43	59857.11	14491.32	74348.43

- As its evident from the data given in the table that ESIC has huge pol of reserve funds, which is deposited in PSU Banks and as Special deposit with the Central Government.
- The reserve fund has increased to the tune of 438% in 2018 from 2008.
- And the annual growth rate of reserve fund is in the range of 15-25% over the years, which turnouts to be a very high Annual Growth Rate.
- As of 31.03.2018 ESIC has reserve fund to the tune of 74348.43 Crores, which is a very huge amount.

Table 3: Yearly Expenditure in crores (INR) of ESIC through various sources

Benefits					Other Expenditure				Total Expenditure
Year	Medical Benefits	Cash Benefits	Other Benefits	Total Benefits	Administrative Expenses	Contribution to Capital Construction Fund (x)	Other Expenses (y)	Total Other Expenses (x+y)	
2000-01	542.29	285.64	0.77	828.7	170.95	62.77	20.16	82.93	1082.5808
2001-02	543.37	300.16	0.778	844.31	176.43	62.5	20.88	83.38	1104.1219
2002-03	565.2	285.61	0.798	851.6	177.22	65.12	24.37	89.49	1118.318
2003-04	620.38	273.97	0.807	894.35	182.77	69.03	23.51	92.54	1169.66
2004-05	686.37	264.69	0.804	951.87	199.96	84.45	21.9	106.36	1258.19
2005-06	724.11	273.74	1.15	999	210.96	19.34	49.84	69.17	1279.13
2006-07	779.78	272.31	2.43	1054.52	221.39	24.53	49.72	74.25	1350.16
2007-08	924.79	287.28	2.09	1214.16	247.97	32.63	54.08	86.71	1548.84
2008-09	1123.2	380.7	2.52	1506.45	412.76	36.98	112.63	149.61	2068.82
2009-10	1626.9	426.93	1.89	2055.75	504.36	38.96	112.72	151.68	2711.79
2010-11	2123.7	494.1	2.45	2620.23	524.2	57.49	125.68	183.17	3327.6
2011-12	2689.6	681.85	3.2	3374.67	647.06	70.7	169.25	239.95	4261.68
2012-13	4058.1	761.17	2.62	4821.92	826.12	81.11	0	81.11	5729.15
2013-14	4859.9	598.69	2.66	5461.25	1028.02	96.33	0	96.33	6585.6
2014-15	5714.3	681.97	2.56	6398.87	1210.42	108.67	0	108.67	7717.96
2015-16	6113	703.98	2.52	6819.47	1390.63	114.56	0	114.56	8324.66
2016-17	6256.6	1517.9	2.45	7776.95	1732.04	136.62	82.1	218.72	9727.71
2017-18	6867.7	642.84	2.52	7513.09	1031.06	200.07	416.44	616.51	9161.36



Graph 3.1: line graph showing the trend line and pattern of total expenditure- Year wise

- As seen in the table, Medical Benefits is the major expenditure of the Corporation and accounts for around 60-75% of the Total Expenditure
- Another main expenditure is in the form of Cash Benefit (10-15%) and Administrative Expenses also accounts for the similar amount of Annual Expenditure
- Another significant expenditure is Other Benefits and Contribution to Capital Construction Funds.
- As seen in the Graph 1 the trend of income has increased very much over the years, but the expenditure has not increased the way income has increased over the years. And, the excess of income has also been increasing year by year which shows over estimation of yearly budget by the corporation. (Table 3)

Income and expenditure Analysis: - Excess income over expenditure

Table 4: - Income and Expenditure in crores (INR) incurred by the ESIC from 2000-2017.

Year	Revenue Income	Revenue Expenditure	Excess Income
2000	1564.28	1082.58	481.7
2001	1730.19	1104.12	626.07
2002	1704.81	1118.32	586.49
2003	1975.64	1170.48	805.16
2004	2246.06	1258.19	987.87
2005	2410.61	1278.96	**1131.65**
2006	3108.11	1350.16	**1757.95**
2007	3989.32	1548.84	**2440.48**
2008	4452.45	2068.83	**2383.62**
2009	5085.17	2711.82	**2373.35**
2010	6980.61	3327.6	**3653.01**
2011	8393.55	4261.69	**4131.86**
2012	10138.63	5729.15	**4409.48**
2013	11909.44	6554.67	**5354.77**
2014	13588.58	7713.57	**5875.01**
2015	14372.22	7874.75	**6497.47**
2016	16582.38	9727.71	**6854.67**
2017	23480.37	9161.36	**14319.01**

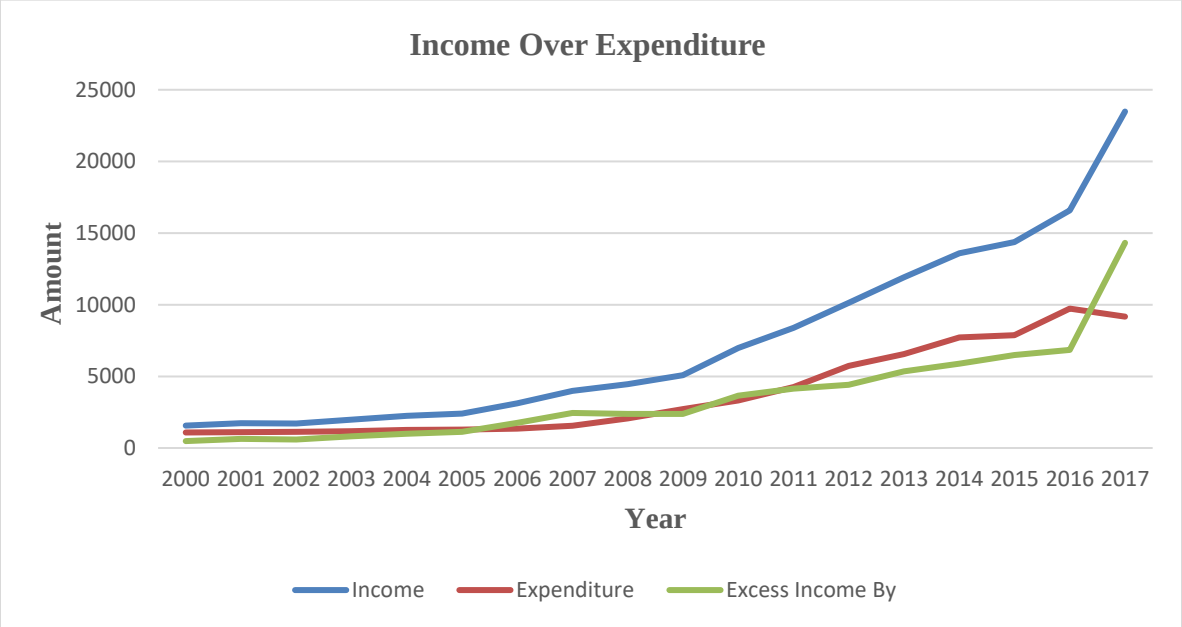


Figure 4.1: Graphical representation of trend of Income, Expenditure and Surplus amount of ESIC from 2000 to 2018.

As per the financial reports. Around 80 % of the expenditure is attributed to medical benefits (54-64%) and cash benefits (18%), the rest 20 % is attributed to administrative and construction expenses of the corporation. In contrast to this the total contribution accounts about 84% of income each year. Table 4 above lists the expenditure and income of the ESIC from the year 2008-2017. It is quite clear by the table there is a surplus of funds acquired by the corporation as contribution from the employers and employees over the years and this margin has been increasing exponentially each year.

This brings a question on situation seen here which is totally opposite to what was expected from the ESIC, as evident from the table and graphical represntation. We can observe that year by year the surplus amount is increasing. And as evident nothing is done to increase the amount of expenditure.

Seeing the huge amount of income and reserve funds of the corporation, they should focus to increase the expenditure in the form of medical and cash benefits every year, but in reality both income and surplus amount is increasing. And infact expenditure has shown a decreasing trend in recent years.

This is a worrisome scenario since the excess funds are marked as unspent funds and are not being utilized for providing the health and social security services the corporation claims at providing.

Interpretation:-

The reasons if we look closely can be accounted for to the following:

- The increase in the acquisition of total number of emolyees and factories under the scheme over the years has led to the vast revenue accumulation.
- The salary slab may have changed for the employees over the years in terms of incentives and raises.
- If we look closely at the figure 4.1 and table 5, it tells us that post the year 2005 the revebus has been exposnetially greater which can be contributed to various external factors.

