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Health System Strengthening and Reforms in India:
Retrospect and Prospect

IHEPA

Azim Premji University

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

Department of Economics
University of Rajasthan
J.L.N. Road, Jaipur – 302 004
Phone: 0141-2711070
Web: www.uniraj.ac.in

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

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Informal Health Providers Market in Indian Sundarbans: An application of New Institutional Economics

Debjani Barman, Barun Kanjilal

This paper applied New Institutional Economics (NIE) to explain the informal health providers market in Indian Sundarbans. Started with brief discussion on NIE, the paper focused on Transaction Cost Economics (TCE) and its application in various discipline and then on informal health care market. Based on primary data, the paper explored how the informal providers (IP-s) are minimizing the transaction cost based on bounded rationality and opportunism. It showed how by integrating various service and guided by local norms, tradition and customs, the IP-s are successful in minimizing the transaction cost and rule the health care market in a geo climatically vulnerable area like Indian Sundarbans. The paper then concludes with some institution based policy approaches to deal with the unregulated and growing informal health providers market.

Consequences of Local Level Intra-Sectoral Linkages for Health Care Governance

Niyati Joshi

Local level linkages help development of sustainable governance infrastructure. In this context, this paper attempts to study health care governance with the help of nine components contributing to a sustainable health care strategy. Selected components of program at the local village level-SHGs, Citizen Leaders, Village Panchayat Health Committee and NGOs are taken to measure local level intra-sectoral linkages about selected components of RCH. The study is based on quantitative data collected in 2006 from Faizabad District of Uttar Pradesh from 340 women self help group members and 225 health care citizen leaders. Case studies and FGDs have also been undertaken to corroborate the findings. To understand local level intra-Sectoral Linkages, multi-stage log-linear model has been applied and model has been selected with the help of Brown Screening Technique. The study finds out that intra-sectoral linkage brings a sustainable RCH programme and finds out that the best form of sustainable health care programme starts with citizen leaders as diffusion point and operates through political commitment followed by administrative commitment. The statistical models suggest that this type intra-sectoral linkage can be replicated for sustainable health care governance.

Economic burden of injury in North India

S Prinja, J Jagnoor, AS Chauhan, S Aggarwal, RQ Ivers

Background: Road traffic injuries in India have been estimated to account for 3 % of GDP. Thepotential catastrophic effects of injuries on families due to medical care, particularly those of low socioeconomic status, has generated a need to document burden in economic terms.

Methodology: A total of 227 patients who were admitted for at least one night in a tertiary care hospital of Chandigarh were recruited. Data were collected on the type of injury, OOP expenditure and its coping mechanisms. Cases were followed-up at 1st, 2nd and 12th month after discharge to collect information on OOP expenditure.

Results: The average OOP expenditure per hospitalization and up to 12 months post injury was USD 388 and USD 1046 respectively. Mean OOP expenditure for RTI and non RTI cases at the time of hospitalization was USD 400 and USD 369 respectively. The prevalence of catastrophic expenditure was 30%, and was significantly associated with lower income quartile (OR-23.3, 95% CI: 5.7-93.9), inpatient stay greater than 7 days (OR-8.8, 95% CI: 3.8-20.6), major surgery (OR-4.9, 95% CI: 2.2-10.8) and occupation as wage labourers (OR-8.1, 95% CI: 1.6-39.9). Nearly 34% patients reported distress financing (DF) to cope with OOP expenditure.

Conclusion: High private out of pocket (OOP) expenditure for treatment of injury poses significant economic burden on the families. Measures aimed at increasing public health spending for prevention of injury and, providing financial risk protection to those injured deserves urgent priority in India.

Does increasing longevity lead to increasing disability? Evidence from Indian States

Jayanta Kumar Bora & Nandita Saikia

Background: Recent studies uncovered continuous increase in life expectancy (LE) at birth in India and states. Does increasing longevity lead to increasing disability? How are the different levels of LE associated with different proportions of life in good or in bad health? Present paper aims to answer this question by relating the most recent disability data available in 2011 census with corresponding mortality data in Sample Registration System data.

Objectives: 1) To examine differential pattern of disability among older adults defined as aged 60 and above 2) to examine the association between LE and healthy life expectancy (HLE) at birth and at age 60 in India and states.

Methods: Two measures are used to quantify disability in Indian states. First, We calculate disability rates by age, sex, residence and states; secondly, we calculate healthy life expectancy (HLE), disabled life expectancy (DLE) proposed by Sullivan (1971) and proportion of life spent in poor health.

Findings: Almost all types of disability increase with increasing age. There exists greater prevalence of disability in rural areas, among elderly populations and among the oldest old women in India. Disability prevalence rate is systematically more among Indian men than Indian women until age 79. Among oldest age group (80+), Indian women are more disabled than men. Among all kinds of disability among older adults, movement disability prevalence rate was the highest. On average both males and females are expected to live about 2 years in unhealthy condition. In general, there exists positive association between LE and HLE. No significant correlation is found between LE (at age 0 & 60 age) and proportion of life spent in poor health in Indian states.

Conclusion: These findings recommend that policy and intervention on disability should be pro-rural, pro-gender and pro-elderly to reduce disparity in disability among Indian population. Further, modification of census disability definition as per WHOs ICF model is urgently needed for accurate measurement of disabled population in India.

The role of Human Resource for Health in improving Health Outcomes: A Preliminary Analysis

Nutan Tigga

Huge disparity exists in the health outcomes across Indian states. A whole range of innovative interventions are made to bring about changes in these health outcomes which does not offer a homogenous response. This leads one to believe that intervention however ideal it may be, the response in outcome is conditioned by a process involving a perfect match between the needs and the provisions. The two important outcomes which this study focuses upon are infant mortality and maternal mortality rate. A range of attributes are cited to explain these differentials in outcomes; but it still remains far from convincing to justify extreme differentials that prevail despite all our efforts to address them. One of the obvious input indicators- human resource for health (HRH) is ought to have a bearing on health outcomes as they make a difference to making things change on ground. However, there seems to be no systematic association between the strength of HRH and the corresponding health outcomes. Figures reveal that there are states which have impressive outcomes and human resource for health; alternatively there are states which report worse outcomes along with poor numbers of health workers. This does not suffice to claim that better HRH will always ensure better health outcomes. In fact, this makes one to search for an ideal or efficient level of HRH that can guarantee desirable health outcomes. With this pre-text the present study is a modest attempt at comparison of health outcome in keeping with the health workers in states of India. In other words, this is an attempt at adjusting differentials in health outcomes in tune with the differentials in human resource for health.Using basic methods of standardization, we propose to read differentials in health outcomes across the states of India. In the process, we adjudge the most efficient HRH for the best health outcomes and assess the shortfall in HRH for various states of India.Such an analysis assumes significance owing to the fact that the differential assessment in outcomes ismade more robust when assessed in accordance with the strength of HRH. This being a prerequisite for an efficient health delivery system, focus is required in the quantity and quality of health workers. Moreover, there has been growing awareness in developing a strong HRH for reducing mortality rates and improving the health scenario of the country.

Health Reforms in Human Resources, India: A Way Forward

Swati Katoch, Shankar Prinja

Background: A health system is inadequate and inefficient without a strong health workforce. It has often been seen that human resources have been a neglected component of health system in India as compared to the reforms undertaken to strengthen the structural and financial component. Post independence, keeping the vision of primary health care proposal in Alma Ata declaration in 1978, strategic reforms were undertaken but with the increasing unmet need of health services, shortage of health workforce needs to be addressed.

Objective: This paper reviews the situation of human resources in health sector in India and illustrates the reforms undertaken in health sector in human resources in India along with the challenges and hurdles.

Methodology: Review of literature was done to assess the overall health reforms in human resources in global and Indian context. Considering the current scenario and shortfalls, various strategies have been discussed to up scale the human resource requirement in health.

Conclusion: Even though various reforms have been undertaken in India to strengthen the human resources in health, there's still a long way to go.

Health Workforce: Issues and Challenges Among the Major Indian States

R. Devanathan & S. Gayathri

Availability of adequate number of health workforce at health facilities is essential for providing an effective health care service for the population. Strenuous efforts have been made in our country to address the need for health workforce since independence. However, shortage exists in all categories of human resources at different levels. Inequalities in the availability of health workers exist in India. Under this circumstance this paper made an attempt to analysis the issues and challenges prevail in the health work force among the three major states – Rajasthan, UP and Bihar in India. Although the health workforce has expanded greatly in last few years, the problems of imbalances in their distribution persist. It is noticed that Bihar and UP states are facing acute shortage of health workforce than the state of Rajasthan. As India seeks to achieve universal health coverage by 2020, the realization of this goal remains challenged by the present lack of availability and inequitable distribution of appropriately trained, motivated and supported health workers. It is concluded that there is an urgent need to adopt sustained and innovative actions to increase the density of health workers, especially doctors, nurses and female health workers. Special efforts should be made to address the shortage of specialist allopathic doctors at district and sub district hospitals.

Comparing Relative Effect of Human Resource and Economic Resource on Utilization of Maternal Health Care Services in India: A Multilevel Analysis

Swati Srivastava

Using a cross sectional data from DLHS-3 (2007-08) and Multilevel logistic regression analysis, this paper examines the relative effect of human resources and economic resources on the utilization of maternal health care services in India by measuring the impact of mother's education and household wealth at individual, community and district levels. The result of second order predictive quasi likelihood (PQL2) model shows that significant amount of variation in use of maternal health care services has been observed across communities and districts. The result shows that simultaneous adjustment of education and wealth reduces the effect of both at each level compare to only education adjusted and only wealth adjusted model. Compared to the model

including only education effects, adjustment for economic resources reduces the effect of mother's education at all levels. In contrast, adjusting for education reduces the effect of household relative wealth to a greater extent at each higher wealth quintile, resulting in flattening of the household wealth effect on the likelihood of the maternal health services. This accumulated research has led to the firm conclusion that the overall level of mother's education compare to economic status is more important determinant of utilization of maternal health care services in India.

