Healthcare Facilities in Developing Countries

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A Case Study of Mau, India

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Cambridge
Scholars
Publishing

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This book first published 2019

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

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PREFACE

The state of people's health is an important indicator of the quality of human life and the Human Development Index. Health, a multi-dimensional issue, is influenced by a complex combination of socio-economic, individual and environmental factors. Some of the major factors include food, housing, education, income, basic sanitation, nature of lifestyle, protection against environmental hazards and communicable diseases. A healthcare facility in India is multi-tiered and has been devised using population size and physical distance to the available healthcare facility. At the time of independence, the healthcare facilities were rudimentary, poorly developed, underfunded, ill-equipped, poorly staffed and mostly confined in urban areas, in the form of sub-divisional and district hospitals.

This book is organised into five chapters along with a summary and conclusions. **Chapter one** introduces the research theme, its relevance, objectives, research questions, methodology and the basic characteristics of the study areas.

In **chapter two**, the conceptual and theoretical framework of healthcare facilities is discussed. Health is fundamental for development of individuals and communities as a whole. Availability, accessibility and affordability, community participation and technology are fundamental criteria for the evolution of a sound healthcare system. A complex combination of factors, including socio-economic factors, affects not only the development of healthcare facilities but also their utilisation. In India, the modern healthcare system evolved during the British period, but real development took place after the independence following the recommendation of several committees and the implementation of five-year plans. Among the committees, the Bhore Committee (1946), Mudaliar Committee (1962), Chadha Committee (1963), Mukherjee Committee (1966), Jungalwalla Committee (1967), Kartar Singh Committee (1973), Shrivastav Committee (1975) and Mashelkar Committee (2003) are notable. Recommendations of these committees have been implemented primarily through the five-year plans. Consequently, the healthcare system evolved in three distinct phases, i.e., first phase (1947–1983), second phase (1983–2000) and third phase (post-2000). Healthcare in India is delivered through a three-tier structure

of health services comprising the primary, secondary and tertiary healthcare facilities, which include district hospital, CHCs (community health centres), PHCs (primary health centres) and SCs (sub-centres). This chapter throws light on healthcare facilities of all kinds in India and discusses variation in their availability, accessibility and affordability.

Chapter three analyses the distribution of healthcare facilities, focusing on their spatiotemporal change, rural-urban variations and availabilities of healthcare facilities across nine blocks of the district according to population distribution. Densely populated areas as well as villages have access to the nearest PHCs, whereas Ranipur, Pardaha, Fatehpur Madaun and Kopaganj have higher percentages of villages and populations with no access to the nearest PHC. Hence, it can be summed up that the healthcare facilities in the allopathic domain show a declining trend in terms of population, leaving a few, over the two decades, which is not a good sign as it is bound to create more pressure on the existing over-burdened facilities. There is an urgent need to increase the number of beds and staff (paramedical, doctors and others) in the district in order to provide easy access to healthcare facilities. Institutional arrangements such as large infrastructure and qualitative changes like availability of medicines, presence of doctors and availability of basic amenities at healthcare institutions are to be made on a sustained basis, if we want to attract the poor to use the public health facilities with confidence.

Chapter four discusses the utilisation of healthcare services and ascertains the relative significance of socio-economic factors affecting treatment behaviour. Utilisation of government healthcare facilities by families living in urban areas is compared to those in the villages. Utilisation of available health facilities at the district hospital is poor among both rural and urban areas for two main reasons: first, its location in the largest urban centre of the district where a sufficient number of good private hospitals provide perceptively better health services; and second, it is found suitable for critical diseases, not as a place of first visit in case of illness.

Chapter five highlights the perceptions people have about healthcare facilities, and their awareness and attitude about different healthcare programmes in study area. In the present study, the perceptions of people about the healthcare facilities have been analysed. This chapter explains the awareness of respondents about the NRHM (National Rural Health Mission), their satisfaction with the treatment process, problems faced during hospitalisation and the overall perception of respondents about healthcare services. It is noted that, out of a total of 680 respondents, only

about 14 per cent of the respondents are satisfied by medicines provided by hospitals and 27 per cent are not satisfied, while 59 per cent of the respondent did not answer regarding satisfaction with medicine provided by healthcare providers in hospitals. Among 145 female respondents, no one was found to be satisfied with the medicine. Out of the female respondents, 20 per cent did not respond.

Finally, conclusions and suggestions are given.

