Chapter 5

HEALTH POLICY AND PROGRAMMES IN INDIA AND KARNATAKA

The present chapter has five sections. Section 5.1 deals with the Health Policy in India. It discusses the health policy in the pre-independence and in the post-independent India. Section 5.2 analyzes the health policy and programmes in Karnataka state. The health scenario of the pre-independence period and health policy and programmes of the state during the post-re-organisation period are examined. Section 5.3 discusses the setting up of the Task Force on Health and Family Welfare; its findings and recommendations. Section 5.4 deals with the relevance of these recommendations to Karnataka. Section 5.4 is the conclusion.

5.1 HEALTH POLICY AND PROGRAMMES IN INDIA

5.1.1 Health Policy in Pre Independence India

The British inducted the Western medicine as one of the components of imperialistic aims. The British formed (1746) a cadre of medical personnel called Indian medical services (IMS). The IMS played a key role in the making of health services in the Indian region. In 1835 the establishment of three medical colleges in Calcutta, Bombay and Madras, was an important landmark in the history of health services in the country. The nursing profession was established in India at an early stage. Florence Nightingale took personal interest in developing the profession in the country [D. Benerji 2001]
In the mid nineteenth country, as many as 69 out of every 1000 soldiers sent from Britain died of various diseases during the first year of their arrival [Ramasubban 1982]. This led to the setting up of cantonments and civil lines exclusively for the rulers and their army, where sanitary practices like protected water supply and proper disposal of wastes [Crawford 1914] were adopted. The massive outbreak of plague towards the end of the country made the British to establish a large number of research and training institutes were set up to strengthen the health organisation.

Meanwhile, the state of health of the "subalterns" and their access to health services was materially different from that of the rulers. The ruthless colonial exploitation made the people much more vulnerable to diseases of various kinds and to famines and epidemics. At the very time when the disease load became heavier, these "forgotten people" were also fast losing access to the various mechanisms for coping with the problems, which they had developed over the centuries, this was so because the elite of the society been enriching the indigenous systems. However with the advent of provisional governments after the Government of India Act 1919 some semblance of a medical care network evolved [Ravi Duggal and N. H. Antia 1993] of medicine, had now transferred their loyalty to the western system.

On the eve of Independence, medical services were scattered and highly inadequate, not only in the number but in the kind of medical care they delivered. Rural population in particular, were starved of services. Some of India's most eminent medical professionals, such as Dr. B. C. Roy, Dr. A. R. Ansari, Dr. Khan
sales, Hakim Ajamal Khan, Dr. Jeevraj Mehta and Dr. N. M. Jaisoorya, occupied leadership positions in the national struggle. Inspired by the welfare state movement in the U.K. and the socialized health services in the social union, they demanded a more egalitarian health services system and made this demand an important flank in the anti colonial struggle. Another remarkable feature of the movement for health services was the initiative taken by the prominent persons in different parts of this vast country to start a large variety of institutions on a voluntary basis.

An important feature of health policies, plans and programs in India is that they originated during the national movement against colonial rule. The Indian National Congress President, Subhas Chandra Bose, nominated Jawaharlal Nehru as the Chairman of the national Planning Committee in 1938. This committee set up a subcommittee [Sokhey Committee] on national health, which made an incisive appraisal of the health situation and health services in the country also recommended measures for their improvement. The Bhore committee, Popularly known as the 'Health Survey and Development Committee, was set up by the British colonial authorities [1943]. The impact of this committee is clearly seen in the shaping of health services in independent India. Many of its proposals and recommendations continue to be pertinent and valid even today.

The guiding principle adopted by the Sir Joseph Bhore Committee were : (i) no individual should be denied adequate medical care because of inability to pay for it ; (ii) the health services should provide fully developed all the consultant,
laboratory and institutional facilities necessary for proper diagnosis and treatment; (iii) the health program must, from the beginning, lay special emphasis on preventive work; (iv) medical relief and preventive health care must be urgently provide as soon as possible to the vast rural population of the country; (v) the health services be located as close to the people as possible to ensure maximum benefit to the communities served; (vi) the active co-operation of the people must be secured in the development of the health programs. The idea must be included that, ultimately, the health of the individual is his own responsibility, and (vii) health development must be entrusted to the ministers of health, who enjoy the confidence of the people and are able to secure their co-operation.

The shortcomings of the Bhore committee report was that it was based mainly on the imported allopathic medical system. The committee also failed to appreciate the entirely different socio-economic and cultural conditions and traditional health practices of the people. It failed to appreciate the values and cultural difference between the urban trained health providers like doctors and nurses and the majority of our people [N. H. Antia, G. P. Dutta, A. B. Kasbekar 2000].

5.1.2 Post Independence Period:

The post Independence Health Policy of India can be studied in 3 Phases **Phase 1**: Bhore Committee (1948) to (1975-76), Phase 2: from 1976-77 to 1983 (First National Health Policy) and Phase 3: from 1983 to 2001 (Second National Health Policy). The Bhore Committee report provides a ready made formal model which was available at independence and was hence adopted as the blue print
for the country's post Independence health policy. The protection and promotion of health and nutrition of the people was ensured by placing it in the Directive Principles of State Policy in the Constitution of India.

**Health Sector Planning**

Since "health" is an important contributing factor in the utilization of manpower, the Indian Planning commission gave considerable importance to health programmes in the Five Year Plans. For purposes of Planning, the health sector has been divided into the following sub sectors (Shrivastav J.B. 1972] (1) Water Supply and Sanitation (2) Control of communicable diseases (3) Medical education, training and research (4) Medical care including hospitals, dispensaries and primary health centres (5) Public health services (6) Family Planning and (7) Indigenous System of Medicine.

To have a better co-ordination between the centre and state Governments, the Bureau of Planning was constituted in 1965 in the ministry of health, Gcvt. of India. The main function of this bureau is compilation of compilation of National Health Five Year
Plans. The health plan is implemented at various levels. E.g. Centre, State, District, Block and Village.

