

Helpdesk Report: Evidence Base for Local Block Grants in Health

Date: 18 October 2012

Query: Provide a literature / evidence review of the effectiveness – or otherwise – of sub-national flexible block grants in health in delivering public health or health system objectives in developing countries.

Content

1. Overview
2. Tanzania
3. Indonesia
4. Related examples in other countries
5. Additional information

1. Overview

It was difficult to find examples that met the criteria of sub-national flexible block grants in health. The main two identified were the Tanzania Essential Health Interventions Project (TEHIP) and Generasi, Indonesia.

TEHIP

TEHIP aims to bring health spending more in line with cost-effective approaches to the local disease burden. Information from Demographic Surveillance Systems allows planners to determine spending priorities. A series of simple management tools enable those district planners to allot funds to interventions that will have a greater impact on local causes of mortality.

Objectives:

- Development of managerial capacity
- Focussing resources on the greatest need

Results:

New means of planning led district health teams to budget more proportionally to address major contributors to mortality.

Impacts:

- Average clinic visits per child increased from 2.8 to 5.8 a year.
- More children were treated for malaria, more early cases of worms were spotted, more eye infections were caught, more AIDS messages were shared, and more mothers had exposure to family planning information.
- Child mortality fell in the 2 districts by more than 40% over the 5 years of implementation. Adult mortality dropped by about 20%, even as AIDS was beginning to spread. During this period, districts not using the TEHIP plan experienced virtually no change in their death rates.

Success factors:

Improvements in the quality of healthcare were made because district managers successfully used planning tools to choose funding priorities in response to the burden of disease. The other key factor was the availability of “supportive interventions” - training courses and targeted funding.

Summary of factors:

- Supplementary funding
- Capacity building in management and administration
- The Integrated Management Cascade
- What the districts did with budget planning tools
- A new assault on disease

Quality of the evidence base:

Sources are all positive. No critical review was found. A conversation with someone at IDRC found that “parts of TEHIP worked and parts did not”.

Generasi

PNPM Generasi is an incentivised community block grant program that builds on the architecture of the Government of Indonesia’s (GOI’s) community driven development programme. It uses a facilitated community decision-making process to allocate block grant funds to target 12 health and education indicators. Communities work with facilitators and health and education service providers to improve access to and use of health and education services. To give communities incentives to focus on the most effective policies to target program indicators, the GOI determines the size of the village’s PNPM Generasi block grant for the subsequent year partly on the village’s performance on each of the 12 targeted health and education indicators.

Health Indicator Objectives:

- Four prenatal care visits for pregnant women
- Taking iron tablets during pregnancy
- Delivery assisted by a trained professional
- Two postnatal care visits
- Complete childhood immunisations
- Adequate monthly weight increases for infants
- Monthly weighing for children under 3 and biannually for children under 5
- Vitamin A twice a year for children under 5

Programme achievements:

- Enabled over 1.6 million women and children to receive nutrition counselling and support
- Assisted over 1 million children under the age of 5 to obtain Vitamin A supplements
- Ensured that over 770,000 pregnant women receive iron supplements
- Helped over 365,000 children receive immunisations
- Eliminated over 185,000 cases of underweight children
- Provided training and operational support to over 59,000 community health volunteers
- Engaged women in basic health and education service planning and decision-making processes—on average 67 percent of participants in programme socialisation, planning, and monitoring meetings were women.

Unintended impacts:

There are a wide variety of other aspects of health not covered by the indicators. There were positive spillovers but it is also possible that communities diverted attention away from non-targeted indicators. Statistically significant spillovers were found such as increased:

- facility-based deliveries
- quality of services at the village health post
- improved parental knowledge in parenting practices

Quality of evidence base:

- The World Bank evaluation appears to be rigorous.

Other examples (Detailed in section 4 of this report)

- An IDRC project in Nigeria, NEHSI, aims to get health information and services working in a more positive way to improve planning, service delivery and eventually health outcomes. The focus is on strengthening data reliability, participation and institutional capacity.
- A dated article on Pakistan (published 2000) reviews a project that aimed to strengthen district management and planning capacity by increasing management skills and improving management systems by looking at resource allocation patterns. The research found that the support had not yet led to change. Possibly insufficient attention was paid to decision-making culture.
- A brief case study from Belo Horizonte, Brazil was identified. Increased efficiency and broader access to health services was achieved through devolved control to the municipal government and participation of the community.
- A resource allocation formula has been used in Kenya to reflect the relative needs of different districts. The process was constrained by poor quality data, inadequate training of officials and disconnect between the health ministry and district-level budgeting.

2. Tanzania

Fixing Health Systems

de Savigny D et al, Second edition 2008, IDRC

<http://web.idrc.ca/openebooks/411-6/>

The Tanzania Essential Health Interventions Project (TEHIP), conceived in 1993, has sought to test a premise that called for health reforms based not just on increased funding but on more strategic investments in health.

