DRAFT

GOVERNMENT OF KERALA

HEALTH POLICY KERALA

2013

Health & Family Welfare Department

Introduction

Kerala has achieved good health indictors compared to other Indian states. A prime reason for this has been the stewardship role that successive governments, before and after independence, have played. This has become even more important at a time when the state is facing the emergence and re-emergence of some of the communicable diseases along with problems resulting from the epidemiological and demographic transition. In order to navigate the sector through the multiple challenges faced in the health sector Government of Kerala needs to articulate the policy framework under which all the stakeholders can develop their strategies. This document is an attempt to address such a need.

1. Formulation of Health Policy documents in India an overview

National Development Committee (Sokey Committee) and Bhore Committee had developed a very broad and elaborate frame work for the Health policy for the country even before Independence. Successive Five year plans have been the guiding documents for national policy in India. Post independence Kerala has, by and large, followed the guidelines of the national government. The state went on to achieve most of the targets set out in these documents such as population stabilisation and control of communicable diseases through a network of institutions modelled on the national pattern, even though there were a few differences.

National level expert committee reports like ICMR/ICSSR committee report, Swaminathan Committee Report on Population Control, Commission on Macro economics and health and the recent HLEG reports are significant documents which have guided policy making in the health sector and influenced the health service system of the country. The national health policy 1983 was the first articulation of a policy document at the national level. Commencement of the National Rural Health Mission in 2005 resulted in substantial augmentation of resources and modification of implementation arrangements. The 12^{th} plan document sets a target of Universal Health Coverage before the government. Since Kerala is in a unique position to achieve the targets set out in the 12^{th} plan document it is important to develop a policy to guide our efforts in this direction.

2. Kerala Current Scenario

2.1 Kerala statistics

Sl.No.	Category	Numbers
1	Districts	14
2	Taluks	75
3	Panchayaths	978
4	Panchayath wards	16680
5	Blocks	152
6	Revenue Villages	1453
7	Towns	197
8	City Corporations	5
9	Corp. Wards	359
10	Municipalities	60
11	Municipal Wards	2216
12	Population (2011 Census Provisional)	
	Total	33387677
	Male	16021290
	Female	17366387
	Sex Ratio	1084
	Urban	7455506
	Rural	5932171
	Percentage of Population below Poverty line	
	Total	12.72
	Rural	9.38
	Urban	20.27
	Scheduled Caste Population (2001 Census)	
	Total	3123941
	Male	1525114
	Female	1598827
	Scheduled Tribe Population (2001 Census)	
	Total	364189
	Male	180169
	Female	184020
	Total 0 to 6 Populations (2011 Census)	
		3322247
	Male	1695935
	Female	1626312
	Sex Ratio (Child)	959
	Density of Population (2011 Census)	859/Km^2
	Literacy Rate (2011 Census)	93.91%
	Male	96.02%
	Female	91.98%

2.2 Health Financing

Even before independence the expenditure for health by the Maharajas of Travancore was significant. As early as in the 1860s the government of Travancore allotted a little over 1% of its total expenditure to health sector and the proportion increased to 2% by the close of the century. The unswerving governmental support for the welfare sectors till the mid 1980s served as a catalyst for the development of health services in Kerala. This was also reflected in the expansion of health infrastructure. During the periods between 1960s to mid 1980s the number of beds in public sector institutions increased from 13000 in 1960-61 to 36000 in 1986.

Health sector investments continued till the mid 1980s but thereafter the pace of growth of public health care system slowed. The shortage was made good by the private sector. The public health care expenditure (as a proportion of the gross state domestic product) decreased by 35% between 1990 and 2002, making Kerala one of the states with the highest reductions in public sector contributions and the highest increase in private funding for health care. The decline in public sector spending for health resulted in an overwhelming expansion of the private sector.

Budget allocation for Health under the Demand XVIII (M & P H) & XIX (FW)

(Rs. In Crore)

	State plan	**100 % CSS**	**50 % CSS**	**State Plan allocation for RCC**	**Total Allocation**
	Allocation	Allocation	Allocation	Allocation	
2007-08	105.09	155.35	.56	5.00	**266.00**
2008-09	154.42	55.99	.96	10.00	**221.37**
2009-10	166.28	156.40	1.23	15.65	**339.56**
2010-11	242.10	169.04	2.35	24.00	**437.49**
2011-12	297.45	176.24	3.10	25.00	**501.79**
2012-13	484.93.	299.94	1.00	36.00	**821.87**
2013-14	541.00	383.45	0.00	42.17	**966.62**

NRHM budget details

			(Rs. in Cores)
Year	Allocation	Expenditure	%
2005-06	34.45	3.90	11%
2006-07	80.60	17.64	21.9%
2007- 08	120.00	112.49	93.75%
2008-09	285.72	266.01	93.10%
2009-10	230.03	291.80	126.85%
2010-11	296.53	239.20	80.67-%
2011-12	285.25	194.81	68.29%
2012-13	450.74	386.06	85.65%

The Budget Outlay (Plan) provided for various Depts. Under Medical & Public Health sector during the 1st year (2012-13) and 2nd year (2013-14) of 12th Five Year Plan (2012-17) is as follows:

Sl. No.	Name of Dept.	2012-13		2013-14
		Budget Outlay	*% of expen diture*	Budget Outlay
1.	Health Services Dept. (including State Plan, 100% & 50% CSS)			
	2210-Medical & Public Health (including allocation by way of SDGs)	234.84	97	238.05
	2211-Family Welfare	291.89	76.37	370.34
2	Medical Education Dept.	205.67	85	226.65
3	Indian Systems of Medicine Dept.	16.65	96.38	23.30
4	Ayurveda Medical Education Dept.	17.60	49	23.00
5	Homoeopathy Dept.	17.21	50.9	18.95
6	Homoeo Medical Education Dept.	10.70	78.07	8.00
7	Drugs Controller Dept. (including addl. authorisation)	9.10	87	6.00
8	Commissioner of Food Safety	4.00	92	6.00
9	RCC	34.00	100	42.17

2.3 Social determinants of Health

2.3.1 Water supply: Even though Kerala gets over 3000 cm of rain in a year poor management reduces the state of near drought conditions in the period between January and May. With increased reclamation of wetlands and water bodies and persistent pollution of drinking water sources, water availability is likely to come under increased strain in future. Added to this is the failure to provide safe drinking water in hilly regions, coastal and water logged areas. Unless this is reversed and the state manages its environmental and water situation better we are likely to witness outbreaks of water borne diseases such as Cholera and Hepatitis A.

