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Better Health Access: The Rough Road Ahead

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LIST OF ABSTRACTS

Health Care Insurance for the Poor: Protection Against Catastrophic Expenditure or Protection of the Private Sector?

D NARAYANA
Director, Gulati Institute of Finance and Taxation, Thiruvananthapuram

Till recently India has been a country with low protection against catastrophic health care spending. The new century, however, saw India making some valiant efforts to cover the poorer segments of the population by initiating health insurance schemes. But the coverage was poor as few among the lower segments of the population joined the schemes. This began to change with Yeshaswini in Karnataka, Arogyasri in Andhra Pradesh and Karnataka and Rashtriya Swasthya Bima Yojana all over India during the last five years. However, that is only the story from the demand side. The supply side story is different which would explain the emergence of Arogyasri in Andhra Pradesh and Karnataka, Yeshaswini in Karnataka and Rashtriya Swasthya Bima Yojana all over India. It would also throw light on the cashless system to cover tertiary and secondary care and empanelment of largely private health care facilities. The supply side story looks more like government fund flowing to the private health care sector to protect it. The story is woven by drawing data from the scheme sites and elsewhere.

Measuring Health of Elderly in India

K.S.JAMES
Professor, ISEC, Bangalore

The paper brings out health status of elderly based on a large survey conducted across seven states in India in the year 2011. Several measures have been used to assess the health status more broadly. These measures also provide an opportunity to compare the health of Indian elderly across countries of the world. The measures include self rated health, functionality, mental health and cognitive ability which enables us to understand not only the physical aspects of health but more importantly the subjective well being as well. The analysis on self-rated health shows that around 55 per cent of the elderly rating their health as poor or fair on a five point scale. Thus the self rated health appears to be lower among elderly as compared to overall population and in comparison with elderly population in developed countries revealed by other studies. Self rated health has also close connection with mental and physical health of the elderly. The mental health status measured through GHQ and SUBI also revealed that nearly half of the elderly require further health assistance for understanding their mental health status which poses important challenges for the healthcare system in the country in the coming decades. Both self-rated health and mental health have strong socio-economic gradient. The functionality was measured in the survey though ADL, IADL as well as loco motor disability. The study shows that over five per cent of the elderly in the country have serious functionality issues with regard to basic functions as observed in the ADL functions necessitating care and support. Another important measure elderly well being is the cognitive ability which measures not only health status but also provides clues on their economic productivity. The cognitive ability measured in terms of number of immediately recalled words reveals that performance of Indian elderly is on part with other transitional countries. Thus, with the rapid changes in the age structure of the population, there will be potential to increase the economic productivity in the country utilizing the elderly workforce. The cognitive abilities are also directly linked to socio-economic background of the elderly indicating that the education and the upbringing in the past has direct link with the potential to contribute in future. Overall, the study brings out several measures which can be used to capture health status more efficiently in any population groups than the mortality or morbidity measures used commonly.

Trends in the Nutritional Status of the Rural Communities - An Overview

DR. G.N.V. BRAHMAM
Scientist – 'F' (Retd.), N.I.N., I.C.M.R., Hyderabad – 500 007

Undernutrition continues to be a major public health problem in the developing world, including India, the most vulnerable groups being women and young children, contributing significantly to very high morbidities and mortalities. During the past decades, though the severe clinical forms of undernutrition such as kwashiorkor, marasmus, keratomalacia have become rare, the prevalence of sub-clinical forms of undernutrition continues to be very high, despite significant improvement in total food production, dairy development and industrial growth. Though poverty is the major underlying cause of undernutrition, factors such as maternal undernutrition, faulty infant and young child feeding practices, lack of personal hygiene and environmental sanitation, coupled with recurrent infections and infestations, and a host of socio-economic and demographic factors largely contribute to very high prevalence of undernutrition in the communities.

The Major nutritional problems of public health significance in the country are, protein energy malnutrition (PEM), vitamin A deficiency (VAD), iron deficiency anaemia (IDA), and iodine deficiency disorders (IDD). Preschool children, adolescent girls, women of reproductive age group, elderly, those belonging to socio-economically backward groups such as scheduled caste and schedule tribe communities, communities in chronically drought affected rural areas are nutritionally the most venerable segments of the populations.

CURRENT STATUS

Mortality rates such as IMR, <5YMR, MMR are known to reflect overall wellbeing of the communities. As per SRS 2010 the IMR in India is 47 per thousand live births, <5YMR is 59 per thousand live births, and the Maternal Mortality Ratio (2007-09; SRS 2011) is 212 per 100,000 live births. With in the country, a wide variation exists between States, with the mortality rates being very low in the State of Kerala to very high figures in the States of Uttar Pradesh, Bihar, Madhya Pradesh etc.

According to NFHS 3, the IYCF practices in India, especially in the rural areas remains sub-optimal with low proportion (23%) of women initiating breast feeding with an hour of delivery, exclusive breast feeding up to 6 months (46%) and initiation of complementary foods during 6-9 months (56%).

The National Nutrition Monitoring Bureau operating in 10 States namely, Andhra Pradesh, Gujarat, Karnataka, Kerala, Tamil Nadu, Madhya Pradesh, Mahrashtra, Orissa, Uttar Pradesh and West Bengal, collects data on food & nutrient intakes of individuals and their nutritional status in terms of, anthropometry, clinical examination and biochemical investigations. The survey carried out during 2004-06 revealed that the average daily consumption of staple foods such as cereals among adults was satisfactory. However, the intakes tended to decline with decrease in age, with the extent of inadequacy being highest among 1-6 year children. The intake of coarse grains such as millets in general tended to decrease over the period except in the state of Gujarat, where the consumption of bajra increased over the period.

The average consumption of protective foods like pulses, green leafy vegetables and milk & milk products were grossly inadequate in all the age groups. The extent of inadequacy was relatively more among young children as compared to adults. Extent of deficit in the energy intakes (% of RDA) ranged from a low of about 10-20% in adults to a high of about 55% in young children. Dietary inadequacy of micronutrients, particularly with respect to vitamin A, riboflavin and iron, was very high. About 70-80% of young children were consuming micronutrients such as vitamin A, iron and Riboflavin in amounts less than 70 % of RDI.

Study of intra-family distribution of dietary energy revealed that in about 23% of the households, the adult male, female and pre-school child were having adequate (≥70% of RDA) energy. In only about 8% of the HHs, the energy intakes of the adult male, female and pre-school child were inadequate (intakes <70% of RDA), suggestive of lack of household food security. However, in a half (52%) of the HHs while both adult men and women were meeting the energy requirements, the pre-school child was not meeting the energy requirements, indicating poor child feeding practices.

The overall prevalence of underweight (SD classification using WHO child Growth standards) among <5 year children was about 40%, stunting was 45% (suggestive of long duration undernutrition), while that of wasting 20% (suggestive of short duration undernutrition). The prevalence of underweight (compared with NCHS reference values) school age children and adolescents was about 40%, while that of stunting tended to increase with age from about 30% among 6-9 year children, through 34% in 10-12 year age group to about 37% in 13-17 year adolescents. The prevalence of undernutrition was significantly higher among boys compared with girls. About third of the adults (33% men & 36% women) were having chronic energy deficiency (CED) as measured by body mass index (BMI<18.5), while about 11% of females and 8% males were having overweight/obesity.

Prevalence of severe forms of PEM such as Kwashiorkor among preschool children was conspicuously absent, while that of marasmus was about 0.2%. The micronutrient deficiency survey carried out during 2002-03 revealed that the overall prevalence of Bitot spots among 1-5 year children was about 0.8%. The prevalence of Bitot spots was >0.5%, a cut-off level recommended by WHO to indicate public health significance, in the States of Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, Madhya Pradesh, and West Bengal. About 58% of the children examined reportedly received at least one dose of massive vitamin A during the previous one year. However, only 25% had received stipulated two doses.

The overall prevalence of total goitre among 6 to 11 year children was about 4%, which is below the cut-off level to indicate endemicity of IDD. However, the proportion was higher than the WHO criterion of >5% in the States of Maharashtra (12.2%) and West Bengal (9%). Spot test of salt samples revealed that, in general, about 42% of the HHs were using non-iodized salt, while in 31% of HHs, the iodine content of the salt was at the recommended level of ≥15 ppm. In about 26% of the HHs, the iodine content was unsatisfactory (7 ppm).

The mean haemoglobin level among different age/sex/physiological groups ranged from about 9.9 g/dl among pregnant women to about 11.1 g/dl in adolescent girls. In the State of Kerala, the mean haemoglobin levels among all the physiological groups were relatively higher as compared to their counterparts in other States. The overall prevalence of anemia ranged from 70-80% in different physiological groups. However, the prevalence of moderate to severe anaemia was observed to be maximum in pregnant women (50%), followed by preschool children (44%), lactating Women (34%), and adolescents (23%).

Prevalence of underweight among 1-5 yr children was higher among Scheduled Tribe communities and Scheduled Tribes, compared to other communities. Similarly, the prevalence of underweight was relatively higher among children from the households living in Kutcha houses), those with monthly PCI of < 300 Rs., and in the households where adult female was illiterate (65%).

Data collected at different points of time between 1975-79 and 2004-06 revealed that the average daily consumption of cereals remained essentially similar, while that of pulses, milk & milk products and fats & oils have declined by about 10-20% of RDI. The proportion of millets as staple has come down from about 26% in 1975-79 to about 13% in 2006. The consumption of protective foods such as pulses, GLV, Milk & Milk products etc, continued to be grossly inadequate. As per NFHS 3, among <5 year children, there was a decline in the extent of underweight (43 to 40%) and stunting (51 to 45%) while that of wasting increased from 20 to 23% between 1998 and 2006. The prevalence of chronic Energy Deficiency (CED) (Body Mass Index <18.5) declined from about 56 to 33% in males and 52 to 36% in females between 1975 and 2006. There was reduction in the prevalence of nutritional deficiency signs such as marasmus (1.3 to 0.1%), angular stomatitis (6 to 1%) and Bitot spots (1.8 to 0.6%) over the period 1975 and 2006.

There is an urgent need to improve and strengthen implementation of existing short term measures such as supplementary nutrition programmes, immunization and health cares services, medium term measures such as food fortification in terms of quality and coverage. Implementation of Long term measures mentioned below will go a long way in overall improvement and sustenance of health and nutritional status of the communities:

- Development & implementation of State specific Nutrition Policies and Programmes,
- Strengthening of IEC activities, especially regarding infant & child feeding practices, nutrition during adolescence, pregnancy and Lactation,
- Bio-fortification of foods,
- Dietary diversification, promotion of home gardening, through Krishi Vigyan Kendra (KVK),
- Improvement in literacy status,
- Environmental sanitation and personal Hygiene including safe drinking water,
- Programmes for Economic development, especially at grass root level, through income generating activities, and last but not the least,
- Population control.

Health Nutrition Education and Communication for School Children Policies and Programs

SHUBHADA KANANI
Professor, Azim Premji University, Bangalore.

Good health and nutrition are essential pre-requisites for a child to learn and benefit optimally from education. Unfortunately in India, growth retardation , anemia and vitamin-mineral deficiencies (iodine, zinc, vitamin A) affect 50-70% school age children and teens in school, and school absenteeism due to morbidity is common. Contributory etiological factors include grossly inadequate food and nutrient intakes (<50% of recommended), recurring ailments like fever, parasitic infections and school-household demands (especially for girls). An emerging and rapidly growing problem of dual burden of malnutrition (co-existing under-nutrition and overweight-obesity) is already creating serious challenges among children of all ages in both rural and urban areas. To address such multiple health and nutrition challenges, a promising intervention is health-nutrition education and communication (HNEC).

A Favorable Policy Framework

in India exists to support HNEC initiatives within comprehensive programs; such as the Right of Children to Free and Compulsory Education Act 2010, National Policy on Education 1986 (modified 1992, 2005),

National Nutrition Policy 1993, National Health Policy 2002, and draft policy for Early Childhood Care & Education (ECCE) 2012. There are several programs in our country in which HNEC can be effectively integrated; such as the Sarva Shiksha Abhiyaan (SSA), National Programme for Education of Girls at Elementray Level (NPEGEL) which is a part of SSA, the Rashtriya Madhyamik Shiksha Abhiyaan (RMSA), Nutrition Support for Primary Education guidelines for school meals (NSPE 2006), Adolescent Anemia Control Program for Secondary School Girls and others.

Well designed and implemented HNEC programs (where planning-implementation-evaluation components explicitly have a behavior change focus) can help improve dietary quality- quantity and health-hygiene care practices of school children, within available resources. Additionally, effective HNEC helps increase the utilization of available health, nutrition and education services for children. The sad reality is that when health and nutrition care of school children is not a priority at national or state level, it is not surprising that HNEC is also neglected in schools and school- to- community settings.