ACKNOWLEDGEMENTS

LIST OF ABBREVIATIONS

ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AYUSH	Ayurveda, Yoga and Naturopathy, Unani, Siddha and Homeopathic
BCG	Bacillus Calmette–Guérin
BMSP	Basic Minimum Services Programme
BPL	Below Poverty Level
BPHC	Block Primary Health Centre
CBR	Crude Birth Rate
CDR	Crude Death Rate
CHC	Community Health Centre
DGHS	Directorate General of Health Services
DLHS	District Level Household and Facility Survey
DPT	Diphtheria, Tetanus and Pertussis
ECG	Electro-cardiogram
FRU	First Referral Unit
GDP	Gross Domestic Product
GNM	General Nurses and Midwives
HFA	Health for All
HFU	Health for Underprivileged
IFA	Iron and Folic Acid
IMR	Infant Mortality Rate
IPHS	Indian Public Health Standards
ISM	Indian Systems of Medicine
KM	Kilometre
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MDG	Millennium Development Goals
MMR	Maternal Mortality Rate
MNP	Minimum Needs Programme
MPW	Multipurpose Worker
NGO	Non-government Organisation
NH	National Highway
NHP	National Health Policy
NLEP	National Leprosy Eradication Programme
NMEP	National Malaria Eradication Programme
NSSO	National Sample Survey Organisation

NTCP	National Tuberculosis Control Programme
OADR	Old Age Dependency Ratio
OPD	Outpatient Department
PCI	Per-Capita Income
PHC	Primary Health Centre
PRI	Panchayat Raj Institution
RCH	Reproductive and Child Health
RMP	Registered Medical Practitioner
SC	Sub-centre
SQ	Square
TB	Tuberculosis
TFR	Total Fertility Rate
TT	Tetanus Toxoid
UMI	Upper Middle Income
WHO	World Health Organization
UNICEF	The United Nations Children's Fund

CHAPTER 1

INTRODUCTION

Health is one of the priorities in every individual's life. Its importance is evident in the old saying, "Health is Wealth". Health is a vital aspect of human life and development of an individual in particular and a nation as a whole. It is inevitably linked to actualisation of human energy, capacity, and potential for using economic and human resources in order to bring prosperity and happiness. Therefore, health is a common theme in all cultures, and different communities have their own concepts of health as part of their cultures. Health, today, is considered an integral part of human development. The definition of "health" as given by the World Health Organization (WHO) describes health as a state of complete physical, mental, social and spiritual well-being and not merely as the absence of disease or infirmity. The modern medical facilities are striving towards achieving this multi-faceted concept of health for the population.

The National Health Policy 1983 (NHP-1983) envisaged a three-tier structure of primary, secondary and tertiary healthcare facilities to bring healthcare services within the reach of the rural population. Under the primary tier, three types of healthcare institutions were planned: (1) a sub-centre (SC) for every 3,000–5,000 people; (2) a primary health centre (PHC) for every 20,000–30,000 people; and (3) a community health centre (CHC) to serve as a referral centre for every four PHCs covering a population of 80,000–120,000. The district-level hospital serves as a secondary tier for rural healthcare and provides primary healthcare services for urban areas. Tertiary healthcare is provided by institutions in urban areas, which are often well equipped with state-of-the-art technology for diagnostic and investigative facilities. Since 1983, there have been marked changes in the determining factors relating to the health sector. Some of the policy initiatives outlined in the NHP-1983 have yielded results, while, in several other areas, the outcome has been far below the expected level. Therefore, a new health policy was formulated in 2002.

The National Health Policy 2002 (NHP-2002) focuses on the need for enhanced funding and an organisational restructuring of the national public health initiatives in order to facilitate more equitable access to the health facilities across the country. The approach was to improve access to health through the decentralised public health system by establishing new infrastructure in deficient areas, and by upgrading the infrastructure in the existing institutions. The policy advocated for greater emphasis on increasing public-private investment in the health sector, on strengthening the capacity of public health administration, on rendering effective service delivery and on ensuring rational use of drugs within the allopathic system. The policy gives primacy to preventive and first-line curative initiatives at the primary health level and increased access to tried and tested systems of traditional medicine. The policy specifically stressed the following aspects:

a) Need to enhance financial resources in the health sector;
b) Equity and effective delivery of national public health programmes;
c) Strengthening and expansion of public health infrastructure and services;
d) Increasing the role of private-sector, local self-government institutions and community;
e) Education of healthcare professionals and nursing personnel;
f) Cost-effective public healthcare through increasing the use of generic drugs and vaccines;
g) Information, education and communication to maximise the dissemination of information to those population groups which cannot be effectively approached by using only the mass media;
h) Giving priority to school health programmes which aim at preventive-health education, providing regular health check-ups and promotion of health-seeking behaviour among children;
i) Health research for developing cost-effective operational applications and therapeutic drugs/vaccines.

This policy envisages the full operationalisation of an integrated disease control network (National Disease Surveillance Network) from the lowest rung of public health administration to the central government, use of statistical techniques for completion of baseline health data, and the need to establish national health accounts. It also stresses identification of specific programmes targeted at women's health, mental health, medical ethics, and enforcement of quality standards for food and drugs. The policy proposes the setting up of an organised two-tiered urban primary healthcare structure: the primary centre covering a population of one lakh

as a first-tier unit, with a dispensary providing an outpatient department (OPD) facility and essential drugs, to enable access to all the national health programmes; and a second tier of the urban health organisation at the level of the government general hospital, where references are made from the primary centre.