2.3.2 Sanitation; The availability of sanitary toilets has improved in most parts of the state except backward regions like coastal areas, hilly, tribal areas and urban slums. Problems of toilet construction in water logged areas and areas below sea level in Alappuzha district (Kuttanad areas) and the absence of appropriate models for areas with water scarcity are unresolved technological issues of this field. First generation sanitary toilets were without septic tanks (with ordinary pit)) contaminating the nearby drinking water sources including the wells. The increasing population density and the migrant situation further complicate this issue.

2.3.3 Solid and Liquid Waste management system: For last few years this is the most burning issue with administrative, ecological and public health dimensions. It is a major problem in Municipal corporations of Trivandrum, Ernakulam, Kozhikode and Thrissur. This is becoming a major threat to public health in urban areas and urban townships of the rural areas also. Accumulation of the plastic waste and the issue of thin plastic carry bags which is still being used even after repeated legal measures further complicate the scenario.

Ecological degradation and the contamination of the water bodies and ecosystem in general due to the unscientific use / misuse of pesticides pose a serious health hazard. Health problems due to occupational pollutants, asthma, allergy, chronic obstructive pulmonary diseases especially in the context of raising urbanisation and increase in the automobile use are other related issues to be addressed.

2.3.4. Climate change and Public Health.

The changing climate will inevitably affect the basic requirements for maintaining health, clean air and water, sufficient food and adequate shelter. Climate change also brings new challenges to the control of infectious diseases. Many of the major killers are highly climate sensitive as regards to temperature and rainfall, including cholera and the diarrheal diseases, as well as diseases including malaria, dengue and other infections carried by vectors. Also the issues of reductions and seasonal changes in the availability of fresh water, regional drops in food production, and rising sea levels etc has the potential to force population displacement with negative health impacts.

Climate Change is a new challenge for the control of infectious diseases and public health. It leads to change in pattern of infection, emergence / resurgence /of diseases like H1N1, H5N1, Malaria, Dengue, Chikungunia, Letospirosis. Similarly many diseases caused, transmitted or harbored by insects, snails and other cold-blooded animals can be affected by a change in climate eg. Lyme disease, Tick-borne encephalitis, Salmonella and other food borne infections. Kerala with a long coastal line and parts of Western Ghats covering almost all districts except Alappuzha is very much disaster prone. This necessitates the preparedness for managing all varieties of natural disasters.

2.3.5. Other social determinants of Health: As per WHO's report on social determinants of health and HLEG report of GOI other factors like food and nutrition, regular employment housing, women empowerment etc are very significant in achieving better health. As per the official figures 12.72 % of the population of Kerala is below poverty line. But studies have shown that relative poverty, more than absolute poverty, leads to poor health outcomes. There is an urgent need for addressing the issue of social determinants of health in a comprehensive and time bound manner .

2.4 Managing the emerging / re-emerging Communicable diseases;

Waterborne diseases like diarrhea diseases, Hepatitis, Typhoid fever and vector bone diseases like Dengue fever, Malaria , JE remain a major problem in Kerala. Leptospirosis which was a problem for few southern districts in the last decade has become a major communicable disease in the whole state and causing much morbidity and mortality throughout the year. These diseases follow a seasonal pattern. Outbreaks of waterborne diseases like diarrhoea cholera are always more in the monsoon season extending from May to August. Higher incidence of acute viral fevers along with diseases like Dengue, Chikungunia, leptospirosis, scrub typhus etc make this as the "season of epidemics". There is an apprehension that the presence of migrant labourers from different states might introduce/ reintroduce diseases that are not prevalent here. A high level of epidemiological surveillance and outbreak management has to be maintained in the state.

2.5 Non Communicable Diseases: In Kerala NCDs account for more than 50% of total deaths occurring in the age group between 30 and 60. With 27% of adult males and 19 % of adult females being diabetic, Kerala is considered to be the diabetic capital of India. The percentage of Hypertension, Cardiovascular diseases and Cancer is also very high in the community across all sections of the society. Yet there was no organized programme to combat these problems till 2010. NPCDCS (National Programme for Prevention of CVD, Diabetes, Cancer and Stroke) a national programme in this regard was introduced in

Pathanamthitta district in 2010 and later extended to Thrissur, Idukki, Alappuzha and Kozhikode. The State Health department in order to extend the benefit of the programme to the entire population has introduced the State NCD Control programme (Amruthum Arogyam) which covers all fourteen districts up to the sub centre level.

The activities include Primordial and Primary prevention through Health education, Secondary prevention through early detection and management and Tertiary prevention by prompt treatment and uninterrupted supply of medicines. Health education is done through field level workers about Diet, Exercise and Habits with a motto of Prevention of NCD through Life style modification. This programme has to be strengthened as the load and complexity of NCDs are likely to grow in future.

2.6. Cancer Care – Prevention and early detection

Kerala reports nearly 35,000 new registrations and around 1 lakh patients are under treatment every year. But treatment in Government sector is limited to Regional Cancer Centres at Thiruvananthapuram and Malabar Cancer Centre at Thalassery, Kannur. Radiotherapy is available in 5 Government Medical Colleges and GH Ernakulam leaving the remaining 7 districts with no facility for cancer treatment in Government sector. The focus has to be on elimination of risk factors, increased awareness, early detection and prompt. Government proposes to establish early Cancer detection and follow of Chemotherapy centres in all the districts attached to district head quarters hospitals. In order to control the use of tobacco and other tobacco containing products, a major cause of cancers and other NCDs, COTPA is being implemented in the State. The State aims to establish tobacco free homes, schools and workplaces.

2.7. Women's Health. In Kerala atrocities against women, domestic violence, and other related issues are comparable to the national level. Gender based health management centres which started functioning in major hospitals in district and taluk levels, in partnership with social justice and home ministries will be strengthened to manage the physical and psychological impact of such violence. Similarly the health problems of the elderly women, widows, women workers of the traditional industries like cashew, coir, fisheries, tribal women, domestic women workers, agricultural workers, low- paid urban based sales girls working in shops/ malls etc needs to be addressed in a comprehensive manner covering the health determining sectors. Rising trends of under nutrition, anaemia, obesity, infertility etc. among women also need to be addressed. The declining child sex ratio reported in the 2011 census of India points to the possible existence of child sex selection and foeticide in some parts of the state.

