HH The Rajah's College, Pudukkottai

Research Dept. of Economics

II M.A Economics - Semester III - Elective Paper - 3 HEALTH ECONOMICS

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Study Material for Unit 1, 3, and 5

Unit – 1

Introduction:

Health economics is important in determining how to improve health outcomes and lifestyle patterns of individuals, healthcare providers and clinical settings.

Health economists study the functioning of healthcare systems and health-affecting behaviors such as smoking, diabetes, and obesity.

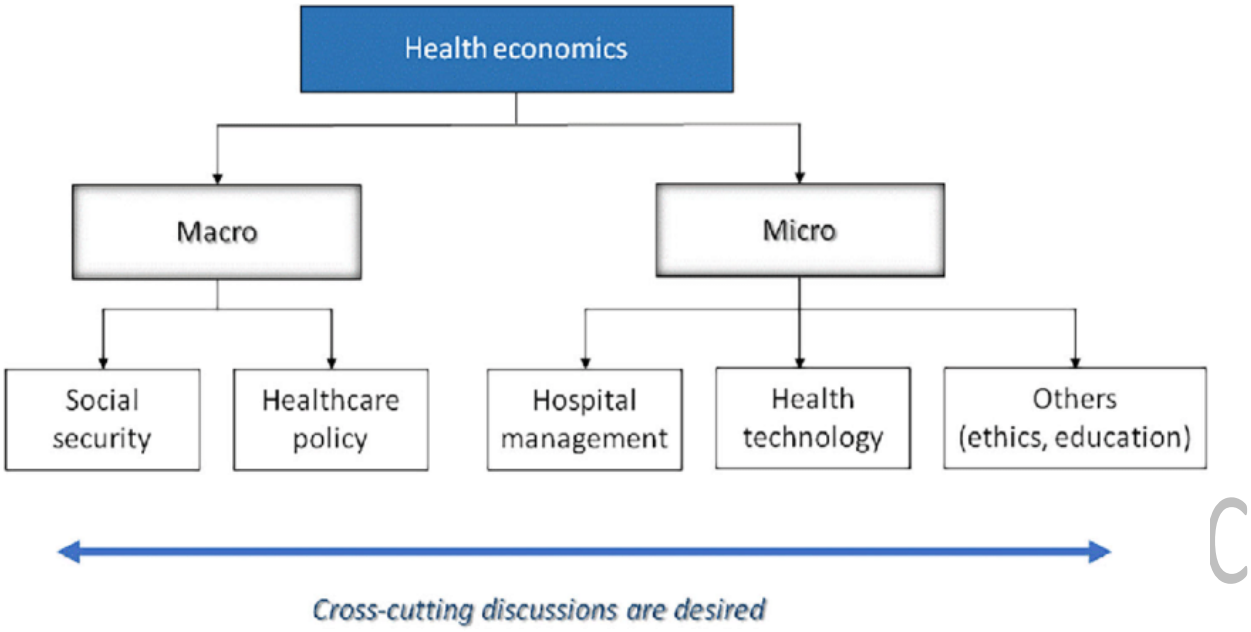
Kenneth Arrow, a founding father of health economics,

Pointed out in 1963 that health and healthcare differ from other areas of the economy in that there is extensive government intervention is needed.

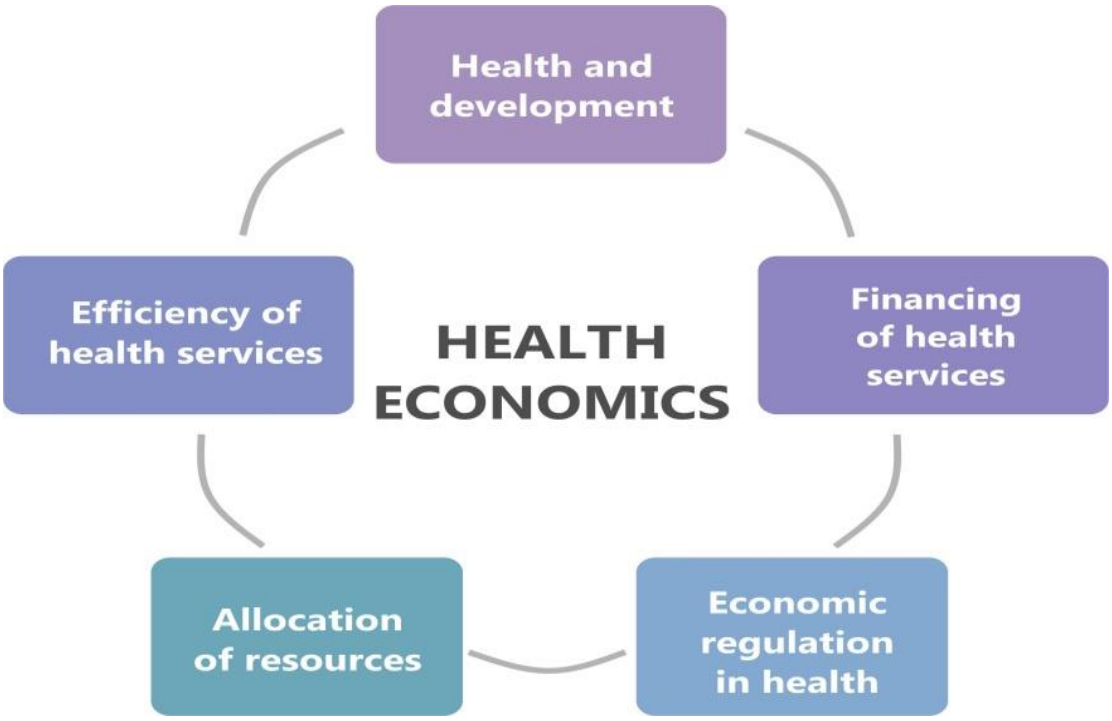
Definition:

Health economics is concerned with issues related to efficiency, effectiveness, value and behavior in the production and consumption of health and healthcare.

Components of Health Economics:



Areas of Health Economics:



Objectives of Health economics:

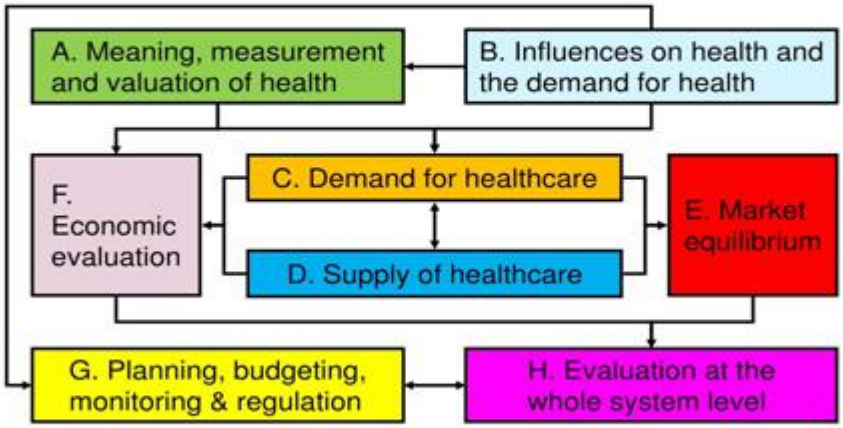
Health economics is the study of how scarce resources are allocated among alternative uses for the care of sickness and the promotion, maintenance and improvement of **health**, including the study of how **health** care and **health**-related services, their costs and benefits, and **health** itself are distributed among individuals.

Scope of Health Economics:

Scope of Health economics

- Factors influencing health (other than health care)
- Definition of health and its value
- The demand for health care
- The supply of health care
- Microeconomic evaluation at Treatment level
- Market Equilibrium
- Evaluation at whole system level; and,
- Planning, Budgeting and monitoring mechanisms.

The scope of health economics



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Importance of Health Economics

- Understanding the economics of health care is important for a number of reasons.
- Health is important to us as individuals and as a society, and health care is one, though not the only, way of modifying the incidence and impact of ill health and disease.
- Economic analysis offers a unique and systematic intellectual framework for analyzing important issues in health care
- Healthcare sector is very important in identifying solutions to common problems.

Contd...

- Decisions about how health care is funded, provided, and distributed are strongly influenced by the economic environment and economic constraints.
- One good reason for understanding health economics is to engage in policy debates as an informed critic.
- Health economics is an application of economic theory, models, and empirical techniques to the analysis of decision making by individuals, healthcare providers, and governments with respect to health and health care

Contd...

- Health economics also comprises a body of theory developed specifically to understand the behavior of patients, doctors, and hospitals.
- On the other hand, analytical techniques developed to facilitate resource allocation decisions related to health care.
- Health economics has evolved into a highly specialized field.
- It includes related disciplines including **epidemiology,** statistics, psychology, sociology, operations research, and mathematics in its approach