Two large districts in Tanzania — already engaged in health reforms centred on devolving management of resources to the local level — attempt to bring health spending more in line with cost-effective approaches to the local disease burden. Information from Demographic Surveillance Systems makes it possible for planners to determine spending priorities. A series of simple management tools enable those district planners to allot funds to interventions that will have a greater impact on local causes of mortality.

New means of planning lead district health teams to budget more proportionally to address major contributors to mortality such as malaria and a cluster of childhood illnesses. Effectively addressing those problems, however, requires that a modest funding top-up be applied to increasing capacity within the health system. This allows for better training, more effective deployment of resources such as drugs, better clinical practice, and increased patient satisfaction. The overall result is a dramatic decline in mortality in the two districts.

Essentially, improvements in the quality of health care have been the result of two factors. One is how district managers chose to use the planning tools; that is, what health interventions they decided to fund and prioritise in response to the portrait of burden of disease produced by the tools. District Health Management Teams (DHMTs) used these tools to overhaul the ways they planned, to revise their proportional allotment of funds, and to promote integrated solutions that offered multiple benefits from single health interventions.

The other key factor that allowed change to take place in the field was the availability of so-called “supportive interventions.” Intended to restore some of the functional capacity that the health systems had lost because of years of under-funding and inertia, these interventions depended on districts’ use of supplementary funding they had received from TEHIP. Both the use of the tools and the districts’ investment in “supportive interventions” are examples of capacity building. However, they differ from each other in one key respect. The deployment of the tools is a form of passive capacity building: those tools didn’t directly lead to change, but rather were one contribution that helped the districts enhance their own capacity to plan. The districts’ provision of supportive interventions, on the other hand, is a more traditional form of capacity building that relies upon a direct transfer of skills through means such as training courses and targeted funding.

Success factors:

- **Supplementary funding.** None of the changes to the ways that managers and clinicians go about their daily business would have happened without the provision of a modest financial top-up in the form of stakeholder funds to the districts. This new inflow of cash catalyzed an improvement of health care delivery by giving districts the financial means to act on their plans. These funds allowed districts to achieve new efficiencies in the daily operations of health systems and to increase spending where needed on interventions aimed at the most significant contributors to the local burden of disease.
- **Capacity building in management and administration.** The DHMTs saw in the mystery of the unspent funds a clue as to where they should invest a portion of the new money. It became clear that, for the system to be able to expand its budgets and service levels in the future, essential training and capacity building had to take place. Therefore, the DHMTs took stock of the missing skills and subsequently made use of a range of “supportive interventions” to address local deficits in management, administrative, and other skills.
- **The Integrated Management Cascade (IMC).** Focused largely on increasing capacity for the downward delegation of administrative duties to community-level workers (so that those workers became more engaged in the process of improving health care delivery), IMC was designed to ensure the smooth operation of the health system by improving the links between community health workers and supervisory personnel. These links led to greatly improved quality in the health system by reducing problems that had existed in numerous areas, such as delivery of drugs and supplies, distribution of staff pay, and the supervision of health workers dealing with expenditures and the referral of emergencies. All have major effects on the delivery of service.
- **What the districts did with budget planning tools.** In addition to the “supportive interventions,” other reforms — aimed at changing how community health workers dealt with disease — took place on a parallel track. Health managers at the district level, newly equipped with the planning tools, began restructuring health services to focus resources on the greatest need. Armed with new and current knowledge about the burden of disease in their district — and with tools that allowed them to track spending in line with that burden of disease — these managers tried to ensure that spending on individual health services would provide a significant pay-off in terms of lives saved and illness prevented. Districts also had new insight into the ways the health system could be improved since they had access to the results of research undertaken by the research consortia.
- **A new assault on disease.** District managers also ensured they had well thought-out programmes in place to combat the conditions that accounted for very large shares of the burden of disease. Since the most burdensome conditions were malaria and illnesses of young children, health managers put a heavy emphasis on malaria control and the Integrated Management of Childhood Illnesses (IMCI).

As the accounts contained in this book have shown, TEHIP has been largely concerned with assisting decentralised health system managers address technical and allocative inefficiencies by increasing their access to new management skills and new forms of local evidence. More work is required, however.

In the medium term, the challenge is to strengthen and consolidate the indigenous structures capable of absorbing the hard-won lessons of the district health managers in Rufiji and Morogoro and “rolling out” the products and approaches that led to drastic reductions in mortality in those districts. This challenge is being addressed today, for instance, by a consultancy that has been set up to enable Tanzania’s zonal training centres to train and motivate the personnel responsible for bringing those tools and approaches to the rest of Tanzania. “Scaling up,” however, is difficult and time-consuming. It is important that this happens and that the lessons that flow from the experience in Tanzania — that systemic improvement of health care delivery can greatly reduce mortality — not be discarded or forgotten.