In pursuance of these policies, over time, a vast network of healthcare institutions has been created in the rural and urban areas of the country. Substantial resources, though inadequate, have gone into planning and implementing the health and family welfare programmes. Increased availability of healthcare and its utilisation has contributed to the improved health status of the population as reflected in the improved life expectancy and decline in mortality rate and a fall in the birth rate to some extent. However, these achievements have not been uniform across the various states and districts or between rural and urban areas in the country. Moreover, in successive reports similar recommendations are made repeatedly, and by implication this means that the policy guidelines are at best only partially getting implemented. The morbidity and mortality levels in the country are still unacceptably high. By virtue of being a signatory to the International Conference on Population and Development (ICPD), the Government of India (GOI) is committed to pursuing the goal of providing healthcare to its entire population. After independence, through the setting up of the Department of Health and Family Welfare both at the central and state levels, the government established a multi-tier health infrastructure network across the nation and engaged health functionaries at different levels.

Health, a multi-dimensional issue, is influenced by a complex combination of socio-economic, individual and environmental factors. Some of the major factors include food, housing, education, income, basic sanitation, nature of lifestyle, protection against environmental hazards and communicable diseases. Health is closely associated with every aspect and activity of human life; hence, its frontiers are not confined to the narrow limits of medical care, though "healthcare" is a better concept that addresses issues beyond controlling illness and infirmity. "Healthcare" embraces a multitude of services and facilities provided to individuals or communities by agents of the health services or professionals for the purpose of promoting, maintaining, monitoring or restoring health (Singh 2002). Healthcare covers a broad spectrum of services ranging from education in hygiene and information for prevention of various diseases to early diagnosis and treatment. It also implies institutions, organisation, staffing regulation and quality control. So, healthcare facilities and

services may be defined as, "all those personals and community health services including medical care and related education and research oriented towards protection and promotion of the health of the community" (WHO 2002). Medical care is a subset of the healthcare system. A good medical system tries to enhance the health of the masses through various preventive and protective measures. Healthcare is considered one of the basic human rights in many countries across the world. Consequently, the governments provide human care services and facilities to their citizens.

Good health of a population largely depends on many factors like existing environmental risks (physical, biological and social), and the demographic, cultural and economic conditions prevailing in the region. In India, since independence the government has introduced a comprehensive primary healthcare system to promote effective healthcare for the masses in both rural and urban areas of the country. Healthcare is a state subject; consequently, the responsibility of health facilities and services rests with the state governments. The onus of the central government primarily lies in formulation of a national health policy and monitoring its implementation through coordination of the different levels.

Each healthcare facility in India is multi-tiered and has been devised using population size and physical distance to the available healthcare facility. At the time of independence, the healthcare facilities were rudimentary, poorly developed, underfunded, ill-equipped, poorly staffed and mostly confined in urban areas, in the form of sub-divisional and district hospitals. These facilities were inadequate to cure widespread recurrences of communicable and infectious diseases like cholera, chickenpox, plagues and malaria. Consequently, two committees, viz. the Health Survey and Development Committee led by Joseph Bhore (established by the British government in 1946) and the National Planning Committee under the chairmanship of Pandit J. L. Nehru (established by the Congress Party in 1938) were constituted to suggest a future course of action. The report of the Bhore Committee prevailed over the National Planning Committee's report due to several reasons. The Bhore report provided the framework for most health decision in independent India. The Bhore Committee placed stress on rural health and a socialised system of health services in which public health provisions dominate and eventually replace private medical practices. The report also emphasised insurance-based services for industrial workers. The "comprehensive healthcare system" advocated by the Bhore Committee rested on the following criteria:

1. Integration of adequate promotive, preventive and curative measures should be attained with the help of full-time salaried workers.
2. Provision of healthcare facilities and services to rural masses.
3. Services should be as close to the beneficiaries as possible.
4. Inter-linking of rural health centres with larger health centres at district level.
5. There should be a substantial increase in public investment in the health sector, and the shortage of trained personnel should be resolved.
6. Emphasis should also be placed on health education, awareness and peoples' cooperation in order to change the mental habits and ways of life of the masses.

Additionally, the Bhore Committee report stressed campaigns against specified diseases, particularly malaria, tuberculosis, venereal diseases and leprosy. Implementation of the Bhore Committee report was based on a more official and authoritative top-down planning perspective based on health centres staffed by doctors and ancillary staff. Later on, from time to time, a number of committees were set up to evaluate the existing health condition and status of infrastructure and services. Implementation of suggestions and recommendations of these committees helped in extension and up gradation of healthcare facilities and services as well as formed the basis of the National Health Policies of 1983 and 2002.