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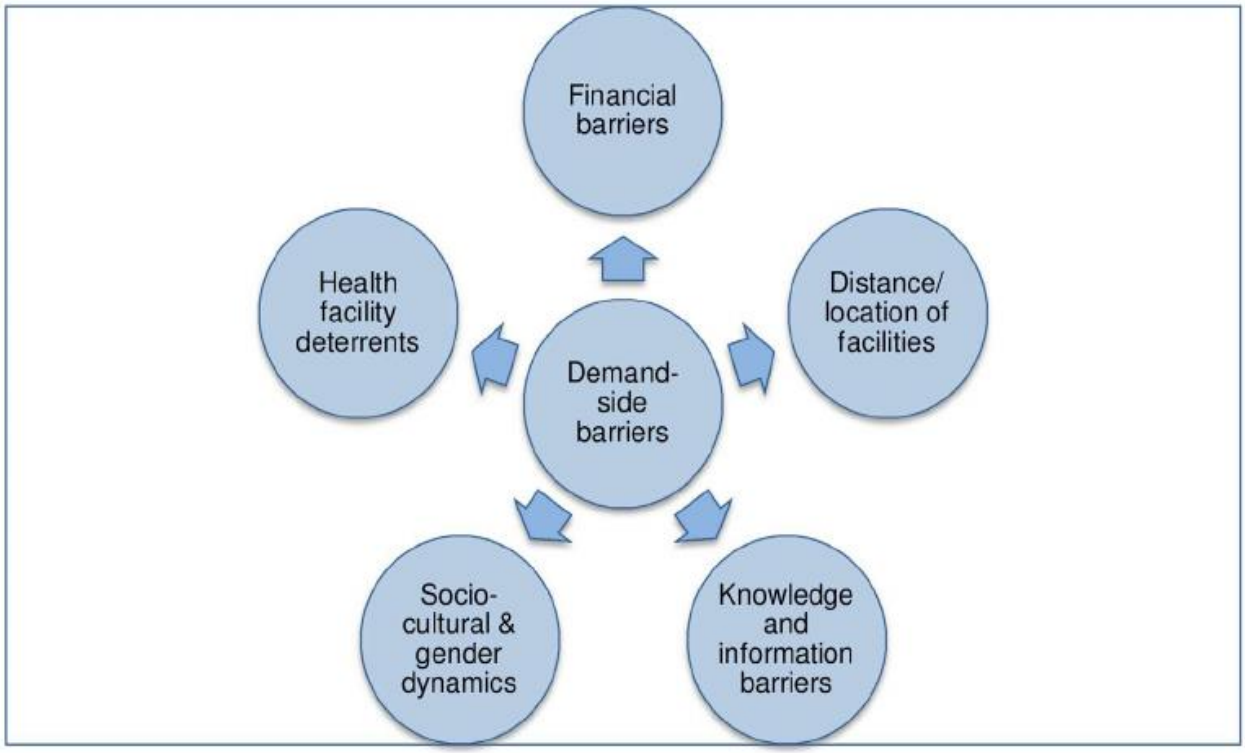
Demand Side of Health Economics:



Supply side of Health:

Supply of Health Care

Factors Influence Healthcare Spending Growth

- Technology. ...
- Healthcare product and service prices. ...
- Market power. ...
- Health insurance coverage. ...
- Demographics and patient characteristics.

Contd.,

- First of all, some health-care suppliers have significant market power.
- So it is trickier to compare the price of health care across countries
- Because we have to consider differences in market power as well.
- A bigger problem is that some health-care suppliers, such as hospitals, are either government- controlled or not-for-profit institutions.

Contd.

- Health-care prices are not necessarily determined by supply and demand.
- The government has a significant influence on prices: for example, the governments in some countries set prices for pharmaceutical products.
- Prices may be determined by bargaining between hospitals and drug companies rather than by supply and demand.

Health indicators

- Health indicators are quantifiable characteristics of a population which researchers use as supporting evidence for describing the health of a population.
- A health indicator is a measure designed to summarize information about a given priority topic in population health or health system performance.
- Health indicators provide comparable and actionable information across different geographic, organizational or administrative boundaries and/or can track progress over time

Example of a health indicator

- A common example of a health indicator is life expectancy.
- A government might have a system for collecting information on each citizen's age at the time of death.
- This data about age at death can be used to support statements about the national life expectancy, in which case life expectancy would be a "health indicator".
- Life expectancy may be one of many "health indicators" which collectively researchers would use to describe the health of the population of the country.

The 5 key indicators of health

- Crude death rate.
- Life expectancy.
- Infant mortality rate.
- Maternal mortality rate.
- Proportional mortality rate.

Mortality rate:

- Mortality rate, or death rate, is a measure of the number of deaths (in general, or due to a specific cause) in a particular population, scaled to the size of that population, per unit of time.

Crude death rate:

- CRUDE DEATH RATE is the total number of deaths to residents in a specified geographic area (country, state, county, etc.) divided by the total population for the same geographic area (for a specified time period, usually a calendar year) and multiplied by 100,000.
- We call this a "crude" death rate because the denominator, population size, consists of the total population and does not take its age distribution into account. All things equal, a society with a higher proportion of older people should have a higher crude death rate.

Life expectancy:

- The term "life expectancy" refers to the number of years a person can expect to live. By definition, life expectancy is based on an estimate of the average age that members of a particular population group will be when they die.

