Executive summary
Strategies for Health Insurance for Equity in Less Developed countries (SHIELD)

Objectives and focus of project

The SHIELD project aims to critically evaluate existing inequities in health care in Ghana, South Africa and Tanzania and the extent to which pre-payment mechanisms for funding health care could address equity challenges by:

1. evaluating the distribution of the current health care financing burden between socio-economic groups, distinguishing between public and private financing mechanisms, and the factors influencing this distribution
2. evaluating the distribution of health care benefits across socio-economic groups and health system related factors that influence this distribution of benefits
3. identifying and critically evaluating current experience, and options for the likely future development, of pre-payment mechanisms for funding health care in and between Ghana, South Africa and Tanzania in relation to their actual and/or potential equity impact and their feasibility and sustainability given attitudes of key stakeholders
4. developing strategies and policy recommendations on pre-payment funding mechanisms that will most appropriately address the identified health system equity challenges.

Until recently, international debates about financing and health care equity have primarily focused on mechanisms to promote equity in relation to very specific aspects of health systems: e.g. user fee exemption mechanisms; allocation of limited public sector resources through needs-based formulae; mechanisms for regulating private providers and improving effectiveness in contracting with private providers. However, in recent years there has been growing interest in considering these equity challenges from a more systemic perspective.

Health system equity evaluations often draw on financing and benefit incidence analyses. To date, most of the work on financing incidence analysis has been confined to high-income countries. Only recently have such approaches been applied in low- and middle-income countries, mainly through the EQUITAP project which was confined to Asian countries. No *comprehensive* financing incidence analyses exist for African countries. In relation to benefit incidence analyses, some work has been undertaken, but this has focused solely on quantifying who benefits from public subsidies for health services. The SHIELD project has greatly added to existing knowledge through not only undertaking the first set of comprehensive financing incidence analyses within African countries, but also through undertaking the first set of benefit incidence analyses that cover publicly funded health services *as well as* services funded through other financing mechanisms. In this way, it is the first study to explore in detail income and risk cross-subsidies within the overall health system. SHIELD then went further to

undertake a detailed evaluation of the factors contributing to the financing and benefit incidence patterns within each country. This then provided an excellent basis for considering alternative health care financing mechanisms that may address those factors contributing to inequitable financing and benefit incidence.

There is growing international attention on pre-payment funding mechanisms as a core instrument in promoting progress towards universal health care entitlements and explicitly addressing the socio-economic divisions that exist in many health systems. Pre-payment funding is seen as potentially being a mechanism for overcoming existing structural inequities and negotiating the entrenched interests that have influenced health sector reforms over the past few decades. There has not been much critical evaluation of African experience with increasing pre-payment funding for health care within the context of moving towards universal coverage. No primary level research has been undertaken to explore whether system-wide interventions, such as mandatory insurance (and associated reforms to ensure that insurance entitlements can be claimed), translate into overall health system equity gains. Further, previous research has placed a heavy emphasis on 'technical' solutions, with little or no attention paid to the policy context and process and to whether these technical solutions will be supported or opposed by influential stakeholders. As policy analysis in relation to health care financing reforms in low- and middle-income countries is a relatively new area of investigation, this project contributed to international understanding of health care financing and wider health system restructuring processes.

Work undertaken

The first phase of the SHIELD project, which comprised an extensive review of existing publications and available data, was completed in the first year of the project. A 'map' of the health system in each country was developed, identifying all the major sources of finance and financing mechanisms, key categories of health care providers and user groups. Particular emphasis was placed on documenting the type and scope of existing health insurance mechanisms as well as all proposals for future health care financing developments. Financial flows were mapped and a preliminary indication of their nature and extent provided. There was a focus on categorising financing, provision and user groups in relation to the public and private health sectors and identification of the nature and extent of interactions between the two sectors. An overview of the nature of the factors that influence financing and benefit incidence (e.g. structure of existing contribution mechanisms, coverage, benefit packages etc.) was provided. The existing policy and regulatory framework was also explored, in terms of how this may influence the current financing, provision and use patterns. This information was used to critically evaluate the equity of the current health system, and identify the key drivers of inequity in each country. Detailed reports on the findings in each country have been produced and are available on the SHIELD website. In addition, an article on the key issues arising from this phase of the research project was published in the WHO Bulletin.