This has to be verified and corrected to prevent Kerala going the way of most other states in India

2.7.1 Maternal Health. Though the maternal mortality rate of Kerala is better than the all India average it is unacceptably high compared to the international standards and has been relatively stagnant for the past few years. Government intends to reduce the MMR by 50% of the current rate by the end of the 12th Five year plan. Since most of the deliveries in Kerala take place in institutions the quality of obstetric care has to be improved. A strategy to reduce the maternal mortality through a standards framework, developed with the support of the Kerala Federation of Obstetrics and Gynaecology (KFOG) and National Institute of Clinical Excellence (NICE) of UK, is being piloted in the state. By addressing the most common obstetrical complications like post partum haemorrhage and Pregnancy Induced Hypertension this projects hopes to make a dent in maternal mortality in the state. .

For the last one decade both government and private sector hospitals are reporting a rising trend of caesarean section touching 40%. Though some administrative and technical measures have been taken up at the state level, so far it has not made any major impact. Other issues like maternal anaemia, early marriage, and teenage pregnancy in some of the districts and tribal areas also remain intractable.

Maternal and child health indicators during the three NFHS periods (1993-94, 1998-99 and 2005-06)

Indicators	**NFHS-I 1992-93**	**NFHS-II 1998-99**	**NFHS-III 2005-06**
Fully immunized children (%)	54	80	75
Under weight children (%)	27	27	29
Infant mortality rate	24	16	15
Any antenatal care (%)	88	99	100
Institutional delivery (%)	89	93	100
Total fertility rate (TFR)	2	2	1.9
Women who are exposed to Spouse's violence (%)	NA	NA	16.4

2.8 Child Health

While the IMR of Kerala (12 per 1000) is better than most Indian state the rate has stagnated for the last decade. The state aims to reduce the present IMR to single digits by the end of the 12th Five year plan. For further reducing the infant mortality, the Neonatal Intensive Care Unit (NICU), Special New Born Care Unit (SNCU) and New Born Care Corner (NBCC) and other new born care facilities attached to the delivery points will be further strengthened.

Government attaches foremost importance to prevention of disabilities among children. A New Born Screening Programme for congenital diseases like G6 PD deficiency, adrenal hyperplasia, hypothyroidism and phenyl ketonuria has been started recently. This will be further expanded to cover other conditions. Community level disability detection and management through ASHA, Anganwadi worker and Health worker will be strengthened. Remedial measures in such cases will be made available free of cost by government.

Though no polio cases were reported in the state since 2000, the VPDs like diphtheria, whooping cough, measles, and tetanus are still being reported. Health Department and Social Justice Department will collaborate to achieve universal immunisation and nutritional monitoring.

2.9 Adolescent health (ARSH):

Government seeks to equip, sensitise, and empower all adolescents of the State to realise their full potential. To this end their physical and mental health needs will be addressed. Through the Weekly Iron Folic acid Supplementation Programme (WIFS) health department will cover 31 lakh beneficiaries in the state including adolescent girls and boys from class 6 to 12, and out of school adolescent girls from 10 to 19 yrs for anaemia control.

Hospital based Adolescent Friendly Health Clinics (AFHCs) have been started at all District Hospitals and selected THQs, CHCs, and mobile AFHCs in underserved areas. Out reach sensitisation, peer leader motivation, and adolescent health promotion through NRHM-NSS Teen Clubs, and Parent Teachers seminars at schools have been started state wide. Large numbers of doctors, nurses, and JPHNs have been trained in all districts, to serve as the manpower for all these efforts.

2.10 School Health:

The Modified School Health Program implemented in 7% of the schools of the state in 2009 was extended to all government schools in 2012-13. The programme aims to provide school based health support services to all the students by working collaboratively with different agencies, school teachers,

parents and community members. The programme will try to establish, with the support of health and education officials, teachers, students, parents, health providers and community leaders, health promoting schools, a school "that constantly strengthens its capacity as a healthy setting for living, learning and working".

2.11 Health problems of elderly. At present the percentage of population above 60 is 12 % and is expected to cross 25% by the year 2050. As in many other areas the capacity of the health sector has to be scaled up substantially to deal with the enormity of the problem. This has taken efforts to set up Geriatric care wards with Geriatric friendly facilities at District and Taluk level Hospitals. However a comprehensive Geriatric health care programme is yet to be developed in the state.

A significant achievement has been the Palliative Care Policy in Kerala in 2008. Palliative care programme which, operates in three levels, home based primary care, hospital based secondary care and major institutions based tertiary care, is supported by Local Self Governments. At present there are 700 palliative care units attached to primary health centres and 250 palliative care units supported by community based organizations. In the secondary level there are 64 hospitals offering palliative care services.

2.12 Mental health problems

The state aims to incorporate the mental health services with the general health care services up to the primary health centre level. This is done by establishing district mental health programmes where specialist units visit PHCs, diagnose and prescribe medication, leaving the management in the hands of the PHC team and by having psychiatry units in Taluk and District Hospitals. Rehabilitation of mentally ill persons is done as joint effort of Health, Social Justice and Local Self Government Departments. We are handicapped by the shortage of mental health professionals.

2.13 Health of vulnerable sections:

The health status of some tribes is worse than what exists in most parts of India. This is partly the result of political disempowerment and partly due to their remote location. Coastal population suffers from diseases that result from lack of safe drinking water and sanitation. These call for long term efforts and political commitment to make a difference. Within the constraints government departments will continue to provide ameliorative measures.

Urban population, especially persons living in slums do not have access to primary health care services. Urban sub centres and primary health centres has to reconfigured to provide primary care preventive and curative services.