National health planning has been defined as "the orderly process of defining community health problems, identifying unmet needs, and surveying the resources to realistic and feasible and projecting administrative action to accomplish the purpose of the proposed programme [W.H.O. 1971]

Since "health" is an important contributing factor in the utilization of manpower, the Indian Planning commission gave considerable importance to health programmes in the Five Year Plans. For purposes of Planning, the health sector has been divided into the following sub sectors (Shrivastav J.B. 1972] (1) Water Supply and Sanitation (2) Control of communicable diseases (3) Medical education, training and research (4) Medical care including hospitals, dispensaries and primary health centres (5) Public health services (6) Family Planning and (7) Indigenous System of Medicine.

To have a better co-ordination between the centre and state Governments, the Bureau of Planning was constituted in 1965 in the ministry of health, Govt. of India. The main function of this bureau is compilation of National Health data under Five Year Plans. The health plan is implemented at various levels. E.g. Centre, State, District, Block and Village.

The broad objective of the health programmes during the five year plans have been: (1) control or eradication of major communicable diseases; [2] Strengthening of the basic health services through the establishment of PHC's and subcentres [3]
population control and development of health manpower resources.

In the Five Year Plans the health sector is broken into various schemes each of which has a target to be fulfilled. Each FYP period had a number of schemes and every subsequent plan added many more and dropped a few. During the first three FYP’s, the main focus of the public health sector was to manage epidemics through various vertical single purpose disease control or eradication campaigns. Expansion of modern health care, especially to rural areas and the growth of medical manpower were the other important objectives.

**Mudaliar Committee**

By the close of the second Five Year Plan i.e. in 1959, the Government of India appointed 'Health survey and planning committee under the Chairmanship of Dr. A. L. Mudaliar, to survey the progress made in the field of health since the Bhore Committee’s Report and to make recommendations for future development and expansion of health services. The main recommendations of the Mudaliar committee were (1) consolidation of advances made in the first two five year plans (2) Strengthening of the district hospital with specialist services to serve as central base of regional services (3) regional organizations in each state between the head quarters organisation and the district in charge of a Regional Deputy or Assistant Directors each to supervise 2 or 3 district medical and health officers (4) each primary health centre not to serve more than 40,000 population (5) to improve the quality of health care provided by the primary health centres (6) integration
of medical and health services as recommended by the Bhore Committee and (7) constitution of an All India Health Service on the pattern of Indian Administrative service.

The outcome of the various programs designed to achieve these objectives were not as envisioned. Modern health care services did expand but only in urban areas. Rural areas saw the introduction of 'Public Health' programs but medical care eluded them. Medical education of doctors at the expense of the public exchequer grew rapidly, which helped expansion of not only the private health sector in India but also helped Western countries get skilled human power through extensive migration Programmes. The eradication of malaria and small pox, which had panendemic potential, were fairly successful but those for other communicable diseases, like leprosy, and tuberculosis were neglected. By the end of the third FYP family planning (FP) emerged as the top priority program.

**Chadah Committee:**

The Government of India appointed a committee in 1963, to study the arrangements necessary for the maintenance phase of the National Malaria Eradication Programme. The committee envisioned the role of "Multipurpose" workers. These workers, in addition to malaria vigilance were to collect vital statistics and look after family planning activities.

**Mukerji Committee:**

The "Mukerji Committee" appointed by the Govt. of India in 1965 recommended separate staff for the family planning
programme. The committee also worked out the details of the 'Basic Health Service', which should be provided at the block level.

**Jungalwalla Committee:**

The Jungalwalla committee in its report in 1967, recommended integration from the highest to the lowest level in the services, organisation and personnel. The main recommendations were (a) unified cadre (b) common seniority (c) recognition of extra qualifications (d) equal pay for equal work (e) special pay for specialized work (f) no private practice and good service conditions.

The 4th and 5th FYP's set their target on population control as the means to achieving health care development. A massive expansion of the rural health infrastructure was undertaken under the 'Minimum Needs Programme' (MNP) and the objective was to integrate the various health programmes under the multipurpose workers (MPW) scheme.

**Kartar Singh Committee:**

In 1972, the Govt. of India constituted "The committee on Multipurpose worker under Health and Family Planning" under the chairmanship of Kartar Singh. The committee in its report submitted in 1973, made the following recommendations: (a) The present ANM's to be replaced by "Female Health Worker"; and the present basic health workers, malaria surveillance workers vaccinators, health education Assistants and the family planning Health Assistants to be replaced by "Male Health workers" (b) the multipurpose workers programme to be introduced in Phases (c) there should be one PHC for a population of 50,000 (d) Each PHC
should be divided into sub centres each having a population of about 3000 to 3500 depending upon topography and means of communications (e) each sub centre to be staffed by a team of one male and one female health worker. (f) there should be a male and female health supervisors for 3-4 male or female health workers (g) the present lady health visitor to be designated as female health supervisors (h) the doctor in charge of a PHC should have the overall charge of all supervisors and health workers in his area. The recommendations of the committee were accepted by the Government to be implemented in a phased manner during the Fifth Five Year Plan.

The Minimum Needs Programme (MNP) was introduced in the first year of the Fifth Five Year Plan (1974-78). The objective of the programme was to provide certain basic minimum needs and thereby improve the living standards of the people. The programme included the following health components (a) Rural Health (b) Rural Water Supply (c) Nutrition (d) Environmental improvement of urban slums (e) Houses for the landless labourers.

Shrivastav Committee:

In 1974 the Govt. of India set up Shrivastav committee known as "Group on Medical Education and support manpower", submitted its report in 1975. It recommended (1) creation of paraprofessional and semiprofessional health workers from within the community itself (e.g. School teachers postmaster, grain sevaks) to provide simple, promotive, preventive and curative health services needed by the community (2) establishment of two cadres of health workers namely – MPH workers and HA’s between
the community level workers and doctors at the PHC (3) development of a 'Referral Services Complex' by establishing proper linkages between the PHC and higher level referral and service central viz taluka / tehsil, district, regional and medical college hospitals and (4) establishment of a medical and health Education Commission for planning and implementing reforms needed in health and medical education on the lines of the UGC.

The committee also felt that by the end of the sixth plan, one male and one female health worker should be available for every 5000 population. Also one male and female assistant for 2 male and 2 female health workers respectively. The health assistants should be located at the sub centre, and not at the PHC.

The Government accepted these recommendations in 1977, which led to the launching of the Rural Health Scheme. The programme of training of CHW's was initiated during 1977-78. Steps were also initiated (a) for involvement of medical colleges in the total health care of the selected PHC's with the objective of reorienting medical education to the needs of rural people. (b) reorientation training of multipurpose workers engaged in the control of various communicable diseases programmes into single purpose workers.