- Global life expectancy at birth in 2016 was 72.0 years (74.2 years for females and 69.8 years for males), ranging from 61.2 years in the WHO African Region to 77.5 years in the WHO European Region, giving a ratio of 1.3 between the two regions. Women live longer than men all around the world.
- India's life expectancy rises to 68.7 years, says National Health Profile 2019.
- Kerala has recorded the highest life expectancy at birth for males and females in rural areas and for females in urban areas where as Himachal Pradesh has recorded the highest for males in urban areas in 2006-10.

Infant mortality rate:

- Infant mortality rate (IMR) is the number of deaths **per 1,000** live births of children under one year of age. The rate for a given region is the number of children dying under one year of age, divided by the number of live births during the year, multiplied by 1,000.

- In 2018, the infant mortality rate in India was at about 30 deaths **per 1,000** live births, a significant decrease from previous years. The infant mortality rate is the number of deaths of children under one year of age **per 1,000** live births.

Maternal mortality rate:

- The maternal mortality ratio can be calculated by dividing recorded (or estimated) number of maternal deaths by total recorded (or estimated) number of live births in the same period and multiplying by 100,000.
- The five countries with the highest number of maternal deaths in 2015 were: Nigeria (58,000); India (45,000); Democratic Republic f Congo (22,000); Ethiopia (11,000); and Pakistan (9,700).

Proportionate mortality rate:

- Proportionate mortality. Number of deaths assigned to a specific cause during a given time interval. Total number of deaths from all causes during the same time interval. 100 or 1,000. Death-to-case ratio.

End of UNIT-1:

UNIT-3

Unit-3

Health Care Planning:

- Health Care Planning – Need for Planning – Process of Planning in
- Health Sector – Planning at the micro level –
- Health Management – Management of Health Institutions.

Health Care Planning Introduction

- Health planning and policy seek to create a group of mutually interacting bodies to produce goods and services to meet the health needs of a population.

Types of health planning

- Based on time frame

1. Short term planning (generally 1-3 years)
   - Meeting needs as defined by current trends
   - Using available resources and re-allocation of resources

2. Medium-term planning (5-10 years)
   - Modify demands
   - Recognize new needs
   - Obtain new resources

3. Long-term planning (10-20 years)
   - Select a desired future
   - Design a way of reaching it

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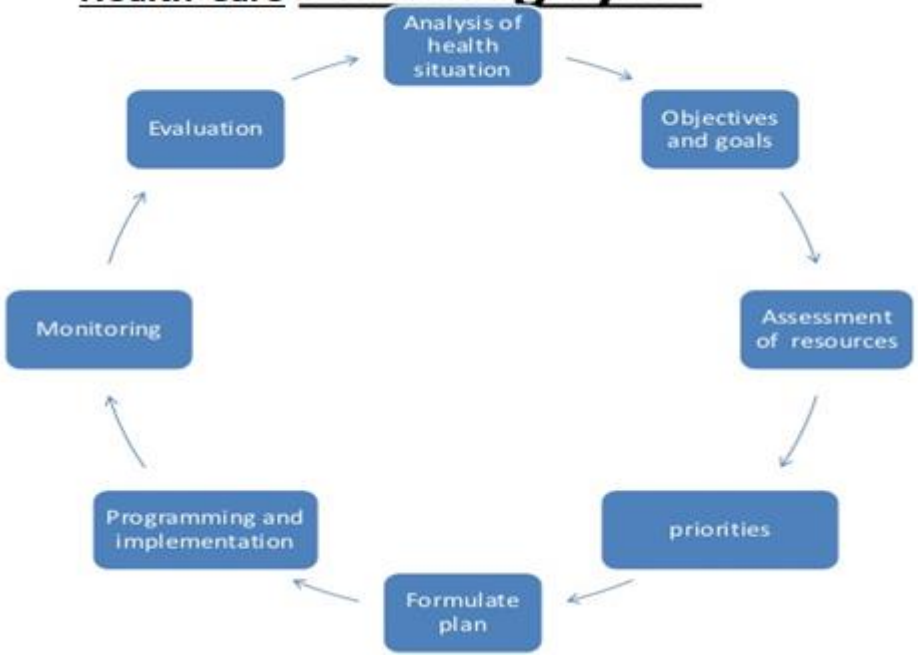
Health Care Planning cycle



Health Care and Social Planning

Healthcare management

- Healthcare management, also referred to as healthcare administration.
- It is the administration, management or oversight of healthcare systems, public health systems, hospitals, entire hospital networks or other medical facilities.

- Duties of these professionals include ensuring that individual departments run smoothly, qualified employees are hired, information is disseminated efficiently throughout the organization, specific outcomes are reached and resources are used efficiently, among many other responsibilities.
- There are general healthcare managers and those who are considered specialists. Generalists oversee entire facilities, while specialists focus on the administration of specific departments like marketing, fiance, policy analysis or accounting.

Health sector planning at Micro level

Decentralized planning or micro level planning is a kind of percolation of planning activities. It is process from the centre to the sub-state levels, i.e. district, sub-division, block and village level.

