FACTORS INFLUENCING VARIATIONS IN HEALTH SERVICES

A Study of Selected Districts of Andhra Pradesh

DISSERTATION SUBMITTED TO THE JAWAHARLAL NEHRU UNIVERSITY
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
AWARD OF THE DEGREE OF

MASTER OF PHILOSOPHY

RAMA V. BARU

CENTRE OF SOCIAL MEDICINE AND COMMUNITY HEALTH
SCHOOL OF SOCIAL SCIENCES
JAWAHARLAL NEHRU UNIVERSITY
NEW DELHI - 110 067.

1987

JAWAHARLAL NEHRU UNIVERSITY
School of Social Sciences
Centre of Social Medicine and
Community Health

667676/259

Telegram : **JAYENU**
Telephones : **652282**
661444
661351
New Delhi-110 067

C E R T I F I C A T E

Certified that the dissertation entitled: "Factors Influencing Variations in Health Services: A Study of Selected Districts of Andhra Pradesh", submitted by Mrs. Rama V. Baru is in partial fulfilment of requirement for the Degree of Master of Philosophy of this University. The dissertation has not been submitted for any other degree of this University or any other University, and is her own work.

We recommend that this dissertation be placed before the examiners for evaluation.

Qadeer

Dr. Imrana Qadeer
Chairperson

Qadeer

Dr. Imrana Qadeer
Supervisor

New Delhi, 15th July 1987.

ACKNOWLEDGEMENT

My interest in the area of health and health care is a product of my experiences as a student and later an activist in the area of medical social work. My experiences in the field ranged from working in institutional settings to conducting community based programmes which constantly threw up questions regarding the relationship between health, health care and society. It is this that led me on to doing an M.Phil. programme in community health.

Words would be insufficient to express my gratitude to all those persons who have influenced and guided my thinking over the years and this dissertation in particular. I would like to thank the following people for helping me.

1. Dr Imrana Qadeer who helped me learn and grow beyond my narrow area of specialisation and guiding me through this work.
2. Prof. Banerji for his timely and thought provoking comments.
3. Dr Mohan Rao for his detailed comments.
4. Prof.A. Vaidyanathan for his detailed comments and suggestions at various stages.

5. Dr.P.L. Sanjeeva Reddy, Principal Secretary to Government of Andhra Pradesh, Department of Health, Sri K.A. Govinda Rao of the Statistical Division at the Directorate of Medical and Health Services, Dr. Bajrang Lal, President, A P Nursing Homes Association and Sri Rayanna, Secretary of the A.P. Voluntary Health Association without whose cooperation I could not have got all the necessary information.

6. All the doctors with whom I held discussions with in Hyderabad and the selected districts.

7. Prof.R. Radhakrishna for allowing me to use the facilities at the Centre For Economic and Social Studies, Hyderabad.

8. Sri Vijay Kumar, for his cooperation in using the library facilities at Centre for Economic and Social Studies, Hyderabad.

9. Mrs Rohini for a neat job of typing.

10. To my friends and family who were a great support in writing this dissertation. Lastly to, Sanjaya, who has been a companion both at home and at work.

For the shortcomings, if there are any in the dissertation, I alone am responsible.

Rama V. Baru

RAMA V. BARU

New Delhi,
21st July, 1987.

CONTENTS

LIST OF TABLES

LIST OF MAPS

CHAPTER I

Introduction to the Problem and Methodology of Study:

(a) Introduction

(b) Methodology

INTRODUCTION

It is well recognised that the health status of a population is shaped by a variety of factors like food, water, sanitation, housing, income, education and availability and accessibility of health care facilities.[1] Thus health services are just one of the inputs required to improve the health status of a population. Just as health status is influenced by socio-economic factors, similarly, health services are not mere technical interventions which exist in a vacuum but are shaped by socio-economic factors in society.[2] These factors play an important role in influencing decisions regarding policy, amount of resources allocated, choice of technology, manpower development, education and priorities in research, which in turn shape health services in a given region.[3]

Several scholars have discussed the relationship between the environment, social and economic factors and health and health care. During the 19th century, social philosophers

---

1 ICSSR and ICMR, Health For All : An Alternative Strategy: Report of a Study group set up jointly by ICMR and ICSSR, New Delhi, 1980

2 Heller, T. and Elliot, C.(Ed) - Health Care and Society: Readings in Health Care Delivery and Development, University of E.Anglia, School of Development Studies, 1977, p.2

3 Banerji, D. Health and Family Planning Services in India- An Epidemiological, Socio-Cultural and Political Analysis and A Perspective, New Delhi, Lok Paksh, 1985, p.3

like Engels[4], Virchow[5], Dubos[6] and Snow[7], looked into the relationship between health and society and have focussed attention on the influence of social factors on health status of people. More recent works of Allende[8], Navarro[9], McKeown[10], Rosen[11] and Mekinlay[12], together with many others, have also looked into the dynamics of the impact of socio-economic and political factors on health and health services development. These studies have dealt primarily with Western societies. In India, several scholars like Banerji[13], Panikar[14],

---

4 Engels, F.The Conditions of the Working Class in England, Moscow, Progress Publishers, 1973.

5 Waitzkin, H. ''The Social Origins of Illness: A Neglected History;" International Journal of Health Services, Vol.II, No.1, 1981.

6 Dubos, R: Man, Medicine and Environment, London, Penguin Books, 1968.

7 Snow,J: On the Mode of Communication of Cholera, London John Churchill, 1954.

8 Waitzkin, H. op.cit.

9 Navarro,V. Medicine Under Capitalism, London

10 McKeown,T. 'A Sociological Approach to History of Medicine' in Medical History and Medical Care : A Symposium of Perspectives, London, Nuffield Provincial Hospitals Trust,1971.

11 Rosen,G.'Historical Trends and Future Prospects in Public Health", in Medical History and Medical Care: A Symposium of Perspectives, London, Nuffield Provincial Hospitals Trust, 1971.

12 McKinlay,J.(Ed.) Issues in the Political Economy in Health Care, New York, Tavistock, 1984.

13 Banerji,D. Health Services Development in India, Jawaharlal Nehru University, New Delhi, 1985

14 Panikar, PGK. 'Health Care Delivery System in India: Alternative Approaches' in Economic and Political Weekly, Vol.XI, No.22, 1976.

Qadeer[15], Zurbrigg[16], Djurfeldt and Lindberg[17] and others have also looked into the relationship between society and health status and health services development.

A good deal of work in this area has been done in Britain, which has brought forth the link between socio-economic factors and improvement in health status and development of health services. It is important to look into these studies because developments in Britain have had an influence on the development of health services in her colonies. While discussing the health status of the British people during the late 18th and early 19th century, Mckeown points out that the major causes of death were diseases like tuberculosis, typhus fever, cholera and gastro enteritis.[18] Most of these diseases affected mainly the working class who lived under very poor socio-economic conditions. Hence this group of diseases were commonly referred to as 'diseases of the poor'.

---

15 Qadeer,I. 'Health Services System : An Expression of Socio-Economic Inequalities' in Social Action, Vol.35, July-Sept.1985.

16 Zurbrigg,S. Rakku's Story : Structures of Ill-Health and the Source of Change, Madras, George Joseph, 1984.

17 Djurfeldt and Lindberg, Pills Against Poverty : A Study of Introduction of Western Medicine in a Tamil Village, New Delhi, MacMillan, 1980.

18 McKeown,T. Op.Cit. pp.62-63.

Many of the deaths due to communicable diseases started declining by the middle of the nineteenth century. The fall in these diseases, for the most part, was due to improved standard of living of the poorer classes along with public health measures[19].

While public health measures in Britain were concerned with improved sanitation and water supply to prevent diseases, provision of medical services was restricted to private practitioners and voluntary hospitals. Given the high levels of morbidity among the poorer classes, who could not afford the services of private practitioners, they had to seek treatment through voluntary hospitals[20]. Efforts were made by the government as early as 1846 to establish a system of public dispensaries to be financed through public as well as private contributions. No action was taken on these proposals but important personal health services were developed by local authorities.[21] Following this several committees were appointed and proposals were put forward for an integrated health services system which was to be provided by the government. No concrete action was however taken on these proposals until after World War II. The economic reconstruction after

---

19 Ibid, p.63

20 Ibid, p.64

21 Ibid, p.69

the war coupled with increasing welfarism of the state, which was partly a product of the post-depression economics of Keynes, was responsible for increasing state interventions not only in the economy but also in social services, particularly health care and education.[22] It was this process that led to the creation of National Health Service in Britain. While the National Health Services was meant to be an integrated service under the control of local governments, it met with a lot of opposition from hospitals and physicians who did not want to be under the control of local authorities. The national government could not ignore political pressures from the influential medical community and therefore the local government lost its dominant role and the National Health Service was divided into three consisting of (a) hospital and specialist services (b) a general physician, dental, pharmaceutical and optical service and (c) local health authority service.[23]

Developments in Britain had a profound influence on shaping of health services in India as well. The leadership of the Indian National Movement, which consisted essentially of the educated upper middle classes were considerably influenced by the liberal, progressive policies of the British government. They had seen the fruits of the liberal British policies for the British people and hence in their own political

---

22 Cleaver, H. 'Political Economy of Malaria Decontrol' Economic and Political Weekly, Vol.II, No.36,Sept. 1976, p.1964.

23 McKeown, Op.Cit. p.72

struggle at home, under the influence of the Goodenough Committee's report on medical education, British Medical Association and the Beveridge Committee report[24], they strived for an integrated National Health Services. Both the National Planning Committee of the Indian National Congress and the Bhore Committee recognized the need for improved socio-economic conditions and adequate provision of health services to promote better health among the people. The Bhore Committee recommended an integrated health services system which would have a well established infrastructure for rural and urban health care along with a proper referral system.[25] It emphasized an intersectoral approach to health services development which implied viewing health services in the context of socio-economic development in other spheres.[26]

Given the size and diversity of India, the Bhore Committee had recommended that health services was to be a state subject. While the centre was to provide the policy direction and some amount of financial assistance, the states had full authority with respect to resource allocation, location and administration of institutions.[27]

---

24 Government of India, Ministry of Health : Health Survey and Development Committee (Bhore Committee), Delhi, Government of India Press, 1946, pp.4 and 17.

25 Ibid. Vol IV, p.11

26 Ibid. Vol.IV, pp.3-4

27 Ibid. Vol.IV, p.19

Although the Bhore Committee had recommended the establishment of a strong primary health care system and an intersectoral approach to health services development, the experience of the last forty years has shown the inadequacy of the structure of health services that has evolved in this country. Several studies[28] and even government committees[29] have pointed out that health services in this country are essentially curative-oriented, capital-intensive, hospital-based and biased towards urban areas. Given this sort of lopsidedness in the development of health services it is not surprising that "two types of sub systems exist simultaneously. One consists of the ill-equipped Primary Health Centre network for the rural areas which is starved of resources and the other is the better equipped hospital network in urban areas which gets the lion's share of the total resources".[30]

While the issue of rural-urban dichotomy has been discussed extensively, what also needs to be taken into account

---

28 Qadeer, I. Op.Cit.
See Banerji, D. The Making of Health Services in India, New Delhi, 1985.
Also see Panikar, PGK. Op.Cit.

29 Government of India, Ministry of Health, Health Survey and Planning Committee Report, New Delhi, 1961.
See Government of India, Ministry of Health and Family Planning, Report of the Committee on Medical Education and Support Manpower: A Programme for Immediate Action, New Delhi, 1975.

30 Qadeer,I 'Health Services System: An Expression of Socio-Economic Inequalities;in Social Action, Vol.35,July-Sept. 1985, p.205.

is accessibility to the existing institutions in both rural and urban areas. Accessibility to health care institutions is determined not only by spatial distribution of services but also determined by the social position that the person seeking treatment occupies in the community.[31] A study conducted by the Centre for Development Studies, Trivandrum points out that the even spread of health services in Kerala has contributed to improving the accessibility and utilization of services.[32] While the distribution of services is one aspect, Banerji observes that the Primary Health Care network, as other welfare services are inaccessible to the poor. The overall image of the ANM is that of a person who is quite distant from them and is meant only for special people or for those who can pay for her services.[33]

In addition to these studies, the Indian government sponsored a study group set up jointly by the Indian Council of Social Science Research and Indian Council of Medical Research (ICSSR/ICMR) in 1980, to look into the ''social aspects of medicine with a view to suggesting reforms which would lead to improvement in the health status of the people''.[34]

---

31 Banerji,D, Poverty Class and Health Culture, New Delhi Prachi Prakashan, 1984.

32 Centre for Development Studies, Poverty, Unemployment and Development Policy, New Delhi, Orient Longman, 1977.

33 Banerji, D. Op.Cit.

34 ICSSR and ICMR, Health For All : An Alternative Strategy: Report of a Study Group set up jointly by ICMR and ICSSR, New Delhi, 1980, Foreword.

It surveyed the health situation in India and pointed out that the major causes of morbidity and mortality were diseases related to poor living conditions.[35] While death rates had fallen since independence the average Indian was still prone to a host of communicable diseases which includes tuberculosis, malaria, gastro enteritis, leprosy, filaria etc.[36] As far as health services were concerned, the Committee observed that a vast network of services has been built up since independence which was essentially dependent on curative services which were rendered through hospitals based in urban areas.[37] The bulk of the expenditure on medical and public health was being consumed by the hospitals in urban areas, the benefits of which were skewed in favour of upper and middle classes at the expense of the poor people in outlying villages.[38]

Since the health services system was overwhelmingly curative, little progress was made to develop and integrate the preventive and promotive aspects.[39] In addition the curative nature of health services was very dependent on doctors, who by and large were unwilling to go to work in rural areas.[40] The Committee also discussed the simultaneous

---

35 Ibid. p.5
36 Ibid. p.5
37 Ibid. p.83
38 Ibid. p.82
39 Ibid. p.82
40 Ibid. p.83

operation [redacted] of both the public and private sectors in health care. It commented that in the Indian set up it was becoming increasingly difficult to demarcate the role of the private and public sector and given the profit motive of the private sector it was bound to create problems in the future.[41]

Infact most studies relating to health services development have focussed mainly on the public sector with only passing references to the private and voluntary sectors. The private and voluntary sectors in health care were well established in the colonial period itself. While private practice was confined largely to urban areas and essentially restricted to individual practice[42], the voluntary sector, on the other hand, was under the control of missionaries who provided services in areas like health and education.[43] Thus in those areas which were directly under British rule, a number of organisations were set up by missionaries for provision of various welfare services.[44]

At the time of independence India continued the dual pattern of governmental and private medical practice as

---

41 Ibid. pp.83-84

42 Jeffrey,R.'Recognizing India's Doctors: The institutionalization of Medical Dependency, 1918-39' in Modern Asian Studies, 13, 2, 1979, p.317

43 Fernandes,W.'The National NGO Convention:Voluntarism,The State and the Struggle for Change' in Social Action,Vol.36,No.4,1986

44 Twumais,PA.'Colonialism and International Health: A Study in Social Change in Ghana' in Social Science and Medicine, 15B, 1981, p.147.

followed by the British.[45] The Congress sub Committee had nothing to say on the issue of private practice. The Bhore Committee, on the one hand, proposed banning of private practice by public sector employees, and, on the other hand, went out of its way to allay the fears of private practitioners.[46] The Mudaliar Committee infact visualised a role for private practitioners in the government institutions as part time work.[47] Therefore, none of these committees saw private practice as a hindrance to the growth of a National Health Service. In fact, over the years, private practice was incorporated into the public service structure by allowing public sector employees to practice privately, in most states.

Indeed, the private and voluntary sectors have expanded significantly since independence. While upto the fifth five year plan there was no mention of these two sectors, the Health Policy of 1982, for the first time, categorically states that "the state will elicit the cooperation of the private and voluntary sectors to deliver health care to the

---

45 Jeffery, R. Op.Cit.

46 Government of India, Ministry of Health, Health Survey and Development Committee (Bhore Committee), Delhi, Government of India Press, 1946, p.6

47 Government of India, Ministry of Health, Health Survey and Planning Committee, Delhi, Government of India Press, 1961, p.134-135.

people".[48] Given the perspective of the government to co-opt the private and voluntary sectors in health care, it is necessary to study the public, private and voluntary sectors to get a full picture of the extent and nature of services rendered by these sectors.

Our brief review shows that, despite the initial liberal efforts at developing an integrated health service system uniformly distributed across regions, we ended up with a system which was ridden by rural - urban disparities, unequal access to services, lack of emphasis on public health and promotion of private services. These problems become more complex when we take into account the size and inter-regional variations of the country. If we take into account the states of India, they are very often larger than some countries in Europe. This is only to underline the need to look into the specificities of states if we want to understand the genesis of national trends and the reasons for the differences within states.

While macro level studies do give an indication of broad trends, they provide little information on variations across states. India is a large country with significant inter-regional variations in levels of socio-economic development. Apart from these variation, given the fact that health is a state subject, one finds a great deal of variation across

---

48 Government of India, Ministry of Health, Health Policy of India, New Delhi, 1982, p.8

states with respect to expenditure patterns and provision of health care facilities. For example, the average per capita expenditure on health care in 1982-83, for India was Rs.32.8, and across states it varied from Rs.15.6 in Bihar, Rs.27.2 in Madhya Pradesh, Rs.25.4 in Andhra Pradesh and Rs.36.8 in Kerala.[49] Similarly, in the case of bed strengths and number of institutions, states like Punjab, Maharashtra and Kerala rank high while Madhya Pradesh and Bihar rank low.[50] Such variations are found not only across states but infact even within a state.[51]

These inter-regional variations have stimulated considerable interest among scholars. Kerala, is one state in which health and health services have been studied because not only are the health care facilities well developed but it is unique in that it has the lowest infant mortality and birth rate in the country. Panikar in his studies on health status of Kerala, proposes that one of the factors responsible for improved health status has been a wide network of health care institutions under the public sector and an equally extensive one under the private sector.[52] He also shows that within Kerala there were inter-regional disparities with respect to

---

49 Central Bureau of Health Intelligence, Health Statistics of India 1982, New Delhi, Ministry of Health

50 Ibid.

51 Panikar, PGK and Soman,C. Health Status of Kerala, Trivandrum, Centre for Development Studies, 1984.

52 Ibid, p.97

distribution of public health services but these have gradually been narrowed overtime.[53] While stating this, Panikar, does not go further to explain why these inter-regional variations have been narrowed.

Zurbrigg[54], while discussing the Kerala experience, points out that improvement in the health status and growth of health services has to be seen within the socio-political context of the state. She suggests that the growth of a politically conscious and powerful agricultural unions is a major reason for the introduction of a variety of welfare measures. These measures include provision of minimum wages for agricultural labourers, redistribution of educational funds for primary and secondary education and establishment of fair price shops for rations in both rural and urban areas. All these measures along with the emphasis on primary health care, specially in rural areas, have contributed to the improvement of health status in Kerala.[55] According to a study conducted by the Centre for Development Studies, the even spread of health facilities across both urban and rural areas has been an important factor in bringing down mortality rates in Kerala.[56] While health services, in

---

53 Ibid. p.94

54 Zurbrigg,S. Rakku's Story: Structures of Ill Health and the Source of Change, 1984, p.175

55 Ibid. pp.176-177

56 Centre for Development Studies, Poverty, Unemployment and Development Policy,New Delhi,Orient Longman, 1977.

many states are concentrated in urban areas, in Kerala they are more evenly spread across all areas thereby ensuring equal access to the rural population as well.[57] This even spread of services has ensured a higher utilisation of services in this state and in so far as utilisation ratios are concerned, Kerala ranks the highest among all other states.[58] According to Mencher, another factor responsible for higher utilisation is that people are politically conscious, as a result of which people would demand what they are entitled to thereby making health care more readily available.[59]

While these studies contribute towards some understanding of Kerala's health situation, they are limited to the extent that they establish only the coexistence of factors and not really the causal relationships. These studies have not attempted to study the dynamics of the interaction of social, economic and political factors on health and development of health services. In their study, Panikar and Soman[60] discuss the role of socio-economic factors on health status but in their analysis do not show the link between socio-economic factors and health status. In the case of health services,

---

58 Ibid. p.139

59 Mencher,J.'The Lessons and Non Lessons of Kerala:Agricultural Labourers and Poverty',in Economic and Political Weekly, Spl.No.Vol.XV,Nos.41,42 and 43,Oct.1980

60 Panikar,PGK. and Soman,C. Op.Cit.

while they point out that inter-regional differences between the three regions in Kerala have narrowed over time, they do not offer any explanations as to why these differences were narrowed.[61] Only a rigorous effort at comparative analysis of inter-regional differences within Kerala and a changing pattern over time can bring us closer to a better understanding of Kerala's health status.

While for Kerala some indepth studies have been attempted, there is infact little else on the dynamics of health for other states. Indeed, we believe that similar studies for each region and states would throw interesting and new light on the relationship between health, health care and socio-economic and political factors.

This dissertation is an attempt to look at the influence of socio-economic and political factors on the growth of health services at the state level. We have chosen four districts in Andhra Pradesh to study the growth and distribution of allopathic health care facilities provided by the public, private and voluntary sectors in backward districts as compared to the more well developed districts. We chose Andhra Pradesh because it is considered to be an average performing state with respect to agricultural, irrigation, industrial and infrastructural development. In addition,

---

61 Qadeer,I. Review of Panikar, PGK and Soman, C. Health Status of Kerala, Trivandrum, Centre for Development Studies, 1984. (mimeograph).

the state presents a picture of regional variations with respect to socio-economic development. There are regions in the fertile delta region of coastal Andhra which are comparable to advanced states like Punjab with respect to agricultural development and very backward regions in the Telengana area which is almost comparable to some of the backward states of North India.