In 1986, the restructured 20-point programme led at least 6 of the 20-points, directly or indirectly, to health. These are: clean drinking water, health for all, two child norm, housing, improvement of slums, protection of the environment.
The Minimum Needs programme produced multipurpose workers (MPW's) chiefly to achieve targets of the family planning programme and all all-out effort to push forward the family planning Programme at all costs had a devastating impact on the wider provision of health services control resurgent malaria. The community Health Worker (CHW's) scheme was introduced in 1977 in order to bridge the increasing distance between the government services and the community services and the community whose participation was essential to achieve the target of the various programmes. This too suffered at the hand of an indifferent bureaucracy which co-opted the CHW the community's own resource into the lowest rung of the PCH team. Curative medicine in urban areas continued to increase in a highly disproportionate manner, especially in the private sector, with some spillover of the excesses to the rural aras.

A massive PHC construction programme did ensue but this did not fulfill the rural population's demand for basic medical care. The integration of various health programmes was basically to give FP a central position. But it negated the success of the vertical health programmes and rural health care becomes synonymous with Family Planning.

The subsequent Five Year Plans (6th and 7th) did not bring in any major change in objectives. Though Family Planning became 'Family Welfare' it was only a change in nomenclature. 'Child survival' and 'Safe motherhood' programmes under a "mission" approach are the new catchwords, but they really mean Family Planning. The programmes like maternal and Child Health (MCH).
Extended Programme of Immunisation (EPI) and reproductive and child Health (RCH) were only the euphemistic names for Family planning. India was a signatory to the Alma Ata declaration in 1978, and it set the goal of "Health For All by 2000 A.D." as a goal. But major powers of the world were opposed to moving away from a bio-medical model of health, there was a swift invention of the idea of "Selective Primary Health Care". [Walsh and Warren 1979] to nip the Alma Ata Declaration in the bud. This led to the implementation of programmes antithetical to the Alma Ata Declaration, a virtual barrage of specific and Vertical programs like VIP, Oral dehydration, Child survival strategies and social marketing of contraceptives [Banerji D. 2001]

A working group on health constituted by the Planning Commission in 1980, identified the broad approach to health during the Sixth Five Year plan and evolved family specific indices and targets to be achieved in India by 2000 A.D.

Second Phase: National Health Policy 1983

With a view to attain the goal of Health For All by 200 A.D., the Ministry of Health and Family Welfare, Govt. of India, evolved a National Health Policy in 1983. The policy laid stress on the preventive, promotive, public health and rehabilitation aspect of health care and point to the need of establishing comprehensive primary health care services to reach the population in the remotest areas of the country, the need to view health and human development as a vital component of overall, integrated socio-economic development and the centralized system of health care delivery with maximum community and individual self-reliance and participation. It's important elements are (1) a greater awareness of health problems and means to solve these, in and by the communities (2) supply of safe drinking water and basic sanitation using technologies that the people can afford; (3) reduction of existing imbalance in health services by concentrating on the rural health infrastructure (4) establishment of a dynamic health management information system to support health planning and health programme implementation (5) provision of legislative support to health protection and promotion (6) concerted actions to combat widespread malnutrition (7) research into alternative methods of health care delivery and low-cost health technologies; and (8) greater co-ordination of different systems of medicine.

The health policy is supported by components of wider socioeconomic policies addressed to the reduction of regional disparities, fuller employment, elementary education, integrated rural development population control, welfare of women and
children etc. The health strategies include restructuring the health infrastructure, developing health manpower research and development.

To translate the above objectives into reality the health policy laid down specific goals to be achieved by 1985, 1990 and the year 2000. These are given in the following table.

Table 5.1 : SELECTED GOALS FOR HEALTH AND FAMILY WELFARE IN INDIA

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Indicator</th>
<th>Current level</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Infant Mortality Rate</td>
<td>73 (1994)</td>
<td>Below 60</td>
</tr>
<tr>
<td>2.</td>
<td>Prenatal Mortality Rate</td>
<td>44.2 (1993)</td>
<td>30.35</td>
</tr>
<tr>
<td>3.</td>
<td>Crude Death Rate</td>
<td>9.2 (1994)</td>
<td>9.0</td>
</tr>
<tr>
<td>4.</td>
<td>Under 5 Mortality Rate</td>
<td>23.7 (1994)</td>
<td>10.0</td>
</tr>
<tr>
<td>6.</td>
<td>L.E.B. Males</td>
<td>60 (1993)</td>
<td>64</td>
</tr>
<tr>
<td></td>
<td>Females</td>
<td>61 (1993)</td>
<td>64</td>
</tr>
<tr>
<td>7.</td>
<td>Crude Birth Rate</td>
<td>28.6 (1994)</td>
<td>21</td>
</tr>
<tr>
<td>8.</td>
<td>Net Reproductive Rate</td>
<td>1.5 (1990)</td>
<td>1</td>
</tr>
<tr>
<td>9.</td>
<td>Couple Protection Rate (%)</td>
<td>43.5 (1993)</td>
<td>60</td>
</tr>
<tr>
<td>11.</td>
<td>Babies with birth weight below 2500 gm (%)</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>12.</td>
<td>Immunisation</td>
<td>66.93</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Health Information of India 1997-98.

From the above table it is clear that the important determinants of health status viz. IMR, CDR, LEB are given...
importance by the Govt. in achieving the goals. Other aspects are Maternal Mortality Rate, Net Reproductive Rate and Couple Protection Rate.

The Eighth Five Year Plan had the following objectives to be achieved under the MNP: One PHC for 30,000 population in plains and 20,000 population in tribal and hilly areas; one sub-centre for a population of 5000 people in the plains for 3000 in tribal and hilly area, and one community health centre (rural hospital) for a population of one lakh or one C.D. block by the year 2000. The establishment of PCH's, sub centres, up gradation of PHC's and construction of buildings there of are all included in the state sector of the MNP. In the field of nutrition the objectives were; (a) to extend nutrition support to 11 million eligible persons (b) to expand "special nutrition programme" to all the ICD's projects and (c) to consolidate the mid-day meal programme and link it to health, potable water and sanitation.

