

## **Dissemination Workshop on Impact Evaluation**

India Development Foundation (IDF), in collaboration with the Global Development Network (GDN) had undertaken a research project entitled, “Promoting Innovative Programs from the Developing World: Toward Realizing the Health MDGs in Africa and Asia”. The study involved 20 different health interventions in 20 emerging and developing countries. Each of the studies was carried out by local researchers mentored by an international team of 10 economists and 10 public health officials. The purpose of the study was to use state of the art technology to evaluate the impact of each of these interventions and, in particular, to determine how the more successful ones could be replicated or, scaled up. The goal was to inform researchers, policy makers and donor agencies of the most promising innovations in this area. The study was funded by the Gates Foundation.

IDF, along with GDN, held a dissemination workshop in Delhi on July 14, 2009. Nine studies were selected for discussion and five of them were presented by the respective lead researchers in the workshop. There were presentations from Indian officials and practitioners on some of the more interesting health programmes being rolled out in India. The presentations were followed by an open discussion moderated by IDF.

Over fifty participants working in the health sector attended the workshop. The key note address was delivered by Vijay Kelkar, Chairman, Thirteenth Finance Commission of India. Anil Swarup, Director General of Labour Welfare, Ministry of Labour and Employment, Government of India, and Dr Kirti Bhusan, Officer on Special Duty, Directorate of Family Welfare, represented the Government of India. Anil presented a report on how the Indian National Health Insurance Plan (RSBY) for below poverty line households was being implemented in India; Kirti presented the maternal and child health initiatives of the Delhi government. Policy makers, researchers and practitioners from multilateral organizations and NGOs from India as well as from countries like China, Brazil, Indonesia, Thailand, Sri Lanka and Ghana participated in the workshop. The objective of the workshop was to elicit the policy messages and generic components from the studies and to identify those health interventions that could be adopted to address the health issues of Asian and African population.

The Indian research on ‘Yeshasvini’ - Community Based Health Insurance Program- highlighted the importance of mobilization of resources, pooling of risks and financial protection. The key findings reveal that the scheme has had substantial impacts on health care utilization. There is also some evidence of financial protection in terms of reduced borrowings or sale of assets in the event of surgery. Clearly, the health status of participants was found to be better than the non-beneficiaries.

The study on “Evaluation of Ghana’s National Health Insurance Scheme” (NHIS) tried to find the health outcomes of women (18-49 years) who are enrolled in the scheme with those who are not. Women who were enrolled are more likely to use health services and have fewer complications and experience fewer infant deaths than their non-NHIS counterparts.

The paper presented on “HIV Counseling and Testing Intervention” in Thailand, explored the characteristics of patients who accept voluntary HIV testing and assessed the factors associated with HIV infection among patients. The important findings show that, though the intervention is costly, the consequent early detection leads to an overall reduction in the cost of treatment and care.

The study on the “Safe Motherhood Program” in China, tried to find out its impact in the reduction of MMR through the enhancement of mother and child health care. It indicates positive correlation between exposure to the programme and MMR reduction.

The Brazilian study focused on the nation’s health interventions that emphasize preventive care and early detection brought about through the use of local level health workers. The paper shows that the program has resulted in a reduction in IMR, increase in the labor supply of adults, and an increase in school enrollment.

The presentation on the Indian National Health Insurance Plan for below poverty line households (RSBY) revealed the importance of empowering the poor by providing them with smart cards that allows freedom of choice regarding the facility to go to and to enables cashless transactions. It is different from various other insurance programs as it focuses strongly on sustainability. The presentation on “Reproductive and Child Health” care program aims to reduce IMR, MMR and total fertility rate.

One of the policy implications from these studies is that community based health interventions helps in promoting health improvements even under poor economic conditions. Second, awareness among the masses is an important aspect of realizing health goals. Third, for basic preventive health issues, it may be a good idea to follow a universal approach rather than attempting to focus only on high-risk clients. Programs should have one well defined objective. However, successful health interventions have spill over effects on other aspects that improve the quality of life of a household.

The workshop was concluded by an open discussion moderated by Shubhashis Gangopadhyay, Research Director IDF. Various questions related to insurance premium, price discrimination by ability to pay, allowing clients to top-up what is being paid for by the government, sustainability of insurance when preventable diseases are included in the cover, and quantification of the spillover effects of health intervention were raised during the discussion. The participants contributed richly to the discussion.