Inpatient and Outpatient Health Care Utilisation and Expenditures among Older Adults aged 50 years and above in India

Ankit Anand

There is high need to understand the health care utilization and burden of health care expenditures among older adults in India. The objective of the study is to assess the utilization of outpatient and inpatient care among older adults and analyze the out of pocket health expenditure incurred during the recent outpatient and inpatient care visit. The data from the Study on Global Ageing and Adult Health (SAGE) Wave1 was used. 87.5 percent of older adults aged 50 years and above have received outpatient health care in last 12 months. 14.6 percent of older adults aged 50 years and above have received inpatient health care services during last 3 years. Among adults who received outpatient care, 61.8% of them received in Private health care facility. Similarly, among older adults who received inpatient care, 58.4 of them received in private health care facility. Marital status, religion, caste were significantly associated with health care utilization of health care. Marital status, caste, wealth quintile, working status of older adults was significantly associated with out of pocket health care expenditures. Presences of chronic morbidity also significantly associated with increased utilization and out of pocket expenditure on health care services. The older adult population in India will increase in near future. Public health system must adopt soon to meet the need for this section of the society.

Relying on whom? Health care Expenditure among Elderly in Bargarh District of Odisha

Rinshu Dwivedi, Pallavi Banjare & Jalandhar Pradhan

The rapidly growing elderly population in India posses a major challenge for health care system, especially in terms of equitable provisioning of health care facilities by the households. This study uses the primary data based on the sample survey of 310 households and examines the health care expenditure among elderly population and its association with different socio-economic covariates in Bargarh district of Odisha. The study shows that spending on health care differs on the basis of various socio-economic characteristics like age, gender, income, social group, living arrangement, morbidity, economic dependence, episode of illness, marital status etc. Results

indicate that in terms of the morbidity, elderly population was suffering more from the problem of arthritis. Elderly reported their health as poor and disease prevalence among elderly was high. First preference for the treatment among the elderly was government hospitals in the first episode of illness. Major source of financing for elderly was their son in both the episodes of illness. Spending on the health care increases with economic status, independent living, higher literacy rate, separation from their spouse and with risk behaviour.

Duration and Inequality in Untreated Mental Illness: A study of persons with mental illness from Yerwada Mental Hospital, Pune

Anil Vartak, R. Nagarajan & Nilesh Kamble

Mental disorders have been neglected among various health issues. This neglect is found at the macro level as well at the micro level. At the family level, significant delay in initiating psychiatric treatment is observed. Duration of delay in initiating psychiatric treatment, on one hand, indicates neglect of it, and on the other, it is important because greater delay makes prognosis of these disorders weak.

This study was conducted with a view to understand duration of delay in initiating psychiatric treatment, role of non-psychiatric treatment in such delay among households belonging to various socio demographic groups. In this study 249 sample caregivers visiting Out Patient department (OPD) section of Yerwada mental Hospital, Pune were interviewed with the help of semi structured questionnaire. Quantitative and some qualitative data were also collected. Using SPSS, data was analysed in order to find out duration of untreated mental illness and length of non-psychiatric treatment (NPT). These results were further analysed according to various socio demographic variables like gender, caste, religion, place of residence and age.

Main conclusions of this study are- duration of untreated mental illness is significant, 35.75 months in this study and Non psychiatric treatment (NPT) is first choice of treatment for majority of the households. Moreover, we found significant inequality in duration of untreated mental illness and length of non-psychiatric treatment (NPT) when the data was further classified according to various socio demographic variables.

Out of Pocket Expenditure and Catastrophic Health Expenditure on Hospitalization in Haryana State, India

Deepshikha Sharma, Shankar Prinja, Arun K Aggarwal

Objective: To assess prevalence and determinants of out-of-pocket (OOP) expenditure and catastrophic health expenditure (CHE) on hospitalization in Haryana state, India.

Methods: Data collected as a part of a household level survey conducted in Haryana 'Concurrent Evaluation of NRHM: Haryana Health Survey' was analyzed using SPSS 16.0 software. Descriptive analysis was done to assess socio-demographic characteristics, occurrence of hospitalization and treatment seeking behavior. Multivariate linear and logistic regressions were done to find determinants of OOP expenditure and CHE respectively.

Results: Hospitalization rate was found to be 3891 persons per 1, 00,000 population. Mean OOP expenditure on hospitalization was INR 19926. Maximum expenditure was incurred on medicines (40%). Multivariate analysis showed age, gender, quintile, type of ailment and provider had significant association with OOPE ($p<0.01$). Prevalence of CHE was 25.2% with higher prevalence in males (odds ratio = 1.34), S.C/S.T (odds ratio=1.29), illiterates (odds ratio = 2.40), poorest quintile (odds ratio= 2.52), injuries (odds ratio = 4.13), private provider (odds ratio = 2.64).

Conclusion: Hospitalization results in significant OOP expenditure and CHE. A mean OOP expenditure of INR 19926 was observed. One fourth of the entire study population incurred CHE Maximum expenditure was incurred on medicines followed by hospitalization charges.

Performance-based Financing in Healthcare: A Case Study from the U.S. and its Lessons for the Indian Context

Bijan J. Borah, Yang Qiu, Nilay D. Shah, Patrick P. Gleason

India's healthcare system can potentially emulate performance-based financing (PBF) strategies that have been tested and implemented in the U.S. or other healthcare systems. One such PBF strategy is Medicare Star rating program. Medicare is the largestgovernment insurance program in the U.S. that provides health insurance to the elderly and the disabled. The Star rating program provides performance-based financial incentives to private drug insurance plans for delivering quality healthcare to the Medicare beneficiaries. Adherence to medications for chronic conditions including diabetes, hypercholesterolemia and hypertension is a key component of the Star program. Insurance plans have adopted different strategies to improve medication adherence of their enrollees, which in turn would improve Star ratings and qualify these plans for higher financial rewards. One such commonly adopted low-cost strategy is to send letters to prescribing physicians of non-adherent patients. However, evidence on the effectiveness of prescriber mailing for improving medication adherence is very sparse. Using data from a large group of drug insurance plans, we have shown that prescriber mailing is associated with improved medication adherence. Our study demonstrates how low-cost strategies such as prescriber mailing may be adopted in the Indian context, and how such programs may be evaluated for their effectiveness.

Behavior and Attitude towards Avoidance of Regular Health Checkups: A Case Study from Telangana State in India

Badri Narayan Rath & Amrita Deb

This paper examines the determinants of avoidance of regular health checkups in rural India using primary data through a field survey inTelangana state, India. The decision of a household for going regular health check-up is

considered as a binary choice variable and estimated through logit model. The results indicate that demographic factors like gender and age, economic factors such as family income and family health expenditure, distance, cost of availing a doctor and health locus of control are the key determinants for avoiding regular health check-up in rural India. However, due to increasing awareness among the rural populationover the years, majority of the respondents reported that willing to pay a minimal amount of money if the facility for regular health checkups is provided by the government. The above findings suggest that government should provide necessary facilities and create awareness among the rural people for regular health check-up. Keywords: regular health check-up, willingness to pay, health locus of control, logit model, rural health care, rural India

Publically Financed Health Insurance for Poor: Understanding Rashtriya Swasthya Bima Yojna (RSBY) in Odisha

Rinshu Dwivedi & Jalandhar Pradhan

Evaluating the effectiveness of the "targeting" approach in the Rashtriya Swasthya Bima Yojna (RSBY), the present study examines the current situation of RSBY programme in Odisha. By using the available data sources the study focuses upon various aspects like the proportion of the eligible people below the poverty line, the families enrolled for the scheme and the fraction of those hospitalised who are covered in this scheme in Odisha in 2012-13. The implementation of RSBY in Odisha has started in 2009 with the introduction of this scheme in six selected districts and currently operational in all 30 districts of the state. Until 2013, only around 65 per cent of BPL families in the 30 districts had been covered under the RSBY in Odisha. There are large variations across the districts and despite the strengths of its design, the RSBY requires more institutional capacity to supervise and improve the system over time. There are also gender disparities in the RSBY coverage in Odisha. However, in the long run, the government should strengthen the resource-starved public health system.

State Insurance Schemes in Karnataka and Users' Experiences – Issues and Concerns

Saligram P, Nagavarapu S, Giske A, Kilaru A

Background: Karnataka has been a forerunner for state-supported insurance schemes. Today, there exists a multitude of insurance schemes, each designed for different populations or purposes (with some overlap). The objectives for these schemes have been to improve access to health care and to prevent catastrophic health care expenses by providing 'cashless' care. This paper presents an overview of state insurance schemes in Karnataka, including their implementation, state finances and users' experiences with accessing them. Issues and concerns arising from the insurance-model in the context of Universal Access to Health Care (UAHC) are discussed.

Methods: This exploratory study used a variety of methods such as literature review, RTI applications, key informant interviews, group discussions, and a small cross-sectional survey of insurance users.

Conclusions: While the current plethora of state insurance schemes provides some access to care for poor populations, the problems are multi-fold and are weakening the public sector in health care provision.

Coverage and Financial Risk Protection for Institutional Delivery: How Universal is Provision of Maternal Health Care in India?

