Annex 6: Capacity development

Annex 7: Final Report Summary Sheet for R4D

Research programmes must complete the Final Report Summary for R4D. The Final report (minus financial information) will be made available for download from R4D or the research programme’s website.

1. Background Information

<table>
<thead>
<tr>
<th><strong>Title of research programme:</strong></th>
<th>Consortium for Research on Equitable Health Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reference Number:</strong></td>
<td>HD105</td>
</tr>
<tr>
<td><strong>Period covered by report:</strong></td>
<td>1 April 2005 to 31 March 2010</td>
</tr>
<tr>
<td><strong>Name of lead institution and Director:</strong></td>
<td>London School of Hygiene &amp; Tropical Medicine; Dr Kara Hanson</td>
</tr>
<tr>
<td><strong>Key partners:</strong></td>
<td>Indian Institute for Technology (Madras), India; KEMRI-Wellcome Trust Research Programme, Kenya; Health Policy Research Group, University of Nigeria (Enugu), Nigeria; Centre for Health Policy, University of Witswatersrand, South Africa; Health Economics Unit, University of Cape Town, South Africa; Ifakara Health Institute, Tanzania; International Health Policy Programme, Thailand.</td>
</tr>
<tr>
<td><strong>Countries covered by research:</strong></td>
<td>India, Kenya, Nigeria, South Africa, Tanzania, Thailand [plus related work: Ghana, Benin, Cambodia.]</td>
</tr>
<tr>
<td><strong>Start Date for research programme:</strong></td>
<td>1 April 2005</td>
</tr>
<tr>
<td><strong>End Date for research programme:</strong></td>
<td>30 September 2010</td>
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</tbody>
</table>
2. Summary

Over the past 5 years CREHS researchers have produced a rich body of new knowledge about how health systems can be strengthened to better meet the needs of poor people in low and middle-income countries. We have also engaged actively with decision-makers at national and international levels to communicate widely this new knowledge and influence policy and practice.

The research programme addressed 4 main themes:
1) Protecting the poor against the financial risks associated with paying for health care
2) Improving performance of health workers and their distribution between rural and urban areas
3) Delivering priority health interventions at scale
4) Strengthening the implementation of pro-poor health policies

Financial risk protection
Research undertaken directly through CREHS, and related research undertaken by our broader circle of collaborators, has contributed substantially to the evidence base around:
- The high levels of health expenditure occurring among the poorest and most vulnerable groups when they experience illness
- Socioeconomic inequalities in both the use of health services and the burden of paying for these services, in a wide range of low income settings, reflecting supply side constraints and policies that fail to address the needs of poor people
- The effects of a novel approach to supporting user fee removal/reduction by channelling funding directly to health facilities in Kenya;
- Further documentation of the equity outcomes of the Thai health reforms, demonstrating how a comprehensive approach to health financing reform, addressing both demand and supply side barriers, can support an equitable and efficient health system.

Drawing on data from an “expenditure diary” in which households were asked to record all of their expenditure over a 2-month period and a cross-sectional household survey, CREHS researchers in Nigeria found that nearly 25% of households in the poorest one-fifth of the population spent more than 40% of their total non-food expenditure on health care, exposing them to potentially serious financial hardship.

