Post Graduate Certificate Course in Health System and Management

Module 1

Introduction to Public Health

2015

Indian Association of Preventive and Social Medicine
Gujarat Chapter

Post Graduate Certificate Course in Health System & Management (PGCHSM)

Team –2014

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Preface

Understanding of Health system and acquiring skills of health management are assuming importance in protecting and promoting people's health. Sound epidemiological knowledge and skills are ineffective if it is not complemented with robust Health System and Effective management. Hence it is the high time for every health manager to acquire the managerial understanding and skills.

As a professional body in Public Health; it is our responsibility to act as a catalyst in increasing the quality of health services. This course; Post Graduate Certificate In Health System and Management is an attempt to bridge the gap between technical and managerial worlds for Community Physicians and Public Health experts.

This course is covering key topics on health system, planning, managing human resources, materials and machines. Also health fineness and health economics, monitoring and evaluation, quality in health care are covered. The strength of the course lies in its faculties. Faculties are mixed of experts from the medical colleges and public's health cadres. Also it is envisage that students who are opting the course develop critical and creative thinking, reasoning power and analytical skills in Community Health with vision of applicability.

We have successfully completed two PGCHSM courses during the years 2013 and 2014.

I am sure this is a small step, but it will go a long way in creating culture for learning about health system and health management in the medical expert involved with public health. We are looking forward to your suggestions and support to further enhance the quality of this course.

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We deeply appreciate tireless efforts of Dr. Umed Patel and Dr. Kaushik Lodhiya for successfully steering the entire course and give a concrete shape.

Academia
IAPSM-GC

: About Module:

First module of Post Graduate Certificate Course in Health System and Management covers introduction to public health. First chapter includes various definitions concerns for public health. Second Chapter revealed basic concept of health; it also shows what is preventive medicine and how it differs from public health.

Evolution of Public Health in different era in world is explained in third chapter. How focus of health changed from symptoms to disease; risk population; diagnosis and treatment of disease to diagnosis and treatment of patient and lastly community diagnosis and treatment is briefed in third chapter. How public health evolved in India from Ancient living conditions of Mohenjo-Daro and Harrappa to modern period in 21st century is also showed in this chapter.

Chapter four has covered Primary Health Care concept (Health for All 2000AD in 1978) to Millennium Development Goal with its Goals, Targets and Indicators. Chapter fourth also covers relevance of MDG in India at current level.

Health Planning in India and role various health committee and their recommendations were explained in Chapter number five. Chapter six covers role of various international health agencies and its role in global health.

Achievements during various Five year plans in India were explained in seventh chapter. Universal Health Coverage, 12th Five Year Plan (2012-2017) strategy and various instruments of service delivery in 12th FYP is narrated in this chapter.

We hopeful this module will help reader to understand basic concept of public health and health planning in India.

Team
PG Certificate Course in Health System and Management
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Post Graduate Certificate Course
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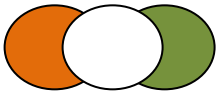

Module 1: Introduction to Public Health

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Indian Association of Preventive and Social Medicine
Gujarat Chapter
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Module 1

Introduction to Public Health

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Chapter 1

Terminologies Used In Health Care System and Management

At the end of this chapter participants should be able to learn:
1). Various terminologies used in Health Care System

Access (to health services): the perceptions and experiences of people as to their ease in reaching health services or health facilities in terms of location, time, and ease of approach.

Accessibility (of health services): aspects of the structure of health services or health facilities that enhance the ability of people to reach a health care practitioner, in terms of location, time, and ease of approach.

Accountability: the result of the process which ensures that health actors take responsibility of what they are obliged to do and are made answerable for their actions.

Accreditation: accreditation is a formal process by which a recognized body is assessed and recognized to meet applicable pre-determined and published standards. Accreditation is often a voluntary process in which organizations choose to participate, rather than one required by law and regulation.

Aid: support provided by countries, international agencies, institutions, non-governmental organizations or foundations, to developing countries in the form of monetary grants, loans at low interest rates, in kind, or a combination of these.

Aid-in-kind: flows of goods and services with no payment in money or debt instruments in exchange. In some cases, 'commodity aid' goods (such as grain) are subsequently sold and the receipts are used in the budget or, more commonly through a special fund, for public expenditure.

Audit: the legal requirement for a corporation to have its balance sheet, financial statement, and underlying accounting system and records examined by a qualified auditor so as to enable an opinion to be formed as to whether the financial statement accurately represent the company's financial condition and whether they comply with relevant statutes.

Benefits: Gains, whether material or not, accruing to an individual or a community.

Benchmark: (i) a measurement or point of reference at the beginning of an activity which is used for comparison with subsequent measurements of the same variable; (ii) unacceptable standard in evaluation.

Budget (macroeconomics): Summary of planned financial expenditures and incomes over specified periods. In a narrower sense, a budget shows the total amount of money allocated for specific purposes during a specified period.

Budgeting: the process of elaborating a detailed plan for the future, showing how resources will be acquired and used during a specific time period, expressed in formal, measurable terms.

Burden of disease: a measurement of the gap between current health status and an ideal situation where everyone lives, free of disease and disability.

Capital expenditure: the cost for resources that last more than one year, such as building, vehicles, computers, pre-service training etc. Sometime a price ceiling is also defined (usually $US 100), below which costs are considered as recurrent. The cost of capital equipment is net of depreciation. Also called investment or non-recurrent cost/expenditure.

Care Maps: plans for the management of patient care that set goals for patients and provide the sequence of interventions that physicians, nurses and other professionals should carry out in order to reach the desired goals in a given time period.

Certification: A process, by which an authorized body, either a governmental or non-governmental organization, evaluates and recognizes either an individual or an organization as meeting pre-determined requirements or criteria. Although the terms accreditation and certification are often used interchangeably, accreditation usually applies only to organizations, while certification may apply to individuals, as well as to organizations.

Community financing: Direct financing or co-financing of health care by households in villages or communities, either by payments on receipt of care or by pre-payment.

Coherence (of a national health policy/strategy/plan): (i) the extent to which proposed strategies are aligned with the priorities identified in the situation analysis; (ii) the extent to which programme plans are aligned with the national health strategy and plan; (iii) the extent to which the different programmatic strategies in the national health policy/strategy/plan are coherent among each other.

Comprehensive Health Services: health services that are managed so as to ensure that people receive a continuum of health promotion, disease prevention, diagnosis, treatment and management, rehabilitation and palliative care services, through the different levels and sites of care within the health system, and according to their needs throughout the life course.

Comprehensiveness (of a national health policy/strategy/plan): the extent to which a national health policy/strategy/plan addresses the full range of health problems and health system problems and challenges.

Consensus building: the process by which different stakeholders reach an overall agreement on a policy concern.

Contracting-out: the practice of the public sector or private firms of employing and financing an outside agent to perform some specific task rather than managing it themselves.

Cost benefit ratio: The ratio of the present value of benefits to the present value of costs.

Cost benefit analysis: A method of comparing the actual and potential costs (Both private and social) of various alternative schemes with the actual and potential benefits (private and social), usually measured in monetary terms and present values, with a view to determining which one maximizes the benefits. (See also benefit to cost ratio, cost effectiveness and cost utility).

Cost benefit analysis: a comparison of costs and achieved benefits, where both costs and benefits are expressed in monetary terms. The usual rule in cost benefit analysis is for the benefit-cost ratio (B/C) to exceed unit.

Cost effective analysis: A method of comparing similar alternative courses of action in order to determine the relative degree to which they will achieve the desired objectives. The costs are expressed in monetary terms but some of the consequences are expressed in physical units, e.g. number of lives saved or cases of disease detected.

Cooperative health care: A community based and community managed scheme, often government supported, whereby the consumer contributes in advance for covered health services.

Co-payment: An arrangement whereby an insured person pays a particular percentage of any bill for health services received, the insurer paying the remainder.
Costing: (i) the estimation of cost for a specific strategy or intervention, or of an overall national policy, strategy or plan. (ii) the estimation of the cost of different scenarios, corresponding to different priorities or strategies, in the short, medium or long term.

Cost recovery: receipt, by a health provider, of income from individuals or the community in exchange for health services. It may be expressed as a percentage of expenditure.

Cost sharing: Usually refers to a method of financing health care that involves some portion of the expenditure falling directly on the user. The cost is then shared between user and employer, government, donor, taxpayer, insurance agency, etc.

Cost utility analysis: A method of evaluation that uses more subtle measures of output (utility indices) than in cost effectiveness analysis, and does not usually assign monetary value to health outcomes, as in cost benefit analysis.

Deflation: removal of the effect of price inflation from expenditure amounts by dividing the expenditure amount by a price index or deflator.

Deflator: a price index used to distinguish between those changes in money value which result from a change in prices and those which result from a change in physical output.

Depreciation: the reduction in value of a capital asset through wear and tear.

Development funds: Funds for activities which promote a country's development.
Many governments of developing countries have a development budget to finance
(often from external sources) activities which will increase the country's productive capacity.

Disbursement: the release of funds to – or the purchase of goods or services for a recipient; by extension, the amount thus spent. Disbursements record the actual international transfer of financial resources, or of goods or services valued at the cost to the donor.

Effectiveness: the extent to which a specific intervention, procedure, regimen or service, when deployed in the field in routine circumstances, does what it is intended to do for a specified population.

Efficacy: the extent to which a specific intervention, procedure, regimen or service, produces the intended result under ideal conditions.

Efficiency: the capacity to produce the maximum output for a given input.

Empowerment – entails helping people to help themselves. It can mean supporting people with the official authority or freedom to act or ensuring that they have the means to act, but it also comprises an element of self-empowerment consciousness whereby people feel more confident to take the decision to act and also feel more in control of their lives.

Endorsement (of a national Policy/Strategy/Plan): approval and signing off on the National Policy/Strategy/Plan by relevant authorities (parliament, ministry of health, others).

Equity: Not necessarily identified with equality, it relates in general to ethical judgments about the fairness of income and wealth distributions, cost and benefit distributions, accessibility of health services, exposure to health-threatening hazards, and so forth.

Equity in Health: a measure of the degree to which health policies are able to distribute well-being fairly.

Facilitation: (i) the effort to help a process move forward towards attaining a particular end or result. (ii) the process undertaken to enable the different stakeholders involved in policy dialogue to achieve a high degree of consensus around a specific policy concern and to ensure that negotiations run well.

First Level of Care: the entry point into the health care system, at the interface between services and community.

Fiscal space: the capacity of government to provide additional budgetary resources for a desired purpose without any prejudice to the sustainability of its financial position.

Governance: the exercise of political, economic and administrative authority in the management of a country's affairs at all levels, comprising the complex mechanisms, processes, relationships and institutions through which citizens and groups articulate their interests, exercise their rights and obligations and mediate their differences.

Gross Domestic product (GDP): The market value of the total final output of goods and services produced in a country over a specified period of time.

Gross National Product (GNP): Market value of the total domestic and foreign output of a country.

Health economics: The application of economic theory to phenomena and problems associated with health and health services. Topics include, among others, the meaning and measurement of health status, the production of health and health services, the demand for health and demand for health services, cost effectiveness and cost benefit analysis in the health field, health insurance, the analysis of markets for health services, planning of human resources, the economics of medical supply industries, the determinants of inequalities in health and health care utilization, hospital economics, health care budgeting, territorial resource allocation, and methods of remuneration of medical personnel.

Health financing: Provision of funds or credits for a specified purpose in the health sector. The origin of financing may be external (from abroad) or domestic (private or public).

Health insurance: "a contract between the insured and the insurer to the effect that in the event of specified events (determined in the insurance contract) occurring the insurer will pay compensation either to the insured person or to the health service provider. There are two major forms of health insurance. One is private health insurance, with premiums based on individual or group risks. The other is social security, whereby in principle society's risks are pooled, with contributions by individuals usually dependent on their capacity to pay.

Health investment: Expenditure on equipment and human resources used to provide health services and promote health. In a more general sense, the undertaking of any activity that involves a sacrifice (e.g. payment of money), followed by a benefit (e.g. enjoyment of a good).

Health policy: a general statement of understanding to guide for decision making that results from an agreement or consensus among relevant partners on the issues to be addressed and on the approaches or strategies to deal with them.

Health service: any service (i.e. not limited to medical or clinical services) aimed at contributing to improved health or to the diagnosis, treatment and rehabilitation of sick people.

Health system performance: the degree to which a health system carries out its functions - (service provision, resource generation, financing and stewardship) to achieve its goals.

Human capital: The skills and capabilities generated by investments in education (including on the job training) and health.

Impact: positive or negative, long-term or medium-term effects produced by a programme or intervention.

Indirect costs: total sum of morbidity costs (goods and services not produced by the patient because of the illness), mortality costs (goods and services the person could have produced had the illness not been incurred and the person not died prematurely), and productivity cost (related to lost productivity incurred by an employee who leaves work to provide care for the patient).

Input: a quantified amount of a resource put in a process.

Licensure: licensure is a process by which a governmental authority grants permission to an individual practitioner or health care organization to operate or to engage in an occupation or profession.

Macroeconomics: Branch of economics which considers the relationships among broad aggregates, such as national income, volume of investment and consumption, employment, money supply, etc. Macroeconomics looks at the determinants of the magnitude of these aggregates and at their rates of change over time.

Microeconomics : Brach of economics which is concerned with individual decision units (households, firms) and the way in which their decisions interact to determine the quantity and the price of goods, services, and factors of production (e.g. labour).

Marginal cost: the change in total cost that results from a unit increase in output.

Monitoring: the continuous oversight of an activity to assist in its supervision and to see that it proceeds according to plan. Monitoring involves the specification of methods to measure activity, use of resources, and response to services against agreed criteria.

Outcome: those aspects of health that result from the interventions provided by the health system, the facilities and personnel that recommend them and the actions of those who are the targets of the interventions.

Out-of-pocket payments (OOP): payments for goods or services that include: (i) direct payments: payments for goods or services that are not covered by any form of insurance; (ii) cost sharing: a provision of health insurance or third-party payment that requires the

individual who is covered to pay part of the cost of health care received; and (iii) informal payments: unofficial payments for goods and services that should be fully funded from pooled revenue.

Output: the quantity and quality of activities carried out by a programme. Or The products(s) that an activity is expected to produce from its inputs in order to achieve its objectives; the quantity of goods or services produced in a given time period.

People-centered care: care that is focused and organized around the health needs and expectations of people and communities rather than on diseases. People-centered care extends the concept of patient-centered care to individuals, families, communities and society. Whereas patient-centered care is commonly understood as focusing on the individual seeking care.

Pledge: A binding promise or agreement to give a grant or loan.

Policy dialogue: the social debate and interaction between stakeholders that leads to translation of policy into strategies and plans.

Primary care: often used interchangeably with first level of care. the part of a health services system that assures person focused care over time to a defined population, accessibility to facilitate receipt of care when it is first needed, comprehensiveness of care in the sense that only rare or unusual manifestations of ill health are referred elsewhere, and coordination of care such that all facets of care (wherever received) are integrated. Quality features of primary care include effectiveness, safety, people-centeredness, comprehensiveness, continuity and integration.

Productivity: Output per unit of input in a stated time period. For example, labour productivity can be measured as output per person, per hour.

Programming: the stage of the national health planning cycle in which the National Health Policy/Strategy/Plan (and in some cases its Medium Term Expenditure Framework), is translated into annual operational plans.

