INDIAN HEALTH ECONOMICS AND POLICY ASSOCIATION (IHEPA)

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# Health for All to Universal Health Coverage:

## Journey so far and challenges ahead

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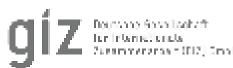

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# Health transition in India:
# Historical trends and determinants of causes-of-death

**GOPAL AGRAWAL**
International Institute for Population Sciences, Mumbai

Cause-of-death information is an important planning tool for health services. The contour of cause-of-death profile reflect better picture of mortality and health circumstances of a country as it postulates that causes of death are different at different transition phases and in different age-sex groups of the population. In India, only few studies had been carried out to understand the dynamics of causes-of-death. Most of the causes-of-death studies are based on hospital records restricted to the urban areas and mostly focused on causes of maternal and child deaths. With this background, this paper explored the historical trends and determinants of causes-of-death classified in three broad categories of causes of death (WHO, 2008): Group I encompass communicable diseases as well as maternal, perinatal and nutritional conditions; Group II includes non-communicable diseases; and Group III comprises causes of death resulting from external sources, namely injuries, including both intentional and unintentional injuries. It is evident that the demographic and epidemiologic transitions are inextricably linked. The epidemiologic transition shapes the mortality patterns of the demographic transition, while the shifting age structure that occurs with the demographic transition influences the distribution of deaths by cause observed in the epidemiologic transition.

# Spatial pattern of multidimensional poverty, environmental deprivation and short term morbidity in urban India

**SANJAY K. MOHANTY AND BIDYADHAR DEHURY**
International Institute for Population Sciences, Mumbai

Using the unit data from Indian Human Development Survey (IHDS), 2004-05 that covered over 40,000 households, this paper examines the linkages of poverty, environmental deprivations and short term morbidities (fever, cough and diarrhoea) in urban India. Poverty is measured in a multidimensional framework by incorporating dimensions of knowledge, health and income, while environmental deprivation is measured using basic sanitation, cooking fuel and drinking water. A composite index combining multidimensional poverty and household environmental deprivation is computed and households are classified as; multidimensional poor and living in poor household environment, multidimensional poor and living in good household environment, non-poor and living in poor household environment, and non-poor and living in good household environment. The multidimensional poor living in poor household environmental condition are more likely to suffer from short-term morbidities compared to others. Controlling for socio-economic covariates, the odds of having fever is 1.49 [CI: 1.37-1.61] among those multidimensional poor and living in poor household environment, 1.06 [CI: 0.98-1.15] among those poor and living in good household environment and 1.32 [1.21-1.46] among the non-poor and living in poor household environment. The coefficients are similar for cough and diarrhoea.This validates that along with poverty the household environmental conditions have an important bearing on short term morbidities.

# Consequences of Health on Poverty: An Exploration of Uttar Pradesh

**PRATIMA YADAV**

Institute of Economic Growth, Delhi

This study attempts to examine the impact of health expenditure on consumption of the households (or poverty) in the four regions of Uttar Pradesh. It uses as the major source for this analysis the all-India health survey conducted at the household level by the National Sample Survey Organisation (NSSO) in January-June 2004 (NSS 60th round), and decennial population censuses and the past few NSSO consumption expenditure surveys among many secondary data sources. Poverty is a major outcome of poor health status, and an important finding of our study suggests that the relationship is more profound in urban areas than in rural areas, possibly because acute poverty restrains rural households from accessing health services. Our results also indicate considerable diversity in the health status of a regional population. Broadly, we observe that the western and central regions are better than the southern and eastern, where 45 per cent of UP's population and 30 per cent of its BPL population live, and that the government must invest heavily in health services to reap the advantages of the so-called demographic bonus.

# Towards a Healthier Health System in India

**NASIHA MUNIB**

Centre for Management Studies, Jamia Millia Islamia, New Delhi

Investment in human development, specifically, targeting the poor, are justified not only on moral grounds, but also because good health, education and social welfare are key to success in a more competitive world economy. Education, health care and social protection are some of the basic policy instruments used to empower the poor. The investment in providing a minimum universal level of basic health and education, over the long term pay off. We argue that all citizens, irrespective of their economic status should have access to the basic requirements of human development.

The striking gains made in some health indicators  such as life expectancy in a few countries such as Morocco and Tunisia, were made possible due to improvements in health & drug technology, widespread vaccination, improved water, sanitation, increased public and private investment in health.

Against this backdrop the paper focuses on issues related to health, human development and inclusive growth  in India and used international comparisons specifically among the BRICS nations. We also cite a few cases of less developing countries such as Bangladesh, Turkey, Lebanon that have been able to achieve much progress in terms of major health indicators in recent years. In particular the paper focuses on trends in social sector spending, health indicators, major health programmes in India and the BRICS.

We conclude that there has to be a virtuous circle comprising of growth and social policies reinforcing each other. The health system has to be such so as to be accessible by all including the poor and the marginalized sections.

For this economic success must be supplemented by pro poor approach and targeted assistance. Whether there is any difference in quality of care in between the qualified formal health care system and the non-qualified informal system in terms of structural quality, knowledge-practice and job satisfaction and motivation.

# Do acute health care needs of the poor crowd out their chronic care utilization? Evidence from Rural India

**SUBRATA MUKHERJEE**
Institute of Development Studies Kolkata
**ANOSHUA CHAUDHURI**
San Francisco State University, USA
**ANOMITRA BARIK**
Society for Health and Demographic Surveillance

Acute illnesses tend to get higher priority when it comes to the poor seeking care. Much of the public health facilities in rural areas are better equipped to provide treatment for acute illnesses and reproductive and child health needs. Therefore, to get the right kind of care for a chronic illness one has to travel to secondary or tertiary hospitals located in sub-division or district headquarters or in the big cities. Consequently, treatment of chronic illness becomes relatively much more expensive. This paper tests whether there is a crowd-out effect on treatment of chronic illnesses because households ration the amount they spend on care for chronic illness, especially in poor households, and whether the most common victims of such rationing are women and elderly.

# Access to Public Health care Services in Odisha

**ANJALI DASH**
M.P. Institute of Social Science Research, Ujjain

As Health is a basic human development indicator, government of India has lunched various healthcare policies and programme which directly curbed the spread of health outcome of the people. Even though significant strides in health care took place the government could not eradicate some diseases, because of insufficient infrastructure facilities. In this case access to public health care not possible. Among the Indian states Odisha is situated in eastern part. Health care facilities are not far better than other states. Health indicators like mortality and morbidity rate are high due to inaccessibility, unavailability and not affordability of health care. It may be due to poor health infrastructure in Odisha. So objective of this paper to analyse the health infrastructure and healthcare services prevalent in Odisha and its accessibility across the districts. This is a macro level analysis, data collected from various sources. From this analysis we observed that public health infrastructure and health indicators are diverse to each other. Efficiency is more important for better health care.

# Difference in quality of care accessible in the Indian Sundarbans

**DEBJANI BARMAN, ARNAB MANDAL**
Institute for Health Management and Research, Kolkata

In geographical inaccessible region like Sundarbans 85 percent of children visit rural medical practitioners (RMP) when they fall sick. These providers are practicing modern medicine without any formal training. This system is parallel to the existing formal health system which is already running short of human resources and necessary structural supports. There are lots of debates about the poor quality of treatment provided by the rural medical practitioners but given the geographical inaccessible terrain of the Sundarbans, specially in the remotest island of the same, no doubt they are the only option the islanders are left with.

In this backdrop the paper tried to explore whether there is any difference in quality of care in between the qualified formal health care system and the non-qualified informal system in terms of structural quality, knowledge-practice and job satisfaction and motivation.

The present paper used primary data collected from Patharpratima block of Indian Sundarbans. All the public facilities and thirty clinics of RMP have been interviewed by structured questionnaire. It collected information on structural quality, knowledge and practice of the providers related to childhood diseases Diarrhea, ARI (Acute Respiratory Infection), Malaria, New born care and others, along with their motivation and job satisfaction. Simple descriptive statistics has been used to explore the difference between these two groups of providers.

In Patharpratima block, there is one doctor vis-à-vis 11 RMP-s per ten thousand population. In terms of facility infrastructure and availability of necessary equipments the formal facilities are in better position compared to the informal one, except their round the clock availability over mobile phone and access to emergency transportation for referral. The RMP clinics are particularly poor in terms of waste disposal, maintaining patients' privacy and providing them toilet facility. In terms of knowledge score for all the diseases like Diarrhea, ARI, new born care the qualified providers scored more compared to RMPs and for Malaria, both the groups of providers scored almost equally. Even then what is more bothering is that the formal providers scored poorly and just above the 50 percent of the total score. In terms of job satisfaction and motivation both the providers are in moderate position except in terms of opportunity of future training where both of them are unsatisfied or very unsatisfied.