One challenge in better protecting poor households against high out-of-pocket health expenditures is the difficulty of extending health insurance to low-wage workers from whom it may be difficult to collect insurance premia. CREHS researchers in India studied the Employees State Insurance Scheme (ESIS), which was created in 1955 to protect those in low-wage employment (currently set at less than $250 per month) against the financial risks of health care use and other shocks. However, the research found that the poor quality of health services provided by the scheme, and other characteristics of the scheme which prevented it from meeting the particular requirements of low wage formal sector employees, reduced its effectiveness. Despite a relatively comprehensive package of services covered by the insurance, including both inpatient and outpatient care, only 14% of outpatient visits, and 66% of inpatient admissions were to ESIS providers. Those who sought care from outside the insurance plan made substantial out-of-pocket expenditure payments, averaging more than $15 per outpatient visit. A familiar set of quality-related reasons were cited for failing to use ESIS providers (poor quality drugs, impolite staff, long waiting times). Other problems for this group were the inconvenient opening times (requiring them to leave their place of work during the day to seek care) and the fact that many were migrant workers living away from their families, who were therefore unable to use the ESIS designated providers.
CREHS and related research investigated the socioeconomic distribution of the use of public health services. Studies in both Tanzania (SHIELD BIA) and India (CREHS utilization incidence analysis) have demonstrated the capture of public subsidies by better off socioeconomic groups. Data from Nigeria, which further disaggregate utilization by type of public facility, show that this can partly be explained by greater use of hospital level care by the non-poor, while utilization of PHC units, more frequently located in rural areas, tends to be more pro-poor. These results contrast sharply with the equitable pattern of utilization in the Thai system, which shows the effects of a comprehensive approach to health financing reform (albeit one which is underpinned by a much higher level of economic development, and a strong primary health care infrastructure).

In September 2009 the UK government committed to support countries to implement progressive health financing mechanisms and to remove user fees. Core CREHS and CREHS-related studies have generated new insights into some of the practical challenges involved in user fee removal. One problem when user fees are reduced or removed is the loss of health facility revenue. While this revenue is often small in absolute magnitude, it has sometimes been shown to play an important role in improving service access through outreach and referral, as well as improvements in quality of care, where these locally controlled discretionary resources are used for these purposes. CREHS researchers studied a pilot project in Kenya which experimented with Direct Facility Funding (DFF), a mechanism to compensate health facilities for user fee reduction by channelling money directly to health facilities. DFF was perceived to have been an important means of increasing access, improving quality and working conditions, and findings supported the decision to scale up this system to national level (gazetted in 2008, and implementation planned for mid 2010).

Overall, the research produced through CREHS has demonstrated the critical role of pooled, public funding in protecting the poor from high levels of health expenditure. Expanding insurance schemes to protect the poor is on the policy agendas of many low income countries, including Kenya, Tanzania, South Africa, and Nigeria. However, CREHS research has also shown how supply side problems must be addressed if financing reform is to have positive impacts. The Thailand experience provides an excellent example of how a comprehensive approach to health financing reform, incorporating both supply and demand-side measures, has created a system which is both equitable and efficient. CREHS researchers in Thailand have undertaken a series of studies of their health financing system. The main lessons for lower income countries emerging from the Thai experience include:

- the need to explore different options for expanding insurance to the informal sector;
- the importance of investing in public health infrastructure, including district level PHC services and close-to-client services, together with equitable distribution of human resources, to reduce access barriers and provide adequate quality;
- the need for effective purchasing strategies within UC schemes to secure efficiently provided services;
- the importance of both the breadth and depth (benefit package) of public health insurance coverage in protecting against financial catastrophe;
- the value of effective implementation strategies to secure equity gains.

**Health workforce**

Scaling up service delivery to meet the MDGs depends crucially on having enough health workers to meet the health needs of the population, and ensuring that they are located in the places where services are required. However, recruitment and retention of health workers in rural areas has been a challenge in many countries. CREHS research sought to generate new knowledge about the motivations and preferences of health workers, with the aim of informing strategies to improve the supply of health workers in rural areas, through the CREHS Cohort Study in South Africa, Kenya and Thailand. A longitudinal study design was adopted, in which a group of nursing graduates was enrolled and monitored prospectively, with follow-up after one year. Overall, the findings from the
cohort study provide evidence of the importance of trying to attract to the health profession individuals who have a positive attitude towards rural areas, and that locally designed non-financial incentives can be powerful interventions to redress the geographic maldistribution in low- and middle-income countries.