1.1 Review of literature

Various studies on utilisation of healthcare facilities at the micro as well as macro level have been conducted by a number of scholars in India and abroad. Early studies in health geography were mainly focused on analysing distribution and cause of disease and the spatial pattern of healthcare facilities. Some of the major studies include Akhtar (1978), Bladen and Karan (1975), Dutt (1962), Ranganna et al. (1968), Panikar (1979), and Chib (1985). Now, the focus has been shifted to promotive and curative aspects of health under the term "healthcare". Healthcare utilisation is the use of healthcare services by people. The healthcare utilisation of a population is related to the availability, quality and cost of services, as well as to socio-economic structure and personal characteristics of the users (Chakraborty et al. 2003; Manzoor et al. 2009). The under-utilisation of the health services in the public sector has been almost a universal phenomenon in developing countries (Zwi 2001) like India

(Brown et al. 1998) identify eight dimensions of healthcare service delivery: effectiveness, efficiency, technical competence, interpersonal relations, access to service, safety, continuity, and physical aspects of healthcare. Robert (1984), in a research article, discusses a variety of aspects of research design and data deficiency problems inherent in well-established approaches in medical geography and the geography of healthcare. It reviews the work and raises many issues and pleads for greater care on the part of researchers to be aware of the limitations of the data base, and to develop more rigorous research designs, and to refrain from implying cause-effect relationships where the data relate to aggregate levels of spatial scale.

Al-Taiar et al. (2010) investigate the relationship between different measures of physical access, including straight-line distances, road distances and travel time, and the impact of these measures on the vaccination of children in Yemen. They found that straight-line distances, driving distances and driving time are strongly linked and associated with vaccination uptake and highlighted the need for efforts to target vaccination and other preventive healthcare measures to children who live far from health facilities. Islam and Aktar (2011) measured physical accessibility of health facilities by population coverage, average travel time and distance to the closest hospital in the city of Khulna, Bangladesh. The study found that even with existing health facilities, discontent about the unavailability of health services can be mitigated in most areas. Exceptions are some peripheral areas, where average travel time to reach the city centre and distance from hospital services are greater. Such a study is necessary to enable the government to identify precise locations where healthcare services need to be delivered to ensure optimum level of outcome. Awoyemi et al. (2011) studied the effect of distance on utilisation of healthcare services. The result reveals that household size, distance and total cost of seeking healthcare affect the utilisation of government and private hospitals while total cost of seeking healthcare and the quality of access routes affect the use of traditional care. The policy implication arising from this study suggests that distance to improved health facilities and the total cost of seeking healthcare need to be reduced to enhance access to improved health services among various socio-economic groups.

Michael et al. (2004) apply and compare two GIS-integrated methods using several layers of information for measuring physical access to healthcare in Central America. The results of these methods are used for cost-effectiveness analysis and population coverage estimates as well as

for resource planning within countries. Anand (1991), in the study of the Tiruchirapalli district of Tamil Nadu, analyses optimum locations of healthcare facilities using two sets of analysis—one related to the accessibility and the other related to the location-allocation of facilities. The result regarding location solutions demonstrated the range of alternatives available for the district in creating a healthcare system which would individually prove quality and efficiency options.

A study undertaken by Ranganna et al. (1968) at the Sarojini Nagar Primary Health Centre, Lucknow, showed that healthcare rendered by the PHC is inadequate because the area to be covered includes many people who live more than five miles from the centre, the population to be served is too large and the per-capita expenditure for medicine is insufficient. Some of its findings are still relevant. Banerjee-Guha and Joshi (1985) studied the spatial distribution of health facilities in Pune district to bring out the disparity in the distribution at two levels. A wider disparity was found in the Pune metropolitan region and the remaining Talukas of Pune district, while the inter-urban disparity and the supremacy of the metropolitan core was dominant at the level of Pune city and the other settlements.

Choubey (1986), in his study, identifies certain geographical aspects of the healthcare problem in Madhya Pradesh. The study reveals that healthcare facilities are better around Bhopal as well as other developed towns of the state, while in remote, hilly and tribal areas—particularly in the eastern part of the state—healthcare facilities are as a whole not satisfactory. Ahmad and Shamim (2004), in their study, evaluate the position of health facilities in Meerut district, which is the most viable unit in which to examine the level of social well-being. Analysis of various indicators pertaining to health facilities (medical and sanitary) clearly reveals a wide gap in the distribution of health facilities with reference to size of population.

Debapriya and Mohanty (2008), in their paper, tried to evolve a sound statistical methodology to measure the regional imbalance prevailing in the levels of development of education and healthcare facilities in the state in quantitative terms. Mukherjee and Levesque (2010) observe that, contrary to the widespread belief of increasing inequality in the health sector, economic status-related inequality in inpatient care utilisation has declined in recent years. However, a lowering of inequality has not made the situation more equitable for the poor because of a high increase in the rate of inpatient care utilisation, a decline in dependence on government

hospitals and a steep hike in the cost of inpatient care. In a majority of states, the average cost of inpatient care, even at government hospitals, has grown at a much higher rate than the prices of essential food items. The hardships faced by the rural poor in meeting healthcare expenses show that the net result has been a welfare loss for them.

