CHAPTER 2

REVIEW OF LITERATURE
2.1 A COMPARISON OF THE HEALTH SYSTEMS IN CHINA AND INDIA

By Sai Ma, Neeraj Sood

In this study, comparison of the health systems of China and India—the world’s two most populous countries, each of which is undergoing dramatic demographic, societal, and economic transformations—to determine what approaches to improving health in these two countries do and do not work. China and India have achieved substantial gains in life expectancy and disease prevention since independence; these gains are more substantial in China. However, both countries’ health systems provide little protection against financial risk, and patient satisfaction is a lower priority than it should be.

Over the past 50 years, both countries have also made substantial gains in health, including increased life expectancy, reduced infant mortality, and the eradication of several diseases. Yet, despite these gains, the health status of residents of China and India still lags that of other populations, and the health gains in each country have been uneven across sub populations. Demographic overview of China and India help to foster a better understanding of some of the issues and challenges the two countries face. In particular, India’s population is much younger and is growing at a faster rate. In 2004 India’s more than 1 billion residents had a median age of 24.4 years; only 4 percent of the population was older than 64, whereas 36 percent was younger than 15. Yet population growth in China has slowed in the past decade; the annual population growth rate was only 0.8 percent between 1994 and 2004. According to a Population Reference Bureau (PRB) projection, China’s population will be overtaken by India’s in 2050.

Overall, people in China live longer and are healthier than people in India. According to WHO’s statistics, a woman born in India in 2004 has a life expectancy of 63 years, whereas a woman born in China at the same time has a life expectancy of 74 years. India has many more deaths due to communicable diseases. In China, non-communicable diseases accounted for 77 percent
of all deaths. Unfortunately, the health systems in China and India provide little protection from financial risk. In 2004 poor Indians spent 40 percent of their income on health care; the rich spent about 2.4 percent (Varatharajan, Thankappan, and Sabeena, 2004). The heavy burden of health costs in China and India is not a surprise, given the lack of well-developed health-insurance schemes in both countries. Consumer satisfaction has not been widely studied in China or India. A 2001 survey of Chinese patients revealed widespread dissatisfaction with public providers, mainly because of high user fees and poor staff attitudes, was driving patients to seek cheaper but lower-quality care from poorly regulated providers (Lim, Yang, Zhang, Feng, et al., 2004). In another survey of patients from ten hospitals in a populous province, patients expressed satisfaction with the hospitals’ environment but explicit dissatisfaction with the hospitals’ ability to build relationships with patients and keep them informed (Liu and Lu, 2000).

A 1999 patient satisfaction survey in 25 public hospitals in Andhra Pradesh in India found that top patient concerns included corruption among hospital staff, lack of utilities such as water supply and fans, poor maintenance of toilets and general lack of cleanliness, and poor communication and interpersonal skills (Mahapatra, Srilatha, and Sridhar, 2001). According to a survey conducted by the Chinese Ministry of Health, 80 percent of the public health services were performed at a lower rate than the target set by the ministry, and one-third of the services were provided at less than half the target rate (Project Team of the Development Research Center of the State Council of China, 2005). A survey conducted in 1994 revealed that residents of big cities had better access to health insurance and better access to health facilities compared with those who lived in rural areas (Shi, 1996). India too faces access-to-care challenges. In 2005 there were substantial shortfalls at each level of health facility: There were 10 percent fewer SCs and PHCs than needed and 50 percent fewer community health centers (CHCs) than needed (Datar, Mukherji, and Sood, 2007). Transportation may be a serious barrier, since public transportation between PHCs or CHCs and state hospitals is irregular and infrequent, while private transportation is expensive (Ramani and Dileep, 2005).

Although India’s health system was ranked higher than China’s by WHO in 2000, Indian health is far poorer. Compared with China’s government, the government of India contributes too little
to health care, and the basic national health infrastructure, which includes clinics and preventive care services, lags behind. It is suggested that the government make health care its top priority and allocate more resources at the village level. A high proportion of deaths in India result from preventable causes. China outperforms India on almost all health indicators, especially birth outcomes and the control of communicable diseases. To show similar results, India’s government must commit more resources to preventive and basic health care and coordinate efforts to improve hygiene, water quality, nutrition, and education and to reduce poverty reduction.

2.2 PATIENT SATISFACTION WITH PRIMARY HEALTHCARE SERVICES IN THE UNITED ARAB EMIRATES

By STEPHEN A. MARGOLIS¹, SUMAYYA AL-MARZOUQI², TONY REVEL² AND RICHARD L. REED¹(¹Department of Family Medicine, Faculty of Medicine, United Arab Emirates University, Al Ain, ²Ministry of Health, United Arab Emirates)

Patient satisfaction has long been considered an important component when measuring health outcomes and quality of care. The United Arab Emirates (UAE), a union of seven sovereign sheikhdoms in the Arabian Gulf, was formed in 1971. Education and health development were negligible until the late 1950s. However, a relentless pace of development in the last 20 years, fuelled by petrodollars, has resulted in one of the highest per capita incomes in the world. Education and health infrastructure are extensive, with each sector undergoing continuous development and expansion. In 1986, the federal government of the UAE adopted the WHO ‘Health for All’ concept and declared that primary health care (PHC) was central to achieving this goal. Consequently, by 2001, a central to achieving this goal. Consequently, by 2001, an extensive network of 105 government-funded PHC clinics had been established across the country, with few people living more than a short distance from their nearest clinic. These PHC centers, which are funded by the Federal Ministry of Health, and in Dubai Emirate by the state Dubai Ministry of Health, show limited variation across the country. There is a relatively uniform low level of infrastructure and service provision at each of these PHC clinics [termed as
resource thrifty clinics (RTCs)], although only smaller centers utilize offsite pathology and X-ray services. However, one PHC clinic in the inland oasis city of Al Ain, which is financed and managed by the state-based Abu Dhabi Health Authority, has a high level of human, physical, and economic resources, at a similar level to that seen in Western countries we have termed this a ‘resource intensive clinic’ (RIC).