Table 5 :- Premium contribution on the total revenue from 2000-2017

Year	Premium Contribution	Revenue Expenditure
2000	1255.44	1082.58
2001	1249.91	1104.12
2002	1302.39	1118.32
2003	1380.72	1170.48
2004	1689.08	1258.19
2005	1933.56	1278.96
2006	2453.48	1350.16
2007	3262.84	1548.84
2008	3698.53	2068.83
2009	3896	2711.82
2010	5748.77	3327.6
2011	7070.11	4261.69
2012	8111.45	5729.15
2013	9632.54	6554.67
2014	10867.1	7713.57
2015	11455.6	7874.75
2016	13662.4	9727.71
2017	20077.2	9161.36

If we look closely then we can interpret that the premiun contribution over the said years have been suffiecient amunt indivator of thr excess reveue collection being undertaken within the organisation. Since the contribution amount has been constant,the increase in the total contribution amount can be attribute to the following reasons:-

- The increase in the acquisition of total number of emolyees and factories under the scheme over the years.
- The salary slab may have changed for the employees over the years in terms of incentives and raises.

Thus, if we negate the other sources of income like interest rceived, reserved earmarked funds etc. the conribution amount has been proven to be more than suffiient funds to facilate the expenditure that the corporation hads ncurrewd in the above mentioned years.

Time series Analysis

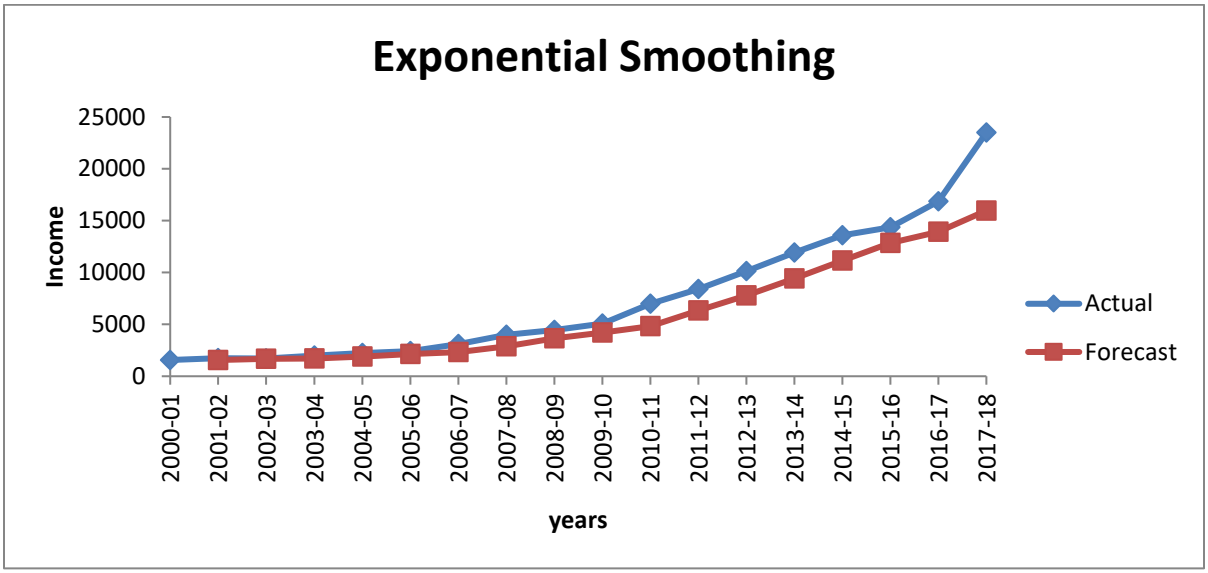


Figure 5.1: time series analysis of total income

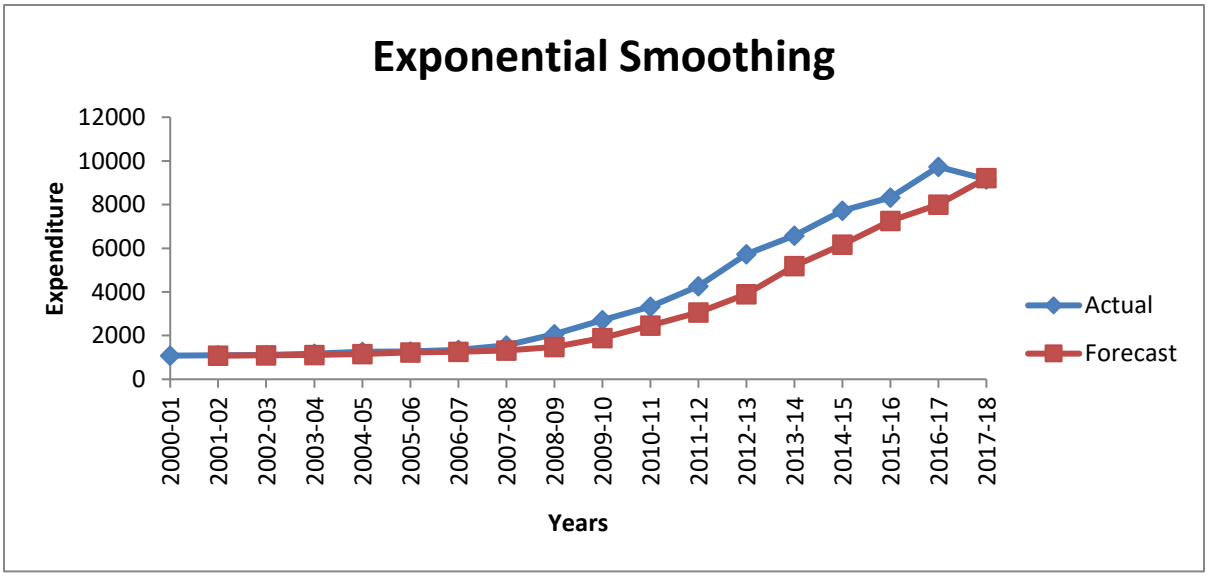


Figure 5.2: time series analysis of total expenditure

Recovery of arrears

Further if you probe further into the unrecovered arrears by the ESIC (Table 5), it provides a detailed insight into the huge amount of funds which are left unrecovered each year. These figures again have been increasing each year.

Table 6: - Unrecovered Arrears in crores (INR) by The ESIC from 2000-2017

Year	The break-up of outstanding arrears
2000	41.37
2001	42.01
2002	57.61
2003	59.61
2004	**136.66**
2005	**148.20**
2006	68.64
2007	**101.81**
2008	63.29
2009	62.07
2010	**129.29**
2011	84.39
2012	**189.8**
2013	**185.24**
2014	**308.64**
2015	**299.33**
2016	**112.88**
2017	**710.45**

Except for the years 2000-2003,2006, 2008, 2009 and 2011, all the remaining year has seen an enormous amount of arrears which could not be recovered. This is indicative of a faulty recovering mechanism.