Firstly, across countries our research provided encouraging results regarding the attitude of future nurses towards rural areas and jobs there. Although the nursing students surveyed feel that working in rural areas is difficult due to professional difficulties (for example in all three countries, for a large majority of nurses working in rural areas means being isolated and without much support) and challenges in their personal lives (particularly in Kenya and South Africa where rural areas often lack infrastructures, roads, and social amenities), we also found that there is a reservoir of good will and positive attitudes towards rural areas. In all three countries, many people have positive associations with living in rural areas (less stress, better quality of life), and there are also professional opportunities (such as better recognition from the population). We also found that certain groups of nurses were more positive towards rural areas and jobs than others. In particular, those who grew up in rural areas or trained in training facilities located in more rural areas were more inclined to like rural jobs, and in South Africa they were more likely to choose a rural job as their first placement.

We also undertook a study which asked nurses to make choices between “hypothetical” jobs that differed in terms of their levels of pay and a series of non-financial incentives, called a Discrete Choice Experiment (DCE). These data allowed us to examine the association between individual characteristics and preference for rural jobs. Whereas in South Africa students who were younger, single or had children were more likely to choose an urban posting, in Kenya these same groups preferred rural jobs. Female graduates were less likely to choose rural postings, but not significantly. Furthermore, in all three countries having been born in a rural area was significantly associated with the choice of a rural job.

Other important findings emerging from the DCE can inform the design of policies that could attract more health workers to rural areas:

- In both Kenya and South Africa, the most effective policy interventions to attract nurses to a rural job were the introduction of a cash bonus for working in rural areas, and the provision of preferential access to specialist nursing training.
- For Thai nurses, improved housing and an expanded health insurance package were the most attractive incentives, and more effective than a 30% salary increase.
- In all three countries, faster promotion and changes in management culture were the factors least likely to persuade nurses to accept a rural posting.
- Finally, in South Africa, a study of different policy scenarios showed that providing favourable education opportunities to nurses was a cost-effective policy option; but also that attracting more rural students to nursing studies (for example, through quotas) would be more cost-effective than most other interventions.

Service delivery at scale

As we approach 2015, there continues to be concern at the national and international levels about how coverage of effective health interventions and supporting policies can most effectively be expanded to meet the MDGs. Our review of the scaling up literature (Mangham and Hanson 2010) identified four critical issues for understanding how to increase the coverage of key services, and to expand the resources needed to deliver these. These are the approaches to estimating and mobilizing the money required to scale up; the constraints to expanding coverage operating at different levels; the challenges of addressing equity, and quality concerns; and novel approaches to service delivery. Commentaries by CREHS researchers expanded on these ideas, and addressed the importance of managing the process of scaling up; the equity challenges of expanding ART coverage in South Africa; and the opportunities and challenges created by the Global Health Initiatives, such as the Global Fund and PEPFAR.
CREHS-related research is contributing to a rich body of evidence in the area of delivery of malaria interventions, which is also having an impact on policy and practice at global level. Researchers from HEFP and IHI were contracted by the Ministry of Health (using their Global Fund grant) to monitor and evaluate the Tanzania National ITN Voucher Scheme over the period 2004 to present. This innovative scheme is perhaps the largest voucher scheme ever to run in a low-income setting, operating at a national scale to deliver vouchers to pregnant women and to infants which can be used as part-payment for ITNs delivered through private retail shops. The scheme was found to have contributed to a significant increase in ITN use among target groups, with each year of operation associated with a 9 percentage point increase in household ITN ownership. Modifications to implementation processes were made each year following presentation of the results to the implementing partners. Together with the sharp and consistent socioeconomic differences in ITN use that were being demonstrated through the monitoring process, progress in increasing coverage was judged to be too slow, and plans were made for a mass free distribution to all children < 5 from 2009, with a universal coverage to follow in 2010. The multidisciplinary nature of the evaluation, and the close relationship forged with the implementing team have been key in supporting the rapid take-up of findings into programming and practice.

