1. **Introduction**

"Expenditure of money and effort on improving the nation’s health is a gilt-edged investment which will yield not deferred dividends to be collected years later, but immediate and steady returns in substantially increased productive capacity. We need no further justification for attempting to evolve a comprehensive plan which must inevitably cover a very wide field and necessarily entail large expenditure, if it is to take into account all the more important factors which got the building up of a healthy, virile and dynamic people". – Sir Joseph Bhore.

“The Health for All” programme was pronounced through the Declaration of Alma Ata in 1978. In part, the Declaration said "…that health is a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity; that health is a fundamental human right; and that the attainment of the highest possible level of health is a most important worldwide social goal".

The Declaration of Alma Ata went on to say: "Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures…"

Maharashtra is a progressive state known for its social reform movements begun by Jyotiba Phule in 1873 to the present day initiatives of decentralized governance and free education for girls. Maharashtra ranks third in terms of area and demography.

**Maharashtra State Topology**

The state consists of 37 districts, 358 blocks and 43,711 villages. The population density is 314 per sq. km. (National average 312 per sq. km.). The decadal growth rate of the state is 22.73% (against 21.54% for the country) and the population of the state continues to grow at a much faster rate than the national rate. Maharashtra is endowed with rivers like the Godavari, the Bhima, the Krishna, the Wardha etc.

**Public Healthcare System.**

Public healthcare system consists of:

1) Primary, secondary and tertiary care institutions
2) Medical colleges and professional training institutions
3) Programme managers managing on-going programmes at central, state and district levels.
4) Health management information system

The public health care system of Maharashtra is plagued by number of inadequacies in spite of huge web of primary, secondary and tertiary institutions. Some of the inadequacies are listed below.

1. There are no referral linkages between the 3-tier system of primary, secondary and tertiary care institutions in the same locality.
2. Institutions in this 3-tier system need to be linked.
3. Like most states Maharashtra has no proper Health Management Information System (HMIS) due to which current status of supply and availability of resources cannot be known.

**History of Primary Health Centre.**

Major milestones in evolution of Primary Health Care in India:

<table>
<thead>
<tr>
<th>Year</th>
<th>Detail</th>
</tr>
</thead>
<tbody>
<tr>
<td>1946</td>
<td>Bhore Committee Report on Health Survey and Development</td>
</tr>
<tr>
<td>1952</td>
<td>Community Development Programme</td>
</tr>
<tr>
<td>1962</td>
<td>Mudaliar Committee Report on Health Survey and Planning</td>
</tr>
<tr>
<td>1963</td>
<td>Chadha Committee on National Malaria Eradication Programme.</td>
</tr>
<tr>
<td>1965</td>
<td>Mukherjee Committee for Family Planning.</td>
</tr>
<tr>
<td>1966</td>
<td>Mukherjee Committee for maintaining multiple activities of the mass programmes like family planning, small pox, leprosy, trachoma, NMEP (maintenance phase), etc.</td>
</tr>
<tr>
<td>1975</td>
<td>Shrivastav Committee Report on Medical Education and Support Manpower</td>
</tr>
<tr>
<td>1977</td>
<td>Rural Health Scheme: Community Health Volunteer Scheme – Village Health Guides.</td>
</tr>
</tbody>
</table>

**Recommendations of the committees and policy implications:**

1) **Bhore Committee:** Health care in any nation requires a comprehensive health care programme which should cover preventive and curative aspects. Short term development programme was proposed which includes one primary health centre for a population of 40,000. Each PHC should have 2 doctors, one nurse, four public health nurses, four midwives, four trained dais, two sanitary inspectors, two health assistants, one pharmacist and fifteen other class IV employees. Secondary health
centre was also visualised by Bhore Committee to support the PHC. A long-term programme consisted of setting up of primary health units with 75 – bedded hospitals for each 10,000 to 20,000 population and secondary units with 650 – bedded hospital, district hospitals with 2500 beds. The committee proposed three months’ training to carve a “social physician” who would not only provide medical and clinical assistance but also humane touch to their treatment. Free medical assistance should be provided to all those who can not afford to pay for health care services.