Purchasing power parity (PPP): It is the number of units of country's currency required to buy the same amount of goods and services in the domestic market as one dollar would buy in the USA.

Recurrent expenditures - costs: costs that refer to inputs which last less than one year and are regularly purchased for continuing an activity, such as salaries, drugs and supplies, repair maintenance, and others.

Resilience: the ability of a system, community or society exposed to hazards to resist, absorb, accommodate to and recover from the effects of a hazard in a timely and efficient manner, including through the preservation and restoration of its essential basic structures and functions.

Resource planning: the estimation of resource inputs (human resources, medical devices, medical equipment, pharmaceuticals and facilities) necessary to provide expected services.

Shadow prices: prices that have been adjusted for various reasons, including donations, distorted exchange rates, subsidies, to yield an economic cost that better reflects the value of a given good or A money value applied to a cost or benefit where there is none revealed by any market, or where market revealed prices reflect them inaccurately. A technique commonly used in cost benefit or cost effectiveness analysis.

Social marketing: Promotion and education techniques intended to stimulate behavior conductive to good health, for example, the promotion of condom use.

Stakeholder: an individual, group or an organization that has an interest in the organization and delivery of health care.

Standard: an established, accepted and evidence-based technical specification or basis for comparison.

Strategy: a series of broad lines of action intended to achieve a set of goals and targets set out within a policy or programme.

Target: an intermediate result towards an objective that a programme seeks to achieve, within a specified time frame, a target is more specific than an objective and lends itself more readily to being expressed in quantitative terms.

Transaction costs: any use of resources required to negotiate and enforce agreements, including the cost of information needed to facilitate a bargaining strategy, the time spent haggling, and the costs of preventing cheating by the parties to the bargain.

Vertical Integration: the coordination of the functions, activities or operational units that are in different phases of the service production process. Examples of this type of

integration are the links between hospitals and medical groups, outpatient surgery centers and home-based care agencies.

Chapter 2

Concept of Health

At the end of this chapter participants should be able to learn:
1). Various concept of public health

There are many views as to what constitutes "health". One view puts it as "absence of disease", i.e. there are no impediments to an individual's functioning or survival. The problem inherent in the "absence of disease" definition is that it focuses only on disease. However, there is, in every disease, a long phase of transition from actual health to the overt disease process. Hence, health is something much more than the mere absence of disease.

The widely used definition of health by WHO, which states "Health is a state of complete physical, mental and social well being and not merely the absence of disease or infirmity". This definition is commonly seen as the statement of an "ideal" towards which nations should aspire, rather than as a practical working definition. For this reason, an "operational" definition of health, one drawn from the above "ideal" definition, has been forwarded, by a technical study group of WHO. According to this definition, the concept of health is viewed as being of two orders - first, in a broad sense, health can be seen as a condition or quality of the human organism in given conditions: genetic and environmental. Secondly, in a narrow sense, more useful for working purposes, health means: There is no obvious evidence of diseases and that the person is functioning "normally", i.e. conforming within normal limits of variations to the standards of health criteria, generally accepted for one's age, sex, community and geographic region and various organs of the body are functioning adequately in themselves and in relation to one another, which implies a kind of equilibrium or homeostasis.

In addition there are various determinants of health as well as indicators of health which we will not discuss here. We aim to clarify on certain concepts which are as under.

Preventive Medicine
Preventive Medicine is that branch of medicine which deals with promoting health and preventing disease. The cardinal goal of preventive medicine is to avert the occurrence of disease. Achievement of this goal requires that actions be directed at the earliest stage of the natural history of disease, i.e. stage of susceptibility, using the methods of health promotion and specific protection; and to some extent, methods of secondary prevention by early detection of disease when it may be otherwise not detected using usual methods of diagnosis, often by screening followed by appropriate intervention.

However, in a broader sense, preventive medicine refers to "limiting" the progression of disease at any stage of its course. Thus, when a clinician, using the approach of curative medicine, diagnosis and treats a patient of pulmonary tuberculosis, she is practicing

preventive medicine too, since she is "preventing" the progress of the disease from the mild /uncomplicated phase to one of complications and more disability.

Public Health

"The science and art of preventing disease, prolonging life and promoting physical health and efficiency through organized community efforts for the sanitation of the environment, the control of community infections, the education of the individual in principles of personal hygiene, the organization of medical and nursing services for the early diagnosis and preventive treatment of diseases and the development of social machinery which will ensure to every individual, in the community, a standard of living adequate for maintenance of health".

Thus public health is best identified as a social movement concerned with protecting and promoting the collective health of the community. While, mostly public health activities are funded and regulated by the Governments (National or State), the work of voluntary health agencies is also very much part of public health activities since they represent an organized community effort and systematic social action.

Preventive Medicine versus Public Health

The dividing line between preventive medicine and public health is actually a very thin, rather hazy one. Preventive medicine is an overall science; public health is an approach within this science. When preventive medicine starts focusing on population groups rather than individuals and utilizes the approach of 'organized community efforts' it takes the shape of public health.

The other approach of using preventive medicine is the "individualized" preventive medicine, for instance, immunizing an otherwise healthy child, or the "clinical" preventive medicine, which can be very effectively practiced in clinical settings; for example, a doctor who educate ante-natal women about breast feeding or a doctor who takes a pap smear from patients who are attending a family planning clinic is actually practicing individualized or clinical preventive medicine, but, may be, not public health. On the other hand when the Government or even a Non Governmental Organization (NGO) working with community members in a village, organizes a health education program for breast feeding for expectant mothers, or organizes a cervical cancer screening camp, the approach becomes that of public health.

Social Medicine

The fact that man is a social animal, it is apparent that any effort at preventing or curing the disease or making an assessment of the health problems has to take social factors into account. This is, in essence, the concept of social medicine. Subsequently, the concepts of social medicine merged with preventive medicine, to form the specialty of preventive & social medicine

Socialized Medicine

Socialized Medicine is different from of Social Medicine. It refers to the policy of providing complete medical care, preventive and curative, to all members of a society (usually a nation) as a governmental commitment and out of governmental (public) finances, as is the policy in Russia.

Community Medicine

As a professional movement, Community Medicine (or Community Health) is the most recent of the three fields to emerge in medical education and medical practice. As a discipline, it is defined as that branch of medicine, which addresses certain selected aspects of health promotion, disease prevention, health restoration (by curative steps) and rehabilitation of the former patients, in the community, usually, from an "Institutional Community Base" which is usually either an Academic Department in a medical college or through a curative centre. Community medicine, as an approach, has borrowed heavily from the concepts, methods and approaches of its two elder sisters, viz. public health and preventive medicine.

Community medicine is one pathway for representing an institution's commitment to improving health of its immediate (or adopted) community - generally a medical college, hospital or a clinical department serve as the base. The health task is to define the health problems, propose solutions, maintain surveillance, evaluate progress and monitor the use of resources. The approaches employed range from tools of epidemiology to the social skills, necessary for involvement with the community.

Central to the approach of community medicine, whether in academia or in practice, is the promise that the main factors that determine a community's health are to be found within the community itself - in its social, cultural or biological features, or in its environment - natural and man-made.

In UK, community medicine essentially includes Epidemiology and Medical Administration and has been seen as a successor to public health, providing information and advice on the health status and the services to the community and to the local Self Govt/community organizations, as well as performing other planning and management functions.

Chapter 3

Evolution of Public Health

At the end of this chapter participants should be able to learn:

1) Public health in different era in globe
2) Public health in different era in India
3) Some important milestones of public health in India

EVOLUTION OF PUBLIC HEALTH IN WORLD

Evolution of public health in World has passed through various stages. These can be segmented into various eras.

EMPIRICAL ERA (Until 1850)

During this period, the medicine and health science belonged to empirical era. The focus was on ***symptoms***. The art of medicine revolved around the diagnosis and treatment of symptoms by all kinds of available home medicaments considered appropriate at that time which had no bases of science are scientific evidence. People put the blame on witches or evil spirits and treated the sickness or symptoms with magic cures, cupping and application of leaches to draw bad blood out of the body and administered a variety of purgatives. People held several kinds of wrong beliefs like evil eyes, past sins, curse of god, and being possessed by an evil spirits (ghost intrusion into body) in cases of all mental illness.

During the ancient Egyptian period developments such as toilets and bathing were introduced, but this was on a private level. While Egyptian religious beliefs encouraged washing the body, thereby improving the health of the population. Patients were visiting the temples of the god of healing, but the temples were not part of a public health system.

There was some development of public health by the Minoans, a Mediterranean civilization about 3000-1050 BC. The Minoans built baths and constructed channels to supply clean water and remove waste. However, these facilities were lost when the Minoan civilization collapsed and their palaces and towns were destroyed by natural disasters and invading Greek forces.

The Greeks encouraged healthy living and pursued regimens of exercise and hygiene such as those prescribed by Hippocrates in his Regimen (4th century BC). Hippocrates is often called a father of Medicine. He studied and classified the diseases based on observation and reasoning. He challenged the tradition of magic in medicine and initiated a radically new approach to medicine i.e. application of clinical methods in medicine.

First half of nineteenth century, was the period of the industrial revolution and cholera epidemics. The industrial revolution brought about the need for increased manpower and massive use of laboring classes. The life expectancy rate based on social class was: gentry, 35 years; tradesmen, 22 years; and laborers, 15 years. Approximately one-half of the

children of the working classes died before age of five. William Farr, convinced that mortality increased with density of population. From 1839 William Farr collected statistics from parish registers on births and deaths. He was able to show the impact of poor living conditions on life expectancy and the differences between different areas.

Sanitary Theory: The theory of miasma, which said that disease is due to causes contained in bad air including the cosmic radiations, found much support during the 18th and 19th century. It made sense to the English Sanitary reformers of the mid-nineteenth century.

Miasma explained why cholera and other diseases were epidemic in places where the water was un-drained and very foul-smelling. The theory led to improvements in the sanitation systems, which led to decreased episodes of cholera, which helped to support the theory. This caused public health reforms and encouraged cleanliness, even though some doctors still did not wash their hands between patients. They believed that the miasma were only airborne and would not be stuck on the doctors' hands.

The cholera Epidemic of 1832 highlighted the problem of disease. In 1837, Chadwick appointed doctors to investigate the London districts with high typhus mortality. The report highlighted the squalor of the inhabitants and the insanitary conditions. Chadwick compiled a survey of "Sanitary condition of laboring classes of great Briton" in 1842 in which he recommended the "Sanitary Idea" with creation of a public health authority to provide drainage, potable water, sanitation, regulation of buildings etc. The first British Public health Act was passed in 1848 and emphasized state's responsibility for the health of its people. The city of London also had its own private Sewers Act 1848.

BACTERIOLOGICAL ERA (1850-1900)

During this era, medicine became a science. Micro-organisms of various diseases were discovered or isolated and grown on cultures. The focus shifted from ***symptoms*** **to disease**. Much more emphasis was laid on diagnosis and treatment of disease. This era was also called as basic science era.

John Snow, an English epidemiologist studied the epidemiology of cholera in London from 1848 to 1854 and established the role of polluted drinking water in the spread of cholera. In 1856, William Budd reported outbreak of typhoid fever in rural north of England due to polluted drinking water. These two discoveries were remarkable because at that time causative agents of Cholera and Typhoid were not identified. Then came the demand for clean water from people.

Free vaccinations were made available through the Poor Law Medical Services in 1840. In 1853 vaccination was made compulsory for all children of first year of life. In 1864, the first Contagious Disease Acts was passed which provided for compulsory examination of women believed to be "Common prostitutes" who were to be locked up for up to one year without right to habeas corpus if they were diagnosed to have sexually transmitted disease. In 1875, the Public Health Act was codified including all existing sanitary legislation.

A shift in public health took place when individuals began to be categorized into "**Risk populations**". These were on the basis of analysis of disease by Edmund Parkes. Soon thereafter, came the germ theory which was based on the concept that specific microbes caused specific diseases. Developments in Bacteriology in 1880's were embraced by the preventive profession. A model was developed in which one agent was related to one disease (Robert Koch).

A dramatic increase in industrialization in the late 19th century, coupled with urbanization, had profound effects on urban water supplies. There was pollution from human wastes from homes and the workplace disposed in the waterways. Effluents containing organic and inorganic toxic and non-toxic material were dumped into the same waterways. During this time medical theories were limited to bacteriological paradigms. In 1898, when US sent troops into Cuba they lost 968 men in battle and 5438 due to infectious diseases. When yellow fever threatened troops in Cuba in 1900 an army commission under Walter Reed confirmed that the disease was transmitted by mosquito and eliminated the disease from Havana.

PREVENTIVE MEDICINE AND CLINICAL SCIENCE ERA (1900-1950)

Hospital, dispensaries and health centers were developed and focus shifted from diagnosis and treatment of disease to diagnosis and treatment of patient. This was an era of preventive medicine, treating/curing the sick in hospitals/health centers by using the advanced knowledge of clinical sciences, laboratory tests and other advances. The whole approach was patient-centered. Subsequently, it was realized that an individual needs to be treated as a whole in totality, including family. The concept of family physicians developed. Early diagnosis and prompt treatment has benefited "individuals" but it has not led to eradication of a disease or control of a disease. Only community medicine will eradicate the disease or control a disease ultimately and it is much more beneficial. The answer eliminating a disease or controlling a disease does not lie in opening more hospitals and more clinics. Community based actions and approaches are required to control and eliminate both communicable and non-communicable disease (lifestyle disease).

The US Army in Philippines had to battle with malaria, dengue, dysentery and beriberi to continue to remain in the region. The French attempt to build a canal across Panama was abandoned due to disease-malaria killing so many workers. The American attempt succeeded due to an intensive campaign against mosquitoes and able to finish Panama canal work.

During World War II the Public Health services established the control of Malaria in war areas. After the war, the organization was converted into the Centers for Disease Control and Prevention. In 1907, preventive medicine practitioners and town planners got together to bring about housing reforms. Simultaneously, legislations were passed for free school meals, medical inspection of school children and antenatal care. These concerns were clubbed by society into "Endowment of motherhood" movement which included targeting of malnutrition and breaking habits of inefficient and unhygienic motherhood. A great emphasis was placed on health education.

Newsholm in 1910 introduced the concept of "Causal attack" upon disease after redefining the environment from a "Social Standpoint". In Germany, Pettenkofer first calculated the financial returns on public health investments to prove the value of sanitary improvement in reducing death from typhoid. Bacteriological analysis was used to determine the presence of coliform bacteria in municipal water supplies. Since coliform bacteria are present in great numbers in humans and animals but are not typical water organisms, their presence served as an indicator of fecal pollution and possible pathogenic organisms.

COMMUNITY HEALTH/PUBLIC HEALTH ERA (1950-1977)

During this era, profound change was observed. It was realized that medicine as a "social science" could not solve a health problem by treating and caring of sick individuals in the hospitals or dispensaries. The focus in the second half of the 20th century shifted to community and community diagnosis and treatment. The whole community should be the focus of health and to ensure health to total community and meet the health needs of community.

Accordingly, the approach to medicine shifted from treatment to care, coverage, reduction of incidence of disease burden and disability and "development of community" to achieve positive health.

Classical infectious disease rates have declined while increased rates of so-called modern diseases (heart disease, cancer and immune deficiency diseases) are now being observed in epidemic proportions throughout the world. Classical public health organizations and systems are now in a state of flux because these structures were emerged for classical communicable disease control. New problem-solving systems are needed in areas such as health care financing, medical care for the aged, environmental health protection and health care planning and administration.