The Ninth Five Year Plan Document had pointed out the problems faced by the health care services. These include:

1. Persistent gaps in manpower and infrastructure especially at the primary health care level.
2. Sub optimal functioning of the infrastructure; poor referral services.
3. Plethora of hospitals not having appropriate manpower, diagnostic and therapeutic services and drugs, in Govt. voluntary and private sector.
4. Massive inter state / inter district difference in performance as assessed by health and demographic.
(5) Suboptimal inter sectoral co-ordination.
(6) Increasing dual disease burden of communicable and non-communicable diseases because of ongoing demographic lifestyle and environmental transitions.
(7) Technological advances which widen the spectrum of possible interventions.
(8) Increasing awareness and expectations of the population regarding health care services.
(9) Escalating costs of health care, ever widening gaps between what is possible and what the individual or the country can afford.

The Ninth Plan pointed out that the existing PHC’s [Primary Health Care] are functioning sub-optimally because of one or more of the following factors:

i) Inappropriate location, poor access lack of maintenance.
ii) Lack of professional and para professional staff at the critical posts.
iii) Mismatch between the requirement and availability of health professionals especially physicians at PHC.
iv) Lack of funds for essential drugs /diagnostics
v) Lack of first Referral units (FRU’s) for linkage of referral services.

**Approach during the Ninth Plan:**

The Ninth Five Year Plan envisaged the following approach towards the health care in India. The approach during the Ninth Plan will be:

(1) An absolute and total commitment to improve access to and enhance the quality of primary health care in urban and
rural areas by providing an optimally functioning primary health care system as a part of the Basic Minimum services.

(2) To improve the efficiency of existing health care infrastructure at primary, secondary and tertiary care settings through appropriate institutional strengthening improvement of referral linkages and operationalisation of health management Information systems (HMIS).

(3) To promote the development of human resources for health, adequate in quality and appropriate in quality so that access to essential health care services is available to all.

(4) To improve the effectiveness of existing programmes for control of communicable diseases to achieve horizontal integration of ongoing vertical programmes at the district and below the district level;

(5) To develop and implement integrated non-communicable disease prevention and control program within the existing health care infrastructure.

(6) To undertake screening for common nutritional deficiencies especially in vulnerable groups and initiate appropriate remedial measures.

(7) To strengthen programmes for prevention, detection and management of health consequences of the continuing deterioration of the ecosystem.

(8) To improve the safety of the work environment and workers health in organised and un-organised industrial and agricultural sector especially among vulnerable groups of the population.
(9) To develop capabilities at all levels for emergency and disaster prevention and management
(10) To ensure effective implementation of the provisions for food and drug safety.
(11) To increase the involvement of ISM & H practitioners in meeting the health care needs of the population.
(12) To enhance the research capability.
(13) To increase the involvement of voluntary private organisations and self-help groups in the provision of health care.
(14) To enable the Panchayat Raj Institutions (PRI) in planning and monitoring health programmes at the local level

It was decided to give highest priority for the access to primary health care and safe drinking water under the Basic Minimum Services Programme in the conference of the Chief Ministers held in July 1996.

Table 5.2 show the pattern of investment under Five Year Plans by the Government of India. Under the First Five Year Plan the total investment for health and family welfare was Rs. 65.30 crores which was 3.33% of the total plan outlay. In the Second Plan the Health outlay increased Rs. 143 crores which was 3.06% of the total plan investment. During the Third Five Year Plan the plan outlay increased to Rs. 260.06 crores which was 3.04% of the total outlay. It means the plan outlay for health and family welfare remained same for the First Three Five Year Plans. However it marginally increased to 4.73% i.e. Rs. 313.40 during the Annual
Plan period. The total outlay for health and family welfare increased to 6.84% i.e. Rs. 1078.80 crores in the Fourth Five Year Plan.

Table 5.2: Investment in plan periods (Rs. Crs)

<table>
<thead>
<tr>
<th>Period</th>
<th>Total plan investment</th>
<th>Health</th>
<th>Family welfare</th>
<th>Water supply &amp; sanitation</th>
<th>Total</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1951-56)</td>
<td>1960.00</td>
<td>65.20</td>
<td>0.1</td>
<td>N.A.</td>
<td>65.30</td>
<td>3.33</td>
</tr>
<tr>
<td>2nd [1956-61]</td>
<td>4672.00</td>
<td>140.80</td>
<td>2.20</td>
<td>N.A.</td>
<td>143.00</td>
<td>3.06</td>
</tr>
<tr>
<td>3rd [1961-66]</td>
<td>8576.00</td>
<td>225.00</td>
<td>24.90</td>
<td>10.70</td>
<td>260.06</td>
<td>3.04</td>
</tr>
<tr>
<td>Annual Plans</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1966-69]</td>
<td>6625.40</td>
<td>140.20</td>
<td>70.50</td>
<td>102.70</td>
<td>313.40</td>
<td>4.73</td>
</tr>
<tr>
<td>4th [1969-74]</td>
<td>15778.80</td>
<td>335.50</td>
<td>284.40</td>
<td>458.90</td>
<td>1078.80</td>
<td>6.84</td>
</tr>
<tr>
<td>5th [1974-79]</td>
<td>39332.00</td>
<td>682.00</td>
<td>497.40</td>
<td>91.00</td>
<td>2150.40</td>
<td>5.47</td>
</tr>
<tr>
<td>1979-80 outlay</td>
<td>11650.00</td>
<td>268.00</td>
<td>116.20</td>
<td>429.50</td>
<td>813.90</td>
<td>6.99</td>
</tr>
<tr>
<td>6th [1980-85]</td>
<td>97500.00</td>
<td>1821.05</td>
<td>1010.00</td>
<td>3922.02</td>
<td>6753.07</td>
<td>6.93</td>
</tr>
<tr>
<td>7th [1985-90]</td>
<td>180000.00</td>
<td>3342.89</td>
<td>3256.26</td>
<td>6522.47</td>
<td>13171.62</td>
<td>7.32</td>
</tr>
<tr>
<td>Annual Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1990-91]</td>
<td>61515.10</td>
<td>960.90</td>
<td>784.90</td>
<td>1876.80</td>
<td>3522.60</td>
<td>5.89</td>
</tr>
<tr>
<td>Annual Plan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>[1991-92]</td>
<td>72316.80</td>
<td>1185.50</td>
<td>749.00</td>
<td>2514.40</td>
<td>4448.90</td>
<td>6.15</td>
</tr>
<tr>
<td>8th [1992-97]</td>
<td>798000.00</td>
<td>7575.92</td>
<td>6500.00</td>
<td>16711.03</td>
<td>30786.95</td>
<td>3.86</td>
</tr>
<tr>
<td>9th [1997-2002]</td>
<td>859200.00</td>
<td>5384.54</td>
<td>15120.20</td>
<td>-</td>
<td>20504.74</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Ninth Five Year Plan Document