II) Mudaliar Committee: It was appointed to assess the recommendations of Bhore Committee and to suggest the action plan to implement the same. It recommended that Primary Health Centre should provide with all three public health care services namely curative, preventive and promotive services. Each Primary Health Centre would cater to population of 40,000 as suggested by Bhore Committee. It also suggested that one health worker should be appointed for every 10,000 persons. ‘All India Health Service’ body should replace the earlier ‘Indian Medical Service’. The Committee felt that existing Private Health Centres should be improved before new ones were opened.

III) Jungalwala Committee: It was known as the ‘Committee on Integration of Health Services’. The committee recommended comprehensive approach for health services rather that specific approach. The committee strongly felt that medical care and public health programmes should be under the supervision of a single administrator. The steps recommended for the integration health care services at all levels of health organisation in the country were common seniority, unified cadre, recognition of extra qualifications, equal pay for equal work, special pay for special work, restriction on private practice by government doctors and improvement in their service conditions.

IV) Kartar Singh Committee : It was known as ‘Committee on multipurpose workers under Health and Family Planning’ recommended that there should be one Primary Health Centre for a population of 50,000 and each Primary Health Centre should be divided into 16 sub centres covering a population of 3,000 -5,000. Each sub centre to have 1 male and one female health worker. A health assistant must supervise 3-4 health workers.

V) Shrivastava Committee: It was known as ‘Group on Medical Education and Support Manpower’. It recommended creation of bonds of paraprofessional and semi-professional health workers from the community itself, establishment of 3 cadres of health workers namely – multipurpose health workers and health assistants between
the community level workers and doctors at PHC. Development of a ‘Referral Services Complex’, establishment of a Medical and Health Education Commission for planning and implementing the reforms needed in health and medical education on the lines of University Grants Commission.

VI) Rural Health Scheme was introduced in 1977 following the report submitted by Shrivastava Committee. It looked into training of health workers, providing linkage of medical colleges to rural health program, re-orientation of multi-purpose workers and appointment of village health worker.

Healthcare in Maharashtra.

The following table gives Maharashtra’s rank for selected Health Care Infrastructure as compared to all states and Union Territories of India.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctor : Population Ratio</td>
<td>9</td>
</tr>
<tr>
<td>Nurse: Population Ratio</td>
<td>7</td>
</tr>
<tr>
<td>Govt. bed: Population Ratio</td>
<td>15</td>
</tr>
<tr>
<td>PHC: Population Ratio</td>
<td>18</td>
</tr>
<tr>
<td>Rural With Govt. Facility in Village</td>
<td>25</td>
</tr>
<tr>
<td>Rural With Private Doctor in Village</td>
<td>5</td>
</tr>
<tr>
<td>Rural With Anganwadi Worker in Village</td>
<td>3</td>
</tr>
<tr>
<td>Per Capita Public Health Expenditure</td>
<td>20</td>
</tr>
<tr>
<td>Health Expenditure as % of Govt. Expenditure</td>
<td>25</td>
</tr>
<tr>
<td>TB Prevalence</td>
<td>7</td>
</tr>
<tr>
<td>Malaria Prevalence</td>
<td>27</td>
</tr>
</tbody>
</table>

Source: 1. Health Information India 2005, CBHI, GoI, New Delhi 2006;
2. RCH DLH Survey 2002-2004, IIPS, GoI, Mumbai 2006

In respect of medical infrastructure Maharashtra topped the list amongst states such as Kerala, Punjab and Gujarat. It was the leader in terms of number of hospitals, hospital beds, doctors and nurses until the turn of the Millennium. However, in recent years, medical infrastructure in the public sector has slipped as is evident from the table.

<table>
<thead>
<tr>
<th>Type of Providers</th>
<th>Number Per Lakh Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Doctors – Allopathic (2000)*</td>
<td>72.5</td>
</tr>
<tr>
<td>All System Doctors (2000)*</td>
<td>167.6</td>
</tr>
<tr>
<td>Nurses (2000)</td>
<td>140.5</td>
</tr>
</tbody>
</table>

Source: Supplied by Directorate of Economics and Statistics, Government of Maharashtra, Mumbai. The rural-urban distribution for doctors and nurses in 2000 provided by respective medical councils, are calculated on the basis of the 1991 census distribution ratios.