"HEALTH FOR ALL ERA"- 1977 ONWARDS

During the year 1977, WHO adopted the strategy of "Health for All by 2000AD." The emphasis was clearly focused on community to achieve a level of health which would permit all individuals to lead a socially useful and economically productive life through primary health care approach.

CNNA (Community Need Assessment Approach) was launched after an International Conference on Population and Development held at Cairo in 1994. In September 2000, representatives from 189 countries met at the Millennium Summit in New York to adopt the United Nations Millennium Declaration. The leaders made specific commitments in following areas: i). Peace, security and disarmament, ii). Development and poverty eradication, iii). Protecting common environment, human rights democracy and good governance iv). Protecting vulnerable, v). meeting the special needs of Africa and strengthening the United Nations by declaring Millennium Developing Goals.

During last 30 years, the World became more clear in Developed and Developing nations. Developed nations were able to control their environment and able to established health care system as per the need of people effectively, but Life style and behavior related health

problems are their main concerns. On the other hand developing nations are still struggling for environmental, social, political, economical issues in their nations and not reach to large proportion of their population to serve primary and basic health care. That led to poor public health indicators even in 21st century.

Thus, it can be summed up that during various eras profound changes were taking place and focus was shifting from 'Symptoms' to 'bacteria or disease' to 'individual' to 'community'. As of now, the 'Community' is the focus or concern of all health sciences or medicine. The community concern or focus means that whole population (urban, rural tribal, desert and slum dwellers) need to be ensured "healthy" and their "health needs" must be responded through various ways of community approaches.

EVOLUTION OF PUBLIC HEALTH IN INDIA

India has one of the most ancient civilizations in recorded history. Around 3000 B.C., Excavation in the Indus Valley at Mohenjo-Daro and Harrappa showed well planned cities with drainage, houses and public baths built of baked bricks suggesting the practices of environmental sanitation, by ancient people. This shows hygiene and sanitation is an important in ancient public health.

Ancient Indian thoughts, philosophy developed on concepts of spirituality. Ayurveda is the ancient science of life. Charaka has described the objective of medicine as two fold; preservation of good health and combating disease. Ayurveda emphasized the need for healthy lifestyle, including cleanliness and purity, good diet, proper behavior and mental and physical discipline. Purity and cleanliness were to be observed in everything : jalasuddi (pure water), aharasuddi (clean food), dehasuddi (clean body), manasuddi (pure mind) and deshsuddi (clean environment). Ayurveda calls upon the physician to treat the patient as a whole: Charaka Samhita prescribes an elaborate code of conduct.

During 600 B.C.-600 A.D. was dominated by the religious teaching of Buddhism and Jainism. Medical education was introduced in the ancient universities of Taxila and Nalanda.

British rules established numbers of small dispensaries and large hospitals and medical institute during their ruling in India(1750-1950). Public health educational and research institutions, such as the Calcutta School of Tropical Medicine and Hygiene and the All-India Institute of Hygiene and Public Health, also in Calcutta, were established in British India in the first half of 20th century in order to carry out public health training and research in the region.

After independence, Govt. of India launched many national health programmes and strengthens public health system through various Five year plans. Today, Urban areas have two clear cut demarcated population i.e. slum and non-slum. People of slum are economically poor with poor health status and health care services. Rural India also has its own limitation of awareness and accessibility of various kind of health services.

Some Important Milestone of Public Health in India

Year: Milestone

1825: Quarantine Act promulgated
1881: 1st Indian Factories Act was passed. 1st Census was taken
1897: The Epidemic Disease Act was promulgated
1930: All India Institute of Hygiene and Public Health, Calcutta was established
1939: First Rural Health Training Center was established at Singur , near Calcutta
1946: The Bhore Committee submitted its report
1948: India joined WHO as member country. ESIS Act 1948 was passed
1950:: The beginning of 1st Five Year Plan
1953: National Malaria Control Programme was implemented. Nationwide Family Planning Programme was launched.
1954: National Leprosy Control Programme was started
1958: NMCP was converted to National Malaria Eradication Programme
1962: School Health Programme was started
1963: National Institute of Communicable disease was inaugurated
1975: India became Smallpox free. ICDS scheme was launched
1977: Eradication of Smallpox from India was declared.
WHO adopted the goal "Health for All 2000A.D."
1983: National Health Policy was approved. Guinea –worm eradication programme was launched
1987: New 20 point programme was launched. National Diabetes Control Programme and National AIDS Control Programme was launched.
1992: CSSM (Child Survival and Same Motherhood Programme was launched.
1993: RNTCP was launched. National Nutrition Policy 1993 formulated.
1994: Plague returned after 28 years of silence.
1995: Pulse Polio Immunization campaign started
1997: RCH Programme launched
2000: National Population Policy announced. India was declared as Guinea-worm free country.
2002: National Health Policy 2002 announced
2003: NVBDCP launched
2004: Integrated Disease Surveillance Project launched
2005: RCH-II launched. Janani Surakha Yojana launched. NRHM launched
2006: IMNCI strategy launched in 16 states
2007: Indian Public health standards for PHC and sub-centre formulated.
2008: Non-communicable disease Programme as pilot project launched.
2009: Pandemic Influenza A (H1N1) 2009 outbreak reported
2010: 1st phase of Measles Catch-Up Campaign began in India.
2011: Last case of Poliomyelitis reported from West Bengal
2012: Janani Shishu Surakha Karyakram launched. NSSK (Navjat Shishu Surakha Karyakram) launched.
2013: Pentavalant vaccine was included in national immunization schedule.

Chapter 4

Primary Health care to Millennium Development Goal

At the end of this chapter participants should be able to learn:

1). Concept of Primary Health Care
2). Millennium Developmental Goal
3). Millennium Development Goal -an Indian perspectives

In 1977, the Director General of WHO called for a new strategy, acknowledging that although the health care strategies of the industrialized world - that of big hospitals, drugs and curative medicine had been exported to developing countries for thirty years, the health of the world had not improved. The International Conference on Primary Health Care was convened in Alma-Ata, Kazakhstan, in 1978 and was attended by virtually all the member nations of the World Health Organization (WHO) and UNICEF.

134 governments ratified the WHO Declaration of Alma-Ata, asserting that:
(a) Health for all could be achieved by 2000.
(b) Governments have a responsibility for the health of their people that can be fulfilled only by the provision of adequate health and social measures.
(c) Primary health care is the key to attaining a level of health that will permit their citizens to lead a socially and economically productive life.

The Alma-Ata Declaration of 1978 emerged as a major milestone of the twentieth century in the field of public health and it identified Primary Health Care (PHC) as the key to the attainment of the goal of Health for All (HFA).

Definition of "Health for All (HFA)"
HFA is defined as "the attainment by all peoples of the world by a particular date (kept at that time as the year 2000), of a level of health that will permit them to lead a socially and economically productive life". It does not imply that by that date, everybody in the world will have the most state of the art health care but that by that date, everybody in the world will attain a level of health so as to enable him or her to lead a physically, mentally, socially and economically fulfilling life and contribute fully, depending on his/her capabilities, towards the socio-economic development of the community and nation.

The Global Strategy for Health for All by the Year 2000 (HFA2000) set the following guiding targets to be achieved by year 2000:
1. Life expectancy at birth above 60 years
2. Infant mortality rate below 50 per 1000 live births
3. Under-5 mortality rate below 70 per 1000 live births.

Health for All in the 21st Century
In May 1998, the World Health Organization adopted a resolution in support of the new global Health for All policy. The new policy, Health for All in the 21st Century, succeed the

Health for All by the Year 2000 strategy launched in 1977. In the new policy, the worldwide call for social justice is elaborated in key values, goals, objectives and targets.
The 10 global health targets are the most concrete end points to be pursued. They can be divided into three subgroups, viz.
a). Health outcome targets (total four targets),
b). Targets on determinants of health (two) and
c). Targets on health policies and sustainable health systems (four targets).

Global Health Targets:
a). Health Outcome
1. Health equity: Childhood stunting—By 2005, health equity indices will be used within and between countries as a basis for promoting and monitoring equity in health. Initially, equity will be assessed on the basis of a measure of child growth.

2. Survival : Maternal mortality ratio, child mortality rates, life expectancy—By 2020, the targets agreed at world conferences for maternal mortality ratio (<100/100,000 live births), under 5 years or child mortality rates (<45/1000 live births) and life expectancy (>70 years) will be met.

3. Reverse global trends of five major pandemics: By 2020, the worldwide burden of disease will be reduced substantially. This will be achieved by implementing sound disease control programmes aimed at reversing the current trends of increasing incidence and disability caused by tuberculosis, HIV/AIDS, malaria, diseases related to tobacco and violence or trauma.

4. Eradicate and eliminate certain diseases: Measles will be eradicated by 2020. Lymphatic filariasis will be eliminated by the year 2020. The transmission of Chagas' disease will be interrupted by 2010. Leprosy will be eliminated by 2010 and trachoma will be eliminated by 2020. In addition, vitamin A and iodine deficiencies will be eliminated before 2020.

b). Determinants of Health

5. Improve access to water, sanitation, food and shelter: By 2020, all countries, through intersectoral action, will have made major progress in making available safe drinking water, adequate sanitation, food and shelter in sufficient quantity and quality and in managing risks to health from major environmental determinants, including chemical, biological and physical agents.

6. Measures to promote help: By 2020, all countries will have introduced and be actively managing and monitoring, strategies those strengthen health enhancing lifestyles and weaken health damaging ones through a combination of regulatory, economic, educational, organizational and community based programmes.

c). Health Policies and Sustainable Health Systems

7. Develop, implement and monitor national Health for All policies: By 2005, all member states will have operational mechanisms for developing, implementing and monitoring policies that are consistent with this Health for All policy.

8. Improve access to comprehensive essential health care: By 2010, all people will have access throughout their lives to comprehensive, essential, quality health care, supported by essential public health functions.

9. Implement global and national health information and surveillance systems: By 2010, appropriate global and national health information, surveillance and alert systems will be established.

10. Support research for health: By 2010, research policies and institutional mechanisms will be operational at global, regional and country levels.

The Member States of WHO have to translate the Regional Health Policy into realistic national policies backed up by appropriate implementation plans. WHO, on its part, will provide support to the Member States based on countries' realities and needs, especially community health problems, the strengthening of health systems and services and the mobilization of countries and the international community for concerted action in the harmonization of national policies with regional and global policies.

Primary Health Care

Primary health care is defined as "essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination".

It forms an integral part both of the country's health system, of which it is the central function and main focus and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work and constitutes the first elements of a continuing health care process. Primary Health Care was identified as the key measure through which HFA was envisaged to be achieved.

In India the first National Health Policy in 1983 aimed to achieve the goal of 'Health for All' by 2000 AD, through the provision of comprehensive primary healthcare services. It stressed the creation of an infrastructure for primary healthcare; close co-ordination with health related services and activities (like nutrition, drinking water supply and sanitation); active involvement and participation of voluntary organizations; provision of essential drugs and vaccines; qualitative improvement in health and family planning services; provision of adequate training; and medical research aimed at the common health problems of the people.

The "Graded (3-Tier)" System of Health Care

In the curative domain there are various forms of medical practice. They may be thought of generally as forming a pyramidal structure, with three tiers representing increasing degrees of specialization and technical sophistication but catering to diminishing numbers of patients as they are filtered out of the system at a lower level.

The first level represents primary health care, or first contact care, at which patients have their initial contact with the health-care system. Only those patients who require special attention either for diagnosis or treatment should reach the second (advisory) or third (specialized treatment) tiers where the cost of service becomes increasingly higher.

Primary health care: It is an integral part of a country's health maintenance system. It deals with the entire gamut of the community at the grass-root level. Primary health care is a comprehensive teamwork between medically qualified physician as well as a wide range of nursing and paramedical personnel. Quite often, primary health care systems are further subdivided into three levels-the most peripheral level which is in direct contact with the community and is usually managed by one or more members from within the community who are trained and equipped in Preventive and Promotive health care as well as in the most basic clinical and emergency care. The next higher level is managed by one or more nursing/paramedical workers, while the highest level within primary health care is managed by a medical person along with his team of nursing and paramedical persons. In our country, these 3 levels correspond to the ASHA/VHG at village level, FHW/MPW at subentries and MO at Primary Health Centre, respectively.

Secondary health care: The vast majority of patients can be fully dealt with at the primary level. Those who cannot dealt at primary level are referred to the second tier for the opinion of a specialist. Secondary health care often requires the technology offered by a local or regional hospital. In India, CHC and Sub District hospital provides secondary level of health care.

Tertiary health care: The third tier of health care, employing specialist-super specialist services, is offered by district hospital, institutions such as teaching hospitals and special health units devoted to the care of particular group of patients. The cost of treatment if very high at this level.

Characteristics of Primary Health Care

(a) Stresses prevention rather than cure.
(b) Relies on home self-help, community participation and technology that the people find acceptable, appropriate and affordable.
(c) Combines modern, scientific knowledge and feasible health technology with acceptable, effective traditional healing practices.
(d) Should be shaped around the life patterns of the population.
(e) Should both meet the needs of the local community and be an integral part of the national health care system.
(f) Should be formulated and implemented with involvement of the local population.

Components of Primary Health Care

There are eight essential components:

(a) Education about common health problems and what can be done to prevent and control them;
(b) Maternal and child health care, including family planning;
(c) Promotion of proper nutrition;
(d) Immunization against major infectious diseases;
(e) An adequate supply of safe water;
(f) Basic sanitation;
(g) Prevention and control of locally endemic diseases;
(h) Appropriate treatment for common diseases and injuries.

The Four Pillars of Primary Health Care (Principles)

Primary health care is not simply treating patients or immunizing children and so on. It is an ethos, a concept, which is built up as a system. For this concept to be successful, it should employ the following four essential principles:

Community Participation: While most of the efforts in providing health care come from the state, the system of primary health care should be based on full participation and involvement of the community. It is akin to placing people's health in people's hands. In our country, the concepts of ASHA, VHG, TBAs are all examples of community participation.

Appropriate Technology: Appropriate technology is one which is scientifically sound, adapted to local needs, acceptable to those who apply it and to those on whom it is applied and which can be maintained by the people, as a part of self reliance and within the resources which can be afforded by the community and the nation. Outstanding examples of appropriate technology are the use of coloured tapes / bangles for measuring mid-upper arm circumference and use of coconut water for oral rehydration.

Inter-Sectoral Coordination: Health care, especially primary health care's preventive and Promotive functions cannot be executed in isolation by health sector alone. A large number of other sectors concerned with human development will need to function in close cooperation and tandem. These include health, education, legal, urban / rural development, agriculture, industrial, irrigation, media and such other sectors. Even at the grass root level, health care functionaries cannot function in isolation but will need to function with various other functionaries for obtaining best results. An outstanding example of intersectoral coordination at the grass root level is that of the Anganwadi, as a part of ICDS programme.

Equitable Distribution: Health services should be available to each and every one in the community and not depend on one's capability to pay for the services. In fact, those who are not in a position to pay are the one's who are in most in need of health care.
Similarly, disadvantaged groups within the homes / society (as women in a household or persons belonging to Scheduled Castes / Scheduled Tribes in the community) should have equal access and right to provision of health care, for it to be successful.