Though the volume of expenditure increased in 1991-92, to as high as an expenditure i.e. Rs. 4448.90 (6.15%), it almost remained same. It further decreased to 3.86% in the Eighth Five Year Plan. In the Ninth Five Year Plan Rs. 20504.74 crores were allocated for the health and family welfare which was 2.39% of the total outlay. The trend in the expenditure pattern by the Government of India clearly
is towards decrease. It is result of pressure by the international donor institutions to reduce the public expenditure on public health and family welfare.

Table 5.3 show the achievements of health and family welfare programmes under various Five Year Plans. By the end of the

Table 5.3 : Achievements of Health and Family Welfare Programmes during the Plan Periods:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>PHC's</td>
<td>725</td>
<td>11,000</td>
<td>21854</td>
</tr>
<tr>
<td>2.</td>
<td>Sub Centres</td>
<td>NA</td>
<td>83,000</td>
<td>123730</td>
</tr>
<tr>
<td>3.</td>
<td>Total Beds</td>
<td>125,000</td>
<td>514,989</td>
<td>892738</td>
</tr>
<tr>
<td>4.</td>
<td>Medical colleges</td>
<td>42</td>
<td>106</td>
<td>146</td>
</tr>
<tr>
<td>5.</td>
<td>Allopathic Doctors</td>
<td>65,000</td>
<td>297,228</td>
<td>410800</td>
</tr>
<tr>
<td>6.</td>
<td>Nurses</td>
<td>18,500</td>
<td>164,421</td>
<td>449351</td>
</tr>
<tr>
<td>7.</td>
<td>ANM's</td>
<td>12780</td>
<td>85630</td>
<td>203451</td>
</tr>
<tr>
<td>8.</td>
<td>Health Visitors</td>
<td>578</td>
<td>13,612</td>
<td>22144</td>
</tr>
<tr>
<td>9.</td>
<td>Health Workers (Female)</td>
<td>-</td>
<td>80,000</td>
<td>12468</td>
</tr>
<tr>
<td>10.</td>
<td>Health Workers (Male)</td>
<td>-</td>
<td>80,000</td>
<td>63871</td>
</tr>
<tr>
<td>11.</td>
<td>Village Health Guides</td>
<td>-</td>
<td>372,190</td>
<td>410904</td>
</tr>
</tbody>
</table>

Eighth Five Year Plan the number of PHC's increased to 21854 which was just 725 during the First Five Year Plan. The number of beds in hospitals increased to 892738 by the end Eighth Plan period. The number of Medical colleges increased to 146 from 42. Similarly the number of Nurses, ANM's, Health Visitors, Male Health Workers, Female Health Workers and Village Health Guides increased tremendously.

**National Health Programmes**

A number of 'National Health Programmes" have been launched by the Central Government for the control / eradication of communicable diseases, environmental sanitation, raising the standard of nutrition, control of population and improving rural health. Various international agencies like W.H.O., UNICEF, UNFPA, World Bank as also a number of foreign agencies like SIDA, DANIDA, NORAD and USAID have been providing technical and material assistance in the implementation of these programmes. Some of these programmes are:

1. National Malaria Eradication Programme - 1953
4. National Tuberculosis Programme – 1962
5. Revised Tuberculosis Control Programme – 1992
6. Diarrhoeal Diseases Control Programme Sixth Plan
9. Guinea Worm Eradication Programme 1983-84
10. Reproductive and Child Health Programme
(11) National Surveillance Programme for Communicable Diseases 1997-98
(12) National Programme on Control and Treatment of Occupational Diseases
(13) National Programme for Control of Blindness – 1976
(14) National Iodine Deficiency Control Programme 1962
(15) National Mental Health Programme 1982 – 7th Plan
(16) National Cancer Control Programme 1975
(17) National Diabetes Control Programme
(18) National Cardiovascular Diseases Control Programme
(19) Oral Health Project 1995
(20) National Emergency Preparedness Plan - Disaster Management
(21) India Population Project
(22) Basic Minimum Services Programme
(23) National Water and Sanitation Programme 1954
(24) Other Vector Borne Diseases Control Programmes are:
   a) Kala Azar Control Programme
   b) Japanese Encephalitis Control Programmes
   c) Dengue
(25) Nutritional Programmes are:
   a) Integrated Child Development Services Scheme – 1975
   b) Programme Against Micronutrient Malnutrition 1995
   a) Midday Meal Programme 1962-63
   c) Special Nutrition Programme 1970-71
   d) Balwadi Nutrition Programme 1970-71
   e) Wheat Based Supplement Nutrition Programme 1986
   f) Applied Nutrition Programme 1936
g) Tamil Nadu Integrated Nutrition Programme 1980
h) National Nutritional Anemia Prophylaxis Programme - 1970
i) National Programme for Prophylaxis against Blindness in Children due to Vitamin – A deficiency –1976
j) World Food Programme.

There is some consensus today that these programmes are cost effective only for diseases that are eradicable, but should not be permanent features of health care [EPW 2002]

**Phase Three: National Health Policy of Government of India 2001**

The Third Phase of the Health Policy of the Government of India begins with the declaration of the National Health Policy in 2001. The policy speaks of : 1) Integration of vertical health programmes 2) Strengthening health infrastructure. 3) Promotion of public health as a discipline 4) Filling the gap of availability of doctors by introducing short term training for basic services. 5) Decentralisation of health care delivery through panchayat raj and autonomous monitoring institutions. 6) Setting up of National Disease Surveillance Systems as well as a National Accounting System. 7) Strengthening ethical practices. 8) Regulation of Private Practice by the Government Doctors. 9) There will be increase in central investment upto 25 % from the 20% of the total health expenditure. 10) Envisaged the "kick starting of the revival of primary health care system by providing some essential drugs under Central Government funding through the decentralized
system." Need for establishing a reliable data system for disease surveillance.