*Brief summaries of the projects presented at the workshop are given below.*

## **Policy Brief 1**

### **An impact evaluation of the safe motherhood program in China**

**Xinglin Feng, Yan Guo**

#### **The program**

The Chinese Government initiated the national safe motherhood program (SF program) in the year 2000 with an aim to reduce maternal mortality rate (MMR) through the enhancement of mother and child care. The following activities were carried out under the program:

1. Training of the traditional birth attendants and village doctors for conducting high risk maternal screening, promoting hospital deliveries, contacting higher referral centres for assistance as well as post-partum follow up.
2. Enhancing health service infrastructure by ensuring that the hospitals adhere to the norms and basic requirements for service delivery; regulating prices and maintaining transparency about prices to the community and health personnel; promoting hospital delivery by direct and indirect reimbursement of families and incentives to patient escorts and sending accredited specialists to facilitate improvement of obstetric service quality and setting up rapid referral system for MCH care.
3. Setting up of a community-support-family mechanism which includes publicizing safe motherhood through media, motivating villagers to designate a responsible person to assist in referral and promoting mutual help, educating mothers and families and registering pregnant women.

#### **Context**

In the early years of the safe motherhood initiative, most countries based their program recommendations on the hypothesis that obstetric complications could be prevented or predicted by good care during pregnancy and delivery. Antenatal care programs were expanded in the hope that routine monitoring and improved health practices during pregnancy would prevent or enable early recognition of complications. Evidence shows that the focus on antenatal programs, as well as those involving the training of traditional birth attendants given that most women deliver at home, was not very effective in reducing maternal mortality in the absence of a functioning health care system.

Another approach was based on the hypothesis that obstetric complications could be predicted by screening for risk factors. However, the high risk group accounted for only a small percentage of maternal deaths, the vast majority occurring in women with no known risk factors. So focus on high-risk pregnancies could lower maternal mortality by a small extent.

The clear consensus internationally is that scarce resources should not be wasted on extensive unfocused antenatal care, training traditional birth attendants or in trying to predict which women will develop life-threatening complications. Instead, maternal mortality reduction programs should be based on the principle that every pregnant

woman is at risk for life-threatening complications, and that safe delivery and access to emergency obstetric care are essential. For MMR to be reduced dramatically, all women must have access to the following:

1. Skilled attendant at delivery
2. Access to emergency obstetric care in case of complications
3. A referral system to ensure that women can reach in time

The SF program is relevant in this context. It tries to incorporate all the three key elements.

### **Objective of the impact evaluation**

1. To test the relationship between the SF program and the reduction of MMR
2. To estimate the contribution of the SF Program to the reduction of MMR through the enhancement of MCH care

### **Key findings of the impact evaluation**

The results are based on 216 treatment group counties and 911 control group counties which were selected out of 2322 counties in China. Analysis of retrospective panel data from year 1996 to year 2006 at county level across China shows that the impact of reducing MMR increases as years of exposure in the program increase. Seven years' treatment could reduce MMR by 3.87 per 100,000 live births. There is evidence that enhanced MCH services are not irrelevant in reducing MMR.

### **Policy implications**

The results of the SF program are encouraging. The program strategy involves concerted efforts of families, community, community supporters and health system to promote efficient and safe delivery. An important aspect of the program is the awareness that every pregnant woman be cared for in the same way without prejudging who is high-risk and who is low-risk. This has serious implications for public health programs that try to target people based on perceived health risks.

### **Points of discussion**

1. The Indian NRHM uses a similar approach. It promotes access to improved healthcare at household level through female health activists (ASHA). It also focuses on strengthening the existing primary health centres (PHCs) and community health centres (CHCs) in accordance with Indian Public Health Standards. What can we learn from this program?
2. How do we set up the various accountability mechanisms?