# Utilization of Primary Healthcare Services among Select Rural Women in Coimbatore

**V.L.LAVANYA AND SHERLY THOMAS**

Avinashilingam Institute for Home Science and Higher Education for Women

**Coimbatore**

Access to healthcare is critical to improving health status and good health is necessary for empowerment. Rural healthcare services suffer from a shortage in public sector infrastructure. Majority of women from rural areas are working in the unorganised sector and are paid less. They are suffering from many hazardous diseases and their health status is degrading. The low priority accorded to women's health is reflected in patterns of healthcare utilization. All health services and programmes of PHC are directly or indirectly related to the women's health. They are playing an important role to improve the health status of women. The present study attempts to analyze the utilization of primary healthcare services by a select rural woman. The primary data forms the basis for the study. The present study was done in Thondamuthur block, Coimbatore and it was planned to give representation of the Kaliveerampalayam Primary Health Centre where the medical facilities are available in 24/7 services. The results showed that age, education, occupation and monthly income emerged as a significant factor and had positive impact on utilization of healthcare services among the respondents. The pattern of utilization of healthcare also varies with age. Only household size had negative impact on accessing the healthcare services because in a large family if the income is less it will reduce chances of utilizing healthcare services. The rural women are suffering from various diseases like anemia diabetics, blood pressure, etc. Utilization of medical facilities has to be brought home to the rural people through the primary healthcare services. This centre plays very important role in protecting the rural health particularly health of women.

# Has Utilization of Maternal Healthcare Services Improved among Women Carrying High Risk Fertility Behaviour in India?

**GARIMA DUTTA AND CHANDER SHEKHAR**

International Institute for Population Sciences, Mumbai

Introduction: In the last three decades, India's family welfare programme has been completely dynamic in nature starting from the national health policy (1983) to the National Rural Health Mission (2005). During the period, there have various programme initiatives, such as the child survival and safe motherhood (1992), Reproductive and Child Health (1997), and the national population policy (2000). There is no doubt that access and utilization of essential maternal healthcare services have improved tremendously. The effects of these initiatives can be easily seen in declining maternal and under-five mortality rates, two most important MDGs (4&5) indicators, in the country as whole. However, huge socioeconomic, geographical and regional differentials still persist across the country. One of the pertinent reasons behind these differentials is variation in fertility behaviour.

Objective: This paper is trying to understand whether there is an improvement in utilization of maternal healthcare services especially among women who carry high risk fertility behaviour. Providing quality of reproductive and child healthcare services not only will improve maternal health status but also will positive effects on child survival status. We have revised the definition of high risk fertility behaviour used in survey by adding unwanted births in it.

Data source and Methodology: In methodology, percentage, cross-tabulation and decomposition analysis have been carried out by using two rounds of national family and health survey (NFHS) during 1992-93 and 2005-05. The decomposition analysis has been carried using non-linear (logistic) multivariate approach to find out the contribution of actual change in above maternal healthcare (MH) practices, socioeconomic composition of births, and interactions of both the factors between the two surveys.

Main conclusion: This paper brings out that there have been some improvements in utilizing maternal healthcare services in India even among those births which fell in any avoidable risk category. In case single risk category the risk ratio (2.4) is found to be highest for those births which are borne to women aged below 18 years followed by among births with less than 24 months (1.9) of preceding birth interval. For multiple risks categories, preceding birth interval below 24 months and mother's age at birth<18 years show maximum risk ratio. Almost 53 percent births were estimated to fall in any of the avoidable risk categories in 1992-93; proportion has reduced marginally to 47 percent (2005-06). As a whole around 18 percent births in any avoidable risk were delivered in health institutions in 1992-93. Even after investing huge resource in reproductive health since late 1980s, the proportion could reach only 27 percent. Our analysis reveals that composition and interaction did not play any significant role in change of uptake in institutional delivery of such births.

# Inter-District Inequalities in Reproductive and Child Health Services in Uttar Pradesh

**MAMTA RAJBHAR AND SANJAY MOHANTY**

International Institute for Population Sciences, Mumbai

Despite one of the high focused states under the National Rural Health Mission (NRHM) and efforts of various national and international organisations, the utilization of reproductive and child health (RCH) services is very low in the state of Uttar Pradesh. Evidences suggest large spatial pattern in utilisation of RCH services in the state. Using data from the third round of District Level Household and Facility Survey (2007-08), this study examines the variation in reproductive and child health servicesin districts of Uttar Pradesh. The six indicators of reproductive and child health services namely, three or more ANC visits, post natal care, safe delivery, contraceptive use, unmet need for contraception and child immunization has been analysed. For inter-district comparison, a composite index of these indicators has been computed.Theconcentration index, descriptive statistics and binary logistic regression analyses has been carried out to understand the inequality and variation in utilization of reproductive and child health services.

Results indicate large disparities in utilization of these services, concentrated among districts fromwestern and central part of the state. Ofall theseservices, inequality in three or more ANC visits and safe deliveryis large, while that of full immunization followed by post natal care and contraceptive use issmall. The multivariate analyses on RCH services indicate that years of schooling and economic status are significant predictors of low utilization of RCH services in Uttar Pradesh.

# Supply-side barriers to providing delivery care in India: a facility-based analysis

**SANTOSH KUMAR AND EMILY DANSEREAU**

Institute for Health Metrics and Evaluation, Department of Global Health

University of Washington, USA

Background: Health facilities in many low- and middle-income countries face several types of barriers in delivering quality health services. Availability of resources at the facility significantly affects the volume and quality of services. We aim to investigate the effect of supply-side determinants of delivery care in India.

Methods: Facility data from the District-Level Household Survey (DLHS-3) collected in 2007-2008 were analyzed to explore the effect of supply-side factors on the volume of delivery care at health facilities. A Negative Binomial regression model was fitted to the data due to the count and over-dispersion property of the outcome variable (number of deliveries performed at the facility).

Results: Availability of labor room (Incidence Rate Ratio [IRR]: 1.84; 95% Confidence Interval [CI]: 1.71-1.98) and facility opening hours (IRR: 1.44; 95% CI: 1.36-1.52) were the most significant predictors of volume of delivery care at the health facilities. Implementation of quality and training measures was not associated with more deliveries. Increases in the types of medical and paramedical staff available were statistically associated with very small increases in the IRR, of 3% (IRR: 1.03; 95% CI: 1.01-1.07) and 5% (IRR: 1.05; 95% CI: 1.03-1.07), respectively. The volume of deliveries was higher if essential obstetric drugs, medical equipment and electricity are available at the clinics. The number of beds at the facility was also associated with the output volume (IRR: 1.26; 95% CI: 1.18-1.34).

Conclusions: Our study highlights the importance of supply-side barriers to health services utilization. To meet the Millennium Development Goal of reducing maternal mortality, policymakers should make additional investment in improving the availability of infrastructure at the primary-care level.

# Women's Reproductive Health Complications and Utilisation of MCH Services in India

**MOUSUMI GOGOI1 AND PROF. SAYEED UNISA**

International Institute for Population Sciences, Mumbai

The present study tries to focus on pre-delivery, delivery and post-delivery complications and their association with utilization of maternal health care (MHC) services in India using third round of District Level Household and Facility Survey. Descriptive statistics, bivariate and multivariate techniques are used to justify the objectives. Factor analysis has been used to create indices using a different type of complications. The most common complications among women are paleness, giddiness, weakness, excessive fatigue, swelling of body and face during pregnancy. Result shows that more than half of women reporting of having any pregnancy and delivery complication, whereas post delivery complication is reported less by women. It is statistically found significant that women received full antenatal care during pregnancy has less complication during delivery and after delivery. There is a positive interrelationship found that having any complication during pregnancy have a higher chance of experiencing any delivery and post-delivery complication

# Changing Sex Differential in Life Expectancy and Life Disparity in India

**AKANSHA SINGH AND LAISHRAM LADUSINGH**

International Institute for Population Sciences, Mumbai

**Context:**

Females in the developed countries are observed to have higher life expectancy and lesser life disparity showing greater convergence in age at death and enormous sex differentials in mortality. Such phenomena simultaneously have not been much studied in the developing countries like India.

**Objectives:**

The major objectives are to examine the sex differences in life expectancy, life disparity and to estimate the age specific mortality contribution in the sex difference in mortality in India.

**Methodology:**

Complete life tables, generated from data on death rates and abridged life tables from 1970-75 through 2006-10, from Sample Registration System (SRS) in India, are used to estimate life expectancy at age x (ex), life disparity at age x (e+), threshold age at death and evaluate age with extremal impact on life disparity. General stepwise replacement algorithm is used for decomposition of both the measures.

**Main Results:**

The results indicate that the average increase in life expectancy and average decline in life disparity is higher for females showing greater convergence in age at death among females. Higher threshold age at death among females resulted in increasing life disparity among males and decreasing life disparity among females of similar

age. The gender differentials in life expectancy and life disparity in 1970-75 were mainly attributed to the child mortality and mortality in the reproductive age groups. The recent difference in life expectancy of both sexes is attributed to negative contribution of adult mortality in India while the difference in life disparity is attributed to positive contribution of adult mortality.

**Conclusions:**

Females have higher rate of improvement in life expectancy and higher convergence in age at death in India. The study has shown that there has been a significant change in the contribution of different ages in the sex difference over the four decades in India.

## Health Care System and Health Status of Dalit Children

**VIRENDRA B. SHAHARE**

Department of Social Work, Jamia Millia Islamia New Delhi

The state health care system entails to provide services to all without any discrimination. However, Dalits are less likely to benefit from the meager health-care benefits provided by the government due to social exclusion and discrimination. As a result even today inequalities in health status are the most grave and inadmissible as it has a direct impact on right to life. The statistical information about Dalit children health status is quite alarming. They are more likely to be underweight. Dalit infants and child mortality rate is very high, compared to the non-Dalit children rate. The present paper explores the importance of social determinants of Dalit children such as food availability, nutritional status, accessing drinking water etc. that contribute to their well being. The paper looks at the nature and forms of discrimination experienced by Dalit children in accessing health services provided by the primary health centres providers. It evaluates the health status of Dalit children and the health delivery system. The paper evaluates the present health schemes/ programmes and its impact on Dalit children. The paper argues that the consequences of discriminatory practices severely limit Dalit children from accessing health services, are attributable to the poor health and high level of mortality among them.