Women and their children are more frequent users of healthcare facilities than men (Mustard et al. 1998). Singh and Rajeshwari (1996) conducted a study to access gender bias in utilisation of healthcare facilities in rural Haryana. The study shows that the availability of public healthcare facilities at the place of residence had a positive impact on women's health status when the comparison was made between the PHC and non-PHC villages. The study reveals that infant and child mortality was highest where there was no medical facility and trained birth attendance. It concludes that the level of female healthcare is positively affected by economic development and the gender disparity is reduced with the overall economic development of an area. The educational status of the head of the household emerged as an important factor which had a positive effect on women's healthcare (both preventive and curative) in PHC and non-PHC villages. It is suggested that the provision of public healthcare facilities at the place of habitation, coupled with increased educational status or awareness of various healthcare programmes, would reduce the selective bias against women.

Hazarika and Barah (2009), in a study, explore community-wise reflections on education and health in women from the rural areas in the Jorhat district. This study has revealed that there still exists a wide community variation in female literacy, healthcare and access to health facilities. No doubt, a balance has to be maintained for effective population control and providing healthcare, but the picture is dismal, especially among the scheduled caste population. Recognising that the determinants of an individual's health extend beyond individual and household risk factors, recent studies have examined community influences on health outcomes. Such studies relate individual health outcomes to the socio-economic characteristics of the community (e.g., levels of economic development) and the community health infrastructure (e.g., presence and quality of health services).

Weisner (1977), in the study of southern rural Gujarat (India), evaluates the relative impact of community work intervention and socio-economic factors on utilisation behaviour in the health sector. Using primarily correlation and regression analysis, factors identified as significant

determinants of utilisation include distance, wealth, caste, literacy and the existence of a village cooperative. Notably absent are indicators of community work intervention, that is, village meetings, community health worker visits and health talks. A major implication of the study is that geographic and socio-economic conditions should play a greater role in determining community health work policy and strategy at the village level. Akhtar (1978), in his study of Rajasthan, explores spatial distribution of available health facilities over two points in time, i.e., during 1960 and 1970, to compare variation in the growth of healthcare facilities with the growth in population. Kumari et al. (2006), in their study of Kurnool district in Andhra Pradesh, asserted that healthcare delivery systems must be examined as part of the society in which they are embedded, particularly in developing countries like India where there is a larger and more diversified population. A number of social, economic and cultural factors appear to constrain accessibility and also result in differential utilisation rates and healthcare delivery system patterns. Singh and Rajeshwari (1996) examined the relationship between utilisation of healthcare facilities and the elements of social structure in rural Haryana. In Bhiwani district, upper-caste households benefit the least from the healthcare facilities. The reason for the lower level of utilisation of healthcare facilities here may be due to lack of proper health education.

Trakroo (1993), in the study of Meerut district, Uttar Pradesh, focuses on the factors that influence the utilisation of health facilities by the scheduled caste population. The study showed that the health culture among rural people is equally shared by the scheduled castes and non-scheduled caste groups. No striking differences were found existing either in perception or in health practices which could be attributed to a particular caste only. However, the slight differences in perceived morbidity pattern, and in utilisation of health and MCH services, between two castes can be explained in terms of socio-economic disparities. The study also shows that the relationship between physical illness and existing medical care is an extremely complex phenomenon and simple provision of health services may not be adequate to cut across or eliminate poverty. Dalal and Dawad (2009), using logistic regression analyses in the study of women in India, indicated that respondents' education, economic status and standard of living are significant predictors for non-utilisation of public healthcare facilities. Women who sought the services of care delivery and health check-ups indicated a lack of health personnel. Further, service seekers for self and children's medical treatments indicated that there were no nearby health facilities, that service times

were inconvenient, and that there were long waiting times and poor-quality healthcare.

A study by Bansod and Lingaraju (2009) of Karnataka state attempts to determine the level and status of healthcare facilities and their utilisation, as well as factors affecting healthcare utilisation and its regional variations. Nath et al. (2008) found that due to poor primary healthcare services, utilisation of limited secondary and tertiary health institutions has increased tremendously in recent years as a majority of the patients coming to referral centres were new patients (89 per cent), about two-thirds of whom had come there directly. In addition, their expenditure on healthcare also increased tremendously. George and Nandraj (1993), in a comparative study of Indian states, showed that development of health facilities is an outcome of different factors in different states. For instance, in Maharashtra and Punjab this may be attributed to high per-capita income (PCI) and good economic development, while Kerala shows a good development in the health sector in the context of low PCI and a low level of industrialisation. While the first pattern could be attributed to the trickle-down effect of capitalist modernisation of the industrial-cum-agrarian variety in Maharashtra and of the predominantly agrarian variety in Punjab, the second is rooted in the socio-political, geographic and demographic particularities of Kerala.