2. Methodology:

As we have already stated the focus of the study is inter-regional differences of health services within the state of Andhra Pradesh and their relationship to Andhra Pradesh's socio-economic and political dynamics. Our specific objectives thus are :

(1) To study the growth and distribution of allopathic health services in the public, private and voluntary sectors across the selected districts of Andhra Pradesh.

(2) To see if there is any variation in the growth and distribution of services across the selected districts over time.

(3) To provide an explanation as to why variations do or do not occur by looking into the social, economic and political factors which influence and shape health services.

2.1 Selection of Districts : This study uses districts as units for study. For the purposes of selection all the districts of Andhra Pradesh have been classified according to their socio-economic development into, highly developed, well developed and backward districts.(Table No.1)

TABLE 1 : CLASSIFICATION OF ANDHRA PRADESH DISTRICTS (1978 - 79) *

Stage of Development	District
Highly Developed	Hyderabad West Godavari Krishna
Developed	Guntur Chittur East Godavari Vishakapatnam Nellore
Developing	Kurnool Anantapur Cuddapah Nizamabad
Backward	Prakasham Nalgonda Karimnagar Warangal Khammam
Very Backward	Medak Srikakulam Mahboobnagar Adilabad

Out of these, two well developed and two backward districts were selected for intensive study. The choice of the four

* Source : Iyengar and Sudershan, 'AMethod of Classifying Regions from Multivariate Data', EPW, Vol.XVII,No.51,D82,p.2047.

districts for this study represents the extremes with respect to socio-economic development. While Krishna and Guntur districts belong to the fertile delta region, Mahabubnagar and Medak districts belong to the Telengana region. Using the variations in the levels of socio-economic development as a backdrop, our attempt will be to study the growth of health services in public, private and voluntary sectors in the specified districts.

The indices selected for health services include institutions, bed strength, manpower and coverage which would cover all three sectors. Based on this information we would like to see if there is any variation between the advanced and backward districts for the three sectors, following which we have attempted to explain why these variations do or do not occur. For this purpose we will study the growth of health services in the socio-economic and political millieu of the specified regions. We will take into account the history of regions, structure of economy which would include geographical differences, land systems, irrigational facilities and general infrastructural development. Based on the structure of the economy, we will be studying the major caste/classes that have emerged and their representation in the political life of the state.

Thus we will not only be looking at the growth of health services but our attempt will be to explain how the social,

socio-economic and political factors have impigned upon and influenced the growth of health services in a given region. We give below the details of these steps.

2.1 (i) Ranking of Districts : Studies which have attempted to classify regions as developed and underdeveloped have taken only economic indicators like growth in per capita incomes and gross national product as indicators for classification. However, over the last few years, several third world social scientists have emphasised the need to take into account other categories, namely, education, infrastructural inputs like electricity, water supply, roads and transport facilities and other economic institutions which are important components of the development process.[1] Using this as our basic definition, we have identified studies which have classified districts taking into account a number of socio-economic variables as indicators of development. The choice of the districts for the present dissertation is based on two studies which have classified and ranked districts in Andhra Pradesh. N.S.Iyengar and P.Sudershan[2] ranked the districts by taking into account twenty one variables which included education, health

---

1 Sundrum,AR.Development Economics, Canaberra, John Wiley and Sons, 1983

2 Iyengar and Sudershan, 'A Method of Classifying Regions/ Multivariate Data', Economic and Political Weekly, Vol.XVII, No.51, 1982, p.2047.

services, electrification, yield per hectare, irrigated area, roads, communication facilities, banks, industries etc. They weighted each of these variables and worked out cumulative scores for each of the districts. Based on the cumulative scores, they classified the districts into five categories (Table No.1)

Another study conducted by VLS Prakash Rao,[3] has classified districts according to agricultural and infrastructural development and industrial development. The method adopted for classifying these districts was factor analysis approach. Factor analysis is a method which takes into account a number of variables and attempts to determine which characteristics are most important in classifying and ranking any phenomena.[4] In this study variables like yield per hectare, percentage of area irrigated, power supply, health and educational facilities, roads, communication facilities, number of industries in Andhra Pradesh. In the ranking of districts by this study also, Krishna and Guntur fall into the developed category and Mahabubnagar and Medak fall into the category of backward districts.

---

3 Prakash Rao, VLS, Backward Areas in Andhra Pradesh: Pattern of Development, Hyderabad, Centre for Economic and Social Studies, 1984.

4 Kim and Mueller, Introduction to Factor Analysis - What it is and How to do it, California, Sage Publications, 1978.

2.2 Health Service Indices : The indices used for health services include :

(1) Institutions which include hospitals, dispensaries, Primary Health Centres and Sub Centres in the public sector, nursing homes in the private sector and hospitals in the voluntary sector.

(2) Bed strength would include total number of beds in each of these institutions and bed/population ratios in each of the three sectors across selected districts.

(3) Manpower would include doctors, nurses and paramedical staff i.e. Auxillary nurse Midwife, Health Inspector and health visitors. It will also include personnel population ratio for selected districts.

(4) Coverage would include rural-urban distribution of institutions. In addition spatial distribution of institutions for the public sector will be studied.

2.3 Socio-economic status: Given the fact that Andhra Pradesh is primarily an agricultural state with two thirds of the population dependent on agriculture for their livelihood, we have explored major caste/class combinations that have emerged and their representation in the political process. As far as

social forces are concerned we would be looking at religous composition of regions, the major caste/class formations in these regions and how they have been represented in the political life of the state. For this purpose we would look at the caste background of ministers and the regions they represent in the various ministries. We would also take into account the social background and regional representa- of the various health ministers in the state. Based on this, we would study how these factors influence the growth of health services in a given region.

2.4 Data Required : In order to study the growth of health services, information has been compiled on number of institutions, bed strength and manpower. While we have got year wise information on the public sector, it is limited for private and voluntary sectors. The state plan documents have been reviewed for the overall policy and regarding medical and public health. In addition, other evaluation studies published by the state government on health services have also been used. Studies on social, economic and political developments in Andhra Pradesh used for the dissertation have been based on references to work done by various scholars from the Centre for Economic and Social Studies, Osmania University and Central University of Hyderabad. The libraries of these institutions were used for reference work.

2.5 Sources of Data: Primary data included collection of year wise information on the growth of specific indices for selected districts, for the public sector, from the Statistical Division at the Directorate of Medical and Health Services, Hyderabad. For certain indices like bed strength and number of institutions, in the public sector, yearwise information was available only from 1968 onwards. This was mainly because prior to 1968 records have not been properly maintained. A great deal of time was spent in compiling information on increase in bed strength across taluks hospitals at district level since the records are not easily accessible. Similarly in the case of personnel, while information on number of doctors was available over time, it was less easily available for nurses and for paramedical workers only current information was available at the district level. Compiling information on personnel also took up a good deal time since it involved making trips to the respective districts and going through available records at the statistical division in Directorate of Medical and Health Services.

As far as the private sector was concerned, information was limited. An effort was made to tap various sources to compile information at the state and district

levels. For this purpose, information was compiled from the records available with the President of Andhra Pradesh Nursing Homes Association and the Health Secretary, Government of Andhra Pradesh. Although the information is available only for 1984 and the bed strength an approximation, it gives us some idea of the extent of involvement of the private sector.

For the Voluntary Sector, information was compiled from the directories brought out by the Andhra Pradesh Chapter of the Voluntary Health Association. These directories have information on institutions, bed strength and manpower. In addition to the VHAI publications, IIM Calcutta has brought out a directory in 1980 and AVARD has also published a directory in 1979 which have covered all the states in India. Information on this sector was compiled from these sources. In addition several doctors, presidents of associations and administrators, were interviewed and district visits were also undertaken.

Secondary Data Sources included information on the Registered Medical Practitioners in rural areas from the Village Directories of the Census District Handbooks and the District Level Handbooks published by the State Government. The membership pattern of the Indian Medical Association was used as a supportive index for the growth of private

sector. Membership pattern was compiled year-wise from the local chapter of the IMA for selected districts for which information was available. Information regarding coverage of districts by government medical amenities was compiled from the District Census Handbooks. In addition, health service maps prepared by the Cartographic Unit, at the Centre for Economic and Social Studies at Hyderabad have been used to show spatial distribution of facilities in the public sector for selected districts. Published studies on social, economic and political developments in Andhra Pradesh have been also taken into account.

2.6 Analysis of Data : Data has been presented for the selected districts sector-wise for the various indices. Analysis of this data for forward and backward districts have been intermeshed for comparison.

2.7 Limitations of the Study: Data on certain indices for the three sectors is limited. In the public sector information regarding certain categories of paramedical workers was not available at either district or state level. Infact even at the central level, for Andhra Pradesh, information has not been received for those categories of paramedical workers.[5]

---

5 Government of India, Ministry of Health, Health Statistics of India, 1986, Central Bureau of Health Intelligence.

As far as the private and voluntary sectors, information is very limited. This is essentially an unexplored area but even the little information we have, does provide adequate ground for analysis and insight. As far as time series information is concerned it is available only for the public and not for the other two sectors. As for the studies relating to socio-economic and political developments, we have reviewed various studies and taken those aspects which we felt were relevant for this study. As there were no such studies at the district level, we have only relied on studies dealing with regional variations at the state level. We realise that these factors do pose certain limitations for our study.

CHAPTER II

An Overview of Andhra Pradesh

(a) A Profile

(b) Policy

(c) Health Services.

ANDHRA PRADESH : A PROFILE

The State of Andhra Pradesh was formed on November, 1st 1956, under the states reorganisation scheme. It is the fifth largest state with an area of 276,754 sq kilometres accounting for 8.4% of India's territory. The state is bounded by Maharashtra in the North, Orissa and Madhya Pradesh in the north east, Tamilnadu in the South, Karnataka in the West and Bay of Bengal in the east. It is fed by major rivers like Krishna, Godavari, Tungabhadra and Pennar which are a good source for both irrigation and power. A major part of the State is covered by red soil which has relatively lesser capacity to retain water than either the black or alluvial soil. There is a substantial amount of area covered by black soil which is suitable for growing tobacco, cotton and other cash crops while alluvial soil deposits are found in the delta region which is conducive for paddy cultivation.[1]

2.1 Demography : The population of the State according to the 1981 Census was 5,35,49,673 of which,there were 2,37,41,657 (44.3%) in the Coastal districts, 2,01,82,085 (37.7%) in Telengana and 96,25,931 (18%) in Rayalaseema. The state has a density of 195 persons per sq.km. as against an all-India average of 220 persons per sq.km. The rate of urbanisation has been low.

---

1 Data News Features, Andhra Pradesh Year Book,1985, Hyderabad, 1986.

In 1974, urban population, accounted for 19.31% and rural population, the remaining 80.89%. In 1981 there was a marginal increase in the urban population which accounted for 23.5% while the remaining 76.5% constituted the rural population. The literacy rate for the state was 29.44% in 1981, which is well below the all-India average of 31.23%. While the state average is 29.44%, there is a great deal of variation across districts with respect to literacy rates. While Krishna, Guntur and West Godavari districts have rates as high as 41%, 36% and 37% respectively. Mahabubnagar, Medak and Adilabad districts have rates as low as 18.95%, 21.36% and 19.97% respectively.[2]

2.2 Religious and caste Composition : Of the total population 88.75% are Hindus, 8.47% Muslims and 2.68% Christians in the state. While the Muslims constitute the second largest community, in the coastal districts of Krishna and Guntur, christians are the second largest community next to the Hindus. The Scheduled castes and tribes constitute 14.87% and 5.93% of the total population respectively.[3]

The significant castes in the state are Brahmins, Reddis, Kammas, Velamas, Rajus, Harijans and a number of other minor castes which are classified as backward classes.[4]

---

2 Ibid
3 Ibid
4 Ibid

2.3 Economy : Being predominantly an agricultural state a large percentage of the workers are engaged in agriculture and allied activities[5]. Infact Andhra Pradesh ranks fifth among all the states with respect to cropped area and second in the quantum of area irrigated, among various states. The yield per hectare for crops like rice, groundnut, cotton and tobacco in Andhra Pradesh is higher than the All-India average. As far as industrial and commercial fields are concerned Andhra Pradesh ranks lower than other states as a result of which only a small percentage of the workers are engaged in non-agricultural occupations.[6]

This in brief are the characteristics of Andhra Pradesh. In the following section we will review the structure of the economy and the socio-political formations in the state.

2.4 Structure of Economy: The State of Andhra Pradesh is divided into three distinct regions, namely, Coastal Andhra, Rayalaseema and Telengana. These regions are characterized by different agro-climatic regimes and while coastal Andhra and Rayalaseema were a part

---

5 Ibid

6 Ibid

of erstwhile Madras Presidency, Telengana was a part of the erstwhile Hyderabad State. The differences in the agro-climatic regimes and political and economic structures have contributed to inter regional variations in the levels of economic development within the state. It may be pointed out here, that the coastal Andhra region, which is the most developed region, does comprise of backward districts like Srikakulam, while Telengana, which is a backward region, has relatively well developed districts like Khammam and Nizamabad.

2.5.1 Agro-Climatic Variations : The Coastal Andhra region has certain geographical advantages over Telengana and Rayalaseema both in terms of availability of water and the type of soil. The deltas of the two major rivers, namely, Krishna and Godavari, cover certain districts of the coastal Andhra region. A substantial amount of area in the deltas is covered by black soil which is suitable for growing a variety of cash crops and large deposits of alluvial soil which is conducive for paddy cultivation.[7] The Telengana and Rayalaseema regions, on the other hand, are covered mainly by red soil.[8] Along with these natural advantages, Coastal Andhra which was under the Madras presidency, has also

---

7 Ibid

8 Ibid.

benefitted by the fact that the British built infrastructure for providing irrigation by constructing an anicut across the rivers of Krishna and Godavari, which changed the material basis of this regioh.[9] In the Telengana region, the Nizam's government did not invest very much in developing irrigation. The only major irrigation project taken up by the Nizam's government was the Nizamsagar project. There were no major irrigation project in the Rayalaseema region. After the formation of the State in 1956, two major irrigation projects viz. Nagarjunasagar and Srisailam were commissioned by the government. Both these projects have benefitted the coastal areas more than either of the other two regions.[10]

In addition to the geographical advantages there were differences in the land systems in these regions. In the coastal Andhra and Rayalaseema regions, Zamindari and Ryotwari land systems existed. Under both these systems, a large chunk of the cultivated land was owned by landlords, money lenders, government employees and business men.[11] In the Telengana region, on the other hand, feudal agrarian relations existed with Deshmukhs, Deshpandeys and landlords

---

9 Haragopal,G.'Dimensions of Regionalism: A Nationality Question, (Mimeograph), Hyderabad, Centre for Economic and Social Studies, 1984.

10 Krishna Rao,YVS.'Growth of Capitalism in Indian Agriculture : A Case Study of Andhra Pradesh' in Krishna Rao et al (Ed.) Peasant Farming and Growth of Capitalism in Indian Agriculture,Vijayawada,Visalandhra Publishing House, 1984, p.15.

11 Ibid. p.2

owning large areas of land.[12] Land used to be leased out to peasants and heavy taxes were levied by the landlords, Deshmukhs and other officers in the Nizam's government.[13] As a result of this the peasant did not have enough to meet the basic needs of his family and consequently nothing was left for improvement of land.[14] To put it briefly, the pre-independence agrarian structure was characterized by feudal landlordism in the Telengana region, peasant farming in the Rayalaseema region and the coastal Andhra region exhibited a mixed picture.[15] The introduction of irrigational facilities in the Coastal Andhra area during the mid-nineteenth century helped in minimising famines and improved the prosperity of ryots thus resulting in the growth of the middle and rich peasant classes in these areas.[16]

In Telengana, on the other hand, the historic armed struggle of the peasantry in the 1940s directed against the feudal autocratic rule of the Nizam. As a result of this struggle the Indian Government, after police action in 1948, enacted a number of legislations in order to abolish the feudal land systems and all intermediaries between the state and the landowner, so as to bring the entire

---

12 Ibid. P.2
13 Ibid. p.2
14 Ibid. p.3
15 Ibid. p.2
16 Haragopal,G. Op.Cit.

state under the ryotwari system.[17] However, the legislation for land reform enacted during the post-independence period have only had a marginal effect in weakening the hold of the feudal gentry.[18]

As a consequence of both geographical and historical factors the coastal Andhra region provided the basic conditions in which green revolution took roots.[19] The conditions necessary for the green revolution viz. the availability of water, land and complementary resources, were available in coastal Andhra and it was essentially the rich peasants and capitalist farmers who were able to use the concessions offered by the state for development of agriculture and allied activities.[20] The green revolution contributed to surplus accumulation which accentuated the inter regional disparities and contributed to the growth of a number of agro-based and other industries in the Coastal Andhra region.[21] Even during the pre-independence period landlords and rich peasant sections, mainly from the coastal Andhra area, entered into a number of agro-based industries by setting up oil and rice mills. Following the green revolution period, there was a phenomenal growth in manufacturing activities in sugar, cement, cotton ginning, spinning and oil

---

17 Sundarayya 'Telengana' in Desai,AR(Ed.) Peasant Struggles in India, New Delhi,Oxford University Press, 1979.

18 Ibid

19 Thorner,D.'Coastal Andhra : Towards an Affluent Society' in Economic and Political Weekly,Annual Number,Feb.1967.

20 Frankel,F.India's Green Revolution: Economic Gains and Political Costs,Princeton,Princeton University Press,1971.

21 Krishna Rao,YVS, Op.Cit.p.14

mills. [redacted] Sections of the landlords and rich peasants set up a number of small and medium scale industries. In addition they have also diversified their business interests into areas like trade and commerce, transport, hotel and cinema.[22] Thus a significant proportion of the surplus accumulated as a result of the green revolution, has been diverted to non-farm activities.

2.6 Socio-Political Structure : Given the fact that Andhra Pradesh has till recently been a predominantly agrarian economy with a narrow industrial base, it is the landowning caste and classes who have played an important role in the political life of the state. The dominant agricultural castes in the state are the Brahmins, Reddis, Kammas, Velamas and Telagas. While the Brahmins were a major landowning caste during the pre-independence period, many of them have sold their lands and entered into professional, government and other allied services.[23] Now, the dominant agrarian castes are the Reddis, Kammas and Velamas who are powerful due to their access and control over land and other assets.[24] While the Reddis are distributed across all the three regions of the state, the Kammas are essentially confined to the delta districts.[25] While the Reddis and

---

22 Ibid. p.49

23 Ibid. p.56

24 Fadia,B.'State Politics in Andhra Pradesh' in State Politics in India, New Delhi,Radiant Publishers,1984,p.21.

25 Ibid. p.21

Kammas are powerful castes, one must keep in mind that not all of them are landlords or equally well off. It is essentially the landlord and rich peasant classes from these castes who have dominated the politics of the state.[26] However, owing to the nature of parliamentary democracy, other castes, like scheduled castes, backward classes and minorities have also become an influential political force to reckon with.[27]

If one reviews the caste composition of ministries since 1956, the forward castes have dominated the most important portfolios. The representation of the forward castes exceeded fifty percent in all ministries except in 1972. When it came down to 45% while it was as high as 72% in 1960. Representation of backward classes and scheduled castes was however largely symbolic till 1967 when it was less than 10% but it gradually increased during the later years and varied between 11% and 20% (Table 2). The rise of the backward classes in state politics was a post 1969 phenomena linked partly to the Telengana Seperatist Agitation, when the Central leadership within the Congress party tried

---

26 Elliot,C.'Caste and Faction among the Dominant Caste : The Reddis and Kammas of Andhra' in Kothari,R(Ed.). Caste in Indian Politics, New Delhi, 1970, p.148.

. . Also see Reddy,N.'Congress Parties and Politics' in Reddy and Sharma,(Ed) State Government and Politics: Andhra Pradesh, New Delhi,Sterling Publishers,1979,p.202.

27 Reddy and Prasad,'Personnel of the Council of Ministers' in Reddy and Sharma (Ed.) State Government and Politics: Andhra Pradesh, New Delhi, Sterling Publishers,1979,p.160.

to build up backward classes and scheduled castes to check the Reddis from becoming too powerful.[28]

Table 2

ALLOCATION OF MINISTRIES BY CASTE

Name of the Chief Minister	Core Ministries	Development Ministries	Welfare Ministries	Other Ministries
N.Sanjiva Reddy F.C.	6	4	1	-
-1956 B.C./S.C.	-	1	1	-
Min.Com.	-	-	1	-
N.Sanjiva Reddy F.C.	6	4	1	-
-1957 B.C/S.C/S.T.	-	1	1	-
Min.Com.	-	-	1	-
D.Sanjeeviah F.C.	5	4	1	2
-1960 B.C/S.C/S.T.	1	-	-	1
Min.Com.	-	-	1	-
N.Sanjiva Reddy F.C	5	3	2	3
-1962 B.C/S.C/S.T	1	1	-	1
Min.Com.	-	-	-	1
K.Brahmananda F.C. Reddy	4	3	2	3
-1964 B.C/S.C/S.T.	1	1	-	1
Min.Com.	-	-	-	1
K.Brahmananda Reddy F.C.	5	5	1	4
-1967 B.C/S.C/S.T	-	-	2	2
Min.Com.	-	-	1	-
K.Brahmananda Reddy F.C	4	10	1	3
1969 B.C/S.C./S.T.	1	1	2	3
Min.Com.	-	-	2	2
P.V.Narasimha Rao F.C.	4	6	2	4
-1971 B.C/S.C/S.T.	-	4	1	2
Min.Com.	-	-	1	-
P.V.Narasimha Rao F.C.	4	7	-	5
-1972 B.C/S.C/S.T.	1	3	3	4
Min.Com.	-	-	1	1
J.Vengal Rao F.C.6	6	5	2	4
-1973 B.C/S.C/S.T.	-	4	3	2
Min.Com.	-	1	-	1
Dr M.Chenna Reddy F.C	4	5	-	8
-1978 B.C./S.C/S.T	2	4	4	3
Min.Com.	1	1	-	2

Totals do not tally as the same ministers were in charge of Ministries in more than one group.