## **Policy Brief 2**

**Evaluating the Impact of Community Based Health Interventions:  
Evidence from Brazil's Family Health Program  
Romero Rocha and Rodrigo R. Soares**

## **The program**

The Family Health Program (Programa Saúde da Família, PSF) is an ongoing project by the Ministry of Health, Brazil. Since its origins in the mid 1990s, the program has expanded in terms of the number of municipalities covered. The PSF targets provision of basic health care through the use of professional teams consisting of a family doctor, a nurse, an assistant nurse, and six health community agents. Each team is assigned to about a 1,000 families of about 3,000 to 4,500 people in a defined geographic area. The main focus of the program is on improvement of basic health practices, prevention, early detection and coordination of large scale efforts.

The key points in the program are as follows:

1. By focusing on preventive care the program reduces the occurrence of simpler health conditions and improves the management of other types of diseases that are endemic to certain areas.
2. By interacting with communities on a regular basis health care professionals are able to detect early symptoms that may require a more specific type of care. This ensures arresting of the disease state before it progresses into a stage of complications. However, if required, patients are referred to hospitals or specialists. Thus only those patients in need of specialist care go the higher health facilities thereby reducing the pressure on public hospitals.
3. Once the network of PSF professionals is established in a specific area their help can be sought by the government to implement any type of health intervention that demands coordination across large areas or different agents (immunizations, campaigns against endemic conditions etc).
4. By placing teams locally, basic health care can be extended to a group of people that in most cases had almost no access to public health.
5. The exchange of information and experience across different teams and areas can hasten the implementation of strategies leading to improved practices and health outcomes.

## **Context**

Public hospitals are often overburdened primarily because the primary health care aimed at prevention of disease and promotion of health is often inadequate or missing in most cases. This results in complicating even the simplest of illnesses that could have been treated at grassroot level forcing the patient to seek care from a higher referral centre. The pressure on the public hospitals often has an impact on the quality of care provided --- overworked doctors, longer delays to get to a doctor, etc. This, in turn, forces poor patients to divert to private health care providers thereby increasing their out-of-pocket expenditure. The strategy of the PSF program is to shift provision of basic health care from hospital and health clinics towards cheaper and supposedly more effective day to day preventive care.

## **Objective of the evaluation study**

The evaluation of the program was done to study the following:

1. The direct impact of the program on health outcomes

2. The indirect impact through changes in health on household behavior related to fertility, school attendance of children, and labor supply of adults.

### **Key findings of the impact evaluation**

The program was significantly associated with reductions in mortality before age 1, between ages 1 and 4, and between ages 15 and 59. Its main impact has been on the IMR. The program has been particularly effective in the North and Northeast regions of Brazil, and also in municipalities with a higher fraction of rural population, and lower coverage of public health infrastructure (like access to treated water and sewerage system). As an example, the infant mortality rate of a municipality eight years into the program was reduced to 15 per 1,000 live births in the North and to 14 per 1,000 live births in the Northeast, as compared to national average of 27 per 1000 live births. The estimated impacts were driven mostly by reductions in mortality due to perinatal period conditions, infectious diseases, endocrine and metabolic diseases, and respiratory diseases.

In the North and Northeast regions of the country, the program was significantly associated with reduced fertility, increased labor supply of adults, and increased school enrollment. The analysis of the two poorest regions of the country show that eight years of exposure to the program has been associated with a 6.8 percentage point increase in the labour supply of adults between 18 and 55, a 4.5 percentage point increase in the school enrollment of children between 10 and 17, and a 4.6 percentage point reduction in the probability that women aged between 18 and 55 years experience a birth over a given 21 month interval.

### **Policy implications**

This intervention has the potential to improve access to basic health care to a large proportion of the poor population and at the same time reduce the burden on public hospitals. Experiences, from this type of community/family health intervention has been identified as one of the key factors in promoting health improvements even under very poor economic conditions (classic examples include Sri Lanka, the Indian state of Kerala, Jamaica and Costa Rica). In principle, the setup and the techniques involved in the program are adaptable to any other developing country given the geographic, cultural and ethnic heterogeneity within Brazil.