Six domains of patient satisfaction were measured in the study. Compared with the RTC (n = 125), the RIC (n = 156) scored significantly higher in continuity (P = 0.001), comprehensiveness (P < 0.001), health education (P = 0.05), effectiveness (P = 0.001), and overall satisfaction (P < 0.001), while accessibility (P = 0.130) and humaneness (P = 0.102) were not significantly different. Humaneness scored the highest and continuity the lowest at both clinics. Older people’s satisfaction was higher for comprehensiveness but otherwise the same as those who were younger. More highly educated people’s satisfaction was lower for effectiveness, but otherwise the same as those who were less educated. Men and women had equal levels of satisfaction.

The response rates for participation in this survey were 95% at the RIC (156 out of 165 people approached) and 92% at the RTC (125 out of 136 people approached). The two sub populations showed no significant variations in age (P = 0.84) or marital status (P = 0.15), although those in the RIC had a significantly higher proportion of males (P = 0.01), were better educated (P = 0.01), and were less likely to walk to the clinic (P = 0.01). The results ranged from 0.15 to 0.76, from a possible score range of between −1.0 and +1.0. The RIC scored higher in four of the six domains and in the summary ‘overall’ domain. In particular, the domains of continuity (P = 0.001), comprehensiveness (P < 0.001), health education (P = 0.05) and effectiveness (P = 0.001) were significantly higher in the RIC, with an overall satisfaction score (P < 0.001) that was also significantly higher. Humaneness scored the highest and continuity the lowest at both clinics resource-intensive and a resource-poor PHC clinic. The significantly higher patient satisfaction in the RIC compared with the RTC was a strong a priori expectation, suggesting that this satisfaction questionnaire is a useful quality assurance tool in this setting.
2.3 QUALITY OF PRIMARY HEALTH CARE IN SAUDI ARABIA: A COMPREHENSIVE REVIEW

By HANAN AL-AHMADI1 AND MARTIN ROLAND2

(Institute of Public Administration, Riyadh, Saudi Arabia, 2National Primary Care Research and Development Centre, University of Manchester, UK)

Little is known about the quality of primary care in Saudi Arabia, despite the central role of primary care centers in Saudi health strategy. This study presents an overview of quality of primary care in Saudi Arabia, and identifies factors impeding the achievement of quality, with the aim of determining how the quality of Saudi primary care could be improved. Using a systematic search strategy, data were extracted from the published literature on quality of care in Saudi primary care services, and on barriers to achieving high-quality care. Of the 128 studies initially identified, 31 met the inclusion criteria for the review. Studies identified were diverse in methodology and focus. Components of quality were reviewed in terms of access and effectiveness of both clinical and interpersonal care. Good access and effective care were reported for certain services including: immunization, maternal health care, and control of epidemic diseases. Poor access and effectiveness were reported for chronic disease management programs, prescribing patterns, health education, referral patterns, and some aspects of interpersonal care including those caused by language barriers. Several factors were identified as determining whether high-quality care was delivered. These included management and organizational factors, implementation of evidence-based practice, professional development, use of referrals to secondary care, and organizational culture. There is substantial variation in the quality of Saudi primary care services. In order to improve quality, there is a need to improve the management and organization of primary care services. Professional development strategies are also needed to improve the knowledge and skills of staff.
2.4 PEOPLE’S PARTICIPATION IN HEALTH SERVICES: A STUDY OF BANGLADESH’S RURAL HEALTH COMPLEX

Mohammad Shafiqul Islam Shahjalal University of Science & Technology (SUST)
And Mohammad Woli Ullah Shahjalal University of Science & Technology (SUST)
Bangladesh Development Research Center (BDRC) (June 2009)

Health services based on primary health services have been expanding gradually in Bangladesh to improve the health status of the people, especially in rural areas where more than 85 percent of the people are living and are underserved and underprivileged groups. The study suggests that the people’s participation in health services is not satisfactory. The Government of Bangladesh has taken some initiatives according to the Alma-Ata Declaration of 1978. However, these initiatives have been limited and their goal has not been achieved yet. The Government also tries to motivate the people to use the existing health facilities, but most of the people are not willing to use modern health care facilities due to the ignorance and traditional mentality of rural people.

The present study revealed that most of the respondent expresses that health education and information is critical for ensuring people’s participation in rural health service. But the health education and information is not possible due to the apathy of the Government, and thus, the people’s participation and integration of health care services remain poor. Though the National Health Policy is essentially people-oriented, but analysis shows that the problem lies in the implementation of these policies. Accountability and transparency is an important factor for all sectors. But the health sector is absence of accountability and transparency. The Government should be given accessibility of community based health service providers in the rural health complex and other organizations. The qualities and the behavior of health personnel working were not helpful to the people and it reduces the participation in rural health service.

Most of the doctors said that the public salary and working condition are not enough and that they are therefore forced to go to the private sector. Financial and technical support is also important for ensuring a high quality of health care but the government’s allocation does not
match the demand. Given that the Government receives foreign funds, they are accountable to the foreign donors. But the Government should also keep in mind national interests. Donor’s performance may go against national interests. Apart from insufficient infrastructure and logistics, the corrupt practices and unwillingness of some government doctors to stay at their posted place makes the government health services inaccessible to the people.