The Basic Requirements for Sound Primary Health Care (the 8 A's and the 3 C's)
1. Appropriateness
2. Availability
3. Adequacy
4. Accessibility
5. Acceptability
6. Affordability
7. Assessability
8. Accountability
1. Completeness
2. Comprehensiveness
3. Continuity

Appropriateness
Whether the service is needed at all in relation to essential human needs, priorities and policies. The service has to be properly selected and carried out by trained personnel in the proper way.

Adequacy
The service should be proportionate to the requirement. Sufficient volume of care to meet the need and demand of a community

Affordability
The cost should be within the means and resources of the individual and the country.

Accessibility
Reachable, convenient services. Geographic, economic, cultural accessibility.

Acceptability
Acceptability of care depends on a variety of factors, including satisfactory communication between health care providers and the patients, whether the patients trust this care, and whether the patients believe in the confidentiality and privacy of information shared with the providers.

Availability
Availability of medical care means that care can be obtained whenever people need it.

Assessability
Assessebility means that medical care can be readily evaluated.

Accountability
Accountability implies the feasibility of regular review of financial records by certified public accountants.

Completeness
Completeness of care requires adequate attention to all aspects of a medical problem, including prevention, early detection, diagnosis, treatment, follow up measures, and rehabilitation.

Comprehensiveness
Comprehensiveness of care means that care is provided for all types of health problems.

Continuity
Continuity of care requires that the management of a patient's care over time be coordinated among providers.

Millennium Development Goals

The **Millennium Development Goals** (**MDGs**) are eight international development goals that all 192 United Nations member states and at least 23 international organizations have agreed to achieve by the year 2015. They include reducing extreme poverty, reducing child mortality rates, fighting disease epidemics such as AIDS, and developing a global partnership for development

Background
In 2001, recognizing the need to assist impoverished nations more aggressively, UN member states adopted the targets. The MDGs aim to spur development by improving social and economic conditions in the world's poorest countries.
They derive from earlier international development target, and were officially established at the Millennium Summit in 2000, where all world leaders present adopted the United Nations Millennium Declaration, from which the eight goals were promoted.

Goals
The **Millennium Development Goals (MDGs)** were developed out of the eight chapters of the United Nations Millennium Declaration, signed in September 2000.
There are eight goals with 21 targets, and a series of measurable indicators for each target.

GOAL 1: ERADICATE EXTREME POVERTY AND HUNGER

TARGET 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.
Indicator 1A: Poverty Headcount Ratio (percentage of population below the national poverty line)
Indicator 2: Poverty Gap Ratio
Indicator 3: Share of poorest quintile in national consumption

TARGET 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger.
Indicator 4: Prevalence of underweight children under three years of age

GOAL 2: **ACHIEVE UNIVERSAL PRIMARY EDUCATION**

TARGET 3: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary education.
Indicator 6: Net Enrolment Ratio in primary education.
Indicator 7: Proportion of pupils starting Grade 1 who reach Grade 5
Indicator 8: Literacy rate of 15-24 year olds

GOAL 3: **PROMOTE GENDER EQUALITY AND EMPOWER WOMEN**

TARGET 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education, no later than 2015.
Indicator 9: Ratio of girls to boys in primary, secondary and tertiary education
Indicator 10: Ratio of literate women to men, 15-24 years old
Indicator 11: Share of women in wage employment in the non-agricultural sector
Indicator 12: Proportion of seats held by women in National Parliament

GOAL 4: REDUCE CHILD MORTALITY

TARGET 5: Reduce by two-thirds, between 1990 and 2015, the Under-Five Mortality Rate.

Indicator 13: Under-Five Mortality Rate
Indicator 14: Infant Mortality Rate
Indicator 15: Proportion of one year old children immunized against measles

GOAL 5: **IMPROVE MATERNAL HEALTH**

TARGET 6: Reduce by three quarters, between 1990 and 2015, the Maternal Mortality Ratio.

Indicator 16: Maternal Mortality Ratio (MMR)
Indicator 17: Proportion of births attended by skilled health personnel

GOAL 6: **COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES**

TARGET 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

Indicator 18: HIV prevalence among pregnant women aged 15-24 years
Indicator 19: Condom use rate of the contraceptive prevalence rate (Condom use to overall contraceptive use among currently married women, 15-49 yrs, percent)
Indicator 19A: Condom use at last high risk sex (Condom use rate among non-regular sex partners 15-24 yrs)
Indicator 19B: Percentage of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS

TARGET 8: Have halted by 2015 and begun to reverse the incidence of Malaria and other major diseases.
Indicator 21: Prevalence and death rates associated with Malaria.
Indicator 22: Proportion of population in Malaria risk areas using effective Malaria prevention and treatment measures (Percentage of population covered under use of residuary spray in high risk areas)
Indicator 23: Prevalence and death rates associated with Tuberculosis
Indicator 24: Proportion of Tuberculosis cases detected and cured under DOTS
GOAL 7: ENSURE ENVIRONMENTAL SUSTAINABILITY

TARGET 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

Indicator 25: Proportion of land area covered by forest
Indicator 26: Ratio of area protected (to maintain biological diversity) to surface area
Indicator 27: Energy use per unit of GDP (Rupee)
Indicator 28: Carbon Dioxide emissions per capita and consumption of Ozone depleting Chlorofluoro Carbons (ODP tons)
Indicator 29: Proportion of the Households using solid fuels

TARGET 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

Indicator **30**: Proportion of population with sustainable access to improved water source, urban and rural
Indicator 31: Proportion of population with access to improved sanitation, urban and rural

TARGET 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers.

Indicator 32: Slum population as percentage of urban population

GOAL 8: DEVELOP A GLOBAL PARTNERSHIP FOR DEVELOPMENT

TARGET 12: Develop further an open, rule-based, predictable, non-discriminatory trading and financial system Includes a commitment to good governance, development and poverty reduction - both nationally and internationally

TARGET 13: Address the special needs of the least developed countries Includes : tariff and quota free access for least developed countries' exports; enhanced programme of debt relief for HIPCs and cancellation of official bilateral debt; and more generous ODA for countries committed to poverty reduction

TARGET 14: Address the special needs of landlocked countries and small island developing States

TARGET 15: Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.

TARGET 16: In cooperation with developing countries, develop and implement strategies for decent and productive work for youth.

TARGET 17: In cooperation with pharmaceutical companies, provide access to affordable essential drugs in developing countries

TARGET 18: In co-operation with the private sector, make available the benefits of new technologies, especially information and communication.

Indicator 47: Telephone lines and cellular subscribers per 100 population
Indicator 48A: Internet subscribers per 100 population
Indicator 48B: Personal computers per 100 population

Tracking India on Millennium Development Goals

Although developed countries' aids for the achievement of the MDGs have been rising over the recent year, it has shown that more than half is towards debt relief owed by poor countries. As well, remaining aid money goes towards natural disaster relief and military aid which does not further the country into development. According to the United Nations Department of Economic and Social Affairs (2006), the 50 least developed countries only receive about one third of all aid that flows from developed countries, raising the issue of aid not moving from rich to poor depending on their development needs but rather from rich to their closest allies

India's position with reference to the various Goals is given below

TARGET 1: Halve, between 1990 and 2015, the proportion of people whose income is less than one dollar a day.

Since the appropriateness of the poverty lines in use so far for poverty estimation was questioned in some quarters, the Government appointed an Expert Committee under the Chairmanship of late Prof. Suresh Tendulkar. As per the revised methodology adopted by Planning Commission, on the basis of recommendations of Tendulkar Committee, the poverty line provides a higher estimate of rural poverty and therefore also of total poverty.

With the new method applied to the earlier years, it shows that the percentage of the population in poverty declined from 45 per cent in 1993-94 to 37 per cent in 2004-05. Thus, poverty declined at roughly 0.8 percentage points per year during the 11 year period before the Eleventh Plan. Preliminary estimates using the latest NSS (National Sample Survey) for 2009-10 suggest that the percentage of the population in poverty declined, at a faster pace than before, by approximately one percentage point per annum, during the five-year period 2004-05 to 2009-10. Since 2009-10 was a drought year, and poverty in that year could have increased temporarily, the underlying rate of decline is probably more than one percentage point per year.

TARGET 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger.

All-India trend of the proportion of underweight (severe and moderate) children below 3 years of age shows India is going slow in eliminating the effect of malnourishment. From estimated 52% in 1990, the proportion of underweight children below 3 years is required to be reduced to 26% by 2015. According to the officially acclaimed estimates by the new standard, the proportion of underweight has declined by 3 percentage points during 1998-99 to 2005-06, from about 43% to about 40% and at this rate of decline is expected to come down to about 33% only by 2015.

TARGET 3: Ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary education.

By the measure of Net enrolment ratio (NER) in primary education the country has already crossed by 2008-09, the 95% cut-off line regarded as the marker value for achieving 2015 target of universal primary education for all children aged 6-10 years. Primary enrolment of 6-10 year old children by their NER measure has improved from 83% in the year 2000 to over 95% in 2007-08.

However, the survival rate at primary level up to Grade V (i.e. proportion of pupils starting Grade I who reach the last grade of primary) has risen from 62% in 1999 to 81% by 2002 and declined thereafter to 73% in 2004. According to DISE (District Information System on Education)2007-08, it further dipped to 72% in 2007-08. However, DISE 2009-10 indicated an improvement to 76 percent in 2008-09.

TARGET 4: Eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education, no later than 2015.

By the measure of Gender Parity Index (GPI) in enrolment at primary, secondary and tertiary levels, the female-male disparity in all the three grades of education has been steadily diminishing over the years.

In primary education, the GPI ratio has gone up from 0.76 in 1990- 91 to 0.98 in 2007-08 showing 29% increase, in secondary education the increase is from 0.60 in 1990-91 to 0.85 in 2007-08 thereby showing 42% increase, and in higher education, it is increased from 0.54 in 1990-91 to 0.7 in 2007-08 registering an increase of 30%.

The target for eliminating gender disparity in primary and secondary enrolment by 2005 has not been achieved in India as per the available data for Gender parity Index for Enrolment, in the sense that though almost perfect parity was attained in the primary level of enrolment, it was not so in secondary level. The rates of increase in GPI signify India's on –the –track progress to achieving Gender parity in enrolment by 2015, even for Secondary grade.

TARGET 5: Reduce by two-thirds, between 1990 and 2015, the Under-Five Mortality Rate.

The Under-Five Mortality Rate (U5MR) is the probability (expressed as a rate per 1000 live births) of a child born in a specified year dying before reaching the age of five if subjected to current age specific mortality rates. The estimates from the NFHS-I, II and III for the years 1992-93, 1998-99 and 2005-06 have been used for determining the trend of U5MR towards the 2015 target value of the estimate to be achieved. SRS based U5MR in India for the year 2009, stands at 64 and it varies from 71 in rural areas to 41 in Urban areas.

TARGET 6: Reduce by three quarters, between 1990 and 2015, the Maternal Mortality Rate.

The Maternal Mortality Ratio ((MMR) is the number of women who die from any cause related to or aggravated by pregnancy or its management (excluding accidental or incidental causes) during pregnancy and childbirth or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, per 100,000 live births.

SRS data indicates India has recorded a deep decline in MMR of 35% from 327 in 1999-2001 to 212 in 2007- 09 and a fall of about 17% happened during 2006-09. The decline in MMR from 1990 to 2009 is 51%. From an estimated MMR level of 437 per 100,000 live births in 1990/1991, India is required to reduce the MMR to 109 per 100,000 live births by 2015. At the historical pace of decrease, India tends to reach MMR of 139 per 100,000 live births by 2015, falling short by 29 points. However, the bright line in the trend is the sharper decline i.e. 17% during 2006-09 and 16% during 2003-06 compared to 8 % decline during 2001- 2003.

Safe motherhood depends mainly on delivery by trained /professional personnel, particularly through institutional facilities. The rate of increase in coverage of institutional deliveries in India is rather slow. It increased from 26% in 1992-93 to 47% in 2007-08. As a result, the coverage of deliveries by skilled personnel has also increased almost similarly by 19 percentage points from 33% to 52% during the same period. With the existing rate of increase in deliveries by skilled personnel, the likely achievement for 2015 is only to 62%, which is far short of the targeted universal coverage.

TARGET 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS.

The estimated adult HIV prevalence in India was 0.32 percent (0.26% – 0.41%) in 2008 and 0.31 percent (0.25% – 0.39%) in 2009. The adult prevalence is 0.26 percent among women and 0.38 percent among men in 2008, and 0.25 percent among women and 0.36 percent among men in 2009. Among pregnant women of 15- 24 years, the prevalence of HIV has declined from 0.86% in 2004 to 0.48% in 2008.

TARGET 8: Have halted by 2015 and begun to reverse the incidence of Malaria and other major diseases.

The total Malaria cases have consistently declined from 2.08 million to 1.6 million during 2001 to 2010. Similarly Pf cases have declined from 1.0 to 0.83 million cases during the same period. Less than 2000 deaths were reported during all the years within this period with a peak in 2006 when an epidemic was reported in NE States. India has contributed to approximately 24% of the total global new cases detected during the year 2009 as per the WHO Global Report 2010.

In 2005, 1.29 million, in 2006, 1.39 million; in 2007, 1.48 million patients; in 2008, 1.51 million; in 2009, 1.53 million TB patients and in 2010, 1.52 million TB patients have been registered for treatment. Prevalence of all forms of TB has been brought down from 338/ lakh population (1990) to 256/ lakh population in 2010 and TB mortality in the country has reduced from over 42/lakh population in 1990 to 26/lakh population in 2010 as per the WHO global report 2011.

TARGET 9: Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources.

A network of 668 Protected Areas (PAs) has been established, extending over 1,61,221.57 sq. kms. (4.90% of total geographic area), comprising 102 National Parks, 515 Wildlife Sanctuaries, 47 Conservation Reserves and 4 Community Reserves. 39 Tiger Reserves and 28 Elephant Reserves have been designated for species specific management of tiger and elephant habitats. The total area covered under National Parks and Wildlife Sanctuaries, which constitute major part of the protected areas in India, has increased from 155,961.06 sq.km in 1999 to 156,659.0842 sq.km in 2011. The country is on track in increasing the protection network for arresting the diversity losses and for maintaining ecological balance.

Per-capita Energy Consumption (PEC) during a year is computed as the ratio of the estimate of total energy consumption during the year to the estimated mid-year population of that year. The estimated PEC has increased from 1204 KWh in 1970-71 to 4646 KWh in 2009-10. The annual increase in PEC from 2008-09 to 2009-10 was 11%.

TARGET 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water and basic sanitation.

The prevailing trend over time suggests attainability of almost cent percent coverage of safe drinking water by 2015, including both rural and urban sectors. In other words, halving the proportion of households without access to safe drinking water sources from its 1990 level (about 34%), i.e. of the order of 17% to be reached by 2015, has already been attained by 2007-08, much before the target timeline.

Given the 1990 level for households without any sanitation facility at 76%, India is required to reduce the proportion of households having no access to improved sanitation to 38% by 2015. It is expected that at this rate of decline, India may achieve to reduce the proportion of households without any sanitation to about 43% by 2015 missing the target by about 5 percentage points. By 2015, India is likely to reduce the rural proportion of no sanitation to 58.84% (against target of 46.64%) and urban proportion of no sanitation to 11.64% (against target of 12.14%).