The National Health Policy Declaration of 2001 has been criticized on number of accounts: 1) The Draft thinks of handling over medical care to the private sector without first streamlining and standardizing the private sector. 2) It thinks of commercialization of tertiary and secondary care to earn foreign exchange without first ensuring the secondary and tertiary care to the underprivileged. 3) The Draft does not mention the importance of food availability, under nutrition, drinking water supply sanitation etc. 4) The policy document talks neither of explicit measures nor of institutional mechanisms for monitoring and regulation of the private sector. 5) It makes no mention of the control of private sector 6) Integration of services does not touch the major programmes such as those for tuberculosis, AIDS and malaria control where the major chunk of resources continues to be invested. And the hope that these diseases can be controlled through the present vertical strategies is misplaced and ill supported by the available evidence. [Chakraborty 2001, Ritu Priya 1994, WHO 1997] 7) The draft mentions about the extension of public health services through licentiate medical practitioners and entrusting some limited health functions to nurse or to the other personnel of the extended health sector after importing adequate training to them. It simply shows the state's inefficiency in the rational distribution of health manpower. The use of part time doctors already shows that these consultants cannot have a long term commitment to the goals of the health infrastructure.
The Central Government announced a scheme of providing health insurance in rural areas through Life Insurance and General Insurance Corporations. Under this scheme an individual can accept to receive indoor treatment of upto Rs. 30,000/- per year at selected hospitals. Which means the Government will be subsidizing medicare provided by the private institutions. Instead of this measure the Government would have better spent in investing in the primary health care system.

5.2 Health Policies and Programmes in Karnataka:

The erstwhile Mysore State, was a pioneering state in providing and increasing comprehensive public health services. Even before the Government of India conceived the idea of establishment of primary Health units, to provide comprehensive health services in rural areas.

There were 4 hospitals and 24 dispensaries in the state under the British administration which were handed over to the Government of Mysore state in 1884. A senior surgeon was appointed to head the medical department. Preventive measure to control the incidence of disease was recognised for the first time in the state in 1887, when public health section surgeon was redesignated as Senior Surgeon cum Office Sanitary Commissioner.

In 1907, the Public Health section was expanded and strengthened with the creation of additional posts of (a) Deputy sanitary commissioner (b) Divisional Health Officer and (c) Health Officers in local bodies. In 1917, with a view to improve public health services, the Department was bifurcated into (a) Medical
Department headed by senior surgeon and (b) Sanitary Department headed by sanitary commissioner. However, for a short period these department were amalgamated.

Independent Public Health Department was established in 1929 under the control of a full time Director of Public Health to enable him to give undivided attention to the public health programmes in the state. In the same year, a board of health was created to act as an Advisory body of Public Health matters. Public Health department was concerned with control of communicable diseases, immunization supply of potable water to towns and villages, proper disposal of sewerage and development of sanitary consciousness among the people through health education. In the same year a Health unit was created to provide comprehensive medical facilities to public in the state.

In 1936, a Health Training cum Demonstration Centre was established in Ramanagaram with the financial and technical assistance from Rock Felter Foundation of U.S.A., Malaria control through D.D.T. spraying was instituted in 1946 and subsequently in 1948, a Malaria Training –cum –Investigation centre was established in Mandya. After 1953, Malaria control programme was managed by the National Malaria Control Programme.

In 1956, with the formation of Mysore state, the Medical Department of different regions viz, Coorg, Mysore, Madras State, Bombay State and Hyderabad State were brought under a single administration called Department of Health and Family Planning services. In 1977, the Directorate of Health and Family Welfare Services was established [Kamble N.D. 1984].
The main objectives of health programmes during the first four Five Year Plans were (1) control / eradication of major communicable diseases (2) provision of curative, preventive and promotional health services (3) augmentation of training programmes of medical and paramedical personnel. (4) strengthening the primary health centre complex for undertaking preventive and curative health services in rural areas.

During the First, Second & Third Year Plans many national programmes were undertaken in Karnataka. Simultaneously a number of infrastructure building activities were carried out. In the second Five Year Plan, two Medical Colleges were taken over by the government. One more medical college at Hubli and a Dental college at Bangalore were started. Impetus was also given to the Indian System of Medicines. The Tuberculosis control programme was launched in the state. In the Third Five Year Plan another Medical College was started at Bellary. National Filaria control programme, school health programme were started. Two regional family planning training centers were started at Hubli and Ramanagaram. The State Family Planning Board was started in 1957 along with the establishment of Bureau of Nutrition.

During the Annual Plans Period of 1966-67 to 1968-69, the expansion the existing hospitals, establishing PHC's, Leprosy clinics, Family Planning centers, providing more hospital beds, appointment of doctors and nurses was undertaken. The training of Medical Paramedical and technicians was done. The number of Medical Colleges increased to 11.
During the Fourth Five Year Plan the Rural India Health Project (RIHP) - a joint Indo-American venture was started to establish hospital in rural Karnataka. The National Small Pox Eradication Programme was started in all Districts of the state.

In the Fifth Five Year Plan the government made efforts to provide minimum public health facilities integrated with family welfare and nutrition for vulnerable groups and children, expectant and nursing mothers. The following were the other objectives of the plan: 1) increasing the accessibility of health services to rural areas 2) to provide basic minimum health facilities to increased population 3) to upgrade taluka level institutions 4) to restructure the existing institutions and make them functionally viable units 5) to improve the quality of medical services rendered at the taluka and district level institutions 6) to intensify control and eradication of communicable diseases especially small pox, malaria and leprosy. 7) qualitative improvement in education and training of health personnel and 8) to develop referral services by providing specialists' attention to common diseases in rural areas.

In the same period supplementary feeding programme was initiated with the assistance of CARE. Hospital Pharmacies were started in Bangalore, Mysore, Bellary, Hubli, Mangalore, Davengere Gulbarga, Shimoga and Belgaum. The following Medical institutions were started in 1972: 1) Cornea Grafting centre in Bangalore at Minto Hospital 2) Institute of Cardiology at Bangalore 3) Venkateshwar Institute of ENT and 4) National Institute of Mental Health and Neuro Sciences at Bangalore. The India Population Project (IPP) was implemented in the 5 Districts of
Bangalore division namely Bangalore, Chitradurga, Kolar, Tumkur and Shimoga. In 1972 a separate department was established for the Indian System of Medicines.