2.5 PATIENTS' SATISFACTION WITH PRIMARY HEALTH CARE SERVICES AT CAPITAL HEALTH REGION, KUWAIT

By Ibrahim S Al-Eisa (1), Manal S Al-Mutar (2), Maged M Radwan (3), Adel M Al-Terkit (4) (1) Head of Primary Health Care at Capital Health Region (2) Sawaber Health Center (3) Preventive Health Department (4) Head of Preventive Health Department, Primary Care Capital Health Region, Ministry of Health, Kuwait

To evaluate patients' satisfaction with Primary Health Care Centers' (PHCCs) services at Capital Health Region. A cross sectional survey using an Arabic language questionnaire was conducted between January and August 2003. The questionnaire included socio-demographic characteristics as well as the overall and differential satisfaction with the different aspects of services in the PHCC at Capital Health Region rated from 1-5 points ranged from very dissatisfied through to very satisfied, the higher the score the higher the satisfaction. A convenient sample of 1250 patients attending the PHCC aged 18 years and above was included in the study. The response rate of completed questionnaires was 82.8%. Female subjects constituted 52.2% of all participants. More than two-thirds of the subjects were married, about 79.2% were Kuwaitis, 34% were 31-40 years of age, more than one-third of the subjects were clerks and 23.6% completed secondary school. The mean score of overall satisfaction was 4.59 out of a maximum of 5 points. The highest satisfaction was for pharmacy (4.62 mean points) and the lowest for buildings (3.95 mean points). Subjects aged above 50 years showed the highest overall and differential satisfaction. Male subjects and those who completed primary school showed the highest overall satisfaction (4.63 mean points and 4.68 mean points respectively). Other socio-demographic characteristics were not significantly related to overall satisfaction.
scores. There is a growing interest in many countries in assessing and assuring quality of health care. It is also being increasingly recognized that consumer satisfaction should be taken into account as part of the assessment of quality of care. The results of our study showed that although the overall satisfaction was high, some aspects of the services indicated some degree of dissatisfaction. Also, some physicians' service items need suggestions and corrective intervention. Female and young patients appear to need more attention.

Study helps for evaluating and the shaping of health care. In addition, patient evaluations can help to educate medical staff about their achievements as well as their failure, assisting them to be more responsive to their patients' needs. Therefore, patient satisfaction surveys should be carried out routinely in all aspect of health care to improve the quality of services. Survey results can guide policy makers in introducing changes as competition between health care providers increase. The results of study showed that although the overall satisfaction was high, some aspect of the services showed some degree of dissatisfaction. Also, some physicians' service items need suggestions and corrective intervention. Female and young patients appear to need more attention.

2.6 ORGANIZATION AND DELIVERY OF PRIMARY HEALTH CARE SERVICES IN PETRO´POLIS, BRAZIL

James Macinko1*, Celia Almeida2, Eliane dos Santos Oliveira2, and Paulo Klingelhofer de Sa´3 1Department of Nutrition, Food Studies, and Public Health, Steinhardt School of Education, New York University, USA 2Department of Health Administration and Planning, National School of Public Health/Oswaldo Cruz Foundation, Rio de Janeiro, Brazil 3Faculty of Medicine of Petro´polis, Municipal Secretariat of Health, Petro´polis, Brazil

The objective of the study was to adapt and apply an instrument to measure the organizational features of the primary care system in the municipality of Petrópolis. The study compared the performance of the new Family Health Program (Programa Saúde da Família or PSF) with traditional primary care facilities using data from facility surveys and key informant interviews. The main results include: (a) the methodology was capable of distinguishing between the two
types of primary care services in the municipality; (b) the PSF clinics scored higher on most dimensions of primary care, although in some areas the traditional health units had equivalent scores; and (c) data obtained from interviewing key informants was generally compatible with that obtained by conducting facility surveys. The results suggests that in spite of making important advances in primary care, the municipality of Petrópolis continues to face several challenges including the need to improve access, enforce the gatekeeper role of primary care, and improve the coordination and community orientation of both types of primary care services. The methodology could be used to set objectives and monitor progress towards improving the organization and delivery of primary care in Petrópolis and elsewhere.

2. 7 PROTECTING RESOURCES FOR PRIMARY HEALTH CARE UNDER FISCAL FEDERALISM: OPTIONS FOR RESOURCE ALLOCATION

By Okore A Okorafor¹,* and Stephen Thomas²

¹Health Economics Unit, University of Cape Town, South Africa. ²Department of Health Policy and Management, Trinity College, Dublin, Ireland.

Fiscal federalism can be defined as the devolution of expenditure responsibilities to sub-national levels of government. This has become a global trend in the past few years (Ter-Minassian 1997; de Mello 2000). The introduction of fiscal federalism or decentralization of functions to lower levels of government is a reform not done primarily with health sector concerns. A major concern for the health sector is that devolution of expenditure responsibilities to sub-national levels of government can adversely affect the equitable distribution of financial resources across local jurisdictions. Since the adoption of fiscal federalism in South Africa, progress towards achieving a more equitable distribution of public sector health resources (financial) has slowed down considerably. This study attempted to identify appropriate resource allocation mechanisms under the current South African fiscal federal system that could be employed to promote equity in primary health care (PHC) allocations across provinces and districts. The study used data from interviews with government officials involved in the budgeting and resource allocation process.
for PHC, literature on fiscal federalism and literature on international experience to inform analysis and recommendations. The results from the study identify historical incremental budgeting, weak managerial capacity at lower levels of government, poor accounting of PHC expenditure, and lack of protection for PHC funds as constraints to the realization of a more equitable distribution of PHC allocations. Based on interview data, no one-resource allocation mechanism received unanimous support from stakeholders. However, the study highlighted the particularly high level of autonomy enjoyed by provincial governments with regards to decision making for allocations to health and PHC services as the major constraint to achieving a more equitable distribution of PHC resources. The national government needs to have more involvement in decision making for resource allocation to PHC services if significant progress towards equity is to be achieved.

2.8 THE EFFECTIVENESS OF CONTRACTING-OUT PRIMARY HEALTH CARE SERVICES IN DEVELOPING COUNTRIES: A REVIEW OF THE EVIDENCE

Xingzhu Liu¹, David R Hotchkiss²* and Sujata Bose³

¹ National Institutes of Health, Fogarty International Center, 31 Center Drive – MSC 2220, Bethesda, MD 20892, USA. ² Tulane University, School of Public Health and Tropical Medicine, 1440 Canal Street, New Orleans, LA 70112, USA. ³ Private consultants, 8500 Carlynn Drive, Bethesda, MD 20817, USA

The purpose of this study is to review the research literature on the effectiveness of contracting-out of primary health care services and its impact on both programme and health systems performance in low- and middle-income countries. Due to the heightened interest in improving accountability relationships in the health sector and in rapidly scaling up priority interventions, there is an increasing amount of interest in and experimentation with contracting-out. Overall, while the review of the selected studies suggests that contracting-out has in many cases improved access to services, the effects on other performance dimensions such as equity, quality and efficiency are often unknown. Moreover, little is known about the system-wide effects of contracting-out, which could be either positive or negative. Although the study results leave open
the question of how contracting-out can be used as a policy tool to improve overall health system performance, the results indicate that the context in which contracting-out is implemented and the design features of the interventions are likely to greatly influence the chances for success.