Quality of the evidence base: This book does not seem to be a critical review. Results are mostly positive.

Tanzania Health Interventions Project

WHO (one-pager, no date)

<http://www.who.int/management/tehip.pdf>

Goal: To determine the feasibility of an “evidence-based” approach to health planning.

Features:

- 1) Development of managerial capacity
- 2) Focus resources on the greatest need

Key lessons:

- No single approach is sufficient
- Start simple and adjust over time
- Scale up sequentially – build on synergies
- Address largest disease burdens
- An additional \$0.80 per capita, well spent, has impact but need flexibility to use funds
- Communities health utilisation behaviour is important so engage community after improvements in quality

Impact Data - Tanzania Essential Health Interventions Project (TEHIP)

The Communications Initiative Network, 2005

<http://www.comminet.com/?q=early-child/content/impact-data-tanzania-essential-health-interventions-project-tehip>

Source article: Nolen S (2005) ‘Canadian Project Halves Tanzania’s Child Deaths’, <http://www.theglobeandmail.com/news/national/canadian-project-halves-tanzanias-child-deaths/article1113374/>

A collaboration between Tanzania’s Ministry of Health and Canada’s International Development Research Centre (IDRC), TEHIP was established to test innovations in planning, priority setting, and resource allocation at the district level, in the context of the reform and decentralisation of Tanzania’s health care system. A heavily indebted country with a per capita income of \$290 that spends \$8 a year on the health of each of its citizens, Tanzania was seeking ways to improve the health of its citizens on a small budget. In two rural districts, Rufiji and Morogoro, TEHIP worked to:

- strengthen district-level capacity to plan and set priorities using locally obtained burden of disease and cost-effectiveness considerations
- increase district-level capacity to effectively deliver selected health interventions
- assess and document lessons learned in district health planning and management systems/processes
- measure the overall impact of delivering health interventions in terms of burden of disease and per capita cost.

Impacts:

- Average clinic visits per child increased from 2.8 to 5.8 a year.
- More children were treated for malaria, more early cases of worms were spotted, more eye infections were caught, more AIDS messages were shared, and more mothers had exposure to family planning information.
- Child mortality fell in the 2 districts by more than 40% over the 5 years of implementation. Adult mortality dropped by about 20%, even as AIDS was beginning to spread. During this period, districts not using the TEHIP plan experienced virtually no change in their death rates.

In accomplishing these practices, the districts were able to use just 30 cents out of TEHIP's promised \$2 increase the first year. (The figure increased to 89 cents in the second year, and \$1.37 in the third.)

Strengthening fairness, transparency and accountability in health care priority setting at district level in Tanzania

Maluka SO, 2011, Global Health Action (Volume 4)

<http://www.globalhealthaction.net/index.php/gha/article/view/7829/13614>

This review is based on a PhD thesis that aimed to analyse health care organisation and management systems, and explore the potential and challenges of implementing Accountability for Reasonableness (A4R) approach to priority setting in Tanzania. A qualitative case study in Mbarali district formed the basis of exploring the socio-political and institutional contexts within which health care decision making takes place.

Mbarali District was selected by the REACT project as it was a typical rural district in Tanzania. Like other districts in Tanzania, the structure of the health system in Mbarali District has been decentralised. At the district level, the Council Health Management Team (CHMT) was formed with the remit of planning and budgeting for activities needed to manage, control, coordinate and support all health services in the district on a year-to-year basis. To ensure that the district health plans are in line with the national strategies in health, in 2000 the Ministry of Health developed the National Package of Essential Health Interventions as a way of ensuring that the highest priority services are fully supported. Burden of disease, efficiency, effectiveness and equity were the main principles guiding the selection of the priority areas. Based on these principles, six broad priority areas were identified: reproductive and child health; communicable disease control; non-communicable disease control; treatment of other common disease of local priorities within the district; community health promotion and disease prevention; and management support.

The project found that the priority-setting process has been devolved to the district and health-facility level. Identification of priorities has to begin at the grassroots, with district-level monitoring of adherence to budget ceilings as well as to national policy requirements on core issues. Ideally, the process should result in health facilities (health centres and dispensaries) and community representatives providing input to district priority setting. However, as the priority-setting process was studied, it was observed that this was not the case. Health boards and committees had little impact on the planning and priority-setting process.

Consequently, priority setting for health at the district-level depended heavily on the group dynamics within the CHMT rather than other actors.

Interviews with members of user committees and boards revealed that they had recently been established in the district and did not seem to have played a major role in determining district health priorities. Poor attendance of public meetings, lack of interest and education, lack of monetary gain, cultural barriers and suspicion were some of the reasons given for this. Furthermore, priority setting in the district often started late which made it hard to conduct meaningful participatory planning. The fact that funds were earmarked for certain purposes was viewed as a problem, as were unexpected budget cuts and irregular budgetary remittances to the district.