(contd...pg.37(a))

28 Acharya,AR.'Telengana and Andhra Agitation' in Reddy and Sharma (Ed.)State Government and Politics: Andhra Pradesh, New Delhi, Sterling Publishers,1979, p.516.

Note: Core Ministers : Home, Revenue, Finance, Agriculture, Commerce and Industry Development Ministries : Panchayati Raj, Planning, Irrigation, Forests, Cooperation, Marketing, and Fisheries. Welfare Ministries: Harijan Welfare, Social Welfare, Tribal Welfare, Women Welfare, Medical and Health, and Rehabilitation. Other Ministries : All the other Ministries.

* F.C: forward castes B.C/S.C/S.T.: Backward Castes, Scheduled castes and Tribes and Min.Com,: Minority Communities.

Source : Reddy and Prasad, 'Personnel of the Council of Ministers' in Reddy and Sharma (Ed.) State Government and Politics : Andhra Pradesh, New Delhi, Sterling Publishers, 1979, p.150.

The Telengana Separatist Agitation of 1969 was a by product of acute economic problems in the Telengana region. This agitation brought to light the regional imbalances and discontent of the people living in backward underdeveloped and neglected conditions.[29] The basic cause for this agitation was the disequilibrium between the developed coastal Andhra and the less developed and backward Telengana region. Following this agitation, the leadership of the State became more conscious of the inter-regional differences and set up regional planning boards to ensure rapid socio-economic development of the backward areas.[30] In addition conscious measures were also taken to reduce inter-regional disparities across a wide variety of economic and social infrastructure.

Every ministry in the State has had to take due care in the appointment of ministers to ensure that members belonging to different castes and regions are properly represented in the distribution of portfolios. The core ministries which include Home, Revenue, Finance,Agriculture, Commerce and Industry have been essentially the monopoly of the forward castes. If one looks at table II,(pg.37) one finds that in the various ministries, scheduled castes have had a marginal representation. Similarly in the case of development ministries which include Panchayati Raj, Planning, Irrigation,

---

29 Ibid

30 Based on discussions with the former Secretary of Planning, Government of Andhra Pradesh, 1986.

forests, Cooperation, Marketing and Fisheries were also essentially monopolised by forward castes until 1971. It is only after this period that the weaker sections, namely, scheduled castes, backward classes and minorities were given a share of these ministries. In the case of welfare ministries which include education, social welfare, medical and public health, there has been greater representation for the schedule castes, backward classes and minorities. What must be noted, is that, though greater representation is being given to the weaker sections, they are not always allotted ministries which are considered important.

Given the variation in the levels of socio-economic development, representation of districts in the ministry also becomes an important factor with regard to developmental matters because non-representation of districts can lead to neglect of districts.[31] Since 1956, Hyderabad, Guntur, East Godavari, Krishna and Nellore have been well represented. Medak, Mahabubnagar, Adilabad, Warangal, Karimnagar have been fairly well represented comparitively Srikakulam, Cuddapah, Nizamabad and Nalgonda have been poorly represented. (Table No.3)

---

31 Reddy and Prasad, 'Personnel of the Council of Ministers' in Reddy and Sharma (Ed). State Government and Politics: Andhra Pradesh, New Delhi, Sterling Publishers,1979,p.156.

TABLE 3

DISTRICT REPRESENTATION IN THE COUNCIL OF MINISTERS

(Figures in Percentage)

Name of the District	1956	1960	1962	1964	1967	1969	1971	1972	1973	1978
Hyderabad	30	23	26	26	16	8	4	15	7	22
Warangal	-	8	7	6	-	-	-	3	-	6
Karimnagar	-	-	7	6	10	3	8	3	4	-
Mahaboobnagar	-	-	-	-	6	8	12	7	7	-
Nalgonda	-	8	-	-	6	8	4	3	4	-
Adilabad	7	-	-	-	6	8	4	7	10	3
Nizamabad	-	-	-	-	-	-	-	3	4	6
Medak	-	-	7	6	-	3	8	3	4	6
Khammam	-	-	-	-	6	8	4	3	4	-
Krishna	-	-	13	13	6	3	8	10	16	6
East Godavari	14	13	-	6	10	8	12	3	4	6
Visakhapatnam	-	8	7	6	-	8	-	7	10	3
Guntur	14	15	13	6	6	14	4	7	-	6
West Godavari	-	-	-	6	6	3	4	3	-	6
Nellore	7	-	7	13	10	8	-	-	4	3
Srikakulam	-	-	-	-	-	3	4	7	7	-
Prakasham	-	-	-	-	-	-	4	-	-	6
Anantapur	14	-	7	-	-	3	8	3	7	6
Cuddapah	-	-	-	-	-	-	4	3	4	-
Kurnool	7	15	-	-	6	3	4	7	4	9
Chittoor	7	-	7	6	6	3	4	3	-	6
TOTAL	100	100	100	100	100	100	100	100	100	100

Source : Reddy and Prasad, 'Personnel of the Council of Ministers' in Reddy and Sharma (Ed.) State Government and Politics : Andhra Pradesh, New Delhi, Sterling Publishers, 1979, pp.157-158.

It must be remembered that after the formation of the state in 1956, the Congress party has been continuously in power till 1983. The decline of the Congress party began from the late 1970s with increasing infighting among its members. The weakening of congress rule occured at a time when the emergent rich peasant and regional enterpreneurial groups were looking for a stable government which would help these classes to realise the full potential of the post-green revolution development in the state which witnessed the accumulation of surpluses and growth of rich peasant and business classes. It is this trend along with the weakness of the Congress party which gave rise to a regional party which came to power in 1983.[32]

From this brief review of the political development of the state since independence one thing that becomes clear is that the state, in recent times, has been witnessing important political changes. That such changes should reflect themselves in government policy should be fairly obvious. It would be our contention that these changes would be particularly important in areas like social services. It is from this point of view that we see the relevance of the preceding discussion for subsequent discussion on development of health services in the state.

---

32 Haragopal,G. Op.Cit.

In the following section we will briefly review the policy and priorities of the government with respect to overall development in general and health services in particular.

DEVELOPMENT POLICIES OF THE STATE

2.1 Overall Policy

Being predominantly an agricultural state, the policies and priorities of the state have been to promote agricultural development. The various plan periods have given priorities to provide for the required infrastructure to boost agriculture and industrial growth by investing in irrigation and power. Nearly 75% to 80% of the total plan outlays have gone for agriculture, irrigation and power, as a result of which, on an average only 15% to 20%, have been given to other sectors like transport, education, health, water supply, sanitation, housing and welfare of scheduled caste/backward classes. However, during the VIIth plan period, the outlays for social services were increased accounting for 23.46% of the total outlay.

TABLE NO.4

PERCENTAGE OF TOTAL OUTLAY FOR AGRICULTURE, IRRIGATION AND POWER

	PLAN PERIODS							
	I	II	III	Annual Plans	IV	V	VI	VII
1. Agriculture	13	20	22	17	16	3.1	9.5	4.51
2. Irrigation	22	31	26	25	26	30.5	24.6	27.37
3. Power	39	20	27	42	41	41.8	24.1	20.03
Percentage of Total Outlay	74	71	75	84	83	75.4	58.2	51.91

Note : Figures in percentage.

Source : Government of Andhra Pradesh, Plan Documents, Department of Finance and Planning, Hyderabad.

Having reviewed overall policy we shall look at state policy with regard to Medical and Public Health.

Policy Regarding Medical and Public Health:

The State has been broadly following the central policy with respect to medical and public health. It has laid greater emphasis on the curative aspect of health care. A state level Working Group on Medical and Public Health reviewed the strategy of the first two plan periods and stressed that "any country where the general level of health is low due to malnutrition and other factors, should lay greater emphasis on the curative side. Infact till the general level of health is considerably raised by an increase in the standard of living, the curative aspect of health programmes will be all the more important".[1] Given this perspective, the thrust of the subsequent plan periods was to strengthen medical education and teaching hospitals in the state.

Infact when one looks at the total expenditure on medical and public health, it shows that nearly two thirds of the expenditure is incurred on curative services through

---

1 Government of Andhra Pradesh, Third Five Year Plan, Department of Planning, Hyderabad, 1960, p.204.

establishment of hospitals and dispensaries. Allopathic services have gained predominance over indigenous medicine by claiming nearly 95% of the total expenditure in the medical subsector.[2]

If one reviews the state's expenditure pattern during the second and third plan periods, medical education, establishment of hospitals and dispensaries and control of communicable diseases accounted for nearly 75% to 85% of the total expenditure on Medical and Public Health (Table No.5). During the same period, the expenditure on establishment of primary health centres was only 7% and 3.17% of the total expenditure during the second and third plan respectively. What is interesting to note is that while a major share of the expenditure on public health has been for the control of communicable diseases the expenditure on primary health centres was negligible

---

2 Kumar, PVS. Medical and Health Services in Andhra Pradesh : A Review, Centre for Economic and Social Studies, Hyderabad, 1984.

TABLE No.5

EXPENDITURE INCURRED DURING 2ND AND 3RD PLAN PERIODS UNDER MEDICAL AND PUBLIC HEALTH

(Rs.in Lakhs)

Sl. No.	Subject	Expenditure in 2nd Plan	%age of Total	Expenditure in 3rd Plan	%age of Total
1.	Medical Education	266.10	31.87	220.15	17.20
2.	Training Programme	56.96	6.82	83.98	6.55
3.	Hospitals/ Dispensaries	163.05	19.00	266.97	20.79
4.	Primary Health Centres	58.40	7.00	40.68	3.17
5.	Control of Communicable Diseases	225.76	27.03	635.82	49.54
6.	Family Planning	13.44	2.60	10.93	0.85
7.	Indigenous Medicine	10.83	1.00	13.59	1.06
8.	Other Programmes	40.54	4.86	10.90	0.84
	TOTAL	835.10	100.0	1283.02	100.00

SOURCE : Government of Andhra Pradesh, Economic Development of Andhra Pradesh 1951-1968, Planning Department, Hyderabad, 1969.

During the fourth plan period, the basic objective of the government was to expand curative facilities across the state. Accordingly the plan envisaged strengthening and expansion of taluk headquarters hbspitals, provision of adequate facilities in primary health centres and facilities for specialized treatment at district headquarters hospitals.[3] Thus once again medical and nursing education gained importance. Infact nearly 65% of the total expenditure was incurred on the medical subsector, around 30% on Public Health and 5% on indigenous systems.[4]

At the end of the fourth plan period, the state government undertook a review of development for all sectors of the economy from the first plan onwards to provide direction for formulation of the fifth plan.[5] A review of medical and health brought forth issue regarding institutions and manpower. It was felt that the total number of doctors produced were not being absorbed. The posts of doctors in Primary Health Centres were lying vacant, and most of the primary health centres did not have adequate buildings, drugs or equipment available. It also pointed out that while there had been some improvement in the

---

3 Government of Andhra Pradesh, Fourth Five Year Plan, Department of Planning, Hyderabad, 1969

4 Ibid.

5 Government of Andhra Pradesh, Fifth Plan Technical Papers-Review of Development, Department of Planning and Cooperation, Hyderabad, 1972, pp.69-74.

TABLE NO.6

PATTERN OF INVESTMENT (PLAN OUTLAYS) IN DIFFERENT PLAN PERIODS IN PUBLIC SECTOR-INDIA AND ANDHRA PRADESH

(Rs. in Crores)

Plan Period	Total Plan/Outlay		Health	
	India	Andhra Pradesh	India	Andhra Pradesh
(1)	(2)	(3)	(4)	(5)
Ist Plan Actuals (1951-56)	1960.0	N.A.	65.2 (3.3)	N.A.
II Plan Actuals (1956-61)	4672	185.01	140.8 (13.0)	8.37 (4.52)
III Plan Actuals (1961-66)	8576.5	352.41	225.9 (2.6)	23.31 (6.61)
Annual Plans Actuals (1966-69)	6625.4	234.06	140.2 (2.1)	5.82 (2.49)
Fourth Plan Actuals (1989-74)	15778.8	448.87	335.5 (2.1)	4.65 (1.04)
Fifth Plan Actuals (1974-79)	39426.2	1444.70	760.8 (1.9)	17.40 (1.20)
Annual Plans Actuals (1979-80)	12176.5	459.11	223.1 (1.8)	7.80 (1.70)
Sixth Plan Outlay (1980-85)	97500.0	3403.79	1821.1 (1.9)	61.53 (1.81)

Note : Figures in brackets are percentage of total outlays.

Source: Kumar,PVS, Medical and Health Services in Andhra Pradesh : A Review, (Table II), Centre for Economic and Social Studies, Hyderabad, 1984.

teaching hospitals, the expansion of medical facilities was lagging in rural areas.[6]

Based on these observations during the fith plan it was proposed to upgrade all taluk hospitals and Primary Health Centres as a measure to strengthen the referral system.[7] In addition it also proposed to promote self employment opportunities for medical graduates to set up practice in rural areas by subsidising the costs to set up dispensaries.[8]

During the Sixth plan, the thrust was similar to the fifth plan which emphasized strengthening of district, taluk and teaching hospitals and expansion of primary health centres.[9] Medical relief, through teaching hospitals, and medical education were strengthened by allocating almost 65% of the outlay for modern medicine to these headings.[10]

The outlays on medical and public health, as a percentage of the total outlays, has been decreasing, from

---

6 Ibid. pp.69-70

7 Ibid. pp.72-73

8. Government of Andhra Pradesh, Five Year Plan - Draft Outline, Vol.II, Hyderabad, 1978, p.356.

9 Government of Andhra Pradesh, Sixth Five Year Plan, Department of Planning, Hyderabad, 1980, p.341

10 Ibid, pp.344-345.

the first plan to the VIth plan except for the third plan period which showed an increase (Table No.6). This increase was because a medical college at Tirupati was set up during this period. During the VIIth plan period, there has been an increase in the outlay on Medical and Public Health services. In continuation of the earlier policy it has been proposed to strengthen taluk, district and teaching hospitals. It is proposed to provide superspecialities in all hospitals. In addition to strengthening hospitals the plan also envisages greater input into rural health care through the minimum needs programme.[11]

While the earlier plan documents discussed only the public sector, the VIIth plan has not only laid more emphasis on establishing super specialities in government hospitals but also seeks to encourage further the involvement of private hospitals in the state health services. In addition it also contemplates on devising institutional mechanisms for attracting finances from non-resident Indians. This shift towards privatisation in health care has to be viewed in the context of recent political changes in the state with the emergence of a regional party which represents the interests of the rising business classes in this state.

---

11 Government of Andhra Pradesh, Seventh Plan, Department of Planning, Hyderabad, 1986,

In brief, while the outlays on medical and public health have been meagre, the priorities have been for strengthening medical education and hospitals which has resulted in the expansion of hospitals at the expense of Primary Health Centres. In addition to the Public sector, there is a rapidly expanding private sector but as yet a relatively minimal involvement of the voluntary sector in health care. Of the total expenditure on Medical and Public Health, almost 65% is claimed by the Medical subsector around 17% is expended on public health and the remaining on family welfare.[12]

4.3 Health Services in the State :

In the public sector there are 337 allopathic hospitals, 160 dispensaries and 906 primary health centres as on 31.3.1986 in the state.[13] The total bed strength is 29,096 and number of doctors and nurses are 5814 and 5663 respectively. The total area of Andhra Pradesh is 275,068 sq.kms, therefore, on an average, there is one government allopathic institution for 196.4 sq.km and the number of persons covered by an allopathic institution is

---

12 Kumar, PVS, Op.Cit.

13 Government of Andhra Pradesh, Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

15,38,249. On an average there is one doctor for 10,097 persons, one nurse for 10,366 persons. As far as the paramedical staff are concerned there are 1,250 health visitors, 637 health supervisors, 5,012 ANMs and 10,225 midwives for the state as a whole. The bed/ population ratio is 1:2018 persons.

Information on the private sector is incomplete. Out of the twenty three districts, information is available only for 21 districts. Based on the latest information, there are 22,192 beds available in the private sector. What needs to be pointed out here is that the bed strength indicated is at best an approximate and therefore the actual figures would be higher.[14] The number of doctors and nurses engaged in private practice is not available.

As far as the voluntary sector is concerned the total bed strength, according to the latest available data, is 7103. Information on number of doctors and nurses employed in the voluntary sector is available only for 1981. As per this information there are 373 doctors and 1816 nurses.

---

14 Based on information compiled by Health Secretary, Government of Andhra Pradesh, March, 1987, and discussions with the President of Andhra Pradesh Nursing Homes Association, Hyderabad, March, 1987.

Thus the total bed strength in the non-governmental sector is 29,295 as against 29,096 in the governmental sector. What must be taken into account is that the private sector has been expanding. According to Dr.Bajrang Lal, President, Andhra Pradesh Nursing Homes Association, "there has been a 25% increase in the number of nursing homes in the twin cities of Hyderabad and Secunderabad and a 10-15% increase in the delta districts during the last two years".[15] Therefore, the bed strength in the non-governmental sector is infact higher than in the governmental sector. While we do not have data on the growth of the private and voluntary sectors, information is available for the public sector since the formation of the state.

4.4 Growth of the Public Sector :

If we examine the progress in Medical care over the years, we find a considerable increase in the bed strength, institutions and medical manpower in the state. On an average there is one bed for 2,200 persons over the years. There has been nearly a four fold increase in the number of doctors whereas the number of nurses have barely doubled over a twenty year period (Table No.7).

---

15 Based on discussions with the President, Andhra Pradesh Nursing Homes Association, March, 1987.

TABLE NO.7

PROGRESS IN MEDICAL CARE IN ANDHRA PRADESH OVER THE YEARS

Item	1956-57	1966-67	1976-77	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	'85-86
1. INSTITUTIONS AND BEDS(STATE GOVERNMENT L.F)										
1. Hospitals	170	281	306	323	326	328	333	334	337	337
2. Dispensaries	226	680	702	653	582	586	586	592	607	160
3. Primary Health Centres.	136	365	416	420	420	421	425	430	455	906
Total Medical Institutions	532	1,246	1,424	1,398	1,928	1,325	1,344	1,356	1,399	1,403
4. Beds	13,995	19,745	23,445	23,854	24,807	25,005	26,448	26,542	26,928	29,096
PERSONNEL (STATE GOVERNMENT ONLY)										
5. Doctors	1,094	3,096	3,726	4,028	4,164	4,253	5,049	5,099	5,150	5,814
6. Nurses	N.A.	2,491	3,105	3,968	4,065	4,186	4,837	4,852	4,897	5,663
POPULATION SERVED BY ONE										
Medical Institute	63,000	31,000	33,430	36,190	40,350	40,970	41,415	41,795	41,235	-
Bed	2,410	1,960	2,030	2,104	2,160	2,187	2,117	2,135	2,142	2,200
Doctor	30,800	12,500	12,776	12,460	12,870	13,560	11,095	11,115	11,200	10,097
Nurse Bed Ratio	N.A.	1 : 7	1: 6.8	1:6.0	1:5.4	1:5.4	1:5.4	1:5.4	1:5.4	-

Note : The figures for the years upto 1976-77 are inclusive of thefigures for E.S.I. Institutions and Personnel.

Source: Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

This is in keeping with the policy of the government to strengthen medical education. Given the policy to strengthen medical education and teaching hospitals, of the total bed strength in the state, 45% are in teaching hospitals.

The number of primary health centres have not increased significantly, it is only during 1985-86, with the introduction of Mandal Primary Health Centres that there has been an increase (Table No.7).

There are nine medical colleges in the state, of which four are in coastal Andhra, two in Rayalaseema and three in Telengana region. As far as institutions for training nurses are concerned there are only eight institutions with around 200 seats. The number of training institutions for ANMs and health visitors is low with only 14 and 3 institutions respectively.

The total number of beds, personnel and institutions, bed-population and personnel-population ratios give us a cumulative picture but little idea of the variations in distribution of these services across districts. This is possible only through the comparative study of selected districts.

Having reviewed the broad trends at the state level, the next chapter will deal with the selected districts.

CHAPTER III

The Data Base

(a) The Study District

(b) Health Services Infrastructure in The Study Districts in :

(i) Public Sector

(ii) Private Sector

(iii) Voluntary Sector.

THE STUDY DISTRICTS

Krishna and Guntur districts belong to the coastal Andhra region which was a part of the erstwhile Madras Presidency while Mahabubnagar and Medak belong to the Telengana region which was a part of the erstwhile Hyderabad state. In this section we will present, in brief, the socio-economic characteristics of each of these districts and then the evolution of health services infrastructure in the districts.

3.1 Guntur District: The district is bounded by Nalgonda and Krishna districts in the north, by Prakasam and Mahbubnagar on the West, on the East by the Bay of Bengal and Krishna district. The Guntur district of today was constituted in 1904 carved out of Ongole taluk of Nellore. Prior to 1859, there was a Gunture district with a different jurisdiction. In 1859 this district was abolished and merged with Masulipatnam and Rajamundry and remamed as Krishna and Guntur districts. In 1904 it was constituted as a separate district. In 1970, further changes were made with the formation of Prakasam district which was carved out of parts of Bapatla, Narasaraopet and Vinukonda taluks.[1]

The district is fed by five rivers viz. Krishna, Gundlakamma, Musi, Naileru and Chandravanka. The predominant soil is black cotton constituting 69% followed by red loamy

1 Government of Andhra Pradesh District Gazeteers-Guntur, Hyderabad,1977, pp.2-4.

constituting 24%. The area covered by the district is 11,391 sq.kms.