Chapter 5

Health Planning in India

At the end of this chapter participants should be able to learn:

1).Contribution of Bhore committee towards health planning in India

2). Various health committees and its recommendation in post-independence era.

The guidelines for national health planning were provided by a number of committees. These committees were appointed by government of India from time to time to review the existing health situation & recommend measures for further action. A brief review of recommendations of these committees is given below.

In 1940, the resolution adopted by the National Planning Committee based on the **Sokheys Committee's** recommendations recommended integration of preventive and curative functions and the training of a large number of health workers. Bhore committee constituted in 1943 laid the framework on which the health care was eventually built in the independent India. The health care in India has since moved from bureaucratic government based top down approach to decentralized community based bottom-up approach. This model was long ago propagated by the Father of the nation "Mahatma Gandhi".

Bhore Committee (1943-1946)

During pre independence era, to improve the preventive, promotive and curative heath services of country, a National Planning Commission was set up by the Indian National Congress in 1938. The rulers of that time, the British Empire realized the importance of Public Health and instituted the 'Health Survey and Development Committee,' in the year 1943 under the chairmanship of Sir Joseph Bhore. The committee was tasked to survey the health conditions and health organizations in the country, and to make recommendations for future development. The committee submitted its report in1946. The integration of preventive, promotive and curative health services and establishment of Primary Health Centers in rural areas were the major recommendations made by this committee.

Important recommendations of the Bhore Committee

a). Integration of Preventive, Promotive and Curative services at all administrative levels.

b). The development of Primary Health Centers for the delivery of comprehensive health services to the rural India. Each PHC should cater to a population of 40,000 with a Secondary Health Centre (now called Community Health Centre) to serve as a supervisory, coordinating and referral institution.

c). In the long term (3 million plan), the PHC would have a 75 bedded hospital for a population of 10,000 to 20,000.

d). Compulsory 3 months training in Community Medicine.

e). Committee proposed the development of National Programmes of health services for the country.

The details of the **Long term plan** recommended by Bhore Committee are as follows: The district health scheme, also called the three million plan, which represented an average districts population was to be organized in a 3-tier system within a period of 30 to 40 years. At the periphery will be the primary unit, the smallest of these three types. A certain number of these primary units will be brought under a secondary unit, which will perform the dual function of providing a more efficient type of health service at its headquarters and of supervising the work of these primary units. The headquarters of the district will be provided with an organization which will include, within its scope, all the facilities that are necessary for modern medical practice as well as the supervisory staff who will be responsible for the health administration of the district in its various specialized types of services.. 3-

Primary Unit

Every 10,000 to 20,000 population (depending on density from one area to another) would have a 75-bedded hospital served by six medical officers including medical, surgical and obstetrical and gynaecological specialists. These medical staff would be supported by 6 public health nurses, 2 sanitary inspectors, 2 health assistants and 6 midwives to provide domiciliary treatment. At the hospital there would be a complement of 20 nurses, 3 hospital social workers, 8 ward attendants, 3 compounders and other non-medical workers. Two medical officers along with the public health nurses would engage in providing preventive health services and curative treatment at homes of patients. The sanitary inspectors and health assistants would aid the medical team in preventive and promotive work. Preferably at least three of the six doctors should be women. Of the 75 beds, 25 would cater to medical problems, 10 for surgical, 10 for obstetrical and gynaecological, 20 for infectious diseases, 6 for malaria and 4 for tuberculosis. This primary unit would have adequate ambulatory support to link it to the secondary unit when the need arises for secondary level care. Each province was given the autonomy to organize its primary units in the way it deemed most suitable for its population, but there was to be no compromise on quality and accessibility.

Secondary Unit

About 30 primary units or less would be under a secondary unit. The secondary unit would be a 650-bedded hospital having all the major specialities with a staff of 140 doctors, 180 nurses and 178 other staff including 15 hospital social workers, 50 ward attendants and 25 compounders. The secondary unit besides being a first level referral hospital would supervise, both the preventive and curative work of the primary units. The 650 beds of the secondary unit hospital would be distributed as follows: Medical 150, Surgical 200, Obs. & Gynae 100, Infectious Disease 20, Malaria 10, Tuberculosis 120, and Paediatrics 50.

District Hospital

Every district centre would have a 2500 beds hospital providing largely tertiary care with 269 doctors, 625 nurses, 50 hospital social workers and 723 other workers. The hospital would have 300 medical beds, 350 surgical beds, 300 obs. & gynae beds, 540 tuberculosis beds, 250 pediatric beds, 300 leprosy beds, 40 infectious diseases beds, 20 malaria beds and 400 beds for mental diseases. A large number of these district hospitals would have

medical colleges attached to them. However, each of the three levels would have functions related to medical education and training, including internship and refresher courses.

This document laid the utmost emphasis on primary health care; it needs no emphasis that primary health care was later on recognized as the key strategy to achieve Health for All (HFA) by 2000 during Alma-Ata conference. The Bhore committee model was based on the allopathic system of medicine. The traditional health practices and indigenous system of medicine prevalent in rural India, which had great influence and were part of their socio-cultural milieu, were not included in the model proposed by Bhore committee. The approach was not entirely decentralized but had a top down approach. However, it provided a ready-made model at the time of independence and thus was adopted as a blue print for both health policy and development of the country.

Post Independence Era:

With the beginning of health planning in India and first five-year plan formulation (1951-55), **Community Development Programme** was launched in **1952** for the all round development of rural areas, where 80% of the population lived. Community Development was defined as "a process designed to create conditions of economic and social progress for the whole community with its active participation and the fullest possible reliance upon the community's initiative". The Community Development Programme was envisaged as a multipurpose programme covering health and sanitation (through the establishment of primary health centers and sub-centers) and other related sectors including agriculture, education, transport, social welfare and industries. Each Community Development Block (CDB) comprised approximately 100 villages with a total population of one lakh. For one CDB, one Primary Health Centre was created.

By the close of second five year plan (1956-61), "Health Survey and Planning Committee", The **Mudaliar Committee (1961)**, was appointed by the Government of India to review the progress made in the health sector after submission of Bhore committee report. The major recommendation of this committee report were:

a). To limit the population served by primary health centers to 40,000 with the improvement in the quality of health care provided by these centers.

b). Strengthening of the district hospitals with specialist services to serve as a central base of regional services.

c). Regional organizations in each state between headquarter organization & the district in-charge of a Regional deputy or assistant directors each to supervise 2 or 3 district medical & health officers.

d). Constitution of an All India Health Service on pattern of Indian Administrative Service.

The **Chaddah committee (1964)**, recommended provision of one basic health worker per 10,000 populations for vigilance operations through monthly home visits under national malaria eradication programme. These workers were envisaged as multipurpose health workers to look after additional duties of collection of vital statistics & family planning. The family planning health assistants were to supervise 3 or 4 of these basic health workers.

In a short time after implementation of MPHW scheme it was realized that malaria vigilance operations & family planning program could not be carried out satisfactorily. A

committee known as **Mukerjee committee** was formed in **1965** & it recommended separate staff for Family planning activities so that malaria activities could receive undivided attention of its staff.

The **Jungalwalla Committee** in **1967** gave importance to integration of health services & elimination of private practice by government doctors. Integrated health services were defined as "a service with a unified approach for all problems instead of a segmented approach for all different problems". Care of the sick & various public health programmes functioning under a single administrator. The committee recommended:
a). Unified cadre
b). Common seniority
c). Recognition of extra qualification
d). Equal pay for equal work
e). Special pay for specialized work
f). No private practice

The **Kartar Singh Committee** on Multipurpose workers in **1973** laid down the norms about health workers. For ensuring proper coverage, the committee recommended, one primary health centre to be established for every 50,000 population. Each primary health centre to be divided into 16 sub-centers each for a population of 3,000 to 3,500. Each sub-centre to be staffed by a team of one male and one female health worker. The work of 3-4 health workers to be supervised by one health assistant. The doctor in charge of the PHC should have the overall charge of all supervisors & health workers in his area.

The **Shrivastav Committee** on Medical Education and Support Manpower in **1975** suggested:

a). Creation of bands of Para-professional and semi-professional health workers from within the community (e.g. school teachers, post masters, gramsevak, etc.) to provide simple health services needed by the community.
b). the development of a "Referral Service Complex" by establishing linkages between the primary health centre and higher level referral and service centers, viz. taluka/ tehsil, district, regional and medical college hospitals.
c). establishment of a medical & health education commission for planning & implementation of reforms needed in health & medical education on the lines of university grant commission.
d). One male & female HW should be available for every 5000 population.
e). The Health Assistants for every two HWs should be located at SC & not at PHC

Following the suggestions of the Shrivastav committee report, **Rural Health Scheme** was launched in **1977**, wherein training of community health workers, reorienting medical education (ROME) training of multipurpose workers, and linking medical colleges to rural health was initiated. It was based on principle *"placing people's health in people's hands".* Also to initiate community participation, the Community Health Volunteer-Village Health Guide (VHG) Scheme was launched. The VHG was to be person from the village, mostly women, who was imparted short term training and small incentive for the work.

Shivaraman Committee health report

A Committee on Basic Rural Doctors was framed under the guidance of Shri Shivaraman, then member of planning commission. The committee recommended establishment of countrywide cadre of basic rural doctors consisting of trained paraprofessionals to extend comprehensive health care delivery to rural community.

Bajaj Committee health report 1986

A expert committee for 'health manpower planning, production and management' was constituted under the chairmanship of Dr JS Bajaj, then member of planning commission, to tackle the problem of health manpower planning, production and management. Important recommendations of the Bajaj committee are:

a). Recommended for Formulation of National Health Manpower planning based on realistic survey.
b). Educational Commission for health sciences should be developed on the lines of UGC.
c). Recommended for National and Medical education policy in which teachers are trained in health education science technology.
d). Uniform standard of medical and health science education by establishing universities of health sciences in all states.
e). Establishment of health manpower cells both at state and central level.
f). Vocational courses in paramedical sciences to get more health manpower.

Krishnan Committee Health Report 1992

The committee under the chairmanship of Dr Krishnan reviewed the achievements and progress of previous health committee reports and also made comments on shortfalls. The committee address the problems of urban health and devised the health post scheme for urban slum areas. The committee had recommended one voluntary health worker (VHW) per 2,000 population with an honorarium of Rs 100. Its report specifically outlines which services have to be provided by the health post. These services have been divided into outreach, preventive, family planning, curative, support (referral) services, reporting and record keeping. Outreach services include population education, motivation for family planning and health education. In the present context, very few outreach services are being provided to urban slums.

Chapter 6

International Health Agencies

At the end of this chapter participants should be able to learn:
1) The need of various health agencies
2). The type of health agencies and their role in public health

INTRODUCTION:
Inequalities and the health of nations
Almost the entire cost of health care in the developing world is borne by the developing countries themselves. According to two separate estimates, aid from international health organizations in the developed countries pays for less than 5% of the total health care costs in the developing world.

The estimates do not specify exactly what they include as health aid, but they probably omit the value of food relief and other health-related disaster relief, as well as money spent on water supply and sanitation projects, although these activities have important health benefits.

Of 6.5 billion people in the world, 2.5 billion live in the poorest countries (LICs), 2.7 billion live in lower-middle income countries (LMICs), 333 million in upper-middle income countries (UMICs) and about 972 million people live in HICs, rich in part because of their access to or ability to exploit resources, for example, oil, metals and food etc. Restated, over 80% of people live in nations with access to less than 20% of the world's wealth and productive capacity. More striking is that 2.5 million of the world's poor collectively have less wealth than the world's richest 400 individuals. Such gross inequalities should challenge the world community.

Life Expectancy varies by more than 48 years among countries (Japan 81.5; Zambia 32.7), and 20 years or more within countries. Social factors influence the occurrence of most forms of disease and lie at the root of health inequalities. In response to this global challenge, WHO had launched a Commission on Social Determinants of Health (2005) to review evidence, raise societal debate, and recommend policies to improve the health of vulnerable people; the thrust was to transform public health knowledge into political action.

International Health Agencies
Health services in developing countries mostly reflect their own widely varying capacities. The international system plays an ancillary role, comprising four types of agency: **multilateral, bilateral, nongovernmental and other**.

1). Multilateral Agencies
The term multilateral means that funding comes from multiple governments (as well as from non-governmental sources) and is distributed to many different countries. The major

multilateral organizations are all part of the United Nations. The United Nations is made up of 192 countries from around the world. It is often called the UN. It was set up in 1945, after the Second World War, as a way of bringing people together and to avoid further wars. It started with 51 countries. The United Kingdom is one of the original members. Germany did not join until 1973.

The UN has 4 main purposes:

a). To keep peace throughout the world;
b). To develop friendly relations among nations;
c). To help nations work together to improve the lives of poor people, to conquer hunger, disease and illiteracy, and to encourage respect for each other's rights and freedoms;
d). To be a centre for harmonizing the actions of nations to achieve these goals.

The **World Health Organization (WHO)** is the premier international health organization of the UN with its headquarters at Geneva. Technically it is an "intergovernmental agency related to the United Nations". WHO and other such intergovernmental agencies are "separate, autonomous organizations which, by special agreements, work with the UN and each other through the coordinating machinery of the Economic and Social Council." According to its constitution (1948) its principal goal is "the attainment by all peoples of the highest possible level of health."

WHO has three main divisions.
The **governing body** - **the World Health Assembly**, meets once a year to approve the budget and decide on major matters of health policy. All the 200 or so member nations send delegations. The World Health Assembly elects 31 member nations to designate health experts for the **Executive Board**, which meets twice a year and serves as the liaison between the Assembly and the Secretariat, which carries on the day-to-day work of the WHO. **The Secretariat** has a staff of about 4500, with 30% of the employees at headquarters in Geneva, 30% in six regional field offices, and 40% in individual countries, either as country-wide WHO representatives or as representatives of special WHO programs.

The principal work of WHO is directing, coordinating international health activities and supplying technical assistance to countries. It develops norms and standards, disseminates health information, promotes research, provides training in international health, collects and analyzes epidemiologic data, and develops systems for monitoring and evaluating health programs.

The **Pan American Health Organization (PAHO)** serves as the regional field office for WHO in the Americas and, since it predates WHO, carries on some additional autonomous activities.

WHO has a biannual budget. Contributions from the member nations constitute the regular budget. In recent years voluntary ("extrabudgetary") contributions - from governments and private philanthropies - have exceeded the regular budget. Donors may earmark voluntary contributions for special programs;

WHO allocates assessed contributions to nations. While this diversification protects WHO against unstable government funding, extrabudgetary support is mostly restricted to particular programs, which may influence or distort priorities. Its noteworthy contribution is that, it spearheaded the global eradication of smallpox, accomplished in 1979. Similar initiatives for other conditions are underway.

Other multilateral agencies with health-related roles are **UNICEF**, **UNDP, WB, UNAIDS** (a separate agency since 1993, formerly the WHO Global Program on acquired immunodeficiency syndrome), **the Food and Agriculture Organization (FAO), the United Nations Fund for Population Activities (UNFPA), the Office of the UN High Commissioner for Refugees (UNHCR), and the UN Fund for Drug Abuse Control (UNFDAC).**

The **World Bank** is the other major "intergovernmental agency related to the UN" heavily involved in international health. The World Bank loans money to poor countries on advantageous terms not available in commercial markets that will lead to economic growth of that country (India's population project). The projects are usually concerned with electric power, roads, railway, agriculture, water supply, education, family planning, etc. health and environmental components have been added to many projects.