Two main factors influence priority setting at the district level. The most common influence mentioned was national-level priority, followed by district-level challenges. Ideally, planning guidelines that come from the national government require that interventions in each priority area be selected on the basis of magnitude, severity, feasibility and cost. The actual allocation of resources has to be based on budget ceilings, as specified in the National Basket Grant guidelines. However, interviews with district health managers, and analysis of field notes revealed that CHMT members use projections based on previous plans. So, the plan was based largely on what was funded the previous year, with some minor adjustments for demographic or political factors. The use of epidemiological or cost-effectiveness evidence tends to be only a small component of the decision.

The political contexts in which the CHMT operates also influence priority-setting decisions. These include both nationwide political decisions and politics at the district level. The priorities of the national government influence the priorities that the CHMT gives to particular areas of health policy. Many CHMT members indicated that, while some of their priorities came directly from the districts, in situations where district-level priorities conflict with national priorities, the national priorities take precedence.

This study aimed to analyse health care organisation and management systems in Tanzania, and explore the potential and challenges of implementing the A4R approach to priority setting. The study has revealed that, despite the indisputable national rhetoric on decentralisation, practice in the district involved ineffective and limited participation. The findings of this study demonstrate clearly that the setting up of health priority-setting structures alone is unlikely to lead to significant improvements unless accompanied by transparency and accountability mechanisms aimed at ensuring the effective use of resources. In this regard, one could rightly argue that the participatory priority-setting approach that has no stakeholder participation, and minimises the impact of power differences in the decision-making context, is less likely to bring about strong and effective health systems.

3. Indonesia

Indonesia: A Healthy and Smart Generation (PNPM Generasi)

World Bank webpage accessed 17/10/2012

<http://go.worldbank.org/XZZ513AUS0>

Overview:

PNPM Generasi is an innovative Government of Indonesia social assistance programme designed to address three lagging Millennium Development Goals: Maternal Health, Child Health, and Universal Education. PNPM stands for Program Nasional Pemberdayaan Masyarakat (National Program for Community Empowerment).

Approach:

PNPM Generasi is an incentivised community block grant programme that builds on the architecture of the GOI's community driven development programme, the National Community Empowerment Program in Rural Areas (PNPM-Rural). The programme uses a facilitated community decision-making process to allocate block grant funds to target 12 health and education indicators. Communities work with facilitators and health and education service providers to improve access to and use of health and education services. Average block grants total approximately IDR110,000,000 village/year (approximately US\$12,000 village/year). To give communities incentives to focus on the most effective policies to target program indicators, the GOI determines the size of the village's PNPM Generasi block grant for the subsequent year partly on the village's performance on each of the 12 targeted health and education indicators.

The flexibility of this approach helps address the strong regional disparities seen in health and educational attainment across Indonesia. The current estimated beneficiary total is 3,630,818 (approximately 1,835,100 of whom are women, 50%).

The PNPM Generasi Indicators for health:

- Four prenatal care visits for pregnant women
- Taking iron tablets during pregnancy
- Delivery assisted by a trained professional
- Two postnatal care visits
- Complete childhood immunisations
- Adequate monthly weight increases for infants
- Monthly weighing for children under 3 and biannually for children under 5
- Vitamin A twice a year for children under 5

PNPM Generasi has had three waves of evaluation, including a Baseline Survey (2007) and Mid-Term Impact Evaluation (2009), and Final Impact Evaluation (2011). To allow for a rigorous evaluation of PNPM Generasi, the Government of Indonesia incorporated random assignment into the selection of program locations. Within the districts selected for the program, entire kecamatan were randomly allocated to either receive PNPM Generasi or to be in the control group. This series of evaluations represents one of the largest randomized social experiments conducted in the world to date.

Over the life of the programme PNPM Generasi has:

- Enabled over 1.6 million women and children to receive nutrition counselling and support
- Assisted over 1 million children under the age of 5 to obtain Vitamin A supplements
- Ensured that over 770,000 pregnant women receive iron supplements
- Helped over 365,000 children receive immunisations
- Eliminated over 185,000 cases of underweight children
- Provided training and operational support to over 59,000 community health volunteers
- Engaged women in basic health and education service planning and decision-making processes—on average 67 percent of participants in programme socialisation, planning, and monitoring meetings were women.