This paper first explains briefly the background scenario of the poor health and nutrition profile of school children and the gaps in knowledge-practices which need to be addressed. HNEC from a conceptual and programmatic perspective for school settings is explained; with examples of how communication theory has contributed to program development. Some lessons learnt from our recent research are highlighted. For the future, specific components of various policies and programs, where health-nutrition and education are integrated and where behavior change communication can find a place, are suggested. Small beginnings have been made, and there is hope.

Reproductive and Sexual Health of Adolescents through the School System - Policies and Programs

RENU KHANNA
SAHAJ, Vadodara

The paper begins by examining the demographics of adolescents and young people in India. Census 2011 shows that 70% of India's population (550 million) is below the age of 35 years. Adolescent population (10-19 years) is 20% (243 million), (UNICEF State of World's Children 2012). Early childbearing continues to prevail as a social phenomenon. One in six women age 15-19 in India, have begun childbearing. NFHS 3 also shows that thirty percent of women age 25-49 gave birth before age 18 and 53 percent gave birth by age 20. Young women who become pregnant and have births experience a number of health, social, economic, and emotional problems. Girls under 18 are 2-5 times more likely to die during pregnancy or childbirth. Up to half of all maternal deaths among adolescents aged 15-19, in India, are attributed to unsafe abortion. Adolescents are more exposed to the danger of unsafe abortion than older women because of their relatively greater lack of information about and access to health services, and higher risk of unplanned pregnancy, particularly among married adolescents. District Level Household Survey 3 (DLHS 3) shows that unmarried girls have several information needs which are not fulfilled. All of the above establishes that it is imperative that adolescent reproductive and sexual health issues be addressed urgently.

The next section uses a Rights Framework to analyse how policies and programmes have treated Adolescent Reproductive and Sexual Health through the school system. A sample of policies and programmes are examined – the National Population Policy, various versions and drafts of the Youth Policy, the 11th Five Year Plan and recommendations for the 12th Five Year Plan, the Reproductive and Child Health Programme (2), the School Health Programme, the National Curriculum Framework 2005, the Adolescent Education Programme 2005. Programmes initiated by UNFPA and CEDPA are also described briefly.

Based on an emerging critique - that policies and programmes have tended to look at adolescents only as future reproducers – the final section offers some guiding principles and recommendations for Adolescent Reproductive and Sexual Health programmes through the school system. The guiding principles are: the curricula should be transacted in a non judgemental and non prescriptive way, should influence the ethos of the entire school and not be stand alone, should empower young people and have a transformatory potential for promoting social justice and equity. Some recommendations are: adolescent programmes should be age and developmental stage specific, should be designed with participation of the young people and based on their concerns and issues, teachers and those who transact this education should be carefully selected, trained and supported through the implementation, it is very important to orient and involve parents and administrators and other gatekeepers. The curricula should be participatory, activity based and based on the students' real life situations.

Malnutrition among Children of Migrant Labor: A Story of Two Schools

SHREELATA RAO SESHADRI AND RAJVEER SANGHA
Azim Premji University, Bangalore

The relationship between a child's nutritional status and intellectual development has been well established (Wolfe, 1985). Recognizing the importance of nutrition, schemes like Integrated Child Development Services (ICDS) and Mid-Day Meal Scheme (MDMS) have been launched on a national scale. A considerable amount of scholarship is available on the efficacy of these programs as well (Khera, 2006; Drèze, 2004). Less explored are the challenges faced in implementing and assessing impact of such interventions vis-à-vis the migrant labor children. The meteoric rise of urbanization in India has meant that construction industry has seen an unprecedented boom. Most migrant workers are engaged in semi-skilled jobs in this industry. The nature of the jobs is such that the workers are constantly in flux, moving on from one construction site to another. This severely hinders any attempt to monitor their nutritional status and administer appropriate interventions.

In this paper, we present a nutrition study of migrant-labor children in two schools where students are provided with two meals a day. We provide a brief overview of the methodology used and then present our findings. Our study has found serious prevalence of malnutrition among the students despite the provision of food and a healthy school environment. Our contention is that nutrition is a matter of more than just two meals a day and that any intervention proposed should be carefully assessed and monitoring mechanisms put in place to ensure a positive impact on the children's health. We hope that the insights from this study will promote further research into the area of migrant health, especially children's well-being. It also hoped that the methods of analysis used in this study will provide a framework for future research in the area of malnutrition. Finally, we recommend that the existing legislations on providing day-care and school for migrant labor children be strengthened.

Health Inputs, Health Outcomes and Public Health Expenditure: Evidence from the BRICS Countries

LALITAGAURI KULKARNI
Assistant Professor
Gokhale Institute of Politics and Economics, Pune

The Governments in developed countries with better health indicators have been increasing public health expenditure, but the role of public expenditure in health care provision has been constantly debated .This study aims at examining the differences in the health care systems of emerging economies of BRICS based on the panel data fetched from the World Health Organization and World Bank Databases. It estimates the health production function based on Grossman's theoretical framework. Despite of its limitations, the estimation of health production function can help indicate the relative significance of these factors. This may help policy makers to focus on the most effective variables given the fiscal constraints. The study is based on the analysis from the panel data of the five BRICS nations, Brazil, India, China, Russian Federation and South Africa. The analysis is based on the panel data regression with fixed effects model.

The results show a positive relation between health outcome and the GDP Per capita, adult literacy rate, and Out of Pocket expenditure. The environmental pollution represented by CO2 emissions per capita metric ton and Female workforce participation rate shows a negative relation with health outcomes. The age dependency ratio also shows a positive elasticity with IMR confirming the negative relation between age dependency relation and health production. The Importantly public health expenditure is showing a positive elasticity with IMR. This implies that higher public expenditure indicates higher IMR or lower health outcomes.

The efficiency of public expenditure for financing quasi-public goods like education or health is debatable .The evidence from the study of emerging BRICS countries in the present study supports the fact that an increase in the size of public health expenditure alone cannot assure increased health outcome, unless the quality of delivery and finance system is significantly improved.

Multidimensional poverty and longevity in India

MANISHA DUBEY, S. K. MOHANTY
Research Scholar and Associate Professor
IIPS, Govandi Station Road, Deonar, Mumbai-400088

This study examines the inequalities in longevity (life expectancy at birth) by multidimensional poverty in India and states. In this paper multidimensional poverty and corresponding life expectancy has been calculated using NFHS-1 (1992-93) and NFHS-3 (2005-06) data. The Brass method (Palloni-Heligman version of Brass method) which is based on average children ever born and children surviving is used to generate life expectancy at birth for India and major states. Results show that 8% households were below poverty line in 1992-93 which reduced to 4% in 2005-06 with the corresponding life expectancy of 60 and 63 years respectively. Relative improvement in life expectancy during 1992-2006 is lowest among the persons belonging to the multidimensional poor household. Implying that highest achievement in population health, life expectancy, could be achieved through the improvement in all the three dimensions health, education and economic condition of the poorest section of the society.

Regional Morbidity pattern in India: an analysis based on NSS 60th round (2004)

UTTAMACHARYA AND SURYAKANT YADAV
PhD Student, IIPS, Mumbai
Economist, Indicus Analytics Pvt. Ltd, New Delhi

CONTEXT

A comprehensive picture of morbidity situation prevailing in the country, differentials in the pattern of morbidity in different subgroups of the population and also the variations in it across the geographical regions is essential for health planning and interventions. To assess and address the public health interventions, understanding the epidemiology of diseases and the pattern are important pre-requisites.

In India a lot of socio-economic and regional differences in disease profile have been observed by several studies including disparities in health seeking behavior and access to the health care facilities. Very few studies have been done on the level of reported morbidity from the large scale survey data which have important information on various aspects of morbidity, problems of aged and heath care. Studies done using this type of data have not attempted to address the regional variations in the morbidity and healthcare seeking behavior across the country. So understanding the regional variations in the morbidity prevalence and health seeking behavior in the country is essential and still remains a least studied area.

AIMS

The aim of this paper is to explore regional disparities in the prevalence of reported morbidity and levels of hospitalization in India. This paper also investigates the diseases profile in terms of 10 most prevailing diseases across the regions of India.

Data & Methods: the data for present study comes from the 60th round (Schedule 25.0) of National Sample Survey, 2004.

The bivariate analysis has been used to examine the level of morbidity by selected socio-demographic and economic characteristics. Binary logistic regression technique have been used as a multivariate technique to understand the variations and odds of reporting ill and getting hospitalized with respect to the reference category for each background variable during the reference period.

RESULTS

The results indicate that there are regional variations in the prevalence of morbidity and hospitalization. Keeping in view the findings of the study, it can be said that age is the most important factor in determining the level of morbidity and hospitalization across all the regions of the country. The results confirm J-shape relationship between morbidity and age. The study also indicates different diseases profile among different age-groups. In the younger population infectious, parasitic and other short term diseases are more prevalent while in the older population chronic diseases and disabilities are more common.

In case of hospitalization, sex differentials are indicated while there are no such differentials in the level of morbidity, this clearly indicates gender discrimination in availing healthcare. The level of hospitalization increases with age in all the regions. Clearly, except East and North-East majority of the population is availing private health facilities more than the public health facilities which indicate a strong preference for private health facilities to meet the healthcare needs in the country.

Healthcare Performance of Gujarat: Outcomes, Outputs and Inputs

SHREEKANT IYENGAR
Assistant Professor of Economics, CEPT University, Ahmedabad

RAVINDRA H. DHOLAKIA
Professor of Economics, Indian Institute of Management, Ahmedabad

Health performance of Gujarat viewed in terms of the Human Development Index (HDI) portrays it as a medium performer in the country. However, the index of health component for Gujarat is found to be positively contributing to the HDI ranking of the state. It is, therefore, crucial to review the status of health performance of Gujarat among the other states for improving its relative standing in human development. In this context the present paper attempts to identify the gaps in performance of the health related outcome, input and output indicators to the best performers in each indicator. These gaps show the distance that Gujarat has to cover to reach the best performance. Moreover, the paper also reviews the trends in health performance of Gujarat over time. Finally, an attempt is made to measure the efficiency of converting the health inputs in to outputs and outcomes, and health outputs into outcomes. The results of the performance gap analysis indicate that the outcome indicators have improved in the absolute sense but have high performance gaps except the maternal mortality rate (MMR). Majority of the output and input indicators, however, show poor absolute performance and high performance gaps that have been expanding over time. The analysis of efficiency of health indicators in Gujarat suggests that the state has become inefficient in conversion of outputs into outcomes and Inputs to outcomes over time. It is only input to output conversion where the state has marginally improved. Improving the health status of Gujarat requires targeted efforts in specific areas such as controlling neo-natal deaths, improving coverage of children under immunization and address malnourishment. Additionally, building adequate health infrastructure and employing manpower are also relevant.

Changes in morbidity pattern in Kerala: Issues of policy concern

M. BENSON THOMAS
Doctoral Scholar, PRC, ISEC, Bangalore-560072

K. S. JAMES
Professor, PRC, ISEC, Bangalore-560072

High Life Expectancies (LE) resulting from low mortality rates are often interpreted to indicate high health status for Kerala. However, such understanding becomes inadequate when morbidity in the state is considered. So far, the available studies discuss the health status by analyzing either the mortality rates or morbidity rates. But they cannot indicate the expected healthy life years in Kerala. This study is an attempt to analyze the health status in Kerala by taking a combined index of mortality and morbidity, namely Health Adjusted Life Expectancy (HALE). We followed the methodology forwarded by Daniel Sullivan (1971), generally called as Sullivan's method. The study used mortality data given by Sample Registration System and the rate of morbidity/disability (estimated from National Sample Survey (NSS)) data in different time periods. The study classified the morbidity/disability into three levels. In estimating the morbidity rates, the study takes into consideration not only the rate of ailment, but also two hitherto ignored categories; 'restricted activity' and 'confined to bed'. Data on both of these are available through the NSS survey. HALE was estimated at major age levels like, at birth (age at 0), young adult (age at15), old adult (age at 40), older (age at 60) and oldest (age at 80) ages for male and females, for both rural and urban areas. The study found that changes in LE and HALE are moving in opposite directions. This trend indicates that the actual health status in Kerala may actually be declining. Such worsening was noticeably higher at the old adult and old age population. This is was visible for all the three morbidity/disability level, which denotes a 'morbidity expansion' in Kerala. Both rural and urban population has similar paradoxical movements in LE and HALE. But interestingly, though the urbanites had lower life expectancy in 2004, they had better HALE than the rural people in the same year. An analysis of diseases that contributed to the loss of HALE shows the major role of chronic/degenerative diseases in the state. Healthy life lost due to these diseases increased towards the oldest ages. The exploration of health status using HALE suggests that the state has to come out with policies which focus on the reduction of morbidity level along with the incremental advances in the life expectancy in the state.