The **United Nations Children's Fund** (**UNICEF**) is a United Nations Agency having headquarter in New York City, that provides long-term humanitarian and developmental assistance to children and mothers in developing countries. It is one of the members of the United Nations Development Group and its Executive Committee.

UNICEF was created by the United Nations General Assembly on December 11, 1946 to provide emergency food and healthcare to children in countries that had been devastated by World War II. In 1954, UNICEF became a permanent part of the United Nations System and its name was shortened from the original **United Nations International Children's Emergency Fund** but it has continued to be known by the popular acronym based on this old name.

UNICEF relies on contributions from governments and private donors. Governments contribute two thirds of the organization's resources; private groups and some 6 million individuals contribute the rest through the National Committees. It is estimated that 91.8% of their revenue is distributed to Program Services. UNICEF's programs emphasize developing community-level services to promote the health and well-being of children. UNICEF was awarded the Nobel Peace Prize in 1965 and the Prince of Asturias Award of Concord in 2006.

Most of UNICEF's work is in the field, with staff in over 190 countries and territories. More than 200 country offices carry out UNICEF's mission through a program developed with host governments. Seventeen regional offices provide technical assistance to country offices as needed.

Overall management and administration of the organization takes place at its headquarters in New York. UNICEF's Supply Division is based in Copenhagen and serves as the primary point of distribution for such essential items as vaccines, antiretroviral medicines for children and mothers with HIV, nutritional supplements, emergency shelters, educational supplies, among others. A 36-member Executive Board establishes policies, approves programs and oversees administrative and financial plans.

The Executive Board is made up of government representatives who are elected by the United Nations Economic and Social Council, usually for three-year terms. UNICEF is an intergovernmental organization (IGO) and thus is accountable to those governments. UNICEF makes the world's most vulnerable children its top priority, so it devotes most of its resources to the poorest countries and to children younger than 5. UNICEF runs many of the child health programs in cooperation with WHO.

United Nation Development Programme (UNDP)

The UNDP projects cover virtually every economic and social sector – agriculture, industry, education and science, health, social welfare, etc. The member countries – rich and poor – of the United Nations meet annually and submitting proposal to the UNDP.

Focused areas are: Poverty Reduction & Millennium Development Goals, Democratic Governance, Environment & Energy for sustain development, Crisis Prevention & Recovery

UNDP is at the centre of the UN's efforts to reduce global poverty. Chairs the United Nations Development Group (UNDG), which includes the UN's key players in international development. UNDP's network links and coordinates global and national efforts to achieve the Millennium Development Goals (MDGs). At the country level, UNDP plays two important roles, one as a partner for development work and the other as manager of the Resident Coordinator system. UNDP helps developing countries attract and use aid effectively. It encourages the protection of human rights and the empowerment of women. Coordinates the development activities of the United Nations. Plays a key role in helping to reform the UN as part of the United Nations Development Group (UNDG).

The United Nations Fund for Population Activities (UNFPA)

Funding national level schemes, area projects for intensive development of health and family welfare infrastructure and improvement in the availability of services in the rural areas: To develop national capability for the manufacture of contraceptives; To develop population education programmers; To undertake organized sector projects; To strengthen programme management as well as to improve output of grass–root level health workers and Introduction of innovative approaches to family planning and MCH care. UNFPA Provides assistance to India since 1974.

Food and Agriculture Organization (FAO)

Formed in 1945 with Headquarters in Rome, its prime concern is the increased production of food to keep pace with the ever-growing world population. The chief aims of FAO are: to help nations raise living standards, to improve nutrition of the people of all countries, to increase the efficiency of farming, forestry and fisheries, to better the condition of rural

people and, through all these means, To widen the opportunity of all people for productive work.

The joint WHO/FAO expert committees have provided the basis for many cooperative activities – nutritional surveys, training courses, seminars and the coordination of research programmers on brucellosis and other zoo noses

Joint United Nations Programme on HIV/AIDS (UNAIDS)
UNAIDS, based in Geneva, was created in 1996 as the successor to WHO's Global Programme on AIDS. It is responsible for coordinating efforts to address HIV/AIDS across the U.N. system, consisting of 10 U.N. co-sponsors. UNAIDS activities include: mobilizing leadership and advocacy for effective action on the epidemic, providing strategic information and policies to guide global efforts, and monitoring and evaluating the response to the epidemic.

International Labor Organization (ILO)
Soon after the First World War, it was recognized that problems of industry, like disease, know no frontiers. In 1919, ILO was established as an affiliate of the league of Nations to improve the working and living conditions of the working population all over the world. The headquarters of ILO is in Geneva, Switzerland.

The primary goal of the ILO is to promote opportunities for women and men to obtain decent and productive work, in conditions of freedom, equity, security and human dignity.
Its main aims are: To promote rights at work; Encourage decent employment opportunities and Enhance social protection and Strengthen dialogue on work-related issues.

The purposes of ILO are:
To contribute to the establishment of lasting peace by promoting social justice
To improve, through international action, labor conditions, and living standards
To promote economic and social stability.

ILO is the only tripartite U.N. agency with government, employer, and worker representatives. This tripartite structure makes forum in which the governments and the social partners of the economy of its 183 Member States. They can freely and openly debate and elaborate labour standards and policies.

The International Labor Code is a collection of international minimum standards related to health, welfare, living and working conditions of workers all over the world. The ILO also provides assistance to organizations interested in the betterment of living and employment standards. There is a close collaboration between ILO and WHO in the field of health and labor.

2). Bilateral Agencies
In addition to supporting multilateral agencies, most industrialized nations also provide aid on a "country-to-country" basis, attempting to match a recipient's needs with the donor's objectives and capacity to assist, usually subject to political considerations. Smaller donors

are geographically selective; for example, Australia emphasizes its Western-Pacific neighbors. Others emphasize their expertise; for example, the Netherlands supports water technologies. Some follow historical links; for example, France emphasizes its former colonies. Sometime, both receive and donate international aid, for example, Cuba, and China. The United States links aid to democratic reforms and human rights, although restricting support for reproductive rights since 2001. Donor countries often rely on their own expertise through competitive bidding to design, implement, and monitor projects funded under bilateral agreements, sometimes requiring that the donor's own products and services be used. Thus, a significant proportion of aid budgets may be recycled within a donor's economy. As each donor has its own motivation, priorities, and management style, competition and conflict can arise in some settings, revealing a need to improve donor coordination. It is critical that ODA is increased, effectively placed, and fairly counted, so as to help to build sustainable capacities for all the people of the world. Some of the bilateral agencies functioning in India are USAID for malaria eradication, Family planning & Education; SIDA for RNTCP.

3). International Nongovernmental Organizations

International nongovernmental organizations (NGOs) are increasingly active in development work as the inadequacies of bilateral and multilateral responses become more apparent. Sometimes known as "people to people" aid, their activities are mostly specific, for example, targeting trachoma, and cataract, while some are general, for example, aid for orphans. Supported mainly by voluntary subscriptions or donations, some NGOs also act under contract to governments or other agencies.

The largest NGO is the **International Red Cross and Red Crescent movement,** which has national counterparts within most countries. It is mandated under the Geneva Conventions to assist prisoners and civilians in armed conflicts, including visiting detainees and enabling them to communicate with the outside world, setting up surgical hospitals and emergency teams, rehabilitation of war-disabled persons, and providing independent information on prisoners and war victims.

Other well-known international NGOs are **Oxford Famine Relief (OXFAM), CARE International, Save the Children International Alliance, and World Vision. Medicines Sans Frontiers (MSF, Doctors Without Borders)** was recently awarded the Nobel Peace prize (1999). Founded in France in 1971, MSF provides health aid to war victims, and assists in other health disasters and development initiatives. Smaller international NGOs also make highly valuable contributions, many operating within a country. Many exercise key advocacy roles, for example, to prevent violent conflicts, promoting gender equity. Despite good intentions, given sometimes conflicting priorities and mandates, and competition for resources, better coordination would help them become more effective.

Ford Foundation

Ford Foundation has been active in the development of rural health services and family planning has helped India in the following projects

1. Orientation training centers : at Singur, Poonamalle and Najafgarh.
   The centers provide training courses in public health for medical and paramedical personnel from all over India
2. Research – cum – action (RCA) projects: aimed at solving some of the basic problems in environmental sanitation, e. g., designing and construction of hand –flushed acceptable sanitary latrines in rural areas
3. Pilot project in Rural health services, Gandhigram (Tamilnadu) –Among a rural population of 100,000 people, an attempt was made to develop and operate a coordinated type of health service which will provide a useful model for health administrators in the country
4. Establishment of NIHAE : has supported the establishment of the National Institute of Health Administration and Education at Delhi. The Institute of provides a senior staff-college type training for health administrators.
5. Calcutta water supply and drainage scheme: has helped in the preparation of a master plan for water supply, sewerage and drainage for the city of Calcutta in collaboration with other international agencies.
6. Family planning programme: Supporting research in reproductive biology and in the family planning fellowship programmes.

CARE (Cooperative for Assistance and Relief Everywhere)

Founded in North America in the wake of the second World War in the year 1945. One of the world's largest independent, non-profit, non-sectarian international relief and development organization. Provides emergency aid and long term development assistance. Began its operation in India in 1950. Till the end of 1980s, Primary objective of CARE – India was to provide food for children in the age ground of 6 -11 years. From mid 1980s, CARE – India Focused food support in the ICDS programme and in development of programmes in the areas of health and income supplementation. CARE – India works in partnership with the Government of India, State Governments, NGOs etc.

It is helping in the following projects:

1. Integrated Nutrition and Health Project;
2. Better Health and Nutrition Project;
3. Anaemia Control Project ;
4. Improving Women's Health Project;
5. Improved Health Care for adolescent Girl's Project;
6. Child Survival Project;
7. Improving Women's Reproductive Health and Family Spacing Project;
8. Konkan Integrated Development Project etc

In fiscal year 2010, CARE worked in 87 countries around the world, supporting 905 poverty-fighting projects to reach more than 82 million people, over half of whom are women.

Chapter 7

Five Year Plans and 12th Five Year Plan

At the end of this chapter participants should be able to learn:

1). the achievement during five year plan periods
2). the investment by Government during various five year plans
3). the performance of 11th five year plan
4). the achievements and gaps during 11th five year plan
5). the strategy of 12th Five year plan
6). the core instruments for service delivery in 12th plan

Planning, policy formulations, administration and management are areas with which every person working for public health must be thoroughly familiar. As a matter of fact, proper planning and management are essential for achieving high standard of public health. Planning is defined as an organized, conscious and continues attempt to select the best available alternatives to achieve specific goals.

The Government of India set up a Planning Commission in 1950 to make an assessment of the material, capital and human resources of the country and to draft developmental plans for the most effective utilization of these resources. The Planning Commission has been formulating successive Five Year Plans.

The Planning Commission consists of Chairman, Deputy Chairman and 5 members. Prime Minister of India is a Chairman of planning commission. The Planning Commission works through 3 major divisions-Programme Advisers, General Secretariat and Technical Divisions which are responsible for scrutinizing and analyzing various schemes and projects to be incorporated in Five Year Plans. Planning Commission also reviews from time to time the progress made in various directions and to make recommendations to Government on problems and policies relevant of the pursuit of rapid and balanced economic development.

Goals for the Eleventh Five Year Plan

1. Reducing Maternal Mortality Ratio (MMR) to 1 per1000 live births.
2. Reducing Infant Mortality Rate (IMR) to 28 per1000 live births.
3. Reducing Total Fertility Rate (TFR) to 2.1.
4. Providing clean drinking water for all by 2009
5. Reducing malnutrition among children of age group 0–3 to half its present level.
6. Reducing anaemia among women and girls by 50%.
7. Raising the sex ratio for age group 0–6 to 935 by 2011–12 and 950 by 2016–17.

In 12th Five year plans there are three volumes for different aspects of planning.

A. Volume I: 1). Inclusive growth

B. Volume II: 1). Health, 2). Education, 3). Employment and Skill Development, 4). Women's Agency and Child Rights, 5). Social Inclusion

C. Volume III: 1). Agriculture, 2). Rural development, 3). Industry, 4). Services 5). Physical infrastructure

Volume II is concerned with Social sectors. Social Sectors includes: Education; Health and family Welfare and AYUSH: Youth affairs and sports and art and culture; Nutrition and Social Safety Net; Drinking water, sanitation and clean living conditions; Towards women's agencies and Child Rights.

Table 1
Achievements during plan periods

Sr.	**Particulars**	**1st Five Year Plan (1951-56)**	**11th Five Year Plan (2007-2012) (March 2008)**
1	Primary Health Centers	725	23,458
2	Subcentres	NA	1,46,036
3	Community Health Centers	----	4,276
4	Total beds (2002)	1,25,000	9,14,543
5	Medical Colleges,	42	300
6	Annual admission in medical colleges	3,500	34,595
7	Dental colleges	7	290
8	Allopathic doctors	65,000	7,75,377
9	Nurses	18,500	10,43,363
10	ANMs	12,780	5,57,022
11	Health Visitors	578	51,776
12	Health worker (female)	--	1,53,568
13	Health worker (Male)	--	60,247
14	Health Assistant (male)	--	17,976
15	Health Assistant (female)	--	17,608
16	Village Health Guide	--	3,23,000

Source: Govt. of India, Bulletin of Rural Health in Statistics in India, Ministry of Health and Family Welfare, New Delhi

Table 2

Investment in different plan periods (Rs. In Crores)

Number of plan	Year	Total plan investment	Investment on Health and Family Welfare	Water supply and Sanitation
First Plan	1951-1956	1960	65.3	NA
Second Plan	1956-1960	4672	143.0	NA
Third Plan	1961-1966	8576	249.9	10.7
Fourth Plan	1969-1974	15778.8	619.9	458.9
Fifth Plan	1974-1979	39322	1179.4	971.0
Sixth Plan	1980-1985	97500	2831.0	3922.0
Seventh Plan	1985-1990	180000	6649	6522.47
Eighth Plan	1992-1997	798000	14075.9	16711.0
Ninth Plan	1997-2002	859200	25938.6	----
Tenth Plan	2002-2007	1484131	58145.3	---
Eleventh Plan	2007-2012	3750978	131645.0	175000
Twelfth Plan	**2012-2017**	**8050123**	**300018**	**132760**

Table 3

Pattern of Central Allocation of Funds on Health

Plan	Health (%)	Family Welfare (%)	AYUSH (%)	Total (%)	GDP (%)
First	3.3	0.1	-	3.4	0.22
Second	3.0	0.1	-	3.1	0.49
Third	2.6	0.3	-	2.9	0.63
Fourth	2.1	1.8	-	3.9	0.61
Fifth	1.9	1.2	-	3.1	0.74
Sixth	1.8	1.3	-	3.1	0.81
Seventh	1.7	1.4	-	3.1	0.91
Eighth	1.7	1.5	0.02	3.2	1.05
Ninth	2.31	1.76	0.03	4.02	0.96
Tenth	2.09	1.83	0.05	3.97	0.88
Eleventh	6.3	Merged with Health	0.18	6.5	0.91(03-04)

At present, India's health care system consists of a mix of public and private sector providers of health services. The system suffers from the following weaknesses:

1. ***Availability*** of health care services from the public and private sectors taken together are quantitatively inadequate.