Indonesia's PNPM Generasi Program Final Impact Evaluation Report

Olken BA et al., 2011, World Bank

<http://www->

wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2012/05/25/000356161_20120525020526/Rendered/PDF/691420ESW0Whit0Final0IE0Report02011.pdf

(This link doesn't seem to work by clicking but works if copy and paste)

The Generasi project began in mid-2007 in rural areas of five Indonesian provinces. The programme operates as follows: each year, villages receive a block grant. With the assistance of trained programme facilitators and service delivery workers, villagers undertake a social mapping and participatory planning exercise to decide how best to use the block grant funds to reach 12 education and health targets related to maternal and child health behaviour and education behaviour. These 12 targets relate to prenatal and postnatal care, child immunisations, and primary and junior secondary school enrolment and attendance. To give communities incentives to focus on the most effective policies, the government bases the size of the village's Generasi block grant for the subsequent year partly on the village's performance on each of the targeted indicators. The Generasi project thereby takes the idea of performance incentives from conditional cash transfer programmes and applies it in a way that allows communities the flexibility to address supply constraints, demand constraints, or some combination.

To allow for a rigorous, randomised evaluation of Generasi, the Government of Indonesia incorporated random assignment into the selection of Generasi locations. Subdistricts (kecamatan) were randomly allocated to either receive Generasi or to be in a control group. Each Generasi location was further randomly allocated to one of two versions of the programme: one "incentivised" treatment with the pay-for-performance component described above, and a second, otherwise identical "non-incentivised" treatment without the pay-for-performance incentives. There were three waves of evaluation.

The main findings of the Generasi impact evaluation are as follows:

- After 30 months of programme implementation, Generasi had a statistically significant positive impact on average across the 12 indicators it was designed to address.
- The main long-term impact was a decrease in malnutrition.
- Making grants conditional on performance improves programme effectiveness in health but not in education.
- Generasi had the greatest impact in areas with low baseline health and education indicators.

Surveys found that assistance was indeed reaching beneficiaries in Generasi areas. For health, beneficiaries received assistance for supplementary feeding at village health posts, antenatal/postnatal care, and subsidies for delivery assistance.

For health indicators, the strongest impact was for participation in growth monitoring (weight checks), with children attending on average 0.15 more growth monitoring sessions over the previous three months, a 6.8 percent increase over the average level in control areas. Over the two-year implementation period, pregnant women on average received 0.08 more sachets of iron tablets (containing 30 tablets in one sachet) during pregnancy, a 4.7 percent increase over the control level. In the second year of the programme, there was also a substantial reduction in malnutrition (with a 2.2 percentage point reduction in the share of children more than 2 standard deviations below normal on weight-for-age), representing a 9.6 percent reduction over the average level in control areas. The improvements in health indicators were predominantly found in the group with the incentivised design. On net, between 50-75% of the total impact of the block grant programme on health indicators can be attributed to the performance incentives. Impacts on both prenatal visits and immunisations were higher in incentivised Generasi areas than in non-incentivised Generasi areas.

The project had large impacts on reducing neonatal and infant mortality in Wave II, largely found in Sulawesi; however, these impacts did not persist in Wave III. In Wave II, Generasi led to six neonatal deaths avoided per 1,000 live births in the previous two years and nine infant deaths avoided per 1,000 live births in the previous one year. However, these impacts had disappeared in Wave III.

In Wave III Generasi did lead to a substantial reduction in malnutrition (weight-for-age), with a 2.2 percentage-point reduction overall. This represents a 10 percent decline in malnutrition rates compared to control kecamatans. In Java however, surprisingly stunting worsened in Generasi areas relative to control areas, though some of that worsening was due to a reduction in stunting in the control areas.

While Generasi encouraged communities to focus on 12 targeted indicators for maternal/child health and primary and junior secondary education, there are a wide variety of other aspects of health and education not covered by the indicators. To the extent that Generasi supports general community mobilisation on health and education and increased service provision, one could find positive spillovers on non-targeted indicators. However, it is also possible that communities diverted attention from non-targeted indicators toward targeted indicators, resulting in negative spillovers. In general, the evaluation found spillovers were positive for health throughout the two years of implementation.

Statistically significant improvements were found in non-targeted health indicators such as increased facility-based deliveries rather than deliveries at home (the programme incentivised deliveries by midwives, but these often take place at home instead of at a facility), the quality of services at the village health post measured by the share of standardised services performed (the programme incentivised quantity only, not quality), and improved parental knowledge in parenting practices. The fact that these measures of health service quality increased suggests that the quality and quantity of health services appear to be complements in this context, rather than substitutes. This is consistent with a model where the key driver is facilitating patients' access to trained providers, rather than encouraging a given set of providers to see more patients in a given amount of time.

Overall, the evaluation finds that Generasi had the greatest impact on community effort, which is intuitive given the project's emphasis on community mobilisation as a centerpiece of its strategy. The impact on community effort was greatest in relation to the increase of cadres working at village health posts, and participation in meetings about health education.