Health Risk from Tobacco and Tobacco Products in Tamil Nadu

M.CHITRA
Assistant professor, Department of Econometrics
Madurai Kamaraj University, Madurai – 625021

Tobacco is responsible for cancer of various of body like mouth, threat, lungs, stomach, kidney, bladder etc., there is 'one' Tobacco related death every 8 seconds. Tobacco leads to heart and blood vessel diseases, heart stroke (Brain attack), and Peripheral vascular disease (gangrene of legs). These kind of diseases is due to the consumption of demerit good tobacco and Tobacco products. This tobacco and Tobacco products in manufactured and consumed over the period. The researcher intended to bring out the level of health risk by assuming value of domestic consumption as health risk.

The level of health risk is not an exact measure but an approximate measure for to make the society to be alert in their consumption, and the governments can tight their policy to curb the consumption of Tobacco.

Opportunity Cost of Illness and Occupation Classes: A Case Study of Balangir District in Odisha

SUSANTA NAG
Research Scholar, Department of Economics
University of Hyderabad, Hyderabad-500046. susanta.hcu@gmail.com

PHANINDRA GOYARI
Assistant Professor, Department of Economics
University of Hyderabad, Hyderabad-500046. phanin12@yahoo.com

Illness has an adverse impact on the concerned members and the household as a whole. During the period of illness of family members, the households not only need extra budget allocations to health care but also have to incur the opportunity cost of this extra money and opportunity cost of work loss. Many of the existing studies calculated the cost of illness without paying any attention to the occupations of patients and the care

takers or accompanying persons. However, occupations of the patients play a significant role in estimating the cost of illness in terms of wage/income losses. In this connection, the present study attempts to (i) estimate the opportunity cost of illness, both direct and indirect, for different occupational classes of households and (ii) look into the consequences of the opportunity cost of illness of different occupational classes of the households. The analysis is based on the primary survey data collected from both rural and urban areas of Balangir district in Odisha. The study classified the households into five broad occupational classes based on their annual income. The employment status of the economically active persons (patients and accompanying persons) has been taken into consideration while calculating the opportunity cost of illness.

The main findings of the study are: (i) Due to health problems or illness, the work and earning losses are the highest for the labour class households, both for the patients as well as accompanying persons among the entire occupational classes. (ii) The direct cost burden of illness is greater than that of indirect cost burden for entire occupational classes, both in rural and urban areas. (iii) The indirect cost burden of patients is more as compared to the accompanying persons for entire occupational classes in the total sample. (iv) Rural households incurred a greater average cost burden of illness compared to their urban counterparts (v) Higher proportion of rural households were depending on loan or borrowing during the illness or health problems. In order to protect the poorer households like daily wage earners, farmers etc. the government should increase the investment in health sector mainly in health infrastructural facilities particularly in rural and remote areas.

Health care at Primary Level: An Intervention by ASHA

NIDA SIDDIQUI
Research scholar, Department of Sociology and Social Work, A.M.U ,Aligarh

Millions of people in developing countries are trapped in poverty, malnutrition, hunger and disease, although there are regional variations in living conditions but the most vulnerable among them are the rural section of the society who have very limited access to resources. The resources are generally short, the WHO (World Health Organization) has identified a global deficit of nearly 4.3 million health workers. The use of Para-professional health workers has been implemented in several countries to close the health worker gap. While community health workers cannot replace a weak health system, they can perform valuable tasks such as case management for common illnesses, promotion of health behavior, immunization, and community.

In India the latest band of community based functionaries, named Accredited Social Health Activist (ASHA) is proposed under NRHM (National Rural Health Mission) who serve the population of 1000 in hilly areas and 500 in desert terrain in rural areas. ASHA is the first port of call for any health related demands of deprived sections of the population, especially women, children, old aged, sick and disabled people. She is the link between the community and the health care provider. The focus of the present paper is to find out the impact of ASHA on maternal as well as child health in Aligarh district of Uttar Pradesh.

Gender Inequality in the Provisioning of Health Care and empowerment

ARUN K.SEN GUPTA
Formerly of Indian Statistical Institute, Kolkata &
Ushagram Trust, Birnagar and Indian Input Output Research Association, Pune

Provisioning of adequate health care to all perhaps is very important for ensuring attaining a minimum good quality of life for all people, at the same time empowerment through providing opportunity of education, right to express views and employment are also equally necessary for good living and sustaining the pace of human development process. Again, it is not simply the totality or average is important, the distribution is a matter of serious concern also . Inequity in various forms in health care provision and empowerment in India seems growing at an alarming rate. This paper makes an attempt to look into the issue of gender inequality in respect of health care provision and empowerment. Based on slightly modified formulation of gender inequality index proposed by Seth (2009) an attempt is made here to capture the pattern and nature of interstate variation of the above index in India and also to account for the above. To focus attention to the special aspects of health care facilities relevant for the females namely performance of various states in provisioning of reproductive health care facilities have been isolated to assess the degree of gender inequality in health care provisioning . The parameters like "Maternal mortality rate" ," Adolescence fertility rate" treated as core parameters supplemented by" Infant mortality rate" (as proxies in the absence of availability of data for Adolescence Fertility Rate for some of the states) have been used to compute the gender inequality in the provisioning of health care for various states of India . Kerala has been found to be the best performer among the states of India to administer a kind of HCF where gender inequality has been least. As far as female empowerment is concerned we have considered the following (1) Percentage of Female representation in the democratic bodies like Legislative Assembly/Parliament (2) Percentage of Female Attendance in the higher classes of schools (3) Participation of Females in the labor market. We observe substantial variation among states in respect of gender bias /gender neutrality in implementing empowerment to the people. Finally, we have obtained a set of composite indexes of gender inequality incorporating health and empowerment together. Again, here also ranked by composite index, Kerala has come out with the least gender inequality .

An Investment Case for the Accelerated Introduction of Oral Cholera Vaccines

VITTAL MOGASALE & OTHERS
Scientist & Manager, Policy and Economic Research Unit

International Vaccine Institute, Seoul, South Korea. vmogasale@ivi.int

The International Vaccine Institute (IVI) developed an investment case in order to provide a global evidence base for investing in oral cholera vaccines as part of a larger strategy that includes improvements to water, sanitation, and hygiene. At present, the demand for oral cholera vaccines has been too uncertain for producers to invest in increasing their production capacity beyond current low levels, leading a delay in the introduction of new and under-utilized vaccines in developing countries where cholera remains a persistent public health problem.

In its position paper World Health Organization (WHO) suggested to involve immunization with currently available cholera vaccines and traditional strategies such as water and sanitation improvements, be a priority in endemic areas. The WHO also suggested that pre-emptive vaccination be considered in preventing potential outbreaks or spread of outbreaks, and that vaccination should be targeted to high-risk areas and population groups. The licensure in India in 2009 of a new low-cost oral cholera vaccine, (Shanchol™) developed through IVI was a further impetus for WHO's recommendations. Shanchol received pre-qualification by WHO in 2011.

This investment case report was designed to meet the needs of groups that include the WHO Strategic Advisory Group of Experts on Immunization (SAGE), the international health community, vaccine manufacturers, prospective donor agencies, and policymakers from cholera-endemic countries for more information about the potential demand for cholera vaccines, the cost involved to meet this demand, and the impact and cost-effectiveness of vaccination. Specifically the report provides: a)A detailed estimate of the cholera disease burden; b)The forecast of cholera vaccine demand for the control of endemic cholera; c)An estimate of vaccine requirement and its costs for a vaccine stockpile that could be used for pre-emptive vaccination to prevent outbreaks; d) An analysis of the global impact of vaccination on the disease based on the demand forecast results; e) The cost and cost-effectiveness of vaccination; and f) financial analysis and possible financing mechanisms for vaccine introduction.

The report concluded that the global investment case provides strong evidence for the feasibility of introduction of oral cholera vaccine. It was noted that the burden of disease largely in South Asia and Africa. The new oral cholera vaccine is relatively low-cost, easy to introduce and would be a cost-effective intervention, particularly if targeted to children in high-risk areas. The investment case also identifies information gaps that should be addressed to improve decision making such as disease burden.

Measles Vaccination Coverage in India: A Progress Assessment

WILLIAM JOE
Assistant Professor, Institute of Economic Growth, Delhi 110007

william.joe@gmail.com

'Descent is easy, and a[n] onward motion over a level road is not difficult; but every step towards a higher state encounters obstacles; and so it is in the improvements of the human race.'

- William Farr, 1875

CONTEXT

Commonly, methods such as rate-ratios and rate-differentials are applied to assess inter-temporal, inter-regional and inter-group progress. However, an indiscriminate application of these methods is increasingly identified as an area for concern. In particular, two major concerns are obvious. First, since most of the indicators can be defined in two ways - either as an achievement (positive) indicator or as a failure (negative) indicator - progress assessments based on rate ratios are strongly associated with the adopted definition. Second, rate-ratios are sensitive to the base level of an indicator and tend to be larger (smaller) at lower (higher) overall levels thus introducing a bias while interpreting progress. It is also worthwhile to note that inferences based on rate-differentials do not exhibit any level-sensitivity. Clearly, it would be inappropriate to discount the dynamics of improvement – linear or non-linear - at differential levels while evaluating progress toward MDGs.

OBJECTIVES

It is desirable that while comparing progress across specified points in time, the chosen measure of progress should exhibit some sensitivity to the levels of the indicators in the two points of time. Given such intricacies, one of the main objectives of the paper is to review the existing progress measures and advance a level-sensitive progress assessment index. The second objective of the paper is to examine the progress made by India in case measles vaccination coverage – a key MDG indicator.

METHODOLOGY

The paper discusses an alternative level-sensitive indicator of progress assessment that offers similar conclusions irrespective of the way (achievement or failure) the indicator is defined. Inter-personal and inter-group inequalities in vaccination coverage are assessed using concentration index and group-analogue of Gini coefficient.

MAIN CONCLUSIONS

Empirical illustration for progress assessment in measles vaccination coverage is provided by using National Family Health Surveys (NFHS) of India. The inequality analysis reveals that there is high income-related inequality in the distribution of measles vaccine particularly among the backward states. Moreover, these states also suffered from higher inter-group disparities in the distribution of measles vaccine. At the all-India level it was observed that female child from backward social groups (Scheduled Caste or Scheduled Tribe) and residing in rural areas were the most disadvantaged in receipt of measles vaccine. The progress index suggests that Tamil Nadu, West Bengal and Kerala are the best three performers in the country. However, it is disconcerting to note that a rapidly developing state such as Gujarat has not progressed well in vaccination coverage.

Knowledge and medical treatment seeking behavior among breast and cervical cancer patients: A case study of inpatients in BHU Hospital

APARNA RAI
Research Fellow, Department of Radiotherapy and Radiation Medicine
IMS, BHU, Varanasi.

PRADEEP K.PANDEY
Research Fellow, Department of Sociology, BHU, Varanasi.

Knowledge about the disease, types of available medical care and existence of health care facilities in the vicinity, is likely to have significant impact upon the utilization of health services by the cancer patients. This aspect was explored by interviewing 264 breast cancer and 436 cervical cancer patients. Only 2.3 percent subjects were aware about the causes of disease majority (86.93%) were knowledgeable about different systems of medicine and. Only 289 (41.3%) subjects consulted doctor for illness. . Maximum number of patients (56.1%) availed Allopathic treatment, 8.4% availed followed Homoepathy treatment and 35.4% patients availed none of them. There is a need and scope for enhancing awareness in the community about disease and the existing health facilities.

Working Condition, Occupational Illnesses and Addiction among the Working Poor

RAVI KUMAR GUPTA
Ph.D Scholar, Dept of Economics, Pondicherry University, Pondicherry

V. NIRMALA
Associate Professor, Dept. of Economics, Pondicherry University, Pondicherry

The correlation between poverty and ill-health due to occupation is undeniably strong. Occupational illness reduces the earning capacity, and increases the risk of families with ill members to drift down the social and economic ladder. Occupational illness and health has a profound impact on individuals, families, communities, and societies. Rickshaw pullers are susceptible to health risks due to occupational requirement. Deteriorating health combined with health shocks can impose a significant burden on the urban poor (rickshaw pullers), dragging down the pace of upward mobility during their lifetime. This paper examines working condition, occupational illness, addiction details and effects of occupation illness of rickshaw pullers. The study is based on data collected from a random sample of 200 rickshaw puller in two districts of Uttar Pradesh. The objectives of paper would be analyzed using simple average, ratios, percentages, Standard of Living Index and binary logistic regression. It would be useful in providing essential information's and data to the researcher, academician and policy makers for designing policy for them.