2.14 Health Infrastructure in Kerala

Sl.No.	Institution	Number	Beds
	Teaching hospitals		
	Government Medical College Thiruvananthapuram		
	T.D. Medical College, Alappuzha		
	Government Medical College, Kottayam		
	Government Medical College, Thrissur		
	Government Medical College, Kozhikode		
	Government Dental College, Thiruvananthapuram		
	Government Dental College, Kottayam		
	Government Dental College, Kozhikode		
	Government Ayurveda College, Trivandrum		
	Government Ayurveda College, Thrippoonithura		
	Government Ayurveda College, Kannur		
	Govt. Homeopathic medical College, Trivandrum		
	Govt. Homeopathic medical College, Kozhikode		

	Total Govt. Modern Medicine Institutions	**1250**	**37021**
1	General Hospitals	12	4866
2	District Hospitals	15	4854
3	Speciality Hospital	19	5740
4	Taluk Hospital	80	9502
5	Community Health Centres	230	6527
6	24X7 Primary Health Centres	175	3343
7	Primary Health Centres	660	2182
	Total PHC (6+7)	**835**	**5525**
8	T.B. Centres /Clinics	17	176
9	Other Institutions	19	198

	Speciality Hospital Category wise		
1	W & C Hospitals	8	1786
2	Mental Health Centre	3	1342
3	T.B.	3	608
4	Leprosy Hospital	3	1916
5	Others	2	88
	Total	19	5740
	Other Institutions Category wise		
1	Govt. Hospitals/Health Clinics	8	116
2	Mobile Units/Mobile Clinics	17	0
3	Government Dispensaries	23	82
	Total Ayurveda institutions		
	Total Homeopathic institutions		

3. Overview of Health Service System of the State

Curative services are provided by Ayurveda, modern medicine and Homeopathy systems of medicine. While in general modern medicine is the preferred system for specific conditions Ayurveda and Homeopathy are chosen by a large percentage of the population of Kerala. Government acknowledges the importance of the three systems of medicine and will encourage studies of the comparative advantages of treatments under the three systems. **2.8.6.**

3.1 Tertiary care: Tertiary care in government service is provided through Medical college hospitals. It is likely that in five years every district in Kerala will have a government medical college. Each of these hospitals would be equipped for managing cases in all specialties and super specialties. Coupled with a revamped primary care system, referral linkages between secondary and teaching hospitals and an ICT enabled networking of care the medical college hospital can be positioned as the manager of the health care needs of the entire district, including capacity building, quality and research. But to achieve this, capacity and standards in teaching of medical colleges will have to be

substantially improved and better organisational arrangements made. Diagnostics and treatments will have to be standardised at all levels and referral linkages established between hospitals at different levels. It will also mean creating closer links between institutions under the health and medical education departments.

3.2. Secondary care institutions: General/District hospitals, Women and Children's hospitals and Taluk head quarters hospitals, will be strengthened to provide secondary care. Respecting the burden of non communicable diseases these hospitals will be equipped to handle routine cases of such diseases. Since Kerala has good road connectivity and patients expect a minimum level of sophistication Government's effort will be to strengthen these hospitals with specialities and attendant services such as trauma care, dialysis centre, counselling services, de-addiction centres and physical rehabilitation centres.

3.3 In Kerala the national pattern of one post of Gynaecologist, Paediatrician, Physician, Surgeon and Anaesthesiologist are not available in every CHCs since at present the available specialists are inadequate to meet the requirements of specialists in General/ District / Speciality and Taluk hospitals. When the primary care facilities are reworked and the health protection agency comes into being the role of the CHCs will worked out appropriately.

3.4 Primary Health Centres: Primary Health Centres were set up for health promotion activities including prevention of communicable and non communicable diseases, disease surveillance, implementation of the maternal and child health programmes comprising antenatal care, immunisation, post natal care, adolescent health and implementation of other national health programmes. But the system, originally designed to address reproductive and child health issues and communicable diseases, has not been reconfigured to meet the needs of a population that is well on the way through a demographic and epidemiological transition. The job description of primary care physicians will be reworked to resemble that of the Family Physician or General Practioner. Each team will be responsible for a population of 10,000, provide them preventive, primitive and basic curative services and help them navigate through the health system should they need higher level of services.

3.5 Sub Centres: There are 5500 ANMS (JPHNs in Kerala) and 3500 JHIs in Kerala operating in 5403 Sub Centres. The role and responsibilities of the sub centres and primary health centres has come down markedly due to changes in pattern of utilisation of health services. There is a need to better reorganise the functioning of the Sub Centres in such a manner to address the health promotion prevention and other primary health care services at the field level. With the introduction of NRHM, the formation of Ward Level Health and Sanitation Committee and the implementation of the ASHA scheme have also necessitated

reworking of JPHN's job requirements. The lack of job clarity for ASHA, who is paid to facilitate access in a state where no such facilitation is needed, makes the revamping of functions urgent.

3.6 Emergency medical services and management of trauma: With more than 40,000 accidents involving 50,000 persons resulting in 4000 deaths Kerala needs an efficient system for efficient evacuation and good management of victims of road traffic accidents. The 108 Ambulance services will be extended to the entire state. Since management of emergency cases and trauma a specialist cadre of doctors and nurses trained in life saving and trauma management techniques will be built up. Post graduate courses in emergency medicine and emergency nursing will also be started.

3.7 Medical establishment Bill 2013: In the state private hospitals, laboratories and other diagnostic centre play an important role in providing medical care. But unfortunately there is no system for mandatory registration and monitoring of the functioning of these institutions. On line with the Medical establishment bill of GOI, a comprehensive bill covering the registration and regulation of the all health care institutions will be adopted in the state.

3.8 Human Resource Policy in Health:

Human Resource is the core building block of any Health system. In order to ensure a health HR the management capabilities will be improved in all the directorates. HR policy and job descriptions will be dynamically updated to meet changes in the sector. An HR cell and another HR Advisory Committee will be set up to advice government on this. Adequate investments will be made to develop, manage and implement an HRMIS system that will gather and update HR related data on a regular basis. This will ensure availability of authentic information on every individual staff within the department at all levels. This will further aid in process of transfer, capacity building, HR planning etc. All directorates will have a systematic capacity building system including induction and periodic training. A performance appraisal and grievance redressal system will also be institutionalised.

3.9 Nursing Care and Nursing education: Though the services of the nurses of Kerala is well appreciated all over the world, in Kerala itself the profession has not been allowed to realize its full potential. The potential of nursing cadre as an independent professional need to be identified and propagated. The role of nurses in initial work up and counseling of the patients in outpatient sections, and the right to administer key drugs at times of emergencies in OP / IP sections based on a protocol would be very much helpful in improving the patient care. In time Kerala will need to move to the concept of nurse practitioner which is available in all advanced health systems of the world.