Shankar Prinja, Pankaj Bahuguna, Rakesh Gupta, Atul Sharma
Saroj Kumar Rana & Rajesh Kumar

Background: India aims to achieve universal access for institutional delivery. We undertook this study to estimate the universality of institutional delivery care for pregnant women in Haryana state in India. In order to assess the universal coverage of institutional delivery, we analyze service coverage (coverage of public sector institutional delivery), population coverage (coverage among different districts and wealth quintiles of population) and financial risk protection (catastrophic health expenditure and impoverishment as a result of out-of-pocket expenditure for delivery)

Methods: We analysed cross-sectional data collected from randomly selected sample of 12,191women who had delivered a child in last 1 year in Haryana state. Five indicators were computed to evaluate the coverage and financial risk protection for institutional delivery- proportion of public sector deliveries, out-of-pocket expenditure, percent women who incurred no expenditure, prevalence of catastrophic expenditure for institutional delivery and incidence of impoverishment due to out-of-pocket expenditure for delivery. These indicators were computed for public and private sector, for 5 wealth quintiles, and 21 districts of the state.

Results: The coverage of institutional delivery in Haryana state was 82%, out of which public sector contributed 65%. Around 63% of the women reported no expenditure on delivery in public sector. Mean out-of-pocket expenditure for delivery in public and private sector in Haryana was Rs 771 (USD 12.9) and Rs 12479 (208) respectively, which was catastrophic for 1.6% and 22% of households.

Conclusion: Our findings suggest that there is significantly high coverage of institutional delivery care in Haryana state, with significant financial risk protection in public sector. However, coverage and financial risk protection for institutional delivery vary substantially across districts and among different socio-economic groups, and this needs to be strengthened. Success of public sector in providing high coverage and financial risk protection in maternal health provides encouragement for the role which public sector can play in universalizing health care.

Closing the Health In-equity gap under the National Health Mission: A Case of Rhetoric versus Reality

Chandan Kumar

Poverty is the real picture of India. More than half of the country population is either living below poverty line or very close to subsistence levels. The vital role of social security support for health becomes critical in the present context. Good health is highly inadequate in India which restricts them to realize one's potential to participate and achieve well-being. The un-even distribution of health resources in the country deepens the problem health inequalities. The inter-sectionality of caste, class, religion and gender further aggravate the problem of inequalities of accessibility, affordability and utilization of available resources. This study tries to address different types of inequities present in country and complexities of mentioned inter-sectionality in it. Moreover, it also discusses government policies largely National Health Mission (NHM) to address the problem the grave problem of Health inequalities. The specific objectives of this paper are firstly to explore the concepts of equity underlined in the current framework of NHM. Secondly, the study seeks to examine the health inequities in availability, accessibility and affordability across socio-economic group and finally it analyzes the achievements of NHM and future challenges in achieving equity.A narrative review was undertaken and mainly policy documents and reports related to NHM were employed under the study. It covers both National Rural Health Mission (NRHM) and National Urban Health Mission (NUHM) was analyzed in the study. After the assessment of 15 documents (policies and evaluation reports) related to NHM, the results suggested that there are significant improvements in health infrastructure in EAGs states like Bihar and Utter Pradesh (U.P). It resulted in improvement of health indicators in these state. However, the gap between EAGs (Bihar & U.P) and better performing states like Kerala and Tamilnadu (T.N) has only marginally declined for the MMR, while for TFR it is same and for IMR it has actually increased. The results also clearly show that the infrastructure and manpower responsible for health are highly inadequate as per Indian Public Health Standard (IPHS) norms. To, conclude NHM also paves the way of privatization through encouraging private participation. More important, it is also important to address future challenges of health system to address the issue of health inequality which NHM largely made skewed presence.

Does Institutional Delivery Improve Neo-Natal Survival?: A Study of Empowered Action Group (EAG) States of India

Chhavi Paul

The most notable initiative to achieve health-related millennium development goal (reduction of child mortality and improving maternal health) in India was the launch of National Rural Health Mission (NRHM). Promotion of institutional delivery has been a key strategy to reduce maternal and neonatal mortality under Janani Suraksha Yojana (JSY). This paper examines the role of institutional deliveries in improving neonatal survival in EAG States. Data from Sample Registration System over 12 years and District Level Household Survey-3 is used. Bivariate regression and survival analyses are used. During last 10 years of NRHM, institutional delivery has increased significantly across states and socio-economic groups. Nevertheless, there is little sign of reduction in neo-natal mortality in EAG states. Moreover, it was felt that financially weak sector of society aspire to get well-equipped treatment especially reproductive right of safe delivery. Three delays exist that handicap women to avail required health care services: delay in decision to seek care, delay in reaching care and delay in receiving adequate health care. Probably, these delays are the cause of higher neonatal deaths across EAG states. It is suggested to increase investment on new born health centres to improve the quality of new born care in EAG states.

Disparity in Maternal, Newborn, and Child Health Services in EAG states of India

Ashish Awasthi, CM Pandey, Manisha Dubey, Uttam Singh

India is likely to miss the opportunity to achieve the fourth and fifth Millennium Development Goals (MDG). Increasing the coverage of key maternal, newborn, and child health interventions are essential to achieve the targets of MDG.

Study to examine the level and trend of coverage of set of interventions of maternal and child health services using coverage gap index (CGI) and also to examine the relationship between socio-economic development indicator (SEDI) and CGI in the districts of EAG states of India.

Data borrowed from Annual Health Survey and India Census to calculate the CGI and SEDI. Result shows that CGI is highest in Uttar Pradesh (37%) and lowest in Madhya Pradesh (21%) of CGI. Uttarakhand has the highest score of 0.64 in SEDI and Bihar is the worst performing state 0.21. CGI and SEDI are found as negatively correlated (r = -0.63). Average CGI was highest in the lowest quartile of SEDI. In regression analysis, coefficient of determination was 0.6 for linear relationship between determinants of SEDI and CGI. At district level, electricity followed by main worker and female literacy rate were highly correlated with all development indicators with CGI in all EAG states.

Increased coverage of health intervention leads to healthy birth outcome which enable children to reach their full potential and development of the nation.

Institutional Deliveries in Arunachal Pradesh: Status and Barriers A study with reference to Mebo-Subdivision

Apilang Apum & Lijum Nochi

Introduction: One of the important thrusts of the NRHM is to encourage institutional delivery. The provision of delivery services in the government health institutions is one of the components of the maternal care. The government of India has launched Janani Suraksha Yojana under the National Rural Health Mission in 2005 for

safe motherhood and seeks to reduce maternal and neo-natal mortality by promoting institutional delivery, i.e. by providing a cash incentive to mothers who deliver their babies in a health facility. However, the percentage of institutional delivery in Arunachal Pradesh is comparatively low and varies from rural to urban. Therefore the study is an attempt to identify the status of institutional delivery in rural areas and the barriers associated to it.

Methodology: The study is descriptive in nature and cross sectional in design. Data was collected using structured questionnaire. Women who had at least one delivery during the last five years were interviewed. Descriptive statistics was used to show the status and barriers of institutional delivery.

Results: The percentage of institutional deliveries was only 33.9 percent which is below the state average. Absence of complication during previous delivery (17.8 percent), feeling not necessary (17.3 percent) and sudden onset of labour (16.2 percent) were the major stated reasons for non-facility delivery.

Conclusion: More awareness is needed to create regarding the importance of institutional delivery among the mother. The government can also arranged training for the traditional birth attendant who conducted 22.9 percent of the delivery in order to ensure safe delivery..

Nutritional Consumption Pattern and Level of Nutritional Intake among Rural Households: A Cross-Sectional Study in West Bengal

Sanjit Sarkar & Chander Shekhar

The present study sought to understand the nutrition consumption pattern and their determonants among rural households of Bankura district, West Bengal. A cross-sectional study was conducted among 485 households selected from Bankura district in West Bengal of India. The study collected information regarding household's consumption quantity of various food items for thirty days of period. These consumption quantities were multiplied by calorie conversion factors given by Gopalan et. al to achieve the actual nutritional intake of the household. Nutrition value was converted for three spacific nutrition i.e calorie, protein and fat . Nutritional intake per capita was estimated based on adult male eqauavalent norms or consumer unit norms. Bi-variate and multi-variate analysis were applied in this study. Result shows that average calorie consumption is 2642 kcal/capita/day wehereas average protein and fat consumption are 66.6 gms and 27.8 gmg per capita per day respectively. Muslims households are more deprive than Hindus in the consumption of all the three nutrients. Schedule tribe (ST) households are more deprived compared to other caste households. Per capita calorie and fat consumption is found higher to male headed households but protein consumption is higher to female headed households. Result from multiple linear regression model shows that increase of one member in household will decrease about 2 percent calorie consumption than average consumption level of the household (β= -0.026; p<0.10; Cl= -0.05, 0.00).). Household's livestock availability show a significant positive relation with per capita per day calorie consumption (β = 0.007; p<0.10; Cl= 0.00, 0.01). A significant relationship is found with household's source of income and per capita calorie consumption. Like calorie, protein and fat consumption is also significantly associated with households' socio-demographic characteristics.

Impact of Mother's Health-Seeking Behaviour and Employment Status on Child Malnourishment and Access to ICDS: A Regional Analysis

Smritikana Ghosh & Arijita Dutta

Child malnutrition is one of the most debated issues in India, as even today, the country is home to highest number of malnourished children in the world. Several policy interventions have been taken, including the Integrated Child Development Scheme, to control this, but with little results. The long term malnourishment, captured by height-for-age or stunting, appears to be present across all strata of the society. It is a social construct, rather than related only to poverty. The main objective of this paper is to identify the impact of mother's health seeking behavior and her education and employment status on the child's growth trajectory. The study uses bi variate probit models on unit level data of NFHS 3, giving a number of socio-economic variables in control, to find that initiation to ante-natal checkup within first trimester of pregnancy significantly reduces possibility of stunting among children below 5 years in all regions, with highest marginal effects in highest stunting and most vulnerable regions. On the other hand, employment status can help to reduce the burden of malnourishment in those aforesaid areas, though mothers' education can play only limited impact. In case of access to ICDS, employed mothers use these facilities more as a crèche facility, rather than as a service provider to reduce malnourishment.