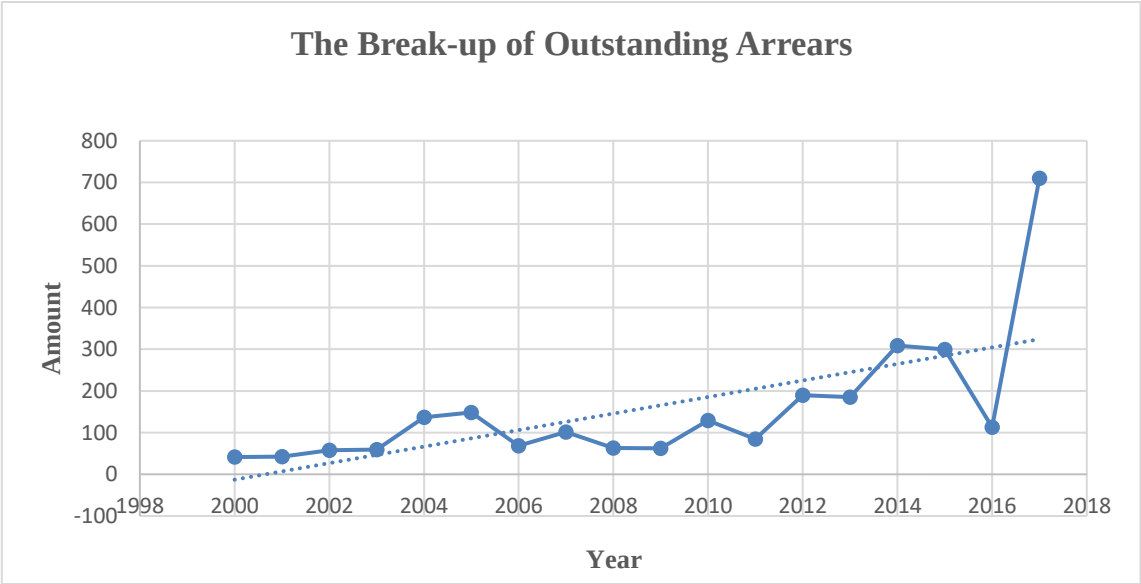


Figure 6.1: - Graphical representation of the outstanding amount of arrears

Most of the funds not recovered were from the industries and companies which were deemed as sick industries and were registered under the BIFR (Board of Industrial and Financial reconstruction). A graphical representation (figure 5.1) of the same data presented in table 5 gives us an insight as to the erratic pattern of the unrecoverable arrears. Even the collection of arrears has been quite impressive with about INR 305.21 crores against a sum of total arrears of about INR 710.45 crores in the year 2017 but it is about 42% of the total arrears for the financial year and hence inadequate.

Budget

Another point of concern is the budget been made over the years are grossly over-estimated and underutilized. A closer look at Table 9 indicates the expenditure incurred over the years due to all the services, cash benefits and administrative expenses is still less compared to the agreed upon budget estimates. The year 2012 is the only year where one can infer that the budget cutoff made was close enough to the actual expenditure made in that financial years.

Table 7: - Over estimation of the required Budget in crores (INR) over the years 2000-2017

Year	Budget Estimates	Expenditure	Difference
2000	--	1082.58	--
2001	1287.39	1104.12	**+183.27**
2002	1401.02	1118.32	**+282.7**
2003	1498.2	1170.48	**+327.72**
2004	1484.07	1258.19	**+225.88**
2005	1644.91	1278.96	**+365.95**
2006	--	1350.16	--
2007	--	1548.84	--
2008	2130.71	2068.83	+61.88
2009	3399.05	2711.82	**+687.23**
2010	3890.71	3327.6	**+563.11**
2011	5079.7	4261.69	**+818.01**
2012	5749.63	5729.15	+20.48
2013	7119.18	6554.67	**+564.51**
2014	8759.6	7713.57	**+1046.03**
2015	8877.37	7874.75	**+1002.62**
2016	10654.47	9727.71	**+926.76**
2017	15361.01	9161.36	**+6199.65**

**the budget estimates for years 2000,2006 & 2007 are not available*

The excess in estimates infers a lack in judgement and proper evaluation on the part of the corporation to decide the budget for the upcoming financial year and hence there exist a great deal of disparity among the actual expenditure and budget estimates made.

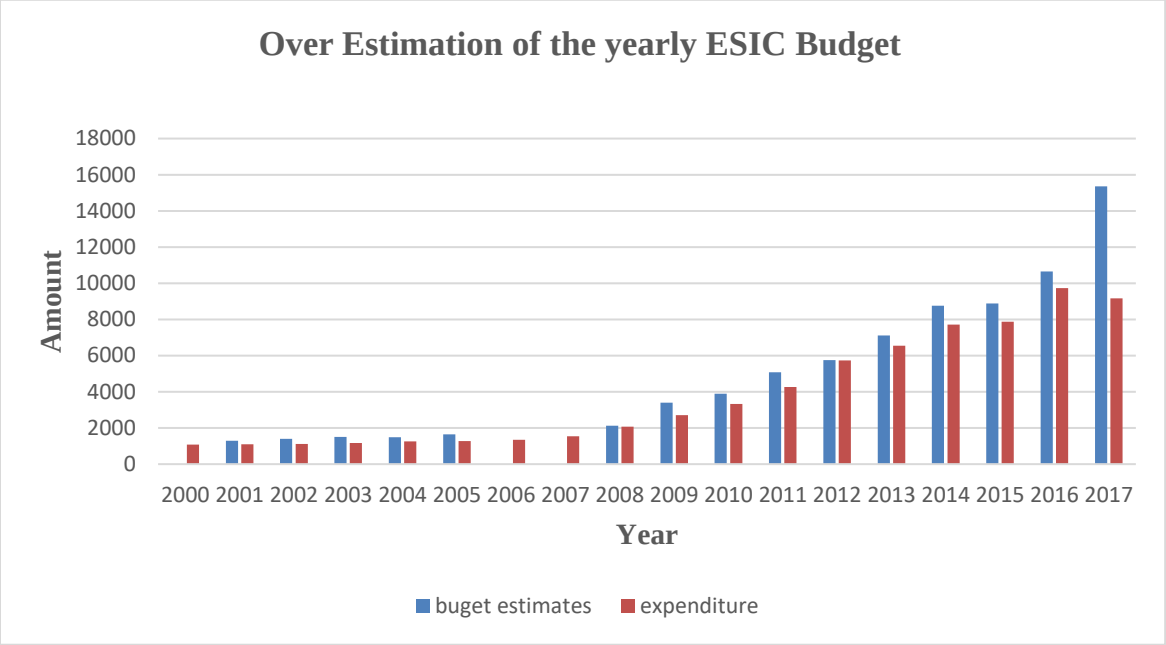


Figure 7.1: - Graphical representation of the Budget estimates and expenditure

VI. CONCLUSION

The problem lies in the implementation and utilization of these funds effectively. If we look into the budget or the inefficient recovering of arrears or defaulters, all this points out to the fact that is a rather good flow of funds in the organization with which they can provide world class health services and infrastructure at cheap and affordable prices.

The currents situation of the ESIC, directs us to derive the following deductions: -

- The low expenditure of the total Income of the corporation which is shown in Table 4 in which we can observe that the corporation is able to utilize only 40-62% of the total income, and rest of the amount is left as surplus. Which shows that there is a huge discrepancy in proper utilization of the resources. Maybe it is due to improper planning and implementation.
- The budget drawn up every year has been done without any deliberation or evaluation of the need. This has led to having two far up figures in terms of the actual expenditure gone in the functioning purposes and the drawn-up budget. This suggests towards the faulty audit mechanism being at play.
- The annual reports of the recent years have revealed that there is a lot of revenue accumulated which are not being properly utilized. Most of the funds are being utilized under administrative and construction purposes.
- The excess funds are untouched and yet these are not being carried over to the next financial year and utilized.
- The non-recovered arrears alone constitute a huge chunk of revenue which could have been used as funds to finance the health services and other important services provided by the ESIC. This indicates to a faulty recovery system and department which has not been able to work efficiently.
- There is a huge amount of funds earmarked as reserve funds which go unutilized. This is again a gross misuse of funds which could have been put to proper use.
- Also as observed from Table 2, there is around 73000 Crore of reserve fund as of 31.03.2018, which is due to low rate of expenditure due to which the amount is left as

surplus. GOI and ESIC should use some amount of the reserve fund for the benefits of the workers.

- Though the amount of Expenditure on Medical Benefits (see annexure figure 1.1) has increased over the years but there's very low disbursement of cash benefits which has decreased from 19% in 2007-08 to 7% in 2017-18 of the total expenditure, though the implementation and coverage has increased many folds during these years, but the decrease in cash benefits shows that there may be increased scrutiny in disbursement of funds. Also, it has been observed that average time to receive funds is very high which can be a reason of Workers not willing to apply for the cash benefits or may be their request is being rejected.

If these problems were dissolved, then there would be plenty of resources to finance the expenses required to provide the services the corporation claims for and that too in the best possible way. The money acquired by recovering arrears and fixing the budget according to requirement, the corporation will be able to bank a lumpsum amount and utilize it accordingly.

VII. RECOMMENDATIONS: -

As the above-mentioned tables, graphs and points have made it clear that there is a huge underutilization of the funds in ESIC. The utilization rate of only 43-60% shows that there is something wrong in the process of disbursement of the benefits to the end beneficiaries. Also, there is no representation of any third party in the corporation, due to which there is no monitoring on the implementation of the services.