## Determinants of Pharmaceutical Pricing in India

**VASUDHA WATTAL**

Department of Economics, Delhi School of Economics, University of Delhi, Delhi

When India complied with the TRIPS agreement in 1994 and subsequently implemented the product patent regime, there was much concern regarding the possible adverse price impact that would ensue and it was believed that competitive forces would no longer govern pharmaceutical prices. Moreover, there exist huge differentials in the prices of branded versions of the same chemical compound as well as within a therapeutic class of drugs, possibly on account of differing pricing strategies according to the molecule specific characteristics. This study addresses these issues by analyzing a dataset of 44 New Chemical Entities launched in the Indian retail formulation sector during 2000 - 2012.

The first model estimates the determinants of launch prices. The second model and its variant estimates the determinants of relative price changes from panel data. The empirical evidence generated shows that while competitive forces do govern prices of drugs, the nature of competition evolves from inter-molecular competition at the time of launch to intra-molecular competition in the later years of the product life-cycle. However, the relative therapeutic advance of one drug over the others matters more at the time of launch when the relatively superior drugs command a premium over existing substitutes. In later stages, only drugs with moderate therapeutic advance show an increase in prices relative to the launch price indicating the possibility that quality perceptions influenced by promotional tactics might cause brands to maintain high prices. In the present scenario, some of the options for improving affordability include prescription by the generic name and greater information dissemination about the chemical equivalence of drugs branded or otherwise, that would help reduce the unnecessary expense on costlier brands.

# Addressing tuberculosis control in the context of promoting economic growth

**M MUNIYANDI**

Regional Medical Research Centre for Tribals (ICMR), Jabalpur, MP

Background: Illness and chronic disease create multiple burdens and society must bear the negative impact created by combined effects of the disease. India is the highest tuberculosis (TB) burden country accounting for one fifth of the global incidence. There is no doubt that a sick workforce contributes to an unhealthy economy.

Objective: To assess the overall economic impact due to TB and the adequacy of current TB control strategy from a poverty reduction viewpoint in India.

Methods: Data from several large scale surveys, carried out in Tamilnadu were used to perform a burden of disease in terms of TB prevalence, economic costs to TB patient on diagnosis/treatment and its significant contribution to poverty alleviation.

Results: The incidence of TB was the highest in the economically active segment of the population 15-54 years. The burden of TB disproportionately affects the poor, it was estimated that TB prevalence was significantly higher among people living below the poverty line (242 vs 149/100,000 population). A TB patient on an average 3-4 months of work time are lost, resulting in loss of average potential earnings up to 20-30% of annual household income. The current DOTS (directly observed treatment short-course) strategy, under the National TB Control Pgrogramme, resources is being directed to provide free DOT treatment to all. It was observed that living status of two thirds of the TB patients registered under TB control programme was low; none of the patients incurred any medical cost, >50% did not incur travel costs and 88% returned to work after completing treatment. The substitution effect was observed that cost of special food was increased as compared to non-DOT treatment.

Conclusion: These findings (saved costs, saved lives, reduced disability and decreased work absenteeism for TB patients, especially among the poor, enabling them to return to work at the earliest, thus increasing their productivity) indicates that TB control strategy engaged meaningfully in their poverty reduction strategy process to promote economic growth.

# Impact of Nutrition transition on the prevalence of chronic diseases in India

**ASNA UROOJ**

Department of studies in Food Science and Nutrition, University of Mysore, Mysore

The increasing prevalence of chronic diseases in India, is posing a serious health burden which is expected to rise in parallel with aging. Demographic and developmental transition in India has a significant impact on nutrition related chronic diseases. Risk factors such as a person's lifestyle, genetics, or environment also increase the likelihood of certain non-communicable diseases. Nutrition transition over the past 30 years, has shown salutary changes in the Indian diet with decreasing intake of coarse cereals, pulses, fruits and vegetables, and an increasing intake of meat products and salt. Studies report striking differences in prevalence of obesity and the incidence of CVD and diabetes between the rural and urban group. Scientific studies supporting the association between nutrition transition and prevalence of NCD’s. More research is needed to identify a full range of prevention-focused, cost-effective programs and initiatives in the developing nations.

# Nutritional Status of Married Women in India

## A study among Empowered Action Group States

**K. KANMANI, S. GAYATHRI AND R. DEVANATHAN**

Department of Population Studies, Annamalai University, Tamil Nadu

Introduction: Malnutrition is one of the most devastating problems worldwide and is inextricably linked with poverty. Malnutrition among women has long been recognized as a serious problem in India, but national-level data on levels and causes of malnutrition have been scarce. Malnutrition not only blights the lives of individuals and families, but also acts as a major barrier to social and economic progress In India, particularly in the EAG states, malnutrition remains a silent emergency, though the government of India has made significant progress in the past several decades in improving the health and well being of its people. This paper mainly focuses on degree of chronic energy deficiency and its determinants and to investigate the impact of low BMI of women on their children’s health status.

Method and Materials: Data drawn from the National Family Health Survey-III, conducted 2005-06, specifically from 8 states, which are grouped as Empowered Action Group (EGA) states. The anthropometric data were collected from 26,728 currently married women, ages 15-49 years. A multiple linear regression analysis was done to see the relation between CED status of women and different socioeconomic factors and bi-variate analysis was carried out to find out the influence of CED on children's health status.

Results: Jharkhand, Bihar and Chhattisgarh reported significantly higher profession of chronic energy deficiency than the rest of the EAG states (around 40percent each). The socio-economic and demographic bi-variate analysis shows that the low-BMI (BMI <18.50 kg/m2) women are found in higher proportion among families with poorest wealth index (50.2percent), ST women (49.2percent), women working in agricultural sector (42.5percent), rural areas (40.8percent), illiterate groups (41.percent), and women who ate fruits, and milk occasionally or never (around 40percent each). In addition, the data discloses state differentials Jharkhand show the highest incidence rate of underweight (39.7 percent) and the Uttaranchal recorded the lowest incidence of CED (25.5 percent). The results of the multivariate logistic regression analyses show that age of women, place of residence, caste, women's education, and wealth index are significantly associated with underweight. The chronic energy deficiency women produce more number of anaemic children (77 percent) than the counterparts. Around forty percent of the low weight babies (500-2000gram) are born to the chronic energy deficit women.

Conclusion: The 20th century witnessed a significant proportion of overweight and obese individuals coexist with the undernourished in many developing countries however the EAG states experiencing high prevalence of under-nutrition (34percent) and low incidence of overweight (13percent). The burden of chronic energy deficiency indicates that there is a need for special public health programs that are able to address chronic energy deficiency.

# Health and Nutritional Inequalities among Scheduled Caste and Scheduled Tribe Children in Empowered Action Group States of India

**RINSHU DWIVEDI AND JALANDHAR PRADHAN**

Department of Humanities and Social Sciences, NIT, Rourkela

In India, where there are of high levels of social hierarchy, people belonging to the scheduled caste (SC) and scheduled tribe (ST) are more deprived than other Indian citizens. With a high level of economic and social inequality, health and nutritional inequality is also pervasive. A greater inequality in health and nutrition among scheduled caste and scheduled tribe children means great challenges if millennium development goals forwarded by the United Nation are to be met. Using national family health survey-3, this study aims to examine the health and nutritional inequalities among SC/ST children in Empowered Action Group (EAG) states (Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh and Uttaranchal) of India. A comparative study has been done among SC, ST and other groups of children. Inequalities in health and nutrition by socio-economic status has been examined with regards to the following deprivation indicators i) standard of

living (wealth quintile) ii) literacy iii) exposure to mass media iv) place of residence etc. Logistic regression model has been employed to examine the aspects of neglects of children among SC and ST: their likelihood of being immunized against diseases; and their likelihood of having nutritional status below -2SD (in terms of height-for-age). Analysis shows that there are marked caste differences with respect to each of these indicators. The level of inequalities within group is also pervasive.

## An Exploratory Study of Malnutrition in Maharashtra: Women and Children

**SURENDRA J. DAWARE AND S. B. GAIKWAD**

Vidyawani Community Radio, University of Pune, Pune

Eradication of malnutrition is a herculean task in front of Maharashtra government. Maharashtra ranked first in contributing to National Gross Domestic Product [GDP] and in terms of dollars $233.89 in the financial year 2011-12. Maharashtra's per capita income was 10,1314 in 2011-12. It indicates that it is one of the developed states of India. Malnutrition is a concern for worry at the national as well as state level. Malnutrition has widened the scope and depths of Maharashtra. Every year 45,000 children die due to malnutrition. Malnutrition exists due to lack of food intake which results in deficiency of all nutrients such as proteins, calories, multiple vitamins and minerals in women and children. Poverty is one of the core causes of malnutrition among children in India and Maharashtra. In Maharashtra, health programmers are not keen to focus and reach the target groups suffering due to malnutrition, hunger and poverty. The conditions are not adequate to ensure a bright future of the children of Maharashtra and India in general.