Community health centre:

Studies consistently show that community health centers provide care that improves health outcomes of their patients. The patients of these centers are also more likely to identify a usual source of care, and report having better relationships with their health care providers.

Whereas **community** health hinges on non-medical interventions to improve population health, **community**-**based** health is defined by the delivery of medical care and education. ... A mobile health **clinic** that parks itself outside of a trusted **community** center, for example, qualifies as **community**-**based** health.

Health facilities are places that provide **health** care. They include hospitals, clinics, outpatient care centers, and specialized care centers, such as birthing centers and psychiatric care centers. Quality is important. Some **facilities** do a better job than others.

The primary tier is designed to have three types of health care institutions, namely, a Sub-Centre (SC) for a population of 3000-5000, a Primary Health Centre (**PHC**) for

20000 to 30000 people and a Community Health Centre (**CHC**) as referral centre for every four **PHCs** covering a population of 80,000 to 1.2 lakh.

Community services play a key role in keeping people well, treating and managing acute illness and long-term conditions, and supporting people to live independently in their own homes. Community services are central to plans for the future of the health and care system.

How can we improve our community health?

1. GIVE TO A FOOD BANK. BUILD FOR HABITAT FOR HUMANITY. ORGANIZE A LOCAL RUN/WALK. SPEAK AT A HIGH SCHOOL. ...
2. RUN A HOLIDAY TOY DRIVE. GET INVOLVED WITH A LOCAL CHURCH. CREATE A BONE MARROW REGISTRY. OFFER A **COMMUNITY HEALTH** SCREENING. ...
3. BUILD AN URBAN GARDEN. ORGANIZE A **COMMUNITY** CLEAN UP. BUILD A LOCAL PARK.

Health management- management of Health institutions

Healthcare management, also referred to as healthcare administration, is the administration, management or oversight of healthcare systems, public health systems, hospitals, entire hospital networks or other medical facilities. ... There are general healthcare managers and those who are considered specialists.

Healthcare management is the profession that provides leadership and direction to organizations that deliver personal **health** services, and to divi- sions, departments, units, or services within those organizations.

Healthcare management is the profession that provides leadership and direction to organizations that deliver personal **health** services, and to divi- sions, departments, units, or services within those organizations. This chapter gives a comprehensive overview of **healthcare management** as a profession.

The benefits of Health Care Management

When most people think of a healthcare management career, they might imagine working long days in a sterile hospital office. Or maybe they visualize spending their work day on the phone negotiating with managed care companies or in long meetings discussing how to transform millions of paper records into an electronic database.

Career paths in Health Care Management are practically unlimited. You can choose a certain sub-field, such as finance, human resources, patient care, information systems or supply chain management, or aim for a top job as a CEO, overseeing the big picture. You have a lot of workplaces to choose from: Health care managers work for hospitals, pharmaceutical companies, nursing homes, universities, federal agencies, insurers and private medical practices. To take advantage of as many career paths as possible, consider your educational level. A bachelor's degree in health-care administration qualifies you for entry-level work, including marketing assistant or accounts-receivable supervisor. You'll need a master's for mid-level jobs such as department manager, marketing director or contract negotiator, and a doctoral degree or professional certificate to run a big hospital or clinic.

Management of Health institutions.

- Overall facility management.
- Health centres and clinics.
- Hospitals.
- Laboratories.
- Referral system.
- Waste management.
- Supportive supervision.

The main principles of healthcare management are usually considered to be maintaining team spirit, ensuring the correct division of labour and focusing on the results of the team's activities. All these principles can be achieved by planning, organising and coordinating, and by skillfully leading your team.

All hospital healthcare managers work with physicians, make policy decisions, oversee patient care and budgeting and accounting, and lead marketing efforts to ensure their organization functions smoothly.

The two main management functions of the healthcare administrator

Healthcare Administrator Responsibilities

- Managing staff within a facility or department.

- Managing the client care/patient care experience.
- Managing health informatics, including recordkeeping.
- Overseeing the financial health of the department or organization.

End of Unit- 3 – Staff: Dr.Balamurugan

Study Material for Unit- 5 follows

Unit – 5

Rural Housing:

A program to construct and/or maintain residences outside a major, metropolitan area.

In India, rural housing is provided through Indira Awaas Yojana, a welfare program of the Government of India. It was first implemented in 1985 and in the 2011 budget the program was funded in the amount of ₹89.96 billion (US$1.3 billion).

Pradhan Mantri Awas Yojana (PMAY) is an initiative by Government of India in which affordable housing will be provided to the urban poor with a target of building 20 million affordable houses by 31 March 2022.

housing shortage follows the economic principles of supply and demand. ... A lack of housebuilding is the driving reason for the housing shortage, however, other contributory issues include: Increasing population. Changing lifestyles meaning more people live alone or in small households.