Majumder (2006), in the study of rural and urban areas of the Cooch Behar and Jalpaiguri districts of North Bengal, applies econometric tools in an inter-disciplinary framework to investigate how patterns of utilisation of healthcare are affected by different socio-economic, demographic and other relevant factors. Among the major influencing factors, demographic factors like age and family size have been deemed important determinants of utilisation of care. Children in the 5–14 age group are by and large neglected. The probability of utilisation is seen as higher in small families than in the large families. The demand for public health facilities is tremendously high as compared to that of private health facilities in rural areas of the districts. The probability of utilisation is very high in rural areas when the preference for the system of medicine is homeopathy. Availability of health facilities is seen to have a negative impact on utilisation of a care. The underlying assumption was that in the urban areas health facilities are available. However, the result indicates that as compared to the people of the rural areas, urban dwellers are likely to avoid utilising care from a modern source. It points out higher chances of self-treatment or family treatment or other treatment by the urban dwellers. By contrast, there are higher chances of utilisation of care from

modern sources in towns by the rural people who generally experience unavailability of health facilities in their local areas. Cost of treatment seems to affect utilisation of care positively. It tacitly indicates that people are compelled to pay more when they seek care from modern sources. Cost or price of care does not play the role that it usually does in the case of other economic goods. The question of financing of healthcare is, therefore, drawing our attention.

Basu (1990) studied two distinct regional groups of similar socio-economic status residing in the same locality and, therefore, theoretically exposed to the same health services. The researcher found that both groups share a strong faith in modern medicine (especially if it is obtained from a private practitioner) for the treatment of most common illnesses. However, important cultural differences exist in the medical services sought for childbirth and in the treatment of morbidity in children of different ages and sexes. Hence, mere provision of healthcare services does not lead to their better utilisation. Chirmulay (1997) studied the preferences of people regarding healthcare providers in relation to their socio-economic backgrounds. The perceived quality of services was an important determinant of the pattern of utilisation. Private practitioners were perceived to be providing better services because they included injections as part of every treatment and were willing to make home visits which were convenient, especially where transportation was inadequate. The government health services were not popular because of the longer waiting period involved, the arrogant attitude and behaviour of all the staff, and non-availability of medicines. In addition, levels of education in the family, caste, affordability (asset-holding) and culture were the factors which determined the utilisation pattern. In general, those with better levels of education, those belonging to dominant and higher castes, and those with more assets preferred private practitioners. However, in traditional and cultural strongholds, relatively uniform behaviour was observed across caste and economic groups.

Sodani et al. (2010) measured the satisfaction of Outdoor Patient Department (OPD) patients with public health facilities in MP in order to improve their quality. Suresh (2011), in his research article, elucidates the vital role of health promotion, i.e., a research-based communication process, in achieving developmental goals—particularly health goals. His article underscores that communication is as much a science as an art, as much a process as it is about process. It advocates for increased linkages between epidemiological research and social science research in planning effective health promotion interventions with quality service delivery,

strategic communication, behaviour change communication, advocacy and social mobilisation. Deivamani (2000) reviews the health status of the people in Tamil Nadu as such status is an important indicator of the welfare of the people. The author recommends improvement in both the formal and non-formal health education systems. Sharma and Narang (2011), in their study, illustrated some interesting differences in user perception regarding healthcare service quality and how it varied between different healthcare centres and according to the demographic status of patients. The study observed that "healthcare delivery" and "financial and physical access to care" significantly impacted the perception among men while among women it was "healthcare delivery" and "health personnel conduct and drug availability". Further, with improved income and education, the expectations of the respondents also increased. It was not merely the financial and physical access that was important but the manner of delivery, the availability of various facilities, and the interpersonal and diagnostic aspect of care as well that mattered to the people with enhanced economic earnings. Purohit and Siddiqui (1994), in assessing the pattern of utilisation of health services in India through analysis of macro-level information, find out some desirable outcomes in terms of: (a) growing popularity of indigenous non-allopathic systems, and (b) growth in the private sector's involvement in expensive tertiary care.

Nonetheless, as against the National Health Policy guidelines, it is distressing to note that the regional disparities in health service utilisation among different expenditure groups of states as well as rural-urban disparities tend to continue. Further, in spite of the inadequacy of health services and prevalence of inequality in utilisation, there has been no serious governmental initiative to encourage appropriate utilisation by means of devising health insurance and other cost recovery mechanisms. Baru (1994), in an inter-state analysis of structure and utilisation of healthcare services, argued that the majority of the lower socio-economic groups are dependent on public provisioning; hence, any slashing of investments in the health sector is expected to further marginalise this group. Therefore, a cutback of public services would only result in greater disparities of access in terms of rural-urban differentials, advanced and least-developed areas, and across classes. Purohit and Siddiqui (1994) concluded in their study that the pattern of utilisation in our country had some desirable outcomes, namely the growing popularity of indigenous non-allopathic systems and growth in the private sector's involvement in expensive tertiary care. As against the National Health Policy guidelines (1983), the regional disparities in health service utilisation among different expenditure groups of states as well as rural-urban disparities tend to

continue. Further, in spite of the inadequacy of health services and prevalence of inequality in utilisation, there has been no serious governmental initiative to encourage appropriate utilisation by means of devising health insurance and other cost recovery mechanisms.