A second key focus of CREHS-related scaling up research is the potential to use the private sector to expand access to artemisinin-based combination therapy (ACT) for effective treatment of malaria. A number of CREHS-related research projects have generated evidence which has been used in the development of the Affordable Medicines Facility – malaria (AMFm), a new global financing mechanism which will provide a substantial co-payment for ACTs purchased by public, private and NGO buyers. CREHS staff members provided technical advice for a pilot of the scheme in Tanzania, which acted as a “proof of principle” that ACT availability could be increased and substantial price reductions achieved through this mechanism. However, drug shops in remote areas were significantly less likely to stock ACTs than those in population centres, and over 75% of drug store customers fell in the highest two socio-economic quintiles nationally, highlighting the need for additional strategies to ensure the poorest groups are reached. A second pilot project in Western Kenya, undertaken by the KEMRI-WT team, demonstrated a 29 percentage point increase in prompt effective treatment of fever among children under five years. These results have influenced the decision to proceed with AMFm at both the international and country levels. Other research on the antimalarial distribution chain undertaken by the ACTwatch team in Benin, Cambodia and Nigeria has been used to inform the design of AMFm. HEFP researchers are part of the team that will undertake the Independent Evaluation of AMFm for the Global Fund (2010 – 2012).

Policy implementation
CREHS research on policy implementation has examined varied cases of policy implementation across all countries, as well as specific experiences of scaling up. A key contribution of using policy analysis in these studies has been to guide our thinking beyond a simplistic, linear model of hierarchical policy implementation, where policies or directives that are issued from the centre are assumed to be implemented just as they are intended, with little resistance or deviation. Instead, policy analysis recognises how implementation is a process of interaction and negotiation between those who seek to put a policy into effect, and those who are responsible for delivering it. Overall, our empirical work drawing on these insights demonstrates that the practice of policy implementation, and its achievements, is influenced by human interactions, and not only by technical design. To strengthen achievements in line with policy objectives, better management of the implementation process is, therefore, needed. This can take many forms, including closer attention to the ways that policies are developed, framed and communicated; strengthened capacities to manage relationships throughout the system; and a greater recognition of the ways that power is distributed and used by those who are ultimately responsible for translating policy into action. The key lessons from this body of work include:
5. The critical importance of frontline health workers in mediating policy implementation and access for patients: health workers influence how patients experience equity-oriented policies and therefore, whether the policy is able to generate equity and coverage gains.

6. Health worker practices are influenced by a number of factors, including whether they see the policy as a threat or as something to support; by the broader organisational culture in which they work and their willingness to make the changes requested by their managers; and by wider community influences. In Nigeria, for example, the largely unsuccessful implementation of Community Based Health Insurance was seen by health workers as a threat because of the loss of income that it entailed; and implementation was further undermined by the tradition of limited bureaucratic authority over health facilities, making it difficult to exercise managerial authority over health workers; but where the scheme worked slightly better, this was attributed to the influence of a local traditional leader who took a particular interest in the scheme. In South Africa, where we examined implementation of the user fee policy and the Patients Rights Charter (PRC) at hospital level, the degree of implementation differed between the two policies – PRC was much more controversial as it challenged the existing balance of power between patients and providers. Implementation of both policies also varied between the two case study hospitals, which had very different organisational cultures and levels of trust between managers and health workers, and therefore differing levels of willingness to cooperate and implement new initiatives. With IMCI in Kenya and Tanzania, some health professionals explained their resistance to the clinical protocols in terms of how the community would view or interpret their actions – feeling that mechanically following a diagnostic flowchart would undermine patients’ confidence in their abilities.

7. The practices of health sector managers are an important influence over implementation. For example, better IMCI performance was observed in the districts where managers took a personal interest and invested more energy in adapting the policy to local circumstances. More inclusive managerial practices in one of the hospitals in South Africa were associated with greater acceptance and engagement with the Patients Rights Charter.