The second year of the project focused mainly on gaining access to existing national household survey datasets and undertaking extensive primary data collection. Existing household surveys are deficient as a basis for calculating financing and benefit incidence in a number of respects. In particular, these surveys tend to dramatically under-report health service utilisation (critical for benefit incidence analyses) and out-of-pocket (OOPs) payments and insurance contributions. Household survey

respondents will not report on insurance contributions made on their behalf by employers unless specifically requested to, and are frequently unsure of the level of their own contributions which are often directly deducted from their salary. Utilisation and OOP payments are usually under-reported due to: inappropriate recall periods; the linking of utilisation and OOP expenditure to acute illness incidence questions – potentially omitting preventive care and care for chronic diseases; and restriction to only one service used when people may have used multiple services during an illness episode. For this reason, primary data collection involved conducting our own household surveys. A nationally representative survey of 4,800 households in all nine provinces was carried out in South Africa. In Tanzania and Ghana household surveys were conducted in 6 districts in each country with a sample of 2,234 and 2,960 households respectively. In addition, a range of case studies were undertaken to better understand the factors influencing these incidence patterns.

The third year was devoted to detailed analyses of financing incidence, which was completed in most countries during this period, and benefit incidence analysis, which was completed in one country during the third year. Analysis of the factors influencing financing and benefit incidence patterns were also initiated during this period. There has been intensive engagement with policy makers in each of the countries to feed results into policy discussions at as early a stage as possible. This has been particularly important in South Africa, which is currently developing policy proposals to introduce national health insurance (NHI), and in Tanzania, which is considering options for integrating the NHI for civil servants with community-based prepayment schemes (the Community Health Funds – CHFs).

During the fourth, or final, year, all financing and benefit incidence analyses were completed in all three countries. In addition, a range of country-specific scenarios of alternative future health care financing reforms were identified through engagement with key stakeholders and the resource requirements of each scenario modelled. The potential for generating revenue from various sources to meet these resource requirements was also modelled. A range of other useful analyses were undertaken using the data collated for SHIELD, such as the impact of insurance coverage on health service utilisation, the extent of financial protection offered by health insurance schemes, the willingness of the population to tolerate income and risk cross-subsidies within pre-payment funding systems, etc. A key activity during this final year was that of dissemination of the research findings, both in terms of engaging directly with health sector policy makers and other stakeholders as well as drafting a wide range of reports and articles for publication in peer-reviewed journals.

Key results

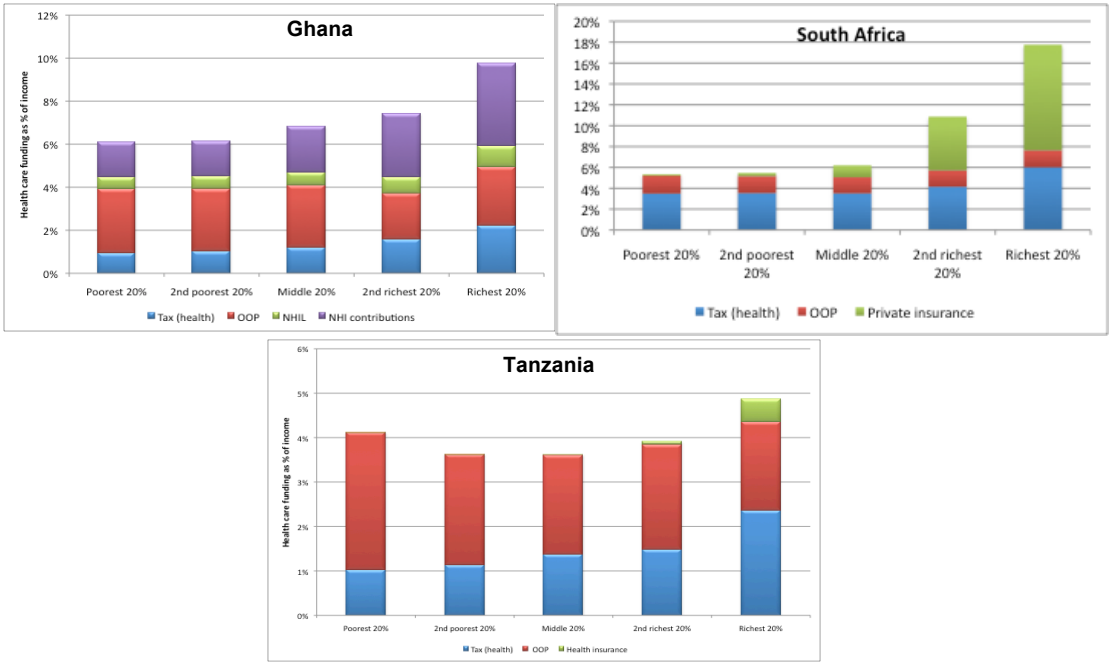
The three countries are very different in terms of their level of economic development and the current structure of their health systems. A key issue of interest relates to alternative health insurance mechanisms in the three countries. Ghana is particularly well known for its wide range of community-based Mutual Health Organisations (MHOs). In late 2002, it was estimated that there were over 159 MHOs in Ghana, covering over 220,000 people. Tanzania also has growing experience of community-based pre-payment schemes and is known for its Community Health Fund (CHF) schemes, the first of which was introduced in 1996. In contrast, South Africa has no experience of community-based pre-payment schemes. Instead, it has substantial private voluntary insurance covering middle- and high-income formal sector workers.