### **Points for discussion**

1. Health extension services taking care health care to households
2. Institutionalizing the mechanisms for health care delivery through the creation of local health care workers who are trusted by the community
3. Comparison with NRHM and ASHA

### **Policy Brief 3**

#### **An Evaluation of Ghana's National Health Insurance Scheme Joseph Mensah, Joseph R. Oppong**

##### **The program**

In 2003, the Government of Ghana established a National Health Insurance Scheme (NHIS). Two major objectives of the program is to make health care services affordable to all and to ultimately replace the existing “cash-and-carry” system, which is considered by many health observers to be highly regressive. The NHIS is structured around the District-wide Mutual Health Insurance Schemes. Such schemes have historically been established by an external organization, such as a hospital, a donor organization, an NGO or, a church.

The NHIS is regulated by the National Health Insurance Council (NHIC) headquartered in Accra, the national capital. The Council manages the National Health Insurance Fund (NHIF) through the collection, investment, disbursement, and administration of the NHIS. The Council also undertakes the licensing, regulation and accreditation of health providers. At the district level, there are Health Insurance Assemblies which comprise all members of the scheme. The district schemes are governed by Boards of Trustees and Scheme Managers. The staff at the District level includes an Administrator, Publicity and Marketing Manager, Claims Manager, Accountant, Data Control Manager, and Data Entry Clerk.

The NHIS covers about 95 percent of the common diseases; it is democratic and has a bottom-up character (being administered by Health Insurance Assemblies); though it is mostly “egalitarian”, it has special exemptions for the *core poor* and elderly.

Premiums are based on one's ability to pay. Ideally, 4 groups are identified --- the core poor, the poor, middle income, and rich --- and each pay differing amounts. (However, because such identification is difficult, flat rates are also often implemented.) All contributors' premiums cover their children and dependents below eighteen years of age. (Earlier, only children of registered parents were covered. Resulting from the outcry against poor or no health care for the children of the uninsured, the coupling of parents' coverage with their children was officially ended in September 2008.) The government has a 2.5 percent sales levy for the funding of health insurance in the country; other sources of funding include money from government budget and donor contributions.

Minimum benefits covered include general out-patient services, in-patient services, oral health, eye care, maternity care, and emergencies. Diseases covered include malaria, diarrhea, upper respiratory track infections, skin diseases, hypertension, asthma, diabetics etc. The basic idea is to cover all common health issues. A handful of specialized services, such as HIV antiretroviral drugs, VIP accommodations etc., are excluded from the health insurance benefit package.

## **Context**

Specific health expenditures have catastrophic effect on the poverty status of low income households, especially those with one earning member who needs the treatment. Also, women, children and non-earning members often do not get proper treatment to avoid these expenses. Health indicators vary widely among population groups --- both geographically and by income classes and there are high incidences of infant and maternal mortality.

## **Objective of the evaluation study**

The impact evaluation of the program was done with the following objectives:

1. To compare the health characteristics and outcomes of women (18-49 years) who are enrolled in the NHIS with those of women who are not
2. To explore the differences in health care access and utilization between these two groups of women, and to understand why some women join the scheme and others do not
3. To assess whether the scheme has been successful or not; and if it has, to explore the extent to which it could be replicated in other African countries.

## **Key findings of the impact evaluation**

The findings from the impact evaluation suggest that the NHIS has yielded some verifiable positive outcomes: Women who are enrolled are more likely to give birth in hospitals; 15.8 per cent more women are attended by trained health professionals at the time of delivery; 15 per cent more women receive prenatal care, have fewer birth complications (2.1 per cent), and experience fewer infant deaths (1.8 per cent) than their non-NHIS counterparts.

As to why women join the scheme and others do not, it was found that the higher the respondent's level of education, the higher was the probability of enrolling in the NHIS. Availability of a television set in the household also improved the probability. As expected, nearness to the health care centre improved probability. The major reason for non-enrolment was the inability to pay the premium.

## **Policy implications**

Universal schemes are better than targeted schemes. One can then focus more on people who are not enrolling even when the objective of the scheme is to include them. In Ghana, the lack of finances was an important cause for non-enrolment. The collection of NHIS premiums on a monthly basis, rather than once a year, may promote enrolment by poorer households. Including outpatient care provided at primary health care facilities in NHIS benefits package may also increase enrolment among the poor. Availability of a health facility in a community is associated with higher likelihood of enrolment. Extending geographical access is very important in any strategy for improving access to quality health care in the country. To the extent that the educational background of the household head is a strong determinant of NHIS enrolment, information on the NHIS has to be disseminated in ways that reach those who have little or no education to ensure that these segments of the population are not excluded.