The evaluation suggests the government's existing national community-driven development architecture and network (PNPM) was useful as a platform for other forms of local assistance. Generasi was started as an experiment in adapting the community participatory planning and block grant process to focus on specific education and health targets that were not being addressed sufficiently in the existing community programme. This project has illustrated the flexibility and adaptability of this community model once the architecture and machinery are established. It also serves as a possible vehicle for improving health and education indicators in supply-deficient areas, where the traditional household conditional cash transfer model may not be as effective due to supply constraints.

The evaluation suggests the project should regularly review the appropriateness of the targets. Target indicators must be relevant to communities, yet reflect development priorities of the government. Although it is important not to overload the project with too many target indicators, 12 target indicators should be regularly reviewed to assess if existing ones should be replaced or added.

Quality of evidence based: Evaluation appears to be fairly rigorous. The Generasi programme was designed as a randomised experiment. The paper outlines the statistical procedures and shows significance levels.

Project Generasi: Conditional Community Block Grants in Indonesia

Olken B et al, 2009, Poverty Action Lab

<http://www.povertyactionlab.org/evaluation/project-generasi-conditional-community-block-grants-indonesia>

In 2007, the Indonesian Government began a pilot programme to test a new approach to improving health and education: incentivised community-based block grants. Under the programme, known as *Generasi*, villages received annual block grants which they could allocate to any activity that improved one of 12 health, nutrition and education indicators. The 12 indicators represented health and educational activities that were within direct control of villages - such as the number of children who receive immunisations, prenatal and postnatal care, and the number of children enrolled and attending school – rather than long-term outcomes, such as test scores or infant mortality.

The evaluation looks at the difference between incentivising block grants rather than the merits of block grants themselves,

Over the two years of the programme, the targeted maternal and child indicators, including prenatal visits, delivery by trained midwives, childhood immunisations, and growth monitoring, were an average of 0.03 standard deviations higher in incentivised areas than in non-incentivised areas. This effect was driven primarily by increases in the number of prenatal visits, which was 5 percent higher in incentivised areas than non-incentivised areas, and immunisation rates, which were 3 percent higher in incentivised areas than non-incentivised areas. While these differences are modest, the impact of the incentives was more pronounced in areas with low baseline levels of service delivery: the incentives improved the targeted maternal and child health indicators as much as 0.10 – 0.15 standard deviations in the poorer, off-Java provinces.

Researchers found little evidence that providing incentives had adverse effects. There was no evidence of a multi-tasking problem, or that immunisation records or school attendance was manipulated.

The results suggest two main channels through which the incentives may have had an impact. First, the incentives appear to have led to a 16 percent decrease in spending on school supplies and uniforms, and a 6.5 percent increase on health expenditures. Despite the reallocation of funds away from school supplies and uniforms, households were no less likely to receive these items and they were of no lesser value, and were actually more likely to receive education scholarships in the incentivised areas. The results suggest that the change in budgets resulted from more efficient spending. The incentives also led to an increase in the labor of midwives, who are the major providers of maternal and child health services in the area. By contrast, there was no change in labour supplied by teachers. One possible explanation is that midwives are paid on a fee for service basis, whereas teachers are not.

Should Aid Reward Performance? Evidence from a field experiment on health and education in Indonesia

Olken B et al, 2012, Poverty Action Lab

<http://www.povertyactionlab.org/publication/should-aid-reward-performance-evidence-field-experiment-health-and-education-indonesia>

This paper reports an experiment in over 3,000 Indonesian villages designed to test the role of performance incentives in improving the efficacy of aid programmes. Villages in a randomly-chosen one-third of subdistricts received a block grant to improve 12 maternal and child health and education indicators, with the size of the subsequent year's block grant depending on performance relative to other villages in the subdistrict. Villages in remaining subdistricts were randomly assigned to either an otherwise identical block grant programme with no financial link to performance, or to a pure control group. We find that the incentivised villages performed better on health than the non-incentivised villages, particularly in less developed areas, but found no differential impact of incentives on education. We find no evidence of negative spillovers from the incentives to untargeted outcomes, and no evidence

that villagers manipulated scores. The relative performance design was crucial in ensuring that incentives did not result in a net transfer of funds toward richer areas. Incentives led to what appear to be more efficient spending of block grants, and led to an increase in labour from health providers, who are partially paid fee-for-service, but not teachers. On net, between 50-75% of the total impact of the block grant programme on health indicators can be attributed to the performance incentives.

Budgeting based on need: a model to determine sub-national allocation of resources for health services in Indonesia

Ensor T et al, 2012, Cost Effectiveness and Resource Allocation (Volume 10)

<http://www.resource-allocation.com/content/10/1/11>

Background:

Allocating national resources to regions based on need is a key policy issue in most health systems. Many systems utilise proxy measures of need as the basis for allocation formulae. Increasingly these are underpinned by complex statistical methods to separate need from supplier induced utilisation. Assessment of need is then used to allocate existing global budgets to geographic areas. Many low and middle income countries are beginning to use formula methods for funding however these attempts are often hampered by a lack of information on utilisation, relative needs and whether the budgets allocated bear any relationship to cost. An alternative is to develop bottom-up estimates of the cost of providing for local need. This method is viable where public funding is focused on a relatively small number of targeted services. We describe a bottom-up approach to developing a formula for the allocation of resources. The method is illustrated in the context of the state minimum service package mandated to be provided by the Indonesian public health system.