## Determinants of Maternal Mortality in Assam

### A Preliminary Study at Administrative Divisions

**PRANTI DUTTA**

Department of Humanities and Social Sciences

Indian Institute of Technology, Guwahati

Reducing maternal mortality is challenging in absence of knowledge of determinants regarding maternal deaths. Both clinical and socio-economic factors are closely associated with maternal deaths. As per Assam Annual Health Survey 2010-11, the state is considered as one of the highest maternal mortality (390 per 100,000 live births) states of India. This study seeks to examine the determinants of high maternal deaths of Assam at the level of Administrative Divisions. The paper is entirely based on secondary data of various years which are collected from number of sources like SRS, NFHS, DLHS, Annual Health Survey, Facility Health Survey and Assam Human Development Report. A simple correlation coefficient and graphical presentations are used to exhibit various determinants of maternal deaths of four Administrative Divisions of Assam at the reference period of 2007-08.

The results show a visible gap in demand and supply factors of health care interventions. In view of supply, the study found an inadequacy of population wise sub centers and variances in availability of facilities at sub-centre both over and within Administrative Divisions. Whereas demand of ANC and institutional delivery has substantially increased but the study also reveals that there are no significant relationship between high range of MMR and socio-economic factors like poverty, income, level of education and religious groups, while there are proximate determinants of maternal deaths namely, anemia, malnutrition and less use of contraceptives which is the result of less utilization of maternal healthcare services. This study also reviews the contribution of NRHM through EmOC facilities at FRUs centers in Indian states including successful story of Tamil Nadu. Finally, the paper urge for addressing the differential socio economic and cultural beliefs that cause barriers for women in utilization of maternal healthcare services. The study proposes for improvement of sub-centre facilities, there is a need of enhancing the adequacy and accessibility of sub-centre that would help in increasing demand for seeking maternal health care services irrespective of socio-economic backgrounds.

# Factors affecting take up for immunization programs in Udaipur

**Radhika Joshi**

Indian Institute of Management, Bangalore

Providing effective and safe vaccines through an efficient delivery system is believed to be one of the most cost effective public health interventions in developing as well as developed countries. Thus, most government health departments have been developing new policies and programs to encourage parents to vaccinate their child in order to reduce mortality and morbidity due to vaccine preventable diseases (VPDs). Yet despite high level of private and public expenditure on vaccination programs, take up of vaccines remains low especially amongst the rural poor in developing countries. This study attempts to identify factors that contribute towards parents vaccinating their child. Using a dataset for over 2000 children from 1000 households in the district of Udaipur, the paper finds that parent's literacy level, whether or not a child goes to school, number of children in the family and caste significantly influence parent's decision to vaccinate their child, while factors such as annual household expenditure and being a BPL family do not seem to have an influence on take up for vaccination.

# Health Sector Reform and Infant Mortality in India: An Untold Story

**ARIJITA DUTTA**
Department of Economics, University of Calcutta*

**RATAN KHASNABIS**
MHROM, University of Calcutta

**SHARMISHTHA BANERJEE**
Department of Business Management, University of Calcutta

Since early 1990, health care reform has swept the countries across the globe, which is supposed to introduce sustained, purposeful and fundamental changes in health care delivery and finance. The main strategies of health sector reform have been introduction of decentralization and synergy with community at one hand and finance through Public Private Partnership on the other hand. Later on Performance Based Finance (PBF) and incentive schemes are added to bypass the typical principal-agent problem of the public sector health facilities and essentially the idea is to incentivise the manpower to improve delivery of services. In tune with the global policy anvil, India introduced the health policy reform since 2004-05 with the introduction of National Rural Health Mission (NRHM), the largest public health program in the world. NRHM introduced the PBF model of Accredited Social Health Activist (ASHA) who would get the incentives based on their performance in institutional delivery and antenatal check up. With the help of 3000 surveyed mothers for children in two districts of West Bengal, this paper seeks to locate the impact of health care utilization, which itself has gone through a drastic change in post-NRHM phase, on possibility of infant mortality thus questioning the very roots of this oft-quoted historical process of health care reform. Cox Proportional hazard Model is used in the study to locate the correlates of infant death. The study clearly depicts that the utilization of health care services have been increased significantly in the study areas of West Bengal, India. However, apart from equity concerns of spread of the service delivery across different socio-economic strata in the society, doubts are garnered at the ultimate improvement of health status among the service users. The automatic link between enhanced health care utilization and reduction of infant mortality appear to be truncated as most of the health system related variables do not seem to have any impact on child's survival at all. On the contrary, increased share of institutional delivery, without much improvement in expansion of health infrastructure, underpin a systematic failure of the quality of service provided. The over-crowding on one hands may lead to increased rate of infection among the infants, while decreases the quality of birth attendance at the public hospitals. The PBF system did improve the service utilization of ANC, ID and CI, but there is dwindling enhancement of health seeking behaviour in terms of contraceptive choices and early breastfeeding of infants. For the ASHAs, the front-line health workers, the unit for better incentive is number of babies born and they earn more as births increase. That is why the study identifies a closing gap between marriage and first delivery among the adolescent women and a decline in awareness of early breast-feeding in post NRHM era. Therefore, there appears to be a failure of non-incentivised services under PBF.

The study succinctly portrays the partial failure of health care reform and the corresponding PBF system to enhance better infant and maternal care in a populous state in the middle of health transition. With female literacy awareness better than most of the other states, West Bengal finds herself in the midst of high demand for maternal care, without proper up-gradation of service facilities. Scaling up of the infrastructure and spreading its availability up to the lowest tier of health facility are what these states would look forward to.

It definitely calls for more autonomy of the State Government in shaping the exact policy options, depending up on its specific position in transition. This would mean suitable changes in PBF in different states, depending upon the local factors to consider when prioritizing health systems choices.

## Self Help groups as a coping mechanism to vulnerability of reproductive morbidity among Left Behind Women of Bangladesh

**ANKITA SIDDHANTA**

International Institute for Population Sciences, Mumbai

This study aims to look at the range of reproductive morbidity among the Left Behind Women(LBW)and their coping strategies to these vulnerabilities primarily focusing on SHGs. The basic data used in this paper has been taken from the issues and concerns emerged during EMPHASIS (Enhancing Mobile Populations' Access to HIV&AIDS Services, Information and Support) Mid Term Review, 2012. This study is accomplished with the help of data from FGDs among the LBW, Peer Educators, Out Reach Workers at Bangladesh. The age long vulnerability that these LBW face are STIs,RTIs,HIV/AIDS, social, physical harassments and blind administrative response. The SHGs have moulded their lives for beneficence. The LBW can now address their vulnerability to HIV/AIDS and impart this knowledge to their husband over phone and also ask them to abstain from sex in India or to use condoms when they are engaged in sex with FSWs. SHGs also have impacted their social and financial positions and helped to reduce social harassments. The mobility of the LBW have increased and they now negotiate with their husbands to use condoms when they come back. The LBW have now become literate about their sexual and reproductive rights. SHGs have proved to be a blessing in the lives of the LBW of Bangladesh. When a single woman fails to fight, the whole group will fight for her.

## Willingness to Pay for Preventive Health care Services in Tamil Nadu

**K. RAMU AND R. KUMARESEN**

Department of Economics, Annamalai University

The present study has explored the willingness to pay (WTP) for preventive health care services (PHCS) in rural and urban environment of three districts in the state of Tamil Nadu, India during 2009-2011. Since the governments are struggling to mobilise additional financial resources to provide essential health care services to the deprived population in the country, assessing the WTP for utilising the services are realised as very important at this juncture. In realising the importance of augmentation of resources, it has been decided to introduce contingent valuation method (CVM) for WTP. A disproportionate systematic random sampling method has been

adopted for the selection of 720 households. A major portion of the surveyed respondents' gender was male, literacy was high and they belonged to economically active age group. They generally involve themselves in the agricultural activities and avail employment. Their per capita income is very close to the national and state figures. The 96 per cent of the total surveyed respondents are ready to pay for PHCS in a public hospital and the remaining 4 per cent of them are not willing to pay for the same. The range of WTP for PHCS is Rs. 10 - 400; the mean value is Rs. 66 per PHCS and the SD is 49. The majority of the people (93%) prefer to pay of Rs. 10 - 100 per visit. Considering the view of majority of the respondents, nominal user fee for PHCS per visit may be fixed between the ranges of Rs. 10 – 100. It is expected that proposed fixation user fee for PHCS may be welcomed by the users. The estimated R2 value for PHCS is 22 per cent, which indicates that the selected 12 independent variables have low influence on WTP for PHCS. The study reports that the other exogenous factors like intensity of disease, accessibility of services, quality, urgency, need, perception, etc, are the predominant determinants of WTP for PHCS. The present research contends that constitution of district level co-ordination committee for fixing and implementing user fee for PHCS. Introduction of nominal fee (user fee) for PHCS may be fixed for affordable population, free services for BPL population and it would improve the efficiency and equity of the health care services for the marginalised population. Finally, it is of utmost importance for health professionals to follow ethics in their profession.

# Assessing the magnitude, distribution and determinants of Catastrophic Health Expenditure in urban Lucknow, North India

**SAUMYA MISRA, SHALLY AWASTHI, MONICA AGARWAL, VISHWAJEET KUMAR, JAI VIR SINGH**

King George's Medical University and Community Empowerment Lab, Lucknow

INTRODUCTION: To assess the magnitude, distribution, and determinants of catastrophic health expenditures (CHE) of households in urban Lucknow, North India.