Such insurance schemes are almost non-existent in Ghana and Tanzania. In addition, all three countries are either planning or implementing some form of mandatory health insurance. South Africa has progressed the least, but is currently in the process of agreeing the policy framework for mandatory insurance. Tanzania introduced a social health insurance for civil servants and then introduced insurance cover for private formal sector workers who belong to the National Social Security Fund (NSSF). Although these schemes are not yet linked, integration of CHF with the mandatory civil servant scheme is soon to be initiated. Ghana has taken the boldest steps in relation to mandatory insurance by embarking on a national health insurance system within which district-wide community-based schemes are an integral component. Coverage by the NHI in Ghana has increased quite rapidly. South Africa has recently announced its intention to introduce a so-called 'NHI', which intends to introduce an integrated and universal health system that will be largely tax funded.

There were some commonalities and some differences in the key health care financing equity challenges identified in the three countries. An area of clear concern in all three countries, yet to different degrees, is the level of out-of-pocket payments. Using the international standard measure of catastrophic health care payments being 10% or more of total household consumption expenditure, over 5% of households in Ghana and nearly 2% of households in South Africa and Tanzania incur catastrophic out-of-pocket payments when using health services. When using the alternative threshold of 40% of non-food consumption expenditure, 2.4% of households in Ghana and 1.5% in Tanzania incur catastrophic payments, while very few do in South Africa.

The financing incidence analysis indicates that overall health care financing is progressive in all three countries, as shown in the figure below. In all countries, the poorest 20% of the population spend a smaller proportion of their household expenditure on contributing to health care funding than higher income groups.