Assessment of Child Malnutritional Indicators in India with PCA

G.Naline

Despite the recent achievements in the progress of child health indicators in India such as mortality, morbidity and malnutrition, the fruit of the development has failed to distribute the achievements evenly among the States and also within states, being one State performing well in one indicator and not in other indicator. This paper focuses on the nutritional indicators of children in India and created a Malnutrition index with NFHS 3 data by using Principal Component Analysis (PCA). By considering the major indicators like height, weight, wasting and anemic, three factors were discovered which explains 65% of total variation. Factor scores were then used to derive standardized indices and quintiles. A KMO test was conducted to assess the appropriateness of using PCA.

Gender Inequality and Child Nutritional Status: A Cross-National Analysis

Anish Kumar Mukhopadhyay

Food security has specific importance for the women in developing countries. They are more likely to experience malnutrition and health related hazards than their male counterparts. The empowerment of women has a direct

impact on reduction of hunger. The study shows how nutritional status of children fares in a cross-national perspective with an improvement in gender specific achievement indicators. It also finds out the most significant variable that is responsible for having any possible trend between gender inequality and child nutritional status over time. Findings are an important cross-national extension of existing research, utilising new measures that capture the development dynamic.

Women's Decision Making Autonomy and their Nutritional Status within India's Socio-Economic Context

Swati Srivastava, Ashish Kumar Upadhayay

The objective of the paper is to explore the relationship between women's autonomy and their nutritional status in India. Using data from third round of National Family Health Survey (2005-2006) and multivariate logistic regression model this paper tries to answer the three core questions: is women's autonomy an integral determinant of women's nutritional status, does domestic violence associated with women's nutritional status and what are the pathways through which women's autonomy influence their nutritional status. Result shows that highest proportion (37.53%) of women with CED were observed when they have reported that their husband have final say in all of the decisions but lowest proportion of women with CED (15.3%) is observed when women reported that they have final say in all of the decisions. Women with lower autonomy are more likely (OR=1.35) to be undernourished than higher autonomy. Women's education, household economic status and husband's education are identified as major pathways through which nutritional status has been affected. Significant association has been found between women's attitude towards wife beating and their nutritional status. It is concluded that women's autonomy is an important determinant of their nutritional status and need to incorporate women empowerment as part of the nutritional strategy.

Impact of Public Health Spending on Health Status in India: An Inter-State Analysis

Ajay Sehgal & Sharanjit S. Dhillon

In a developing country like India, though the health expenditure is dominated by private spending, even then the public sector role in providing and financing health services assumes greater importance from the perspective of social welfare as well as ensuring equity. This study is an attempt to examine the impact of public health spending on health status in India. The study also attempts to analyse the health status in India based on health attainment indicators- infant mortality rate, life expectancy at birth and maternal mortality ratio. The study is based on secondary data. Tabular analysis and Panel data regression have been used for the purpose of analysis. The study brings out that public health spending is not a significant determinant of health status in India whereas country's per capita income and total fertility rate turn out to be significant variables in explaining variations in infant mortality.

Government Spending on Health in India: Some Hopes and Fears of Policy Changes

Shailender Kumar Hooda

The macroeconomic and health policies changes in India have generated some hopes, fear and complexity in public health spending. Health policies turned ineffective even to meet the required level of resources for providing basic health facilities. Fund allocation towards rural area (with missing health facility), preventive services, medicines and equipments recorded noticeable low and inadequate with declining trends. After National Rural Health Mission (NRHM-2005), public finds in health somewhat increased but remained lower than ambitious commitment of 2–3 percent of GDP. Central fund transfer to state, which were (before NRHM) passing through state budget now bypasses the state budget. This has resulted in discontinuation of some of the health programmes/schemes running in the states and also made the centre-state finance relation more complex. Adverse macroeconomic conditions, conditional central fund allocation criteria, inadequate absorptive capacity and priority of state are further slowing down effective policy implementation and progress in health outcomes.

Financial Management under NRHM in southern state of India: Analysis of its Trends and Patterns

Virupakshappa D Mulagund, P.M.Honakeri & N.A.Koujageri

Health is one of the important indicators reflecting the quality of human life. It is a basic need along with food, shelter, clothing and education. There is always a positive correlation between the health status of the people and economic development of the country. It is also one of the key variables that determine growth with human face. The study is aimed at analyzing the Trends of financial management under NRHM in Southern state of India, and to explain the components wise financial management under NRHM in southern states of India. The entire study is based on secondary data. The study has covered the period from 2005-06 to 2013-14. The study finds out the Total fund allocation release and expenditure under NRHM in southern states of India, Kerala has performed better which as compared to other southern states in India with expenditure percentage is 117.26 per cent it is more than the release fund percentage with share is 108.66 followed by Tamil Nadu during the period of 2005-06 to 2013-14. Components wise fund utilization under NRHM in southern states of India, Karnataka state has highest utilisation on RCH Flex and NRHM Flex pool and Tamil Nadu has highest utilisation on Infrastructure and maintenance but Kerala state has consistent utilisation on all components under NRHM during 2005-06 to 2013-14.

Public Expenditure on Health Sector in Karnataka: An Analysis of its Trends and Patterns

Shankaranand G & R R Biradar

Public expenditure regulates the economic activities and helps to attain the long-run and short-run objectives of economic development. The study based on secondary data attempts to examine the trends and patterns of public expenditure on health sector during 1991-92 to 2013-14 and explore plausible association between the public health expenditure and economic growth in Karnataka. The public expenditure on health as a percentage of State Gross Domestic Product (SGDP) at constant prices has found to be increased negligibly over period of time in Karnataka. The per capita public expenditure on health in Karnataka has increased much faster rate in the late reform period as compared to the early reform period. The public expenditure on health in relation to social service expenditure has been seen flatter over a period of time in Karnataka. The public health expenditure as a percentage of total government expenditure in Karnataka have seen fluctuations in the beginning of reform period after the launch of NRHM, it has been increased significantly. The growth rate of health expenditure was highest as compared to growth rate of SGDP in Karnataka. The growth of capital expenditure on health was greater as compared revenue expenditure. This study has found that major indicators of health such as CBR, CDR, IMR and TFR have been declined consistently during 1991 to 2011. The public expenditure on health in Karnataka increased over a period of time which has also inversely impacted on infant mortality rate to decline drastically. The study argues that state government has to increase financial allocation and ensure effective utilization of resources for providing health care services and improving the health status of the people.

Health Expenditure and Household Age Composition in India: Consequences for Health System

Milind Bharambe, Chander Shekhar & Vishal Gaikwad

India is a vast country with its 1.21 billion population at the dawn of new decade, which accounts for one sixth of the global human capital in the world today. It is well known that health expenditure in India is dominated by private spending. This is an unfortunate consequence of India's development because of large positive externality associated with health spending, which make health a merit good. Paper use data from NSSO and Indian Government's spending on health as reported by Ministry of Health and Family Welfare. Understanding of the dynamism of age-structure of the population would greatly optimize the expenditure on health care services. A country with good public health indicators is bound to possess good human capital which is an asset to the economic growth and indicator of development of country. The paper tries to present the linkages between the health expenditure incurred by the states at various levels and the efficiency of the expenditure the way in which it can be improved. It has been tried to explore the per capita spending on health and the population growth over the last seven years in the country.

Assessing the Effect of Household Environment on Child Survival in India

Shalini Meshram & Abdul Jaleel CP

Survival of infants and young children being one of the major policy focus in all developing countries, we analysed the effect of household environmental conditions on child survival in India. We analysed data from the third round of DLHS (2007-08). By using bivariate and multivariate statistical analysis, we tried to understand the child survival differential in terms of percentages and probabilities for households having different environmental conditions. It is found from the analysis that child survival in India is significantly associated with household environmental conditions. Analysis found that children from households having Pucca house, safe drinking water source, improved toilet, clean fuel for cooking and separate kitchen are more likely to survive than children from households being denied of all these facilities. Likewise, being children from rural household, less educated women, SC women, working women, women from economically poor households reduce the chance of survival of the children. Overall, health of the children and their survival are not merely depend on access to health facilities, but it is equally influenced by household environmental conditions. This indicate the need of providing households with basic minimum standard facilities to create a conducive environment at household level for ensuring better health survival of children.

Assessing the Effect of Household Environment on Child Survival across Social Groups, in India

Shalini Meshram

Survival of infants and young children remains one of the most important issues in the developing world. Africa and Asia combined account for 93 percent of all under-five deaths that occur each year in the developing world. Most deaths of under- five children in developing countries have been linked to the household environment (WHO, 2009). This study to attempts to understand the association of household environmental condition and child loss across the social groups in India using a data from District level household survey (DLHS-3, 2007-08). The response variable used in this study is child loss. The household environmental factors are the independent variables. Bivariate and multivariate analysis has used to understand the association between household environment and child loss. Binary logistic regression has applied to find out the net effect of the household environment on child survival. The results revealed that the child loss is highest among scheduled caste. Drinking water source, water treatment, toilet facility, cooking fuel, type of house and separate kitchen are significant determinant for child loss. The household environment plays a crucial role in child survival among SCs than other social groups.

Is Health System Giving Life Year Gain to Children in Tamil Nadu?

S.Rajendran & R.Ramachandran

Background: In developing countries, specifically in India, millions of women and newborns die or experience serious health problems related to pregnancy and childbirth each year and many women do not have the good fortune to be attended by skilled personnel during childbirth. This lack of skilled attendance could be considered as one of the major factors in maternal and infantile mortality. Each year 3.3 million babies or may be even more are stillborn, more than 4 million die within 28 days of coming into the world, and a further 6.6 million young children die before their 5th birthday. The aim of the study was to assess the factors determining the place of delivery and is Health system giving life year gain to Children?