3.10 Treatment protocol, referral protocols and management guidelines

The absence of proper guidelines/ protocols for treatment, medical investigation and case management is a problem identified in Kerala long back , and efforts were made to develop these . But unfortunately these efforts did not succeed. The recent attempt for developing referral guidelines for some of the departments as a coordinated effort of the doctors of Health Services and Medical education department is a step in this direction. Kerala will move towards adoption of standard operating procedures to ensure quality and transparency in health.

3.11 Data Management System: Health sector generates a large amount of data. This should be analysed and form the basis for managerial decision making and policy formulation. Recently Kerala has begun to use data from IDSP and Health Management Information System for decision making. However there is no system to integrate this data and present it in a manner useful to managers at different levels. Kerala will set up a data management unit that can come up with identification of information needs of managers at different levels, identify the data inputs that are needed, analyse them and provide feedback to persons inputting the data and to managers who need to use them. With the support of the IT wing of GOI health services department has started the implementation of a comprehensive IT project on pilot basis. Through this ambitious project it is expected to compile all the household level data including that of the medical care from the government and private in a soft ware.

3.12 Decentralization and health

By middle of the 1990s in Kerala administrative decentralisation and decentralised planning paved the way for transfer of health care institutions up to the district level to the Panchayathi Raj Institutions (PRI). All health care institutions except General Hospitals, Women & Children Hospitals and Speciality Hospitals have been transferred to the three tier PRIs and up to 40 % of the plan fund of various sectors including that of health sector is being disbursed through these institutions. Thus, Kerala became the first state in the country to initiate administrative decentralisation in an extensive way including that in the health sector. But the government level expert committee has identified some of the lacunae a like the lack of technical support from the department and in the absence of public health perspective in planning, unnecessary construction work was taken place at the PHC /CHC levels and most of the projects were repetitive in nature focussing the field level medical camps and drug purchases.

Since the state is still continuing the decentralization in health, support structures need to be developed at the block, district and state levels to take up

a lead role in effective implementation of decentralization. The proposed Public Health cadre at all levels may be made responsible to shoulder this responsibility through appropriate HR development.

3.13 Medical Education

Till 2000 almost all institutions of medical education was under government control. When entry of private sector was allowed growth of the private sector was rapid and in decade there were 18 private medical colleges as against 5 in government. Growth in nursing, dental, Ayurveda and paramedical courses was even more rapid though there were hardly any investors in Homeopathy.

Entry of private sector has increased the supply of medical professionals though it could be argued that there has been a dilution of quality. It is also pointed by health education professionals that the quality of teaching even in government colleges have dropped below desired levels. The Kerala University of Health Sciences has had a salutary influence in maintaining the quality of institutions and instruction.

One would have assumed that the banning of private practice would have led to greater research activities. But Kerala is yet to develop a sub-culture of research. Government will encourage research activities and innovation in health care delivery and management.

4. Private Sector

The private sector in Kerala grew to meet the demand that was unmet when government cut back their investment due to fiscal strain. Currently the private sector accounts for more than 70% of all facilities and 60 of all beds. The types of ownership range from corporate to single proprietor. They vary in sophistication from single doctor hospital to multi-speciality hospitals and have become the preferred providers for the affluent and the middle class. As secondary care in government services became restricted to Taluk hospitals and above it was the private sector that provided services in some remote areas of the state. These small hospitals, which fulfilled an important role in the health sector in Kerala, are threatened by increasing cost of operation and the preference of patients for more sophisticated hospitals.

In the past there was very little engagement between government and private hospitals. That changed with government officials being allowed to access care in private hospitals under some conditions. This was further accentuated by the Rashtriya Swasthya Bima Yojana and the Karunya Benevolent Fund. However any proposal to systematically engage spare capacity in private sector to provide health coverage is derided as a sell out to the private sector. When the Clinical

Establishment Bill 2013 is passed the engagement will be formalised. Government and the private sector will collaborate in purchasing services, ensuring quality and working together to address problems of the health sector.

Objective:

1. To position good health as the product of development agenda including water supply, nutrition, sanitation, prevention of ecological degradation, respect for citizens' rights and gender sensitivity.
2. To ensure availability of the needed financial, technical and human resources to meet health needs of the state.
3. To effectively organise provision of health care from primary to tertiary levels through referral networks managed by primary care providers to maximise efficiency and reduce costs.
4. To regulate practice in health sector to ensure quality and patient protection

5. Plan of action :

For achieving the above objectives this policy propose specific plan of action as discussed in the following sub sections.

5.1. Determinants of health care: Many of the factors that determine health status of the population lie outside the purview of the health sector. These include clean drinking water, proper management of solid and liquid waste, food safety. Many of these have been delegated to local self governments under the 73rd and 74th amendments to the constitution. Health department will leverage their representation in the local administration to effect convergence of efforts to improve such determinants.

(i) **Clean drinking water**: Responsibility for provision of safe water is now shared between the Kerala Water Authority, water resources department, local self governments and a host of community based water supply schemes. There is scarcity of drinking water in many parts of the state, leading to a host of health problems. The state will continue the efforts to provide adequate drinking water of good quality in these areas. Health department will access technologies to test the quality of water being provided in all the schemes and by adhoc providers in times of scarcity or natural calamity.

(ii) **Sanitation facilities:** In addition to providing sanitary latrines in all houses Kerala has to deal with issues created by first generation toilets which have no septic tanks and the lack of scientific system for management of septage. In the absence of such a system many agencies dump such waste abandoned areas and water bodies causing serious public health hazard. Government will access and implement technologies that can treat septage in water logged areas and high density residential areas.

(iii) **Solid Waste Management Policy, and Plan of action**; The system of collection of waste without segregation and dumping them without a scientific system of management has resulted in an ecological and social crisis. By legislative means and education of the public generators of the waste, including households will be asked to assume responsibility for the waste, segregate them and participate in decentralised scientific system of management. Banning of thin plastic carry bags and other administrative, managerial and legal measures will also be enforced.

(iv) **Poverty:** Poor persons have greater load of morbidity without the means of paying for treatment. RSBY, Karunya Benevolent Fund, Janani Sishu Suraksha Programme, free distribution of generic drugs and similar schemes have increased financial risk protection in the state. However government will also introduce other measures to ensure that the poor have access to preventive and curative services free at the point of consumption.