2. ***Quality*** of healthcare services varies considerably in both the public and private sector

3. ***Affordability*** of health care is a serious problem for the vast majority of the population, especially at tertiary care level. Out of pocket expenditures arise even in public sector hospitals

4. The problems outlined above are likely to worsen in future. Health care costs are expected to rise because, with rising life expectancy, a larger proportion of our population will become vulnerable to chronic Non Communicable Diseases (NCDs), which typically require expensive treatment.

The total expenditure on health care in India, taking both public, private and household out of-pocket (OOP) expenditure was about 4.1 per cent of GDP in 2008–09.

When the Eleventh Plan was formulated and an effort was made to increase Central Plan expenditures on health. The increase in Central expenditures has not been fully matched by a comparable increase in State Government expenditures. The Twelfth Plan proposes to take corrective action by incentivizing States.

REVIEW OF ELEVENTH PLAN PERFORMANCE

A review of the health outcome of the Eleventh Plan and of NRHM is constrained by lack of end-line data on most indicators. Analysis of available data reveals that though there has been progress, except on child-sex ratio.

1. ***Maternal Mortality Ratio (MMR)*** is a sensitive indicator of the quality of the health care system. The decline in MMR during the 2004–06 to 2007–09 of 5.8 per cent per year (i.e. 254 to 212) has been comparable to that in the preceding period (a fall of 5.5 per cent per year, over 2001–03 to 2004–06). MMR of 212 from 301 (2007–09) is well short of the Eleventh Plan goal of 100.

2. Infant Mortality Rate (IMR), death of children before age one per 1000 live births, is a sensitive indicator of the health and nutritional status of population. IMR fell by 5 per cent per year over the 2006–11 period, an improvement over the 3 per cent decline per year in the preceding five years, but short of the target of 28

3. ***Total Fertility Rate (TFR)***, which measures the number of children born to a woman during her entire reproductive period, fell by 2.8 per cent per annum over the 2006–10 period from 2.8 to 2.5, which is faster than the decline of 2 per cent per year in the preceding five years, but short of the Eleventh Plan goal of 2.1.

4. On the goal of raising ***child sex ratio***, there has been a reversal. Child sex ratio is unfavorable in India.

5. Progress on goals on reducing *malnutrition* and *anaemia* cannot be assessed for want of updated data, but localized surveys indicated that the status has not improved.

FINANCING FOR HEALTH

During the Eleventh Five Year Plan funding for health by Central Government has increased to 2.5 times and of States to 2.14 times as of in Tenth Plan, to add up to 1.04 per cent of GDP in 2011–12. When broader determinants of health (drinking water ICDS and Mid-Day Meal) are added, the total public spending on health in Eleventh Plan comes to 1.97 per cent of GDP.

An analysis of performance reveals achievements and gaps of 11th Five year plan. These follow.

1. INFRASTRUCTURE

There has been an increase in number of public health facilities over the 2007–11 period: Sub-Centers by 2 per cent, PHCs by 6 per cent, CHCs by 16 per cent and District Hospitals by 45 per cent. Yet, shortfalls remain 20 per cent for Sub-Centers, 24 per cent for PHCs and 37 per cent for CHCs, particularly in Bihar, Jharkhand, Madhya Pradesh and Uttar Pradesh.

Though most CHCs and 34 per cent Primary Health Centers (PHCs) have been upgraded and operationalized as 24 × 7 facilities and First Referral Units (FRU) have doubled, yet the commitment of Eleventh Plan to make all public facilities meet IPHS norms, and to provide Emergency Obstetric Care at all CHCs have not been achieved. Access to safe abortion services is not available in all CHCs, a gap which is contributing to maternal mortality.

2. HEALTH PERSONNEL

ASHAs positioned under NRHM have been successful in promoting awareness of obstetric and child care services in the community. Better training for ASHA and timely payment of incentive have come out as gaps in evaluations. Despite considerable improvement in health personnel in position (ANM 27 per cent, nurses 119 per cent, doctors 16 per cent, specialists 36 per cent, pharmacists 38 per cent), gap between staff in position and staff required at the end of the Plan was 52 per cent for ANM and nurses, 76 per cent for doctors, 88 per cent for specialists and 58 per cent for pharmacists. These shortages are attributed to delays in recruitment and to postings not being based on work-load or sanctions.

3. TRAINING CAPACITY

Setting up of 6 AIIMS like institutes and upgradation of 13 medical colleges has been taken up under Pradhan Mantri Swasthya Suraksha Yojana (PMSSY). Seventy-two State Government medical colleges have been taken up for strengthening to enhance their capacity for PG training. Huge gaps, however, remain in training capacity for all category of health personnel.

4. COMMUNITY INVOLVEMENT

Though Rogi Kalyan Samitis (RKS) are in position in most public facilities, monthly Village Health and Nutrition Days are held in most villages, Jan Sunwais (public hearings) and Common Review Missions have been held yet, their potential in terms of empowering communities, improving accountability and responsiveness of public health facilities is yet to be fully realized.

5. SERVICE DELIVERY

1). To reduce maternal and infant mortality, institutional deliveries are being promoted by providing cash assistance to pregnant women under Janani Suraksha Yojana (JSY). Though institutional deliveries have increased in rural (39.7% to 68%) and urban areas (79% to 85%) over the 2005–09 period, low levels of full Ante-Natal care (22.8% in rural, and 26.1% in urban in 2009, CES) and quality of care areas of concern.

2). Full immunization in children has improved from 54.5% in 2005 (CES) to 61% 2009 (CES) during the Eleventh Plan.

3). The Eleventh Plan commitment of providing access to essential drugs at public facilities has not been realized

6. GOVERNANCE OF PUBLIC HEALTH SYSTEM

The *Eleventh Plan* had suggested *Governance* reforms in public health system, such as performance linked incentives, devolution of powers and functions to local health care institutions and making them responsible for the health of the people living in a defined geographical area. NRHM's strategy of decentralization, PRI involvement, integration of vertical programmes, inter-sectoral convergence and Health Systems Strengthening have been partially achieved.

7. DISEASE CONTROL PROGRAMMES

India bears a high proportion of the global burden of TB (21 per cent), leprosy (56 per cent) and lymphatic filariasis (40 per cent). Though there has been progress in the Eleventh Plan in reducing rate of new infections, case load and death from these diseases, a robust surveillance system at the community level is lacking and considerable hidden and residual disease burden remains.

Among the NCDs, Cardiovascular Diseases (CVD) account for 24 per cent of mortality followed by Respiratory Disease and malignant cancers. During the Eleventh Five Year Plan National Programme for the Prevention and Control of Cancer, Diabetes, Cardiovascular Diseases and Stroke (NPCDCS) was initiated in 100 selected districts in 21 states. So far, 87 lakh people have been screened for diabetes and hypertension, out of which 6.5 per cent are suspected to be diabetic and 7.7 per cent are suspected to be suffering from hypertension. Despite enhanced allocations for the National Mental Health Programme, it has lagged behind due to non-availability of qualified mental health professionals at district and sub-district levels.

8. HMIS

During the Eleventh Plan, a web based Health Management Information System (HMIS) application software has been developed and made operational for online data capture at district and sub-district levels on RCH service delivery indicators. The data captured is scanty, restricted to public facilities and is not always used for programme planning or monitoring.

9. AIDS CONTROL

Against a target to halt and reverse the HIV/ AIDS epidemic in India, there has been a reduction of new HIV infections in the country by 56 per cent. Still, an estimated 24 lakh People were living with HIV/AIDS (PLHA) in 2009. Gaps in the programme include low rate of coverage of Anti-Retroviral Therapy among infected adults and children, low levels of opioid substitution therapy among injection drug users (3 per cent), testing of pregnant women for HIV and Syphilis (23 per cent) and low Anti-Retroviral coverage for preventing mother to child transmission. There is scope for greater integration with NRHM to avoid duplication of efforts, as in reaching non-high risk groups and distribution of condoms.

10. INDIAN SYSTEMS OF MEDICINE AND HOMOEOPATHY (AYUSH)

Against the Eleventh Plan objective of 'mainstreaming AYUSH systems to actively supplement the efforts of the allopathic system', 40 per cent PHCs, 65 per cent CHCs and 69 per cent District hospitals have co-located AYUSH facilities. Though considerable progress has been made in documenting identity and quality standards of herbal medicines, scientific validation of AYUSH principles, remedies and therapies has not progressed.

11. HEALTH RESEARCH

The newly established department of Health Research and Indian Council of Medical Research (ICMR) have piloted several innovations, including an on-line Clinical Trials Registry, Uniform Multidrug Therapy Regimen (UMDT) for Leprosy and lymphatic filariasis, kits for improved diagnosis of malaria, dengue fever, TB (including drug resistant), cholera, Chlamydia infection, Leptospirosis and development of indigenous H1N1 vaccine. Yet, health research in India has yet to make a major impact on the health challenges facing the country

TWELFTH FIVE YEAR PLAN STRATEGY

The Twelfth Plan seeks to strengthen initiatives taken in the Eleventh Plan to expand the reach of health care and work towards the long term objective of establishing a system of **Universal Health Coverage (UHC)** in the country. This means that each individual would have assured access to a defined essential range of medicines and treatment at an affordable price, which should be entirely free for a large percentage of the population. Based on the recommendations of the HLEG (High level Expert Group) and other stakeholder consultations, it is possible to outline the key elements of the strategy that should be followed in the Twelfth Plan.

These elements should be seen as a part of a longer term plan to move towards UHC.

1). There must be substantial expansion and strengthening of the public sector health care system if we are to meet the health needs of rural and even urban areas.

2). Health sector expenditure by the Centre and States, both Plan and Non Plan, will have to be substantially increased by the end of the Twelfth Plan. It has already increased from 0.94 per cent of GDP in the Tenth Plan to 1.04 per cent in the Eleventh Plan. The percentage for this broader definition of health sector related resources needs to be increased to 2.5 per cent by the end of the Twelfth Plan. Since expenditure on health by the State Governments is about twice the expenditures by the Centre, the overall targets for public sector health expenditure can only be achieved if, along with the Centre, State Governments expand their health budgets appropriately.

3). Financial and managerial systems will be redesigned to ensure more efficient utilization of available resources, and to achieve better health outcomes.

4). Efforts would be made to find a workable way of encouraging cooperation between the public and private sector in achieving health goals. This would include contracting in of services for gap filling, and also various forms of effectively regulated and managed PPP.

5). The present Rashtriya Swasthya Bima Yojana (RSBY) which provides 'cash less' inpatient treatment for eligible beneficiaries through an insurance based system will need to be reformed to enable access to a continuum of comprehensive primary, secondary and tertiary care.

6). Availability of skilled human resources remains a key constraint in expanding health service delivery. A mere expansion of financial resources devoted to health will not deliver results if health personnel are not available. A large expansion of medical schools, nursing colleges, and so on, is therefore necessary. Present distribution of such colleges is geographically very uneven; a special effort will be made to expand medical education in States which are at present under-served. In addition, a massive effort will be made to recruit and train paramedical and community level health workers.

7). A series of prescription drugs reforms, promotion of essential, generic medicines, and making these universally available free of cost to all patients in public facilities as a part of the Essential Health Package will be a priority.

8). Effective regulation in medical practice, public health, food and drugs is essential to safeguard people against risks and unethical practices.

9). The public and private sectors also need to coordinate for delivery of a continuum of care. A strong regulatory system would supervise the quality of services delivered. Standard treatment guidelines should form the basis of clinical care across public and private sectors, with adequate monitoring by the regulatory bodies to improve the quality of care and control the cost of care.

TOWARDS UNIVERSAL HEALTH COVERAGE

The Twelfth Plan strategy outlined is a first step in moving toward Universal Health Care (UHC). All over the world, the provision of some form of universal health coverage is regarded as a basic component of social security. There are different ways of achieving this objective and country experiences vary. We need to ensure much broader coverage of health services to provide essential health care and we need to do it through a system which is appropriate to our needs and within our financial capability.

HLEG'S RECOMMENDATIONS

The **High Level Expert Group** has defined UHC as follows: 'Ensuring equitable access for all Indian citizens in any part of the country, regardless of income level, social status, gender, caste or religion, to affordable, accountable and appropriate, assured quality health services (promotive, preventive, curative and rehabilitative) as well as services addressing wider determinants of health delivered to individuals and populations, with the Government being the guarantor and enabler, although not necessarily the only provider of health and related services.'

Recommendations of High Level Expert Group on Universal Health Coverage

1. ***Health Financing and Financial Protection***: Government should increase public expenditure on health from the current level of 1.2 per cent of GDP to at least 2.5 per cent by the end of the Twelfth Plan, and to at least 3 per cent of GDP by 2022. Expenditures on primary healthcare should account for at least 70 per cent of all healthcare expenditure.

2. ***Access to Medicines, Vaccines and Technology***: Price controls and price regulation, especially on essential drugs, should be enforced. The Essential Drugs List should be revised and expanded, and rational use of drugs ensured. Public sector should be strengthened to protect the capacity of domestic drug and vaccines industry to meet national needs. MoHFW should be empowered to strengthen the drug regulatory system.

3. ***Human Resources for Health***: Institutes of Family Welfare should be strengthened and Regional Faculty Development Centres should be selectively developed to enhance the availability of adequately trained faculty and faculty-sharing across institutions. District Health Knowledge Institutes, a dedicated training system for Community Health Workers, State Health Science Universities and a National Council for Human Resources in Health (NCHRH) should be established.

4. ***Health Service Norms***: A National Health Package should be developed that offers essential health services at different levels of the healthcare delivery system. There should be equitable access to health facilities in urban areas by rationalizing services and focusing particularly on the health needs of the urban poor.

5. ***Management and Institutional Reforms***: All India and State level **Public Health Service Cadres** and a specialized State level **Health Systems Management Cadre** should be introduced in order to give greater attention to Public Health and also to strengthen the management of the UHC system. The establishment of a National Health Regulatory and Development Authority (NHRDA), National Drug Regulatory and Development Authority (NDRDA) and National Health Promotion and Protection Trust (NHPPT) is also recommended.

6. ***Community Participation and Citizen Engagement***: Existing Village Health Committees should be transformed into participatory Health Councils.

7. ***Gender and Health***: There is a need to improve access to health services for women, girls and other vulnerable genders. In order to achieve health goals UHC must build on universal access to services that are determinants of health, such as safe drinking water and sanitation, wholesome nutrition, basic education, safe housing and hygienic environment. To aim at achieving UHC without ensuring access to the determinants of health would be a strategic mistake, and plainly unworkable. Therefore, it may be necessary to realize the goal of UHC in two parallel steps: the first, would be clinical services at different levels, defined in an Essential Health Package (EHP), which the Government would finance and ensure provision through the public health system, supplemented by contracted-in private providers whenever required to fill in critical gaps; second the universal provision of high impact, preventive and public health interventions

OUTCOME INDICATORS FOR TWELFTH PLAN

The Twelfth Plan must work towards national health outcome goals, which target health indicators. The national health goals, which would be aggregates of State wise goals are following:

1). *Reduction of Infant Mortality Rate (IMR) to 25.*
2). *Reduction of Maternal Mortality Ratio (MMR) to 100*
3). *Reduction of Total Fertility Rate (TFR) to 2.1*:
4). *Prevention, and reduction of under-nutrition in children under 3 years* to half of NFHS-3 (2005–06) levels: At the current rate of decline, the prevalence of underweight children is expected to be 29 per cent by 2015, and 27 per cent by 2017
5). *Prevention and reduction of anaemia among women aged 15–49 years* to 28 per cent
6). *Raising child sex ratio in the 0–6 year age group from 914 to 950*
7).*Prevention and reduction of burden of Communicable and Non-Communicable diseases (including mental illnesses) and injuries*: State wise and national targets for each of these conditions will be set by the Ministry of Health and Family Welfare (MoHFW) as robust systems are put in place to measure their burden.
8). *Reduction of poor households' out-of-pocket expenditure*: Out-of-pocket expenditure on health care is a burden on poor families, leads to impoverishment and is a regressive system of financing. Increase in public health spending to 1.87 per cent of GDP by the end of the Twelfth Plan, cost-free access to essential medicines in public facilities, regulatory measures proposed in the Twelfth Plan are likely to lead to increase in share of public spending.