2.9 THE EFFECTIVENESS OF PATIENT REFERRAL IN PAKISTAN

S Siddiqi, AA Kielmann, MS Khan, Nabeela Ali, A Ghaffar, Unaiza Sheikh and Zubya Mumtaz

Health Services Academy, Islamabad, Pakistan

In Pakistan, despite an elaborate network of over 5000 basic health units and rural health centers, supported by higher-level facilities, primary health care activities have not brought about expected improvements in health status, especially of rural population groups. A poorly functioning referral system may be partly to blame. System analysis of patient referral was conducted in a district of Punjab province (Attock) for the purpose of identifying major shortcomings, if any, in this domain. Respondents from 225 households were interviewed. Of the households experiencing serious illnesses less than half were taken to a nearest first-level care facility (FLCF). Major reasons included dissatisfaction with quality of care offered, non-availability of physician, and patients being too ill to be taken to the FLCF. The FLCF utilization rate was less than 0.6 patient visits/person/year. The mean number of patients referred per FLCF during the previous 3 months was 6.5 +/- 5.0. Only 15% of patients were referred on the prescribed referral form. None of the higher-level facilities provided feedback to FLCFS: Records of higher-level facilities revealed lack of information on either patient referrals or feedback. There were no surgical or emergency obstetric services available at any of the first-level referral facilities. Seventy-five percent of the patients attending the first-level referral facilities and 44% of the patients attending higher-level facilities had a problem of a primary nature that could well have been managed at the FLCF. As a result of the study findings, eight principal criteria were identified that need to be satisfied before a referral system may be considered functional.
2.10 USING WILLINGNESS TO PAY TO INVESTIGATE REGRESSIVENESS OF USER FEES IN HEALTH FACILITIES IN TANZANIA

Sekhar Bonu¹, Manju Rani¹ and David Bishai²

¹ Indian Administrative Services, Jaipur, India (study conducted while on study leave at Johns Hopkins Bloomberg School of Public Health) and
² Department of Population and Family Health Sciences, Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA

The study uses data from the Tanzania Human Resources Development Survey (1994) on willingness to pay (WTP) for desired quality of health care at lower-level health facilities to assess potential regressiveness of user fees - a disproportionately higher negative effect of user fees on utilization of health services among the poor compared with the rich. Despite reports of extensive bypassing of the lower-level health facilities in Tanzania, the WTP for quality health care at these health facilities is surprisingly large. WTP was lower among the poor, female and elderly respondents. Almost one-quarter of the poorest 40% of the population was not willing to pay even when the quality of services met their expectations. The results suggest that: the utilization of health services at lower-level health facilities can be increased by improving the quality of care; and the implementation of uniform user charges in the public facilities may be regressive, adversely affecting utilization among the poor, women and the elderly. An effective system of exemptions and waivers will be required for the very poor who may not be able to pay even when quality of services is improved. The findings of the study have policy implications for the Tanzanian government's recent attempts to expand cost-sharing through community health funds at lower-level health facilities, being introduced since 1998.
2.11 COMPARATIVE QUALITY OF PRIVATE AND PUBLIC HEALTH SERVICES IN RURAL VIETNAM

Tran Tuan¹, Van Thi Mai Dung¹, Ingo Neu² and Michael J Dibley³

¹ Research and Training Center for Community Development, Hanoi, Vietnam, ² Lux-Development SA, the Government of Luxembourg and ³ Centre for Clinical Epidemiology and Biostatistics, School of Medical Practice and Population Health, Faculty of Health, University of Newcastle, Australia

Private health care services were officially recognized in Vietnam in 1989, and for the last 15 years have competed with the public health system in providing primary curative care and pharmaceutical sales to rural populations. However, the quality of these private and public health care services has not been evaluated and compared. A community-based survey was conducted in 30 of the 160 communes in Hung Yen, which were selected by probability proportional to population size (PPS) sampling. All commune health centers (CHCs) and private health care providers in the selected communes were surveyed on human resources, services provided availability of medical equipment and pharmaceuticals, knowledge and clinical performance for acute and chronic problems. Patient satisfaction and cost of care associated with recent illness were measured using a random household survey covering 30 households from each of the selected communes. There were 11.5 private providers per 10,000 population, compared with 6.7 public providers per 10,000. A quarter of private providers were employees of the public health sector. Less than 20% of the private providers had registered their practice with the government system. Eleven per cent (26/234) had no professional qualifications. Fifty-eight per cent (135/234) provided treatment as well as selling medications. Public sector infrastructure was superior to that of the private providers. The quality of services provided by public providers was poor but significantly better than that of private providers. Patient satisfaction and costs of care were similar between the two groups. Private providers are successfully competing with the public health centre system in rural areas but not because they provide cheaper or better services. The quality of private health care services is not controlled and is significantly poorer than public services. Current practice in both systems falls below the national standard, especially for the
management of chronic health problems. The low quality of health care services at a community level may help explain the previously observed phenomena of high levels of self-medicating, low utilization of commune health centres and over-utilization of tertiary health care facilities.