The total population of the district is 35.35 lakhs, of which 24.89 lakhs are in rural and 9.46 lakhs are in urban areas.[2] The population density is higher than the state average with 349 persons per sq.km. Nearly 78% of the population are Hindus, followed by Christians who constitute 13% of the population and the remaining population are Muslims. The principal castes in this district are the Brahmins, Vaisyas, Kammas, Reddis and Harijans. There are a few landholders among the Brahmins but many of them have entered into a number of professional services. The Rajus or Kshatriyas who are also landowning castes are restricted to two taluks - Repalle and Bapatla. It is the Reddis, Kammas and Telagas who are found in every part of the district and form the landowning and cultivating classes in this district. The scheduled castes constitute 9.2% of the total population of the district.[3]

Among workers, 25% are cultivators, 44.9% agricultural labourers and 26.9% other workers. The literacy rate for this district is 36.1% as against the state average of 29.44%. 94% of all the town and villages have been electrified in this district.[4]

---

2 Data News Features, Andhra Pradesh Year Book 1985, Hyderabad, 1986, p.146.

3 Guntur District Gazetteer, Op.Cit. pp.83-86

4 Data News Features, Op.Cit., p.146.

52% of total geographic area is under crops and 43.5% of cropped area is irrigated. Three fourths of cropped area is food crops viz. paddy, pulses and jowar while the remaining one fourth is non food crops viz. groundnut, tobacco and cotton. 75% of the country's export of virginia tobacco is from Guntur. Canal irrigation accounts for 95% of total irrigation in the district. The major irrigation projects in the district are the Krishna Western Delta Project System and Nagarjuna Sagar Project System.[5]

3.2 Krishna District is one of the oldest British administered areas of Andhra Pradesh. It is surrounded by Bay of Bengal in the east, Khammam district on the north, Godavari districts on the west and Bay of Bengal on the south. The district is fed by Krishna and its tributaries. A large proportion of the area is covered by black cotton soil (58%) while sand clay covers around 22.5% and red loam covers an area of 8,727 sq.km.[6]

The total population of the district is 30.48 lakhs, of which, 20.56 lakhs are in rural and 9.92 lakhs in urban areas. The density in this district is 301 persons per sq.km, which is above the state average.[7] As, in the Guntur, Hindus constitute the bulk of population, followed by Christians and then Muslims. The principal castes in this district are Vaisyas, Kammas, Kapus and Harijans who are distributed

---

5 Ibid.

6 Ibid, p.154

7 Ibid. p.154

all over the district. It is the Kammas and Kapus who are largely landowning and cultivating. The Vaisyas are engaged mainly in trade and money lending.[8] The scheduled castes constitute 13.95% of the total population. Among the workers, 20.5% are cultivators, 43% agricultural labourers and 35.7% other workers. The literacy rate for this district is 42.36%, which is the highest in the state, excluding Hyderabad city.[9]

57.5% of total geographic area is cropped. Of the cropped area 59.3% is irrigated. The district is the second largest producer of rice in the state. This district produces non-food crops like groundnut and tobacco. Nearly 85% of total irrigation in the district is through canals. There are no backward blocks in this district.

Having reviewed the characteristics of the two advanced districts, we will be presenting the characteristics of the two backward districts.

3.3 Mahbubnagar : This district is bounded on the north by Hyderabad and Ranga Reddy districts, on the east by Nalgonda and Guntur districts, Kurnool in the South and Raichur and Gulbarga districts of Karnataka in the West. The district is fed by Tungabhadra and Krishna which flow through the

---

8 Government of Andhra Pradesh District Gazeteers - Krishna, Hyderabad, 1977, pp.60-61.

9 Data News Features, Op.Cit., p.155

district, However, this district is not benefited by either Krishna or its tributary. The district occupies an area of 18,432 sq.km.

The total population of the district is 24.45 lakhs, of which, 21.77 lakhs are in rural and 2.67 lakhs in urban areas. The population density is 123 persons per sq.km. which is below the state average. Hindus constitute bulk of the population followed by Muslims and then Christians. The principal castes are the Reddis, Vaisyas and Harijans. Reddis are distributed all over the district and are largely the landowning and cultivating class. The Vaisyas are basically engaged in money lending and trading activities. The scheduled caste consttitute 17.35% of the total population.[10] Among the workers, 44.6% are cultivators, 34.6% are agricultural labourers and the remaining 20.8% constitute other workers. The literacy rate for this district is 18.95% which is below the state average.[11] 50.41% of total geographical area is under cropped area. Of the cropped area only 15.6% is irrigated. The major source of irrigation are tanks and wells which are dependent on rainfall. 75% of cropped area is under food crops viz. Jowar is the most important food crop and 25% is under non food crops which includes groundnut and castor. Most of the area is covered by red soil.

---

10 District Gazeteers, Op.Cit, p.43 and 46

11 Data News Features, Op.Cit, p.160

3.4 Medak : This district is bounded by Nizamabad and Karimnagar in the north, Warangal and Nalgonda in the east, Hyderabad in the south, and by Bidar district of Karnataka in the west. The district does not have any major rivers flowing through it except for Manjira which is a tributary of Godavari. The area covered by this district is 9,699 sq.kms.

The population of the district is 18.07 lakhs, of which, 15.91 lakhs are in rural and 2.61 lakhs in urban areas. The population density is 188 persons per sq.km. Hindus constitute bulk of the population, followed by Muslims and then Christians. The principal castes in the district are the Reddis, Velamas, Kapus, Vaisyas and Harijans. Of these, the Reddis and Velamas are distributed all over the district and are largely landowning and cultivating. The Vysyas are essentially involved in business and trading activities. The scheduled castes constitute 17.15% of the population.[12] Among workers, 45.2% are cultivators, 32% are agricultural labourers and the remaining 22.8%, other workers. Only 21.36% of the population is literate which is below the state average.[13]

---

12 District Gazeteers, Op.Cit, p.24-25

13 Data News Feature, Op.Cit,p.163.

About 51.2% of the geographical area constitutes the total cropped area in the district. Only 29.18% of the cropped area is irrigated is served by well and tanks which is dependent on rainfall. Food crops which include paddy, jowar, cereals and pulses forms 94% of the cropped while the remaining 6% is under non food crops. Non food crops include paddy, jowar, gingelly and castor.

The characteristics of the selected districts with respect to socio-economic development show differences in terms of size, population, literacy rates, percentage of irrigated area and type of crops grown. Of the selected districts, the advanced ones are more densely populated, have higher literacy rates and a larger percentage of area irrigated than the backward districts. With respect to size, Mahbubnagar is the largest, followed by Guntur, Medak and lastly Krishna district. There is difference in the type of crops grown in selected districts depending on availability of irrigational facilities. In the advanced districts paddy and cash crops are grown while in the backward districts essentially dry crops like jowar, sorghum and groundnuts are grown.

3.5 HEALTH SERVICES INFRASTRUCTURE IN THE STUDY DISTRICTS

The data for the study districts on institutions, bed strength, manpower and population coverages are presented seperately for public, private and voluntary sectors. As far as possible, apart from the present status we have attempted to mobilise information regarding the growth of health service infrastructure over time. Under each sector, we attempt a comparative analysis of the health service infrastructure in the advanced and backward districts.

3.5.1 The Public Sector:

Institutions : Data on institutions which constitute an important part of the infrastructure are presented below.

Hospitals : Of the selected districts, only Krishna and Guntur districts have a teadhing hospital each.

TABLE NO.8 : HOSPITALS IN SELECTED DISTRICTS OF ANDHRA PRADESH, 1987

S.No.	Districts	No.of Hospitals	Total bed strength	Bed/population Ratio
1.	Krishna	15	976	1:3122
2.	Guntur	14	1493	1:2300
3.	Mahbubnagar	18	438	1:4410
4.	Medak	11	478	1:3780

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

From table no.8, we find that the number of hospitals are not very different across districts but the bed strengths do not match. The advanced districts have a higher bed strength than the two backward districts. This is partly because the teaching hospitals are located in the advanced districts. As a consequence, the bed/population ratio between the forward and backward districts shows differences. The forward districts have a better bed/population ratio as compared to the backward districts (Table No.8). However, between the two backward districts, the bed/population ratio is relatively better in Medak district, the reasons for this will be discussed in the next chapter. In general one finds that more number of hospitals are situated in urban areas but in backward districts there are relatively more number of hospitals in rural areas. Of the 15 hospitals in Krishna, 12 are in urban and 3 in rural areas and in Guntur district 12 hospitals are in urban, 2 in rural areas. In the backward districts of Mahbubnagar and Medak, in Mahbubnagar 10 hospitals are in urban and 9 in rural areas while in Medak 7 are in urban and 4 in rural areas. The reason for this variation could be partly due to the relatively few large towns in Mahbubnagar and Medak as compared to the advanced districts.

If one reviews the increase in the number of hospitals over a twenty year period, one finds that there has been

an addition of three hospitals in Guntur, five in Krishna and one each in Mahbubnagar and Medak (Table Nos.12-15). This shows a marked differential in the proliferation of hospitals in developed and backward districts.

Dispensaries : According to the latest information, Krishna district has three government dispensaries, Guntur has seven, Mahbubnagar and Medak have four and seven respectively.

TABLE NO.9 : GOVERNMENT DISPENSARIES ACROSS SELECTED DISTRICTS OF ANDHRA PRADESH,1971-1986.

S.No.	District	Number of Dispensaries			
		1961	1971	1981	1987
1.	Krishna	8	7	8	3
2.	Guntur	9	9	9	6
3.	Mahbubnagar	6	2	2	2
4.	Medak	7	9	9	7

Sources : 1. Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

2. Government of Andhra Pradesh, Statistical Abstracts, Bureau of Economics and Statistics, Hyderabad.

A review of data for earlier years shows that during 1985-86, the number of dispensaries have decreased. This is due to the establishment of mandal primary health

TABLE NO.10: PRIMARY HEALTH CENTRES AND PRIMARY HEALTH CENTRE/POPULATION RATIOS IN SELECTED DISTRICTS 1961-1986

S.No.	Districts	YEARS						
		1960-61	1968-69	1971-72	1975-76	1981-82	1984-85	1985-86
1.	Krishna	8	22	22	22	22	22	40
	PHC/Popul	(1.9)	(0.72)	(0.82)	(0.82)	(0.93)	(0.93)	(0.51)
2.	Guntur	18	22	23	23	24	24	46
	PHC/Popul	(1.3)	(1.08)	(0.92)	(0.92)	(1.03)	(1.03)	(0.54)
3.	Mahbubnagar	3	23	23	23	23	24	51
		(2.86)	(0.62)	(0.76)	(0.76)	(0.94)	(0.90)	(0.42)
4.	Medak	9	15	15	15	16	16	35
		(1.25)	(0.75)	(0.89)	(0.89)	(0.99)	(0.99)	(0.45)

Note : Figures in paranthesis represents Primary Health Centre/Population Ratios (in lakh population)

Source: Statistical Division, Directorate of Medical and Health Services, Hyderabad,1987.

centres over 1985-86, when several government dispensaries were converted into mandal PHCs (Table No.9). The dispensary/population ratio is poor in all the selected districts (Table No.9) complete information on locally funded dispensaries is not available for earlier years, but in 1987, while Krishna and Guntur had some locally funded dispensaries, Mahbubnagar and Medak had none.

Primary Health Centres (PHCs) :

At present there is a PHC for 0.54 lakh persons in Guntur, 0.51 lakh in Krishna, for 0.42 lakhs in Mahbubnagar and 0.45 lakh in Medak. If one examine the growth of PHCs since 1960 onwards, there is a marked increase between 1961 and 1968. After this period there has been only a marginal increase in the number of PHCs in all selected districts. It is during 1985-86, with the introduction of the Mandal PHCs in each of these districts that the number of PHCs-population coverage, the ratios has increased marginally in the backward districts and in almost all districts population covered has been halved.

Sub-Centres (S.Cs):

The information for selected districts is presented below in Table No.11.

TABLE NO.11 : SUB CENTRES IN THE SELECTED DISTRICTS

S.No.	Districts	1981-82	1984-85	1985-86
1.	Krishna	239 (8602)	319 (6445)	344 (5976)
2.	Guntur	227 (10,960)	337 (7382)	357 (6969)
3.	Mahbubnagar	206 (10,567)	263 (8277)	298 (7305)
4.	Medak	156 (10,192)	183 (8688)	208 (7644)

Note : Figures in paranthesis represents S.C./Population ratios

Source: Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

Table 11 shows that the number of sub centres have increased over all four districts and there is very little variation in the S.C/population ratio. However, it is interesting to note that unlike PHC/population ratio, the S.C./population ratio is poorer in backward districts as compared to the forward ones. This is contrary to what we observed in the case of PHCs.

Bed Strength:

If one examines the bed/population ratio for the selected districts, the forward districts have a higher ratio than the two backward ones (Table No.16).

TABLE NO.12 : INCREASE IN GENERAL BED STRENGTH IN KRISHNA DISTRICT, 1961-1987

S.No.	Location	YEARS								
		1961*	1968-69	1971-72	1975-76	1981-82	1983-84	1984-85	1985-86	1986-87
1.	Dt.Hospital (Machilipatnam)	250	250	250	275	298	298	298	298	298
2.	Dt.Hospital (Vijayawada)	100	225	245	255	297	297	297	372	372
3.	Tq.Avannigadda	14	30	30	30	30	30	30	30	30
4.	Tq.Gannavaram	-	-	-	10	10	10	10	10	10
5.	Tq.Nandigama	14	30	30	30	30	30	30	30	30
6.	Tq.Jaggayapet	-	14	14	14	14	14	14	14	14
7.	Tq.Tiruvurru	-	30	30	30	30	30	30	30	30
8.	Tq.Nuzvid	16	16	16	16	16	16	16	30	30
9.	Tq.Gudivada	30	30	30	30	30	30	30	75	75
10.	Tq.Kaikalur	8	8	8	8	8	8	8	8	8
11.	Tq.Mylavaram	-	-	-	30	30	30	30	30	30
12.	Tq.Vuyyuru	-	-	-	-	5	5	5	5	5
13.	Tq.Pammaru	-	-	-	-	-	-	10	10	10
14.	Challapalli	16	24	24	24	24	24	24	24	24
15.	Guraja	-	-	-	10	10	10	10	10	10
		448	657	677	762	832	832	832	976	976

Note : In addition to the District and Taluka Hospitals, there is a 50-bedded Leprosy hospital and the district has 140 Family Welfare and 90 Leprosy Beds.

Source:Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

* Information based on 1961 census.

TABLE NO.13 : INCREASE IN GENERAL BED STRENGTH OVER TIME IN GUNTUR DISTRICT

S.No.	Location	YEARS							
		1961*	1968-69	1971-72	1975-76	1981-82	1983-84	1985-86	1986-87
1.	Govt.General Hospital	600	870	905	905	945	945	945	945
2.	Govt.Fever Hospital	-	40	40	40	40	40	40	40
3.	T.B. Hospital(Mangalgiri)	-	180	180	180	180	180	180	180
4.	Tq.Tenali	80	80	80	80	80	80	80	80
5.	Tq. Repalle	14	14	14	14	30	30	30	30
6.	Tq. Bapatla	16	16	16	16	41	41	41	41
7.	Tq. Narasaraopet	30	30	30	30	30	30	30	30
8.	Tq. Vinukonda	6	6	6	6	6	6	6	6
9.	Tq. Macherla	30	30	30	30	30	30	30	30
10.	Tq.Sattenapalli	-	8	8	30	30	30	30	30
11.	Tq. Gurazala	20	20	20	20	20	20	20	20
12.	Tq. Ponnur	-	-	-	-	5	5	5	5
13.	Tq. Mangalagiri	-	-	-	10	10	10	30	30
14.	Tq. Karampudi	6	6	6	6	6	6	6	6
15.	Govt.N.S. Dam Rt. Bank Hospital	-	-	-	20	20	20	20	20
		802	1300	1335	1387	1473	1473	1493	1493

Note : In addition to the general beds there are 98 family welfare and 40 Leprosy beds.

Sources:1. Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986

2. * Information based on 1961 census.

TABLE NO.14 : INCREASE IN GENERAL BED STRENGTH OVER TIME IN MAHBUBNAGAR DISTRICT

S.No.	Location	YEARS								
		1961*	1968-69	1971-72	1975-76	1981-82	1983-84	1984-85	1985-86	1986-87
1.	Dt. Hqrs.Hospital	80	100	125	145	145	145	145	145	145
2.	Tq. Badepally	6	6	6	6	6	6	6	16	16
3.	Tq. Kollapur	12	12	12	12	12	12	12	12	12
4.	Tq. Nagarkurnool	12	12	12	12	22	22	22	22	22
5.	Tq. Wanaparthi	20	20	20	20	24	24	24	24	24
6.	Tq. Alampur	10	16	16	26	26	26	26	26	26
7.	Tq. Gadwal	20	20	20	20	30	30	30	30	30
8.	Tq. Shadnagar	12	12	12	12	12	12	12	12	12
9.	Tq. Kalawakurthy	20	20	20	30	30	30	30	30	30
10.	Tq. Achampet	10	10	10	10	10	10	10	10	10
11.	Tq. Atmakur	8	8	8	8	8	8	8	8	8
12.	Tq. Makthal	10	16	16	16	16	16	16	16	16
13.	Tq. Kodangal	2	8	8	8	18	18	18	18	18
14.	Koilkonda	4	4	4	4	6	6	6	6	6
15.	Amrabad	12	12	12	12	12	12	12	12	12
16.	Lingal	4	4	4	4	6	6	6	6	6
17.	Narayanpet	30	30	30	30	30	30	30	30	30
18.	Kosigi	15	15	15	15	15	15	15	15	15
		287	325	350	390	428	428	428	438	438

Note : There are 20 Family Welfare + 80 Leprosy beds

Source: 1. Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.
2. * Information based on 1961 census.

TABLE NO.15 : INCREASE IN GENERAL BED STRENGTH OVER TIME IN MEDAK DISTRICT

S.No.	Location	YEARS								
		1961*	1968-69	1971-72	1975-76	1981-82	1983-84	1984-85	1985-86	1986-87
1.	Dt. Hqrs. Hospital	20	80	80	80	80	80	80	80	200
2.	Tq. Sadasivapet	6	12	25	25	25	25	25	25	25
3.	Tq. Zaheerabad	8	16	16	16	20	20	20	20	20
4.	Tq. Narayankhed	4	4	4	4	10	10	10	10	30
5.	Tq. Andole-Jogipet	10	10	10	10	36	36	36	36	36
6.	Tq. Medak	10	10	16	16	26	26	26	32	32
7.	Tq. Narsapur	4	8	8	8	30	30	30	30	30
8.	Tq. Gazwel	6	10	10	10	30	3o	30	30	30
9.	Kohir	4	4	4	4	15	15	15	15	15
10.	Ramayampet	-	-	-	-	10	10	10	10	10
11.	Siddipet	8	30	30	30	50	50	50	50	50
		80	184	203	203	336	336	336	362	478

Note : In addition there are 26 Family Welfare and 20 Leprosy beds and 1 Leprosy hospital with 20 beds.

Source: 1. Statistical Division, Directorate of Medical and Health Services, Hyderabad,1986.
2.* Information based on 1961 Census.

one looks for increase in bed strength since 1961 for these districts, it is clear that there has not been much increase in bed strength. Between 1961 and 1968, bed strength was increased in the only teaching hospital at Guntur with an addition of 270 beds. In district hospitals, bed strength increased in Krishna, however Medak and Mahbubnagar registered only a marginal increase. During the same period, bed strength was increased for a few taluk hospitals in Krishna, there were no additions in Guntur and only marginal increase in taluk hospitals in Mahabubnagar and Medak (Table Nos.12,13,14 and 15).

As a result of the review done by the state government at the end of the fourth plan period, the emphasis during the fifth plan period was to strengthen district and taluk hospitals. Between 1976-81, bed strength registered a substantial increase in the district hospitals in Krishna and marginal increase in Mahabubnagar districts, however there were no increases in Medak or Guntur. During the same period, there was a substantial increase in bed strength in two taluk hospitals in Guntur district and two new taluk hospitals were established in this district. In Krishna district there were no increases in bed strength in taluk hospitals, however a taluk hospital was established at Vuyurru in this district.

In Mahbubnagar district there were only marginal increases in bed strength in taluk hospitals, however, in Medak there were significant increases in bed strength across several taluk level hospitals, during this period (Table No.15).

TABLE NO.16 : BED/POPULATION RATIO IN SELECTED DISTRICTS FOR 1961, 1971 AND 1981

S.No.	Districts	YEARS		
		1961	1971	1981
1.	Krishna	1:4663	1:3682	1:3663
2.	Guntur	1:3751	1:2130	1:2331
3.	Mahbubnagar	N.A.	1:5220	1:5770
4.	Medak	1:15,337	1:7226	1:5377

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

The gap between the forward and the backward districts in the bed population ratio for 1961, 1971, and 1981 have narrowed somewhat over time but the difference is still quite significant (Table No.16).

TABLE NO.17 : INCREASE IN BED STRENGTH IN DISTRICT AND TALUKA HOSPITALS IN SELECTED DISTRICTS

	1961		1971		1981	
	Dist. Hospital	Taluka Hospital	District Hospital	Taluk Hospital	District Hospital	Taluk Hospital
Krishna	350	98	495	182	595	237
Guntur	600*	202	905*	210	945*	308
Mahbubnagar	N.A.	N.A.	125	225	145	283
Medak	20	60	80	123	80	156

Source : Statistical Division, Directorate of Medical and Health Services,=Hyderabad, 1986.

* Teaching Hospital

If one looks at the increase in district and taluka hospital over the two sets of districts, there have been significant increases in bed strength in district and taluk hospitals in Krishna district over this period (Table No.17). In Guntur district, there has been greater increase in the teaching hospitals rather than the taluka hospitals. In Mahbubnagar and Medak, there has not been much of an increase in the district hospitals. There was only a marginal increase in bed strength in taluka hospitals in Mahbubnagar, and a substantial increase in Medak between 1971 and 1981. Thus one does find that the increase in bed strength has been more significant in the advanced rather than the backward districts.