Obimbo (2003) critically reviews the advantages and disadvantages of selective versus comprehensive primary healthcare approaches as a strategy towards improving health in the developing world. Selective PHC programmes have improved specific aspects of health, frequently at the expense of other health sectors, but fail to address an individual's health in a holistic manner or the health infrastructure of countries. Selective PHC programmes tend to focus only on a small subset of the community. Comprehensive PHC is expensive to implement; however, it addresses the health of individuals more holistically, addresses both preventive and curative healthcare, and promotes health infrastructure development and community involvement, thereby providing more sustainable improvement of health in the whole community.

These studies are focused largely on the availability and accessibility aspects of healthcare institutions. The quality of services rendered at individual level and the perception of the users remain less researched. Another question that needs to be addressed is the nature of users, meaning who goes to PHCs, CHCs and other government healthcare institutions. The question of whether income affects the user profile and other socio-economic aspects needed to be answered. In the present work, attempts are made to answer these questions. For our purpose, the district of Mau - one of the least-developed districts from eastern Uttar Pradesh in terms of healthcare infrastructure - is taken as a case to elaborate upon some of these issues.

1.2 Study area: The district of Mau

Utilisation of available healthcare and adopting a healthy lifestyle and use of preventive measures to ensure good health depends on the cultural landscape of the region. There are certain factors which considerably affect the cultural landscape of any area. Among these factors, the physical setting appears to be the most important as it presents a platform for various human activities including the process of human occupation. Its major components include relief, drainage, climate, soil and water. The physical attributes of the area under study directly affect human health as specific physical characteristics lead to emergence and persistence of different disease ecologies. These attributes play a significant role in

special variation of disease occurrence as well as the state of healthcare facilities. Therefore, a brief appraisal of an important constituent of the physical setting is essential to analyse the state of health and utilisation pattern regarding healthcare facilities in the study area of the district of Mau.

1.2.1 Location and extent

District Mau is situated in the Ganga-Ghaghara plain (Doab) of eastern Uttar Pradesh in India. It extends from25°41'35" N to 26°16'37" N latitude and 83°17'49" E to 83°46'12" E longitude. It is surrounded by district Ballia in the east, district Azamgarh in the west, district Gorakhpur in the north, district Deoria in the north-east and district Ghazipur in the south (Fig 1.1). District Mau covers an area of 1727.96 sq km and is one of the smallest districts of Uttar Pradesh. It is comprised of four tehsils, namely Mau Nath Bhanjan, Ghosi, Madhuban and Muhammadabad Gohana. For administrative and development purposes, the district has been further sub-divided into nine development blocks, which include Doharighat, Ghosi, Badraon, Kopaganj, Fatehpur Madaun, Pardaha, Ratanpura, Muhammadabad Gohana and Ranipur. There are as many as nine towns, i.e., Mau, Kopaganj, Muhammadabad Gohana, Ghosi, Doharighat, Adari, Amila, Khairabad and KurthiJafarpur, in the district (Fig 1.1).