Health and Income in India

ZIBA ASL GHORBANI
PhD student, Gokhale Institute of politics and Economics, Pune

The vast majority of Indians suffer from a poor standard of healthcare infrastructure which has not kept up with the growing economy. The broad objective of this article is to observe the characteristic features of health and growth in India compare of some countries, and relationship between health status and economic growth in India. Time series and secondary data have been used; the period of this study is 1970 to 2010. Infant mortality rate (per 1000 live births) and fertility rate (total births per woman) have been decreased in India like other countries, but still they are high, 48 and around 3 in 2010. The life expectancy is seen to be rising through the late 1970s in the world; it is lowest in India at 1990-2010 between the studied countries (it is 64 in 2010). At the present stage of development of India, the health indicators have lagged behind the impressive economic progress evident over the past two decades. The study of correlation coefficient in India shows a negative relationship between fertility rate and GDP, and GDP per capita too (it is 84% and 85% respectively). Also there is a negative relationship between infant mortality and GDP, and GDP per capita.(it is 89%). But there is a positive relationship between life expectancy and GDP, and GDP per capita too (it is 88% and 89% respectively). The results of Auto-Regressive Distributed Lag model estimation in India reveal that life expectancy has positive and meaningful effect on economic growth. In long term, life expectancy has an estimated coefficient of 1.8. This indicates that in a long term, upon increase of life expectancy by one percent in India, GDP is increased by 1.8 percent. Estimated coefficient of fertility rate indicates that upon decrease of this indicator by one percent, GDP is increased by 0.31 percent. The results obtained from short-term relation estimation indicate that upon increase of growth rate of life expectancy by 1%, growth rate of GDP will be increased 0.63%. Decrease of fertility rate by one percent, growth of GDP will be increased by one percent.

Economic Growth, Public Expenditure on Health and IMR in India: An Econometric Investigation of Causal Linkages

SUBHALAXMI MOHAPATRA
Assistant Professor, Indian School of Business, IFHE Campus, Hyderabad – 501 203

The causal relationship between economic growth and public expenditure on health and its corresponding linkage with the health outcome, namely, Infant Mortality Rate (IMR) has been the focus of discussion for public policy makers and economists since several years both at the theoretical as well as at the empirical level. In this context, the present paper employs a two step approach to first investigate the bi directional causal linkage. Therefore, the study investigates the two-way causal relationship between economic growth and public expenditure on health; the bi directional causal relationship between public expenditure on health and IMR and finally the bi directional causal relationship between economic growth and IMR in the Indian situation. This study covers a period of seventeen years starting from the year 1990-91 to the year 2007-08 and employs panel data analysis techniques to investigate the same. In pursuit of this objective, an econometric analysis using the tests of Panel Cointegration and Granger Causality were conducted by using panel data on sixteen major Indian states. The results of panel data analysis suggested that GDP granger causes public expenditure on health both in the short run and in the long run, but effect of public expenditure on health on GDP was only significant in the long run. Further, individually public expenditure on health and economic growth was found to granger cause IMR in the long run but the reverse linkage from IMR to public expenditure on health and/or economic growth was found to be insignificant. The study has implications for academicians and policy makers.

Economic growth and intrastate disparities in health care financing in India

SANJAY RODE
Assistant professor, Somaiya, Mumbai

At global level, India is far behind in terms of achievements of millennium development goals. Health care system is a key to reduce the diseases and improve health status of population. But per capita health spending, health infrastructure and professionals are low. The large variations are observed within and between states as far as incidence of diseases and health infrastructure, professionals are concerned. The poor and higher population states have lower spending in health care. For the functioning of health care sector, state government policies toward population are important. But lower health financing and higher population growth reduces the overall health care investment. The policies of more aid to populated states through establishment of community and health care centers, recruiting health care professionals and population based health care financing will be the key to overcome with this problem.

Public Expenditure on Health in Orissa: An Analysis of Pattern, Growth and Determinants

PRASANT KUMAR PANDA
Assistant Professor, Dept. Of Economics, Tagore Arts College, Puducherry.
pkp.pondyedu@gmail.com

ALIVA DIPALI PANDA
Research Scholar, K.M. Centre for P.G. Studies, Puducherry

The paper analyses the pattern, growth and determinants of public health expenditure in Orissa considering a data set for the period 1987-88 to 2004-05. While simple percentage ratio method is used for analysing the pattern and growth, a double log multivariate equation is employed to examine the determinants of public expenditure on health in Orissa. The analysis of pattern reveals that the situation of the state in financing health care has not changed in the desired direction and there is a need to emphasize on all components of health more particularly medical and public health for quality and adequate provision of health care service in the state. From the determinant analysis it is observed that per capita GSDP, literacy rate, population growth and resource transfers from centre in per capita terms emerged as key variables in affecting health expenditure per capita of the states like Orissa. The change in health spending of the state seems to have been determined due to the pressure exerted due to rise in per capita income, change in literacy rate and population, growth, rather than the actual requirement of health expansion indicated by health outcome like infant mortality rate. The study calls for strengthening of resource capacity of the state and reprioritising expenditure to give more emphasis on health. Specific purpose central transfers would be more useful for enhancing health expenditure. Finally state may take some measure to check population growth, and promote literacy rate which have impact on health spending.

Cost and utilisation of hospital based delivery care in Empowered Action Group (EAG) states of India

SANJAY. K. MOHANTY AND AKANKSHA SRIVASTAVA
Associate Professor and Research Scholar, IIPS, Deonar, Mumbai- 400088
sanjayiips@yahoo.co.in & akankshaleo@gmail.com

CONTEXT

Large scale investment in the National Rural Health Mission (NRHM) is expected to increase the utilization and reduce the cost of maternal care in public health centres in India.

OBJECTIVE

The objective of this paper is to examine recent trends in the utilization and cost of hospital based delivery care in the Empowered Action Group (EAG) states of India.

DATA AND METHODS

The unit data from the District Level Household Survey 3, 2007-08 is used in the analyses. The coverage and the cost of hospital based delivery at constant price is analyzed for five consecutive years preceding the survey. Descriptive and multivariate analyses are used to understand the socio-economic differentials in cost and utilization of delivery care.

RESULTS

During 2004-08, the utilization of delivery care from public health centres has increased in all the eight EAG states. Adjusting for inflation, the household cost of delivery care has declined for the poor, less educated and in public health centres in the EAG states. The cost of delivery care in private health centres has not shown any significant changes across the states. Results of the multivariate analyses suggest that time, state, place of residence, economic status; educational attainment and delivery characteristics of mother are significant predictors of hospital based delivery care in India.

CONCLUSION

The study demonstrates the utility of public spending on health care and provides a thrust to the ongoing debate on universal health coverage in India.

Household Health Spending in India: A Comparative Study of Demographically Advanced and Transitive States

SHRUTI
Research Scholar, Banaras Hindu University, Varanasi - 221005
shrutibhu28@gmail.com

CONTEXT

The health needs in India is changing fast in the context of ongoing demographic, epidemiological and economic transition. With increase in the size and proportion of elderly population, the demand for health services and health spending will increase in coming years. On the other hand, the health spending in India is largely financed by household and often tend to be catastrophic for poor households. Indian states are at different stages of demographic transition. Thus comparing the health spending of demographically advanced and transitive states will help us to understand the role of age structure in health spending

OBJECTIVES

Using two rounds of NSS data (61st and 66th provided), this paper examines the pattern of household health spending of demographically advanced and transitive states of India.

The specific objectives are:

- To examine the pattern of institutional and non-institutional health spending in India and selected states over time.
- To examine the socio-economic and demographic differentials in health spending in India and selected states over time.
- To understand the predictors of catastrophic health spending in India and selected states.

METHODOLOGY

The study uses the following dependent variables, namely :

1. Per Capita Health Spending.
2. Health spending as a percentage of monthly per capita consumption expenditure.
3. Catastrophic health spending is used as the third dependent variable.

Descriptive and multivariate analyses are used to understand the pattern of health spending. The OLS is

used to understand the relationship of life expectancy with Monthly Per Capita Spending on Health. Four logistic regression models are used to understand the significant predictors of health spending

RESULTS

Results suggests that the health expenditure has increased over time irrespective of states and the increase in household cost of health care is more pronounced among the poor and labour households compared to rich and regular wage earner. Households with elderly member are more likely to incur catastrophic health expenditure compared to households without any elderly member. The monthly per capita spending on health and percentage of health expenditure out of total expenditure has increased with increasing number of elderly in the household.

CONCLUSION

Based on the above findings, it is suggested to increase the public spending for elderly so as to protect individuals and households from catastrophic health spending.

Does Public Spending on Health Improve Health Outcome in India?

KAUSHALENDRA KUMAR, F.RAM & ABHISHEK SINGH
Research Fellow, Director and Assistant Professor, IIPS, Mumbai, 400 088

The present study attempts to investigate the association between public spending on health and health outcomes in India using time-series cross-sectional data from various government sources for the period 1985-2009. Infant and child mortality rates were used as the indicators for health outcome. Ordinary least squares, generalized least squares and fixed effects regression models were used to investigate the association between public spending on health and health outcomes. Findings suggest insignificant association between public spending on health and health outcomes both at the country level and for the EAG states. On the contrary, per capita state income and female literacy were significantly associated with improved health outcomes. Percentage of population living below poverty line was significantly associated with infant and child mortality only in the EAG states. Findings call for a number of other measures along with increased public spending on health to improve health outcomes in India.

Do higher levels of public financing make health services more equitable?: Evidence from hospitalization data in India

SHANKAR PRINJA & OTHERS
School of Public Health, PGIMER, Chandigarh

Studies from a number of low-income countries suggest the wealthy often take advantage of publicly financed health services at a higher rate than the poor. To examine the situation in India, we examine the use of public and private sector hospital services. We also assess the relationship between utilization across income groups, public spending on health services and reported out-of-pocket (OOP) payments. We analyzed data from the 60th round of the National Sample Survey (2004-05) of 29,036 hospitalization episodes among 3,83,338 individuals in India. Mean per capita reported consumption expenditure was used as a proxy for socio-economic status. The concentration index (CI), was computed as a measure for assessing horizontal equity in utilization of hospitalization care. We computed correlation coefficients to assess the relationship between the mean public spending and out-of-pocket (OOP) payment in public hospitals and CI at the state level. Not surprisingly, hospital services in the private sector are significantly pro-rich. In contrast to previous studies, we found that India's poor report using hospital services in the public sector at a slightly higher rate than the wealthy, particularly in urban areas. However, this varied across states. We found that states with higher public spending on health have more equitable hospital service utilization. High OOP were correlated with higher degrees of inequity, and likely serve as barriers to accessing care. Further work is required to explore the significant variation seen between states and to understand the history of its development. A number of policy options are available to increase equitable use of public health services in India.

Incidence, its correlates and effects of maternal health care expenditure in India

SARADIYA MUKHERJEE
UGC-Junior Research Fellow, CSRD, JNU, New Delhi - 110067
mamonputush@gmail.com

This study measures the incidence and intensity of 'catastrophic' maternal health care expenditure and examines its socio-economic correlates in urban and rural areas separately. It also measures the effect of maternal health care expenditure on poverty incidence and examines the factors associated with impoverishment due to maternal health care payments. Using data from 60th round of the National Sample Survey, we find that urban household spent almost twice that of rural households on maternal health care. A little more than one third households suffered catastrophic payments in both urban and rural areas. Rural women from ST had more catastrophic head counts than ST women from urban areas. On the other hand, the head count was greater among illiterate women living in urban areas compared to those living in rural areas. After adjusting for out-of-pocket maternal health care expenditure, the poverty in urban and rural areas increased by almost equal percentage points (19.7% in urban areas versus 18.5% in rural areas). Increasing education level, higher consumption expenditure quintile and, higher caste of women was associated with increasing odds of impoverishment due to maternal health care expenditure. To reduce maternal health care expenditure induced poverty, the demand-side maternal health care financing programs and policies in future should take into consideration all the costs incurred during prenatal, delivery and postnatal periods and focus not only on those women who suffered catastrophic expenditure and plunged into poverty but also those who forgo maternal health care due to their inability to pay.

Innovation in Health Financing

SALMA BEGUM
Masters in Applied Economics (2nd Year), Christ University, Bangalore

Innovation in health care is about how to pay for the provision of healthcare services— usually through some form of insurance that can pool the risk and cost of illness across a large group of people. In poorer countries, however, not only is insurance more expensive relative to incomes, but many people work in the informal sector and so are not covered by employee health insurance laws.

How to provide and finance health care for more than 1.22 billion population is one of the greatest challenges that India is facing. This paper presents the evidence based experience of Rwanda, Mexico, Singapore and also India on implementing cost effective innovations in health care financing which has been very successful in improving effectiveness and sustainability of health services in these countries. It also includes some recent innovation in health financing and some recommendation given by experts in improving India's health care system.

THE OBJECTIVE

of the study is to examine the benefits of the programs implemented in the aforesaid countries and the scope of implementing that kind of innovative method of financing in India which would help our country to face the challenges of health inequality, inadequate availability, unequal access, poor quality and costly health care services.