Housing shortage is a situation when there is insufficient housing to accommodate the **population** in an area, when the supply of houses cannot meet the demand. It also includes situations where housing is not affordable for those who need it.

Hygiene – Sanitation – Safe Drinking Water:

Improve sanitation facilities by providing toilets and latrines that flush into a sewer or safe enclosure. Promote good hygiene habits through education. Proper hand washing with soap and water can reduce diarrhea cases by up to 35 percent.

Safe **water** supplies, **hygienic sanitation** and good **water** management are fundamental to global health. Almost one tenth of the global disease burden could be prevented by: increasing access to safe **drinking water**; improving **sanitation** and **hygiene**;

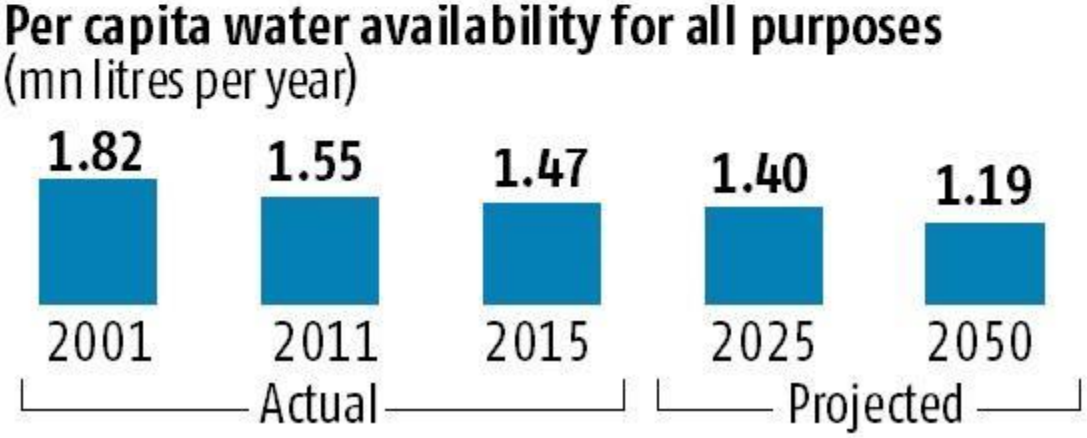
Dr.Bala, Dept. of Economics, HHRC

Universal access to safe drinking **water**, **sanitation** and adequate **hygiene** (WASH) services is essential to population health, welfare and development. ... Sufficient, affordable and safely managed drinking-**water**, **sanitation**, and improved **hygiene** behaviours **can** cut this number dramatically.

Access to safe drinking **water** and basic **sanitation** are vital for **health**, especially among children. Poor **sanitation**, **water** and hygiene have many serious consequences: Children die from preventable illnesses like diarrhea; ... **Health** systems are overwhelmed and national economies suffer.

WATER DEMAND TO RISE, WATER AVAILABILITY DECLINING

India is moving from a water-stressed country – consumption less than 1.7 mn litres per person a year – to a water scarce one – consumption less than 1 mn litres. Harvesting of rain and surface water will become necessary in coming years



Poor sanitation is linked to transmission of diseases such as cholera, diarrhoea, dysentery, hepatitis A, typhoid and polio and exacerbates stunting. Poor sanitation reduces human well-being, social and economic development due to impacts such as **anxiety**, risk of sexual assault, and lost educational opportunities.

108 Ambulance Services

Dial-108, or one-zero-eight is a free telephone number for emergency services in India. ... 108 Ambulance Service was first envisioned by retired doctor and former director of the Andhra Pradesh Handicapped Department, Dr. A.P. Ranga Rao,

Dr. AP Ranga Rao is credited with first conceptualizing 108 ambulance services in India, having spent 10 years working with the National Health Service (NHS) in Britain learning about emergency systems.

A common modern usage of mirror writing can be found on the front of **ambulances**, where the word "**AMBULANCE**" is often written in very large mirrored text, so that drivers see the word the right way around in their rear-view mirror.

108 Services

1-0-8 Emergency Response Service is a 24X7 emergency service for medical, police and fire emergencies. The service is available for the entire state of Andhra Pradesh , Telangana, Gujarat, Uttarakhand , Goa, Tamil Nadu, Karnataka, Assam, Meghalaya, Madhya Pradesh, Himachal Pradesh, Chhattisgarh, Uttar Pradesh, Rajasthan, Kerala and 2 Union Territories Dadra & Nagar Haveli and Daman & Diu

The main highlights are It is a 24x7 emergency service. Toll Free number accessible from landline or mobile Emergency help will reach you in an average of 18 minutes 1-0-8 / 1-1-2 is dialed for the purposes mentioned below:

- To save a life
- To report a crime in progress
- To report a fire

Types of Emergencies

Medical Emergencies	Police Emergencies	Fire Emergencies
Serious Injuries	Robbery / Theft / Burglary	Burns
Cardiac arrests	Street Fights	Fire breakouts
Stroke	Property Conflicts	Industrial fire hazards
Respiratory	Self - inflicted injuries / Attempted suicides	
Diabetics	Theft	
Maternal/Neonatal/Pediatric	Fighting	
Epilepsy	Public Nuisance	
Unconsciousness	Missing	
Animal bites	Kidnappings	
High Fever	Traffic Problems (Traffic Jams or Rallies, raasta rokos etc)	
Infections	Forceful actions, riots etc	

Do not call 1-0-8 if there is no 'serious people emergency'. It is not a number for enquiry or information gathering. Do not play around by dialing 1-0-8 as a joke. Otherwise a call in real emergency could be blocked and a life will be lost. If you happen to call 1-0-8 by accident then do not hang up until the officer asks you to do so.

GVK EMRI (Emergency Management and Research Institute) is a pioneer in Emergency Management Services in India. As a not - for - profit professional

organization operating in the Public Private Partnership (PPP) mode, GVK EMRI is the largest professional Emergency Service Provider in India today.

GVK EMRI handles medical, police and fire emergencies through the “1-0-8 Emergency service". This is a free service delivered through state- of -art emergency call response centers and has over 7016 ambulances including 996 drop back Ambulances across Andhra Pradesh, Gujarat, Uttarakhand, Goa, Tamil Nadu, Karnataka, Assam, Meghalaya, Madhya Pradesh, Himachal Pradesh, Chhattisgarh, Uttar Pradesh, Rajasthan, Kerala and 2 Union Territories Dadra & Nagar Haveli and Daman & Diu. With a vision is to respond to 30 million emergencies and save 1 million lives annually, GVK EMRI is set to expand fleet and services set to spread across more states.

With increased focus on research and analytics, GVK EMRI has plans to significantly enhance the overall emergency management scenario - further reducing individual suffering.

Accessibility of GVK EMRI-108 in India

Having launched the 108 emergency response service on August 15, 2005, in Hyderabad, GVK EMRI presently provides an integrated emergency service across the state of Andhra Pradesh, with 802 ambulances serving over 3500 emergencies per day.

GVK EMRI is currently operational in 17 States and union Territories i.e. Andhra Pradesh, Telangana, Gujarat, Uttarakhand, Goa, Tamil Nadu, Karnataka, Assam, Meghalaya, Madhya Pradesh, Himachal Pradesh, Chhattisgarh, Uttar Pradesh, Rajasthan, Kerala and 2 Union Territories Dadra & Nagar Haveli and Daman & Diu with 7,600+ambulances.

Ambulances distribution in various states

1. Andhra Pradesh - 802
2. Gujarat - 671
3. Uttarakhand - 245
4. Goa - 33
5. Tamil Nadu - 638
6. Karnataka - 517
7. Assam - 899
8. Meghalaya - 47
9. Madhya Pradesh - 604

10. Himachal Pradesh - 174
11. Chhattisgarh - 540
12. Uttar Pradesh - 1194
13. Rajasthan - 592
14. Kerala - 43
15. Dadra & Nagar Haveli and Diu & Daman - 13 (Included Boat Ambulances)

Volunteers In Case of Emergency (VoICE)

Volunteerism is a major initiative by GVK EMRI to ensure that no emergencies go unreported and unattended. GVK EMRI is keen to enlist the support of volunteers to disseminate knowledge and information about 1-0-8 services. Volunteers can assist in the following areas:

- Reporting emergencies to help those who have no access to a telephone
- Provide assistance to victim till the ambulance arrives
- Accompany victims to the hospital and serve as referral for the unknown
- Transporting the victim to a meeting point where the ambulance will take over or take the victim directly to the hospital in case the ambulance is busy or not available

Implementation of Nutritional Programmes in India: Mid-day meals scheme

The Mid-day Meal Scheme is a school meal programme of the Government of India designed to better the nutritional standing of school-age children nationwide. The programme supplies free lunches on working days for children in primary and upper primary classes in government, government aided, local body, Education Guarantee Scheme, and alternate innovative education centres, Madarsa and Maqtabs supported under Sarva Shiksha Abhiyan, and National Child Labour Project schools run by the ministry of labour. Serving 120,000,000 children in over 1,265,000 schools and Education Guarantee Scheme centres, it is the largest of its kind in the world.

The **Mid-Day** meal officially started in the state of **Tamil Nadu**.

The roots of the programme can be traced back to the pre-independence era, when a mid day meal programme was introduced in 1925 in Madras Corporation by the British administration. based on the recommendation of Labour Advisory Board member M. C. Rajah . A mid day meal programme was introduced in the Union Territory of Puducherry by the French administration in 1930.