5.2. Enforcement of regulations for good health. Enforcement of enabling and preventive measures, if necessary by coercive means remains a necessary element of public health any where in the world. Due to outdated laws and poor enforcement public health in Kerala has not benefited fully from such regulatory support. Government will revise such laws and move towards their effective enforcement relying on democratic institutions in the state to prevent their abuse.

(i) **Food Safety.** With the passing of the FSSA in India now has a legal framework for ensuring food safety. However the enforcement machinery lacks the capacity to effectively implement the provisions of the act. In addition to strengthening the Commissionerate of Food Safety Government will leverage capacities available in other departments for technical support (e.g: Laboratory tests) or to administer areas that fall into other areas as sanitation. To respond to increased awareness of food safety and the demand for quality food

government will scale up the machinery to ensure safe food and beverages.

(ii) **Public Health Act:** Government proposes to enact a unified Kerala Public Health Act combining the existing Travancore-Cochin Public Health Act 1955 and Madras Public Health act 1939 and incorporating current public health needs. The proposed health protection agency and the public health cadre will be able to implement the provisions of the act effectively.

5.3. Reorganisation of Government Health System:

Government health services currently function as a conglomeration of stand alone institutions. This creates high degree of inefficiency. Government will aim to link them in a networked care system with the primary care team providing initial care and assisting individuals navigate through different levels of health system. This calls a higher level of organization and management than what health services currently possess.

i. Primary Care

The primary care system in Kerala has concentrated on family planning, maternal and child care and prevention and management of communicable diseases. It is not designed to respond to some of the current challenges as non communicable diseases, mental health issues and geriatric care. Government intends to revamp the primary care provision to make them assume responsibility for population allotted to them.

The primary care team will be trained to function as a general practice team dealing with a smaller population. Currently fresh graduates are assigned charge of primary care duties which in many countries are discharged by family physicians with post graduate qualifications and specialized training. Kerala will develop a cadre of primary care providers like General Practitioners or Family Physicians. Initially they would receive specialized training before posting. Concurrently Kerala will start a PG course on Primary Care and gradually create a cadre of qualified doctors to provide primary care.

Using ICT the Primary Care Team will keep track of health care needs of persons assigned to their care. They will be trained to provide basic services themselves and to refer to appropriate levels when specialist care is needed. Using ICT framework they will develop appropriate messaging and track compliance. Since every interaction of the referred patients with the government health system is tracked and available on the central data server the primary care team will be able to guide the patients on treatment compliance and prevention. Referral

protocols and systems will regulate their interaction with secondary and tertiary levels of the health system. The Primary care team will be the prime managers of the Electronic Health Record of every individual that will be developed from the ICT framework.

Developing the new system would involve identifying the knowledge and skill sets needed by the crucial members of the primary care team and building them; shifting some of the tasks currently discharged by the medical practitioner to nurses and paramedics; fine tuning referral protocols and developing the managed referral networks around Primary Care and developing a monitoring framework.

Primary health centres: Staffing of Primary health centres will be reworked with three teams of a doctor and a nurse managing a population of 10,000 each. Only OP and field activities will be discharged in PHCs and OP would be managed in evening hours by turn. The job responsibility of nurses will be revised to assign more patient care responsibilities to them. Laboratory services will be available at all PHCs. The primary care in difficult to reach areas will be configured differently.

Community Health centres:

Community Health Centres are the block level institutions expected to provide basic speciality services. Considering shortages in specialists such services will be provided only after the requirements of higher level institutions are addressed. Facilities at the CHC would be utilised as Coordinating Centres of Pain and Palliative Care, terminal care and Community Mental Health Programme. Community Health Centre will be the lowest unit of the Health Protection Agency and Public Health Cadre.

ii. Taluk Head Quarters Hospital

A Taluk Head Quarters Hospital with all major and minor specialities, with average bed strength of 300 provides an optimal level to provide secondary care. It will have such supporting services as emergency services, laboratories, blood bank/blood storage centres, units for maintenance dialysis, physiotherapy and rehabilitation and de-addiction centres.

iii. District/ General Hospitals

One District or General hospital in the district will have in addition to all major and minor specialities a few super specialities built up over time subject to availability of doctors. These would be Cardiology, Neurology, Nephrology and

Urology. To ensure adequate attention to the needs of mothers and children Kerala will have a Women and Child Hospital in every district.

iv. Specialty Hospitals

With advances in pharmacology specialist hospitals like TB and Leprosy have lost their relevance. Mental Health care is also increasingly being managed at general hospitals. While it will not be possible to close them down now increasingly their role would be brought down and the institution developed for alternate uses.

v. Medical College hospitals.

In time all districts in Kerala will have a government medical college. Some of the existing medical college hospitals have become unmanageably large. With better referrals linkages and teaching hospitals coming up in every district it should be possible to restrict such hospitals to 1000 beds and focussing on quality and research. All teaching hospitals, in addition to providing specialist consultation services to other hospitals in the districts, will also be involved in training and quality control of services in other hospitals. They will provide the top most level of the networked care system managed by primary care providers.

Upgradation and renaming of hospitals without a clearly spelt out norm has led to considerable confusion in health planning in the state. For the purpose of planning of health care services the state will follow demographic/administrative norms: a subcentre catering to 5000 population or the ward of a panchayat, a Primary Health Centre serving one Grama Panchayat or 30,000 population, a Community Health Centre for a block panchayat or 1,00,000 population, Taluk Head Quarters Hospital for each Taluk and a District Level Hospital for every district. Disparities that exist between hospitals in different regions will be rectified before sanctioning or upgrading hospitals.

5.4. Other specialised services

i. Public Health cadre and Health protection Agency:

The absence of a dedicated public health cadre with adequate skill and knowledge to lead the public health functions of the health services department

is one of the reasons for the repeated failure of public health work which we come across. Dedicated Public Health Cadre of doctors and other non medical supervisors from block level and above is very much needed for this purpose. A Medical Officer who is busy with the routine clinical works may not be able to deliver the necessary public health functions at the field level. And he / she may not be in a position to supervise guide and monitor the activities of the field level functionaries and their supervisors. At the block level a post of Public Health cadre doctor will be created and the candidate opting this cadre will have opportunity to go for Public Health qualification. The block level supervisors namely Health supervisors and Senior Public Health Nurse would be similarly equipped with similar courses and the designation of the officers may be appropriately changed.