* Data for 2004 from the respective medical councils show that Maharashtra had on its registers 90855 allopathic doctors and 83167 AYUSH doctors giving an overall ratio of 91 allopathic doctors and 174 doctors of all systems per lakh population.
According to the above table, the disparity in availability of doctors and nurses in rural to urban area is nearly 4 times. The availability of medical facilities in the urban areas is higher than those in the rural areas.

Although Maharashtra leads financially where per capita income is concerned, its per capita credit where investment is concerned is the highest, yet its population is plagued by malnourishment and declining sex ratio. Wide rural urban divide in health infrastructure and health care services are prominent, since 80% of beds in public hospitals are in urban areas. Similarly there is variation in health care access across districts of Maharashtra. Mumbai, Pune, Wardha, Nagpur have better health facility rather than Beed, Bhandara, Buldhana districts. Private health sector of Maharashtra is among the largest and the most sophisticated in the country but such institutions are located mostly in Mumbai. Such state-of-the-art hospitals are registered as trusts, non-profit organisations which are as good as any other private hospital in country, but they are beyond the means of the average Indian or the poor man who cannot afford the exorbitant fees charged by these private hospitals. Although it is obligatory for these private institutes to provide free health care services to 20 to 30 % of their patients they continue to ignore the poor due to the absence of proper monitoring of regulations. Moreover, although there is a well knit web of rural medical infrastructure, the Primary Health Centres and Sub Centres are not well equipped as more than 50 % of First Stage Referral Units and Community Health Centres did not have basic facilities such as the Boyle’s apparatus, oxygen cylinder, high pressure sterilizer, and ECG machine. Most of the first stage Referral Units lack separate aseptic room and are not even linked with blood banks. Majority of health care units do not have obstetrician & gynaecologist, paediatrician, pathologist, and anaesthesiologist. Most of the Primary Health Centres did not have laboratory technician and lady medical officers. Household surveys conducted by the National Sample Survey Organisation (NSSO 1992, NSSO 1995) show that the use of public health care facility is on decline.

**Health Indicator determinants.**

The components that govern the healthcare are its population (rural/Urban), age structure, birth rate, death rate, growth rate, infant mortality rate, maternal mortality rate, life expectancy, number of towns and villages and population structure, housing, environmental hygiene, water supply and drainage, morbidity and disease pattern, communicable diseases,
health education, health administration, technical manpower, per capita income, food and nutrition of the people.

**Health Indicators of Maharashtra:**

- The Fertility Rate in the State is 2.0.
- The Infant Mortality Rate is 33.
- Maternal Mortality Ratio is 130 (SRS 2004 - 2006) which is lower than the National average.
- The Sex Ratio in the State is 922 (as compared to 933 for the country).

Comparative figures of major health and demographic indicators are as follows.

**Table I: Demographic, Socio-economic and Health profile of Maharashtra State as compared to India figures**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Item</th>
<th>Maharashtra</th>
<th>India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Total population (Census 2001) (in million)</td>
<td>96.88</td>
<td>1028.61</td>
</tr>
<tr>
<td>2</td>
<td>Decadal Growth (Census 2001) (%)</td>
<td>22.73</td>
<td>21.54</td>
</tr>
<tr>
<td>3</td>
<td>Crude Birth Rate (SRS 2008)</td>
<td>17.9</td>
<td>22.8</td>
</tr>
<tr>
<td>4</td>
<td>Crude Death Rate (SRS 2008)</td>
<td>6.6</td>
<td>7.4</td>
</tr>
<tr>
<td>5</td>
<td>Total Fertility Rate (SRS 2008)</td>
<td>2.0</td>
<td>2.6</td>
</tr>
<tr>
<td>6</td>
<td>Infant Mortality Rate (SRS 2008)</td>
<td>33</td>
<td>53</td>
</tr>
<tr>
<td>7</td>
<td>Maternal Mortality Ratio (SRS 2004 - 2006)</td>
<td>130</td>
<td>254</td>
</tr>
<tr>
<td>8</td>
<td>Sex Ratio (Census 2001)</td>
<td>922</td>
<td>933</td>
</tr>
<tr>
<td>9</td>
<td>Population below Poverty line (%)</td>
<td>25.02</td>
<td>26.10</td>
</tr>
<tr>
<td>10</td>
<td>Schedule Caste population (in million)</td>
<td>9.88</td>
<td>166.64</td>
</tr>
<tr>
<td>11</td>
<td>Schedule Tribe population (in million)</td>
<td>8.58</td>
<td>84.33</td>
</tr>
<tr>
<td>12</td>
<td>Female Literacy Rate (Census 2001) (%)</td>
<td>67.0</td>
<td>53.7</td>
</tr>
</tbody>
</table>