Various components of 12th Five year plan

1. FINANCING FOR HEALTH

For financing the Twelfth Plan the projections envisage increasing total public funding, plan and non-plan, on core health from 1.04 per cent of GDP in 2011–12 to 1.9 per cent of GDP by the end of the Twelfth Plan. In such an event, the funding in the Central Plan would increase to 3 times the Eleventh Plan levels involving an annual increase by 34 per cent. The Central and State funding for Health, as a proportion of total public sector health funding will remain at 2011–12 levels of 33 per cent and 67 per cent respectively.

When viewed in the perspective of the broader health sector, which includes schemes of Ministries other than Health aimed at improving the health status of people, namely Drinking Water and Sanitation, Mid-day Meal and Integrated Child Development Services Scheme the total Government expenditure as a proportion of GDP in the Twelfth Plan is likely to increase from 1.9 per cent of GDP in the last year of the Eleventh Plan to 3.04 per cent in the corresponding year of the Twelfth Plan.

In the Approach Paper to the Twelfth Plan, it was stated that we should aim at raising the total expenditure on health in the Centre and the States (including both Plan and Non-Plan) to 2.5 per cent of GDP by the end of the Twelfth Plan period

2. OTHER MODELS OF FINANCING

Public–Private Partnerships: PPPs offer an opportunity to tap the material, human and managerial resources of the private sector for public good. But experience with PPP has shown that Government's capacity to negotiate and manage is not effective. Without effective regulatory mechanisms, fulfillment of contractual obligations suffers from weak oversight and monitoring. It is necessary, as the HLEG has argued, to move away from ad-hoc PPPs to well negotiated and managed contracts that are regulated effectively keeping foremost the health of the '*aam-admi*'. RASHTRIYA SWASTHYA BIMA YOJANA (RSBY):

Health insurance is a common form of medical protection all over the world and until the Eleventh Plan, it was available only to government employees, workers in the organized sector; private health insurance has been in operation for several years, but its coverage has been limited.

3. HEALTH AND MEDICAL REGULATION

Regulations for food, drugs and the medical profession requires lead action by the Central Government not only because these subjects fall under the Concurrent List in the Constitution, but also because the lack of consistency and well enforced standards hugely impacts the common citizen and diminishes health outcomes. Keeping in view the need to place authority and accountability together, the proposed Public Heath Cadre in States would be expected to be the single point for enforcement of all health related regulations.

There is also an urgent need to strengthen the regulatory systems in the States, where most of the implementation rests. This would entail the strengthening of and establishment of testing labs and capacity building of functionaries. Such proposals will be part-funded

under the National Health Mission (NHM). Regulation can be made affordable and effective by encouraging self-regulation, and entrusting responsibility to Public Health officers.

3.1 DRUG REGULATION

E-governance systems that inter-connect all licensing and registration offices and laboratories, GPS based sample collection systems and online applications for licensing would be introduced. A repository of approved formulations at both State and national levels would be developed. The drug administration system would build capacity in training, and encourage self regulation. The MoHFW would ensure that irrational Fixed Dose Combinations (FDCs) and hazardous drugs are weeded out in a time bound manner.

Pharmaco-vigilance, post-marketing surveillance, Adverse Drug Response Monitoring, quality control, testing and re-evaluation of registered products would be accorded priority under drug regulation. Use of generic names or the International Non-proprietary Name (INN) would be made compulsory and encouraged at all stages of Government procurement, distribution, prescription and use, as it contributes to a sound system of procurement and distribution, drug information and rational use at every level of the health care system.

3.2 FOOD REGULATION

The newly established Food Safety and Standards Authority of India (FSSAI) would strive to improve transparency in its functioning and decision making. Bio-safety would be an integral part of any risk assessment being undertaken by FSSAI. An appropriate module on food safety and bio-safety will be introduced in the Medical and Nursing curriculum.

4. REGULATION OF MEDICAL PRACTICE

The provisions for registration and regulation of clinical establishments would be implemented effectively; all clinical establishments would also be networked on the Health Information System, and mandated to share data on nationally required parameters. The Government would consider mandating evidence based and cost-effective clinical protocols of care, which all providers would be obliged to follow.

5. INFORMATION TECHNOLOGY IN HEALTH

Information Technology can be used in at least four different ways to improve health care and systems:

1). Support public health decision making for better management of health programmes and health systems at all levels
2). Support to service providers for better quality of care and follow up
3). Provision of quality services in remote locations through Tele-medicine
4). Supporting education, and continued learning in medicine and health

6. NATIONAL HEALTH MISSION (NHM)

The Prime Minister in his Independence Day speech, 2012 had declared: 'After the success of the National Rural health Mission, we now want to expand the scope of health services in our towns also. The National Rural Health Mission will be converted into a National Health Mission (NHM) which would cover all villages and towns in the country.' The gains of the flagship programme of NRHM will be strengthened under the umbrella of NHM which will have universal coverage.

A major component of NHM is proposed to be a Scheme for providing primary health care to the urban poor, particularly those residing in slums. Modalities and institutional mechanisms for roll-out of this scheme are being worked out by the Ministry of Health and Family Welfare in consultation with Planning Commission. NHM would give the States greater flexibility to make multi-year plans for systems strengthening, and addressing threats to health in both rural and urban areas through interventions at Primary, Secondary and Tertiary levels of care.

The National Health Mission will incorporate the following core principles.
CORE PRINCIPLES:

1. **Universal Coverage**

The NHM shall extend all over the country, both in urban and rural areas and promote universal access to a continuum of cashless, health services from primary to tertiary care. Separate strategies shall be followed for the urban areas, using opportunities such as easier access to secondary and tertiary facilities, and better transport and telecommunication services.

2. **Achieving Quality Standards**

The IPHS standards will be revised to incorporate standards of care and service to be offered at each level of health care facility. Standards would include the complete range of conditions covering emergency, RCH, prevention and management of Communicable and Non-Communicable diseases incorporating essential medicines, and Essential and Emergency Surgical Care (EESC).

All government and publicly financed private health care facilities would be expected to achieve and maintain these standards. An in-house quality management system will be built into the design of each facility, which will regularly measure its quality achievements. The service and quality standards shall be defined, made consistent with requirements under the Clinical Establishments Act, and performance of each registered facility made public, and periodically ranked.

3. Continuum of Care:

A continuum of care across health facilities helps manage health problems more effectively at the lowest level. For example, if medical colleges, district hospitals, CHCs, PHCs and subcentres in an area are networked, then the most common disease conditions can be assessed, prevented and managed at appropriate levels. It will avoid fragmentation of care, strengthen primary health care, reduce unnecessary load on secondary and tertiary

facilities and assure efficient referral and follow up services. Continuum of care can lead to improvements in quality and patient satisfaction.

4. Decentralized Planning

A key element of the new NHM is that it would provide considerable flexibility to States and Districts to plan for measures to promote health and address the health problems that they face.

New health facilities would not be set up on a rigid, population based norm, but would aim to be accessible to populations in remote locations and within a defined time period. The need for new facilities of each category would thus be assessed by the districts and States using a 'time to care' approach. This will be done based on a host of contributing factors, including geographic spread of population, nature of terrain, availability of health care facility in the vicinity and availability of transport network. For example, a travel time of 30 minutes to reach a primary healthcare facility, and a total of two hours to reach a FRU could be a reasonable goal.

INSTRUMENTS FOR SERVICE DELIVERY

1. Effective Governance Structures

The broad and flexible governance structure of the National Health Mission would be used. States would be advised to merge the existing governance structures for social sector programmes, such as drinking water and sanitation, ICDS, AIDS control and NRHM at all levels, pool financial and human resource under the leadership of local PRI bodies and make multi-sectoral social plans to collectively address the challenges.

The existing National Programme Coordination Committee (NPCC) of NRHM will be expanded to serve the National Health Mission. It will be made more representative of all social sectors, sub-sectors within the health sector, and include expertise on monitoring and independent evaluation.

2. Accountability for Outcomes

In order to ensure that plans and pronouncements do not remain on paper, a system of accountability shall be built at all levels, States reporting on service delivery and system reforms commitments undertaken through the MoU system, district health societies reporting to States, facility managers reporting on health outcomes of those seeking care, and territorial health managers reporting on health outcomes in their area.

Accountability shall be matched with authority and delegation; the MoHFW shall frame model accountability guidelines which will suggest a framework for accountability to the local community, requirement for documentation of unit cost of care, transparency in operations and sharing of information with all stakeholders.

States can empower facility managers with more financial and hiring powers so that they can take quick decisions on service related local issues. The Rogi Kalyan Samiti model of

facility autonomy launched under NRHM would be expanded to enable investment in facility upkeep and expansion, or even filling temporary HR gaps.

3. Health Delivery Systems and its strengthening

Trained and competent human capital is the foundation of an effective health system. Without adequate human resources, additional expenditure on health will not lead to additional services and will only bid up wages. In this context it is important for the Twelfth Plan to embark on a clear strategy to expand the supply of appropriately trained health workers to support health care objectives.

Effectively functioning health systems depend on human resource, which range from medical, AYUSH and dental graduates and specialists, graduate and auxiliary nurses, pharmacists to other allied health professionals. A peculiar feature of India's healthcare system is the presence of a large number of nonqualified practitioners, such as traditional birth attendants (dais), compounders and RMPs.

As per law, they are neither authorized to practice Medicine, nor to prescribe drugs. Nonetheless, they work everywhere in the country and address a huge unfulfilled demand for ambulatory care, particularly in rural areas. The challenge is to get them into the formal system. The plan recommends giving these practitioners, depending on their qualifications and experience, an opportunity to get trained and integrate them into the health workforce in suitable capacities by mutual consent.

Another opportunity lies in utilizing the services of AYUSH graduates for providing primary care. There are two pre-requisites before this can be done—first by amendment of the legal framework to authorize the practice of modern medicine for primary care by practitioners of Indian Systems of Medicine; and secondly by supplementing skills of AYUSH graduates by imparting training in modern Medicine through bridge courses.

It is generally accepted that the doctor to nurse ratio should be at least 1:3 for the team to perform optimally. This ratio is currently 1:1.6 and is expected to improve to 1:2.4 by end of Twelfth Plan if no new colleges are started. If we adopt a goal of 500 health workers per lakh population by the end of Thirteenth Plan, we would need an additional 240 medical colleges, 500 General Nursing and Midwifery (GNM)/nursing colleges and 970 ANMs training institutes. If work on these new teaching institutions begins from the 2013–14 annual plan, and is completed by the end of the Twelfth Plan, the flow of nurses and ANMs would begin within this plan, while doctors from these institutions would be available only from the beginning of the Thirteenth Plan. The ratio of doctors to nurses will then rise from 1:1.6 in 2012 to 1:2.8 in 2017 and reach 1:3 in 2022.

A major objective of enhanced funding, flexibility to and incentivisation of States is to build strong health system.

4. Expansion of Teaching Facilities:
The Government shall take the lead role in creating teaching capacity in health, while private sector colleges would also be allowed. Initiatives would be taken to upgrade existing District hospitals and CHCs into knowledge centres, where medical, nursing and para-medical teaching and refresher courses can be held side-by-side with patient care.
States shall be encouraged to take this up through the incentive fund of the NHM. The existing state level teaching institutions such as the State Institutes of Health and Family Welfare would also be strengthened. Simultaneously, the existing Government medical colleges and central Government institutions would be strengthened so that the seats could be increased to the maximum level of 250. Efforts to support the existing institutions to create more Post-graduate seats would continue. The long term goal would be to build at least one training centre in each District, and one para-medical training centre in each sub-division block.

Centres of Excellence for Nursing and Allied Health Sciences also need to be established in every State. These Centres would impart higher education in specialised fields, offer continued professional education and have provisions for faculty development and research.

5. Community Participation and PRI Involvement
Government health facilities at the level of blocks and below can become more responsive to population needs if funds are devolved to the Panchayati Raj Institutions (Village Council or its equivalent in the Scheduled Areas), and these institutions made responsible for improving public health outcomes in their area. States should formalize the roles and authority of Local Self-Government bodies in securing convergence so that these bodies become stakeholders for sustainable improvements in health standards. The States would be advised to make Village Health, Sanitation and Nutrition Committees as the guiding and operational arms of the Panchayats in advancing the social agenda.

Modules & Chapters

Post Graduate Certificate Course in Health System and Management

Module 1 : Introduction To Public Health	
1	Terminologies Used In Health Care System And Management
2	Concept Of Health
3	Evolution Of Public Health
4	Primary Health Care To Millennium Development Goal
5	Health Planning In India
6	International Health Agencies
7	Five Year Plans And 12th Five Year Plan
Module : 2 : Basics Of Health Systems And Health Care Delivery	
1.A	Introduction To Health System In India : Health System In India
1.B	Introduction To Health System In India : Urban Health System
1.C	Introduction To Health System In India : Decentralised Health Administration By Local Self Government
1.D	Introduction To Health System In India : Voluntary Health Agencies In India
2	Health Policy
3	Health Indicators
4	Health Legislation
Module : 3 : Basic Of Management & Planning	
1	Basics Of Health Management
2	Managers : Level, Role & Skills
3	Health Planning Process
4	Strategic Management/Planning & Operational Planning
5	Project Management & Log Frame Analysis

POST GRADUATE CERTIFICATE COURSE IN HEALTH SYSTEM AND MANAGEMENT

Aim

PGCHSM is aiming to develop comprehensive knowledge and skills in the Health System and Management.

Objective

1. To equip students with an overall perspective on health system
2. To improve leadership skills in public health and create good health managers
3. To inculcate interdisciplinary approach to problem solving skills in public health

About Course

Module 1: Introduction to Public Health
Module 2: Basics of Health System and Health Care Delivery
Module 3: Basic of Management and Planning
Module 4: Organization and Human Resource Management
Module 5: Material Management in Health
Module 6: Monitoring and Evaluation in Health System & Health Economics

Student Speaks

We learned many of the newer knowledge and skills about Health System & Management.

- Dr. Snehal Vaghela

Sessions of Resource Persons who had worked in the field were very interesting. We came to know about field realities and practical solutions.

- Dr. Kanan Desai

Contact sessions were interactive and we got maximum insights and understanding about Health System & Management during these sessions.

- Dr. Jaimin Patel

Assignments were framed in completely different ways. They require more thought process and field understanding than mere book knowledge.

- Dr. Ankit Sheth