At the district level also dedicated Medical officers and Non medical Officers with public Health Qualifications would lead the team. Strengthening of the Public Health cadre at the state level without bifurcating it as a separate directorate would be done. Public Health laboratories and State Institute of health and Family Welfare and SHSRC would be important partners in capacity development of this cadre. Providing appropriate Public Health Qualifications for around 250 doctors and 600 non medical public health cadre officers is a major task requiring necessary course formulation, developing a mechanism for providing the courses etc. It is to be provided in a time bound manner through the medical colleges, public health institutes and the institutes referred above. Effective enforcement of the Public health act would be the responsibility of this cadre. Enactment of an updated public health act would further strengthen the Public Health cadre.

ii. Communicable disease surveillance and execution of control measures; For last many years Directorate of Health Services is maintaining a daily and weekly surveillance system of communicable diseases through the IDSP system. There are many shortcomings in this system. Most of the data from the private hospitals are not covered and many a time increase in the number of cases is not timely detected. Under the leadership of the Public health cadre and health protection agency referred above these activities need to be further streamlined and strengthened. The IDSP system with the contract staff has its inherent weakness of frequent changes and lack of motivation . The existing posts of IDSP including the data entry operators, data managers, epidemiologists etc at the district level, and the posts at the state level and the laboratories need to be made regular posts so that over the years the system will be improved.

The proposed health protection agency under the public health cadre will have representation from the other health determining sectors like water resources , LSGI, total sanitation mission, Social Justice departments and will be empowered

with the revised and updated Public health Act and other acts through necessary enactments / rules.

iii. Non communicable Disease control:

Considering the multiple dimensions of social determinants of Non Communicable Diseases multiple levels of policy decisions and activity plan from various departments LSGIs and other agencies would be required. Inter-sectoral actions for health promotion activities prevention and early diagnosis are very critical.

Educating and encouraging hotel and bakery group for promoting NCD food and banning of junk foods in schools and govenment run canteens.

School health screening / incentives for keeping fit/ walking /cycling/involving in outdoor exercises / health education in schools

The policy is to be crafted with an aim to improve the quality of health, by restricting the incidence, prevention of complications and reduction in mortality.

Specialised diabetic, hypertensive clinics will have to be started in General Hospitals, District hospitals and Taluk hospitals on a step by step manner. Dedicated diet counsellors and other supporting staff to be provided in these units to work with the specialist doctors as a team so that follow up of cases, counselling, awareness generation etc are organised in a better manner.

The public health cadre and the health protection agencies would impart health promotion activities at work places, schools and other institutions. Physical fitness centres with adequate machineries and equipments for doing exercises and for outdoor games to be started at LSGIs level and at major works sites, offices etc. Promotion of household level backyard kitchen garden, linking the ward level health and sanitation committee activities with exercise and outdoor game promotion, group farming, community kitchen (with healthy diet)etc would be other activities.

iv. Cancer care

Cancer control programs in Health sector aims at decentralizing cancer treatment from tertiary hospitals to district / general hospitals in districts and organizing detection camps and screening programs for promoting early detection of cancers. This year one major hospital in a district where there is no cancer treatment facility in Government sector was provided with funds and manpower for setting up day-care chemo therapy centres. Oral cancer detection clinics were started in every district hospitals and funds were provided for conducting cancer

detection camps at the peripheral level as part of this package. All these activities need to be more expanded and strengthened with better community participation. Anti tobacco activities which was started in recent years would be also part of this programme.

v. Measures for reducing the Road Traffic Accidents other trauma and developing systematic trauma care services:

Around 4000 road traffic deaths through 30000-40000 road traffic accidents is the pattern seen in the recent years. The ongoing activities of the Road Safety Authority at the state level and the limited activities at the district level through the district collectors are not yielding the expectant results. Effective enforcement of the existing rules and regulations, and enactment of new laws like giving registration for the vehicles only on the basis of the available road facilities, restricting single passenger (own vehicles) in peak hours, improving the road facilities and constitution of an "Act force "system involving police, LSGI , voluntary workers etc at locations identified as black sots with more probability of accidents to be attempted.

This policy envisages to extent the 108 Ambulance systems to all districts. For the time being it is available only at Thiruvananthapuram and Alappuzha districts only.

vi. Community mental health care and services: Considering the higher prevalence of the mental health problems suicides, alcoholism etc department has already extended the District Mental Health Programme and NRHM supported community mental health programmes to all districts in the state by this year. But the integration of the activities with the primary health care at the PHC, CHCs and with the health care providers namely doctors and field workers has not materialised so far. This policy envisages a package of preventive and primitive mental health activities through the field workers, supervisors, ASHA etc at the field level and early mobilisation of those requiring the counselling / treatment. Similarly for providing effective systematic follow up, the patient is identified and treated at the peripheral institutions. From the ASHAs in the block a selected group of ASHA s will be given specific training and certification for the working as part of the block level team and empowered with necessary skill and knowledge for the household level counselling of the patients/ family members. As per the policy frame work and activity plan proposed in the revised state mental health policy activities would be conducted.

vii. Strengthening Laboratory Net Work in the State

Government will take steps to ensure quality in laboratory services in the Government and private sector. Registration is being made compulsory and periodic quality assurance checks will be insisted upon. The paramedical council will be activated to function as a watchdog for training institutions and laboratories. In government sector the State and Regional Public Health laboratories will be strengthened and District Public Health Laboratories started in all districts. All government laboratories will be covered by internal and external quality assurance systems. Laboratory facilities will be made available at PHC level to support management of life style diseases like hypertension, diabetes and health problems of the elderly.

6. Ayurveda

Ayurveda is an integral part of Kerala's health landscape, its treatments ranging from common household remedies and prevention to specialised treatment for stroke rehabilitation and cardio vascular care. However the system faces many challenges today due to shortage of raw materials, lack of enforcement of standards and diluting the system by unqualified providers. Government will work with leading ayurveda practitioners to improve the sector.

i. Research and documentation.