**Table II: Health Infrastructure of Maharashtra.**

<table>
<thead>
<tr>
<th>Particulars</th>
<th>Required</th>
<th>In position</th>
<th>Shortfall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-centre</td>
<td>12153</td>
<td>10579</td>
<td>1574</td>
</tr>
<tr>
<td>Primary Health Centre</td>
<td>1984</td>
<td>1816</td>
<td>168</td>
</tr>
<tr>
<td>Community Health Centre</td>
<td>496</td>
<td>407</td>
<td>89</td>
</tr>
<tr>
<td>Multipurpose worker (Female)/ANM at Sub Centres &amp; PHCs</td>
<td>12395</td>
<td>12027</td>
<td>368</td>
</tr>
<tr>
<td>Health Worker (Male) MPW(M) at Sub Centres</td>
<td>10579</td>
<td>9956</td>
<td>623</td>
</tr>
</tbody>
</table>
Health Assistant (Female)/LHV at PHCs 1816 3323 -
Health Assistant (Male) at PHCs 1816 3182 -
Doctor at PHCs 1816 1191 625
Obstetricians & Gynaecologists at CHCs 407 143 264
Physicians at CHCs 407 41 366
Paediatricians at CHCs 407 99 308
Total specialists at CHCs 1628 352 1276
Radiographers 407 294 113
Pharmacist 2223 1976 247
Laboratory Technicians 2223 769 1454
Nurse/Midwife 4665 6150 -

The other Health Institution in the State is as follows:

<table>
<thead>
<tr>
<th>Health Institution</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medical College</td>
<td>39</td>
</tr>
<tr>
<td>District Hospitals</td>
<td>23</td>
</tr>
<tr>
<td>Referral Hospitals</td>
<td>--</td>
</tr>
<tr>
<td>City Family Welfare Centre</td>
<td>--</td>
</tr>
<tr>
<td>Rural Dispensaries</td>
<td>--</td>
</tr>
<tr>
<td>Ayurvedic Hospitals</td>
<td>55</td>
</tr>
<tr>
<td>Ayurvedic Dispensaries</td>
<td>469</td>
</tr>
<tr>
<td>Unani Hospitals</td>
<td>5</td>
</tr>
<tr>
<td>Unani Dispensaries</td>
<td>25</td>
</tr>
<tr>
<td>Homeopathic Hospitals</td>
<td>45</td>
</tr>
</tbody>
</table>

National Rural Health Mission (NRHM):

National Rural Health Mission was launched in 2005 as a resolve to provide health for all with following objectives.

1. Reach out to 18 states in India which have weak health infrastructure and have weak health indicators.
2. Increase in health expenditure from 0.9% of GDP to 2-3% of GDP.
3. Appointment of female health worker in rural area to improve health of women.
4. Decentralization of public health care service by involving Panchayats to prepare village plans.
5. Mainstreaming of Ayurvedic, Yoga, Unani, Siddha and Homeopathy Systems of Health (AYUSH).

6. Effective implementation of District plans for public health which covers the issues like sanitation, hygiene, nutrition, safe drinking water etc.

7. Addressing the inter-state and inter-district inequalities.

8. Making access to health affordable, equitable, accountable and effective that will ensure health for all.