THE METHODOLOGY

used in this study is descriptive positive study. Thorough literature review has been done to analyze the success stories of the selected countries in having implemented the innovative method of financing in health. Again some of the successful schemes implemented in India have also been examined to view the future prospects of strengthening our health care by introducing more innovative method of financing.

THE STUDY CONCLUDES

that India though has introduced innovation in health care financing yet it needs a major boost from the government. Governments can contribute to the effectiveness and sustainability of community health financing schemes for rural, informal sector and poor populations through key policies involving the following: increased and well-targeted subsidies boosting the health insurance contributions of low- income populations; insurance for protection against fluctuations in expenditure; technical support to strengthen the management capacity of local schemes; and the establishment and strengthening public private partnership in providing better health facility to the poorer section of the society.

Health and Economic Growth in Andhra Pradesh: A Search for Causality

T. SUBBA LAKSHMI AND DUKHABANDHU SAHOO
PhD Scholar and Assistant Professor
IIT Bhubaneswar, Bhubaneswar 751 007.

The paper is an attempt to explore the long run relationship between health indicators and economic growth of one of the progressive states of India, i.e., Andhra Pradesh, by using time series data for the period 1981-2010. A health infrastructure index was developed by using health inputs like number of hospitals and dispensaries, number of beds and number of doctors. The empirical result shows that the elasticity of health indicators like crude birth rate (CBR), crude death rate (CDR), infant mortality rate (IMR) and life expectancy at birth (LEB) with respect to health infrastructure index is -37.966, -27.816, -30.598 and 10.282 respectively. The cointegration test shows that there is a long run relationship between health indicators and economic growth in Andhra Pradesh for the study period. The Granger causality test confirms that there is bidirectional causality from economic growth to LEB, unidirectional causality from economic growth to IMR and there is no causality from economic growth to CBR and CDR. In view of the above findings, it could be suggested that with higher levels of economic growth there are levels of investment in basic infrastructural facilities made

available to people in the form of opening up additional hospitals with good bed strength and specialist doctors, maintain primary health care facilities etc in backlog areas, which acts as an engine in promoting better health.

Contribution of Health Insurance to the Growth of Non-Life Insurance Business

R.K.SINHA AND M.M.NIZAMUDDIN
Deputy Director and Assistant Director
Sectoral Development Department, IRDA, Hyderabad

The non-life insurance penetration has remained stagnant during the last decade, the era of post-privatization in India. This is in contrast of the life insurance penetration, which has almost doubled (as per Swiss Re) in ten years time although its growth appeared to be a bit irregular, especially during the recent years. The stagnation in the non-life penetration exhibits that the growth in the non-life insurance premium has been only at par with the overall growth rate of Indian economy, in terms of its Gross Domestic Product (GDP). Given that the industry is in the initial years of post-privatized era, this ordinary growth in the non-life insurance industry has been a concern and issue of debate during the past few years. Despite the overall stagnation in the non-life insurance sector, the health insurance has witnessed consistently higher growth, protecting the non-life insurance industry to grow at a slower pace than the Indian economy.

While the health insurance industry is growing very fast cater to the needs of various stakeholders, it has been a concern for the insurance companies themselves. This is because of the high loss ratio (incurred claims ratio) in the health insurance business, which is eating away profits of insurance companies. Because of high incurred claims ratio, many insurers are making losses in selling health products despite doing huge business under health portfolio. The paper attempts to investigate the incurred claims ratio of health insurance vis-à-vis the other lines of business in the non-life insurance sector. In the passing, it proposes a model for the incurred claims ratio of health segment. In the last, it discusses various possible determinants, such as, mis-pricing (under-pricing) of health insurance products, under-estimation of claims, presence of fraudulent practices, moral hazard, anti-selection etc., which might have led to the high incurred claims ratio of health insurance.

Exploring the factors inhibiting health insurance: Insights from Longitudinal Data

KSHIPRA JAIN
International Institute for Population Sciences, Mumbai

BACKGROUND

India has gained impetus in its economic development to emerge as one of the fastest growing economies, yet the social development of nation, particularly health, is still at crossroad today. The Indian health system is burdened with communicable and non communicable diseases and thus not able to meet its objective of universal health coverage. One of the important challenges being faced by Indian health policy experts is: how to convert predominantly private OOP spending into health insurance premium whereby this amount

is collected from a much larger group of insured individuals rather than from the limited number of households affected by illness.

OBJECTIVE

The present study attempts (i) to understand the insurance cover of middle aged and older population (ii) to explore the factors that restrict them from buying insurance cover and (iii) to assess the importance of financial issues in deciding the health insurance.

DATA AND METHODS

The study has used data from Longitudinal Ageing study in India (LASI), pilot data jointly conducted by International Institute for Population Sciences, the Harvard School of Public Health, and the RAND Corporation in the year 2010. LASI is focused on the social, economic, and health experiences of 45+ populations throughout India as they grow older. The sample size for the present study is 1585 which is sufficient to carry robust estimations; however if in any cell the sample size is small that particular variable is dropped from the analysis. The study is focused on 45+ populations as per the availability of data and has employed univariate, bivaraite and multivariate analysis to meet the specific objectives.

RESULTS

The study reveals that only five percent of study population has insurance cover. Among the uninsured population it is the female, illiterate, poorest and Hindu population who largely lack insurance. Sixty five percent of the respondents were not aware about the insurance and thus it emerges as the major factor for lack of insurance cover. Near about 61% of the respondents consider financial issues, an important factor in making the decision of buying the insurance cover.

CONCLUSION

The health indices of a country, to a large extent, get determined the way health care is financed. This may be one of the reasons for delay in achieving universal health coverage as reflected by the study that people are not much aware about health insurance and thus a small section of the society is financing its health care via health insurance. India, a nation of savers, ought to be converted to a country of investors where people can atleast invest for their own health. Development of health insurance whether private or public by creating demand is likely to bring improvement in public health care system and thereby the health of the nation.

Universal Access to Health Care Services: Special Reference to Rural Odisha

ANJALI DASH
ICSSR Doctoral Fellow (Fco), M.P Institute of Social Science Research, Ujjain.
dash86.eco@gmail.com

In low income countries problems of access concern the availability of basic health services. In affluent countries where basic service was generally accessible, question of access concern the degree of comprehensive that can be offered by health care system. Access to health care is a "basic human right and social goal in the sense that all individuals are consider to be entitled of economics benefits of the wider community does not necessary require that they should receive it". Health infrastructures of Odisha are far from requirements and the outcomes of health are far from satisfactory. This is because of, both, inadequate health care facilities to the population as well as due to insufficient affordable capacity of majority of the people. There is a heavy burden of communicable, noncommunicable and silent killer genetic diseases prevalent in Odisha. Many of the infectious and parasitic diseases can be prevented with timely intervention, health awareness, and information, education and communication (IEC) skilled activities. In spite of the tremendous advancement in the field of preventive and curative medicine, the health care delivery services in are still poor and need amelioration and strengthening with sustenance on the guidelines suggested to achieve the targeted goals of health for all in India. This study examine the access to health care, its affordability, equity, physical access of health care facilities in terms of provision of health infrastructure and allocation of resources for health care system, outcomes and its implication. This base on micro level data from a rural village Brahmanipali, Sonepur district in Odisha as well as secondary data from various report and research review.

Rashtriya Swasthya Bima Yojana (RSBY) Experiences of Hospitalised Families in National Capital Territory of Delhi

K.S.NAIR, L.K.PIANG,V.K.TIWARI, SHERIN RAJ
Department of Planning & Evaluation, NIHFW, New Delhi

CONTEXT

Rashtriya Swasthya Bima Yojana (RSBY) aims to improve access to quality health care and relieve the burden of health care costs of the poor population. The scheme was implemented in National Capital Territory (NCT) of Delhi in April 2008. This paper is based on a rapid appraisal of the scheme conducted in Delhi by National Institute of Health & Family Welfare, New Delhi during October- December 2010.

OBJECTIVES

To assess the awareness and perception of RSBY among hospitalized families in NCT of Delhi.

METHODOLOGY

270 RSBY cardholders who had availed the services in the RSBY empanelled hospitals during the reference period of November 2009 - October 2010 were randomly selected from 7 districts of Delhi. In-depth interview was conducted with the head of families to collect information about their knowledge of the scheme, enrolment process and perception on services provided in the empanelled hospitals.

FINDINGS & CONCLUSION

A large proportion of the beneficiaries were unaware about the features and benefits of the scheme. The study found that almost 40 percent of hospitalized cases had availed pre-hospitalization treatment from Government or private health facilities. The empanelled hospitals/nursing homes do not admit patients with chronic ailments requiring continuous treatment at the hospital. More than 50 per cent of the patients had to spend about Rs.1000/- as out of pocket expenditure during hospitalisation in the empanelled hospitals. A large number of patients were neither aware of the amount deducted from their smart cards nor the amount left in the cards. This calls for an urgent need for awareness generation about the scheme among the target population.

Allocation of Health Care Resources in Secondary Hospitals in West Bengal and their Technological Efficiency: A note on Policy Prescription

ARIJITA DUTTA
Associate Professor, Department of Economics, University of Calcutta
56 A BT Road, Kolkata-700050. dutta.arijita@gmail.com

SATARUPA BANDYOPADHYAY
Assistant Professor, Bethune College, Kolkata. satarupa_banerjee@yahoo.co.in

ARPITA GHOSE
Associate Professor, Department of Economics, Jadavpur University, Kolkata. dhararpita@yahoo.co.in

CONTEXT

The recent move towards Universal Health Coverage in India calls for right allocation of health care resources across hospitals. The specialized care in secondary hospitals is to be considered specially for this due to their overwhelming share in service delivery in any state and also in West Bengal. But just resource allocation does not necessarily guarantee right utilization of them to operate efficiently and hence measurement of technical efficiency of these hospitals is required for completing the picture.

OBJECTIVES

This paper attempts to locate the distributional inequality of health care resources across geographical regions in West Bengal, a densely populated medium performer state in terms of health-indicators in India, and estimates the efficiency of resource utilization in secondary-level government-run hospitals in West-Bengal.

METHODOLOGY

For the first objective simple statistical and econometric tools are used while for the measurement of technical efficiency output oriented Data Envelopment Analysis (DEA) under variable returns to scale has been used. The paper also used Group Frontier approach to calculate technology closeness ratio of the hospitals across regions, bed categories and types of hospitals.

RESULTS

Analysis shows that there is significant inter-district, inter-region and inter-sub division inequality in availability of hospital beds, equipments and manpower. The allocation of health care resources does not follow the iota of 'vertical equity' in health care too as the areas with low human development suffers from critical shortages of resources. The overall mean efficiency of all hospitals is 0.728, suggesting that on average the hospitals could produce at least 37 per cent more of output with same input volume, if it produced efficiently. The scarce resources like doctors, nurses, beds etc are all sub-optimally used resulting in large input slacks. The meta and group frontier analysis shows that bigger hospitals situated in backward regions perform badly compared to others. The policy must attempt to reduce the often quoted unbalanced regional distribution of resources along with to control the under utilization of resources available with the hospitals.

Unit Cost of Medical Services at Different Hospitals in India

SUSMITA CHATTERJEE
Public Health Foundation of India, New Delhi, India

CAROL LEVIN
PATH, Seattle, Washington, USA

RAMANAN LAXMINARAYAN
Public Health Foundation of India, New Delhi, India;
Center for Disease Dynamics, Economics & Policy, Washington DC, USA &
Princeton Environmental Institute, Princeton University, New Jersey, USA

Many policy decisions are based on information about hospital costs. However, there is a dearth of hospital cost information from low- and low-middle-income countries. In this study, we calculate the operating costs and unit costs of medical services for five representative hospitals across India: a 57-bed charitable hospital, a 400-bed government district hospital, a 778-bed government tertiary care hospital, a 200-bed private hospital and a 655-bed private teaching hospital. The specific objective of the study is to estimate (a) cost per outpatient visit; (b) cost per inpatient stay; (c) cost per emergency room visit; and (d) cost per surgery for the five study hospitals for the financial year 2010–11. The unit costs of medical services have been calculated using the standard costing method. The major cost component for the district and tertiary care hospitals is human resources, for the charitable and private hospital, it is the capital cost and for the private teaching hospital, it is the material cost. The outpatient visit cost ranges from Rs. 93.78 (district hospital) to Rs. 2212.89 (private hospital) (USD 1 = INR 52). The inpatient stay cost is Rs. 1958.77 in the charitable hospital, Rs. 394.17 in the district hospital, Rs. 613.86 in the tertiary care hospital, Rs. 6,996.24 in the private hospital and Rs. 344.90 in the private teaching hospital. Our study results will help hospital administrators run their facilities more efficiently, and we identify areas where improvements in efficiency might significantly improve unit costs. The study also demonstrates that detailed costing of hospital operations is feasible is India. Because of the size and diversity of the country and variations across hospitals, a large-scale study should be undertaken to refine hospital costing for different types of hospitals.