Ayurveda is considered efficacious to treat certain type of ailments and is commonly accessed by most persons in the state. However due to poor documentation and systematic research it has not been able to prove this. Government, in partnership with leading Ayurveda practitioners, will support systematic clinical trials to prove the comparative efficacy of such treatment. Since Institutional Research Boards of any institution cannot approve research proposals cutting across systems of medicine, Government or the Kerala University of Health Sciences, will set up the IRBs and ethical committees to oversee such research.

ii. Quality Assurance

Due to the popularity of Ayurveda treatment many spurious manufacturers and treatment providers have sprung up in Kerala in recent years. Due to poorly equipped and staffed enforcement agencies and legal loopholes these manufacturers have been able to achieve spectacular growth affecting the reputation of the Ayurveda system itself. Drug Regulatory facilities for Ayurveda in the state will be separated and strengthened. Proper implementation of *Good*

Manufacturing Practices (GMP), *Good Agricultural and Collection Practices* (GACP) etc. for proper manufacturing and marketing of Ayurveda drugs will be supported. Government will work with joint initiatives like *care Keralam* to achieve this.

Standardisation of Ayurveda hospitals will be achieved with the implementation of the Clinical Establishment act including qualification of persons staffing these institutions.

iii. Support to manufacturing

Availability of raw materials for manufacture of Ayurveda medicines has come down due to destruction of forest cover and reclamation of waste lands. The State Medicinal Plants Board will work with cultivators and manufacturers to augment availability of raw materials at required quantities. They will also be supported to achieve quality parameters in preparation and packaging.

iv. Awareness regarding the benefits of Ayurveda.

The overwhelming prominence given to treatments under modern medicine has obscured the comparative advantage of Ayurveda for some conditions. After these have been documented and validated government will endorse and propagate these therapeutic procedures in India and abroad. Government will also work with experts in the field to develop appropriate communication strategies for better acceptability of Ayurveda.

7. Homeopathy

Homeopathy enjoys a long and honourable history in Kerala. In 1928 The Maharaja of Travancore acknowledged Homoeopathy as an acceptable system of treatment. First government facility for homeopathy as established 30 years late. Currently government has a policy of providing a homeopathic institution in every panchayat in the state. Now Homoeopathic health care services are delivered through 31 Homoeopathic Hospitals, 611 Homoeopathic Dispensaries, 348 NRHM Homoeo Dispensaries and 29 dispensaries at SC/ST dominant areas, 5 Homoeopathic medical college hospitals, 13 dispensaries and 1 hospital under ESI and a few municipal and corporation dispensaries. Also about 4000 Homoeopathic physicians are engaged with private sector. According to Economic survey Report of the State Planning Board for the year 2011-12 24.39% of the patients utilized Homoeopathy.

Recently Department of Homoeopathy has evolved many such programmes like, "Seethalayam"- gender bases programme for women health care, "Ayushmanbhava"- an **integrated** approach of main AYUSH systems to

control NCDs, "Jyothirgamaya"- The School Health Programme, "Chethana" the cancer palliative care programme, Adolescent health care programme, Mother & Child care Programme, Regional Communicable Disease Prevention Programme, Geriatric Care Programme.

Government strategy on homeopathy will seek to achieve in addition to increasing the availability of services the improvement of homeopathic medical education and research and the standardisation and growth of homeopathic drugs industry. In addition to dispensaries in every Panchayat every Taluk will have a 25 bedded hospital and district a 100 bedded one, both with specialised care. Experts in the field will be brought together to develop standardize treatment protocols for management of different health conditions. Clinical research that focuses on therapeutic out comes and multi branched, individualized, interventions rather than single and uniformly applied drugs will be encouraged. A drug testing and standardizing unit for homeopathic drugs will be set up for homeopathy.

8. Oral Health

The prevalence of oral diseases is increasing especially among the poor and disadvantaged population groups. Of concern are dental caries(especially among young), periodontal disease, oral cancer, (more among adults), malocclusion, and fluorosis and maxillofacial trauma. These problems are exacerbated by lack of access to quality dental care and other equity issues.

Government will scale up the availability of dental care by opening dental clinics in district and Taluk hospitals and making dental check up and treatment part of the school health programme. Free dental treatment facilities to senior citizens will be part of geriatric care programmes. Gradually District hospitals will have the specialties of Oral Surgery, Prosthodontics, Orthodontics, Conservative Dentistry, Periodontics and Pedodontics and supporting staff. They will also function as early detection centers for oral cancer and oral manifestations of AIDS. The possibility of operating Mobile dental units will also be explored.

For skill up gradation of dentists their retraining at least in the health services every five years will be made mandatory. Dental Colleges should also serve as research centers focusing on popularizing and adapting advanced clinical techniques and implementing projects of public health importance. Faculty of the departments will be trained to sharpen their clinical and research acumen.

The Kerala Dental Council will be encouraged to work on quality up gradation of dental clinics with emphasis on infection control practices and waste disposal and to assist clinics to obtain NABH accreditation.

9. Future developments

i. Quality up gradation in health sector

Since Kerala has had many achievements in conventional parameters it is time to raise the bar and aspire towards higher levels of quality and efficiency. Ensuring quality in every interaction with patients, being transparent, avoiding medical errors, avoiding systemic pitfalls such as hospital acquired infections and medical errors are some of the target the health sector in the state should aspire to. This would mean evolving statements of standards to be maintained, building capacity of service to comply with them, monitoring that they are adhered to and taking corrective measures when they are not. Improving efficiency to ensure better results and managerial efficiency to prevent bottlenecks, giving autonomy for hospital management are also needed.

Technical support for these reforms may not be available in state. Kerala will try to get such technical support from wherever needed but will try to build such capacity in one of the institutions in the state with external support. Wherever possible attempt will be made to put in place a certification programme for one of the academic institutions so that technical capacity is institutionalised.

ii. Universal Health Coverage

The High Level Expert Group on health set up by the Planning Commission had recommended that India move gradually along the road to achieve universal health coverage. This would involve the state using the essential health care package, either building capacity to provide in government sector or purchasing services from the private sector.

Achieving universal health coverage would call for substantially scaling up health expenditure. In view of the low level of expenditure by the Government of India during the first two years of the plan it is unlikely that the target would be realised at the end of the 12^{th} plan. But Kerala will prepare a template for Universal Health Coverage. Components of this package would get funded from available sources of health financing such as RSBY, NRHM and funds for Local Self Government. Some resources would also be freed up by efficiency improvements. To begin with the persons below poverty line would be covered. This would provide a goal of good health for all people that the state health sector could move towards and achieve in future

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