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Economics and Health Planning

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Independent of geographical locations, planning the health needs to available resources requires confrontation with the scarce commodities like finance, manpower, equipment, buildings etc. The main problem will be as to how to mobilise the limited resources or manpower, to an organised structure of health services which can supply the community needs, which may have to cater for the general population, special groups as army, police, schools, and industrial workers. Very little attention is generally given to the formulation of a systematic, comprehensive appraisal of health planning for the industrial workers. The usual pattern has been to the intuitive and ad hoc adjustment based mainly on certain routine sickness and death statistical indices. In a developing economy the disparity between needs and resources is so great that health service efficiency and effectiveness need special attention. Health planning must become objective and quantifiable, rather than a subjective art acquired by experience. Rationalisation of planning requires new methods of data collection and analysis which are practically problem oriented.

The word economics, means the study of how men and society choose, with or without use of money, to employ scarce productive resources to produce various commodities over time and distribute them for consumption, now and in the future, among various people and groups in society. Economics is mainly concerned with choices. The decision is quite often weak due to poor statistics, insufficient information and lack of complete understanding of why things happen in the economic life. There is a general belief that interaction of supply and demand in a competitive market will ensure that optimum choices are made. Liberal economists believe (as in the USA.) that a socially responsible government must use the instruments of tax policy,

control of rate of interest, to influence factors such as the amount of investment, of the distribution of income, to assure that market forces lead in fact to the best possible choices. The Marxist school of thought, a major rival to the western thought believe that main reliance be placed on the comprehensive planning of economic life (now very much a computerised process) ensures a socially desirable choice. Generally when economic terms are applied to health services more emphasis is on the statistical data and scientific inference.

In health planning the economist may give divergent opinion. The free enterprise school, may suggest that the recipient should pay a part of the medical care, while the other school, will say the medical care service should be absolutely free, so that it is fully accessible, to all people irrespective of their socioeconomic status. The vicious cycle of poverty and disease has been recognised for many years and serious attempts have been made to calculate the cost of sickness and premature death. Health economics as a discipline has come up since three decades. There has been a slow growth of the science as there was no clear thinking regarding the market for health services. Consumption of hospital days or prescription of drugs did not respond to price, like the consumption of meat or vegetables, as consumers did not want to be hospitalised or drugged.

Economic analysis of health services can be broadly grouped into two main areas, micro-and macro-economics. Microeconomics, is concerned with the individual producing units, the hospital, the health centre, the doctor's office. It is concerned with the efficiency of operation in human and money terms, with problems of cost and utilisation, and of the scale of operations. It involves managerial cost accounting rather than social statistics. This technique is more important for individual producing units than planning an entire health sector.

Macroeconomics is concerned with the summing up of the individual units into aggregate and then giving a relative share of resources taking health service as an aggregate as compared with those allocated to other branches of economic activity. The relative return to the society from investment in health services, education and other so called social services, agriculture, industry are considered. Within the health sector, broad consideration of regional geographical balance of the rural urban distribution of services, and of the relative returns from investment in curative versus preventive services or inpatient versus outpatient care can be considered.

The criteria for allocating resources to health in the aggregate is important to health planners, because these guide the country's national policy on the budget allocation to the health sector. According to the World Health Organisation, 5% of the gross National income goes for the health sector in many of the countries, and 10% of the government expenditure goes for government health services. No method is known for comparing returns from expenditure on health, education, agriculture, manufacturing and other activities, since the only common unit available to measure returns on a single scale is money. It is very difficult to assess the money value of health activity. Multiple factors like high income, more food and better nutrition, better housing and high educational standards are positively correlated with lower infant death rate, higher life expectancy at birth, lower maternal deaths due to delivery and other complications. Health services are often oriented to satisfying needs rather than wants

in the form of market demand.

Economic measurements in the health sector in industries is likely to produce three kinds of benefits. First gain in output, the consequences of ill-health like malaria which causes loss in man-hour working days. Malaria eradication in many countries has increased production which was started by the sugar industry producers as in British *Guiana*, 1940. Secondly non-economic personal gains, thus a distinguishing skin disease, when treated, increases personal comforts and self esteem. Thirdly use of health resources, result in savings, like the introduction of antibiotics, has succeeded in reduction of duration of certain illnesses, thus reducing the bed occupancy rate in hospitals. One can summarise this as inputs (i.e.). Health services which provide outputs as both investment and consumption components. The different sectors of medical care like primary patient care, consultant care, hospital care, home care could be measured, by using utilisation indices.

Priorities in Health Plan

Consumer ignorance amounts to more in the health field than in any other as they are unaware of their own needs. These decisions are to be made by the physicians and other professionals. The relationship between need and demand is influenced by increasing acceptance of the principle that access to health services is a basic right rather than a privilege. Many health service situations can be considered at three levels.

1. Actions of individuals, immunisation and prompt treatment of communicable disease-preventive impact.
2. Actions of institutions.
3. Actions of Government agencies.

Individual actions or choices in the service is not always the method for rational planning or decision making. Health planning in some form is essential. Potential benefits of planning have increased with the introduction of the new tool of systems analysis.

Setting Priorities

The decision making generally lies in health planning; numerous constraints are therein the operations. There is always popular demand for medical care (curative services) in the form of hospitals which can produce dramatic results, but this can consume 90% of the health budget, and they may have political backing. Certain activities on the promotive and preventive aspects, like health education, early detection of diseases, immunisation using vaccines (although largely a need of the community), may not be considered as a want on political basis.

The three major levels of health care services for reducible sickness and death in community are primarily prevention, secondary prevention and tertiary prevention, as "prevention is better than cure". The main objective being a quantifiable reduction in

sickness and death. The resources required are determined by the plan of action chosen, based upon a cost benefit analysis.

1. Primary Prevention

Health promotion

- a) Health Education for accident prevention etc.
- b) Observing better health practices
- c) Nutrition education.
- d) Preplacement examination.

2. Secondary prevention

A. Specific protection

- a) Immunisation with Tetanus Toxoid, B.C.G. etc.
- b) Use of protective devices by workers.
- c) Specific provision of nutrients through canteen.

B. Early detection of disease and prompt treatment

- a) Periodic Health check up.
- b) Special care programme for Diabetics. etc.
- c) Hospital outpatient and inpatient services (i.e.) Ambulatory to hospital inpatients.

3. Tertiary prevention

- a) Disability limitation, so that the reserve capacities are best utilised, through physiotherapy.
- b) Rehabilitation of patients involved in industrial accidents, through social agencies and insurance.

For non reducible sickness and related deaths, the required future resources are calculated by extrapolation of current demand generated by these diseases, alternatively the future resources may be defined by expert opinion as to the care, for prospective demand regardless of cost.

The industrial workers and their families are also to be covered in the health care services. which could be through the insurance programme also. The above services include the support services for the environmental health of the workers, like provi-

sion of protected water supply, minimum housing with sewerage facilities, refuse disposal, and prevention of pollution of the environment from toxic industrial effluents.

Suggestions for making estimates on resources

Capital expenditure

This can be conveniently divided into hospital buildings, furniture, equipment, vehicles, and obtained from various records. Also expenditure on staff quarters when it is provided free. The total expenditure is depreciated as follows.

Buildings

1.5% furniture and equipment and 10% on vehicles. These rates may vary from place to place and from time to time and are affected by recession or inflation.

Maintenance Expenditure

Annual maintenance expenses for buildings, furniture and equipment are about 1.5%. Vehicle maintenance, driver's salary.

Expenditure items

Drugs, consummable equipment as needles, syringes etc.

Salaries

Annual expenditure on salaries and allowance for workers.