Methods:

A standardised costing methodology was developed that is sensitive to the main expected drivers of local cost variation including demographic structure, epidemiology and location. Essential package costing is often undertaken at a country level. It is less usual to utilise the methods across different parts of a country in a way that takes account of variation in population needs and location. Costing was based on best clinical practice in Indonesia and province specific data on distribution and costs of facilities. The resulting model was used to estimate essential package costs in a representative district in each province of the country.

Findings:

Substantial differences in the costs of providing basic services ranging from USD 15 in urban Yogyakarta to USD 48 in sparsely populated North Maluku. These costs are driven largely by the structure of the population, particularly numbers of births, infants and children and also key diseases with high cost/prevalence and variation, most notably the level of malnutrition. The approach to resource allocation was implemented using existing data sources and permitted the rapid construction of a needs based formula that is highly specific to the package mandated across the country. Refinement could focus more on resources required to finance demand side costs and expansion of the service package to include priority non-communicable services.

4. Examples from other countries which have some features of flexible local block grants

Nigeria Evidence-based Health System Initiative (NEHSI), Project Overview

IDRC, 2010

Not available online

The intention of NEHSI is to deliver better Primary Healthcare services and ultimately better health through improving the *health information system—building capacity* to use the evidence and linking the evidence to planning such that resources are allocated to make a difference. At its core, the project seeks to build the *habit* of evidence based planning. NEHSI wants planners at state and local levels to develop the habit of asking for the evidence, the skills and capacities to interpret that evidence, and then make use of that evidence *before* decisions are made.

The project focus is on getting the health information and services working in a more positive way to improve planning, service delivery and eventually health outcomes. It makes every attempts to build on and complements the existing systems rather than setting up a parallel system.

NEHSI has been structured in four components for implementation:

1. strengthening reliability, consistency and availability of health data (from local to state level and linked to the planning process)
2. strengthening participation and engagement by community members
3. strengthening institutional capacity to train, plan, budget and deliver PHC services
4. strengthening local ownership and understanding of the NEHSI for scaling up.

Under NEHSI, capacity strengthening uses a *learning-by-doing* approach linked to course work addressing issues relevant to health workers and planners' contexts. From the community level to state officials NEHSI facilitates community discussions and tailors training modules to enable communities and decision makers to understand the evidence and empower them to generate actionable solutions. The close involvement from the beginning of stakeholders identifying their own problems and priorities, and their active role in the collection, analysis and use of data to make changes increases the likelihood that relevant NEHSI evidence-based planning approaches will be institutionalise.

Progress to date

Evidence to Action:

- 200 local government health officers were trained in rigorous data collection methodologies and routinely conduct household social audit surveys in Bauchi and Cross River.
- The project has supported the collection of information from more than 25,000 women and about children under 5, including their experience of pregnancies, domestic violence, childhood illnesses, immunisation history, and nutritional status.
- After collecting this information, teams meet with community heads (e.g. village chiefs and clan heads) to profile health services and governance bodies.
- Survey findings are interpreted through focus groups with men and women in the communities as well as through discussions with planners and policy-makers.

Sustainable Human Capital:

- Through an Executive Training Course and Master of Science in Epidemiology degree programme developed by CIET/NEHSI, the project builds the capacity of policy-makers and planners in evidence-based planning.

ICT for Health:

- The project is developing a mobile phone application to facilitate and expedite the collection and transmission, and analysis of health and demographic surveillance data

Collaborating with Local Universities:

- NEHSI has established a pilot of the Health and Demographic Surveillance System (HDSS). Led by the University of Calabar, this HDSS site routinely collects information on pregnancies and births, deaths, and migration data from 5,000 people in Cross River state.

Project Governance:

- NEHSI is governed by a Project Steering Committee and Project Advisory Committee (PAC) which serve as a forum to discuss progress of project activities and provides strategic direction.

Resource allocation and budgetary mechanisms for decentralized health systems: experiences from Balochistan, Pakistan

Green et al, 2000, World Health Bulletin 78 (8)

[http://www.who.int/bulletin/archives/78\(8\)1024.pdf](http://www.who.int/bulletin/archives/78(8)1024.pdf)

This article analyses issues involved in the development of resource allocation and budgetary systems, drawing on the experience of work conducted under the Balochistan Health Systems Strengthening Component (BHSSC) of the Second Family Health Project (FH2P). The BHSSC seeks to develop institutional capacity to support a more decentralised and effectively functioning district health system.