Methodology: The present study was undertaken in Virudhunagar District of South Tamil Nadu with primary and secondary data. The Secondary data were name and address collected from all CEmONC Centres under Tamil Nadu Health System Project (TNHSP) and beneficiaries under Muthulakshmi Reddy Maternity Benefit Scheme (MRMBS) in 2007. The primary data were collected from 200 who delivered their children with low Birth Weight (LBW) (<2.500kg) in 2007. There are nine Public Hospitals in Virudhunagar district, namely Virudhunagar, Aruppukottai, Tiruchuli, Kariapatti, Rajapalayam, Watrap, Srivilliputtur, Sattur and Sivakasi and for the present study, Virudhunagar, Aruppukottai, Rajapalayam, Srivilliputtur, Sattur and Sivakasi government hospitals were selected as only these hospital have CEmONC services

Results: 40 (20%) attended ANC for previous pregnancy, 120 (60%) had their last delivery in the private hospital, while 80 (40%) had their last delivery at Government Hospital. Determinants of choice of delivery place include free cost of treatment (100%), friendly attitude of community health workers (75%), good care of doctors, nurses and village health nurses (90%), distance to health care centres (80%), and cash incentive (100%). There is no relationship between age (P = 0.000), cast (P = 0.000), education (P = 0.000), type of family (P = 0.009), annual income (P = 0.000) and place of deliveries in Government Hospital. There were 196 children got life year gain above five year through the TNHSP and Dr. Muthulakshmi Reddy Maternity Benefit Scheme. Lack of care and money is one of the reasons for under five death in the study areas. The total cost for institutional deliveries was ` 1200000 in 2007.

Conclusion: Female education, female empowerment, attitude of health care workers and distance of health facilities to the people in most communities are factors to be addressed in reducing child morbidity and mortality rates and improving maternal health, thus achieving the millennium development goals (MDGs) 4 and 5.

Does Parental Education affect the Impact of Provision of Health Care on Health Status of Children? - Evidence from India

Runu Bhakta & A. Ganesh-Kumar

The objective of the study is to analyse the impact of provision of health care facilities on the child health status taking into account the utilization of these available facilities. The study offers an insight into how parental education plays a significant role in explaining the slow progress in the health status of children. The health status of children is defined on the basis of their survival status and body mass index (BMI) which are ordered in six categories from very good to very bad health conditions (1, 2, ...,6). We use fixed effect ordered probit model and the results confirm that additional provision of health care facilities leads to significant increase in utilization of institutional delivery services and antenatal care which in turn improves the health status of a child. At the same time, we have observed that mere provision of more health care services will not solve the problem at the rate required to achieve acceptable levels of child health status. In addition, the model for utilization of health services reveals the fact that, schooling affects health seeking behavior among women which in turn results in greater utilization of institutional benefits in a region where the services are available. Further, educated parents can manage child care practices in more efficient ways which offer them an additional edge among those who availed those facilities. To have a better utilization of available health care services and to raise the pace of reduction in child mortality rates government has to pay attention to increase education level of adults along with the expansion of health care centres.

Achievements and Challenges and Health Status of the Girl child in Himachal Pradesh: A Case Study

Nisha Kumari & Shashi Punam

Today, a woman is very uncertain about her very existence. She is always unsure about her life because she is always at a risk of being crushed at any moment. No place is safe for women, not even in their mother's wombs. In India the status of girl child reflects serious gender based differences, inequalities and discrimination. Preference for son in the society and discrimination against girl child are interlinked due to interplay of different factors. Despite widespread progress in improving the health, nutrition and education of children, the situation of girls continue to be disadvantaged compared to that of boys. Girls are often seen as less important to family and community life than boys regardless of the fact that girl children constitute one fourth of population in India. Indian society, like most of the society's world over, is patrilineal, patriarchal and patrilocal. The marked gap between boys and girls, which has nationwide implications, is the result of decisions made at the most local level the family. Keeping in view the above said facts this present study has been design with the objective to study the relationships between declining child sex ratio and some of the human development indicators. The data for this purpose was collected through secondary sources. An analysis of the data reveals that there was a marginal increase in the following five decades and it reached to 976 in 1991, but in the beginning of 21st century it started declining to 970 from 976. District wise analysis shows that Kangra district has lowest child sex ratio followed by Una, Hamirpur, Bilaspur, Solan (899) according to 2011 census. The rest of the seven districts are having child sex ratio more than 900.

Impact of Indoor Air Pollution from the Use of Hazardous Fuel for Cooking on the Incidence of Life Threatening Respiratory Related Illnesses in Children: Evidence from India

Ashish Kumar Upadhyay

Using a panel data of young children (born during 2001-02) from the Young Lives Study (YLS) India and two-stage random effects logistic regression, this paper estimates the impact of indoor air pollution (IAP) from the use of hazardous fuel for cooking on the incidence of life threatening respiratory illnesses (LTRI) in Indian children below the age of five. The findings indicate that the probability of an episode of LTRI was considerably higher among children who were exposed to indoor air pollution due to hazardous cooking fuel compared to those who were not. Moreover, the children who were exposed to IAP in both the rounds of YLS were considerably more likely to suffer from one or more than one episode of LTRI compared to children who were exposed to IAP in only one round. Two-stage random effects logistic regression results indicate that children who were exposed to indoor air pollution due to hazardous cooking fuel were 1.77 times as likely as those with no exposure to suffer from LTRI. The effect of hazardous cooking fuel on the incidence of LTRI among children depended on the permeability of the roof. The use of hazardous cooking fuel in houses with permeable roof was associated with lower risk of LTRI (Odds ratio – 0.60. The Government of India must make people aware about the health risks associated with the use of hazardous fuel for cooking and strive to promote the use of non-hazardous fuel.

Preventive Healthcare in Bihar

Abhijit Ghosh

This paper studies the status of preventive Healthcare in Bihar considering the accessibility of safe drinking water and sanitation facilities. This study will consider all the districts of Bihar. A Preventive Healthcare Index (PHCI) is constructed for all 38 districts of Bihar using Census data 2011. This index is a composite index of the four components namely Bathroom Index, Drainage Index, Latrine Index and Safe Drinking Water Index. An attempt has also been made to find out the determinants of PHCI. This shows that literacy, income and urbanisation have positive and significant impact on PHCI. Some area dummies are also positively significant. This suggests that Bihar requires a district specific policy to be adopted for the improvement of preventive healthcare.

Adverse Social Indicators of Health among Urban Poor: Implications for National Urban Health Mission in India

Santosh Kumar Sharma & S.K. Singh

This paper aims to analyze and prioritize the adverse social indicators of health among Urban Poor The basic data used in this paper has been collected from Bhuneswar, Jaipur and Pune using a combination of quantitative and qualitative research methods as a part of USAID and PFI sponsored research project conducted by the International Institute for Population Sciences in 2011-12.

Findings reveal that a substantial proportion of slum dwellers do not use public health facilities even for MNCHN services. Women in the three cities are not fully empowered in case of treatment seeking for health as the majority still needs permission to go for treatment. The survey also affirms substantially higher prevalence of tobacco and alcohol use among slum dwellers. Nearly one-fifth of women reported their husbands drunk quite frequently, resulting in various forms of violence against women and children in the family as well as in the neighborhood.

In view of these findings, the NUHM should prioritize strengthening the availability and accessibility of public health facilities for slums. Higher prevalence of tobacco and alcohol use in slum areas indicates need for targeted interventions by adopting a non-generic approach within the overall framework of the health and well-being of the urban poor. Besides, NUHM must focus at women's empowerment to enable them to take decisions on their health and that of their children, and more importantly, to safeguard them from different forms of violence and ensuring their reproductive and sexual rights.

Access to medical facilities among the Slum Dwellers: A Case Study of Select Towns/Cities in West Bengal, India

Sujoy Kumar Mojumdar

The universal access to health facilities is the goal of national health policy in India. It implies that everyone gets equitable access to health care facilities and there is no discrimination with respect to income, caste and religion. Still India is far away from the 100 percent accessibilities of health care facilities. The major objectives of the present study are to find out the pattern and distribution of health care use among the slums dwellers in urban Bengal focusing the accessibilities of health facilities. . It also investigates the factors affecting the health care demand and utilization of public health facilities among the slums dwellers in select town /cities. Information has been collected purposively from 280 slum households and 1652 members from select town /cities. Logistic regression model with binary dependent variables has been applied to examine the health behavior and use of public health facilities among the slums dwellers in West Bengal. Cross tabulation method has also been used before econometric analysis. The study found that persons belonging to high income group, casual labor and migratory status have reported higher incidence of hospitalization. Patient has to await more time and have to travel more distances for accessing public health facilities. It is also found that the poor households constitute a larger share of ailing persons who do not access health care because of financial problems. Importantly, systematic variations exist in access to medical facilities between the males and females and poor and non poor households in surveyed slum. The demand for medical facilities has also increased with the increase in the level of education of household head. The long waiting time in public health facilities divert the patient to private health institutions. It is also found that the dependent member of household such as children, aged are less likely seek care when they suffer from any kind of ailments. The study also reveals that employment characteristics and level of education of household head have exhibited significant positive impact on use of public health facilities in select slums. The ailing individuals from lower educational status are more likely to use public health facilities in the select slums households. Aged and female member of households are more likely to use public facilities both for the inpatient and outpatient care. On the other hand, the use of public facilities for this service is lower among the higher income groups.