During the Sixth Five Year Plan the following were the broad objectives of health policy and programmes in Karnataka: 1) to provide better health care and medical care services to the rural areas and poor people. 2) to provide basic minimum health facilities to increased population 3) to improve the quality of medical education 4) to enforce the surveillance and control measures over communicable diseases 5) to provide protective and nutritional measures to large number of children 6) to further the development of the Drugs Control Organisation and 7) completion of spill over works of PHC's and sub centers.

During the Seventh Five Year Plan the IPP – III programme was started in districts of Bidar, Gulbarga, Richur, Bijapur, Belguam and Dhrawad. The aim of the IPP-III project was to construct buildings of different categories apart from maintenance of staff and other connected activities, furniture, equipments, training of staff and population education.

According to Karnataka Panchayat Raj Act of 1993, Zilla Panchayats are to look after the management of hospitals and dispensaries excluding district hospitals and hospitals under direct government management (those with more than 50 beds) and the implemention of maternity and child health, family welfare and immunization programmes. Apart from operating the district sector budget, Zilla Panchayats also implement state sector schemes entrusted to them by the government. Taluka Panchayats look after
health and family welfare programmes and promote immunization and vaccination programmes; they also supervise health and sanitation facilities at village fairs and festivals. Gram Panchayats deal with family welfare programmes, preventive measures against epidemics, regulation of the sale of food articles, participation in immunization programmes, licensing of eating establishments and the regulation of offensive and dangerous trades. [GOK : The Karnataka Panchayat Raj Act – 1993]

The IPP-VIII Project was implemented in the slums of Bangalore city since 1993-94 with World Bank assistance. The IPP – IX project was implemented in 13 districts of Karnataka in 1994. The main objectives were to reduce the crude birth and death rates as well as the infant and maternal mortality rates and increase the couple protection rate. The Karnataka Health Systems development project (KHSDP) was implemented over a five year period from 1996-2001. The main objectives were the improvement in the performance and quality of health care services at the sub district and district levels, narrowing coverage gaps and improving efficiency. The Kreditanstalt fur Wiederaufbau(KfW) of Germany is financially assisting a KHSDP project in the 4 districts of Gulbarga division since 1998. The earlier programme of Child Survival and Safe Mother hood was expanded and renamed as The Reproductive and Child Health Services Project to be implemented from 1997-98 to 2002-03.

5.3 The Task Force on Health and Family Welfare.

Karnataka Government constituted a Task force on Health and Family welfare in 1999 under the chairmanship of Dr. H.
Sudarshan, to write a report on the status of health in Karnataka and the health care delivery system. The Task force was expected to address; a) public health concerns b) management of the department of H& F.W. c) medical and public health education systems and d) proposals for stabilization of the population.

The report extensively reviewed the subjects like health care research, quality of care standards raising awareness for public health in the population women & children's health, biohazards waste disposal, panchayat governace systems and Indian systems of Medical and Homeopathy.

Absence of public health emphasis in the Health Department, whether in orientation of health care programmes, staff training or any other aspect of department function.

5.3.1. Findings of Task force:

The Task Force identifies several opportunities to maximize the health care programmes. The major findings of the Task Force are : 1) PHC's do not function or not equippedl, at optimum levels. Updates to technology at primary care centres are very slow. 2) declining expenditures for preventive and promotive health such as nutrition, immunization, antenatal care, etc over the last few years. 3) 78% of total health spending is in the private sector which is mostly borne by and individual / families, and 82% goes towards primary health care. 4) The community involvement in the delivery of primary health care is passive and ad hoc. 5) There does not exist a coordinated, comprehensive data collection and analysis system today for disease surveillance. Data is collected from
various sources, there is no standardization of the data being analyzed. When data is collected at the Department's delivery sites, it is used for statistical purpose at the state level and not as an active tool for disease intervention at the local level. 6) Political leaders missing a broad vision of health leadership is not problem solving oriented. Budgets tend to be stagnant or underutilised and the Department is found to engage in non-evidence based planning, administration, supervision and evaluation of the health care system. 7) The corruption exists in the Department all stages. Department hospitals have been found to charge patients a monetary sum for services or equipment that are to be provided free of cost.Physic practicing at a PHC are regularly absent during office hours and they embark on private practice in contradiction to the terms of their service with the Department. There appears to be corruption even in staff transfer. 8) Lack of administrative transparency. Several procedures in the Department are not open to public and department review. The budget planning process and the rationale for assigning budget priorities is unclear. The information regarding priorities has to be inferred from the previous fiscal date. 9) Intersectoral co-operation with other departments is negligible, while co-ordination among divisions within the same department is wanting. 10) There is general apathy among workers in the health care system. Officers who have vested with power of autonomy, are unwilling to exercise. They are willing to be more cautious and wait for direction from superiors in the department for fear of reprisal. 11) Lack of administrative data hinders the efficient functioning of the Department. "There is unfortunately no complete information on the various institutions
within the Department from the subcenters, PHC's CHC and upwards. There is no consistency in the figures reported on posts vacancies, equipment available and the condition of the equipment and the like[p-284Report]. 12) Transport is one of the access barrier in availing the referral services. 13) The health care delivery site face persistent problems of inadequate staff and vacant posts. 14) The secondary and tertiary care centres face the problems of mismatch between needs and available services/resources. Emergency services at all levels are compromised due to lack of dedicated ambulances. 15) The present Medical Education system emphasizes clinical, secondary or tertiary care. Community Health services training is not provided at all or if provided is clearly inadequate.

5.3.2 Task Force's Recommendations.

To improve the health care system in the state the Task Force has made the following recommendations.

(i) The Department of commission of Health must actively collaborate with other departments to address health issues in a comprehensive manner.

(ii) Staff vacancies be filled immediately

(iii) Necessary equipment for laboratories and for PHC's be purchased.

(iv) Co-ordination between the vertical programmes like RCH, TB, Blindness, etc. A programme co-ordinator at the Dist. Level,

(v) Efforts be made to involve non Government practitioners, local dealers and voluntary agencies.
(vi) School health education to being about changes in health behaviour.