8. Higher level influences are also important. Central level action can support implementation by providing additional resources, clear targets, or acting as policy champions. But actions at the national or international level can also undermine effective policy implementation – for example, by imposing rigid training formats for IMCI which are expensive and therefore cannot easily be scaled up; by imposing health financing models without considering the influence of local politics, as in the case of CBHI in Nigeria; by inadequately resourcing mobile units in Tamil Nadu state in India; or by shifting programme priorities and funding as has happened in the area of child health, which has seen a reduction in global funding compared with HIV/AIDS, TB and malaria.

The broader issue of how to build and strengthen health systems that promote health equity was the focus of the (CREHS-related) work of the Knowledge Network on Health Systems for the Commission on the Social Determinants of Health, led by Lucy Gilson and a core team drawn from LSHTM, CHP and EQUINET. Basis on synthesis of existing knowledge, the network’s report concluded that health systems that promote health equity support and enable inter-sectoral action for health, social empowerment and universal coverage, and are founded on and operationalise primary health care principles. At the same time, the report highlighted the need for political action to embed these features in health systems – not only at global and national levels, but also at local levels and within the health system itself. Such health system transformation requires not only strong, strategic management of policy change processes, but also sustained leadership to re-orient the institutions embedded in any health system that serve to protect the status quo.

3. Products and Publications

Core CREHS publications
Peer-reviewed publications


**Publications in press or submitted**


**Books or book chapters**


**Policy and research briefs**


Cleary S. *Overcoming apartheid health care to achieve equitable access to ART*. CREHS policy Brief, 2009. [4]


Erasmus E. *Nurses attitudes towards living and working in rural areas*. CREHS research Brief, 2009. [3]

Erasmus E, and Blauuw D. *The need for the active and strategic management of local-level policy implementation*. CREHS policy Brief, 2009. [1]

Lagarde M and Palmer N. *Evidence from systematic reviews to inform decision making regarding financing mechanisms that improve access to health services for poor people. A policy brief prepared for the International Dialogue on Evidence-Informed Action to Achieve Health Goals in Developing Countries (IDEAHealth)*. Geneva: The Alliance for Health Policy and Systems Research, WHO, 2006


Palmer N and Lagarde M. *Reviewing the evidence on health financing strategies to encourage uptake of health services by the poor*. CREHS policy brief, 2007. [2]


Uzochukwu BSC, Onwujekwe OE. *Implementing Community Based Health Insurance in Anambra State, Nigeria*. CREHS policy brief, 2010. [1]


**Publicity material**

**Newsletters**
Regular online newsletters provide updates of new CREHS research and publications.

December 2009:
July 2009: Focus on iHEA and Shield
March 2009: Focus on Financial Risk Protection
December 2008: Focus on Health Sector Reform
July 2007: Exchange II
January 2007: Exchange I

**CREHS leaflet**
**CREHS poster**
**CREHS folder**: Disseminated at UK and international conferences

**Website links**
The website is used to provide information on CREHS research, partners and members as well as links to all of our publications. Since the beginning of 2009 the site has had over 2400 unique visitors from 110 countries. The top ten countries are UK, India, US, South Africa, Kenya, Canada, Brazil, Switzerland, Nigeria and Tanzania.

The website has received visitors from 30 sites listed below:

<table>
<thead>
<tr>
<th>Organisations and websites that link to CREHS [2009]</th>
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</tr>
</thead>
<tbody>
<tr>
<td>LSHTM</td>
<td>London International Development Centre</td>
</tr>
<tr>
<td>TARGETS RPC</td>
<td>Tropical Medicine, Oxford University</td>
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<tr>
<td>DFID Health Resource Centre</td>
<td>Heapol, Oxford Journals</td>
</tr>
<tr>
<td>Research for Development</td>
<td>University of Cambridge Medical School</td>
</tr>
<tr>
<td>Health Economics Unit, University of Cape Town</td>
<td>Science Direct</td>
</tr>
<tr>
<td>Health Economics and Financing Programme</td>
<td>Evidence for Action</td>
</tr>
<tr>
<td>Kemri-Wellcome Trust Research Programme</td>
<td>shi-conference.de</td>
</tr>
<tr>
<td>International Health Policy Program, Thailand</td>
<td>World Health Organization</td>
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<tr>
<td>id21</td>
<td>Communication Initiative</td>
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<tr>
<td>CREHS cohort blog</td>
<td>Hepnet</td>
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<tr>
<td>Socialhealthprotection.org</td>
<td>MARCH Centre</td>
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<td>University of Witswatersrand</td>
<td>Providing for health.org</td>
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<tr>
<td>Indian Institute of Technology, Madras</td>
<td>Ifakara Health Institute</td>
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<tr>
<td>Eldis</td>
<td>DFID</td>
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<tr>
<td>Realising Rights</td>
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</table>