- The huge reserve funds should be utilized for making the existing facilities more efficient and beneficial for the IPs
- There should be a rigorous surveillance mechanism to monitor the schemes expenses towards the medical and cash benefits and monthly or quarterly audit systems audit systems should be in place to monitor the outflow of funds.
- The budget estimate can also be revised based on the half yearly analysis.
- More and more focus should be in providing world class medical services and benefits than building upon the infrastructure. As even though the corporation has put up some serious efforts in providing cash and medical benefits to the labor class, it still has not created a big impact if we see holistically.
- This can be achieved by reducing the contribution percentage given by the employers and employees as monthly premium. The good news being that according to the recent reports the ESI has revised the contribution for scheme and brought down to employees 'contribution to 0.75% and the employer's share up to 3.25%, bringing the total share up to 4 %. This will reduce the excess income generation to an extent.
- Also, there needs to be proper audit system which will decide on how much to be spent on which health and cash benefit. This will have a twofold effect. First, they will have a proper budget drawn up which will not allow any wastage of resources. Second, the overall income will be a much realistic figure rather than it being over estimated.

5. ANNEXURES

Table 1: Descriptive Statistics of Income and Expenditure of ESI Scheme from year 2000-2018

	MEAN	ST. DEVIATION	MAX	MIN	CAGR (%)
1.INCOME					
1.1 CONTRIBUTION	6041.5083	5327.81808	20077.18	1249.91	17%
1.2 INTEREST	1301.3844	1037.2537	3196.89	242.95	15%
1.3 FEES, FINES & FORFEITURES	15.445	11.9133643	36.48	3.08	15%
1.4 RENT, RATES & TAXES	58.211667	5.08260615	68.22	48.85	0%
1.5 OTHER INCOME	26.411667	24.0648382	112.3	5.54	18%
TOTAL INCOME	7789.3024	6358.95936	23480.37	1564.28	16%
2.EXPENDITURE					
2.1 MEDICAL BENEFITS	2601.0767	2352.01628	6867.73	542.29	15%
2.2 CASH BENEFITS	507.46278	311.274549	1517.93	265.49	5%
2.3 OTHER BENEFITS	1.9453889	0.83906006	3.2	0.77	7%
2.4 ADMINISTRATIVE EXPENSES	605.21222	487.878735	1732.04	170.94	10%
2.5 CONTRIBUTION TO CAPITAL CONSTRUCTION FUND	75.658889	44.4978681	200.07	19.34	7%
GRAND TOTAL (expenditure)	3862.3339	3147.41915	9727.71	1082.58	13%

Expenditure incurred on medical, cash benefits and others

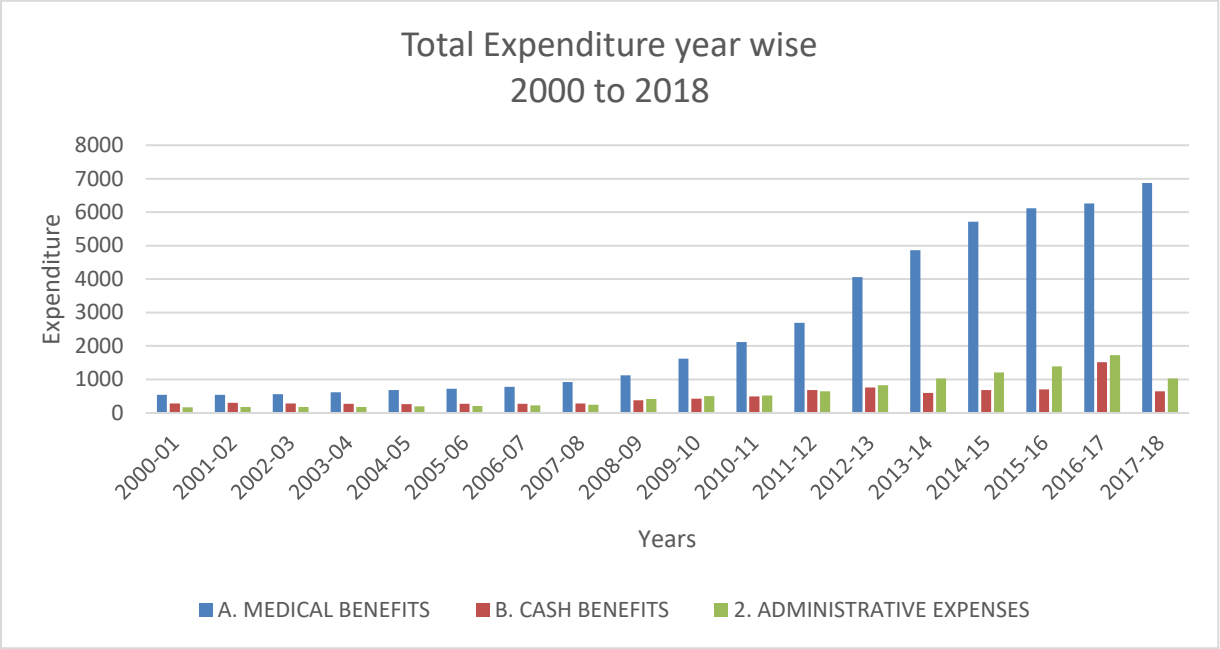


Figure 1.1: Total expenditure- medical, cash and administrative expenses

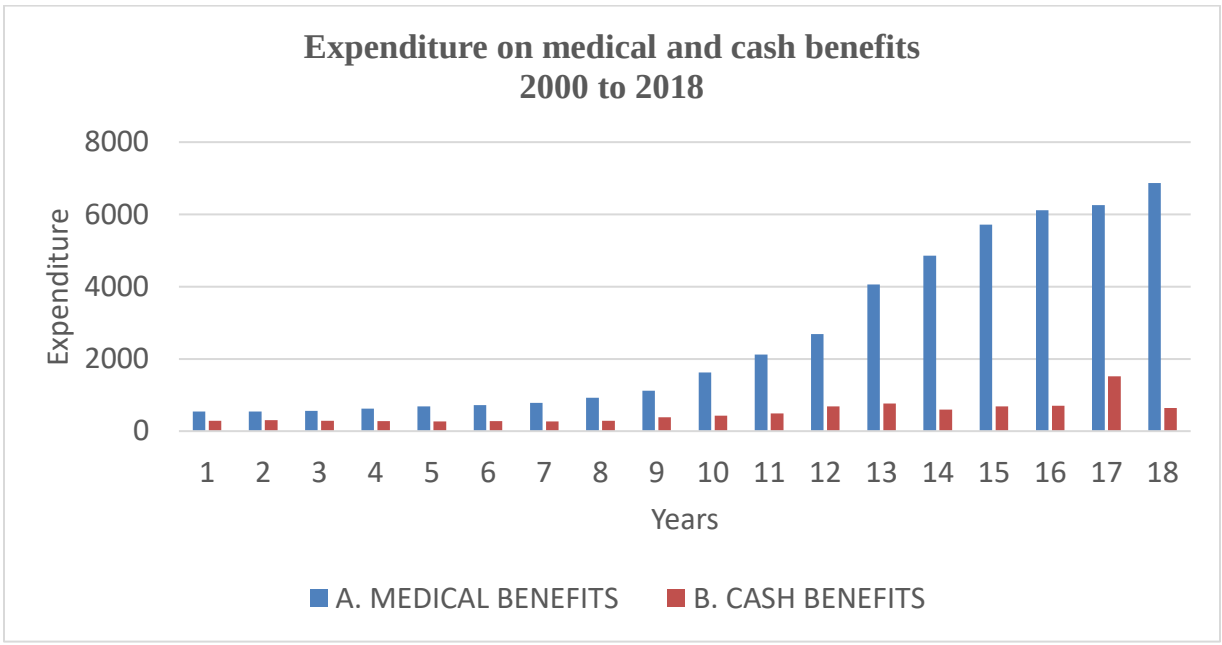


Figure 1.2: Expenditure on medical and cash benefits

Table 2: Percentage of sickness, maternity and permanent disablement benefits out of total cash benefits – year wise 2000-18

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Sickness Benefit	32%	30%	27%	28%	32%	38%	37%	37%	18%	48%
Maternity Benefits	8%	8%	8%	7%	8%	12%	12%	13%	6%	28%
Permanent Disablement benefits	29%	25%	23%	18%	13%	28%	27%	35%	17%	42%