(vii) A separate unit for disease surveillance, at the District level – data be collected not only from Government sites but also from non Government Health care providers.

(viii) A microbiology laboratory be established in each district for etiological confirmation of diseases and central Public Health Laboratory as a reference lab.

(ix) Re-organisation of the Department – development of a strong dept with focussed objectives and empowered staff. The Development is divided into District Cadre Staff and State level employees. More administrative powers to Zilla Parishads over the District Cadre Staff.

(x) Formation of a local services recruitment board is recommended.

(xi) The Department is divided into a Medical stream and a public Health stream and a Public Health stream to address neglect of Public Health. While the former will be responsible for acute clinical care at the individual level, the latter will be concerned with disease & disease patterns in the population as a whole and developing stops to address it. A cell to monitor NGO activities and monitor incentives (high) to staff working in remote areas.

(xii) A lady medical officer at each PHC

(xiii) One urban PHC for every 50,000 population

(xiv) Consolidation of all existing resources such as health centres, urban families welfare centres and maternity homes.
(xv) There should be Health Management Information System (HMIS) as an effective monitoring tool to assess the performance of the system and which provides for informed planning and decision.”

Task Force members concede that implementations of its recommendations is no easy task given the constraints of time financial, personal resources and political will. However the Health Department has accepted and implemented several interim recommendations made by the task force indicating an imperative political will and a receptive management environment for improvements [M. A. Deepa 2001]

The task force while identifying several opportunities to maximise the health care programmes does not takes into account the intersectoral co-operation and co-ordination.

The Task force says 'Medical expenditure accounts for the "second highest cause of rural indebtedness [p. 393 Report]. If found to be true, is it showing the failure of the Department's health care delivery system to meet primary health needs of the population? The Task Force does not include the members of the Panchayat Raj Institutes (PRI) in the proposed Health Commission.
5.4 Conclusion:

The pre Independence health policy of India had the following main features. Firstly, it were the British who introduced the Western Medicine in India during the mid 18th century. The British established the cantonments for the rulers and their army, where sanitary practices were adopted on modern lines. Secondly, with the advent of the British and the Western medicine in India, the indigenous medicine system had lost the favour of the Indian elite. On the eve of Independence, medical services were scattered and inadequate. The Indian National Congress had appointed the National Planning Committee which in turn appointed Sokhey Committee on national health. However it was the Bhore Committee of 1943 which laid down the guiding principles for the health policy of India even after Independence.

Health Planning has become an integral part of national planning in India. As per the recommendations of the Bhore Committee, the office of the Director General of Health Services was established in the country in 1947. Simultaneously the Directorates of Health were established in the states as well. In 1948, India joined the W.H.O. which ensured the free flow of information, initiation of programmes, exchange of personnel and so on. The Mudaliar Committee recommended the strengthening of PHC's and Hospitals at the district and lower levels. Other Committees headed by Chada (1963), Mukherjee (1965), Jungalwalla (1967), Kartar Singh (1973) and Srivastava (1975) examined various aspects of health delivery system in India and
recommended number of measures to improve the efficiency of the system.

The Alma Ata declaration in 1978 and the formulation of National Health Policy in 1983 gave a new direction to the health policy and planning in India, making primary health care the central function and main focus of the national health system. The goal was to attain Health for All by 2000 A.D. The Alma Ata international conference reaffirmed "health for all" as the major social goal and this was to be achieved by providing primary health care at the door steps of the people. This conference called upon the Governments to formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a national health system. It was left to each country to develop its norms and indicators for providing primary health care to suit the needs and resources. In pursuance of the above objective two important reports were prepared: 1) "Health for All – An Alternative Strategy" sponsored by the ICSSR and ICMR (1981); and 2) "Health for All by 2000 A.D." - a report of the Working Group (1981). Both the reports considered the various issues involved in providing primary health care, and based on these reports, a national health policy was formulated by the Parliament in 1983.

The policy aimed to attain the goal of "Health for All by 2000 A.D." emphasized on the preventive, promotive, public health and rehabilitative aspects of health care. The policy viewed health and human development as a vital component of overall integrated socio economic development and it proposed a decentralized system of health care delivery with maximum community participation. To
achieve this, the health policy laid down certain specific goals to be achieved by 1985, 1990 and 2000 A.D. The recent draft National Health Policy (2001) recognises the fact that despite all that may be guaranteed by the Central Government for assisting public health programmes, public health services would actually need to be delivered by the state administration.

Health administration in the erstwhile state of Mysore was well ahead of its neighboring provinces. There was a medical school to train Hospital Assistants. In 1929 the Board of Health was appointed to advise the Government on public health matters. Mysore state was first in the country to establish Rural Health Centers in 1931. These centers worked for the improvement of village sanitation, investigation and control of the outbreak of epidemic diseases, immunisation services, chlorination of drinking water sources and reporting of births and deaths. Mysore was the first state to establish the official 'family planning clinic' in the whole of the world in 1930. After the reorganisation of the state in 1956 the medical department and public health department were amalgamated into a single department – The Department of Health Services.

The main objectives of the health programmes under various five year plans in Karnataka were: Control/eradication of major communicable diseases, provision of curative, preventive and promotional health services, augmentation of training programmes of medical and paramedical personnel and strengthening the PCH's in the rural areas. Many national programmes were undertaken in the state along with the building of health infrastructure. Various
India Population Projects I – IX have been implemented which mainly emphasized the building up of health infrastructure in various districts of Karnataka in a phase manner. To improve the quality of health care services the Karnataka Health Systems Development Project (KHSDP) was implemented at sub district and district levels. The Karnataka Panchayat Raj Act of 1993 has delegated the powers of implementing the state sector schemes, national programmes, to Zilla Panchayats. The Task Force (1999) appointed by Government of Karnataka reviewed the various aspects of health care system in the state and also made recommendations for the better working of the system. The Task Force findings corroborate the findings of the present study regarding the utilization of health care services and household health expenditure in rural areas.
References:


Walsh J. A. and Warren K. S. [1979]: Selective Primary Care: An Interim Strategy for Disease Control for Development countries' New England Journal of Medicine' 301:


[1983]: Statement on National Health Policy


[1963]: Report of the Special Committee on the preparation for entry of the NMEP into the Maintenance Phase, Ministry of Health.


Indian Institute of Education, Pune.