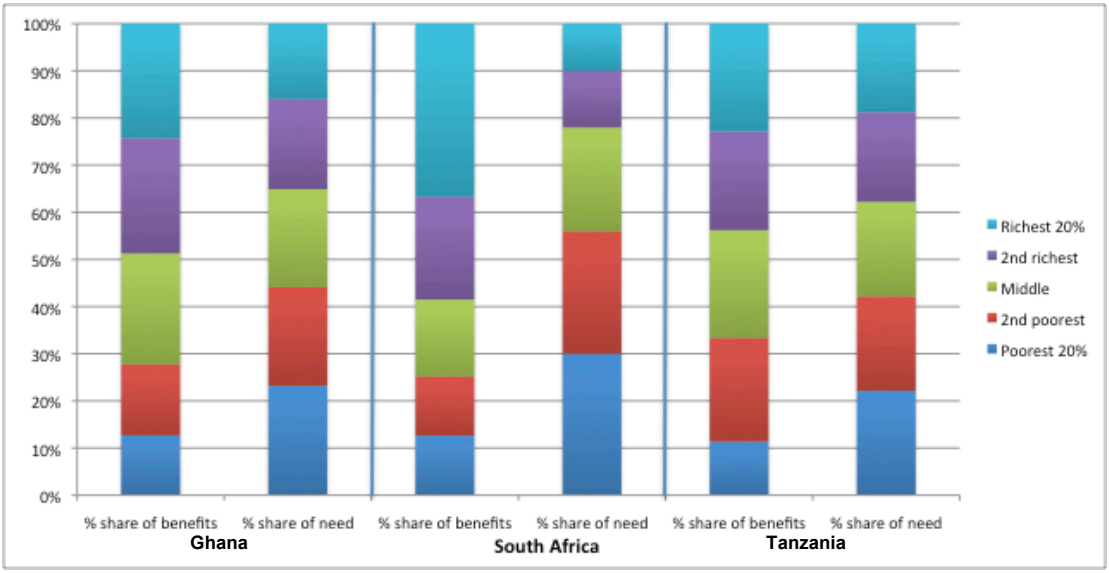
Health care funding as percentage of household expenditure across socio-economic groups in Ghana, South Africa and Tanzania



There are differences between countries in terms of the relative progressivity of different health care funding sources. Tax is an important source of funding in all countries, and the burden of overall tax payments is progressive in each country, largely due to very progressive personal income taxes. However, while VAT is regressive in South Africa, it is progressive in Ghana and Tanzania. Fuel levies were found to be regressive in both Ghana and South Africa. While import duties are a very small share of overall tax revenue in South Africa, they are more sizeable in Ghana and Tanzania, where they were found to be progressive. Out-of-pocket payments for health care were found to be regressive in all three countries. Health insurance contributions were found to be progressive in all three countries when these were evaluated across the entire population. However, in Ghana, contributions to the national health insurance by those outside the formal sector were found to be regressive. In addition, in South Africa the distribution of contributions to private health insurance schemes across those who are members of these schemes is regressive. This is largely due to the flat rate contributions in each case. These findings indicate that while overall health care financing is progressive, efforts should be made to reduce the levels of funding from out-of-pocket payments. It also highlights that in moving towards a greater reliance on pre-payment funding mechanisms, particularly health insurance, whether voluntary insurance as is currently the case in South Africa or mandatory insurance as in Ghana, careful attention needs to be paid to the structure of insurance contributions.

In relation to the distribution of benefits from using health services across socio-economic groups, services are pro-rich in all three countries. The distribution of service benefits is particularly skewed in favour of the richest groups in South Africa. Relative to estimated need for health care, based on self-assessed health status, there is a mismatch between the distribution of service benefits and the need for care.

Distribution of percentage share of health service benefits and health care needs across socio-economic groups



These findings strongly suggest that there are inadequate risk cross-subsidies in these health systems in the sense that individuals are not necessarily able to use health services when needed; rather, the benefits of using health care are distributed according to ability to pay.

We also explored the factors that influence these incidence patterns. In relation to the distribution of the burden of health care financing across socio-economic groups, many of the issues are outside the control of the health sector as they relate to tax policy, which is the domain of the Ministry of Finance. The key factors contributing to the regressivity of out-of-pocket payments and insurance contributions of those in the informal sector (in Ghana and Tanzania) were that flat rates were used (i.e. there was no differentiation of payment amounts according to ability-to-pay) and that policies to exempt the poor from these payments were ineffective, largely due to the inability to identify the poor. Similarly, private voluntary insurance contributions in South Africa imposed a greater burden on lower-income than higher-income scheme members due to charging flat rate contributions.

The consideration of factors influencing benefit incidence patterns highlighted a range of access barriers that affected poorer and rural communities more than their richer and urban-based counterparts. Affordability was a key constraint, not only in terms of the cost of health services themselves but, often more importantly, due to the cost of transport to facilities. The availability of appropriately trained health professionals, equipment and medicines, in addition to the location of health facilities relative to the communities needing health services was also a key constraint. An aspect of access that frequently does not receive attention, namely acceptability, was found to be a particularly important access barrier in all three countries. Poor staff attitudes are a major deterrent to using health services when needed.