### 2.12 PROGRESS AND PROSPECTS OF MILLENNIUM DEVELOPMENT GOALS IN INDIA by F. Ram, S. K. Mohanty, Usha Ram, International Institute for Population Sciences, Mumbai MARCH 2009

The millennium declaration marked a strong commitment to the right to development, to peace and security, for gender equality, and eradication of the poverty in its all form and to promote sustainable human development. The millennium declaration did not advocate conducting survey, rather urges to utilize the available statistical data for monitoring the progress. In India, the data source for many of the indicators is relatively better. Among the various sources, the Census of India (conducted once in every ten years), National Family and Health Survey (NFHS), National Sample Survey (NSS) as well as the All India Education Survey (AIES) provides some of the indicators periodically at sub national level. However, the data on various socio economic indicators are not available uniformly for all states of India. Keeping these limitations in mind, this research aimed at utilizing the available data from reliable sources in assessing the progress at national and sub national level. A total of 13 of the 48 indicators are used in this report owing to data availability, periodicity and reliability. The objectives of this report is i) to assess the progress of the country and states of India in indicators of MDGs using the data of recent past ii) forecast the trends of infant and child mortality based on past trends iii) understand the casual linkage of infant and child mortality on various factors, including the programmatic factors.

The indicators selected are percentage of population living below poverty line, prevalence of underweight children, net enrolment ratio, proportion of people starting grade 1 who reach grade 5, literacy rate of 15-24, gender disparity in enrolment of 6-14 years, gender disparity in literacy rate of 15-24 years, under five mortality rate, infant mortality rate, immunization of children against measles, maternal mortality ratio, proportion of births attended by skilled health
professionals and proportion of population with access to safe drinking water. The base year chosen is either 1990 or close to 1990 depending on the availability of data while the final year is 2015.

The progress on these indicators is assessed by computing the actual annual rate of progress and required annual rate of progress. On reduction in poverty level, it is found that the required annual rate of progress is 2.27 percent while the actual rate of progress is 4.57 percent for the country, during 1993-20004. If this trend continues, the target of poverty reduction might be achievable for the country. But, the regional dimension of poverty showed that while some states are successful in reducing the poverty ratio faster others failed to do so. The reduction of poverty in the poor state like Orissa is far below the required rate of progress. Reduction in poverty level is not accompanied by reduction in hunger, say, under weight of children. Though poverty has reduced the level of hunger remained at the higher level. On education, the school attendance in primary level is high but the primary school retention rate is quite low in most of the state. Gender inequality remains higher for the states where the level is low. In addition to this, the youth literacy rate has not increased much during this period. On mortality front, it is observed that reduction of infant mortality and child mortality is lower than the required rate in India and most of the states.

The time trend of infant mortality showed that the infant mortality rate is likely to be 52 per 1000 live birth for the year 2010 and 46 per 1000 live birth for the year 2015. However, the goal is to bring down Infant mortality rate to below 27 for the year 2015 under MDG. The trend is also similar for child mortality. To understand the relationship of infant and child mortality with other socio-economic as well as programme factors, a set of regression equation are estimated. In the first step, the linear regression was estimated with IMR as the dependent variable with independent variable such as female literacy, poverty ratio, safe delivery as well as antenatal care using the state level data. It is found that poverty has strong relationship with antenatal care and female literacy. Using the decomposition analysis, it is found that women’s education is the most significant predictor of reduction infant and childhood mortality.
2.13 HEALTH INFRASTRUCTURE & IMMUNIZATION COVERAGE IN RURAL INDIA

Study done by Ashlesha Datar, Arnab Mukherji* & Neeraj Sood Economics & Statistics Group & *Pardee RAND Graduate School, RAND Corporation Santa Monica, CA, USA

Immunization coverage in India is far from complete with a disproportionately large number of rural children not being immunized. The study is carried out to examine the role of health infrastructure and community health workers in expanding immunization coverage in rural India. The sample consisted of 43,416 children aged 2-35 months residing in rural India from the National Family Health Surveys (NFHS) conducted in 1993 and 1998. We estimated separate multinominal legit regression models for polio and non polio vaccines that estimated the probability that a child would receive "no cover," "some cover" or "full age-appropriate cover."

The key measure of health infrastructure was a hierarchical variable that assigned each child to categories (no facility, dispensary or clinic, sub-centre, primary health care centre, and hospital) based on the best health facility available in the child's village. We also included variables capturing the availability of various types of community health workers in the village and other health infrastructure. While there was under-provision of rural health infrastructure, our results showed that the availability of health infrastructure had only a modest effect on immunization coverage. Larger and better-equipped facilities had bigger effects on immunization coverage. The presence of community health workers in the village was not associated with increased immunization coverage. The findings suggest that expanding the availability of fixed health infrastructure is unlikely to achieve the goal of universal coverage. Reforming community outreach programmes might be better strategy for increasing immunization coverage.
2.14 HEALTH SEEKING BEHAVIOUR AND HEALTHCARE SERVICES IN RAJASTHAN, INDIA: A TRIBAL COMMUNITY'S PERSPECTIVE

By Lakhwinder P Singh and Shiv D Gupta (Institute of Health Management Research) JAIPUR

In this study, an attempt has been made to investigate the health seeking behaviour of the tribal communities in four tribal districts of Rajasthan, India, namely Banswara, Dungarpur, Udaipur and Sirohi. It was observed that people generally do not pay much attention to the routine problems during ante-natal, natal and post-natal periods, which they regard as a built in part of child bearing and child rearing. In the case of reproductive health problems and general health problems like fever and malaria, at the first stage some treatment is administered at home, followed by a visit to the bhopa (the local faith healer) and a herbalist in that order. The next stage involves visiting a nurse or an ill-qualified or unqualified medical practitioner, depending upon availability. It is only in very advanced stages of the problem that the help of a qualified medical person is sought. In the case of dental problems, as well as for cough and cold, the problem is ignored till the last minute, until the pain becomes unbearable. In the case of children's problems, they are mostly treated by giving some indigenous treatment, and in case the problem should persist after a certain period, the help of a medical practitioner is sought, who may or may not be qualified. In some specific problems like poisoning, all people reported visiting faith healers and claimed that their treatment is very effective. In cases of abortion also, the help of a herbalist or an experienced traditional Birth Attendant (TBA) is sought, who may or may not be trained, to abort the foetus by using indigenous methods. The second part of the study deals with the community's perspective of health services and health personnel. It also looks at the issue of integration of Private Medical Practitioners (PMPs) and traditional Birth Attendants (TBAs) in improving the delivery of health services. Finally, the paper overviews the community's perception of the Non Governmental Organisations working in the health sector.
2.15 SCALING UP PRIMARY HEALTH SERVICES IN RURAL TAMIL NADU: PUBLIC INVESTMENT REQUIREMENTS AND HEALTH SECTOR REFORM

Nirupam Bajpai, Ravindra H. Dholakia and Jeffrey D. Sachs

Nirupam Bajpai is Senior Development Advisor and Director of the South Asia Program at the Center on Globalization and Sustainable Development, The Earth Institute at Columbia University. He is also a member of the United Nations Millennium Project.