Role of Sanitation and Drinking Water Availability: On Incidence of Diarrhea among Children In India

Gitanjali Hajra, Arijita Dutta & Shyama V. Ramani

Objective: Diarrheal disease is one of the leading causes of child mortality and morbidity in developing countries, including India. The present study attempts to find the impact of public health infrastructure like sanitation and drinking water on incidence of childhood diarrhea in different parts of India.

Research Method: The study is conducted using unit level data from National Family Health Survey of India (NFHS-3) 2005-06 to find out the determinants of diarrhoeal diseases among children under five years of age. First cluster analysis has been carried out to divide India in four clusters, using the target variable as availability of sanitation facility, drinking water and disposal of children stool (taken as an indicator of hygiene practices). Logistic regression model is then used to estimate the effect of infrastructure factors after controlling some demographic and socio-economic factors in each of these clusters.

Results: In cluster analysis, Cluster 1 consists of relatively vulnerable and backward states. In Cluster 2 we found states with middle level public health infrastructure. Cluster 3 comprises of four states with improved public health infrastructures, while Cluster 4 has small states. Regression Results showed that, access to improved toilet facilities is significant only in Cluster 1, though none of these three variables related to public health infrastructure is significant in cluster 4.When we further carried out logistic Regression models by taking the interactive variable of access to toilet, drinking water and disposal of stool in all four clusters separately, we found that, complementarities are significant in all the clusters except Cluster 1. This implies that, in states having lowest availability of public health infrastructure, access to toilet and drinking water separately are very important. In other three clusters complementarities are significant implying that, access as well as the combined availability of infrastructure and standard of living is important in the incidence of childhood diarrhea.

Conclusion and implications: Our findings showed that, improved water sources and sanitations separately should decrease diarrheal incidence only in backward states, whereas their complementarity does play crucial roles in all other non-backward states.

POSTERS

Improving Public and Private Health Care Services in Himachal Pradesh: A Case Study

Sandeep Sharma

The people of Himachal Pradesh appear to find higher value in the care provided by government facilities than do many Indians in other states. This study addresses curative health care services and examines the factors influencing demand for health care in the public and private sectors. It also considers available information on privately-delivered health care and how the government may wish to respond. At the same time, there are empirical reasons to question whether government health care is benefiting those who need it most. The health system in Himachal Pradesh has improved tremendously in past decades and is now entering a stage with adequate coverage of primary health services and shifting emphasis to secondary and tertiary care. Services at higher institutions are being strengthened with a growing focus on a more efficient allocation of resources across the different levels of the system. Some data suggest that people in the highest income categories are more likely to seek treatment from private clinics than those with lower incomes. To the extent that the health department wishes to improve health care for those with the fewest personal resources, this is a critical question, yet an issue on which robust data is sorely lacking. Challenges remain in Infant mortality and in children's nutritional status in Himachal Pradesh. There also remains substantial variation by district on many health and health care measures among districts in Himachal Pradesh: some simply are not making as dramatic improvements as others.

Levels, Trends, and Patterns of Self-Reported Morbidity In Uttar Pradesh, India

Ajit Kumar Yadav & Laxmi Kant Dwivedi

This paper is an effort to examine the levels and patterns of self-reported morbidity in Uttar Pradesh in India. This study used 52nd and 60th rounds of National Sample Survey Organization (NSSO) datasets conducted in 1995-96 and 2004 respectively. The prevalence of ailments was calculated with information on any person who had fallen sick in the 15 days preceding the survey date. Multivariate analysis carried out to identify the determinants of different types of self-reported morbidity. The analysis reveals that the infectious diseases were more prevalent in rural areas, concentrated among poor and uneducated section of the population. On the other hand, CVDs and NCDs were more prevalent in urban and among highly educated people. Burden of communicable diseases (26 per 1000) is relatively higher as compared to the non-communicable diseases (19 per 1000) in Uttar Pradesh state of India. This pattern is observed in both rounds of NSS.

National Rural Health Mission and Its Implications on Child Health: A State Level Analysis in India

Pinaki Das & Sanjib Das

The service delivery capacity of the public health system had increased at all three levels – SC, PHC and CHC but a substantial deficit persisted regarding the coverage of the health centers, particularly at the PHC and CHC levels. IMR got reduced from 58 in 2005 to 47 in 2010 against the targeted reduction to 30. There are only three states, namely Kerala, Maharashtra, Tamil Nadu that witnessed IMR lower than the targeted one. Other child health related indicators like Child Mortality Rate, Neo-natal Mortality Rate and Under Five Mortality Rate have shown declining trend though they have not declined at the desired level. NRHM has played an important role in child immunization. The two major interventions by NRHM in terms of creating more 24-hour health facilities in general and 24-hour PHCs in particular are statistically significant for the reduction in IMR. They are also positively and significantly related with full immunization rate among children. The introduction of ASHA had a positive impact on child immunization, women taking at least three antenatal checkups and institutional deliveries.

Health Infrastructure under National Rural Health Mission: Achievements and Challenges

A.K. Ravisankar

Healthcare is one of India's largest service sectors. Despite earnest efforts by the government, India's healthcare service system faces substantial challenges in providing care to its citizens. Under this backdrop this paper tries to find functioning of health care delivery systems in India. Study based on data from Rural Health Statistics 2014 and NRHM Evaluation report (2009). Objective is to assess manpower and infrastructures at Sub-Centre, PHC and CHC level. There is significant improvement in terms of the numbers of human resources in all the categories in 2014 when compared with 2005. Even out of the sanctioned posts, a significant percentage of posts are vacant at all the levels. For instance, 10.3% of the sanctioned posts of HW (F)/ANM are vacant as compared to 40.5% of the sanctioned posts of HW (M). At PHCs, 41.5% of the sanctioned posts of Female HA/ LHV, 49.7% of Male HA and 25.9% of the sanctioned posts of Doctors are vacant. It can be concluded that the demand as well as supply side constraints are observed on staff, infrastructure which restrain the optimum utilization of existing health services in the Indian States/UTS. The extent of the increase in political priority, managerial capacity and resource allocation will determine, if and when, India will be able to meet MDGs.

Governance and Corruption in Health Sector in India "An Overview of Good Governance System"

Veeresh R. Tadahal

The paper is basically of theoretical framework and tries to attempt and examine the extinct of corruption in health sector due to negligence of governance system and tries to propose good governance model along with anti-corruption policies. While corruption and governance problem's are important which need some antidotes to protect the economy globally.

The concept of good governance embraces democracy and respect for human rights and is perceived as essential in the promotion of development(2008,Good Governance implementation). The paper also provides an overview of the forms and dynamics of corruption in healthcare as well as its implications in health and medicine. A healthy population is the engine behind sustainable growth. If health system is not governed well, health workers remain absent, patients pay illegal fees and basic inputs are stolen without any consequences for those who mismanage or corrupt the system, performance of health service will be poor and population health will suffer. Corruption in the health sector is a concern in all countries, but it is an especially critical problem in developing and transitional economies where public resources are already scarce. Corruption reflects poor governance and can be used as one proxy measure. Good goverence is important in ensuring health care delivery. A great deal can be done to reduce corruption but it cannot be done alone, it needs collective efforts along with International cooperation.

Village Level Health Care Inequities in Assam: District-wise Analysis

Joel Basumatary

Inequity in the health care provisions between genders, between regions, amongst communities etc is a political and social discourse in India. The practical reality is that even six decades after independence India has not been able to give reasonable quality of health care at affordable costs to its citizens especially in the rural areas.

Objectives: To achieve the above broad objectives the following three objectives have been formulated:

1. To assess whether health care services are equitably distributed in all the districts
2. To assess whether health care is available for those who cannot afford it
3. To test Julian Tudor Hart's Inverse Care Law.

Methodology : To examine the district wise health care services inequity we ranked the districts on different variables used and took the composite index of the ranks of the different districts and compared the index amongst the districts. Julian's Inverse Care Law has been tested to examine the second objective through the relationship between BPL households in the districts and composite index of districts in government health care facilities.

Findings: Huge difference is found amongst districts in government health care service provisions and the Inverse Care Law of Julian is found to be applicable in rural Assam.

Marginalized Groups and their Health Status in India

Vaishali Gupta

Marginalization refers to processes by which people or a group of people are pushed beyond the sides of society. The term outsiders could also be accustomed confer with those people or groups which United Nations agency measure marginalized. This analysis in this paper is an endeavour to review the health status of marginalised groups and communities - ladies, children, scheduled castes, regular tribes, persons with disabilities, migrants and additionally the health status of aged in India. The paper also aims to focus on the discrimination and exploitation of those marginalised groups particularly in terms of their health. Further, study is disbursed concerning how the rights of these marginalised groups are desecrated in the society. In India there are multiple socio-economic disadvantages that members of specific groups have limited access to health . A number of the outstanding factors that are faced by those marginalized groups and are discriminated in India, i.e., structural factors, age, disability, quality and stigma that act as barriers to health and healthcare. Generally every cluster faces multiple barriers because of their multiple identities. As an example, during a patriarchal society, a disabled women face double discrimination of being a women and being disabled. Besides, in Indian society these groups are subject to discriminatory treatment and are made to feel marginalized. They need special attention to avoid exploitation. The rights of disabled and migrants are desecrated and generally they are discriminated. At times, a medical personnel don't seem to treat them as they are unable to pay such a huge monetary amount for medicines. No proper attention has been given towards their health condition. Finally it is aforementioned that the health status of those marginalised groups in India is terribly poor as compared to alternative sections of the population. This paper relies on the secondary sources such as reports, journals, census, books, articles and on-line sources.