Table 3: - Amount and percentage of total amount utilized (expenditure) out of total income

	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Amount utilized	2383.63	2373.38	3653.01	4131.87	4409.48	5323.84	5870.62	6047.56	7124.67	14319.01
percentage	46%	53%	48%	51%	57%	55%	57%	58%	58%	39%

Annexure Table 4 Table representing percentage of contribution, interest on investment and other total income to total income, year wise

	Contribution	Interest on Investment	Other Total Income
Year	Percentage in relation to total Income		
2000-01	80.26	15.54	4.22
2001-02	72.25	22.97	4.8
2002-03	76.4	19.18	4.43
2003-04	69.89	25.99	4.13
2004-05	75.21	21.65	3.14
2005-06	80.22	16.16	3.27
2006-07	78.94	18.63	2.44
2007-08	81.79	15.76	2.46
2008-09	83.07	14.9	2.04
2009-10	76.62	21.84	1.56
2010-11	82.36	16.23	1.43
2011-12	84.24	14.16	1.62
2012-13	80.01	18.89	1.12
2013-14	80.89	18.25	0.88
2014-15	79.98	19.19	0.85
2015-16	79.71	19.54	0.76
2016-17	81.08	18.22	0.72
2017-18	85.51	13.62	0.88

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Summer online Course Report

On

Essentials of Global Health

Provided by: -

Yale University

Coursera (Yale University)

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I. COURSE DESCRIPTION

Essentials of Global Health targets at developing a comprehensive knowledge base as to what is global health is and how it works. The entire course is structured in such a way that which is easy to grasp and comprehend. The course is designed in a way which will allow us to learn about the global health systems in place in an easy and structure manner.

The course deals with pertinent aspect of the current health care systems across the globe. It ponders over the questions as to what are the various disease from which people get sick, disabled or die from; what are the causative reasons or agents of these diseases and conditions; who are the people most affected by these conditions and how does these affect us as a whole globally.

The course also ponders into what we can do to address the hey health issues and try and solve them at the least cost which is sustainable and impactful at the same time. The course will focus on the low- and middle-income countries, the health of the poor, and health disparities.

The course pays attention to the health system issues, the link between health and development, and the health matters related to global interdependence, it will be covering the key concepts and framework is a much more practical and sensible way.

The outline of the course is designed in such a way that it transitions into each topic easily and consistently. Each chapter has links to the other which makes it easy to co relate every topic with ease. It deals with understanding the global health issues prevalent in various countries and what can be done to tackle these issues.

II. OBJECTIVES OF COURSE

- Understanding the key Health concepts related to Global Health.
- Understand the issues and problems pertaining to the global Health and try and analyze the situation in various perspective.
- Discuss the burden the diseases in various regions of the World.
    - based on the various socio and demographic aspects like sex, age, and location.
    - Its risk factors and how to deal with them in a cost-effective way.
- Asses the Health disparities, concentrating mainly towards the low income and marginalized countries.
- Outline the key actors and organizations in global health and the way they cooperate to address critical global health concerns.
- Understand and analyze the key global Health challenges that may arise in the future and how to tackle them in a sensible and cost-effective way.

III. COURSE CONTENTS

The course has been broadly divided into 10-week program and a total of 21 hours of study curriculum. All topics are inter-connected and easy to relate with the concepts required for the course.

The following are the weekly outline of the topics covered in the course

Week 1: Introduction

- **Chapter 1: - Key perspectives on Global Health and determinants of health**
- **Chapter 2: - Social determinants of health**
- **Chapter 3: - The global health context and who pays**

Week 2: The Burden of the Disease

- **Chapter 4 :- The State of the World's Health**
- **Chapter 5: - Demography and Health**
- **Chapter 6: - The DALY**
- **Chapter 7: - What Do People get Sick, Disabled, and Die From?**
- **Chapter 8: - Key Risk Factor**

Week 3: Health systems and the value for money in Health

- **Chapter 9: - Value for money in Global health**
- **Chapter 10: -The organization and aims of Health systems**

- **Chapter 11: - Ethical priority setting in health**
- **Chapter 12: - Health expenditure, the quest for UHC and pharmaceuticals**

Week 4: Cross cutting themes in Healthcare

- **Chapter 13: - Health disparities**
- **Chapter14: - The environment and health and climate change and health**
- **Chapter15: - Nutrition and global health**

Week 5: Cross cutting themes in Global Healthcare

- **Chapter 16: - Women's health**
- **Chapter17: - Child's health**
- **Chapter 18: - Childhood immunization**

Week 6: Cross cutting themes in Global Healthcare Part II

- **Chapter 19: - Adolescent health**
- **Chapter 20: - Complex humanitarian Emergencies**

Week 7: Critical causes of illness and death

- **Chapter 21: - Emerging and re-emerging IDs and Anti-microbial resistance**
- **Chapter 22: - HIV**
- **Chapter 23: - Tuberculosis**
- **Chapter 24: - Malaria**

Week 8 & 9: Critical causes of illness and death Part II

- **Chapter 25: - Neglected Tropical Diseases**
- **Chapter 26: - Non-communicable Diseases, Cardiovascular Diseases, and diabetes**
- **Chapter 27: - Cancer and diabetes**
- **Chapter 28: - Tobacco and Alcohol**
- **Chapter 29: - Mental health'**
- **Chapter 30: - Injuries**

Week 10: Looking forward

- **Chapter 31: - Intersectoral approaches to enabling better health**
- **Chapter32: - Science and technology for health**
- **Chapter 33: - Key challenges for the future**

IV. LEARNING METHODOLOGY

The entire course has been designed and conceptualized with the help of the following:

- Video lectures
- Required Readings
- Recommended readings
- Recommended videos

Video lectures: - there are certain videos which talk about the central theme of each session and are descriptive in nature. These video sessions are the class sessions delving into the topics of the week by the course lecturer.

Required Readings: - there are several selected numbers of readings dedicated to each of the sessions individually which are central to the understanding the context of the topic. All the topics provided in the reading material have been clearly marked and mentioned on which part of the reading material the student must put emphasis on or focus most on.

Required readings: - Global Health 101, third edition is a comprehensive introductory textbook that closely follows the contents of essentials of Global Health.

Journals and articles: - There are specified reading material marked for each session. Mostly the reading material consists of published articles, journals from the Lancet website and sections from the official WHO website. For reading up these materials as well, it has been indicated which parts to be read and how such emphasis to be given on which all sections

Recommended Readings: - The additional articles and journals and books indicated as recommended readings are being given to enhance our understanding of the topic and gain the much-needed knowledge about the topics.

Recommended Videos: - there are some videos which are additional to course. These videos are talks and sessions held by guest lecturer who play an important role in the Health care sector and has done significant contribution to the field.

These are meant to help the learner get a better feel for the topic which is being covered. Most learners will find the videos brief, easy and enjoyable to watch, and very enlightening.

V. KEY LEARNINGS

Key perspectives on Global Health and determinants of health

The session deals with what do we mean by the term global health and what are the determinants of health which have an effect for achieving good health status for all in the community. In achieving global health, we need to take small steps towards it, hence when we can ensure good health for our own community only then can we widen our reach into global status quo.

What do we understand by the term global health?

It can be culminated into the following aspects namely, it refers to the health of people in a global context where the issues pertaining to health transcends national boundaries and that require cooperative action. It is a field of constant study, research, and practice which places importance on health and achieving equity in health for all individuals.

It is important to study and understand global health to be able to not only preach it but also to abide by it and implement it. It is what is ethically acceptable to have premium health services at disposal of anyone to achieve the status of global health. Maintaining good health will affect the individual and its productivity hence increasing the productivity of the community as a while for the betterment if the country and its economy. Good health is directly proportional to economic and social development of not just the individual but also the country.

This realization has seen a change in the country governance over the years as more and more resources and funds are being allocated towards healthcare. This transcends across borders and it is one such aspect where countries work hand in hand.

Public Health

It has been defined as “the science and art of preventing disease”, prolonging life and improving quality of life through organized efforts and informed choices of society, organization, public and private, communities and individuals.

The public health is governed by four major factors: -

- The decision making based on the data and evidence
- A focus on the population rather than individual
- The importance and emphasis to be given to prevention than the curative part
- A common goal of social justice and equity.

Social determinants of health

To study and understand the concept of health more efficiently, one must first investigate the a few key concepts which play a vital role in health.