The CREHS Cohort study team also developed its own website during the year to share information about the project and to communicate with the cohort members (http://cohort08.blogspot.com/).

**Research programme reports**
Dash U, Muraleedharan VR, Acharya D, Prasad BM and Saraswathi L. Access to health services in under privileged areas: a case study of mobile health units in Tamil Nadu and Orissa. CREHS research report 2008. [1]


Nkosi M, Govender V, Erasmus E and Gilson L. Investigating the role of power and institutions in hospital-level implementation of equity-oriented policies. CREHS research report, 2007 [1].


Dissemination events

In March 2010 we held a conference in London in collaboration with two RPCs, TARGETS and COMDIS called “Delivering effective health care for all”. The conference was attended by over 160 participants from research organisations, NGOs, multi-lateral organisations and bi-lateral donors, and journalists based in the UK and Europe.

CREHS presentations made at the conference were:

- Making health systems work for the poor. K Hanson. LSHTM
- What policies would attract health professionals to rural areas? Evidence from South Africa, Kenya and Thailand. D Blaauw, Centre for Health Policy, South Africa
- Implementing the Integrated Management of Childhood Illness strategy in Kenya and Tanzania. J Borghi, Ifakara Health Institute, Tanzania
- Direct facility funding as a potential tool in user fee removal in Kenya. A Opwora, KEMRI-Wellcome Trust Research Programme, Kenya
• *Do the Poor Benefit from Public Spending on Healthcare in India?:* Results from Utilization Incidence Analysis in Tamil Nadu and Orissa. Indian Institute of Technology, Madras, India

• *Benefit incidence analysis of priority public health services in Nigeria.* O Onwujeke, Health Policy Research Group, University of Nigeria, Enugu-Campus, Enugu

• *Policy implementation: the influence of frontline staff, the nature and meaning of policy, and the organisational environment* E Erasmus, Centre for Health Policy, South Africa

• *Strategic management: a critical element in implementing private medicine retailer programmes in Kenya.* T Abuya, KEMRI-Wellcome Trust Research Programme, Kenya

Conference presentations


Blaauw D, Erasmus E and Lagarde M. *Relative costs-effectiveness of various policy intervention to address nurses shortages in rural South Africa.* Oral presentation at iHEA, Beijing, July 2009. [3]

Dash U and Muraleedharan V. The *Role of the Street Level Bureaucracy in the Implementation of Mobile Health Units* in the International Seminar on Rural Communities: Problems and Challenges. Held on 5-6th March 2008 at the Dept of Sociology, University of Madras, Chennai. [1]


Eze S. The *District Health System in Enugu State, Nigeria: An analysis of policy development and implementation.* Poster presentation at iHEA, Beijing, July 2009 [1]


Goodman C. *Assessing the implementation and effects of direct facility funding in health centres & dispensaries in Coast Province, Kenya.* Poster presentation at iHEA, Beijing, July 2009 [2]

Hanson K. *Scaling up malaria interventions: working with or around existing delivery systems?* Presented at the International Conference on Parasitology, Glasgow, August 2006. [4]
Hanson K. *From interventions to public health impact: The challenge of strengthening service delivery.* Royal Geographic Society meeting on health, November 2007. [4]