Assessment of Effect of Food-basket Intake/Distribution on NRC Discharge Children and their Mothers in Khaknar and Nepanagar Block of Burhanpur District, Madhya Pradesh State

Arun Vashishtha

The government of Madhya Pradesh has taken various steps in the recent years to address issues of malnutrition. These include the opening of NRC (first in Shivpuri district, 2006) in hospitals and community health centres for treating the SAM child as an emergency and strengthening ICDS services.

In NRC after staying of 14 days or increase in weight of 15% of admission weight a child is discharged from NRC but many children after getting discharge relapse in their previous condition which was severe acute malnutrition as they reached in the same socio-economic condition and environment so to prevent the children to relapse in same condition, Food Basket has been distribution since May 2013, to those children who discharged from NRC recently for this study.

The main objectives of the study were to assess the effect of food basket distribution at community level for children who just discharged from nutrition rehabilitation center (NRC) on indicators like cure rate, weight gain of the children, awareness to mothers about balanced diet, cooking food for malnourished child, maintaining hygiene and local available foods.

To assess the objectives, a cross-sectional non probability observational case control study done, which is quantitative in nature. This study had been done on 200 NRC discharged children (100 case (Provided FB)and 100 control (Does not provided FB)) and mothers/caretakers from Khaknar and Nepanagar NRCs of District Burhanpur between April to August 2014. Anthropometric measurements (except height), self-administered questionnaire and observation taken on the day of 2ndinstallment distribution of FB (2nd Visit) and after 2 months of 1st installment of FB distribution (3rd Visit). Mother's oral consent has been taken by telling them the purpose and confidentiality of whole data and research maintained and then analysis done in SPSS software.

Results from the study shown that out of 100 children who received and having food basket 67 children (67%) gain weight during the second and third visit with an average of 730 grams, whereas only 34 children (34%) gain weight during the second and third visit with an average of 670 grams who does not receive FB. Also 6 (6%) children relapse among cases and 23 children (23%) relapse among control. Also after third visit among cases 38 children were cured, 56 were in MAM criteria and 6 were SAM and among controls 17 children were cured, 60 were in MAM criteria and 23 were SAM.

Moreover it was founded that out of 200 mothers/caretakers only 88 mothers (44%) were washing their hand before cooking food and feeding to their children. Only 26 (13%) mothers were cooking food as they were taught during NRC stay. 112 (56%) mothers were adding salt in food. 36% (72) mothers were cooking food in dirty/unclean utensils whereas 77 (39%) mother's nails were found unclean at the time of cooking food for their children.

The result of this study shows that most of the children after giving a proper diet and follow-up increase their weight and will not relapse as in another situation of no proper diet and no follow-up. Children need the same diet and care practices at the home which they were getting during NRC stay.

Moreover most of the mothers were not cooking as they were taught to be at NRC and not even maintaining the proper hygiene and cleaning because either good training/emphasize had not done at NRC during their NRC stay or due to some socio-economic culture.

Perception of Private Hospital Staff towards Hospital Information System in Sangamner Region of Ahmednagar District (Maharashtra)

Nitin S Bhand, A.J.Ganbote & R.B.Gawali

The role of hospital information systems and technology hardly be underestimated as it provides information for decision making. Hence it is necessary to understand the role of Hospital information system and avenues to make the HIS effective in changing competitive dynamics.

Two private hospitals in Sangamner town which is located in Ahmednagar district of Maharashtra are selected for the purpose of study. The year of establishment, the size of the hospital and number of years of establishment

of the hospital information system etc are the major criteria considered to understand the effectiveness of the Hospital Information System. The doctor, nurses, administrative staff who have knowledge and experience to work on the HIS were considered as a major criteria for selecting the respondents on the basis stratified Random Sampling method. The list of the hospital staff whose experience in HIS is 3 years or more than that were categorized for preparing the sampling frame. The primary data collected through structured questionnaire. The data edited, grouped, analyzed and presented in tabular form with the help of percentage and ranking score analysis.

Hence to see the positive impact of HIS on the hospital performance it is necessary that the gap between the expected information and actual information to be filled up by eliminating the barriers through conscious and determined steps to make every hospital employee passionate for executing his duties and responsibilities in right direction.

Proximity to Dumping Site, Occupational and Contextual Health Risk among Waste Pickers of Mumbai, India

Praveen Chokkandre

Paper analyzes health risk due to the nature of waste picking occupation and other covariates which may enhance their health risk. In addition, paper throws light on much contemporary discussion on health hazards of dumping site to nearby communities as poor housing and inadequate civic amenities altogether enhance their health risk. Study used cross-sectional data and compared waste picking specific morbidities among waste pickers, non-waste pickers around the dumping site and a distant community to understand the health hazards of dumping site. Results reveal that the selected morbidities are substantially higher among waste pickers whereas results from multivariate logistic regression demonstrate that dumping site possesses health hazards as the prevalence of respiratory and eye infections are significantly on higher side. Other contextual correlates such as poor living condition, low personal hygiene and high use of substance abuse may increase the health risk among waste pickers.

Does Public health spending across the countries enough? Analyses of Public Health Expenditure versus Size of the Economy with Special Reference to Asian Countries and India

Rahul Koli & Sirinivas Goli

Context: "With existing epidemiological, demographic conditions, social desire, the technical and distributive efficacy of health inputs, existing prices, and substitutive social uses of funds all play a role in determining the right amount of health spending." How much a country should spend on health requires consideration to all these factors to decide the right amount.

Objective:

1) To assess question 'whether the countries across the world spending in proportion to their economy size?'
2) To carryout analyses with specially reference to India, a country believed one lowest public health spender with reference to its economy size.
3) To assess whether countries spending more on public health also have better health outcomes?

Methodology: Our data are gathered from the World Bank's World Development indicators 2012. In this paper, we put the 160 World countries and 37 Asian countries group. To fully examine the relationship between health care expenditure, income and health outcome variables, we include income and four health outcome variables as explanatory variables. The income is replaced by per capita GDP, The four outcome variables are defined as follows: infant mortality rate per 1,000 live births (IMR), Maternal Mortality ratio per 100000 live births (MMR),Gini coefficient of inequality, the Human development Index (HDI). Basic descriptive statistics is used to examine the relation between the variables.

Conclusion: The results suggested that countries across the world are not spending according to their economic size and income inequality. This relationship becomes much stronger when it comes to Asian countries. Further, the findings foster that India is spending very less on public health spending compared to the countries with same economic size and income inequality. However, spending more on public health resulted in better health outcomes across the world and in Asian countries as well. A number of Asian countries and including India which are reasonably doing well in economic terms spending a very meagre proportion of their GDP on public health. Therefore, there is an urgent to need to increase public health spending especially in developing countries at least in proportion to their economic size and health care burden.

Knowledge and Medical Treatment Seeking Behavior among Breast And Cervical Cancer Patients: A Case Study of Inpatients in BHU Medical College Hospital

Aparna Rai, Pradeep.K.Pande

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 Homeopathy 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.

National Economic Loss due to Non-Communicable Deaths in India

Manisha Dubey, F. Ram & Ashish Awasthi

Economic loss due to ill health and early death are associated not merely with the cost of care but takes a heavy toll in terms of loss of productivity and hence the economy of the nation. From a policy standpoint, the adverse economic outcome resulted from the death of a person is important to perform the cost-benefit analysis of the disease-specific-programmes. Present study attempts to estimate the economic loss, at national level, resulted from the deaths due to Non-communicable diseases (NCD).This Study has borrowed population from Census of India, NCD deaths from Global Burden of Diseases and per capita income (PCI) from Economic Survey of India. Disease deleted life table for NCD and overall life tables are constructed for male and female to estimate the difference in the life expectancy (LE) in the absence of NCD and overall LE. Economic loss is calculated as a product of difference in the life expectancies, number of NCD deaths and PCI.In the absence of NCD, gain in the life expectancy is highest at age zero (two years) and declines with age among male and female. Economic loss in the working age group (15-60) is 380.263 billion rupees for males and 198.824 billion rupees for females at base price of 2010-11. The overall economic loss from NCD is 579.08 billion rupees that is 10.17% of total expenditure on health sector in year 2010-11 by Government of India.

Does Expenditure Matter in Performance in Reproductive and Child Health Programme, Bihar

Amit Kumar

Since the launch of the reproductive and child health policy regime in 1998-99, there has been a massive rise in government expenditure on family welfare programmes in Bihar and national level. This paper makes a systematic effort to assess the performance of the family welfare programmes vis-à-vis trends in expenditure. The trends in key performance indicators for Bihar reveal that progress has been slow and limited in the post-RCH policy regime. Contraceptive prevalence coverage has accelerated, and the increased in the Child immunization and institutional delivery. Consequently, the pace of reduction in the couple protection rate, total fertility rate and infant mortality rate has slowed. It is evidently clear that in the absence of suitable mechanism to operationalise of RCH programme, the exponential increase in expenditure alone cannot lead to commensurate a positive impact on key performance and outcome indicators. There is need suitable mechanism to operationalise RCH programme.

Determinants of Social Health Indicators: A Case Study of Sholaga Tribes of Sathyamangalam District in Tamil Nadu

Thangamani Waghmare

Despite several achievements and efforts, the 50 years of development plan has not changed the lives of almost one third of India's population. The continuing poverty of the rural poor is mainly due to structural constraints in livelihood and securing their well-being in terms of parameters of health, education and gender equity. Since rural India faces such a huge magnitude of problems due to the various reasons mentioned above the severity problems faced by the tribals is traumatizing. Unlike rural people who live in plain areas these tribals reside in remote jungles where basic needs are also deprived. Even after 60 years of independence. Because this part of the society remains fairly untouched even today therefore researcher has taken the opportunity to decipher the actual health problems faced by these tribals caused by their socio economic conditions. The study tried to

- To analyse the socio-economic characteristics of tribal respondents that determine the basic well being of the people.
- To examine the environmental factors influencing their health conditions and to identity the crucial factors that lead to diseases in general
- To suggest suitable, corrective and remedial measures in improving their standard of living this in turn will enhance their health conditions.