Risk factors: - Any attribute characteristics or exposure of an individual that increases the likelihood of developing a diseases or injury.

Social determinants: - The conditions in which people are born, grow, work, live and age and the wider set of forces and systems shaping the conditions of daily life.

There are certain factors which play role in shaping the health of the individual and the community. They are as follows: -

Individualistic factors: - This comprises of genetic makeup, age, sex, ethnicity, and the characteristics of a distinctive individual towards his/her health.

Social factors: - These include aspects like the physical environment like sanitation, hygiene and water and waste management, the socio-economic background of the individuals, access to health services etc. Also, the upbringing of the individual plays an important role in the maintenance of health.

External factors: - These include the government and policies which shape or affect the healthcare scenario of the country.

Risk factors can be classified as the following: -

Unmodifiable Risk factor: - A risk factor which is intrinsic and cannot be changed such as age, genetic makeup etc.

Modifiable Risk factor: - A risk factor that can be treated or controlled like diet.

The global health context and who pays

This session concentrated on the health scenario currently and the Sustainable development nations towards a better health outcome. It also discusses about the various global health actors which contribute greatly towards improving and enabling good health.

Key health related SDG targets: -

- By 2030, reduce the global maternal mortality ratio less than 70/100000 live births.
- End preventable deaths of newborns and U5MR.
- End epidemics od AIDS, malaria and NTDs
- Reduce premature mortality by 1/3rd from NCDs
- Ensure Universal health coverage to sexual and reproductive health care services
- Achieve Universal health coverage

Some of the key actors which work for improving health status worldwide are: -

- Individuals, communities, and government
- UN Agencies
- Multilateral/bilateral development organizations
- International Partnerships
- Foundations
- National Research & health oversight organizations
- Universities
- Consulting firms
- Product development partnerships
- Pharmaceutical Firms

Some of the pivotal organizations which are known for their valuable contribution to health are: -

WHO – It works into providing advocacy, policy making, technical research etc. and does not primarily focuses into financing programs and health campaigns. It has 150 country offices and regional offices.

UNAIDS – It is responsible for the world work for AIDS research, finance, advocacy, and policy making.

World Bank – Largest multilateral bank owned by all the countries. It has 189 member countries. 170 country staff and 130 locations around the world.

DFID – It is the Bilateral development organization of UK. It provides technical & financial assistance to countries which work with them.

Médecins sans frontiers: - it is an NGO run by doctors and are also known as doctors without borders.

Bill and Melinda gates foundation: - It was founded in 1997 and it supports technological advances for health and funds certain programs.

Oxfam- it was established in 1995 and it is an independent NGO to fight against poverty and share knowledge and provide resources and combine their efforts.

UNICEF- This organization aims at supporting world's children through fundraising, advocacy, and education. It works with the government, civic leaders, celebrities, corporations, campus groups and churches.

Save the Children- It deals with health, education, protection, gender equality, policy, and advocacy for children. It provides emergency assistance for children all over the world.

IAVI- It is a non-profit scientific research organization dedicated to addressing urgent, unmet global health challenges like HIC and Tb.

The State of the World's Health

There are several milestones or notable health outcomes which we have achieved over the years:

- There is an increase of life expectancy of about 42% around the world from 1960-2013.
- There is 50% fewer U5MR deaths in 2013 than in 1990
- There is a decline in new HIV cases by about 1.2 million each year than in the mid to late 1990s.
- About 44% fewer maternal deaths in 2015 as compared to 1990s.
- 2.5 million children have been immunized against polio since 1988 and about 99.9% reduction of guinea worm cases from 1986 to 2015.

Even though have been significant improvement and work being done across the globe, a lot needs to be achieved and overcome. There is a lot of work to be done to achieve the desired level of health outcomes.

Some of the areas where we are still struggling are:

- About 45% of child deaths are due to under nutrition.
- 2.1 million deaths due to HIV and 1.5 million deaths due to Tb alone in the year 2013.
- Approximately 2 million people were infected with soil transmitted helminths.

Key health indicators: - To assess the health status of any country, we need to evaluate certain key health indicators of the country to understand the condition of population living in that country and accordingly take suitable measures.

Life expectancy: The average number of years a newborn baby could expect to live if current mortality trends were to continue for the rest of the newborn's life.

Death Rate: Total number of deaths per 1000 people of a given population of a geographical region in a given year.

Maternal mortality Ratio: The number of women who die because of pregnancy and childbirth per 100,000 live births in a given year.

Neonatal Mortality Rate: The total number of deaths of infants under 28 days of age in a given year per 1000 live births of that year.

Infant Mortality rate: the number of deaths of infants under 1 year of age per 1000 live births that year,

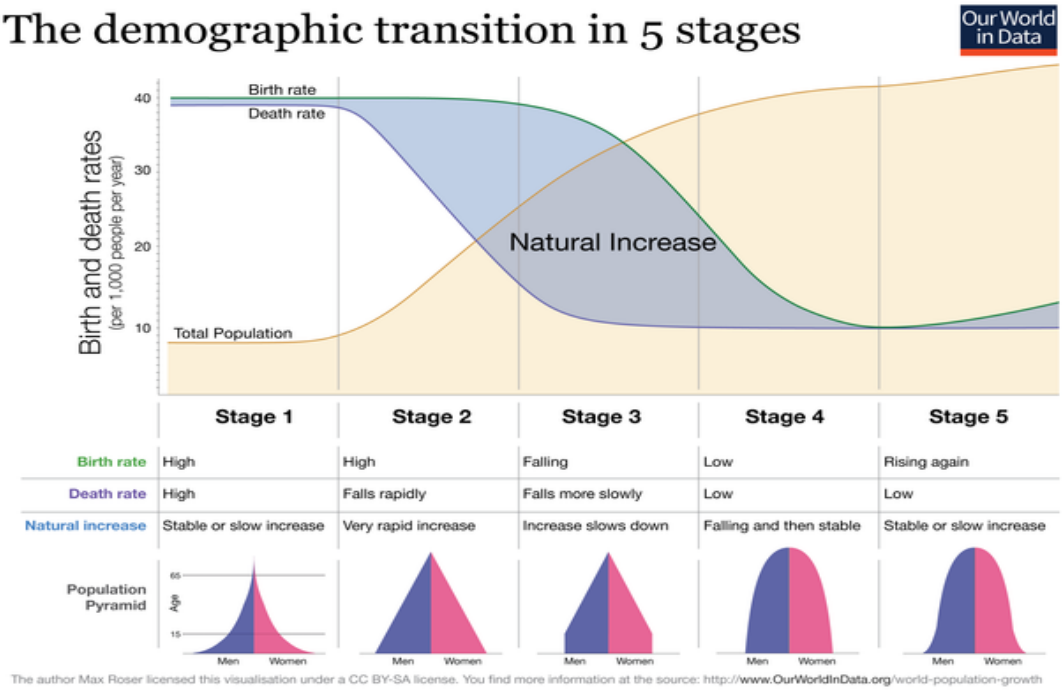
U5MR: The probability that a newborn baby will die before reaching the age 5 years of age, expressed as a number per 1000 live births.

Demography and Health

In this we study the demographic transition model theory which tells us that there is a historical shift from high birth rates and death rates in the society due to various reasons like lack of technology, health services, knowledge etc to decrease in the death rates and birth rates as the world progresses into technological advancements, knowledge and better health care concepts.

This model namely has 5 stages

- Stage I: High death and birth rates
- Stage II: The death rates starts declining
- Stage III: The birth rates starts declining and the death rates falls rapidly.
- Stage IV: Low birth and death rates
- Stage V: There is a slight rise in birth rates again



Different countries are in different stages of the demographic transition model depending upon the economic rate of the country, GDP, and technological advancements. More developed a country, lower will be the birth and death rates in the country. Example: - America.

Health is an important aspect which needs to be given utmost importance. Hence demography and health go hand and hand. The health conditions prevailing in the country can be assessed using tools like the DALY (Disability Adjusted Life years) and the required changes and new advanced can be made accordingly for the betterment of the country.

The DALY

It is a measurement of overall disease burden, in terms of years of life lost due to ill health, disability or early death. This was coined to co spread the life expectancy and overall health between various countries.

DALYs are calculated using two components namely, Years of life lost (YLL) and Years lived with disability (YLD). The DALYs has proved to be a useful to examine the Health Impact Assessment (HIA) among nations.