Performance of Blood Bank Services in Government Hospital

S.RAJENDRAN AND R.RAMACHANDRAN
Professor and Head, and Research Scholar
Department of Economics, Periyar University, Salem-636 011

The World Health Organization estimates that 515000 women die each year from pregnancy-related causes, and almost all of these deaths occur in developing countries. Shortfalls in blood supply have a particular impact on women with pregnancy complications, trauma victims and children with severe life-threatening anemia. The provision of safe and adequate blood supply at national level is the responsibility of the government/national health authority of each country. The blood bank is now regarded as an integral and vital supportive service within a hospital. In a country –India with varied socio-economic and ethnic set up, blood donation and transfusion gets less attention as not much studies is reported. Therefore, the present study was undertaken in Rajapalayam government hospital in Virudhunagar district with secondary data. The study is confined to Blood bank Services, covering a period from January 2007 to December 2007. Rajapalayam government hospital has two parts of the hospital. One is maternity hospital and another is P.A.C.Ramasamy Raja (P.A.C.R) general hospital. In these hospitals there are eight wards namely male,

female; children, maternity, neonatal, eye ward, leprocy ward and post operative ward with 164 beds. It is found that there is a lack of warm response from the voluntary and female donors. However, it is reported that the female patients need more blood due to medical complication (illness). Tamil Nadu State AIDS Control society should be motivating the blood bank medical officers to increase the frequency of blood camps and to create awareness about the blood donation to the society.

Vouchers Make High-quality Reproductive Health Services Possible for India's Poor

SUNEETA SHARMA, ANITA BHUYAN, AND TANYA LIBERHAN
Futures Group India, DLF Cyber City-II, Gurgaon 122002

Improving the poor's access to high-quality family planning (FP) and reproductive health (RH) services is essential to the well-being of India's families and communities and the nation's development. With a rapidly growing population and the highest number of maternal deaths in the world, India will not meet its national goals, including the Millennium Development Goals (MDGs), unless the health of the poor improves. In response, India is among a rising number of developing countries implementing voucher schemes to increase access to reproductive, maternal, and child health services. Vouchers are a demand-side financing mechanism that gives purchasing power to the beneficiaries. While supply-side financing subsidizes inputs into the public health system, demand-side financing links subsidies to the beneficiaries and the desired outputs.

From 2006–2012, the pilot Sambhav voucher schemes have been implemented in northern India to reach below poverty line (BPL) families with FP/RH services. The program's name ("it is possible" in Hindi) signifies that it is possible for BPL families to access high-quality services in the private sector. The voucher schemes are one component of the Innovations in Family Planning Services (IFPS) Project, a collaborative effort of the Government of India and United States Agency for International Development (USAID)/India that has spanned two decades. IFPS supports national-level activities but emphasizes interventions in three priority states: Uttar Pradesh, Uttarakhand, and Jharkhand.

The four pilot districts included Agra (seven blocks), Kanpur Nagar (368 urban slums), Haridwar (two blocks), and Gumla (two blocks). The Sambhav vouchers targeted subsidies to BPL populations, while offering the poor a choice of private providers and enabling access to high-quality services. The vouchers covered a range of services, including antenatal care (ANC), institutional delivery, postnatal care (PNC), neonatal care, and family planning. ITAP fostered active consultation with and feedback from all relevant stakeholders throughout the design, implementation, and monitoring of the pilot voucher schemes. The voucher management units (VMUs), headed by the district chief medical officers, coordinated the voucher programs. The VMUs distributed vouchers to nongovernmental organizations (NGOs) responsible for training and supporting community-level health workers known as accredited social health activists (ASHAs) in Agra and Haridwar, community health volunteers in Kanpur Nagar, and sahiyyas in Gumla. The community-level health workers, in turn, identified BPL and slum households, offered information on available services, distributed the vouchers to clients, and accompanied clients to seek services, as appropriate (e.g., institutional delivery). The community-level health workers were drawn from the communities they served. These women were instrumental in motivating clients to avail services, especially services such as PNC and family planning that may not perceived as essential by families in rural, urban slum, and tribal areas. Clients exchanged vouchers for services provided by private nursing homes and hospitals, which submitted the vouchers to the VMUs for reimbursement. Only accredited private facilities can participate in the program. Provider training, regular medical audits of accredited facilities, and client satisfaction surveys and follow-up helped promote quality improvement. The VMUs also monitored quality. The state health societies, SIFPSA and UKHFWS, facilitated the flow of funds to the VMU and fostered linkages between the government and private providers. A multi-partner Project Advisory Group was also established for each pilot voucher program to provide a forum for discussing implementation challenges and devising solutions.

RESULTS

Together, the four Sambhav voucher pilot programs covered 11 rural blocks in three districts and 368 urban slums in one city, with implementation time periods ranging from 1–2 years. In total, the vouchers facilitated births of nearly 12,500 babies in private health facilities. The voucher schemes also promoted maternal health by supporting approximately 44,000 ANC visits and 10,300 PNC visits. In addition, women and men used approximately 9,500 vouchers to avail a range of FP methods. The success of the pilot voucher schemes garnered interest from the state governments in Uttarakhand and Uttar Pradesh, each of which took steps to scale up the programs. Uttar Pradesh has expanded the voucher system through SIFPSA from 368 urban slums in one city to 1,562 slums in five cities, namely, Kanpur, Agra, Varanasi, Allahabad, and Lucknow.

The MDG's and the NRHM's: The Reality Checks in India

ANISH KUMAR MUKHOPADHYAY
Assistant Professor in Economics, J.N.M.S.Mahavidyalaya, Nahata, West Bengal

There is a very close relationship between the Millennium Development Goals and the functioning's of National Rural Health Mission particularly, goals relating to reduce child mortality, to improve maternal health and to combat HIV/AIDS, malaria and other diseases. Specific targets were set against each of these goals which would be expected to achieve by 2015. The States of India Report highlighted several important dimensions of India's journey to attain the Millennium Development Goals by 2015. The report also flagged the slow progress of India in reducing child mortality and improvement of maternal health. On the basis of state-wise data for the corresponding indicators presented in the report, it was clearly evident that as many as twenty out of twenty nine States of the country are likely to miss their Under Five Mortality Rate targets by 2015. In the recent years, the Country has shown sharp decline in Infant Mortality Rate and a similar trend was observed in most of the States. Though India and most of the States/UTs are on track, the overall mortality risk for the children are going to persist due to lack of medical attention and preventive measures for the deaths of the neo-natal children. The maternal mortality risk in the country was found to have reduced fast in the recent past and the coverage of deliveries under the attention of skilled personnel have improved significantly during the last five years. However, it was observed that there are wide variations from state to state and the corresponding MDG-targets would not be achieved both at the national level as well as for majority of the States/UTs. Despite the existence and launch of various programs and policies to address the major areas of concern under the MDGs, the progress toward achieving these goals appears to be rather slow in most of the areas. It has been observed that the utilisation of services offered by different programs is rather low. With just three more years to go toward the set time for achieving these goals, the only way to do so would be to further intensify our efforts in reaching out to the unreached populations and ensuring uniform distribution of resources.

Millennium Development Goals and IMR in India: There is a Long Way to Go....?

R. R. BIRADAR AND D D MUJAWAR
Associate Professor and Ph. D Scholar,
Department of Economics, Karnatak University, Dharwad, Karnataka.

Health plays a vital role in acquisition and management of "life-cycle wealth" by way of building "human capabilities" in developing economies like India. As children are important potential assets of a nation, providing adequate and quality health care services and thereby reducing infant and child mortality is felt increasing important. The infant mortality rate (IMR) has been considered to be an index of the socio-economic development of a nation. That is why the international organisations and national governments have become pro-active in reduction of infant and mortality and promote greater child survival, thereby reaching the Millennium Development Goals by 2015 that reduction of IMR to 28 and child mortality to 42 per 1000 live births.

In India, efforts have been made to reduce infant and child mortality rates by implementing several programmes since the inception of the planning period in 1951, more so ever since the commitment of Millennium Development Goals. It is, therefore, imperative to explore the underlying causative factors that impede the reduction in infant mortality. Against this background, an effort has been made to examine the trends in IMRs across rural-urban areas, male-female and social groups and indentify the factors that affect IMRs.

The study is based on secondary data collected from the National Family Health Survey, Ministry of Health and Family Welfare, Directorate General of State Health Services, Statistical Report, Registrar General of India, Economic Survey of India. The correlation matrix is estimated to identify the factors that affect IMR at the all India level.

The results reveal that, although India continues to be one of the developing countries with higher IMR, she witnessed a persistent decline from 129 in 1971 to 50 in 2009 per 1000 live births. The mortality rate was higher in rural areas than in that of in urban areas. The unequal infant mortality may be attributed to unequal availability and access to health care facilities. However, the decline in infant mortality in rural areas is found to be much faster than in urban areas. Across social groups, the infant mortality rates were higher among scheduled castes (SCs)/scheduled tribes (STs)-historically exploited sections of the society-compared to other backward castes (OBCs) and Others. This can be ascribed to the greater incidence of poverty and hence limited access to health care facilities, high illiteracy and poor housing conditions among them. It has been observed that that the IMRs showed a persistent decline for all social groups; the decline was higher in rural areas than in urban areas.

The data indicate that the IMR tended to decline as the age of mother's at birth increased upto certain level and thereafter it tends to rise. This constitutes what can be described as the "U-shaped curve", implying that too early and too late birth of children may cause early death of the child. The message is that early marriage has adverse impact on child's health and survival. Therefore, suitable age of marriage and children's birth goes a long way in improving maternal and child health and greater chances of children's survival.

The data on regional pattern of IMR indicate that the states such as Madhya Pradesh, Orissa, Uttar Pradesh, Rajasthan and Bihar, popularly known as "BIMORU" continued to have higher IMRs than that of other states and all India average. On the other hand, the states like Goa, Kerala, Tamil Nadu, Maharashtra, Arunachal

Pradesh, West Bengal and Punjab have had lower IMRs compared to other states and all-India average; a greater decline in IMRs occurred in these states compared to that of BIMORU states during 1981 to 2009. This implies that the states with more educational attainment and economic growth have shown better performance in reduction of IMRs.

The results of correlation matrix indicate that a strong negative association exists between the IMR and the net state domestic product, implying that the households with increased income would be able to access child health care facilities and avoid the risk of children dying. A negative but statistically insignificant association between the IMR and the female WPR indicate that female participation in economic activities may increase income and provide child with adequate health care services. A positive but statistically insignificant association existed between the infant mortality and poverty, implying that poverty is also one of the factors affecting infant mortality. The rate of female literacy is strongly and negatively associated with IMR, implying that mother's education plays a vital role in reduction of mortality her child. Similarly, the health infrastructure measured in terms of the average number of people served by a government hospital and per bed is also positively associated with IMR.

It is evident that the availability of health infrastructure is also as important as affordability to it. With a view to reduce infant mortality rate further and attain the Millennium Development Goals by 2015, therefore, it is important to accord top priority to improve female's education at a massive scale, encourage women to participate in economic activities, reduce poverty at a faster pace by effective implementation of poverty alleviation and employment generation programmes and to provide adequate and quality health care facilities at affordable rates.

Scaling up Sanitation: Sensitisation Indispensable

ALPANA KATEJA
Professor of Economics, University of Rajasthan, Jaipur- 302004
alpanakateja@gmail.com

Access to drinking water and sanitation is both a human rights issue and a key development challenge that has profound health implications. Improvements in water supply and sanitation along with effective hygiene education play a major role in reducing high levels of morbidity and mortality. This paper probes into the current scenario of access to safe drinking water and sanitation in India, analyzes the progress made in last decade, and also evaluates its impact on infant mortality rate and child mortality rate. Applying rotated Principal Component Analysis (PCA) on selected indicators of sanitation, the study aims to construct a comprehensive measure of sanitation. The Index of sanitation so derived has been then used in regression analysis – to investigate its impact on health, and also in cluster analysis – to prepare typology of sanitation and health. The paper locates recent achievements in access to drinking water and sanitation in national context and profiles the current status in different groups of Indian states.

The study concludes that while there has been significant movement in recent years, the achievements, as a whole, have been slow and unbalanced. Large differences remain between the more developed and less developed states. Estimated regression coefficients confirm that index of sanitation has the significant positive effect on all the mortality indicators. It is quite evident from the typology that the states which have a relatively better access to drinking water and sanitation enjoy better health outcome. On the contrary, the states which have a lower level of access to drinking water and sanitation experience poor health outcomes.

Being root source of poor health, steps to scale up sanitation can help provide better value for money spent on health infrastructure and health delivery system. It concludes with a series of policy-oriented recommendations that identify priorities for governments and civil society.