METHODS: A cohort of 400 households was selected by 2-step cluster sampling and baseline demographic survey was done followed by two six-monthly health surveys. CHE was defined as health expenditures > 10% of household's capacity to pay, measured by non-subsistence spending.

RESULTS: From December 2011 to June 2012, 157/ 400 (39.25 percent) households reported >1 episodes of illness, with households suffering sickness in the first survey at increased risk for it in the second (Crude Odd's Ratio = 3.33, 95% CI: 2.02- 5.45; p value<0.0001). Mean sickness days without hospitalization were 13.13+36 per household. In 24 (6 percent) households, there was > 1 hospitalization. Health expenditure was entirely met through out of pocket payments (OOP). CHE occurred in 45 (11.25%) households, with statistically significant differences across per capita income quintiles (p=0.036) and 60% falling in the lower two. On logistic regression model, adjusting for per capital income quintile, CHE was associated with hospitalization (Adjusted OR= 100, 95% CI: 25.00 – 333.33; p<0.0001) and > 13 sickness days without hospitalization (Adjusted OR = 4.21, 95% CI: 1.862 – 9.524; p=0.001).

CONCLUSIONS: Since not only hospitalization but also prolonged sickness days without hospitalization was associated with increased risk of CHE, and since almost half the households have sickness, steps should be taken to protect all households through provision of health insurance as currently all health expenses were met through OOP payments.

# Effect of Direct and Indirect Cost of Child Birth Among Poor Households in Selected Village of Varanasi District

**ANJALI GUPTA**

Centre of Social Medicine and Community Health

Jawaharlal Nehru University, New Delhi

Context: Deficiencies of the government funding and domination of private sector in the health sector is the main reason for increasing the out of pocket health expenditure which considerable negative impact on vulnerable group in India.

Though in the area of reproductive health through promotion of institutional delivery, government has adopted a strategy for reducing maternal as well as neo natal mortality rate in the country but still about half of the deliveries have been conducted at the home under the absence of various medical facilities. Cost barrier is the one of the major cause for preferring the home delivery instead of institutional delivery. Not even only the direct costs responsible for low institutional delivery but also indirect costs too accountable for less number of institutional births in the country.

Objective: To study the causes and consequences of high out of pocket expenditure incurred by BPL households for child birth.

Methodology: This a qualitative study under which primary and secondary data are used for data collection. For the secondary data government records, published articles, journals and micro level studies have been used. Primary data has collected through the in-depth interview of those twenty two BPL households where child births have been occurred during last one year with the help of interview schedule. All the 22 interviews that were taken were in-depth, out of which 13 were institutional births at PHC, five home deliveries and 4 private deliveries. These interviews included, respondent's socio-economic background, their living and working conditions, experiences and costs of hospitalization which they bear (doctor's fee, drugs and diagnostic test fees, bed charge etc) as well as other indirect charges during hospitalization such as, loss of income, accommodation, boarding and lodging cost etc. Content analysis is used for data analysis.

Findings: Medical expenditure is a major issue in government hospitals. Though government has been running lot of schemes for poor to availing free of cost health services but still poor have to pay from their pocket. For bear these expenses, they have to borrow money, taking loans, selling their assets and securities due to which poor households suffer a lot. In the study, it has found that unofficial payment is very prevalent in public institutions and these informal payments make the health service unaffordable for the poor households. These direct and indirect costs are the major reason which people turn towards home delivery.

# How much do women spend on health care during pregnancy and why do they exhibit these spending patterns?

## A case study of out of pocket expenditure from urban slums

**GABRIELA WEIGEL**

Georgetown University, Washington DC and

**AARTI NAGARKAR**

School of Health Sciences, University of Pune, Pune

High out of pocket expenditure (OOPE) proves detrimental to the economic and social wellbeing of a family. Therefore several welfare schemes to reduce economic burden of maternal and child health care have been initiated in recent past. This research was conducted in 2013 with the aim to understand where women seek health care during pregnancy and how much they spend on pregnancy and delivery, and how they manage theses finances. This qualitative study was conducted in four of Pune's urban slums with 20 recently-delivered women. These women were interviewed about their health seeking behavior during pregnancy, reason for choosing facilities, the amount of care received, and the amount of OOPE incurred. It was hypothesized that urban women living in Pune's slums incur high amounts of OOPE during pregnancy due to a preference for private care over public facilities. After the interviews, it was found that OOPE on antenatal and delivery care ranged from Rs. 1,410 to Rs. 33,870 with an average of Rs.5,316 on antenatal care and Rs. 6,713 on delivery care. The majority of women said they preferred public care over private, yet despite these preferences, 95% attended both public and private facilities at one point during pregnancy or delivery care. Thus, the preference of care type was less of a contributing factor to OOPE than other factors like proximity and complications that forced women to seek more expensive care. High OOPE was linked to high amounts of antenatal care advised including repeated ultrasounds and high usage of private facilities. These results are limited due to the small sample size, yet still this research offers insight into the decision making process that goes into health-seeking behaviours and provides suggestions as to how to lower OOPE during pregnancy in the future.

# Out of Pocket Spend (OOPS) on HIV/AIDS: Reflections from Dharwad District in Karnataka

**DATTATRAYA R. REVANKAR AND ARUNKUMAR R.KULKARNI**

Centre for Multi-disciplinary Development Research (CMDR), Dharwad, Karnataka

In this paper a modest attempt has been made to estimate the magnitude of HIV / AIDS specific out of pocket expenditure. The paper is based on the primary survey of 350 HIV/AIDS patients in Dharwad District in Karnataka state. The study reveals that the per capita expenditure on HIV/AIDS affected persons was Rs. Rs.8465 in Dharwad district during the year 2009-10. On an average the households, government and external agencies/NGOs spend Rs.6996, Rs.748 and Rs.724 respectively. Thus, the major portion of the total expenditure (i.e. 82.6 %) has been spent by the household from out of pocket (OOP). The study further reveals that HIV/AIDS epidemic has severely affected the economic, social and psychological status of the families.

# Public Healthcare in Rural India: Financing the Scaling-up Effort

**SHREEKANT IYENGAR**

Faculty of Management, CEPT University, Ahmedabad

Healthcare services in India are provided by both public and private healthcare systems. However, a major part of the healthcare expenditure in the country is borne privately by individuals due to higher dependency on the private healthcare system. This not only impacts the poor population, who end up spending large proportions of their income on healthcare, but also the middle income population who tend to fall below poverty line due to high cost of private healthcare services. Therefore, it is relevant to emphasize the importance of providing healthcare services through public financing. This will have implications on the public healthcare system of the country as it would require adequate infrastructure and manpower for effective function. The present paper attempts to estimate the required infrastructure and manpower to scale-up the public health system for selected major states India with focus on rural areas. This is done with considering the Indian Public Health Standards (IPHS) that are set for different types of health facilities under the public health system. The paper estimates state wise gap in infrastructure and manpower projected for the year 2014-15. Moreover, it also estimates the cost of building and upgrading the infrastructure and hiring the manpower and, the financial implications of these costs on the state budgets. The additional expenditure states on healthcare to be made by the states are also estimated. Finally, the paper also attempts to analyze the impact of scaling-up activity and additional expenditure required on the health status of the states. The findings suggest that scaling-up the healthcare services through increased expenditure could result in improved health indicators for the states.

# Health Status and Public Healthcare Financing in Odisha

**L.N.DASH**

Department of Economics, North Orissa University, Baripada

The paper has tried to map out the health status of people and the level of health financing in Odisha. As Odisha is in an emerging state, there is growing demand for health services. Budget provision is made by the Government of Odisha every year. Funds are also pumped in through the centrally-sponsored NRHM project. The Government of Odisha also receives funds from external sources for the implementation of the externally-aided projects. However, these have not proved sufficient to change the health scenario in the state. The inadequate increase in health expenditure in absolute terms has not translated into better health condition of the people. On many health indicators the state has remained as a lagging state. The budget allocation has remained within four percent of the total expenditure. Similarly, health expenditure as a percent of GSDP has also been within one percent. Finally, the paper ends with the suggestion that in order to bring about significant improvement in the health indicators, there is a need to enhance health expenditure in the state.

# Rajiv Gandhi Jeevandayee Aarogya Yojana in Maharashtra: Another 'target' based scheme

**ASHISH SURYAWANSHI**

Azim Premji University, Bangalore

Health financing in the form of insurance schemes has been taken up by various state governments to provide efficient health care services in India, but ironically most of these schemes focuses only on tertiary healthcare services for target groups, neglecting primary out-patient care which contribute significantly in impoverishment of a large mass. Rajiv Gandhi Jeevandayee Aarogya Yojana (RGJAY) of Govt. of Maharashtra for free, quality critical care to BPL and APL is an example. This paper critically examines this scheme to understand aspects like awareness, stakeholder's perspective and their knowledge on entitlements and grievances with respect to RGJAY. The main findings are the beneficiaries are not well informed unless they visit the providers, role of public healthcare facilities is not very significant in creating awareness and scheme is facing challenges at various levels of implementation and lack of knowledge of entitlements has resulted in grievances in most of the cases. RGJAY is also a target based scheme like other state sponsored schemes covering expenses for the identified surgery/therapy packages which may not be an efficient way to tackle the varied healthcare demands. This paper invites attention to the need for inclusion of out-patient care along with secondary and tertiary care, which may help in achieving universal coverage during increasing privatization.