Hanson K. *Understanding process to demonstrate impact.* Presented at the International Health Economics Association, Beijing, July 2009 [4]

Hanson K. *Delivering the goods: Vouchers as a link between the public and private sectors in the delivery of public health products.* Presented at pre-conference meeting on the private sector, International Health Economics Association, Beijing, July 2009. [4]

Hanson K, Jack W. *Health worker preferences for job attributes in Ethiopia: Results from a Discrete Choice Experiment.* Presented at the International Health Economics Association, Copenhagen, July 2007 [3]

Lagarde M, Blaauw D and Erasmus E. *Nurses’ job preferences in South Africa: Results from a Labelled Choice Experiment.* Presented at the 2nd conference in Conjoint Analysis for Health, 24-26 March 2009, Delray Beach, USA. [3]

Lagarde M. *Nurses’ job preferences in South Africa: Results from a Labelled Choice Experiment.* Oral presentation at iHEA, Beijing, July 2009. [3]

Lagarde M. *A cross-country comparison of nurses’ altruistic motives.* Oral presentation at iHEA, Beijing, July 2009 [3]


Okoli C et al. *Community-based health insurance (CBHI) and financial risk protection: A case study in southeast Nigeria.* Oral presentation at iHEA, Beijing, July 2009 [2]


Pagaiya N, Noree T, Tangcharoensathian V, Chotiros Laongbua, Lagarde M, Blaauw D and Sriratana S. Interventions to attract and retain newly graduated nurses to rural posts. Oral presentation to the policy maker forum, 13 November 2008, Rama Garden Hotel, Bangkok. [3]


Vaishnavi SD, Dash U. Coping with the Financial Burden of Illness: A Study in rural region of a less developed district in India. Oral presentation at iHEA, Beijing, July 2009 [2]

CREHS related publications

Peer-reviewed publications


Dike N, Onwujekwe O, Ikeme A, Uzochukwu B and Shu E. Do educational attainment and knowledge about malaria play a role in peoples’ perceptions, behaviour and practice to the disease control? *Social Science and Medicine* 63(1):103-6, 2006.


Mangham L and Hanson K. Exploring the employment preferences of public sector nurses: Results from a Discrete Choice Experiment in Malawi. *Tropical Medicine and International Health* 13(12): 1433-1441, 2008. [3]


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Onwujekwe O, Uzochukwu B, Dike N, Okoli C, Eze S, Chukwuogo O. Are there geographic and socio-economic differences in incidence, burden and prevention of malaria? A study in southeast Nigeria. *International Journal for Equity in Health* 2009, 8:45


Uzochukwu B, Onwujeke O, Onoka C, Okoli C, Uguru N and Chukwuogo O. Determinants of non adherence to subsidized antiretroviral treatments in southeast Nigeria. *Health Policy and Planning*, 2009, 24(3) 189-196


**In press or submitted**


Goodman C. et al Why increasing access to malaria treatment and preventing drug resistance are reconcilable aims. Submitted to BMJ

Goodman C. et al Improvements in access to malaria treatment in Tanzania after switch to Artemisinin Combination Therapies (ACT) and the introduction of Accredited Drug Dispensing Outlets (ADDOS) - a provider perspective. Submitted to Malaria Journal

Hanson K, Jack W. Health worker preferences for job attributes in Ethiopia: Results from a discrete choice experiment. Health Affairs, in press, 2010

Kachur SP, Black C, Abdulla S and Goodman C. Putting the genie back in the bottle? Availability and presentation of oral artemisinin compounds at retail pharmacies in urban Dar-es-Salaam. Malaria Journal, in press.


Onwujekwe O and Velényi E. Willingness to pay for private voluntary health insurance in southeast Nigeria. Health Affairs, in press.

Books and book chapters


Ranson MK, Sinha T and Chatterjee M. Promoting access, financial protection and empowerment for the poor: Vimo SEWA in India. In, Bennett S, Gilson L and Mills A (eds) Health, economic