Application of Health Accounts Framework to Resource Flows for HIV / AIDS: A District Level Analysis in India

VINOD.B. ANNIGERI
Professor, CMDR, Dharwad – 580004. vinodann@yahoo.com

The study tried to develop HIV / AIDS accounts for a district in the state of Karnataka in the Indian union. The attempts of developing Health Accounts are on the learning curve in most of the developing countries. Contrary to this most of the European countries and few countries in the American continent have produced health accounts. Though India did produce its Health Accounts very recently, more distance needs to be covered at the state level. The disease specific health accounts are considered to be more useful as a policy tool for bringing in corrective measures as regards the financing of disease specific interventions. The conceptual clarity of developing such accounts are also in infancy in most of the developing countries due to the fact that the OECD model of System of Health Accounts (SHA) as well as the Producers' Manual of Health Accounts (WHO, USAID & WORLD BANK)and National AIDS Spending Assessment (NASA) cannot be easily adopted and adapted in the context of developing economies. In this background the study assumes significance due to the fact that it would be an in-house and pioneering exercise to develop and understand the conceptual as well empirical issues in developing disease specific health accounts. The study would be useful for the academicians and the managers of health sector in the years to come.

Major Messages from the Study

In all about 295 millions of Indian Rupees were spent in the district At the outset if one considers the overall HIV/AIDS related spend, it can be observed that the total resources flowing towards HIV/AIDS account for about 0.5 per cent of the District Income. This would certainly indicate the meager amount of resources flowing towards the prevention as well as management of the disease in the district. If one looks at the break- up of the expenditure by broad sources of funds, it is note worthy to observe that a significant burden of the expenditure relating to HIV/AIDS falls on the households who shouldered about 91 per cent of the expenditure. Public and External / NGOs shared about 4 per cent respectively. Thus the pattern which has evolved indicates as well as supports the findings of the other health financing studies in the Indian context which have shown time and again that it is the household expenditure which has a significant share in the total health expenditure. Out of the household expenditure, care and treatment consumes more than 90 per cent of the total.

The major issue that has been at the center of discussion as far as HIV/AIDS related expenditures is about the share of Health and Non Health Components in the total. Our analysis shows that within the domain of public and NGO (External) expenditures such a argument has come out to be true. For example the non health expenditure accounts for about 83 per cent of the resources while only about 16 per cent of the resources do get utilized for health per se components.

As far as the total spend is concerned, the NGO (External Sector) and the Public appear to be marginal players. Hence the need is felt to enlarge the resource envelop of the public expenditure and also to enhance

and strengthen the network of facilities for the effective prevention and management of the disease. A look at the expenditure arranged by the Financing Sources and Health Care Functions show that Prevention receives about 8 per cent of the resources. Care and treatment got the highest spend with about 84 per cent of the share.

Differential Financing For Untied Funds: An Evidence Based Approach

NEHAL JAIN
Health Policy Analyst

VARUN SHARMA
Research Adviser

PRAKHYA BHAT
Research Assistant

Centre for Budget and Policy Studies (CBPS)-Bangalore

Healthcare in India is financed through a number of sources. Public sector constitutes 19% of overall health spending in India. In the recent years, to achieve the Millennium Development Goals, government of India has taken initiatives to promote healthcare financing under its flagship programme of National Rural Health Mission (NRHM), which provides a basket of various schemes and programmes to promote "Health for all". Main objective of NRHM is to build a strong three tier public health infrastructure which would lead to affordable healthcare services to masses. Under NRHM regime, funds are allocated from centre to state to district under a core banking system. NRHM also provides provision for untied funds under the set of "NRHM Additionalities" to cover unforeseen expenditure and other innovative ideas. This paper focuses on the flow of funds under untied fund category to public health facilities, its current utilization pattern and problems in utilization of funds. The study was conducted in two districts of Karnataka state namely: Udupi and Bangalore Urban. All in all 46 health facilities were covered and data on the flow of untied funds, utilization was collected from 92 stakeholders managing these funds. Based on the data collected for three years (2008-09, 2009-10, 2010-11) regarding flow and utilization of untied funds paper proposes an alternative approach of financing which serve the purpose of equity and efficiency more effectively.

Safe motherhood practices and its determinants: A study among young married women in Karnataka

A.K.RAVISHANKAR,
Assistant Professor

K.KANMANI, S.GAYATHRI AND R.DEVANATHAN
Research Scholars
Department of Population Studies, Annamalai University, Annamalainagar 608002

Utilization of health services is affected not only by access but also by demand for services, which is determined largely by socioeconomic factors, personal health beliefs, and perceptions of illness. A number of studies have assessed the role of socioeconomic and demographic factors in influencing demand for and utilization of maternal and child health services. Under this backdrop an attempt was made to investigate the safe motherhood practices among young mothers in Karnataka state and to explore the influence of socio-economic and demographic characteristics on availing pattern of obstetric care and natal care service among the study population.

Data were drawn from District Level Household Facility Survey -III (2007-08). The study focuses on most recent pregnancy/child birth to the currently married women that took place during three years prior to survey. In this study totally 9505 young women aged 20-29 were considered for analysis. Logistic regression models have been used to estimate effect of covariates on availing of natal care services.

Overwhelming majority of the young respondents (90.4 percent) received any one of the ANC services in Karnataka. The majority of women in all religious groups received antenatal care. Nonetheless, there is substantial variation by religion in the likelihood of women receiving antenatal care. The likelihood of having received any one antenatal care, increases sharply with the household's wealth index (poorest 76.6percent and richest 98.8percent) as well with educational attainment of the respondents (illiterates 79.3percent and degree/diploma and above 98.5percent). Multivariate analysis result for the present study shows that all the socio-economic, demographic and cultural factors does not statistically significant, only the level of education, age at marriage and wealth index show a strong association. The results of the logistic regression analysis on institutional deliveries with those of home deliveries show that institutional deliveries are positively and significantly associated with the socio-economic, demographic variables (except age, religion, caste, parity).

Safe motherhood practices and its determinants of young mothers studied in this paper revealed that the natal care seeking behavior among the young communities is better. Further, the above discussion clearly shows that the utilization of any one antenatal care services is very encouraging in this community however receiving full ANC package is not a common practice among the young population.

Efficiency of Radiology services: A Case study in Karnataka

SHEKAR BABU AND OTHERS
Amrita School of Business, Bangalore

Hospitals play a vital role in the health and well-being of people. In recent times there has also been an increase in the number of patients visiting the hospitals owing to various reasons. In a country like Indian where the hospital to patient ratio is very high it is essential to focus towards improving internal processes in order to attain maximum efficiency levels. With the increasing numbers of cancer and related incidents in India, radiology departments in the hospitals play a critical role in the diagnosis and treatment process. Besides, radiology Department also one of the important source of revenue generation for hospitals. The radiology department provides imaging services like X-ray, CT, MRI and Ultrasound scans and this has contributed to enhanced diagnosis of patients and consequently improved medical treatment world over. With the increasing numbers of patients visiting the radiology department in hospital followed by lack of advanced support from IT that can be used in radiology, coupled with lack of trained administrative and technical staff has created bottlenecks in the Radiology department's process. This operational bottlenecks or inefficiency increase in the waiting time of patients and report generation time has caused inconvenience and dissatisfaction to the patients and has resulted in inefficient utilization of existing services to a number of deserving patients.

In this context, our attempt in this paper is to understand and analyze the requirement of Radiology services in Karnataka and measure the (in)efficiency in terms of process flow and waiting time through a primary survey in a hospital with radiology department in Karnataka. Our results and analysis suggest that there is substantial scope to improve the efficiency of radiology departments in Karnataka that not only help in catering to more patients but also help increasing revenue for the hospitals.

Geographic Constraint to Institutional Delivery in Rural India: An Instrumental Variable Approach

SANTOSH KUMAR, EMILY DANSEREAU, CHRIS MURRAY
University of Washington

In this paper, we examine if access to health facilities improves institutional birth delivery in a resource-constrained country like India. Using a household- and village-level health survey, we find that women living closer to health facilities have a higher probability of in-facility births. A one kilometer increase in the distance to the nearest health facility decreases the probability of institutional delivery by 0.8%. This result does not change significantly even after we account for endogenous placement of health facilities. The results of Two-Stage Residual Inclusion (2SRI) and IV-Probit models suggest that an additional travel of one kilometer decreases probability of in-facility delivery (IFD) by 4.4%. The policy simulation result suggests that, the mean probability of in-facility delivery increases when the density of health facility is increased. Overall, results suggest that geographic distance is an important barrier to service utilization and increasing the density of health facilities or improving transport infrastructure may be an important policy tool to improve utilization of health services in developing countries.

The effect of self help groups on access to maternal health services: Evidence from rural India

SOMEN SAHA AND PETER ANNEAR
Nossal Institute for Global Health, University of Melbourne, Victoria, 3010, Australia.

SWATI PATHAK
Indian Institute of Management, Ahmedabad, Gujarat 380015.
somens@student.unimelb.edu.au

BACKGROUND

The main challenge for achieving universal health coverage in India is ensuring effective coverage for poor and vulnerable communities, with high levels of income and gender inequity in access to health care. Self help groups (SHGs), a small economically homogeneous affinity group of the rural poor voluntarily coming together to save small amount and provide collateral free loans, is considered the cornerstone of much of the microfinance activity. SHGs are perceived to influence health outcome, particularly maternal and child health knowledge and service utilization. Evidence about the impact of SHGs on health has, however, have been derived from pilot level interventions and is thus limited in scope. Widening this scope by using data from the national District Level Household Survey (DLHS-3), this paper analyzes the influence of the presence of SHGs on maternal health service uptake in rural India.

METHODS

DLHS-3 collected information on 643,944 ever married women from 22,825 villages in India. The primary predictor variable was presence of SHG in village. The outcome variables were: institutional delivery; feeding newborns colostrums; knowledge about female sterilization, IUD, oral pills, emergency contraception, and female condom; and ever used oral pills, IUD, and female sterilization. Stepwise logistic regression was applied to estimate the influence controlling for respondent education, occupation, heard or seen health messages, availability of educational facilities, and the existence of a village health and sanitation committee.

RESULTS

Respondents from villages with SHG were more likely to have delivered in an institution, feed newborn colostrums, know and utilize family planning products and services. These results are positive and significant after controlling for individual and village level heterogeneities, and are consistent with existing literature that the social capital generated through women's participation in SHG, influence health outcome.

CONCLUSION

The study concludes that the presence of SHGs in a village is associated with higher knowledge of family planning and maternal health service uptake in rural India. Also our results indicates the need for complementary health programmes to build up on the solidarity and social capital generated as a result of the association, to have maximum impact on community health. To achieve the goal of improving public health, there is a need to better understand the benefit of systematic collaboration between public health community and these grassroots organizations.

Patterns and Determinants of Gender Bias in Child Health in India

NILANJAN PATRA
Institute of Health Management Research (IIHMR), Kolkata. nilanjanpatra@gmail.com

The study will make an attempt to identify patterns of gender gap in child health in India and their determinants, and examine the possible role of female education and women's agency in reducing the gap. It will apply Borda rule, Principal Component Analysis, Logistic regression techniques on three rounds of NFHS data. Children under three years of age are the units of analysis.

With the help of 21 selected indicators of health-seeking behaviour and health outcome, it is shown that there are ample evidence of varying level of gender gap exists in all the states of India. It is found that the gender gap in various health outcomes are not much related to the gender gap in various indicators of health-seeking behaviour. However for the girl children's health achievement, the indicators of health-seeking behaviour are significantly related to the indicators of health outcome. It is also shown that any consistently robust pattern of gender bias against girl children in child health is not present in India. But there is a consistent pattern of girl children's absolute health achievement.

Hence we focus on the girl children exclusively and tried to identify the determinants of health achievements for girl children. Given the Rawlsian theory of justice, the same determinants will, in turn, be able to reduce gender bias. We analyse the effects of some selected demographic and socioeconomic variables on the chance of full immunisation, chance of medical treatment in diarrhoea and medical treatment in fever/cough, chance of breastfeeding, chance of malnutrition and chance of mortality for girl children. Except for a few cases, the results are consistently robust. It has been found that, among others, female education and women's empowerment do have a positive role in reducing gender bias in child health in India.

Domestic violence during pregnancy: A study on prevalence of miscarriages and neonatal mortality due to domestic violence

VIJAYA LAKSHMI SHARMA
Research scholar, Sociology and Social work, AMU Aligarh
vijaylaxmi.agra@gmail.com

OBJECTIVE

To investigate occurrence and timing of domestic violence during pregnancy and its consequences as miscarriage and neonatal mortality.

METHOD

It is a quantitative study based on the analysis of interview survey conducted in Agra district in west Uttar Pradesh. After a pilot study, a purposive sampling technique was used for data collection. In total 250 violence survivor who had one or more pregnancies has been selected for the purpose of this study.