# Strengthening of the Insurance Model of Health Financing in India

## Seeking Some Explanations

**ANKITA MUKHERJEE**

Centre of Social Medicine & Community Health

Jawaharlal Nehru University, New Delhi

Insurance is one form of financing healthcare. It is not the only way of health financing, and there are several debates about whether it the best form of health financing especially public health financing. Despite this there has been a proliferation of social health insurance schemes in the past decade, especially publicly funded schemes (both at the national and state level). This paper tries to argue that political, ideological and contextual factors and not necessarily economic factors have led to the popularity and strengthening of this model over other forms of public health financing models. The paper highlights how the vision about health and healthcare are a crucial determinant of the way the health care systems and consequently healthcare financing and provisioning mechanisms will be organised in a country. It examines different health financing models and shows how insurance especially private insurance is not the most cost effective or equitable means of financing especially in contexts of unregulated private sector. Given the increasing role being provided to the private sector

in social insurance schemes in the country, the paper tries to contextualise this trend by tracing the emergence of neoliberal thinking in healthcare since the eighties. It demonstrates through the study of select policy documents how India's health policy has changed over the years to align itself with increasing neo liberal thinking in healthcare. It concludes that current set of insurance policies in their current form are not able to provide risk pool required to make its functioning effective. It fragments the health system and is directed towards achieving neoliberal vision of health and health care.

## Challenges in RSBY awareness and enrolment: a social exclusion perspective

**GAYATRI GANESH, TANYA SESHADRI, ANIL MH, MANOJ PATIL, MAHESH K, MAYA ELIAS, THRIVENI, S.**

Institute of Public Health, Bengaluru

Rashtriya Swasthya Bima Yojana (RSBY) is a health financing scheme for below the poverty line (BPL) and MNREGA households. This paper examines how social exclusion impedes access to the scheme, identifies vulnerable groups consistently facing exclusion and strategies for a more inclusive and people-centric implementation. We used a mixed approach with a longitudinal baseline survey with 6040 households in four districts of Karnataka, analysed using SPSS version 20, multi-variate analysis and bivariate regression; and 21 qualitative group discussions and 32 interviews with citizens and stakeholders. Our data suggests social exclusion occurs because of administrative deficiencies during awareness raising and enrolment that give existing social exclusions a new platform on which to operate. The drivers of social exclusion are social, political, economic and cultural. The groups consistently excluded are female head of households, SCs, STs, economically poor daily wage labourers, migrants, groups in a social or religious minority and people without strong social and political networks. To lessen exclusion: awareness needs to be targetted at vulnerable groups and be meaningful; implementation needs to be people-centric: year-round enrolment, at village not GP level, at places used in daily life like ration shops; alternatively, doing away with enrolment and tagging the scheme on to existing initiatives like Aadhar, BPL cards and ration cards. Accountability, transparency, grievance redressal mechanisms and involvement of civil societies could help empower excluded groups.

# National Rural Health Mission in Maharashtra: An Evaluation

**TORAL GALA**
Mumbai University, Department of Economics, Mumbai, India

**NANDITA KOTWAL**
Siddharth Law College, Mumbai, India

The objective of the Alma Ata Declaration (1978) 'Health for All by 2000' calls for an individual's access to primary healthcare as his fundamental right, irrespective of his ability to pay. This maxim is recognized by international organizations and countries worldwide. India's healthcare story began only after this declaration, coupled with the added pressure of the Millennium Development Goals (2000), appealed to all the nations to create, improve and implement healthcare policies. A developing nation, India had showed signs of progress in all sectors, and yet, the health indicators reflected stagnancy and extremely poor nutrition and sanitary conditions, mainly due to decline in state expenditure on healthcare and a weak health policy framework. With these discrepancies in view, the National Rural Health Mission, which was deemed by the government as a solution to the health of the rural population in India, was introduced in 2005.The objectives of the NRHM include accessible, affordable and available healthcare facilities through 'architectural corrections' in the health system.

This paper explores the significance and impact of the NRHM in Maharashtra by taking into consideration different parameters such as physical infrastructure, manpower, budget allocation and mortality indicators. It also attempts to draw conclusions based on the evaluation of secondary data from the NRHM state and national website, reports and working papers. Moreover, the paper evaluates the progress of the programme since its implementation in 2005, and assesses the impact of qualitative and quantitative factors on the overall health profile. Through this paper, we intend to reaffirm the need for an intensive and accessible mechanism which aims to provide healthcare 'For All'.

# Role of Accredited Social Health Activists (ASHAs) in the Improvement of Health Status of Villagers under NRHM in Kolhapur District, Maharashtra for 2012-13

**PRATIBHA.B.DESAI AND SUSHANT MAHAJAN**
Department of Sociology, Shivaji University, Kolhapur

Context of Study: India's primary healthcare system is based on the Primary Health Centre (PHC) and these PHCs provide treatment free of cost. It is also found that despite significant improvements made in the past few decades, the public health challenges are not only so huge but are also growing and shifting at an unprecedented rate in India. Therefore the Indian government launched the National Rural Health Mission (NRHM) in 2005 to "address infirmities and problems across primary health care and bring about improvement in the health system and the health status of those who live in the rural areas.

One of the core strategies proposed in this mission was to create a village level social activist, designated as ASHA for every village and she is expected to create awareness on health and its determinants, mobilize the community towards local health planning and increase utilization of the existing health services. During 2008 this scheme is implemented in the all districts of Maharashtra State. There are total 2773 ASHA are working in the Kolhapur district. To provide medical care to villagers their role is very important. Hence present study made an attempt to study the role of ASHAs in the improvement of health status of villagers in Kolhapur.

Objectives: The objectives of present study are to study socio-economic characteristics of ASHAs, to study the health services provided by ASHAs in the selected villages and to study the improvements in the rural health due to ASHA scheme.

Methodology: The study is based on primary and secondary source. Keeping in view the resources available in terms of time, money and the objectives of study, for the present study, out 2773 of 107 ASHAs were selected by using accidental / convenience sampling technique from total four villages of two talukas of Kolhapur district.

Conclusion: Due this scheme rate of institutional deliveries increase with the skillful help of ASHAs, malnutrition decreases and infant mortality also decreases.

# Priority Issues for structuring Urban Health Mission in Maharashtra

**PRAVEEN CHOKHANDRE**

International Institute for Population Sciences, Mumbai

The growth rate of the urban population in India has always remained higher than the growth rate of the rural population. This rapid population growth has caused a host of serious problems, including degradation of environment, development of slums, disparities in living conditions and access to services and increasing vulnerability of the urban population, particularly the urban poor. To cater health needs of urban poor, National Urban Health Mission (NUHM) focuses on the implementation of the healthy city framework to improve the health of the urban poor by facilitating equal access to available health facilities and strengthening the existing capacity of health delivery.  The present study attempts a systematic assessment of critical policy issues concerning health and living conditions in six regions of Maharashtra which is most urbanized State in India. For the present paper, DLHS-3 (2007-08) is been used for the study. UNDP's methodology for computation of composite indices is used in the estimation of household living condition index (HLC), public health coverage index (PHC), and child health status index (CHS).

The results presented in this paper demonstrate that the urban poor in Maharashtra are lag behind the expected levels of achievement. The urban poor of Maharashtra continue to display poor health conditions in terms of child immunization, antenatal care and institutional delivery. Add to this, findings from CNSM survey (2012) suggest that the prevalence of stunting and underweight was on the higher side in Amravati, Aurangabad and

Konkan. Despite the presence of a large number of health care service providers the urban poor are unable to access them. Their health indicators are similar or sometimes worst than those of the rural areas. Paper recommends schemes such as community health insurance can become important tools for improving health outcomes among the urban poor.

## Regional Variations and Social Basis of Private Medical Colleges in India: Special focus on Maharashtra

**ARCHANA DIWATE**

Centre of Social Medicine and Community Health, JNU, New Delhi

In past three decades there is a new trend emerging with the establishment of new private medical colleges. Some states have a significant presence in proportion to public medical colleges. It is well known that almost all private medical colleges have a capitation fee and the fee structure is much higher than the public sector.

Objectives: To study the magnitude, growth and distribution of medical colleges in India. It also understands the regional variations and social basis in the establishment of private medical colleges in India with special focus on Maharashtra state.

Methodology: The study employs mixed methodology qualitative as well as quantitative. In quantitative method, data collected through website of Medical Council of India. To understand the growth and regional variations of medical colleges in India the study relied on the data collected through website of Medical Council of India. At the meso level the study focuses on Maharashtra state because Maharashtra state has number of private medical colleges. To understand the regional variations and social basis of private medical colleges, in-depth interviews were conducted with the different key informants. Key Informants includes professors who are teaching in government and private medical colleges, students who are graduating from private medical colleges and alumni students of private medical colleges, local key informants and academicians. The data was also collected from the websites of each private medical college in Maharashtra as well as done a review of secondary literature.

Results: The data shows that 63% of medical colleges are concentrated in the south and western part of India and this growth has taken place in richer and wealthier states. Among all private medical colleges 73% of medical colleges are in the Southern and Western regions of India. Within Maharashtra state the similar trend is evident with concentration of medical colleges in western Maharashtra region. The caste, class and political background of the promoters of private medical colleges illustrates that it is the dominant caste, namely Marathas, that have a hegemony in promoting private medical colleges. The uneven growth and distribution of medical colleges have implications on increasing regional disparities.