So far we have been looking at the increase in general bed strength and have not included family planning or

TABLE NO.18 : GOVERNMENT HOSPITALS(ALLOPATHIC) AND BED STRENGTH FOR SELECTED DISTRICTS IN 1968 - 1986

S.No.	Districts	YEARS						
		1968-69	1971-72	1975-76	1981-82	1983-84	1984-85	1985-86
		Hosp. Beds	Hosp. Beds	Hosp. Beds	Hosp. Beds	Hosp.Beds	Hosp. Beds	Hosp. Beds
1.	Guntur	12 1300 (1:2314)	13 1335 (1:2130)	14 1387 (1:2050)	15 1591 (1:2158)	15 1591 (1:2158)	15 1591 (1:2158)	15 1611 (1:2131)
2.	Krishna	11 649 (1:3198)	11 677 (1:3682)	13 762 (1:3271)	14 1057 (1:2883)	15 1062 (1:2870)	16 1072 (1:2843)	16 1206 (1:2527)
3.	Mahbubnagar	18 325 (1:4892)	18 370 (1:5221)	18 390 (1:4953)	19 528 (1:4628)	19 528 (1:4628)	19 528 (1:4628)	19 538 (1:4542)
4.	Medak	10 184 (1:6668)	10 203 (1:7226)	11 203 (1:4730)	11 382 (1:4730)	11 382 (1:4730)	11 382 (1:4730)	11 408 (1:4428)

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

Note : 1. Bed strength includes general beds plus family welfare and leprosy bed which are centrally funded.

2. Figures in paranthesis indicate Bed-population ratios.

TABLE NO.19 : INCREASE IN BED STRENGTH (HOSPITAL PLUS PRIMARY HEALTH CENTRES) IN SELECTED DISTRICTS OF ANDHRA PRADESH 1968-86

S.No.	Districts	YEARS						
		1968-69	1971-72	1975-76	1981-82	1983-84	1984-85	1985-86
1.	Guntur	1432 (2101)	1473 (1930)	1525 (1864)	1759 (1952)	1759 (1952)	1759 (1952)	1867 (1839)
2.	Krishna	781 (2658)	809 (3081)	894 (2788)	1213 (2512)	1218 (2502)	1228 (2482)	1434 (2125)
3.	Mahbubnagar	463 (3434)	508 (3803)	528 (3659)	714 (3422)	714 (3422)	720 (3394)	838 (2916)
4.	Medak	274 (4478)	293 (5006)	293 (5006)	502 (3599)	502 (3599)	526 (3435)	628 (2877)

Note : All figures in paranthesis are bed/population ratios.

Source: Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

leprosy beds which are a part of the centrally sponsored programme. It is only in 1982, that the state government provided the break-up of the number of family welfare and leprosy beds. Even after adding the family welfare and leprosy beds to the general bed strength, the gap between forward and backward districts remains considerable (Table No.18). If we take the total bed strength of the selected districts which would include general beds, family welfare, leprosy and primary health centre beds, the gap between advanced and backward districts is effectively reduced. (Table No.19).

TABLE NO.20 : GOVERNMENT DOCTORS (ALLOPATHIC) IN THE SELECTED DISTRICTS 1961-1986

S.No.	Districts	YEARS			
		1961	1971	1981	1986
1.	Krishna	71 (1:29,239)	121 (1:20,603)	158 (1:19,291)	194 (1:15,711)
2.	Guntur	189 (1:15,920)	304 (1:9355)	349 (1:9839)	471 (1:7290)
3.	Mahbubnagar	49 (1:32,448)	84 (1:23,000)	126 (1:19,396)	169 (1:14,461)
4.	Medak	29 (1:42,310)	63 (1:23,285)	94 (1:19,223)	140 (1:12,907)

Sources : 1. Government of Andhra Pradesh, Statistical Abstracts, Bureau of Statistics, Hyderabad.

2. Statistical Division, Directorate of Medical and Health Services, Hyderabad.

3. Government of Andhra Pradesh, Handbook of Medical and Health Statistics, State Bureau of Health Intelligence, Directorate of Medical and Health Services, Hyderabad, November 1976.

Note : Figures in paranthesis indicate Doctor/population ratios.

Manpower: While information is available for doctors from 1961 onwards for selected districts, information regarding nurses is available only for specific years and for paramedical personnel, only current information could be gathered.

Doctors: At present, there is one doctor serving a population of 15,711 in Krishna, 7,290 in Guntur, 14,461 in Mahbubnagar and 12,907 in Medak districts. Thus while in 1986, differences in the study districts, except Guntur, is not marked, if we look at the rate of increase in the number of doctors employed in the districts, the rates are higher in backward districts (Table No.20).

At the district level, 64% of the posts are filled in Krishna, 67.9% in Guntur, 53.2% in Mahabubnagar and 69.9% in Medak across all categories.

In the various categories like the civil surgeon cadre, 75% of the posts are filled in Krishna, 100% in Guntur, 100% in Mahbubnagar and 66.6% in Medak. As far as the posts of Civil Assistant Surgeons in hospitals, 77.2% of the posts are filled in Krishna, 87% are filled in Guntur, 70.9% are filled in Mahbubnagar and 73.1% in Medak (Table Nos.21, 22,23 and 24).

TABLE NO. 21: DOCTORS IN KRISHNA DISTRICT,1987

S.No.	Cadre	No.of Poste Sanctioned	No.of Posts Filled	%age of Posts Filled	No. Vacant
1.	Civil Surgeon	4	3	75	1
2.	Dy. Civil Surgeon	10	4	40	6
3.	Civil Asst. Surgeons (Hospitals)	44	37	84	7
4.	Civil Asst. Surgeons (PHCS)	69	39	56.52	30
5.	Civil Asst. Surgeons (Mandal PHCS)	18	12	66.6	6
	All Categories	145	95	65.5	50

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

TABLE NO.22 : DOCTORS IN GUNTUR DISTRICT,1987

S.No.	Cadre	Total No.of Posts Sanctioned	No.of Posts filled	%age of posts filled	No.Vacant
1.	Civil Surgeon	3	3	100	-
2.	Dy. Civil Surgeon	9	4	44.4	5
3.	Civil Asst.Surgeon (Hospital)	30	26	87	4
4.	Civil Asst. Surgeon (PHCS)	70	52	74.2	28
5.	Civil Asst. Surgeon (Mandal PHCS)	22	6	27.2	16
	All Categories	134	91	67.9	43

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

TABLE NO.23 : DOCTORS IN MAHBUBNAGAR DISTRICT -1987

S.No.	Cadre	No.of posts sanctioned	No.of Posts filled	%age of posts filled	No.Vacant
1.	Civil Surgeon	4	4	100	-
2.	Dy.Civil Surgeon	14	7	50	7
3.	Civil Asst. Surgeon (Hospitals)	39	27	69.2	12
4.	Civil Asst. Surgeon (PHCS)	70	33	47	37
5.	Civil Asst. Surgeon (PHCS)Mandal)	27	11	40.7	16
	ALL CATEGORIES	154	82	53.2	72

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

TABLE NO.24 : DOCTORS IN MEDAK DISTRICT - 1987

S.No.	Cadre	No.of posts sanctioned	No.of posts filled	%age of posts filled	No. vacant
1.	Civil Surgeon	3	2	66.6	1
2.	Dy.Civil Surgeon	5	3	60	2
3.	Civil Asst. Surgeon (Hospital)	47	35	74.4	12
4.	Civil Asst. Surgeon (PHCS)	49	33	67.3	16
5.	Civil Asst. Surgeon (PHC)Mandal)	29	13	44.8	16
	ALL CATEGORIES	133	86	64.6	47

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

In PHCS, 56.9% of the posts of Civil Assistant Surgeons are filled in Krishna, 74.2% in Guntur, 47% in Mahbubnagar and 67.3% in Medak.

While the percentage of posts in the Civil Surgeon category is high in Krishna and Guntur districts, it is relatively less in Mahbubnagar but higher in Medak. In the case of posts of Civil Assistant Surgeons in hospitals, the perdentage of posts filled is high across the selected districts. The posts of Civil Assistant in PHCS presents a mixed picture, while the advanced districts have a fairly high percentage of posts filled, Mahbubnagar has only 47% of the posts filled while Medak falls between Krishna and Guntur districts. In general, a higher percentage of the posts in the above mentioned categories have been filled in the advanced districts as compared to the backward districts. Medak does not seem to follow this pattern. This is mainly because of the proximity of Medak to Hyderabad city as a result of which a high percentage of the doctors posted, live in Hyderabad and commute to work. So far we have dealt with three categories, but in the Deputy Civil Surgeon category we see a low percentage of the posts filled across the study districts except Medak district which could be due to its proximity to Hyderabad. In the staff positions of doctors that the difference between developed and backward districts are not as clear as for hospitals and bed distribution.

TABLE NO.25 : NURSES IN GOVERNMENT SERVICES FOR SELECTED DISTRICTS

S.No.	Districts	YEARS		
		1967-68	1975-76	1985-86
1.	Krishna	88	112	267
2.	Guntur	185	192	356
3.	Mahbubnagar	51	37	162
4.	Medak	28	35	138

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1986.

TABLE NO.26 : STAFF NURSES IN SELECTED DISTRICTS IN ANDHRA PRADESH - 1987

S.No.	Districts	No.of Posts Sanctioned	No. filled	%Age of posts filled	No. Vacant	Nurse/ Ratio
1.	Krishna	122	111	90.9	11	1:11
2.	Guntur	84	84	100	-	1:19
3.	Mahbubnagar	95	46	48.4	49	1:11
4.	Medak	107	44	41.12	63	1:13

Source : Statistical Division, Directorate of Medical and Health Services.

Nurses: The growth in the number of nurses in selected districts from 1968, indicates that there has been a substantial increase in all these districts. The rate of increase has been higher in the two backward districts between 1976-86 as compared to the two advanced districts. Although there has been an increase in the number of nurses, at the district level, there is significant difference between forward and backward districts with respect to percentage of posts filled. A higher percentage of posts of nurses are filled in Krishna and Guntur (90-100%) only 48 and 41% of the posts have been filled in Mahbubnagar and Medak districts respectively (Table No.26).

Paramedical Staff:

Auxillary Nurse Midwives (ANM): According to the current information available, there is difference between ANM/ Population ratio in the selected districts. The ANM/ Population ratio is better in the advanced districts, as compared to the backward districts. (Table No.27) The difference in the ANM/Population ratio in selected districts, is also seen in the percentage of posts are filled. While almost 98% of the posts are filled in advanced districts, only 77-82% of the posts are filled in backward districts.

TABLE NO.27 : AUXILLARY NURSE MIDWIVES IN SELECTED DISTRICTS IN ANDHRA PRADESH, 1987

S.No.	Districts	No.of Posts sanctioned	No. Filled	%age of posts filled to sanctioned posts.	No. Vacant	ANM/Population Ratio
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Krishna	360	349	96.9	11	1:5891
2.	Guntur	397	393	98.9	4	1:6330
3.	Mahbubnagar	319	262	82	57	1:8309
4.	Medak	223	171	76.6	52	1:9298

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

TABLE NO.28 : HEALTH INSPECTORS IN SELECTED DISTRICTS IN ANDHRA PRADESH, 1987

S.No.	Districts	No.of posts sanctioned	No. filled	%age of posts filled	No. Vacant	HIS/Population Ratio
1.	Krishna	172	165	95.9	7	1:12,460
2.	Guntur*	207	206	99.5	1	1:12,077
3.	Mahbubnagar	97	94	96.9	3	1:23,159
4.	Medak	84	71	84.5	13	1:22,394

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

* Information for 1987 is not available - information is for 1983.

TABLE NO.29 : HEALTH VISITORS IN SELECTED DISTRICTS ANDHRA PRADESH- 1987

S.No.	District	No.of posts sanctioned	No. Filled	%age of posts filled against sanctioned posts.	No. Vacant	HV/Population.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.	Krishna	84	79	94	5	1:26,025
2.	Guntur	92	90	97.8	2	1:27,644
3.	Mahbubnagar	54	50	92.5	4	1:43,540
4.	Medak	47	45	95.7	2	1:35,333

Source : Statistical Division, Directorate of Medical and Health Services, Hyderabad, 1987.

Health Inspectors (HI) : There is little difference in the percentage of posts filled in selected districts, however the HI/Population ratio is better in the advanced districts compared to the backward districts (Table No.28). Despite the relatively higher percentage of the posts filled, the difference in HI/Population exists because the number of posts sanctioned in the backward districts is lower.

Health Visitors (HV): A high percentage of posts have been filled in the selected districts for this category however there is difference with respect to HV/Population ratio between advanced and backward districts (Table No.29).

This again shows the paucity of present staffing in backward districts. As in the case of Health Inspectors, the number of posts sanctioned for health visitors is very low in the backward as compared to the forward districts.

The review of various categories of personnel in the public sector shows that there is not much difference between forward and backward districts in the case of doctors. Over time, the number of doctors have increased at a faster rate in the backward as compared to the forward districts. This is mainly due to the effort of the government to expand facilities in backward areas to correct inter-regional imbalances.

In the case of nurses and paramedical workers, there is difference between advanced and backward districts in all categories with respect to sanctioned posts and the personnel/population ratios. In general, a higher percentage of all the posts of paramedical personnel have been filled in all the selected districts. Thus one sees that, there is a difference with respect to staff positions of nurses and paramedical worker between the advanced and backward districts.

TABLE-30 : DISTRIBUTION OF VILLAGES ACCORDING TO POPULATION RANGE AND AMENITIES AVAILABLE KRISHNA DISTRICT

Population Range	No.of Inhabited villages in each range	No.(with percentage) of villages having the amenity of						
		Education	Medical	Drinking Water	P and T	Communications	Approach by Pucca Road	Power Supply
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
-499	97	83 (85.57)	6 (0.19)	97 (100)	25 (25.77)	49 (50.52)	50 (51.55)	66 (68.04)
500-1,999	466	458 (98.28)	109 (23.39)	466 (100)	312 (66.95)	292 (62.66)	311 (66.74)	392 (84.12)
2000-4,999	302	302 (100)	146 (48.34)	302 (100)	298 (98.68)	251 (83.11)	252 (83.44)	285 (94.37)
5000 +	77	77 (100)	61 (79.22)	77 (100)	76 (98.70)	73 (94.81)	69 (89.61)	75 (97.40)
TOTAL	942	920 (97.66)	322 (34.18)	942 (100)	711 (75.48)	655 (70.59)	682 (72.40)	818 (86.84)

Source : Census of India, 1981 Series 2A Andhra Pradesh District Census Handbook - Krishna Hyderabad, 1985, p.48.

TABLE-31 : DISTRIBUTION OF VILLAGES ACCORDING TO POPULATION RANGE AND AMENITIES AVAILABLE GUNTUR DISTRICT

Population Range.	No. of inhabited villages in each range	No.(with percentage) of villages having the amenity of						
		Education	Medical	Drinking Water	P and T	Communication	Approach by Pucca Road.	Power Supply
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
-499	30	21	-	30	5	7	16	8
	(4.34)	(70)		(100)	(16.67)	(23.33)	(53.33)	(26.67)
500-1,999	169	169	36	169	126	114	126	119
	(24.42)	(100)	(21.30)	(100)	(74.56)	(67.46)	(74.56)	(70.41)
2000-4,999	340	340	163	340	332	293	311	317
	(49.13)	(100)	(47.94)	(100)	(97.64)	(86.18)	(91.47)	(93.24)
5,000 +	153	153	118	153	152	148	151	147
	(22.11)	(100)	(77.12)	(100)	(99.35)	(96.73)	(98.69)	(96.08)
TOTAL	692	683	317	692	615	562	604	591
	(	(98.70)	(45.81)	(100)	(88.87)	(81.21)	(87.28)	(85.40)

Source : Census of India 1981, Series 2 Andhra Pradesh District Census Handbook - Guntur, Hyderabad, 1985, p.60.

TABLE 32 : DISTRIBUTION OF VILLAGES ACCORDING TO POPULATION RANGE AND AMENITIES AVAILABLE

(pp.43) MAHBUBNAGAR DISTRICT.

Population Range	No.of inhabited villages in each range	No.(with percentage) of villages having the facility of						
		Education	Medical	Drinking Water	P and T	Communication	Approach by Pucca Road	Power Supply
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
-499	252	198 (78.57)	2 (.79)	252 (100)	55 (21.33)	66 (26.19)	92 (36.51)	102 (40.48)
500-1,999	889	886 (99.66)	82 (9.22)	889 (100)	516 (58.04)	389 (43.76)	489 (55.01)	702 (78.97)
2000-4,999	298	298 (100)	125 (41.95)	298 (100)	293 (98.32)	225 (75.50)	244 (81.88)	282 (94.63)
5,000 +	31	31 (100)	27 (87.10)	31 (100)	31 (100)	30 (96.77)	31 (100)	31 (100)
TOTAL	1,470	1,413 (96.12)	236 (16.05)	1,470 (100)	895 (60.88)	710 (48.30)	856 (58.23)	1,117 (75.99)

Source : Census of India 1981, Series 2 Andhra Pradesh, District Census Handbook, Mahbubnagar Hyderabad, 1985, p.43.

TABLE 33 : DISTRIBUTION OF VILLAGES ACCORDING TO POPULATION RANGE AND AMENITIES AVAILABLE

MEDAK DISTRICT

Population Range	No.of inhabited villages in each range	No.(with percentage) of villages having the amenity of						
		Education	Medical	Drinking water	P and T	Communication	Approach by Pucca Road.	Power Supply
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
-499	236	204	7	236	23	55	67	93
	(19.22)	(86.38)	(2.98)	(100)	(9.79)	(23.40)	(28.51)	(39.57)
500-1,999	784	782	86	784	379	305	345	555
	(63.84)	(99.74)	(10.97)	(100)	(48.34)	(38.90)	(44.01)	(70.79)
2,000-4,999	194	194	91	194	187	152	160	183
	(15.80)	(100)	(46.91)	(100)	(96.39)	(78.35)	(82.47)	(94.33)
5000 +	14	14	13	14	14	13	14	14
	(1.14)	(100)	(92.86)	(100)	(100)	(92.86)	(100)	(100)
TOTAL	1,228	1,194	197	1,228	603	525	586	845
		(97.23)	(16.04)	(100)	(49.10)	(42.75)	(47.72)	(68.81)

Source : Census of India 1981, Series 2 Andhra Pradesh District Census Handbook - Medak, Hyderabad, 1985 , p.43.

Coverage :

Information regarding number of institutions and personnel tell us little about coverage. To grasp issues in coverage, spatial distribution becomes crucial. This is so, because spatial distribution to a large extent determines availability and accessibility of health service institutions. In addition to spatial distribution other infrastructural inputs like development of roads, communications and availability of electricity become important for availability and accessibility of services. The Census has published information regarding percentage of villages in each district which are provided with medical amenities. The definition of medical amenities includes government facilities like primary health centres, sub-centres, dispensaries and community health workers. Based on this information one finds that coverage of villages with medical amenities is quite low across all the four districts, compared to other amenities like education, drinking water, post and telegraphs, communications, roads and electricity. However, in the four districts there is considerable difference in the coverage by medical amenities between advanced and backward districts, a larger percentage of the villages in Krishna and Guntur districts (34.18% and 45.81% respectively) have these amenities as compared to

Mahbubnagar and Medak where only 16% of the villages are covered (Table Nos.32 and 33). One also notices that with respect to other amenities like communications which includes public transportation, pure roads and power supply, a larger percentage of the villages in Krishna and Guntur have these amenities as compared to Medak and Mahbubnagar (Table Nos.30 and 31).

As pointed out by the Kerala Study[14] accessibility and utilization of health services is influenced by these various factors. In addition to poor infrastructural facilities in the backward districts which makes utilization difficult, another important finding from table Nos.30-35 is the relative distribution of services in smaller and larger villages. While services are as a rule concentrated in villages with a population of 5,000 or more, in the backward districts also it is the larger villages which are better covered. But, given the fact that a larger percentage of villages in backward districts have a population range below 5000, it leaves a number of villages without medical amenities.

The State government had conducted a study in 1981 on distribution of villages according to distance from PHC.

---

14 Centre for Development Studies, Poverty, Unemployment and Development, Policy, New Delhi, Orient Longman,1971.

TABLE NO.34 : PERCENTAGE DISTRIBUTION OF VILLAGES ACCORDING TO DISTANCE FROM HEALTH CENTRES

Sl.No.	Districts	Percentage of villages according to distance from within			
		5 kms	6.15 kms	above 16	TOTAL
(1)	(2)	(3)	(4)	(5)	(6)
1.	Krishna	25.51	46.12	28.38	100
2.	Guntur	23.74	45.28	30.98	100
3.	Mahbubnagar	17.91	40.55	41.54	100
4.	Medak	23.0	38.0	39.00	100

Source : Government of Andhra Pradesh, Report on Village Amenities in Rural Areas, Bureau of Economics and Statistics, Hyderabad, 1980, Table 15.

As shown in the table above, the coverage in advanced districts was better with 72% of the villages in Krishna and 70% of the villages in Guntur within 15 kms distance of a primary health centre (Table No.34). In the backward districts the percentage of villages within 15 kms distance from a PHC was less than forward districts, (with 58% of the villages in Mahbubnagar and 61% of the villages in Medak) within a distance of 15 kms.

During 1985-86, the government has introduced the mandal PHCs which has ensured a better distribution of facilities within districts (Map Nos. 1-4) whereby those areas which formerly were not covered by any medical facility, are better covered with the introduction of Mandal PHCs.