Ravindra H. Dholakia is Professor of Economics at the Indian Institute of Management at Ahmedabad in India.

Jeffrey D. Sachs is Director of the Earth Institute at Columbia University and Special Advisor to the United Nations Secretary General, Ban Ki Moon.

Tamil Nadu is geographically the 11th largest state in India with an area of 130,058 square kilometers accounting for 4% of the national area. It has a long coastline extending up to 1000 kms. Climatically the state falls into a semi–humid and a semi–arid zone. Tamil Nadu is one of the better performing states in India in terms of various health indicators. The state also has a relatively high female literacy rate of about 65%. Moreover, we find the life expectancy at birth in Tamil Nadu was 67 years for males and around 70 years for females, which is higher than the national average of 64 and 67 years respectively. As per the Tamil Nadu human development report 2003, the state has the HDI value of 0.657 which is higher than the national average of 0.571 indicating the better performance on certain key indicators related to HDI as compared to other states. In this context, it is relevant to examine the relative performance of Tamil Nadu with the best performing states in the nation in each of these indicators.

Tamil Nadu needs to spend an additional Rs. 8.8 billion in 2008/09 to scale up the rural primary healthcare services in the state. Tamil Nadu is yet to implement the ASHA Accredited Social Health Activist) program of the NRHM, though it has implemented other components of the NRHM. It is not a NRHM high focus state, but it will have to address the manpower shortfall whenever it implements the NRHM norms. In terms of budget allocation in 2007-08, Tamil Nadu has allocated Rs. 18 billion to medical & public health, Rs.3.5 billion to family welfare, and
Rs.0.482 billion to water supply and sanitation on revenue account. Similarly, it has allocated respectively Rs.1.724 billion, Rs.0.171 billion and Rs.4.825 billion on capital account to these heads. It can be seen that most of the PHCs and CHCs have their own buildings. The availability of essential amenities such as water supply, electricity and toilets at the health facilities in Tamil Nadu is quite satisfactory compared to several other states. Indian states like Madhya Pradesh (MP), Uttar Pradesh (UP) and Rajasthan (see, Bajpai et al. 2005 and 2006). All the PHCs and CHCs have labor rooms and 24 hrs delivery facilities. About 40% of the CHCs and 10% of the PHCs do not have a functional generator, and 20% of CHCs and 50% of PHCs do not have functional vehicles. The OT (operation theatre) facility is also absent in more than 70% of PHCs and about 20% of CHCs. Unlike the infrastructure of health facilities of Tamil Nadu, the manpower position is not very satisfactory. The study found that all the levels of the health institutions lack the availability of the required manpower. While the sub – centers and PHCs mainly have insufficient paramedical staff; the CHCs also have a crunch of the specialist doctors. Availability of better physical infrastructure in public health facilities can become more or less ineffective in providing quality health service due to inadequate human resources. Training programs of the VHWs are critical, both in terms of the quality of training to be imparted and the time allocated for their training.

Hypertension, Type II Diabetes and Cardiovascular diseases are on the rise in rural Tamil Nadu in particular and rural India in general. It is critical to keep these emerging disease burdens in mind while scaling up health services. Study suggested that under the NRHM umbrella, programs are put in place to deal with the growing burden of these diseases. With the exception of pre-natal checkups for expectant mothers, the delivery of healthcare in rural India is almost entirely curative in nature. With hypertension on the rise in the country, it was suggested that blood pressure be examined on a regular basis for all patients visiting sub centers and PHCs. ANMs at the sub-centre level and nurses at the PHC level should in the normal course examine blood pressure as part of antenatal care, as pregnancy-induced hypertension is a major contributor to maternal mortality in India. Since one of the core strategies of the National Rural Health Mission is to train and enhance capacity of the PRIs to own, control and manage public health services, the following questions need to be looked into: Has the power and authority that has been devolved to the PRIs on paper actually reached the people? Do they understand their
duties/responsibilities on the one hand and their authority on the other? Do the PRIs have the capacity to manage health centers? Are there regular and comprehensive capacity building programs in place? And are any measures being undertaken to ensure that the caste and patriarchy do not prejudice effective management at the local level.

**2.16 PUBLIC PRIVATE PARTNERSHIP IN UTTAR PRADESH HEALTH CARE DELIVERY SYSTEM- UPHSDP AS AN INITIATIVE**

*Bibi Ishrat Jahan* (*ICSSR Teacher Fellow, GIDS, Lucknow*)

The Government of Uttar Pradesh like other state governments is committed to provide high quality, affordable and accessible, preventive, curative, primitive and comprehensive health care services to the population. But unfortunately the performance of the state on various health parameters is not encouraging. Although an extensive infrastructural network of Medical and Health services in the government as well as private sectors has been created over the years, the available health infrastructure is inadequate to meet the demand for health services in the state. The problem is more serious in rural areas as compared to urban areas. The rural population primarily depends on government infrastructure and on private health services providers or mainly on quakes. The availability of physical health infrastructure in the state still lags behind the national average. Apart from this, non availability of staff and medical services at these health facilities is another issue of major concern As a result the state is facing a great challenge to fight communicable and non communicable diseases,, maternity and child health malnutrition and newly emerging fatal diseases like AIDS. State has also 53 district hospitals, 13 combined hospitals, 388 community health centres, 823 block PHC’s,2817 additional PHC’s apart from 20521 sub centers.