1.2.2 Physiography

The district is a part of a vast depositional plain drained by tributaries of the River Ganga like Ghaghara and Tons (Fig 1.2). The slope of the plain is gentle and characterised by small depressions, natural drains, ponds, etc. Among the depressions, Pakadi ka tal, Ratoytal, Narjatal and Gambhir ban tal are notable. The relief is low and the altitude decreases from 85m in the west to 75m in the east. Relative relief is generally seen on either banks of the rivers (3 to 5m) like Ghaghara and Tons. The drainage system of the district follows the general slope from west to south-east.
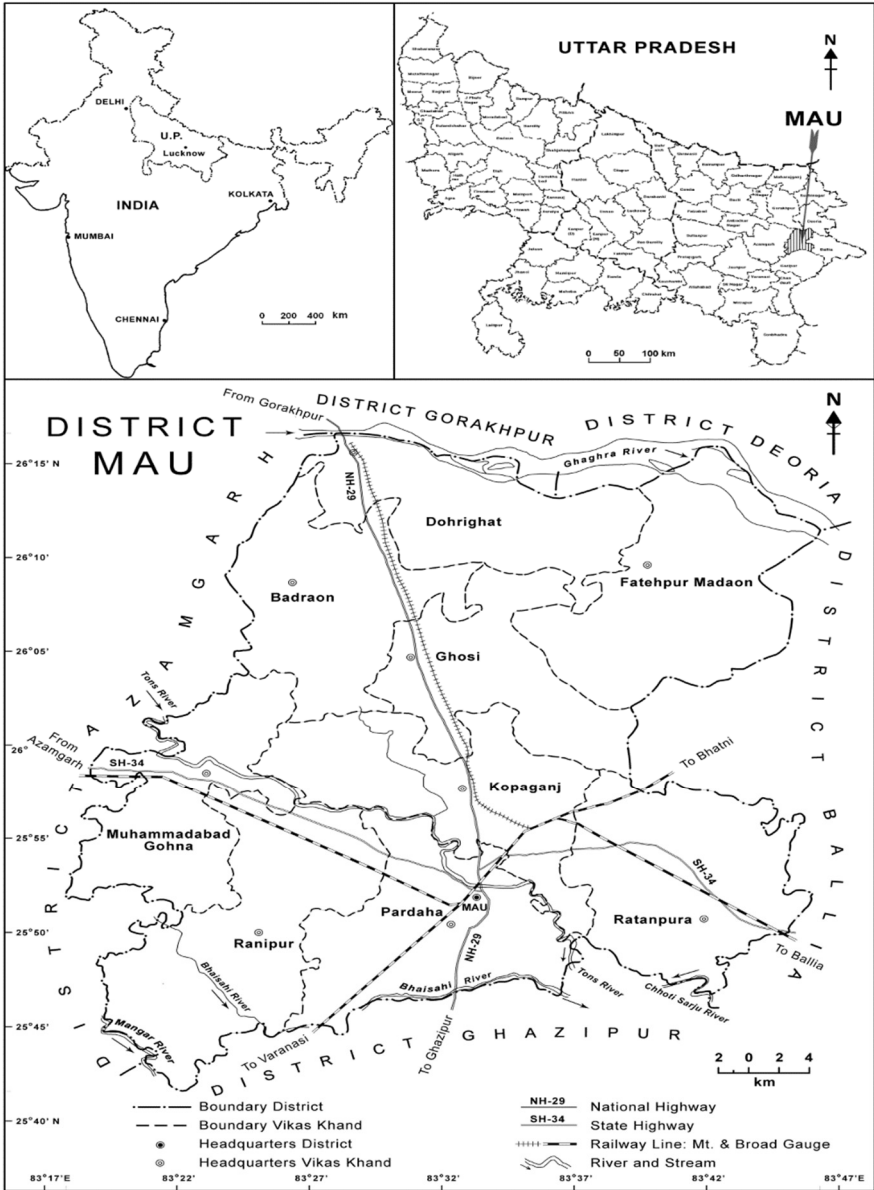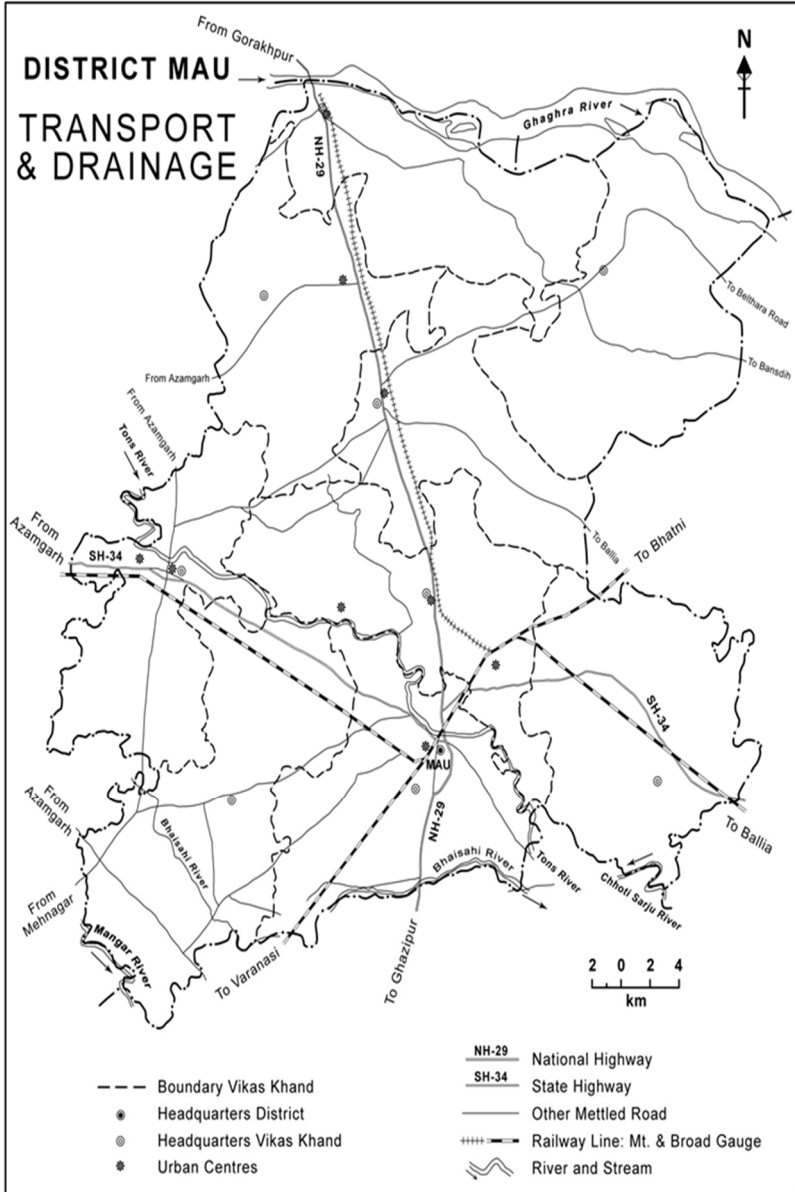
Fig 1.1

Fig 1.2