The impact of such schemes on overall health indicators usually takes time to show up. However, changes in the practices that lead to better health, like delivery in hospitals, proper pre- and post-natal care, early detection of diseases, etc., are more quickly observable. Hence, any evaluation of newly introduced schemes should focus on these variables rather than on overall health indicators, which should become more important for long term impacts.

#### **Points for discussion**

4. Decentralized implementation under broad guidelines
5. Government + individual funding (less than 100 per cent subsidy)
6. Comparison with the Yeshaswani, RSBY and Arogyashree schemes

#### **Policy Brief 4**

##### **The Potential of Provider-Initiated Voluntary HIV Counseling and Testing at Health Care Settings in Thailand Yot Teerawattananon**

#### **The program**

The program is an HIV counseling and testing intervention offered to patients aged between 13-64 years attending healthcare facilities in Thailand. It is unique as it is initiated by the health care provider as opposed to the current practice in which the HIV testing is provided upon the client's request. The process of the intervention is as follows:

1. Invitation cards are given to all eligible patients visiting the OPD. The card is to be used as a coupon for getting a free HIV test.
2. A seven minute TV program designed to represent 'pre-test HIV counseling is presented to the patients in the waiting room.
3. After consulting the doctor, patients volunteering to be part of the study can get tested for HIV, free of cost by presenting the invitation card at the laboratory.
4. The patients with a positive test result are then referred to HIV clinics, where routine investigations, prophylaxis and treatment medicines are provided for free.

Sixteen district hospitals with high- and low-HIV prevalence were randomly assigned to either receiving the new intervention or the current practice with a 1:1 allocation ratio. The study was carried out over a period of sixteen weeks. For the first eight weeks no intervention was introduced. This was the baseline period. All sixteen hospitals collected information on the numbers of patients undergoing HIV counseling

and testing and the number of new HIV infections detected. After eight weeks the intervention was introduced to the hospitals assigned to the experimental group. Data was collected from patients both in the treatment and the control clusters using pre-designed questionnaires.

The main outcome measures were the acceptance rate of HIV testing and HIV detection rate.

**Context:**

The main aim of VCT is to make people aware of their HIV status. The hypothesis is that this could encourage people to modify their sexual behaviour preventing further transmission of the disease. In addition it could also promote an early uptake of appropriate services such as medical treatment, family planning, etc. Recognizing the role of the VCT as a starting point to all services related to HIV/AIDS, WHO and UNAIDS recommended the health care providers to initiate HIV testing and counseling to all patients irrespective of their HIV status. This intervention also ensured that providers made arrangements to provide appropriate treatment to patients detected to be HIV positive. Such a program can contribute significantly to the disease control efforts of the government.

**Objective of the impact evaluation:**

The specific objectives include the following:

1. To explore the characteristics of patients who accept and decline HIV testing, when the service is offered by health providers.
2. To assess the factors associated with HIV infection among patients.
3. To examine the costs and effectiveness of provider-initiated VCT, in comparison to the current practice where VCT is performed only on request by patients or physicians.
4. To develop a decision-based analytic model for the assessment of the clinical and economic impact of provider-initiated VCT compared to current practice.
5. To investigate the perceptions of key stakeholders concerning the introduction of provider-initiated VCT in district hospitals.

**Key findings of the impact evaluation**

During the first eight week baseline period, there was no significant difference between the control and experimental clusters on the acceptance rate and HIV detection. However, after the 8-week intervention period, the acceptance rate and HIV detection rate in the experimental clusters was significantly higher than those of the control clusters

The intervention costs were nearly three times higher in the experimental clusters compared to the control clusters. An additional twelve HIV infections were detected or

1.74 HIV infections averted due to the intervention. So, though the intervention is costly, the consequent early detection leads to an overall reduction in the cost of treatment and care.

### **Policy implications**

The lessons learnt from the impact evaluation clearly show that provider-initiated VCT increases the rates of HIV detection. It is expected that once detected with HIV the patient will take appropriate treatment and, as a consequence, have a positive impact on morbidity and mortality associated with HIV.