# Occupational Health Hazard among Municipal Workers: A Study of Garbage Collectors in Mumbai

**PRADEEP SALVE**

International Institute for Population Sciences, Mumbai

Introduction- Municipal solid waste management is one of the major environmental problems of Indian megacities. The improper disposal of municipal waste has an adverse impact on all components of the environment and human health. Work of waste collectors involves considerable heavy lifting as well as other manual handling of containers, increasing the risk of musculoskeletal problems. It has been found that work-related problems like respiratory, gastrointestinal and skin problems in waste collections is more compared to the general workforce(Lesley Rushton, 2003; Poulsen et al., 1995; R. Mehrdad, 2008).

Need for the Study-The workers of municipality those who collect the garbage and load it in garbage carrying compactor from different areas are vulnerable to the communicable as well as non-communicable disease. They physically handle the decaying carcasses of animals, household garbage, human and animal excreta, gully material mixed with sewage leaking from nearby drains, infectious and hazardous medical waste and other toxic wastes with their bare hands which make them vulnerable. The proposed study is look into the health risks among garbage collectors. Hence, it is imperative to determine the occupation related health problems and health hazards among the garbage collectors.

Methodology- The study is based on the primary data; the framed question probing occupation related health risk of workers engaged in garbage collection. Appalling census sampling method all 160 workers working in M-East ward has been selected as respondents and five in-depth interviews is conducted with the workers for understanding of the issue.

Findings -The study reveals that the percentage of musculoskeletal complaints during the past 6 month was significantly higher among workers, the most frequently affected body region are lower backache, more than 70 percent of workers stated that they are having problem of backache and almost more than two third of workers are having shoulder pain, this could be due to lifting heavy materials frequently. Almost three fourth of workers reported that they have eye related problem. In respiratory related disease two third of population (67%) has breathlessness problem this is could be due to the fact that they are exposed to irritant gases, fumes and weather changes during their. Out-of-pocket payments for health can cause households to incur catastrophic expenditures, which in turn can make them more vulnerable. Mean expenditure on health is positively associated with the age of worker as the age of worker is increasing the mean expenditure is going up. Although the medical facilities are free of cost for workers they are not willing to the civil hospitals due to the quality of the services provided by the hospitals.

Conclusion and Discussion-Their health is continuously deteriorated after their retirement which leads to premature death of workers. In-depth interviews reveal that workers are more addicted to alcohol consumption due to the condition of continue work in garbage. Going through the interviews some fact has come out that workers are more vulnerable to chronic diseases after their retirement so there should be medical check-up for workers once they retired.

# ‘Debating’ or ‘Devaluing’ Health in Maharashtra: Study of Legislative Assembly Proceedings, 1990-2005

**DAKSHA C. PARMAR**
Centre of Social Medicine and Community Health
Jawaharlal Nehru University, New Delhi

In the last few decades neoliberal policy measures have led to the undermining of the role of state in social sectors, particularly health. At the same time an increasing shift towards market provision and financing in health is emphasized. This structural change in the health sector has negatively impacted the health services development across different states in India. It has led to stagnation in the growth of health infrastructure, poor quality of health services and rising cost of medical care. The present paper attempts to explore and understand the shifts in the health services development through the study of discourse on health in the Legislative Assembly (LA)of Maharashtra for a period of fifteen years from 1990 to 2005 by using the approach of Critical Discourse Analysis(CDA). The study broadly assumes that the contents of legislative discourse is largely shaped and influenced by neoliberal ideology thereby resulting in the shifts in health priorities. A re-reading of the legislative discourse on health through the lens of CDA reveals that most of the tenets of health sector reforms were discussed and debated in the LA of the state. It is clear from the debates in LA that there is tremendous emphasis on reduction in public investments on health, shift towards implementing donor driven policies and move towards increased privatization of health services. Thus, the evidence from the legislative assembly debates shows that there is an adoption of market driven discourses into the language and actions of people’s representatives in the assembly, both among the members of the assembly and also the Ministers of Health.

# Health Care Utilization by Elderly in India: Does Family Matter?

**WILLIAM JOE**
Institute of Economic Growth, Delhi

The instrumental role of family in recognition of health care ‘need’ and promotion of health care utilization remains a neglected aspect in ageing research. This paper, therefore, attempts to unravel the ‘family advantage’ in matters of elderly health and health care utilization in India. Using the Morbidity and Healthcare Survey of India (2004), we begin by examining whether SRH follows a dose-response relationship with socioeconomic status and patterns of living arrangement? Further, we present need-standaradized health care utilization by elderly to discern the relative advantage of living arrangement types. The analysis also unravels the magnitude of horizontal equity in elderly health care utilization in India. The results are indicative of a dose-response relationship between consumption quintiles and self-rated health with richer elderly or those from high income households more likely to report good health status.

Family advantage is revealed as elderly living alone or only with spouse is much likely to be in poor health. Even among the poorer sections, elderly who live with family are in much better health than those who live with non-relations or live alone (with or without spouse). Health care utilization exhibits a clear income gradient with (unstandardised) concentration index value of 0.172 (standard error: 0.008) further confirms of a pro-rich distribution of health care utilization. The need-expected profile indicates that females have greater need for health care. The concentration index (0.122 with std. err. 0.006) for need-standardised utilisation reveals a pro-rich bias with income-related horizontal inequity in health care utilization. This finding contrasts with the experience of countries such as US and Brazil who display pro-poor bias in health care utilization among elderly. Finally, the multivariate analysis confirms the importance of 'spousal co-residence' on health care utilization. It is intriguing to note that the positive role of living with children and other relatives gradually disappears when non-need variables, particular income indicators are introduced in the multivariate framework. This result hence further strengthens the case for universal health care coverage through direct public provision as a pragmatic way forward to enhance elderly well-being.

# Socio-economic Differentials and Functional Limitations among Older Adults in India

**ANSHUL KASTOR AND S.K. MOHANTY**

International Institute for Population Sciences, Mumbai

The presents study examines the socio-economic differentials in functional limitations among older adults in India. Functional limitation refers to the difficultly in performing normal daily role activities. These activities include; bathing, eating, walking, dressing, and getting in/out of bed and toileting. The data from Longitudinal Aging Study in India (LASI) pilot survey 2010 has been used for analysis. Bivariate result shows that every eighth older adult in India have at least one of the functional limitations. After age 60-65, health limits the physical functioning and it deteriorates sharply after reaching 75 years of age. The relationship of functional limitation with education is more or less like U-shaped whereas it increases with higher wealth quintile barring richest. The Christians have higher reporting of functional limitation compared to all other religious groups. There exists strong association between functional limitation, chronic disease and subjective health. Multivariate results support the bivariate analysis. There is strong need for a policy which will address the health care requirements of older adults.

# Aging Labor Force: Boon or Bane

**M. CHITRA**

Department of Econometrics, Madurai Kamaraj University, Madurai

National old age pension schemes provide assistance to destitute persons above 65 years. Nearly 75 percent of all elderly are economically dependent on others, usually their children. Even those with pensions find their economic status lowered after retirement. In Indian societies older persons who are economically unproductive do not have the same authority and prestige that they used to enjoy in extended families where they had greater control over family resources. Old age is a Universal phenomenon and increasing all over the world both in absolute and relative terms. Hence the issue of caring the aging is global one .Is it good to allow the aged to one to contribute their labor force or not? If good in what is way to self and society: if not in what is the way to self and society. The researcher made an attempt to analyses the above research question in rural part of Tamil Nadu where floricultural activity is dominated. The marginal incremental contribution to total scoring was high in case of social (0.422) and the second place goes to the economic variable (0.12). Hence the highest push factors is social variables and the pull factor is economic variables which is coincides with the natural logic of society. The family sizes, the type of family, nature of labor force to do are the social variables influence the aging population ready to contribute their labor force in addition with the economic variables like to settle the wedding expenses and educational expenditure of son/daughter,, daily survival needs and current wage per day are pull factors to participate even in their early and late aging stage. If the health problems of aging is addressed and solved in regular basis in rural means then the rural aging population must be boon to their family and society.

# Gender Discrimination and Health of Women in Selected Districts of Himachal Pradesh

**SHASHI PUNAM**

Sidharath Government College Nadaun, Hamirpur, HP

**PIAR CHAND RYHAL**

Department of Humanities and Social Sciences, NIT, Hamirpur, HP

Health Inequality in Bihar: An Intra-state Study

In India, safety measures like empowerment of women, reservation in Parliament, free education to girl child and a lot of other woman progressive initiative, do not make sense when we look at cases of female foeticide. The census 2011 brought some important facts regarding vanishing number of girls and has made us aware the same. The total sex ratio of India as per 2011 census is 940 females per 1000 males. Although a marginal improvement of six points in the overall female to male sex ratio in India from 933 in 2001 to 940 in 2011 is an encouraging development, the massive decline of 13 points in the child sex ratio from 927 to 914 in the country shows the extensive female foeticide in India. Female Foeticide is violation of right a basic human right and guarantee under the constitution. Social, cultural, financial and psychological reasons are responsible for the prevalence of evil female foeticide in our society.