Initiatives by state governments to children began with their launch of a mid day meal programme in primary schools in the 1962–63 school year. Tamil Nadu is a pioneer in introducing mid day meal programmes in India to increase the number of kids coming to school; K. Kamaraj, then Chief Minister of Tamil Nadu, introduced it first in Chennai and later extended it to all districts of Tamil Nadu.

During 1982, July 1 onwards, the Chief Minister of Tamil Nadu, M. G. Ramachandran upgraded the existing Mid-day meal scheme in the state to 'Nutritious food scheme' keeping in the mind that 68 lakh children suffer malnutrition.

Gujarat was the second state to introduce an MDM scheme in 1984, but it was later discontinued.

A midday meal scheme was introduced in Kerala in 1984, and was gradually expanded to include more schools and grades. By 1990–91, twelve states were funding the scheme to all or most of the students in their area: Goa, Gujarat, Kerala, Madhya Pradesh, Maharashtra, Meghalaya, Mizoram, Nagaland, Sikkim, Tamil Nadu, Tripura and Uttar Pradesh. Karnataka, Orissa, and West Bengal received international aid to help with implementation of the programme, and in Andhra Pradesh and Rajasthan the programme was funded entirely using foreign aid.

In Karnataka, Children's LoveCastles Trust started to provide mid-day meals in 1997. A total of eight schools were adopted and a food bank programme and an Angganwasi milk Programme were started. The food-bank programme was replaced by the State Government midday meal scheme

The supreme court occasionally issues interim orders regarding midday meals. Some examples are:

Order regarding	Exact text	Order dated
Basic entitlement	"Every child in every place and Government assisted Primary Schools with a prepared mid day meal with a minimum content of 300 calories and 8–12 grams of protein each day of school for a minimum of 200 days"	28 November 2001
Charges on conversion cost	"The conversion costs for a cooked meal, under no circumstances, shall be recovered from the children or their parents"	20 April 2004
Central assistance	"The Central Government... shall also allocate funds to meet with the conversion costs of food-grains into cooked midday meals"	20 April 2004
Kitchen sheds	"The Central Government shall make provisions for construction of kitchen sheds"	20 April 2004
Priority to Dalit cooks	"In appointment of cooks and helpers, preference shall be given to Dalits, Scheduled Castes and Scheduled Tribes"	20 April 2004
Quality safeguards	"Attempts shall be made for better infrastructure, improved facilities (safe drinking water etc.), closer monitoring (regular inspection etc.) and other quality safeguards as also the improvement of the contents of the meal so as to provide nutritious meal to the children of the primary schools"	20 April 2004
Drought areas	"In drought affected areas, midday meals shall be supplied even during summer vacations"	20 April 2004

Integrated Child Development Services (ICDS

Integrated Child Development Services (**ICDS**) is a government programme in India which provides food, preschool education, primary healthcare, immunization, health check-up and referral services to children under 6 years of age and their mothers. The

scheme was launched in 1975, discontinued in 1978 by the government of Morarji Desai, and then relaunched by the Tenth Five Year Plan.

Tenth five year plan also linked ICDS to Anganwadi centres established mainly in rural areas and staffed with frontline workers.[2] In addition to fighting malnutrition and ill health, the programme is also intended to combat gender inequality by providing girls the same resources as boys.

A 2005 study found that the ICDS programme was not particularly effective in reducing malnutrition, largely because of implementation problems and because the poorest states had received the least coverage and funding. During the 2018–19 fiscal year, the Indian central government allocated ₹16,335 crores to the programme. The widespread network of ICDS has an important role in combating malnutrition especially for children of weaker groups

Scope of services

The following services are sponsored under ICDS to help achieve its objectives:

1. Immunization
2. Supplementary nutrition
3. Health checkup
4. Referral services
5. Pre-school education(Non-Formal)
6. Nutrition and Health information

Implementation

For nutritional purposes ICDS provides 500 kilocalories (with 12-15 gm grams of protein) every day to every child below 6 years of age. For adolescent girls it is up to 500 kilo calories with up to 25 grams of protein everyday.

The services of Immunisation, Health Check-up and Referral Services delivered through Public Health Infrastructure under the Ministry of Health and Family Welfare. UNICEF has provided essential supplies for the ICDS scheme since 1975. World Bank has also assisted with the financial and technical support for the programme. The cost of ICDS programme averages $10–$22 per child a year. The scheme is Centrally

sponsored with the state governments contributing up to ₹1.00 (1.4¢ US) per day per child.

Furthermore, in 2008, the GOI adopted the World Health Organization standards for measuring and monitoring the child growth and development, both for the ICDS and the National Rural Health Mission (NRHM). These standards were developed by WHO through an intensive study of six developing countries since 1997. They are known as New WHO Child Growth Standard and measure of physical growth, nutritional status and motor development of children from birth to 5 years age

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End of Unit 5