Such a program may not be useful in areas of low prevalence of HIV given the costs, but is certainly cost effective in areas of high prevalence. There are concerns about burdening the already overworked hospital staff and the additional requirements at the health facilities. However, this can be addressed by taking inputs from key stakeholders like policymakers at national level, hospital administrators, healthcare workers, service recipients at OPD and civil society organizations.

### **Points for discussion**

1. Countering stigma in case the patient is found to HIV positive?
2. Counselling, if tested positive
3. Follow-up care if tested positive

## **Policy Brief 5**

### **Impact Evaluation of India's 'Yeshasvini' Community Based Health Insurance Program Aradhna Aggarwal**

#### **The program**

The scheme was introduced in June 2003 in the Indian state of Karnataka, as a result of the joint efforts of a government official and a famous Indian cardiologist. It is governed by a Trust and its administration is out-sourced to a profit-oriented TPA (third party administrator). The government, using its administrative network, obtains membership from all cooperative members covering a large number the rural population.

It is a community based, self-funded insurance scheme, with a network of hospitals. These are mainly private hospitals, but charitable, public sector and cooperative sector hospitals are also part of the scheme. There are some super specialty hospitals. Currently, 349 hospitals are in the network. The premium in 2007-08 was INR 10 per month for every adult and every child, with a 15 per cent discount on additional members if the household size is more than 5.

The scheme covers surgical procedures only and the allowable list has about 1600 procedures. The scheme does not cover in-patient admission without surgery. Individual hospitals are allowed to add on different benefits if they so want. The Trust

has fixed a price for each surgery, inclusive of admission charges, bed charges in a common ward, nursing charges, anesthesia charges, operation theatre charges, surgeon's charges, as well as the costs of consumables and medicines during and after the operative period. A well specified list of exclusions is provided to all the hospitals. An important feature of the program is that the price for surgery paid to a network hospital is significantly below the normal market charges to discourage unwarranted surgeries.

There are almost 3 million people enrolled in the program currently.

### **Context**

Karnatak's performance in many of the health indicators is better than the national average. However, communicable diseases such as diarrhea, respiratory tract infections, typhoid and tuberculosis continue to have severe effects on the population. Also above the national average are incidences of heart ailments, diabetes, cataract, and neurological disorders. Health facilities are not uniformly distributed across the state and the share of public health in the state budget has been decreasing. Not surprisingly, there is a perceptible growth in out-of-pocket expenditures on health, especially in rural areas.

### **Objective of the evaluation study**

The study aims at evaluating the performance of the scheme against the three main goals of a community based program: (1) mobilization of resources (2) pooling of risks and (3) purchase of services. In addition, the scheme is evaluated in terms of two types of goals:

- intermediary goals: utilization of health care services, and financial protection; and
- final outcomes: health status of participating households

The study also weaves a gender perspective into the analysis.

### **Key findings**

The scheme has had substantial impacts on health care utilization. The results are more pronounced for outpatient care and surgeries than for non-surgical inpatient treatment. The beneficiaries, however, are generally wealthier than the non-beneficiaries, but not significantly so. There is some evidence of financial protection in terms of reduced borrowings or sale of assets in the event of surgery. There was no clear evidence of the scheme having any marked impact on maternal health care though there is evidence of the increased use of institutional facility for deliveries. The increasing membership is an obvious pointer that people are benefiting from the scheme. There is also some suggestion that the program is cost-effective.

### **Policy implications**

Given that there are out-of-pocket expenditures any way, it may be a better idea to make sure that the money is spent effectively by the household. Improving health care services and making them affordable is an obvious method of achieving that. Standardization of care, allowing people to choose between health care providers and developing a mechanism that allows health care providers to get paid may be a more effective approach than trying to build building free hospitals with limited government resources.

Universal health insurance may go a long way in covering low probability health events, like surgery. They may not be that effective, however, if we use health insurance to cover all types of ailments, especially those that are common, infectious and caused mainly by the lack of prevention strategies. Insurance against bad health events encourage households to concentrate on long term income and welfare enhancing activities as it reduces the need to save money for a rainy day.

**Points for discussion**

7. Health insurance versus subsidized minimum healthcare for all; do they need to be separated out?
8. What is a good model of private public partnership in health?
9. What are the lessons learnt for the RSBY from Yeshasvini and Arogyashree?