The formula for calculating DALY is

DALY= YLL + YLD

YLL= N x L (where N= number of deaths, L= standard life expectancy at the time of death)

YLD= I x DW x L (where I= number of incident cases, DW= disability weight, L= average duration of disability)

What Do People get Sick, Disabled, and Die From?

According WHO, the diseases people get sick, disabled and die from are classified into the following categories: -

- Type I: Communicable Diseases, maternal deaths, neonatal and nutritional conditions
- Type II: NCDs
- Type III: Injuries

Mostly countries which belong to High income group, suffer, and die from different types of diseases as compared to low- and middle-income group. With increase in technology and economic growth, developed countries have shifted from suffering from communicable diseases to non-communicable diseases as they are travelling from different stages of the demographic transition model.

Likewise, low- and Middle- Income countries are still struggling with managing communicable diseases.

Deaths	DALYs
High Income Countries	**High Income Countries**
Group II- 88%	Group II- 85%
Group I- 6%	Group I- 6%
Group III- 6%	Group III- 9%
Low- and middle-Income Countries	**Low- and middle-Income Countries**
Group II- 64%	Group II- 54%
Group I- 27%	Group I- 36%
Group III- 9%	Group III- 10%

Leading Causes of Deaths All over the World

1990	2013
Ischemic Heart Disease	Ischemic Heart Disease
Stroke	Stroke
Lower Respiratory Infections	COPD
Diarrheal Infections	Lower Respiratory Infections
COPD	Alzheimer's
Tuberculosis	Tracheal, Bronchial and Lung Cancer
Preterm Birth Complications	Road Injuries
Road Injuries	HIV/AIDS
Tracheal, Bronchial and Lung Cancer	Diabetes
Malaria	Tuberculosis

Value for money in Global health

Cost effectiveness Analysis: -

A method for comparing the cost of an investment with the amount of health that can be purchased with that investment is known as cost effectiveness analysis.

For example: - **Tb program**

Unobserved Program = 180 USD/ person (70 % cure rate)
Observed Program = 200 USD/ person (90% cure rate)
Approach 1: 10 patients
Cured= 7 patients
Cost of per cured patient = 180x10/7= 257 USD

Approach 2: 10 patients

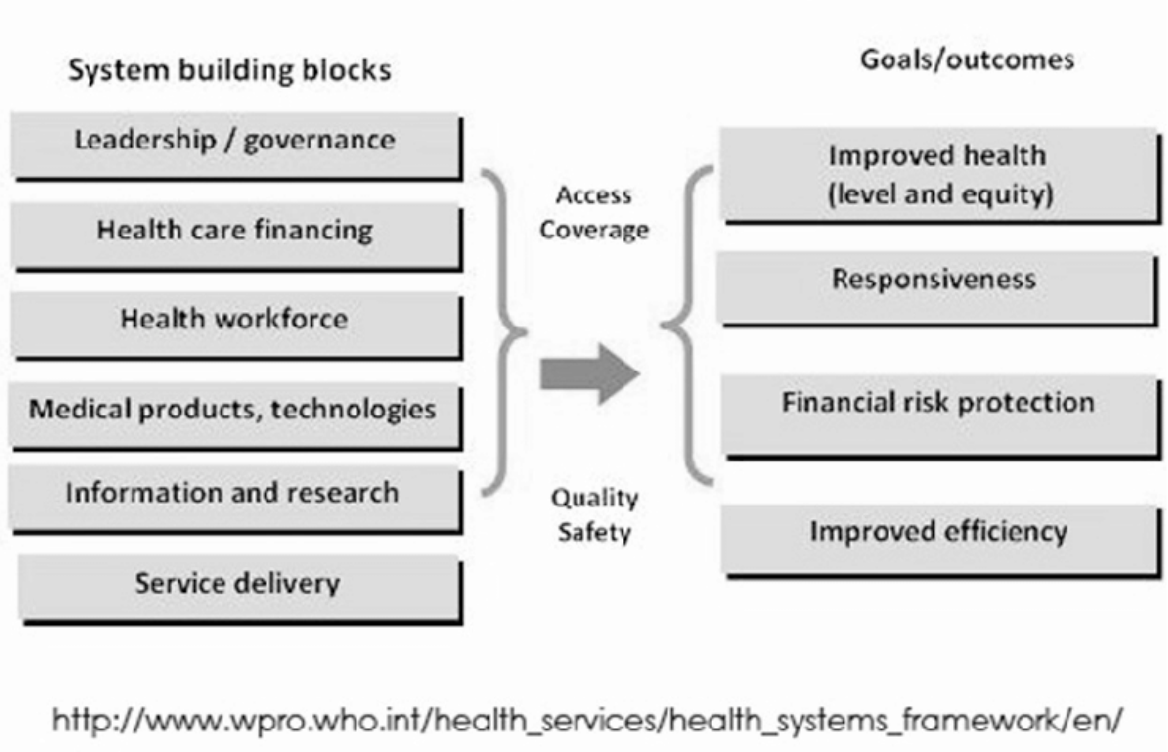
Cured= 9 patients
Cost of per cured patient = 200x10/9= 222 USD (hence, approach 2 will be more cost effective)
Certain important considerations in terms of decision making towards the more cost-effective program for healthcare ae as follows.
Equity Considerations: it should be viable and accessible to all.

- We must have a clear perception about the burden of the disease on the community
- The extent to which the investment serves the society as a whole
- The extent to which the investment produces benefits additional to its usual ones
- The impact of intervention on the provision of insurance.

The organization and aims of Health systems

All the activities whose primary purpose is to promote, restore and / or maintain health are known as health systems
The people, institutions and resources, arranged together in accordance with established policies, to improve the health of the people they serve, while responding to people's legitimate reputation and protecting them against the cost of ill-health through a variety of activities whose primary intent is to improve health.

W.H.O has certain goals and expectations laid out which promote health and tells us to act and enable a certain way to promote good health in our country and globally. This framework helps health care practitioners and workers to work in a systematic way to enable good quality service deliverance in terms of healthcare.



Health expenditure, the quest for UHC and pharmaceuticals

Large amounts of funds are required to implement health programs and services. The health spending globally is increasing by 3.9% annually as compared to the economy which grows by 3 % globally. More and more countries including middle income countries are spending greater share of their country annual budget into health.

The government funds many programs and invests in result-based financing schemes as well. Any program that records the delivery of one or more outputs or outcomes by one or more incentives, financial or otherwise, after it has been verified that the agent has delivered the agreed upon results.

Conditional Cash Transfers (CCTs)

These are programs that provide cash pay to poor households that meet certain behavioral requirements, often related to children's health care and education.

For example: - Brazil Bolsa Familia program

What is Universal health Coverage?

Ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient quality to be effective while also ensuring that the use of these services does not expose the user to financial hardships.

One of the primary goals of the SDGs and the world is to promote and enforce universal health coverage across the globe.

Health disparities

Differences in health that are closely linked with social or economic disadvantage are known as health disparity.

Some of the key working elements which play a ploy in creating health disparity are:

- Religion
- Location
- Occupation
- Social capital
- Social and economic status
- Ethnicity
- Gender
- Health status and whether a person is disabled

The environment and health and climate change and health

The environmental health comprises those aspects of human health including quality of life, that are determined by physical chemical, biological and psychosocial factors in the environment. It also refers to the theory and practice of assessing, correcting, controlling, and preventing those factors in the environment that can potentially affect adversely the health of present and future generations (WHO 2015)

The environment and surroundings can be categorized to three levels:
Level: Household

- Unsafe water, inadequate sanitation and social waste disposal
- Crowded housing and poor ventilation of smoke
- Exposure to naturally occurring toxic substances

Level: Community

- Importance of maintaining water resource
- Excessive exposure to motor emissions

Level: Global

- Climate change
- Ozone layer depletion
- Shift of Tectonic plates

Importance of environmental Risk factors

- About 23% od deaths globally are due to environmental risk factors
- About 24% of total disease burden in all age groups and both genders are due to environmental risk factors
- 33% of total disease burden in young children is caused by them

The key risk factors of environment are:

- Poor sanitation
- Ambient air pollution
- Household Air pollution
- Unimproved water
- Lead

Nutrition and global health

	Malnutrition	
Causes	Underlying causes	Basic Causes
Food availability and utilization	Inadequate access to food	Inadequate education

Disease prevention	Poor health services and environment	Resources and control
Quality of maternal and childcare	Inadequate care for children and women	Political and ecological factors/ structures

To combat nutritional deficiencies, several interventions has been put forth. These interventions are f=different in different countries according to the need of the country and tailor made to serve their purposes. These interventions can be categorized into several categories such as:

Nutritional Specific Interventions: these have a direct impact on nutrition such as breastfeeding, food fortification etc.