Finally, we developed country-specific scenarios of possible future health care financing reform. In Ghana, the focus has been on exploring the implications of alternative interventions to include the informal sector in the NHI. To date, the informal sector was required to make a contribution to their district health insurance

scheme (which is the decentralised level of the NHI). While relatively high levels of NHI coverage have been achieved (about 60% of the population), it is apparent that it is becoming difficult to enrol more members outside of the formal employment sector. The government of Ghana has proposed introducing a 'one-time payment' for those outside the formal employment sector. The implications of different ways of funding NHI membership for the informal sector once they have made their 'one-time payment' has been explored.

In Tanzania, the focus is also on how to include those outside the formal sector in some form of health insurance scheme. There are moves to integrate the community health funds (which cover those outside the formal employment sector) with the mandatory NHI, which covers civil servants. In Tanzania, the status quo was compared to expanding insurance coverage to the informal sector without subsidised contributions for those with the least ability-to-pay (i.e. population coverage of about 60%) and with universal coverage, which require considerable additional health sector investment.

The South African government has committed itself to introducing a universal health system that is largely tax funded, does not require people to pay for health care at the point of service and that covers a reasonably comprehensive package of care. Previously, it had been proposed to introduce mandatory social health insurance, using existing private insurance schemes as financing intermediaries, for all those working in the formal sector and to continue to cover the rest of the population from tax funding. These two alternatives were evaluated and compared to the status quo. The modelling found that, ultimately, the universal coverage option would lead to the lowest levels of health care expenditure. This is largely due to the greater involvement of private health insurance schemes, which have relatively high contribution levels, in the other two scenarios. However, the universal coverage option requires substantial additional public spending on health care.

Another key result of the SHIELD project has been its contribution to capacity development in the African region. One participant of the SHIELD project from Ghana has successfully completed his PhD on SHIELD related research (graduated in June 2010 from the University of Cape Town). A second Ghanaian is due to submit her PhD based on SHIELD related research for examination in early 2011 (University of Cape Town) and a Tanzanian is also nearing completion of his PhD (London School of Hygiene and Tropical Medicine) on SHIELD related research. Finally, a Nigerian who is part of the South African SHIELD team is undertaking his PhD using SHIELD data (jointly supervised by University of Cape Town and London School of Hygiene and Tropical Medicine).

Expected end results and potential impact

The SHIELD research is contributing substantially to current policy debates in all three countries. In particular, the detailed consideration of the resource requirements of alternative health care financing reform options is assisting policy makers in each country in identifying the most appropriate route for future health care financing development. These analyses are timely given that all of the countries are in the process of embarking on major health care financing reform. SHIELD is primarily aimed at contributing to policy efforts to promote health system equity, including improving access to health services and financial protection from the costs of health care for a greater section of the population in each of the three African countries.

SHIELD is innovative in its exploration of the system-wide implications of health care financing options, and its development of innovative tools and methods that will be made available to other groups to use. The approach is novel insofar as it covers the entire process involving the identification of existing health system equity challenges as well as the identification and evaluation of health care financing options and likely implementation challenges. In addition, this project is innovative in its consideration of the potential influence of key stakeholders and how to manage them to support successful implementation of equity promoting policies, in addition to technical design issues.

Another important impact is the contribution that the SHIELD project has made to developing capacity for health system equity analyses in the African region. More specifically, the doctoral level training of four African health economists is an important achievement.

SHIELD partners and contact details

The SHIELD project involves the following partner institutions:

- Health Economics Unit, University of Cape Town, South Africa
- Centre for Health Policy, University of the Witwatersrand, South Africa
- Health Research Unit, Ghana Health Service, Ghana
- Ifakara Health Institute, Tanzania
- Health Economics and Financing Programme, London School of Hygiene and Tropical Medicine, United Kingdom
- Medical Management Centre, Karolinska Institutet, Sweden
- Royal Tropical Institute, The Netherlands

More details about SHIELD and reports arising from the SHIELD project can be found on http://web.uct.ac.za/depts/heu/SHIELD/about/about.htm. The co-ordinator of SHIELD, Prof Di McIntyre, can be contacted on Diane.McIntyre@uct.ac.za.