A study of the maps for each of these districts showing spatial distribution of PHCs brings out some important trends. These when seen together with the socio-economic developmental data on taluks[15]; further reinforce our earlier observations. In the advanced districts, there are a number of very prosperous taluks while in the backward districts there aren't any which would compete with these levels of development. Our Maps show (Map Nos.1-4) that in the advanced districts there are areas which have a better spread of PHCs and there are pockets which are left uncovered. Interestingly the spread of PHCs coincides with the well developed talukas while the uncovered pockets are constituted by the less developed talukas. In the case of Medak and Mahabubnagar the distribution of PHCs is uneven. Given the uniform backwardness of these districts there is hardly any relation with levels of development. However, it is interesting to note that here too the spread is such that large pockets are left uncovered and as we have seen

---

15 Prakash Rao, VLS. Backward Areas in Andhra Pradesh: Pattern of Development, Hyderabad, Centre For Economic and Social Studies, 1984.

earlier (Map Nos. 1-4), most PHCs (87% in Mahbubnggar and 92.8% in Medak) are located in villages with a population of 5,000 or above. It is well known that even in backward areas, larger villages tend to have concentration of resources. This highlights the fact that distortions in distribution of services are more acute in backward areas since in Krishna and Guntur the spread of services over smaller villages (population size upto 1,999) is much better compared to the backward districts (Table Nos.31 to 33).

MAP 1

MAP 11

MAP 111

MAP IV

3.5.2 PRIVATE SECTOR

Institutions owned privately and providing services on a commercial basis are covered by the private sector. The information on this sector is limited mainly because there is no proper system for registration of these institutions. The private sector in health care ranges from Registered Medical Practitioners in villages, clinics and small, medium nursing homes in towns to larger nursing homes in larger towns and the super specialist hospitals and diagnostic centres in cities.

Registered Medical Practitioners (RPP):

These essentially are the non-MBBS degree holders who practice modern medicine. The 1981 census has included this category in their district information and in 1985, the State Government also included this information as a part of the exercise on distric level planning.

TABLE NO.35 : REGISTERED PRIVATE PRACTITIONERS (RURAL) AND RPP/POPULATION RATIOS FOR SELECTED DISTRICTS 1981 AND 1985

S.No.	Districts	1981	RPP/Popul.	1985	RPP/Popul.
1.	Krishna	142	1:14,478	258	1:7,968
2.	Guntur	277	1: 8,981	309	1:8,051
3.	Mahbubnagar	103	1:21,135	198	1:10,994
4.	Medak	118	1:13,474	169	1:9,408

Source : Census of India 1981,Series 2-Andhra Pradesh, District Handbooks-Village Directories,Hyderabad,1985.
2. Government of Andhra Pradesh,Mandal Handbooks,District Planning Board,Hyderabad,1985.

Table 35 shows that the RPP is quite widespread in both advanced and backward districts though much variation between forward and backward districts, their proportionate numbers are higher in the former.

Data on Nursing Homes in the Private Sector:

While information is available on number of Nursing Homes for Krishna and Guntur, it is not available for Mahbubnagar and Medak districts, beds in private sector is available for all four districts.

TABLE NO.36: NURSING HOMES AND BED STRENGTH FOR SELECTED DISTRICTS OF ANDHRA PRADESH, 1984

S.No.	Districts	Number	Approx.bed-strength	Bed/Population Ratio
1.	Krishna	210	3024	1:1,007
2.	Guntur	134	3475	1: 998
3.	Mahbubnagar	N.A.	736	1:3,320
4.	Medak	N.A.	357	1:5,061

Source : President, Andhra Pradesh Nursing Homes Association, Hyderabad, 1986.

From Table No.36 it is obvious that in the private sector it is the advanced districts which have a higher bed strength sector as compared to the backward districts. As far as distribution of these nursing homes within the districts is concerned, their highest concentration is in the cities,

TABLE: 37

Distribution of Private Nursing Homes Across Talukas in Guntur District, 1984

S.No.	Taluka/Towns	No.of Institutions	Bed Strength
	Guntur:		
1.	Guntur (Town)	36	1030
2.	Tadikonda	1	20
3.	Mangalgiri	4	75
4.	Amrawati	2	50
	Narasaraopet:		
5.	Chilakaluripet	32	850
6.	Narasaraopet	5	150
7.	Edlapadu	2	40
	Bapatla:		
8.	Bapatla	12	300
9.	Palaparthipadu	3	60
	Tenali:		
10.	Tenali	13	315
11.	Chebrole	1	15
	Sattenapalli:		
12.	Sattenapalli	9	220
13.	Phirangipuram	1	20
14.	Kollur	2	50
	Palnad:		
15.	Gurazala	2	25
16.	Durgi	-	-
17.	Piduguralla	1	20
18.	Macherla	1	20
	Repalli:		
19.	Repalle	2	60
20.	Nizampatanam	1	30
21.	Atchampet	1	25
22.	Cherukapalli	1	50
	Vinukonda:		
23.	Vinukonda	2	50
	TOTAL	134	3475

Source : Compiled from information available with the President, Andhra Pradesh Nursing Homes Association,Hyderabad,1986.

TABLE NO.38

Distribution of Private Nursing Homes Across Talukas in Krishna District,1984

S.No.	Taluka/Town	Nos.	Bed Strength
1.	Vijayawada	81	1166
2.	Kankipadu	5	40
3.	Vuyyuru	16	420
4.	Atkuru (Mylavaram)	1	5
5.	Gannavaram	8	176
6.	Gudivada	21	236
7.	Nandigama	9	84
8.	Veerakiouk	3	35
9.	Jaggayapet	5	82
10.	Kanchikacherla	4	70
11.	Vissanapet	6	35
12.	Kalidindi	2	37
13.	Kuchipudi	4	110
14.	Nuzvid	15	205
15.	Bantumilli	2	12
16.	Machilipatnam	17	196
17.	Tiruvurru	9	115
	TOTAL	210	3024

Source : Compiled from information available with the President, Andhra Pradesh Nursing Homes Association, Hyderabad, 1986.

followed by small towns in the advanced districts (Table No.37 and 38). In the backward districts, the nursing homes are essentially restricted to the major towns. In Mahbubnagar, majority of the nursing homes are in Mahabubnagar town and in Medak in Sangareddy and Medak towns.

Indian Medical Association Membership:

A supportive index to show the extent of private practice is the membership pattern of the Indian Medical Association (IMA), an association which is run largely by private medical sector doctors although the IMA membership is open both to government and private doctors. If we look at the number of IMA members for the four districts, one finds that the IMA membership is higher for Krishna and Guntur districts compared to Mahbubnagar and Medak (Table No.39). This trend infact follows the trend in distribution of private beds and institutions in study districts.

TABLE NO.39 : INDIAN MEDICAL ASSOCIATION MEMBERS IN SELECTED DISTRICTS OF ANDHRA PRADESH,1984

S.No.	Districts	IMA MEMBERS
1.	Krishna	460
2.	Guntur	395
3.	Mahbubnagar	16
4.	Medak	43

Source : Compiled from Annual Reports of the Indian Medical Association, Hyderabad, 1984.

TABLE NO.40: INDIAN MEDICAL ASSOCIATION MEMBERSHIPS IN TOWNS IN KRISHNA DISTRICT, 1977 - 1985

S.No.	District/Towns	Number of Members								
		1977	1978	1979	1980	1981	1982	1983	1984	1985
1.	Challapalli	26	25	20	17	18	18	18	18	18
2.	Gudivada	42	34	36	33	38	41	40	45	45
3.	Jaggayapet	17	15	12	11	11	11	11	16	16
4.	Konaseema	56	50	45	42	39	31	51	54	53
5.	Machilipatnam	38	35	37	40	20	17	37	35	33
6.	Nidadavolu	28	23	18	20	21	21	21	21	21
7.	Vijayawada	191	194	164	186	198	244	218	253	296
8.	Vuyurru	18	18	20	19	12	12	12	11	11
9.	Nuzvid	-	-	16	11	50	50	13	7	7
	TOTAL	416	394	368	379	407	445	421	460	500

Source : Compiled from Annual Reports of the Indian Medical Association, Hyderabad, 1986.

TABLE NO.41: INDIAN MEDICAL ASSOCIATION MEMBERSHIPS IN GUNTUR DISTRICT,1977-84

S.No.	District/Town	1977	1978	1979	1980	1981	1982	1983	1984
1.	Bapatla	17	14	12	10	15	17	16	14
2.	Chilakaluripet	25	23	25	30	29	45	43	55
3.	Guntur	147	148	116	143	90	99	122	173
4.	Narasaraopet	48	38	28	27	22	22	34	39
5.	Nidubrolu	19	21	17	14	11	12	14	15
6.	Repalle	15	15	15	13	13	13	13	13
7.	Sattenapalli	-	-	10	7	5	5	-	13
8.	Tenali	66	66	50	52	61	70	64	73
	TOTAL	337	325	273	296	246	283	306	395

Source : Compiled from Annual Reports of the Indian Medical Association, Hyderabad, 1986.

Infact if one looks at the membership pattern of the IMA across taluks (Table No.40 and 41) one finds that the highest concentration is in the municipalities followed by smaller towns for Krishna and Guntur districts. This stimulates the pattern of distribution of nursing homes in these districts (Table 37 and 38). However, in Mahbubnagar and Medak, it is restricted to only one or two towns.

There is no information on the number of private nursing homes prior to 1984. However, in the 1971 census, there was a survey on number of health establishments in the Public and Private Sectors across districts. The definition of an establishment included a place where commercial or other type of services is rendered with atleast one or more persons working. Based on this it was seen that in Krishna and Guntur there were more number of private establishments in both rural and urban areas than Mahbubnagar or Medak (Table No.42).

TABLE NO.42

DISTRIBUTION OF PRIVATE ESTABLISHMENTS IN HEALTH IN SELECTED DISTRICTS, 1971

S.No.	Districts	PRIVATE	
		Rural	Urban
1.	Krishna	227	410
	a) Machilipatnam(M)	-	63
	b) Vijayawada (M)	-	194
2.	Guntur	223	447
	a) Guntur (M)	-	155
3.	Mahbubnagar	135	70
4.	Medak	121	55

Source : Census of India, 1971, Series 2-Andhra Pradesh, Part III-B Establishment Tables, Hyderabad, 1974, pp.6-8.

Information on year of establishment of institutions can be used as an index of growth of private nursing homes, but this information is available only for Krishna district. In this district there has been a steady growth from 1976 onwards with a significant increase during 1982-84 (Table No.43). According to Dr.Bajrang Lal, President, Andhra Pradesh Nursing Homes Association the growth of nursing homes in Guntur is similar to Krishna district, but in Mahbubnagar and Medak, establishment of nursing homes has been a recent phenomena.

TABLE NO.43: ESTABLISHMENT OF PRIVATE NURSING HOMES ACROSS YEARS IN KRISHNA DISTRICT

S.No.	Years	No.of Institutions established
1.	1982-84	74
2.	1979-82	35
3.	1976-77	19
4.	1973-76	25
5.	1970-73	15
6.	1965-70	20
7.	1956-65	11
8.	1945-56	4
9.	Information N.A.	7
	TOTAL	210

Source : President,Andhra Pradesh Nursing Homes Association, Hyderabad.

The growth of private nursing homes in Krishna district has been quite significant.If one looks at the government-private beds ratio across districts,one finds that the number of private beds is almost double the number of government beds in Krishna and Guntur districts.In Mahbubnagar, the private beds is slightly

higher than the number of government beds and in Medak the number of private beds is lower than government beds (Table No.44).

TABLE NO.44

DISTRIBUTION OF GOVERNMENT AND PRIVATE BEDS IN SELECTED DISTRICTS,1984

S.No.	Districts	NUMBER OF BEDS	
		Public	Private
1.	Krishna	1591	3475
2.	Guntur	1062	3024
3.	Mahbubnagar	528	736
4.	Medak	382	357

Sources: 1.President, Andhra Pradesh Nursing Homes Association, Hyderabad, 1986-

2.Statistical Division, Directorate of Medical and Health Services, Hyderabad.

Corporate Sector:

While examining the private sector in health care, one needs to look at the emergence of the Corporate Sector as well. Although the growth of the Corporate Sector is restricted to major cities, it is interesting to note that a number of regional entrepreneurial groups have diversified into setting up of super-speciality hospitals, diagnostic centres and leasing of 'high' technology medical equipment. In fact the Seventh Plan categorically states that ''the growth of the private sector will be encouraged and setting up of superspeciality hospitals by non-residents will be

encouraged"[16]. This shift in policy should be seen as a step towards strengthening the growth of Corporate Sector in health care.

Most of the enterprises that have been started are essentially by Reddy business groups. During 1985 there were proposals to set up atleast half a dozen super speciality hospitals with assistance and investment of non-resident Indians in Andhra Pradesh.[17] One such enterprise to be started in Hyderabad was a branch of the Madras based Apollo Hospital Group. The management of this enterprise consists of a board which includes three doctors and six industrialists. Of the three doctors, two are non resident Indians and majority of the board members are Reddys.[18]

Another enterprise which has been diversifying into areas like diagnostic centres and leasing of Medical equipment, is the Standard Organics Limited, which is a drug manufacturing company[19]. Due to its impressive turnovers, it has diversified into other areas of medical care. This company does leasing of medical equipment and caters to clients all over India from large cities

---

16 Government of Andhra Pradesh, Seventh Plan Document Vol.II, Hyderabad, 1986, p.379

17 Report in the Indian Express dated December 29th, 1985.

18 Report in The Hindu dated October 28th, 1985.

19 Report in the Deccan Chronicle dated November 23rd, 1986.

to small towns.[20] Apart from the leasing of medical equipment, they have set up a diagnostic centre in 1985 with a total investment of two crores.[21] This centre offers facilities ranging from CAT Scanners, endoscopy, ultra sound, EEG, EMG to simple lab facilities. Encouraged by their success at Hyderabad, the company plans to open four more centres at Visakhapatnam, Pune, Bangalore and Calcutta.[22]

During 1985-86 several smaller diagnostic Centres offering one or two specialist testing facilities have been established in Hyderabad city. Of late, a 7.6 crore multi speciality hospital is going to be established by another Reddy business group in Hyderabad city, which has financial interests in hospital, hotel industry, manufacturing and trading line.[23]

Coverage by the Private Sector:

In rural areas, there are the Rural Medical Practitioners who are essentially non-MBBS degree holders. The nursing homes are located in towns and cities but in the advanced districts it has spread into smaller towns as well. The highest concentration of bed strengths is located in the

---

20 Based on discussions with one of the Manufacturers of Standard Organics Ltd., Hyderabad, February 1987.

21 Ibid.

22 Ibid.

23 Report in the Indian Express dated March, 1987

cities and in the smaller towns the bed strengths are lower. As far as the corporate sector is concerned it is located essentially in Hyderabad city. Therefore, as far as nursing homes are concerned, they are confined to urban areas. Given the range of services offered by the private sector in health care, one sees a highly differentiated private sector emerging which includes rural private practitioners on the one hand to the corporate sector on the other.

3.5.3 Voluntary Sector in Health Care:

The voluntary sector includes those institutions which are essentially non-profit organisations. These organisations do not generate their own funds but rely on external financing from the government, international agencies or the public at large.

According to the latest information available, there are 30 institutions providing health care in Krishna and Guntur district 8 in Mahbubnagar and 7 in Medak districts. Table No.45 shows that both number of voluntary agencies and bed strength is higher in the two advanced districts as compared to the backward districts. This is also reflected in the bed-population ratio. All these indices together point out the concentration of voluntary agencies in the advanced districts.

TABLE NO.45

INSTITUTIONS AND BEDS IN SELECTED DISTRICTS,1984

S.No.	Districts	No.of Institutions	Bed Strength	Bed/Population Ratio
1.	Krishna	30	922	1:3,298
2.	Guntur	30	901	1:3,811
3.	Mahbubnagar	8	222	1:11,018
4.	Medak	7	58	1:31,500

Source : Directory of Voluntary Health Agencies, Andhra Pradesh Voluntary Health Association, Hyderabad,1984

While yearwise information on number of institutions and bed strength is not available, there is some information available regarding year of establishment of these institutions. Since Krishna and Guntur districts were under the Madras presidency, the British encouraged the involvement of missionaries in providing welfare services. The missionaries established several dispensaries during the late 1800s. Over the years these dispensaries expanded into large hospitals.[24]

In Telengana region a few hospitals were established during the early 1900s. Over the 1960s and 1970s, several organisations were started in the state. Till the 1960s the trend was to establish hospitals but during the 1970s, the shift was towards developmental work where health services

24 Directory of Voluntary Health Agencies, Andhra Pradesh Voluntary Health Associations, Hyderabad, 1984.

was just one of the inputs. Given this background it appears that the reasons for differences in Voluntary Institutions between the backward and more developed districts are partly historical.

Manpower:

Details regarding number of doctors and nurses employed in the voluntary sector is available only for 1981. For the selected districts, the information is presented in Table No.46.

TABLE NO.46

DOCTORS AND NURSES IN SELECTED DISTRICTS,1981

S.No.	Districts	No.of Doctors	DOC/Population Ratio (in lakhs)	No.of Nurses	Bed/Nurses Ratio
1.	Krishna	43	1:070	189	1:4.8
2.	Guntur	42	1:081	192	1:4.6
3.	Mahbubnagar	3	1:8.1	35	1:6.3
4.	Medak	4	1:4.5	14	1:4.14

Source : Directory of Voluntary Agencies in Health Care, Voluntary Health Association of India, 1981

Table No.46 shows a few interesting characteristics of the voluntary sectors Firstly, though the voluntary sector is small, as such, between backward and advanced districts the disparity in the number of doctors is very acute; 86 doctors work in the advanced areas and only 7 work in backward districts. Secondly, the doctor-population ratio is much poorer in backward districts compared to advanced areas. Thirdly, though like the private sector backward districts are at a disadvantage the paucity of voluntary services is much sharper in backward districts.

The services offered by the voluntary institutions include general medical services, maternal and child health services along with a number of other specialist services. As far as community services are concerned, there are more number of agencies offering community based services in the forward districts than the backward districts.

Coverage:

If one studies the distribution of voluntary agencies across taluks, there are more number of agencies in the advanced taluks of the two advanced districts. In the backward districts the differences between taluks are not significant any way. An attempt has been made to see if there is any relationship between infrastructural

development and location of rural voluntary organizations (Table No.47). Our information suggests that there is a relationship between availability of infrastructural inputs like electricity, roads and communications and location of voluntary organizations.

Having analysed the data for the selected indices for the three sectors in the study districts, the next chapter will seek to offer explanations regarding the trends and variations observed across the study districts.

TABLE NO.47

INFRASTRUCTURAL DEVELOPMENT AND LOCATION OF VOLUNTARY ORGANISATIONS

S.No.	Village	Population	Year of Establishment	Medical facility	Electricity	Roads	Communications
Krishna District							
1.	Gollapudi	5,000	1976	Dispensary	Yes	Pucca	Post Office
2.	Srikakulam		1978	-	Yes	-do-	-do-
3.	Chinnapuram	4,462	1980	Pvt.Practice	Yes	-do-	-do-
4.	Pinapaka	-	1926	-	Yes	-	-
5.	Kollikula		1979	2 RP	Yes	-do_	Post Office and Bus stop.
6.	Pedavutapalli		N.A.	PHC	Yes	Pucca	Post Office, Train Station.
				Hospital, 2 RP	Yes	-do-	-do-
7.	Nunna	7,533	N.A.	-	Yes	Kutcha	Post office,Train station.
8.	Nagayalanta	7,873	1978	PHC,Hosp.	Yes	Pucca	Bus Stop, Phone, Post Office.
Guntur District:							
1.	Pedakakani	-	1969	Dispensary	Yes	Pucca	Post office
2.	Siripuram	-	1981	-do-	No	Pucca	Post office, Train Station
3.	Thallacheruva	-	1975	-	Yes	Pucca	2 Post office
4.	Dachepalli	-	1969	Dispensary	Yes	Pucca	Post Office, T.O., Phone
5.	Vejendla	-	1975	-	Yes	Pucca	Post office, Train Station
6.	Amaravati	-	1980	Dispensary	Yes	Kutcha	Post Office
7.	Challgunda	-	1981	-	Yes	Pucca	Post Office
Mahbubnagar District:							
1.	Chandrakal	-	N.A.	-	No	Pucca	Post Office
2.	Padakal		1971	-	Yes	Kutcha	-do-
3.	Kottor	-	1976	-	Yes	Pucca	-do-
Medak District :							
1.	Alirajpet	-	1976	None	None	None	None
2.	Ramayampet	-	N.A.	2 doctors PHC	Yes	Pucca	Post Office, T.O.
3.	Chintalacheruvu		1981	-	No	Kutcha	Post Office

Source : Information was compiled from the village Directories of the census District Handbooks.

Note : Information has been classified according to the village in which the voluntary agency is functioning.

CHAPTER IV

Growth Of Health Services And Factors Influencing Their Variations.

(a) Discussion

(b) Emerging Trends.

GROWTH OF HEALTH SERVICES AND FACTORS INFLUENCING THEIR VARIATIONS

In the preceeding chapter we presented the information relating to certain indices of health services provided by the public, private and voluntary sectors in selected districts. The pattern of distribution of health services in these districts suggests that the overall trend in all three sectors is such that services are more concentrated in developed areas rather than backward one. Of the three sectors, the least amount of variation between the two sets of districts, is in the public sector. In both the private and voluntary sectors the differences are sharp, with the distribution of services skewed in favour of advanced districts.

In the public sector, certain indices like a better distribution of primary health centres in backward areas, a faster growth of primary health centres and personnel and the existence of proportionately a large number of hospitals in the rural areas of backward districts are indicative of political influences whereby the government has consciously intervened to correct regional imbalances.

The private sector is highly differentiated with services ranging from the Registered Medical practitioners in rural areas, nursing homes in urban areas, and,recently,

the emergence of the corporate sector which is dependent on 'high' technology in larger cities. The growth of the private sector is essentially confined to the economically prosperous areas where there is a market for these services. While there is only a small difference in the distribution of services of Registered Medical practitioners between the two sets of districts, the concentration of nursing homes is in larger towns and is skewed in favour of advanced districts. The corporate sector, a recent phenomenon, is essentially restricted to Hyderabad city.