In the private sector, the 4193 male /female hospitals/ nursing homes at district level available in U.P. However there are large numbers of registered and non- registered medical practitioner in the state and they play an important role in providing medical service to the rural and urban populations. Despite all these, the Physical Health Infrastructure in the state is still below the
country’s average. For instance the population covered by sub centre in state is 7080 and the average distance is 3.4 Km. While the country average is 5109 and 1.3 Km. It is estimated that 11% of the people in Uttar Pradesh are not able to access medical care due to locational reasons. Further, even when accessed, there is no guarantee of sustained care. Several other factors such as bad roads, unreliability of findings of health providers, cost for transport and wage loss etc. make it cheaper for a villager to get some treatment from local quacks.

Severe shortage of manpower at all levels in the public health delivery system, stands out as another challenge. Every health functionary is under a lot of pressure on account of large numbers that he/she is expected to serve. This has a direct bearing on the quality of services rendered and uptake services. The ratio of doctors per thousand populations for U.P. is much below the national figure of 1 and although the ratio of beds is almost the same as the all-India figure of 0.7, their geographical distribution is highly skewed in favor of urban areas In UP this ratio is 1:4202 and 1: 10796 respectively whereas all India average is1:1855 and 1:1455. This shows the heavy population pressure on doctors and nurses in UP. A survey of hospitals in the private sector, commissioned by the Government of U.P. revealed that there are 2,592 private hospitals with the total bed capacity of 47,269. There are 2,321 general hospitals that account for 92.4 per cent of beds in the private sector, 201 nursing home with 2,506 beds that offer maternal and child health services exclusively and 70 hospitals with 1,010 beds that offer specialty services.

The problem of shortages is further compounded by the absenteeism of public sector health personnel in the state. 45 per cent of the doctors were found absent from duty in U.P. Interestingly 14 per cent out of this 45 per cent were on leave; 8 per cent of them were absent without reasons; and 22 per cent (i.e. almost half of the total absenteeism) of doctors were absent from the post because they were on the official duty. It raises questions regarding the work schedule, which forces absence of doctors in doctor scarce state. Each sub centers in UP is covering as many as over 6400 population against the prescribed norm of 5000. In fact among the sixteen developing states UP occupied 15th rank only better than Bihar. The state is slightly better in the case of rural population covered by PHC.UP ranks at 11 among the states in terms of population per PHC. The rural population covered by each CHC’s in UP is 341084, which are
almost three times the norms laid down for PHC and CHC. Only three states fulfill the norms of CHC’s & seven states fulfill the norms of PHC’s out of 16 states major states.

About physical infrastructure in PHC’s and CHC’s across the states, study finds that the situation is very pathetic. Out of surveyed PHC’s only 36% of had water supply, 41% had electricity connections (not sure about the hours of supply), only 20% had labour room, 30% had labs, 2% had telephone connectivity and only 14% had vehicle in working condition. Situation of CHC’s in UP is a little bit better but not very satisfactory. U.P. is having 20,251 sub-centers in rural areas. All sub centers are manned by one ANM. As per the Plan, every sub-centre will have two ANMs. Thus the state will require another 20,521 ANMs. In addition the state envisages establishment of additional 14,000 ANMs (norm of two ANMs per sub-centre) in the coming years. Accordingly it will have a gap of around 34,000 ANMs in the coming five years.

It is widely accepted that the deficiencies in the public sector health system require significant reform. The need for India’s health sector reform has been emphasized by successive plan document since eighth five-year plan in 1992, by 2002 National Health Policy and by international donor agencies. The World Bank emphasized that, now is the time to carry health sector reform in India. But there is no single strategy that would be best option. The proposed reforms are not cheap, but the cost of not reforming is even greater. After reviewing the health sector of India, the World Bank (2001) and National commission on macroeconomics and health (2003, 2005) strongly advocated the harshening of private sector. The private sector is not only India’s unregulated sector but also untapped sector. Although inequitable, expensive, the private sector is easily accessible, better managed and more efficient than its public counter parts. It is assumed that collaboration with the private sector in the form of public private partnership will improve equity and efficiency, accountability quality and accessibility of the entire health system.
2.17 ASSESSING THE PERFORMANCE OF PRIMARY HEALTH CENTERS UNDER DECENTRALIZED GOVERNMENT IN KERALA, INDIA

D VARATHARAJAN,1 R THANKAPPAN1 AND SABEENA JAYAPALAN2

1Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology and 2Kerala Health Services, Thiruvananthapuram, Kerala, India

Kerala’s government health-care system functions relatively well compared with other Indian States, but utilization levels are decreasing due to lack of essential facilities. The opportunity cost of seeking medical care from the government sector is high, even for the poor, with 60–70% of the poor seeking care from the private sector and spending disproportionately on health care (about 40% of income compared with 2.4% by the rich). In 1996, the Kerala government brought primary health centres (PHCs) under the control of local governments (panchayats). The study was conducted in three stages. The first stage included all 990-village panchayats in Kerala. The second stage covered 10 panchayats (their respective 10 PHCs and 65 sub-centres) occupying the top five and bottom five ranks in terms of resource allocation to health. Two panchayats (their respective PHCs and sub-centres), one each from the top five and the bottom five, were chosen for the third stage. Published and unpublished government data, panchayat development reports, panchayat and PHC records, facility checklist, and key informant and client exit interviews were used for data collection.

Panchayats in Kerala allocated a lower proportion of resources to health than that allocated by the state government prior to decentralization; while panchayat resources grew at an annual rate of 30.7%, health resources grew at 7.9%. PHCs were funded to the extent of 0.7–2.7% of the total cost. An additional 2% in PHC resources was associated with improved patient load (63.5%), cost-effectiveness (50.8%), medicine supply (49.4%), information (32.8%) and patient satisfaction (12.7%). An annual increase of US$940 in PHC resources would help to extend primary care facilities to 3000 (15.5%) more users.

Decentralization brought no significant change to the health sector. Active panchayat support to PHCs existed in only a few places, but wherever it was present, the result was positive. Kerala
should find an alternative strategy to channel panchayats towards health before health loses its battle for resources.