FINDINGS

Suggest that the health consequences of domestic violence-in terms of pregnancy loss and neonatal mortality-are considerable. 86.4 percent of pregnant women's were beaten during pregnancy period, 16.4 percent miscarriages and 5.6 percent infant mortality occurred due to physical violence during pregnancy.

Socio-economic and Gender Inequalities in Health Status, Health Access and Health Expenditures among Elderly in India

ANOSHUA CHAUDHURI
Associate Professor, Department of Economics, San Francisco State University
anoshua@sfsu.edu

Rapid aging in India and slow dissolution of traditional inter-generational family support has prompted a demand for policies to support the elderly, particularly the impoverished. In 1999, National Policy on Older Persons was announced that subsequently introduced cash transfer schemes such as Old age pension, widow pension, Annapurna, etc. This paper examines socioeconomic and gender inequalities in health status, treatment and out-of-pocket health expenditures for the Indian elderly using the 2005 India Human Development Survey. We also examine whether receipt of cash transfers by the elderly have any impact on their health and health-related decision-making. Results indicate that women have worse health compared to men but men are more likely to be treated. There is significant pro-rich bias in health status and health utilization. Disparities related to caste, location and poverty exist as well. Gender and socioeconomic differentials do not seem to disappear or get reversed with the receipt of cash transfers. While health expenditures increase in absolute terms with the ability to pay, predicted share of health payments for the elderly decrease with increasing ability to pay. Despite existing cash transfers, this indicates a regressive health care system for the Indian elderly highlighting the need for more help for the oldest and the poorest.

Urbanization and Health Status of the Elderly: Evidence from India

YADVENDRA SINGH
Ph.D Scholar, Centre for Study of Regional Development, JNU, New Delhi

KAUSHALENDRA KUMAR
Research officer, WHO SAGE India, IIPS, Mumbai

The proportion of urban population has increased from 11 per cent in 1901 to 28 per cent in 2001 in India. Unplanned urbanization has led to environmental hazards in cities, which adversely affect the health of the people in general and the elderly in particular. This study examines the health condition of the elderly in the urban areas. In terms of physical mobility, there is relatively higher proportion of the urban elderly confined to bed, and the difference is significantly higher for the urban poor families. Similarly, the prevalence of chronic ailments is higher for million-plus cities compared to less populated cities, which can be attributed to poor environmental conditions in the widespread slum areas in bigger cities. These findings suggest that living conditions and the environment in the urban areas should be improved and all the urban elderly should be provided with universal health insurance schemes to mitigate the burden of disease.

Age Structure Transition and Health Expenditure in Southern States of India

C M LAKSHMANA
Associate Professor, PRC, ISEC, Nagarabhavi, Bangalore-72

Over population, persistence of poverty and low status of socio-economic development have been put more pressure on available resource in India and it has posed several policy implications. In which the prime basic needs of health care provision is one of the major administrative task to the respective states in the progressive country of India. However, the health care access and services are not been similar across the states. This is due to over population and resulted higher dependency of children population as well as elderly (60+ populations) in the total. This will have necessitated public health care facilities and hence it requires higher monetary allocation. However, in a given area/region evidence for higher fertility rate it would usually necessitate higher allocation for maternal and child health care services. In this paper an attempt is made to examine the relationship between dependency ratio and health care expenditure (medical, public health and family welfare) in the social service expenditure as well as the proportion of health care expenditure in the Gross State Domestic Product (GSDP) in select four southern states of India. The analysis is based on available secondary data for the various years.

Aged Rural People and Their Health Problems in Kanyakumari District

J. CYRIL KANMONY
Associate Professor of Economics
Scott Christian College (Autonomous), Nagercoil

Due to better health care facilities, greater economic security and a big advancement in the medical field, two transitions (demographic and epidemiological) are taking place in the world. These transitions lead to a decline in the death rate and an increase in the life expectancy at birth, in the number of aged people and in the incidence of diseases that affect only the aged people. In India, there were 24 million elderly people in 1961 and 77 million in 2001 and is expected to reach 198 million in 2030. As population getting aged their disease burden increases. In Kanyakumari district also there is a large number of aged people and so their problems should be brought to the notice of authorities and the present study is conducted to attain the following objectives.

1. To understand the disease burden of the aged.
2. To calculate the share of healthcare expenditure to the monthly income of the surveyed respondents.
3. To estimate the economic impact of the rising healthcare expenses on the families having aged people.
4. To enlist the reasons for rising out-of pocket healthcare expenditure.
5. To compare certain variables such as aged female percentage and the relationship between income, education and age and healthcare expenditure with already established facts.

The following hypotheses have been formulated and tested.

i. The relationship between age and healthcare expenditure is negative
ii. There is no significant correlation between education and healthcare expenditure
iii. The positive correlation existing between income and healthcare expenditure is insignificant.

The study made use of both primary data and secondary data. The primary data have been collected from 200 sampling units. At the first stage, two taluks out of four taluks were selected at random. Then, from each selected taluk, one village panchayat was selected. After that, sampling units were selected at random after conducting a pilot study. The required data have been collected with the help of a scientifically prepared interview schedule. Very few statistical tools have been applied to make the study analytical and scientific. The whole analysis after introduction is presented in three sections. The first section gives a bird's eye view of the health problems of the aged, the second section presents the area specific information and the third section lists out the conclusions arrived at and policy implications.

The aged people are encountered with a number of problems such as low earning, limited care and high healthcare expenditure. Earlier studies show that the type of diseases also changes as time passes. The top diseases that disturbed the elderly people and their percentages of contribution in 1980 are vision impairment 88%, locomotive disabilities 40%, neurological diseases 18.7%, cardiovascular 17.4%, respiratory diseases 16.1% and skin diseases 13.3%. However, in 2009, the diseases occupying the top ten places are, hypertension (39.53%), vision impairment (35.3%), arthritis (33.67%), COPD (19.92%), coronary heart disease (18.85%), hypertrophy of prostrate (16.23%), diabetes mellitus (15.23%) dyspepsia (11.03%), irritable bowel syndrome (9.21%) and depression (8.5%). The survey figures also show almost the same pattern, 33% with hyper tension, 26% with arthritis, 17% with vision impairment, 16% with

diabetics and 15% with COPD. It is already established that among the aged, women are more in number than that of men. It is proved in the survey also, 53%, are women. As far as health expenditure is concerned, it is reported that as people get aged, much expense is required to get treatment for their diseases. Households which have elderly people are making catastrophic expenditure. The per capita spending on health care of elderly people was four times higher than that of non-elderly people. It is inferred from the survey that the average monthly medical care expenditure is `1334.50 (47.54% of total income) against the monthly income of `2807. The correlation analysis shows that there is positive between age of elderly and medical care expenditure. There is significant positive correlation between education and medical care expenditure and between income and medical care expenditure. As aged people are much affected by the ever rising health care expenditure and many communicable and non-communicable diseases, they should be protected from all these problems by taking suitable measures.

Coping with Malnutrition & Morbidity among Children in India in the Context of its Financial Burden

MOUMITA MUKHERJEE
Doctoral Fellow (Health Economics), University of Calcutta, Kolkata.
mukherjee.moumita3@gmail.com

CONTEXT

Long term undernourishment makes children more susceptible to recurrent illness like gastro-intestinal problems and febrile illnesses. Treatment of such ailments involves a substantial amount of out of pocket expenditure on part of households.

OBJECTIVE

The present work attempts to discover whether households, whose children suffer from acute undernutrition related ailments in a country like India, are making catastrophic health payment, whether the catastrophic health payment is unequal by location of residence and economic status, whether households making catastrophic payment are vulnerable to future poverty and will measure the percentage of households vulnerable to help the policy makers to target the proper needy segment of the population through social protection.

METHODS

To investigate the objectives, the National Sample Survey Organization (60th round) data on Morbidity and Healthcare is used. The households were questioned on their health service uptake for treatment of major or minor ailments. This work included children under the age of five only. The information of children's major gastro-intestinal and febrile ailments treated inpatient during last one year preceding the survey and minor spells of such ailments treated during last 15 days preceding the survey are considered.

RESULTS

Richer, poorest and poorer income groups in rural area and middle income groups in urban area shows more than 50 percent of households incurred catastrophic spending whose children were hospitalized for major gastro-intestinal disorders. Percentage of households spent at catastrophic level for treatment of minor gastro-intestinal disorders of their children is higher among rural poorest population. Compared to gastro-intestinal disorders, minor febrile ailments affected more percentage of households. About 50 percent of poorest households in rural and urban areas have incurred catastrophic payment for major

febrile illness. More or less all the income groups have experienced consumption dispersion from the average pre-payment monthly consumption. Ninety percent of rural richer, 75 percent of rural poorest, 41 percent of urban middleclass are more vulnerable to future poverty after payment of treatment.

CONCLUSION

Not only reduction of undernutrition but also reducing the financial impact is important. The identified groups of households should be targeted to cover them under proper social insurance mechanism. Community initiatives are needed to help distinctive groups because centralized scheme may not mitigate specific problems. Spatial difference is also there and geographical clustering will be helpful to identify the vulnerable in small groups and then targeting them would be easier.

Understanding the role of Women's Empowerment in determining Child Stunting A Case Study of Eastern India and Bangladesh

ANKITA SIDDHANTA, APARAJITA CHATTOPADHYAY
M.Phil Student and Assistant Professor, IIPS
International Institute of Population Sciences, Mumbai-400088

Health of the people forms an integral part of the process of development. Based on this back drop, this paper is an attempt to study how women through the process of empowerment nurture her children.

The specific objectives are to understand the level of empowerment among the women and stunting in children under 5 years in selected geographical space i.e. Eastern India and Bangladesh, and also to study the level of women's empowerment in determining child stunting. The data sets used are National Family Health Survey (NFHS 2005-2006) for Eastern India and for Bangladesh, Demographic Health Survey (2007) .The empowerment of women has been measured by some direct and indirect indices. To understand the determinants of stunting, Logistic Regression is used.

Some of the results are that the Children are severely stunted in Eastern India than Bangladesh. Severe stunting is also high in Eastern India than Bangladesh. An important finding is that the bordering region of both the countries have lesser stunting than the other parts i.e. West Bengal, Rajshahi, Khulna have experienced stunting far less than the rest of the geographical space. Village community in both the regions witness more stunting than the cities. It has been observed that with rising educational level, stunting is decreasing significantly in both the areas. Interestingly, increase in work status has a positive relationship with child stunting. So empowerment plays a very important role to reduce child stunting in Bangladesh. Also, ability to take decision among women is having a marked effect on reducing stunting only in Bangladesh not in Eastern India.

Access and Using Pattern of Maternal Health Care Services by SC and ST Women in India

AYUSMATI DAS
Research Scholar in Population Studies CSRD, JNU, New Delhi-110067.
ayusmatijnu@gmail.com

PRATAP MOHANTY
Assistant Professor, IIFT, New Delhi

This paper is based on two research questions (i) does caste itself have any impact on antenatal care and safe delivery and (ii) does antenatal care affect safe delivery among the Schedule caste and tribe (SC/ST) separately. The data has been analyzed from the National Family Health Survey- 2 and 3 by using bivariate and probit regression. The result shows that these women could avail antenatal care equal to general if same socio-economic facilities would be provided to them but institutional delivery remained much lower for SC/ ST than of general after controlling socio-economic factors. Antenatal care indicators are enhancing the likelihood of institutional delivery among them. The main determining factors are mother's education, wealth index. Due to long distance SC/ST women are unable to reach health facility for delivery. The women are not going to institutional delivery as don't think it is necessity and mostly reported by economically sound women.

Utilisation of Reproductive Health Services by Tribals in Pachamalai Hills of Tamil Nadu

R.P.BUVANESWARI
Assistant Professor of Economics, N.K.R. Govt. Arts College for Women, Namakkal.

S.IYYAMPILLAI
Professor and Chair, School of Economics, Bharathidhasan University, Tiruchirappalli.

Every woman deserves a safe birth experience but half a million of women die every year at the time of pregnancy and child birth. Most of these deaths happen in the less developed and developing nations. NFHS 3 (National Family Health Survey) highlighted that 82.3 per cent of home deliveries were contributed by Indian tribal communities. Obviously, these women give birth at home without any medical care. This paper seeks to explain the reproductive health status of tribal villages in Pachamalai Hills of Tamil Nadu with interesting empirical evidences and discusses the constraints in the existing tribal reproductive health delivery system. Particularly the need to Sensitising the tribal women on maternal health to prevent the deaths of mothers and their infants.

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

Institute for Social and Economic Change,
Dr. V.K.R.V. Rao Road, Nagarabhavi,
Bangalore - 560072, India.
Phone: 91-080-23215468, 23215519. Fax: 23217008.
Email: admn@isec.ac.in

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