Unfortunately, it became popular for sex determination, leading to sex selective abortions for those who do not want to be burdened with female child. This paper theoretically analyses the magnitude and increasing trend of the female foeticide in India as well as Himachal Pradesh. The data for this purpose was collected through primary as well as secondary sources. Socio-economic and demographic profile of the respondents is described. It has found that modern medical technology has emerged as a major reason for female foeticide.

# Health Inequality in Bihar: An Intra-state Study

**MANJAREE ANAND**

Department of Economics, Banaras Hindu University, Varanasi

The debate on inclusiveness of the growth process has gathered and attracted attention of everybody recently. It is alleged that fruits of India's outstanding growth of late, has remained concentrated in the hands of a select few. It is widely accepted that a large chunk of population is still deprived of even basic amenities & resources like education, health & nutrition, housing, sanitation, infrastructure etc. Health, the critical component of human capital is not evenly distributed among the different states. South Indian states like Kerala and Tamil Nadu are enjoying better health outcomes as compared with national averages at the same time health situation is pathetic in states like Bihar and Uttar Pradesh.

Objectives: Persistence of health inequality in India has so far been discussed at inter-state level, very few study dealt with intra-state inequality. Bihar, the state where the bulk of the nation's population lives, is the glaring example of nation's failure to provide prime health facilities in a neutral way resulting in health attainment variation of the population. Present paper attempts to measure the extent of health disparity among the different districts of Bihar and looks out for the reason of the same.

Methodology: A detailed analysis of inter-district and inter-region disparity in health status and health infrastructure in the state of Bihar has been done using secondary data from Annual Health Survey (2011) and Statistical Diary of Bihar (2011). Composite indices of health status and health services have been developed using Maher's normalization technique and principal component analysis. Inequality measures like Coefficient of Variations have been used to measure the relevant disparities among the districts of the state and explain the reason thereof.

Conclusion: The work shows low overall health achievement and wide inter-district and inter-region disparity in terms of both health infrastructure and health status in the state. One astonishing fact is existence of very low and insignificant correlation of 0.22 between health infrastructure and health outcome. This reflects that the quality of infrastructure is too poor to leave any impact on outcome and also the presence of other factors in determining health status of Bihar. Therefore, all round development of the state is essential with special emphasis on qualitative health infrastructure.

# Regional Development and Disparity in India: A Comparative Analysis of Gujarat and Jharkhand with special reference to health

**SAZZAD PARWEZ AND NEHA SHIVANI**

Centre for Studies in Economics and Planning

Central University of Gujarat, Gandhinagar

This paper is an attempt to examine the spatial disparities in terms of economic growth and health with special reference to Gujarat and Jharkhand in context of health related indicators such as family planning, child immunization and awareness of deadly diseases AIDS. Empirical evidence suggests that there is a positive relationship between Economic growth and better health of people. However, this rapid economic development has not been accompanied by social development particularly in health sector. Health sector has been accorded very low priority in terms of allocation of resources. Public expenditure on health is less than 1 per cent of GDP in India. It has further witnessed decline during the post liberalization period. The meagre resource allocation to health sector has adversely effected both access and quality of health services. The unequal access to health services is reported across strata, gender and location (i.e. urban and rural areas). It is further strengthened by Human Development Index position of Gujarat which say the same as Gujarat Doing very well in terms of Economic Growth but not in the case of health on the other hand Jharkhand is neither economically developed nor doing well in terms of health. Hence, effort should be directed to create batter infrastructure facilities at the state level to raise the state domestic product and reduce the level of poverty and unemployment of the people concerned. The paper concludes that the government should be more concerned about regional imbalance in human and economic development. Emphasis is on regional growth as per the national priority is likely to address the issue of twin disparities of economic development and health.

# Regional Inequality in Health in India

**ZIBA ASL GHORBANI**

Gokhale Institute of Politics and Economics, Pune

Health equality is an important goal for the society as the poor people have access to limited health care facilities due to low incomes and less facilities also especially in rural area, therefore tends to have higher rates of mortality. The equality of health is mostly measured as inequalities in health outcomes, health services utilization, out-of-pocket expenditures and use of public sector subsidies between the poor and the non-poor. In this study the main objective is to analyze the health disparities in different regions by using data in four periods across India. The data for health indicators in terms of IMR, UFMR and immunization has been collected from different sources of NFHS, SRS and Coverage Evaluation Survey (CES), and data for Per Capita Net State Domestic Product (PCNSDP) has been taken from Reserve Bank of India and female literacy rate from Census and NFHS; for

four time periods: 1992-93, 1997-98, 2005-06 and 2010-11. Since 2005-06, the health status has considerably improved, particularly in terms of IMR, TFR and immunization over the periods of time. By Pearson correlation we showed correlation between PCNSDP, literacy rate and health indicators. The IMR, TFR and UFMR significantly correlated with per capita income at 5 percent confidence interval level. We measured by Gini coefficient and concentration index to show the forms of inequality of health. Concentration index for measuring socio-economic with respect PCNSDP shows that since 1992-93 to 2010-11, the concentration of IMR and UFMR among poorer states has declined, but it shows that the higher mortality rates are still among the poorer states. Concentration index with respect to the female literacy rate shows a relevant indicator to improve the health status. As per the measure of Gini coefficient, the health inequalities have more or less decline over two decades apart from slight increase since 2005. Also, however, the inequalities of health are mainly concentrated towards the poorer states. In terms of ranking based on female literacy, the states with higher female literacy enjoy more healthy life and the higher mortality rates are among the states that are less literate.

# Health Service Inequities
# Is really a challenge to achieve health related MDGs in India

**A. K. RAVISHANKAR**

Department of Population Studies, Annamalai University

While socio-economic factors are important determinants of health outcomes, health services play an important role in averting deaths by providing both preventive and curative services. Therefore, it can be argued that differences in availability, accessibility, and quality of health services are an important determinant of variations in health outcomes. However, most reports and evaluation studies point to the lack of equipment, poor or absence of repairs, improper functioning, or lack of complementary facilities such as 24-hour running water, electricity back-ups, and so on. But conditions being what they are, unreliable electricity and water supplies also take their toll on the performance of these centers.

Under this backdrop this paper made an attempt to assess the disparities of critical inputs at PHC level at Bihar, Maharashtra and Tamilnadu states, with the specific objectives of understand the functioning of various health centers in the study States, to examine the availability of basic infrastructures in the study area, to study the staffs positions and availability of their quarters, to investigate the status of training programme in each sampled PHCs, to explore the supply of essential drugs, kits and lab equipments and to understand the disposal method of bio-medical wastes.

Data are drawn from District Level Household facility Survey -III (2007-08) and Rural Health Statistics (2012). It is proposed to select three states for this analysis viz Bihar, Maharashtra and Tamilnadu. In DLHS-III, totally 1777 PHCs (Maharashtra 830, Tamilnadu 423 and Bihar 524) are considered for this analysis.

Over the period of seven years (2005-07), 13 percent of increases in the number of PHCs at Bihar state from 1648 to 1863. A marginal increase is witnessed in the number of PHCs as well in the number of CHCs at Maharashtra state. Meanwhile a substantial increase is noticed among CHCs from 35 to 256 in Tamilnadu which is 631percent. More than three-fourth of the PHCs in Maharashtra state functioning around the clock, and this proportion is

around 65 percent at Bihar. But in Tamilnadu state just 50 percent of the PHCs are providing to 24 hrs services to the people. As on March, 2012 the overall shortfall in the allopathic Doctor is 298 doctors at Bihar, on the other hand both the Maharashtra and Tamilnadu have surplus number doctors at PHCs. Only 28 percent of PHCs in Bihar and 31 percent of PHCs in Maharashtra state have at least one lady medical officer, on contrast, more than three-fifth of the PHCs in Tamilnadu have at least one lady Medical Officer (62.4 percent). Of the 845 PHCs in Bihar, only 54 percent of the PHCs conducted delivery during the last three months, on the other hand, nearly all the PHCs in the Tamilnadu state conducted delivery during the last three months. Overwhelming majority of the PHCs in Tamil Nadu has at least 60 percent of essential drugs (97.9 percent) and cold storage systems (94.8 percent). On contrast, in Bihar state fifty seven percent of the PHCs have at least 60 percent of essential drugs and 59.2 percent have cold storage systems.

India's fight to lower maternal and child mortality rates is failing due to growing social inequalities and shortages in primary healthcare facilities. It can be concluded from the above analysis that these parameters of availability of infrastructure, staffs, equipments, training and supplies have an impact on utilization levels and health outcomes in these States.

**IHEPA**
Secretariat:
Centre for Multidisciplinary Development Research
RS No. 9A-2, Dr. Ambedkar Nagar, Nr. Yalakki Shettar Colony
Lakmanahalli, Dharwad – 580004, Karnataka
Phone: 0836 2460453   Fax: 0836 2460464
Web: www.ihepa.in

**Gokhale Institute of Politics and Economics**
BMCC Road, Deccan Gymkhana, Pune – 411004
Web: www.gipe.ac.in
Phone: 020-25650287/25679940/25654288/25661367
FAX: +91-20-25652579

**Azim Premji University**
Pixel Park, B Block, PES Institute of Technology Campus
Electronic City, Hosur Road (Beside NICE Road)
Bangalore - 560 100. India.
Phone: 66144900/01/02
Web: www.azimpremjiuniversity.edu.in