The operational methodology adopted for this study which includes sample design, collection of data, period of study, tools of analysis. The village Thalaimalai comes under the Thalavadi panchayat union /block of the sathyamangalam taluk in Erode district. The study area covers 6 hamlets of tribal community, which accounts for 196 of tribal houses, Lack of time and resources hampered studying all the households in the selected hamlets. Therefore, it was decided to study 49 households in 6 hamlets. These 49 houses were selected based on systematic random sampling and they were investigated through interview method by using specific information questions. The study concentrates mainly on the socio economic conditions of the sholaga tribal community and its impact on their health conditions.

The study used both the primary as well as secondary source data in its findings. The secondary data was collected from published and unpublished documents of Government Departments and private agencies such as, Census report, Statistical Abstract of Tamil Nadu, District Statistical Hand Book, District at a Glance, District Gazetteer, and information collected from offices like District collectors, Blocks of district, Panchayat offices etc. Besides this, secondary data were collected from books and from Internet. The secondary data were ratified during field data collections.

Primary data was collected from the selected household of tribal area in Thalaimalai village. It was collected directly from the respondents through interview method by using specific information questions related to socio-economic data such as housing condition, family size, age, gender, literacy, marital status of members, occupation, income, health and sanitations, Loan and borrowing, monthly consumption, households assets etc which emphasizes their living conditions. The primary data was collected through personal interview method with the help of user's recall method subject to limited memory power of the tribal population. Researcher found it very difficult to get the details with regard to their employment wage structure, and income particulars of the tribals. The above study concludes that socio economic status of the Thalaiimalai area is a cause of major concern

as these individuals are residing inside the thick forest with minimum infrastructural facilities (transfort facilities, medical facilities, educational facilities. poor health and sanitation facilities, irrigation facilities etc.,) As a result they are not able to improve their socio economic conditions which in turn led to severe ignorance towards health and sanitation.

Assessing Awareness of Adolescents on Sexual and Reproductive Health in Jamshedpur (East Singhbhum), Jharkhand

Vishwa Ballabh & Pooja Batra

Adolescence is the prepubertal stage after childhood within which the individual attains physical, sexual and social maturity Adolescents form a distinct group of population (an estimated number of more than 1 billion people ranging between ages 14-24 years) with specific needs and capacities. One of the most sensitive issues associated with adolescence is sexuality. The future and the well being of this huge population is greatly shaped by the reproductive and sexual health decisions made by them for them. Any risky or unhealthy sexual behaviour at this stage of life can lead to compromised health for lifetime and even death. The youth are particularly vulnerable to health risks, especially in the area of reproductive health, which is partly due to lack of access to information and services. The unmet needs for reproductive health information and services which are not addressed by parents, schools or the existing health care systems are addressed by friends. They often do not receive proper information about sex and sexuality and develop wrong conceptions.

In order to examine the level of awareness of adolescents on sexual and reproductive health an experiment was conducted at MAXI Fair 2011 at XLRI Jamshedpur. The experiment /research project aimed to check the level of awareness of adolescents in and around Jamshedpur on reproduction, sex education and AIDS using projective techniques. The findings of the survey portrayed higher level of AIDS awareness than pregnancy awareness among the targeted segments /audience. The misconceptions attributing to pregnancy to desire to eat sour food still prevails and there is relatively low level of awareness on methods relating to the test of pregnancy. The welfare of youth has become a major focus for governments, policy makers and service providers. The government awareness programmes regarding AIDS seem to have worked, considering high level of AIDS awareness across various demographic groups. However, pregnancy awareness should be improved possibly in schools and colleges followed by mass media and friends.

Human Resources and Infrastructure for Health in the Himalayan Region

Shivendra Sangar & Ramna Thakur

The success of health care system depends largely on the effectiveness and quality of human resources. Availability of adequate number of human resources in health with suitable skills is a prerequisite. In this paper, we examined the growth of workforce and infrastructure in health and diseases among the rural population living in the Himalayan region of India. We found that there is an increase in the health workforce and infrastructure but the growth rate of diseases is much higher than the growth rate of work force and infrastructure. The results of this study indicate that infrastructure and workforce in healthcare is not adequate enough to cater to the needs of the people. The burden of diseases like acute diarrhoeal disease, acute respiratory disease and typhoid is quite high in the Himalayan region compared to the non Himalayan region. The situation of many states like Manipur, Nagaland and Uttarakhand is very alarming in these diseases. The Ratio of specialist/doctor to population is surprisingly high in the Himalayan region as compared to WHO and national norms. Government must ensure the availability of human resources for health in rural areas along with building adequate infrastructure.

Diabesity- A dual disease burden in India

Mapari Jayashree, Kohli Ashish, Jain Manish

Non Communicable diseases (NCDs),Cardiovascular diseases Cancer, Chronic respiratory diseases and Diabetes are now the leading causes of death and disabilities, accounting for 63% of all global deaths. NCDs lay a huge economic burdenthrough productivity losses, by afflicting people in the productive age groupand burdening household incomes through substantial healthcare expenditure. As per WHO estimates, India is set to lose USD 237 billion (1.5% of GDP) between 2005- 2015 due to heart diseases, diabetes and stroke.

India leads the world in prevalence of Diabetes, second only to China, with a reported 65 million diabetics; projected to rise up to 109 million by 2035. However what is lesser known is the correlation of Obesity with Diabetes; the odds of developing Diabetes are 3 times greater with a higher Body Mass Index (BMI) in comparison to normal BMI. Additionally Asian Indians have a tendency to higher intra-abdominal fat deposition, visceral fat deposition at relatively lower BMI levels, compared to Caucasians, thereby increasing their risk of developing insulin resistance, at far lower BMI levels.India ranks third among 10 countries that accountfor 50% of the 671 million obese individuals in the world. India and China jointly make up 15% of the world's obese population. The Burden of Diabetes in India is thus strongly interlinked with the impending burden of Obesity.

Although 'Halt the rise in Obesity and Diabetes Prevalence' is one of the 10 targets identified in India's 'National NCD Monitoring Framework', there are no comprehensive measures outlined to enable India achieve this as per WHO's Global Action Plan for the Prevention and Control of NCDs (2013-2020). Taking learning from Brazil's experience, it is imperative to define a multi-pronged approach, involve social activism, raise awareness and implement policy frameworks only then will we be able to successfully address the dual disease Burden of Diabesity in India.

Analysis of Public Expenditure on Medical, Public Health and Family Welfare using State Level Data

N. Mani & N. Krishnan

This paper focuses on an analysis of public expenditure on medical, public health and family welfare using state level data during 2000-01 to 2013-14. Increasingly the governments are facing pressures to increase budgetary allocations to social sectors. Recently there has been suggestion to increase the government budget allocations to health sector and increase it to 3 per cent of GDP. Is this feasible goal and in what time-frame? Health being State subject in India and much depends on the ability of the State governments to allocate higher budgetary support to health sector. This inter alia depends on what are current levels of spending, what target spending as per cent of income the States assume to spend on health and given fundamental relationship between income levels and public expenditures, how fast expenditures can respond to rising income levels. In this study an attempt was made to analyze the state wise expenditure in two categories viz. Non- Special Categories and Special Categories. While analysis the ratio to aggregate disbursements of funds, it was learnt that Andhra Pradesh state spent minimum 3.2 per cent during 2004-05 andS maximum of 4.7 during 2000-01. An annual average the expenditure towards expenditure on medical and public health and family welfare was 3.9 per cent. The expenditure pattern of Bihar state witnessed with minimum of 3.1 per cent to maximum 5.9 per cent during 2000-01 and its expenditure was gradually decreasing from 2008-09 onwards. The style of spending is gradually increasing from 2002 -03 and showed good progress from 2011-12 onwards, which shows the special attention towards the healthcare of the common people in Goa state. It is concluded from the above analysis the total of expenditure in all state level with an average spending is 123.4 per cent. The per cent to GDP of all states of average spending was studied and found with 0.6 per cent. The annual growth rate of all states is showed with 163.5 in the year of 2003-04. The trend analysis also clear results shows that the expenditure on medical and public health and family welfare in all states it's very much better trends from 52.17 to 183.70 and the average spending of 117.93 per cent in the overall period.

Unconnectivity and its Impact on Health: A Study of Udhampur District of Jammu and Kashmir State, India

Sunita Sharma & Deepak Sharma

Rural roads brings socio-economic transformation in unconnected rural habitations is generally agreed fact. There are large numbers of habitations at present which are not connected with all weather roads and are the main cause of non utilization of health care in India. Distance of habitation from motorable road often limits the access to health care. Connectivity through all weather roads can solve the problems related with health care utilization and other problems associated with non-connectivity. This paper highlights the problems associated with unconnected rural habitations that have impact on their health. Distance to health care viz. dispensary often increases the problems of local inhabitants and the absenteeism of pharmacists and doctors aggravates inconvenience with residents in these unconnected habitations. In view of this the present study is undertaken to understand the problems faced on account of deprivation of connectivity and health care in sampled unconnected habitations of Udhampur District of Jammu and Kashmir State. The research instruments used were questionnaire and interviews conducted with the respondents. Recommendations are made for proper connectivity of rural habitations to enhance standard of living by access to health services.

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IHEPA is a professional body registered under the Societies Registration Act. It is envisaged as a platform to discuss and share intellectual ideas pertaining to health sector in India. Economists, other social scientists, public health professionals, policy-makers and practitioners are invited to join and exchange, deliberate and discuss key issues and strategies to strengthen the health care system in India. Please visit **www.ihepa.in** for more information.

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