The growth of the voluntary sector, since 1960s, has witnessed a shift from hospital based services to community based services in health care. The distribution of organisations in the voluntary sectors shows that there is a higher concentration of these organisations in the advanced rather than the backward districts.

When we look at all the three sectors together, we find that while both the voluntary and private sector are concentrated in economically developed areas, it is only the public sector which presents a picture of least variation, which is probably due to political factors, as a result of the state's conscious intervention to maintain

regional balances. What is fairly clear is that the trend of the growth of health services in the public sector is quite different from those of the private or voluntary sectors. Having observed these broad trends we now proceed to attempt to explain how socio-economic and political factors have impinged upon and influenced the structure of health services in the public, private and voluntary sectors in greater detail.

In our earlier discussion we had pointed out the differences in the structure of economy and socio-political configurations that are responsible for variations in development across the selected districts. The districts we have chosen infact represent the extremes with respect to socio-economic development in the state.

Historical Factors:

In the Krishna and Guntur districts which were under British rule, a department of Medical and Public Health Services was established as early as 1786.[1] Under this department, several allopathic dispensaries were set up in various towns in these districts around the second half of the 19th century and a Medical College

1. Government of Andhra Pradesh, Andhra Pradesh District Gazeteers - Krishna, Hyderabad, 1977, p.197.

was set up in Guntur town as early as 1946 to train licentiates.[2] In Mahbubnagar and Medak districts which were under Nizam's rule, a state medical department was established only in 1844 and a few dispensaries were set up during the late nineteenth and early twentieth centuries.[3] In addition to the state supported medical services in these districts, a few missionaries established dispensaries in Krishna and Guntur districts during the late nineteenth century.[4] Since these districts were under British rule, the activities of missionaries in providing social services were encouraged and strengthened as a result of which the health facilities were expanded in these regions. However, in Mahbubnagar and Medak district there were far fewer missionaries who established health care facilities. Infact only one hospital was established in each of these districts at the turn of the century.[5] While health services did develop during the half century preceeding the formation of the state, at the time of the formation of the state, Krishna and Guntur districts had a larger number of hospitals and dispensaries compared to either Mahbubnagar or Medak.[6]

---

2 Government of Andhra Pradesh, Andhra Pradesh District Gazeteers-Hyderabad, 1977, p.489 - Guntur

3 Government of Andhra Pradesh, Andhra Pradesh District Gazeteers-Mahbubnagar, Hyderabad, 1977, p.187

4 Krishna District Gazeteers, Op.Cit, p.205

5 Mahbubnagar District Gazeteers, Op.Cit.p.188

6 Government of Andhra Pradesh, Andhra Pradesh District Gazeteers-Krishna, Guntur, Mahbubnagar and Medak, Hyderabad,1977.

Political Factors :

Apart from these historical influences leading to initial differences political factors have also played a part since the time of formation of Andhra Pradesh as a state.

The policy and priorities in the area of Medical and Public Health in the state have been in favour of strengthening medical education and hospital-based curative services and on the public health side, the emphasis has been on control of communicable diseases.[7] These policies reflect the immediate needs of the upper sections of society rather than those of the poor, specially in rural areas, where the focus of health services should be on an integrated approach which would include the curative, preventive and promotive aspects. However, since policies are determined by the ruling classes, the interests of the poor may be neglected given the class basis of state politics. In Chapter III we have already drawn attention to the political economy of government policy in Andhra Pradesh, In Andhra Pradesh, it is essentially the landlord and emerging rich peasantry caste/class combinations who have dominated

---

7 Government of Andhra Pradesh, State Plan Documents of various years, Hyderabad.

the politics of the state and therefore have influenced government policy as well.[8] Their interests were reflected in the priorities in state policy with larger percentage of plan outlays being earmarked for the development of agriculture, irrigation and power. Although, only a smaller percentage of the outlays were allotted for medical and public health, almost 60% of the expenditure was incurred on strengthening medical education hospitals. In rural areas the emphasis has been on establishing Primary Health Centres which are essentially located in larger villages and cater mainly to the medical needs of the elite.[9] They also provide jobs to these families, which includes both doctors and para medical posts.[10] Further, there is little emphasis on other inputs like drinking water, sanitation, and housing. . .

---

8 Haragopal,G.'Dimensions of Regionalism : A Nationality Question' (Mimeograph), Centre for Economic and Social Studies, Hyderabad, 1985.

9 Banerji, D. Poverty, Class and Health Culture, Vol.I, New Delhi, Prachi Prakashan, 1981.

10 Qadeer, I. 'Social Dynamics of Health Care : A Case of the CHW Scheme in Shahdol District,' Socialist Health Review, II, n.2, 1985.

Also see Ramalingaswami, P.Cost of Medical Education, Unpublished Monograph.

These priorities clearly reflect the interest of the upper sections of society rather than those of the poor.

Caste Dominance :

Caste-class overlap is significant in Andhra Pradesh and hence caste plays a crucial role in the political economy of Andhra Pradesh. Caste also has an additional influence since it is used as the basis for political mobilisation by upper classes using both their economic strength and social influence.[11] Thus dominant castes have influenced the development of health services as dominant political representatives in these areas. Political factors like representation of districts in Ministries, caste and regional character of Health Ministers and Chief ministers of the state have played an important role in decision making. In addition major political movement or agitation which could have influenced growth of health services in a region are considered. Of the two sets of districts, Guntur and Krishna have been better represented in the various ministries as compared to Mahbubnagar and Medak. In addition, from 1962 to 1972, the health ministers were from Krishna and Guntur districts and both belonged to forward castes. From 1972 to 1982, the health ministers were from Mahbubnagar and Medak districts. One of them belonged to a minority community while the other

11 Bagchi, A.K.'Towards a Political Economy of Planning in India', Contributions to Political Economy,Vol3, March, 1984.

belonged to the backward classes.

When we examine certain indices in the public sector like bed-population ratio and personnel across selected districts, there are differences between the advanced and backward districts. However, the gap between them has narrowed over time.

When we attempt to relate political changes with the existence of the gap and its subsequent narrowing, certain interesting facts emerge. Firstly, the two earlier health ministers, from 1962 to 1972, were from Krishna and Guntur districts, a fact that perhaps had considerable influence on increase in bed strength over several taluk and district hospitals in the more developed districts. During the same period bed strength had also increased in Medak and Mahbubnagar, yet the gap between the forward and backward districts remained significant due to a disproportionate increase of beds in advanced districts as compared to the backward districts. In addition to this as we have already pointed out due to historical reasons, Krishna and Guntur were at an advantage even at the time of formation of the state.

The gap between the advanced and backward districts started narrowing after 1969. This coincided with the

Telengana agitation which brought to light the socio-economic backwardness of this region and raised demands for a better share of state resources. As a consequence of this agitation, conscious efforts were made to correct regional imbalances in the state and this was bound to reflect itself in the development of health services as well. Due to the effect of the agitation and the fact that legislature members elected from Mahbubnagar and Medak districts were given the health portfolios from 1972-82, bed strength was increased in Mahabubnagar and Medak. It is interesting to note that the increase is much more in Medak whose representative was one of the active leaders of the Telengana agitation and a powerful politician who belonged to the backward classes.[12]

In 1983, the health minister was from Cuddapah district and the Chief Minister from Krishna district. During this period, the only addition in the selected districts was the establishment of a ten bedded hospital in Krishna district. The present health minister, since 1985, is from Guntur district and during this period, bed strength has significantly increased in the constituencies of the health minister and chief minister while there has been only a marginal increase in Mahabubnagar and Medak districts (Table Nos.12,13 and 14).

---

12 Based on an interview with a former Secretary of Health, Government of Andhra Pradesh, February, 1987.

Professional Pressures :

While a high percentage of the posts of doctors have been filled in all hospitals in the selected districts (93% in Krishna, 87% in Guntur, 91% in Mahbubnagar and 73% in Medak districts), there is a great deal of difference between advanced and backward districts with respect to nurses. While almost 90% of the sanctioned posts in Krishna and 100% in Guntur are filled, only 45-50% of the posts are filled in Mahbubnagar and Medak districts. Commenting on the situation of nursing staff, a superintendent of a civil hospital in a backward district said :

> "There is an acute shortage of nursing staff in almost all district and taluk hospitals in this region. The shortage of nursing staff is mainly because there are few training institutions in Telengana. In addition, after the Telengana agitation, an agreement was reached whereby nurses from Coastal Andhra and Rayalaseema were not to be appointed in Telengana and vice versa. While there is a surplus of nursing staff in Coastal Andhra, Telengana has a shortage. The shortage of nursing staff affects the quality of services rendered in a hospital".[13]

---

13 Based on an interview with a Superintendent of a District Hospital in a backward district, March, 1987.

The distribution of doctors and nurses reflects the advantage they have because of their professional " relevance" within the existing health service structure. The doctors are relatively better off since they have the added advantage of a middle class background.[14] However, nurses though neglected as a profession take advantage of their own scarcity and prefer urban postings.

Local Government and Democratic Pressures :

While the bed-population ratio in selected districts presents a picture of variations, there is little variation in the PHC - population ratio across these districts which is mainly due to the directions of the Central Government to locate one PHC per lakh population.

At the state level the priorities of the government is to go in for a curative based health services system which reflects the interests of the dominant caste-classes [redacted] in state politics. However, given the nature of parliamentary democracy and the fact that nearly 80% of the electorate live in rural areas, the government does take into account the needs of these sections by providing services in rural areas.

---

14 Madan,T.N., Doctors in Society, (mimeograph), New Delhi, 1977, p.4.1

In Andhra Pradesh, the location of Primary Health Centres was governed by the A.P. Panchayat Samithis and Zilla Parishads Act of 1959. As per this Act, a specified amount of land and cash had to be contributed by villagers for setting up of primary health centres. Due to the contributory nature of the scheme several Primary Health Centres were not ideally located because any village which came forward with the required contribution was selected even if it was unsuitable for locating an institution.[16] As a result of this "some Primary Health Centres were located at one end of the block where communication, education and accommodation facilities were not available, and coverage was much reduced".[17]

By about the mid-1960s the government assumed responsibility to locate primary health centres, however, local political pressures continued to play an important role in location of these centres.[18] As a result of these pressures, the distribution of Primary Health Centres was rendered uneven and there were instances of a block having two primary health centres instead of one. Infact a look at the spatial distribution of Primary Health Centres for the selected districts (Map Nos. 1-4) shows the uneven nature of distribution of these institutions

16 Government of Andhra Pradesh, Evaluation Study on Working of Primary Health Centres in Andhra Pradesh, Hyderabad, 1971, p.8

17 Ibid, p.8

18 Based on an interview with District Medical and Health Officer in a backward district, March 1987.

across districts. What is important to note here is that welfare measures are used by local leaders to consolidate their position and redeem their campaign pledges. One would therefore agree with Francine Frankel who points out that high caste leaders often redeem their campaign pledge by providing drinking water, school building or other welfare services to consolidate their position.[19]

In addition to local political pressures, democratic pressure in terms of political movements can also influence provision of welfare measures even if it is directly not a demand. This is mainly because health services like other welfare measures performs the double function of appeasing the people and consolidating the state government's political base. To illustrate this case, during the post-Telengana agitation period, efforts were made to correct regional imbalances and this was reflected in the case of distribution of health services as well although provision of health services was not one of the direct demands made during the agitation.

---

19 Frankel,F. India's Green Revolution : Economic Gains and Political Costs, Princeton, Princeton University Press, 1971, p.78.

Economic and Infrastructural Development:

The last, by no means unimportant, factor that we identify is the general level of economic and infrastructural development. These play an important role in determining accessibility and utilization of health institutions and are directly dependent on an area's economic development. If we compare the general level of infrastructural development between the advanced and backward districts, one finds that, on an average, almost 75-85% of the villages in Krishna and Guntur have pucca roads and communication facilities while only 42-48% of the villages in Mahbubnagar and Medak have the same facilities (Table Nos.30 to 33). As pointed out by the Kerala experience the even spread of health services and improved infrastructural development have contributed to better accessibility and utilisation of services.[20] Infact the Evaluation study of Primary Health Centres in Andhra Pradesh also pointed out that lack of adequate communication facilities is an important reason for reduced accessibility to these institutions.[21] Unequal infrastructural inputs, thus constitute a major reason for the differentials in health services distribution between developed and backward districts.

---

20 Centre for Development Studies, Poverty, Unemployment and Development Policy, New Delhi, Orient Longman, 1977.

21 Government of Andhra Pradesh, Evaluation Study of Working of Primary Health Centres in Andhra Pradesh, Hyderabad, 1971, p.9.

The level of infrastructural development not only influences the accessibility to these institutions but also has an effect on the willingness of doctors to serve in rural areas. If one looks at the percentage of posts of doctors filled in Primary Health Centres, across selected districts, then one finds that a higher percentage of the posts have been filled in Krishna, Guntur and Medak (72%, 56% and 67% respectively), while only 47% of the posts have been filled in Mahbubnagar district (Table Nos.21-24). Although Medak is a backward district, a higher percentage of the posts are filled because of its proximity to Hyderabad which facilitates doctors to commute to their work place even while they live in the city.[22] In an interview with a doctor who worked in Krishna district and is now serving in a backward district in Telengana, he stated that :

> "Doctors prefer to work in Coastal Andhra areas because it is better developed than Telengana areas. We can get descent accommodation and proper schooling for our children in coastal areas. Telengana is very backward with poorly developed roads, communications and other facilities. That is why a number of doctors who are posted in

---

22 Based on an interview with a senior official at the Directorate of Medical and Health Services, Hyderabad, March, 1987.

> Telengana areas, especially in Primary Health Centres, either go on leave or try for a transfer. As a result of this, a number of primary health Centres are poorly staffed in Telengana region compared to coastal areas".[23]

Even in the case of distribution of paramedical personnel in PHC areas one does find variation between the advanced and backward districts. However one finds that a higher proportion of them are in position as compared to doctors in both advanced and backward districts. Given their own social background and a relatively lower position in the hierarchy of health services, they have fewer options for mobility.

Factors like location of primary health centres, level of infrastructural development and the overall economic development of the districts determine the accessibility, utilization and willingness of personnel to work in PHCs. These then are the links between health services and the socio-economic and political realities of the study districts. They also are the key factors that explain the variations that we observed in the existing health services in the public sector.

---

23 Based on an interview with a doctor working in the backward districts, February, 1987.

Private Sector:

A look at the distribution of number of nursing homes and bed strength across selected districts shows that Krishna and Guntur districts have a higher bed strength than either Mahabubnagar or Medak districts (Table No.36). Infact the private bed strength is almost double that of the bed strength in the public sector in the advanced districts (Table No.44). In order to understand this variation one needs to take into account the changes that have taken place in the structure of economy in the two advanced districts, as a result of the green revolution during the early 70s. The post green revolution period saw the rise of rich peasants and capitalist farmers who diverted the surpluses accruing from the Green Revolution into a number of commercial and industrial activities.[24] The commercial enterprises included hotels, cinemas, shopping centres as well as nursing homes.[25] Although we do not have information on year of establishment of institutions for all the selected districts, the data for Krishna district shows that the maximum growth of private nursing homes took place during the later 1970s to early '80s (Table No.43). According to Dr.Bajrang Lal[26],

---

24 Krishna Rao, YVS 'Growth of Capitalism in Agriculture: A Case Study of Andhra Pradesh' in Krishna Rao,YVS, et.al,Peasant Farming and Growth of Capitalism in Indian Agriculture, Vijayawada,Visalandhra Publishing House, 1984, p.49.

25 Ibid, p.49

26 Based on an interview with the President, Andhra Pradesh Nursing Homes Association,Hyderabad, October 1986.

> "During the late 1970s and early 1980s there was a boom in the growth of private nursing homes in the delta districts which was definitely a post green revolution phenomenon. However, in the Telengana areas there are fewer nursing homes compared to the delta districts and they are restricted essentially to Hyderabad city and a few towns".

The Indian Medical Association membership patterns support the trend observed in the distribution of nursing homes and bed strength across the selected districts. Krishna and Guntur have more number of IMA members than Mahbubnagar or Medak and in addition the Presidents of the IMA since 1978 have been mostly from coastal districts, Hyderabad city and most of them have been owners of private nursing homes (Table No.48).

The link between economic development and growth of private nursing homes is well illustrated by the case of Miryalaguda town in Nalgonda, a backward district in the Telengana region. Miryalguda taluk like the rest of Nalgonda district was a dry area till a few years back.

TABLE NO. 48

PRESIDENTS OF THE INDIAN MEDICAL ASSOCIATION FROM 1978 TO 1985

S.No.	Year	President	District	Government/ Private
1.	1978-79	Dr Chandramouli	Guntur	Private
2.	1979-80	Dr R.J. Reddy	Khammam	Private
3.	1980-81	Dr Rangiah Chetty	Anantapur	Private
4.	1981-82	Dr B. Pullaiah	Tenali(Guntur)	Private
5.	1982-83	Dr D.A. Mohan Rao	Hyderabad	Private
6.	1983-84	Dr Srinivasulu	Hyderabad	Private
7.	1984-85	Dr V.P. Rao	E.Godavari	Private

Source : Compiled from the Annual Reports of the Indian Medical Association, Hyderabad, 1986.

The opening of the Nagarjunasagar left canal has brought tremendous prosperity to this taluk which has now become a surplus rice producing area. The rapid growth of Miryalguda town is best exemplified by the fact that in this period the town has witnessed the growth of several business establishments like hotels, cinemas, textile shops, liquor shops and of course private nursing homes.[27]

As far as spread of private nursing homes within the selected districts is concerned, one finds that it is the more prosperous taluks of the advanced districts which have more number of nursing homes (Table Nos.37 and 38), whereas in the backward districts nursing homes are essentially located in the larger towns viz. Mahbubnagar town in Mahbubnagar district and Medak and Sangareddy towns in Medak district.[28] In addition to the growth and spread of private nursing homes in the selected districts, one also needs to point out that the larger and better equipped nursing homes are found in the advanced rather than the backward districts.[29] Apart from private nursing homes, there

---

27 Based on a discussion with research scholars working on the economic development of the specified region, March 1987.

28 Based on a discussion with the President, Andhra Pradesh Nursing Homes Association, Hyderabad, January, 1987.

29 Ibid.

are a sizeable number of doctors who are engaged in individual private practice, however, it is difficult to estimate the numbers involved because a large percentage of the doctors in the public sector are engaged in private practice. This is well illustrated by the fact that whenever the government has tried to ban private practice of doctors in the public sector, it has met with a great deal of opposition, because of which, the government has been forced to withdraw the ban. This typeof a situation arose during 1968, when, the then chief minister, imposed a ban on private practice for almost a year and a half but due to pressure from the doctors had to revoke the ban.[30] Similarly the present chief minister has imposed a ban on private practice of government doctors since the beginning of this year and it has resulted in a series of agitation by the doctors in the state.[31]

Almost all ggvernment doctors interviewed were against the ban. The main reason for this attitude stems from the fact that the hospitals are, in many instances, used by these doctors for admitting their private patients and for availing services of its staff. Their position in the hospital adds to their prestige and

---

30 Jafri, S.A.'Government vs.Doctors' in Newstime dated 6th April, 1987.

31 Ibid.

power to attract more clients and their government pay becomes only a pocket money compared to their private earnings. There have been instances of specialists resigning when private practice is banned.[32]

The registered medical practitioners in rural areas also follow a similar pattern to the distribution of nursing homes. Though the differences in their distribution between forward and backward districts are less marked, it does present some variations (Table No.35).

As far as the private sector is concerned, the level of economic development has a direct relationship to the growth of nursing homes which increases the over all inter-regional difference between developed and backward districts. The link between growth of private sector and economic development is logical because it is the economically more developed areas which provide the market for the growth of commercial services.

---

32 Based on a discussion with a retired specialist in a government hospital in Hyderabad, January, 1987.

Voluntary Sector:

If we review the distribution of organizations, bed strength and manpower across the selected districts, one finds that there is an interesting difference between the advanced and backward districts. Krishna and Guntur districts have a better bed/population, manpower/population ratios and larger number of organisations than either Mahbubnagar or Medak districts (Table No.45 and 46). The reasons for this are many. Firstly, as pointed out earlier in this chapter, because Krishna and Guntur districts were under British rule, more number of dispensaries were established by missionaries, whose main interest was to propogate Christianity. This type of development is seen in all those regions which were formerly under British rule.[33] On the other hand in Mahbubnagar and Medak districts which were under Nizam's rule, very few hospitals were set up by missionaries by the turn of the century. Due to the presence of missionaries in Krishna and Guntur districts, a large number of religous conversions took place and if one studies the religious composition in these two districts, one finds that next to Hindus, who are the majority

---

33 Twumasis,A. 'Colonialism and International Health: A Study of Social Change in Ghana' in Social Science and Medicine, 15B, 198.

community, Christians are the second largest community.[34] This could very well have been a factor in the growth of voluntary agencies in these two districts. This kind of a trend is not observed in Mahbubnagar and Medak.

Secondly, during the late 1970s, there was a spurt in the growth of voluntary agencies specially in Krishna and Guntur districts. This was a result of a severe cyclonic storm and tidal wave in 1977, during which time a number of voluntary agencies started providing relief and rehabilitations to the victims of the cyclone.[35] This added to the already existing organisations providing health care in these districts. During the same period only a few drganizations were established in Mahbubnagar and Medak districts.