**2.18 HOW MANY RUPEES WORTH OF MEDICINE DOES ONE NEED? COMPARISON OF MEDICINE BUDGETS IN PHCS AND EXPENDITURE ON MEDICINES FOR GOVERNMENT EMPLOYEES.**

By **Dr. Dileep V. Mavalankar** Chairman Public Systems group, Indian Institute of Management, Ahmedabad 380015.

This study analyses the medicine allocation on per capita basis in various government PHCs and compares them with allocations or expenditures on medicines for employees in few semi-government and government organizations. The study brings out the discrepancy between the per capita medicine allocations in the PHC system and the medicines required for an average man. And showing that PHC medicine budgets are woefully inadequate, it argues for higher allocations for medicines in the PHC system in India. Data are collected from various sources based on personal inquiry with reliable state level or district level officers, or PHC medical officers from that state. To estimate the cost of medicines that would be required for an average person per year financial allocations or expenditures on medicines for some government and Para-governmental organizations like Indian Institute of Management, Ahmadabad, Indian Space Research Organization, Ahmadabad, Indian Railways, and Employees State Insurance Scheme in Gujarat. These data should be taken as indication of the general level of expenditure on medicines per employee. This would serve as basis for estimating how much government spends on medicines for its own employees. This could be taken, as a measure of how much money is required for medicines per person per year. These two sets of data are compared to arrive at the estimate of under funding of PHCs for medicine. Per capita allocation of medicine in Gujarat is Rs.1.66 while in Maharashtra 1.33, Himachal Pradesh 3.2, Uttar Pradesh 0.17 to 0.2 and in Madhya Pradesh 0.43. Data are also collected from some government and semi-government
organizations on allocation or expenditure for medicines for their employees. Per capita medicine allocation or expenditure in Indian Institute of Management Ahmadabad 333 + medicines directly given by doctors in the dispensary, Indian Space Research Organization Rs. 1000, Indian Railways Rs.65, and in Employees State Insurance Scheme in Gujarat Rs. 165. Comparison between these data clearly indicates that there is great disparity among money allocated for medicines in the government PHC system and money spent on medicines for the government employees. The PHCs get medicine allocation of Rs 1-3 per person per year, while the government spends from Rs 66 to 1000 per employee per year on its own employees for medicines.

PHC should provide all essential medicines, which cover almost 90-95% of illness. Thus the medicine costs of government employees should be comparable to PHC medicine allocations. On the other hand one can argue that allocation of medicines in PHC has to be more than that for government employees. This is because government employees are by and large a more healthy lot than the general public in rural areas as they all are medically examined before employment, they are in their adult ages, they get good wages, have better nutritional status, live in urban areas, in well developed housing colonies where water and sanitation etc. are good hence their risk at diseases is much less than general public in rural areas. On top of that they are educated and have very easy access to health care, hence should be better able to take care of their health and hence should require much less medicine than the population covered by PHC system which is poor, under nourished, rural, with bad water and sanitation situation. Taking these facts in to account the gap in medicine allocation in the PHC system as compared to that for government employees looks even worse.

An indirect evidence of low allocation for medicines at higher levels in the government health system comes from the plethora of chemist’s shops just outside the public hospitals in most places in India. In many public hospitals, due to inadequate allocation for medicines and supplies patients are given prescriptions and they have to buy medicines from the open market at much higher rates than what the government could have bought at bulk rate.
Comparing our findings of per capita allocation for drugs in PHC system which is roughly 6-9 Rs. Or 15-20 US cents to the international per capita expenditures on medicines produces even more shocking picture. Per capita expenditures on pharmaceuticals in Asia in 1990 was $ 12 or Rs 216 and it was $137 or Rs 2466 in developed market economies (Managing drug supply. Management Sciences for Health & WHO. Kumarian Press. 2nd edition. West Hartford, 1997. Pg. no. 611.). Annual per capita drug expenditure varies substantially from highest of $ 412 in Japan to lowest of $ 2 in Bangladesh and Mozambique. In India, the per capita expenditure on drugs is estimated to be $ 3 in 1990, which comes to Rs 54 (World Bank, World Development Report, 1993, Investing in Health, Oxford University Press, P.145). International comparisons are further complicated by the fact that medicine prices also vary a lot between countries. But comparison with international figures highlights the fact that allocation in the Indian PHC system is very meager and highly inadequate. A study by RamaRao et al in UP showed that just to include treatment for women’s reproductive tracts infections (RTI) which is just one of the many components of Reproductive and Child health services in the PHC system, the medicine budget will have to be doubled at the PHC level even after making very conservative estimates of prevalence and assuming low (15%) utilization of services. Her model shows that the additional variable costs per PHC, which includes costs of medicine and lab tests, assuming high prevalence and high utilization (65%) of RTI services, would be of the order of Rs 4.8 lakhs per year or roughly Rs 4.8 per capita (RamaRoa S. Townsend JW, Khan ME. A model of costs of RTI case management services in Uttar Pradesh.). This is about 20 times the current budget of medicines in the PHCs. The problem of medicines in PHCs is quite complex and inadequate allocation for medicines are just one aspect of it. The other problems observed are inappropriate medicines being purchased. Many of the drugs from the WHO’s essential drug list are not available and some of the non-essential drugs are purchased. There is no systematic analysis of disease pattern before purchasing of drugs. Second major problem is purchasing procedures, which prefers suppliers with cheapest quoted rate for medicines and without any reasonable quality control system, which leads to substandard medicines being purchased. Review of rate contracts done by Government of Gujarat showed that almost all contracts were with little known producers and none of the large well known and reputed companies were included in the list. Another major problems are logistics and inventory management. Mismanagement in this area leads to frequent ‘stock outs’ and excess stocks at some places. Finally, most medicines are
purchased in bulk packing where tablets are not individually packed; hence there is substantial wastage at periphery. Improper prescribing practices and lack of proper explanation to the patient’s leads to further wastage and misuse of medicines in the PHC. All these factors combined with inadequate allocation for medicines makes the PHC medicine system highly inefficient and ineffective. This leads to lack of faith in the PHC system by the community. Thus under spending in medicines makes the PHC system defunct and under-utilized.