Nutrition Sensitive Intervention: - These address the underlying determinants of nutritional deficiencies such as Vaccination and biofortification

Enabling environment for Nutrition Intervention: These concerns laws, policies, resources, institution issues and how effective countries are at formulating implementing and monitoring nutritional interventions.

For example: - Taxing sweetened beverages etc.

To address the issues of undernutrition we need to consider and maintain certain factors which will benefit the community at large namely the children

- We need to focus more on growth monitoring and promotional activities for children which will contribute in building a good health at the early stage.
- We need to keep a check on infiltrated and adulterated food products and their consumption should be kept low
- Vitamin and mineral supplementation is a must to women and children to build their immunities and in return enabling good health for the entire family.
- There should be a good source of food supplements available in the community to all at affordable rates.
- Food fortification is a unique and fast-growing method to compensate for all necessary minerals and vitamins in your diet through by incorporating these into our daily food items like flour, gram etc.

Addressing Overweight and Obese Issues

- We can set nutrition and activity standards for all ages which will help in maintain a certain body mass according to the person age
- There can be a uniformed national dietary guideline throughout the country which will help in tacking overweight issues.
- We need to align nutritional goals with our agricultural policies so that we can produce more and more food supplies which are required and decide upon the quantity as well.
- Incentivizing healthier food habits will enforce healthier eating habits among people
- Place laws and enable legislation to resist unhealthy food marketing for children

- We can promote healthy eating habits and behaviors among children in schools and provide nutritious food as well.
- Promote physical training and exercise and improve safety of and access to recreational spaces. People suffering from obesity and overweight problems should be trained and encouraged more to engage into physical activities.

Women's health

Throughout time, women have been subjected to discrimination and inequality. Due to the misplaced bias and discrimination women have had to deal with several health problem which could have been easily cured and dealt with if women were given the health services and good health practices. Much has changed now but still we need to work on providing equality to women in terms of access to health bot mental and physical.
We need to look after women health because it has tremendous social and economic consequences on the families and societies. If the women of the household are healthy then health oif the entire family is assured as well. Hence investing in the education and health of women leads to overall social and economic development.

Key Social determinants

- Enhance opportunities for universal schooling of appreciative quality for all girls, at least through secondary school.
- Implement the policies which enhance the status of women and reduce discrimination against them.
- Increases Modern sector employment opportunities for women.

Child's health

This section deals with the concerns related to the child growth and health status. This gives us insights as to what are the reasons for deals among young children and what are their risk factors.

Leading causes of death
Preterm Birth complications
Birth asphyxia and birth trauma
Sepsis and other infections of the newborn
Congenital anomalies
Other communicable diseases
Acute LRI
Tetanus and diarrheal diseases

1-59 months of age	
LRI	pertussis
Diarrheal infections	Birth Asphyxia
Malaria	HIV/AIDS
Other comm. Diseases	Measles
Injuries	Prematurity
Other NCDs	Meningitis
Congenital anomalies	Encephalitis

Risk factors include:

- Childhood undernutrition
- Unsafe water
- Suboptimal breast feeding
- Improper diet of the mother during pregnancy

Immunization: - it is process by which the persons immune system is fortified by injecting an antigen against the disease into the body.

Benefits:

- It provides benefits to those who are immunized and through herd immunity
- It prevents disease that are often treated with antibiotics, thereby reducing the risk of developing anti-microbial resistance
- It helps to keep people healthy, economic growth increases and reduces poverty
- It helps in saving lives and families from the direct and indirect costs of vaccine preventable childhood diseases.

Adolescent health

Reasons for death and DALYs among adolescent population

Death	**DALYs**
Road injuries	Unipolar depression
HIV/AIDS	Road injury
Self-harm	Iron deficiency
LRI	HIV/AIDS
Interpersonal violence	Self-harm
Diarrheal infections	Back and neck pain

Drowning	Diarrheal disease
Drowning	Anxiety
Meningitis	Asthma
Epilepsy	Lower respiratory infections

The issues which adolescents suffer from are as follows:

- Early pregnancy and childbirth
- HIV/AIDS
- Other CDs
- NCDs
- Mental health
- Violence
- Road injuries

Complex humanitarian Emergencies

These are occurrences that causes damage, ecological destruction, loss of human lives, or deterioration of health and health services on a scale sufficient to warrant an extraordinary response from outside.

Complex emergencies constitute:

- Conflicts
- Droughts
- Earthquakes
- Floods
- Landslides
- Storms
- Nuclear.

Emerging and re-emerging IDs and Anti-microbial resistance

Factors which contribute to emerging and re-emerging Infectious Diseases could be the following reasons:

- Technology and industry
- International travel and commerce
- Breakdown of Public Health measures
- Poverty and social inequality
- War and famine
- Lack of Political will

- Intend to harm
- Human demographics and behavior
- Economic development
- Changing ecosystems
- Climate and weather
- Human susceptibility to infectious diseases
- Microbial adaption and change

What do you mean by drug resistance?

It is the reduction in the effectiveness of the medication specifically antibiotics in treating a disease or pathogen. There are numerous reasons as to why an individual might develop drug resistance to a drug. Some of these are as follows:

- Due to the use of counterfeit drugs or poor-quality drugs
- Inappropriate use of drugs/ antibiotics.
- The health systems in place are weak in the given country
- Poor prescribing of drugs by the doctor or dispensing of drugs in the drug stores
- The patient fails to adhere to the prescription and the given dosage

Some of the measures which can be taken to reduce the incidence of drug resistance among people are:

- To conduct studies of the economic burden of drug resistance
- Set up a global surveillance system for resistance
- There should be better regulation and stricter monitoring of prescribing practices for antibiotics
- To increase the awareness and education of the public of the dangers of overuse of antibiotics
- Improved governance of antibiotics
- The development of new models for research and development on antibiotics

HIV, Tuberculosis, Malaria, Neglected Tropical Diseases

This section is dedicated to all the types of communicable diseases which are prevalent globally. We study the key risk factors, the causative agents the high-risk groups that are likely to suffer from these diseases.

We also discuss the affective ways in which we can tackle these diseases and restrict its spread among the population.

High risk groups for HIV and routes if transmission

- CSW
- Drug user
- Having multiple sex partners
- Non circumcised male

Routes: -

- Unprotected sex primarily vaginal ad anal
- Mother to childbirth and breast feeding
- Transplanting infected tissue and organs
- Blood including transfusion and needle sharing

How to tackle HIV:

- There should be a sustained political leadership at the highest levels
- There must be involvement of broad range of civil society efforts to address HIV
- Set up broad based programs to change social norms in people
- Open communication about HIV/AIDS and restricted sexual matters
- Make more programs to reduce stigmas

Tuberculosis: About 1/3rd of the people has latent TB
Latent TB can be developed into active Tb if immune system gets compromised
HIV positive people are most likely to have TB as well

3I's for HIV-Tb co infection: -

- Infection control: - enhancing infection control in healthcare settings so that TB doe not spread along those who are infected
- Isoniazid: it is given to people with HIV, to help prevent them being infected with Tb
- Intensified case finding people infected with Tb are tested for HIV vice versa.

Non-communicable Diseases, Cardiovascular Diseases, and diabetes, Cancer and diabetes, Tobacco and Alcohol, Mental health, Injuries

In this section it is we deal with non-communicable diseases and its risk factors. We also get insights as to how to tackle these diseases as more and more countries are suffering more from non-communicable diseases as we indulge into technology and advanced medicines.

One of the most important aspect of wellbeing is mental health, we need to stress more on the importance of combating mental health issues. We need to reduce the stigma and taboo present involving mental health issues and encourage people to come forth and talk about their problems. A sound mind can eradicate all the unnecessarily health issues which are associated with depression and all other kinds of other mental health issues.

NCDs should be tackled with a lot of care and people need to pay extra care regarding their health in terms if their lifestyle and physical activity and diet.