Till the 1960s, the approach of the voluntary organizations in health care was essentially to provide relief through hospitals. However, during the 1970s there was a shift from an institutional approach to a developmental one. This resulted in a number of organisations

---

34 Government of Andhra Pradesh, Andhra Pradesh District Gazeteers - Krishna, Hyderabad, 1977.

35 Based on discussion with Secretary,Andhra Pradesh Voluntary Health Association, Hyderabad, November,1986.

TABLE NO.49

DISTRIBUTION OF VOLUNTARY AGENCIES AND BED STRENGTH ACROSS TALUKAS - KRISHNA DISTRICT, 1984

S.No.	Taluka	No.of Organisations	Bed Strength
1.	Vijayawada	6	468
2.	Machilipatnam	3	15
3	Divi	4	35
4.	Jaggayapet	1	100
5.	Gudivada	1	115
6.	Nuzvid	4	N.A.
7.	Kaikalur	1	16
8.	Nandigama	2	8
9.	Tiruvuru	2	40
10.	Vuyurru	1	75
11.	Mylavaram	2	40
12.	Kanchikacherla	1	16
13.	Gannavaram	1	6
14.	Movva	1	Health Camp
	Total	30	934

Source : Directory of Voluntary Health Agencies, Andhra Pradesh Voluntary Health Association, Hyderabad, 1984.

Note : The advanced talukas are Vijayawada, Divi, Nuzvid, Machilipatnam. There are no backward talukas in this district.

TABLE NO.50

DISTRIBUTION OF VOLUNTARY ORGANISATIONS BED STRENGTH ACROSS TALUKAS IN GUNTUR DISTRICT,1984

S.No.	Taluka	No.of Organizations	Bed Strength
1.	Guntur	8	398
2.	Narasaraopet	3	125
3.	Bapatla	6	133
4.	Tenali	3	-
5.	Sattenapalli	4	114
6.	Palnad	4	44
7.	Pedakurpadu	1	12
8.	Vinukonda	1	75

Source : Directory of Voluntary Health Agencies, Andhra Pradesh Voluntary Health Association, Hyderabad, 1984.

Note: The advanced talukas are Guntur, Tenali, Repalli, Bapatla and Narasaraopet. The only taluka which is backward is Vinukonda.

adopting a community approach to health care, whereby the emphasis was not solely on medical relief but on a variety of other inputs like sanitation, nutrition, upliftment of weaker sections and the like.[36]

If one reviews the distribution of such organizations across the advanced and backward districts, one finds that there are more number of organisations in Krishna and Guntur rather than Mahbubnagar and Medak.

Even within Krishna and Guntur districts, it is the advanced talukas which have more number of these agencies (Table No.49 and 50). This would ofcourse raise an important question as to why more number of agencies are located in the advanced areas rather than backward areas when it is claimed that voluntary agencies are doing social work for humanitarian reasons, to help the poor and the backward regions. Jessani et.al[37] in their report on Voluntary Organisations in Health Care in Maharashtra, observe a similar pattern of distribution as in our study districts. Nearly 70% of the organisations are concentrated in relatively developed districts.[38]

---

37 Jessani et al., NGOs in Rural Health Care, Volume One: AN Overview, Bombay, The Foundation for Research in Community Health, 1986.

36 Fernandes,W.'The National NGO Convention: Volumtarism, the State and the Struggle for Changes' Social Action, Vol.36, No.4, 1986.

38 Ibid, p.19

They have also pointed out that in the selection of districts, voluntary organisations prefer those areas where infrastructural facilities are adequately developed.[39] Based on our study, we feel that this could be an important explanation for the location of voluntary organisations.

We tried to see the relationship between the availability of the various facilities and location of organisations, in the selected districts. We find that there is a positive relationship between the availability of the various facilities and location of organizations in Krishna and Guntur districts. In Mahbubnagar and Medak there were fewer organisations and of these, most of them had electricity, post offices, but not all of them had pucca roads (Table No.47). The other important point to note is that in the case of the backward districts, proximity to Hyderabad also becomes an important factor in location of organisations because the staff can commute from Hyderabad to work in these agencies.

Our data then indicates that the logic of voluntary agencies is perhaps not what they claim it to be but

---

39 Ibid, p.20

same as that of the private sector i.e. its expansion in areas with better economic and infrastructural facilities. This raises an interesting issue. Are infrastructural inputs an essential prerequisite for the efficient working of health facilities? In which case the public sector is in fact wasting resources. Or, is it that voluntary agencies can in fact be effective in the absence of good infrastructural facilities but they choose to be in developed areas either for profits, for showing better results or for some other reasons? These questions need to be studied and examined at an all-India level.

Our study of the public sector in two sets of districts helps to highlight an existing differential in the availability of health services in them. The backward districts are at a disadvantage as compared to the advanced districts. It also indicates that while the state has attempted to provide adequate PHCs, the growth of sub-centres remains unsatisfactory in the backward districts. The expansion of hospitals is definitely more in developed districts and so is the employment of doctors, nurses and other medical staff. The placement of paramedicals at the PHC level is better than those of the doctors showing their relatively lower bargaining power as well as social position.

An exploration of socio-economic and political factors reveal that historical process, political economy, caste dominance, professional power of the medical community, electoral politics, local governments and economic and infrastructural development have a crucial role in determining the course of health services development.

If we take all three sectors into account one finds that the variations between the advanced and the backward districts become very sharp. Even though the government has tried to correct regional imbalances with respect to public health services, the voluntary and the private sectors, specially the latter, has infact accentuated the regional imbalances. This finding highlights the crucial role that the uncontrolled private sector is playing in distorting the distribution and nature of health services.

The growth of the private sector is linked to factors like the level of economic prosperity in a region, availability of a market, rise of the rich peasant, entrepreneurial and urban middle classes. An interesting finding of our study, contrary to our expectations, is the strengthening of the voluntary sector in advanced

districts which has not corrected but infact accentuated the differences between the two sets of districts. The reasons for this type of a trend in the voluntary sector needs to be further explored.

According to our study we find that historical, economic, social and political factors along with the development of infrastructural inputs like roads and communications have a bearing on the variations in the growth of health services in all the three sectors.

Emerging Trends in Health Care in Andhra Pradesh:

So far, we have looked at inter-district variations in the development of health services. Before concluding it would be interesting to take stock of emerging trends at a macro-level in the health services sector at the state level. There are two important trends that we would like to draw our attention to. Firstly the commercialisation of the public sector by the setting up of a Commissionerate of Medical Services and, secondly, the emergence of the corporate sector in health care.

The most striking development in the area of public policy in health care is the incorporation into the VIIth Five Year Plan, for the first time, a statement on the

role of private enterprises particularly with the involvement of NRI doctors in the growth of health services. All earlier state plan documents discuss only the public sector in health care without any mention of the private sector. Thus one could view this as an important shift in the public policy in health care. As discussed in Chapter III, the outlays on health have been meagre and have declined over the various plan periods, however, during the VIIth plan period it did register a slight increase. A major portion of this outlay is infact going into strengthening of hospitals and creating super specialist services in the taluk, district and teaching hospitals. Given the high cost of specialist services, which is not only capital intensive and dependent on 'high' technology, the marginal increase in the outlay in the state budget for health services would be in-sufficient to meet the costs of the type of medical care which the government is going in for. The setting up of the commissionerate is infact a step towards commercialising health care, so that hospitals can generate their own funds by charging patients for consultation and allied services, construct commercial complexes etc. to finance the running of hospitals. The commissionerate of Medical Services was set up by passing of a bill in 1985. As per provisions of this bill,

the commissionerate will be an autonomous body which will have all non-teaching hospitals at the district and taluk levels with a bed strength of 30 and above under its jurisdiction.[40] The commissionerate will receive funds from the state government, donations from the general public and institutions both from within and outside India. Apart from receiving funds the Commissionerate can also " plan, construct and maintain commercial complexes, paying wards, provide diagnostic services and treatment on payment basis and utilise the receipts for the improvement of hospitals."[41]

The government has also stated that the poor will be exempted from paying in these hospitals, but there have been reports from certain hospitals that even the poor are being made to pay for consultations and services. It is still too early to speculate how the scheme will function and it would be an interesting area for further study.

While the government has gone in for specialist services in hospitals, at the same time it has also

---

40 Government of Andhra Pradesh, Copy of Bill to Set-up Commissionerate, Hyderabad, 1985, pp.3-6.

expanded the primary health centre network by providing a PHC for 30,000 population. They have termed these PHCs as mandal PHCs, since they are located for every mandal.[42] This has ensured a better distribution of services across districts. Once again, it would be interesting to study the functioning and accessibility to these institutions.

As far as the private sector is concerned, there has been a mushrooming of private nursing homes in Hyderabad city and the delta districts in the State. Given the increase in the number of private nursing homes, the government proposed a bill in 1985 to regulate and control the growth of private nursing homes and clinical establishments in the State.[43] The bill sought to lay down certain basic conditions for starting a nursing home which included physical facilities and adequate manpower.[44] This bill evoked strong reactions from certain sections of the medical community consisting mainly of owners of small and medium nursing homes. The Indian Medical Association also protested against the bill and asked for a committee to be appointed to review

---

42 Based on discussions with officials at Directorate of Medical and Health Services, Hyderabad, November,1986.

43 Government of Andhra Pradesh, Brief Note on Private Nursing Homes and Clinical Establishments Act,1985.

44 Ibid.

the working conditions of the private nursing homes. However, a section of the doctors, mainly owners of small and medium nursing homes, decided to form a seperate association. The reason for a seperate association, according to Dr. Bajrang Lal, is that ''the IMA consists of doctors owning both large and small and medium enterprises, we felt that the interests of these enterprises would not be adequately represented, which is why we had to form a seperate association''.[45] Since then, the association has managed to get a stay order from the court and a special committee has been appointed to review the working conditions of nursing homes and make necessary changes in the Bill. While the government claims that this bill would ensure basic standards for nursing homes, Dr Bajrang Lal feels that ''the bill would affect the small and medium nursing homes because the larger enterprises which have become commercially viable will not be affected by the bill. Therefore this bill is just a means of curbing the growth of newer nursing homes, so that the larger enterprises can have a monopoly in the market.[46] This trend would be supportive to the growth of the corporate

---

45 Based on discussions with the President, Andhra Pradesh Nursing Homes Association, December, 1986.

46 Ibid.

sector. The outcome of the report and future development in this area will be of considerable interest.

Apart from nursing homes, over the last three or four years there has been the growth of the corporate sector in health care. The corporate sector in health care consists of regional business groups branching into areas like super specialist hospitals, diagnostic centres and leasing of medical equipment.[47] An example of a regional business group branching into diagnostic centres and leasing of medical equipment is the Standard Organics Limited, a drug company in Hyderabad. This company has links with multinational companies like Siemens, Dornier and others based in U.K. for medical equipment.[48] According to one of the managers of the company, nearly 80% of the medical equipment that is leased is imported from multinational companies and their clientale consists of nursing homes with a bed strength of fifty and above from all over India.[49]

---

47 Report in Deccan Chronicle dated November 23, 1986.

48 Based on a discussion with one of the managers of Standard Organics Limited, Hyderabad, February 1987.

49 Ibid.

In addition to medical leasing, the company has also ventured into the area of diagnostic services. The diagnostic services range from simple lab tests to sophisticated tests like CAT ϕ scans. This venture has been welcomed by owners of smaller nursing homes who cannot afford sophisticated equipment on their own, link up with diagnostic centres to strengthen their business.[50]

There are two more projects for super specialist hospitals, in the offing in Hyderabad, both of which are sponsored by Reddy Business Groups.[51]

It is still too early to comment on these developments, since it would require more detailed study in this area. The rise of business in health care with its links with NRI doctors and multinational companies is an important subject for further study.

---

50 Based on discussions with President, Andhra Pradesh Nursing Homes Association, Hyderabad, Feb., 1987.

51 Based on reports in Indian Express dated April, 1987.

CHAPTER V

SUMMARY AND CONCLUSIONS

SUMMARY AND CONCLUSIONS

The basic objective of this dissertation was to study the inter-regional variations in health services within Andhra Pradesh and the factors that influence these variations. The study districts represent the extremes of socio-economic development. While Krishna and Guntur districts are well developed, Mahbubnagar and Medak districts are backward. We have studied the public, private and voluntary sectors providing health services in the study districts.

Based on our study we find that :

1. The overall trend in all three sectors is for services to be more concentrated in the developed areas rather than backward ones.

2. Of the three sectors, it is the public sector, which exhibits the least amount of variation which is mainly due to the efforts of the state to correct regional imbalances.

3. However, even within the public sector one does find differences between the advanced and backward districts.

4. There are a number of factors which influence these variations in the public sector and these include historical factors, political economy, caste dominance,

professional power of the medical community, electoral politics and role of local governments. Economic infrastructural development also play a crucial role in influencing the structure of health services.

5. The growth and distribution of institutions in the private sector is clearly linked to economic development and it is the well developed districts which provide the market for the growth of commercial enterprises therefore there is a higher concentration of these enterprises in the two well developed districts as compared to the backward ones.

6. Our study also points out the link between the green revolution, growth of rich peasant and urban middle classes and growth of commercial enterprises in health care. During the last two years, there has been a growth of the corporate sector in health care where a number of regional business groups are investing and diversifying into health care.

7. The growth and distribution of voluntary agencies and nursing homes in the private sector are also skewed in favour of the well developed districts. This trend is contrary to what we expected specially because voluntary agencies are associated with working in backward areas. The kind of trend observed in our study districts infact raises some important

issues for further exploration.

8. The differences that we observe in the growth and distribution of voluntary agencies in the two sets of districts is due partly to historical and social factors. In addition, the level of infrastructural development has influenced the location and distribution of these agencies.

9. Thus what is fairly obvious from our study is that health services are not mere technical interventions but are in fact shaped by a variety of factors in society.

This dissertation raises a number of interesting issues for further study. Firstly, as mentioned earlier, the reasons for the pattern of distribution of voluntary agencies across the developed and backward regions needs to be studied further. Secondly, the link between infrastructural facilities and the given level of health services in both public and voluntary sectors need to be further explored. Thirdly it would be interesting to study the effect of commercialisation of the public sector in Andhra Pradesh. And, lastly, as far as the private sector is concerned, studies need to be undertaken to look into the growth of the private sector and the emerging

Corporate Sector in health care. Information on the private sector is limited, however, since it is a rapidly expanding sector, there is a need to study this in greater depth.

BIBLIOGRAPHY

I. BOOKS

Banerji, D. Poverty, Class and Health Culture. Vol.I, New Delhi, Prachi Prakashan, 1981

Health and Family Planning Services in India - An Epidemiological, Socio-Cultural and Political Analysis and a Perspective, New Delhi, Lok Paksh, 1985.

Centre For Development Studies, Poverty, Unemployment and Development Policy, New Delhi, Orient Longman, 1977.

Data News Features, Andhra Pradesh Year Book, 1985, Hyderabad, 1986.

Djurfeldt and Lindberg, Pills Against Poverty : A Study of Introduction of Western Medicine in a Tamil Village, New Delhi, Mac Millan, 1980

Dubois, R. Man, Medicine and Environment, London Penguin books, 1968.

Engels, F. The Conditions of the Working Class in England, Moscow, Progress Publishers, 1973.

Fadia, B. State Politics in India - Vol.I and II, New Delhi, Radiant Publishers, 1984.

Heller,T and Elliot,C.(Ed.) Health Care and Society : Readings in Health Care Delivery and Development, University of E. Anglia, School of Development Studies, 1977.

McKinlay,T.(Ed.) Issues in the Political Economy of Health Care, New York, Tavistock Publishers, 1984.

Navarro,V. Medicine Under Capitalism, London,

Panikar,PGK and Soman,C. Health Status of Kerala : Paradox of Economic Backwardness and Health Development, Trivandrum, Centre For Development Studies,1984.

Snow, J. On the Mode of Communication of Cholera, London, John Churchill, 1954.

Zurbrigg,S. Rakku's Story; Structures of Ill Health and Source of Change, Madras, George Joseph; 1984.

Sundrum, AR. Development Economics, Canaberra, John Wiley and Sons, 1983.

II ARTICLES

Acharya, AR. Telengana and Andhra Agitation in Reddy and Sharma (Ed.) State Government and Politics : Andhra Pradesh, New Delhi, Sterling Publishers, 1979.

Bagchi, A.K. Towards a Political Economy of Planning in India, Contributions to Political Economy, Vol.3, March 1984.

Banerji, D. The Making of Health Services in India, New Delhi, Jawaharlal Nehru University, 1984.

Political Dimensions of Health : Health Services as a lever for Social and Economic Development, Development Dialogue, 1984.

Cleaver, H. Political Economy of Malaria Decontrol, Economic and Political Weekly, Vol.II, No.36, 1976.

Elliot, C.M. Caste and Faction Among the Dominant Castes : The Reddis and Kammas of Andhra in Kothari,R.(Ed.) Caste and Politics in India, New Delhi, Orient Bongman, 1970.

Fernandes,W. The National NGO Convention : Voluntarism, the State and the Struggle for Change, Social Action, Vol.36, No.4, 1986.

Haragopal, G. Dimensions of Regionalism : A Nationality Question, Hyderabad, Centre for Economic and Social Studies, 1984.

Iyengar and Sudershan, A Method of Classifying Regions from Multivariate Data, Economic and Political Weekly, Vol.XVII, 1982.

Jeffrey, R. Recognizing India's Doctors : The Institutionalization of Medical Dependency, 1918-39, Modern Asian Studies, 13,2,1979.

Jessani, A.et al, NGOs in Rural Health Care - Volume I: An Overview, Bombay, The Foundation for Research in Community Health, 1986.

Krishna Rao, YVS. Growth of Capitalism in Agriculture : A Case Study of Andhra Pradesh in Krishna Rao, YVS et al(Ed.) Peasant Farming and Growth of Capitalism in Indian Agriculture, Vijayawada, Visalandhra Publishing House, 1984.

Kumar, PVS. Medical and Health Services in Andhra Pradesh: A Review, Hyderabad. Centre for Economic and Social Studies, 1984.

Madan, T.N. Doctors in Society, New Delhi, 1977.

McKeown,T. A Sociological approach to History of Medicine, in Medical History and Medical Care : A Symposium of Perspectives, London, Nuffield Provincial Hospitals Trust, 1971.

Mencher, J. The Lessons and Non Lessons of Kerala : Agricultural Labourers and Poverty, Economic and Political Weekly, Spl.No.Vol.XV, Nos.41-43, 1980.

Panikar, PGK. Health Care Delivery System in India, Economic and Political Weekly, 1976.

Prakash Rao,VLS. Backward Areas in Andhra Pradesh : Patterns Of Development, Hyderabad. Centre for Economic and Social Studies, 1984.

Qadeer, I. Health Services System : An Expression of Socio-Economic Inequalities, Social Action, Vol.35, July - Sept. 1985.

Qadeer, I. Social Dynamics of Health Care : A Case of CHW Scheme in Shadol District, Socialist Health Review, II, N.2, 1985.

Ramalingaswami,P. Cost of Medical Education (unpublished).

Reddy, N. Congress Parties and Politics in Reddy and Sharma (Ed.) Op.Cit.

Reddy and Prasad. Personnel of the Council of Ministers in Reddy and Sharma (Ed.) Op.Cit.

Rosen, G. Historical Trends and Future Prospects in Public Health in Medical History and Medical Care : A Symposium of Perspectives, London, Nuffield Provincial Hospitals Trust, 1971.

Sundarayya,PS. Telengana in Desai,AR (Ed.) Peasant Struggles in India, New Delhi, Oxford University Press, 1979.

Thorner, D. Coastal Andhra : Towards an Affluent Society, Economic and Political Weekly, Annual Number, 1967.

Twumasi, P.A. Colonialism and International Health : A Study in Social Change in Ghana, Social Science and Medicine, 15B, 1981.

Waitzkin, H. The Social Origins of Illness : A Neglected History, International Journal of Health Services, Vol.II, No.1, 1981.

II. GOVERNMENT REPORTS

Central Government Reports

Government of India, Report of Health Survey and Development Committee, Vol.I and IV, (New Delhi, 1946).

Report of Health Survey and Planning Committee (New Delhi, 1961).

Report of the Group on Medical Education and Support Manpower (New Delhi, 1975).

Indian Council for Social Research and Indian Council of Medical Research, Health for All : An Alternative Strategy (New Delhi, 1980).

Health Policy of India,(New Delhi, 1982).

Central Bureau of Health Intelligence, Health Statistics ofIndia, (New Delhi, 1983).

STATE GOVERNMENT REPORTS:

Government of Andhra Pradesh, Second Five Year Plan, Department of Planning and Cooperation (Hyderabad, 1956)

Third Five Year Plan, Department of Planning and Cooperation (Hyderabad, 1960).

Fourth Five Year Plan, Department of Planning and Cooperation, (Hyderabad, 1969).

Economic Development of Andhra Pradesh 1951-1968, Department of Planning, (Hyderabad, 1969).

An Evaluation Study of Working of Primary Health Centres in Andhra Pradesh, (Hyderabad, 1971).

Fifth Plan, Technical Papers, Series II, Department of Planning (Hyderabad 1972).

Review of Progress, Fourth Five Year Plan 1969-74, (Hyderabad, 1976).

District Gazateers - Krishna, Hyderabad, 1977.

District Gazateers - Guntur, Hyderabad, 1977.

District Gazateers - Mahbubnagar, Hyderabad, 1977.

District Gazateers - Medak, Hyderabad, 1977.

Fifth Five Year Plan, Department of Planning, (Hyderabad, 1978)

Sixth Five Year Plan, Department of Planning, (Hyderabad, 1980).

Seventh Five Year Plan, Department of Planning, (Hyderabad, 1986).

District Census Handbook, Krishna, 1961, 1971 and 1981, Hyderabad.

District Census Handbook, Guntur, 1961, 1971 and 1981, Hyderabad.

District Census Handbook, Mahbubnagar, 1961, 1971, and 1981, Hyderabad.

District Census Handbook, Medak, 1961, 1971 and 1981, Hyderabad.