The project is based primarily around the strengthening of district management and planning capacity brought about by increasing management skills, improving management systems and developing more decentralised organisational structures. This is combined with a strengthening of provincial planning systems to provide strategic policy guidance to districts and builds upon earlier work carried out to establish a provincial health planning system.

The strategy adopted by the project to initiate a more appropriate resource allocation system has involved the following: analysis of previous resource allocation patterns; development of proposals for modifying resource allocation systems; and development of necessary support systems and organisational structures for linking the resource allocation process into the provincial and district planning and budgeting systems. Despite these technical developments, the project has been unable to produce significant changes in the allocation processes. This is largely the result of failing to gain sufficient support in key areas of government, at both the political and bureaucratic level.

It is clear that the technical work carried out to support the development of the resource allocation and budgeting system in line with decentralisation has not yet led to change. Possibly insufficient attention was paid to the decision-making culture. The culture of centralised decision-making and an attendant procedurally driven bureaucracy, coupled with the frequent transfer of staff, means that decentralisation both challenges the organisational and management culture and is in fact high risk, albeit with high potential returns in terms of health impact.

The level and sources of resistance to new systems was underestimated. Various actors can be identified as perceiving the process as threatening. These include the following: the senior professionals in the Health Directorate concerned at a loss of role, status and power; clerical staff currently responsible for centralised budgeting concerned about the development of a system which may sideline them; and other central departments, most importantly the Department of Finance, concerned about the potential dangers of decentralisation. In addition, politicians able to use the current allocative system as a means of maintaining a political base may be resistant. Underpinning all of this is the critical issue as to whether there is shared understanding of and genuine support for equity, the main driving force behind a needs-based resource allocation system. The changes were driven externally by a project operating close to, but largely external to, the government systems. As such it may have underestimated the need for greater internal ownership or championing of the changes by either a senior bureaucrat or politician. The shift by the project halfway through from a province-wide intervention to one using trial districts may also have led to a reduced opportunity for change. Under a province-wide approach greater support from potential winners may have been feasible, and accusations of favouring trial districts would not have been possible.

Lessons learned:

- Greater attention needs to be given to the political dimensions of such projects, to seek ownership of the process of change. While resource allocation may appear as a “technical” issue, it clearly is much more than that.
- It needs to be recognised that, in decentralisation projects, as much attention needs to be given to supporting the necessary changes at the centre as at the periphery.
- It is worth recognising the difficulty of reforming one element of the public sector in isolation.

Positives to come out of the process:

- Technical capacity has improved in a number of areas, particularly health economics.
- The skills and interest of district managers has shown notable qualitative improvement and there is a broader recognition amongst this group of the potentially important role of a district manager under an appropriate decentralised system.
- The technical work that has been carried out will form the basis for change when there is greater political readiness to adopt genuine decentralisation.

The Role of Participation and Partnership in Decentralised Governance: A Brief Synthesis of Policy Lessons and Recommendations of Nine Country Case Studies on Service Delivery for the Poor

Work R, 2002, UNDP

<http://unpan1.un.org/intradoc/groups/public/documents/un/unpan006230.pdf>

The Brazil study examines how the municipality of Belo Horizonte successfully implemented a unified health system. The municipality has been able to expand its basic network of health services and to undertake innovative localised outreach programmes. These activities resulted in increased efficiency and broader access to health services, particularly for the poorest segment of the population. These achievements are attributed in part to the decentralisation of decision-making and management of health service provision, including control of the budget, to the municipal government, and in part to the participation of the community through representation in the newly created Municipal Health Council. The exercise of oversight by the Council reduced the fraudulent transactions that have historically plagued health service provision in Brazil, assured more rational use of funds, improved access of the poor to services, and reduced formerly chronic payment delays to private health service providers. Partnerships between different levels of government and between public, private, and civil society also have contributed to improved provision of unified health services in Belo Horizonte.

A broader national decentralisation initiative embodied in constitutional and legal reform was initiated at the central level; however, a proactive role for the local government of Belo Horizonte allowed it to register notable success in implementing the decentralisation of basic health services through the Brazilian Unified Health System (SUS). By advocating for and supporting popular participation, engaging various types of partners including civil society and the private sector, and enhancing its capacity to develop its own plan while integrating them with national objectives and goals, Belo Horizonte expanded access to its basic health coverage and succeeded in securing an increasing stream of resources from the SUS and from users. While the legislative environment played an enabling role, it was proactive leadership at the local level that made the difference.

Improving Resource Allocation in Kenya’s Public Health Sector

Briscombe B et al, 2010, USAID Task Policy Initiative

http://www.healthpolicyinitiative.com/Publications/Documents/1115_1_Kenya_Resource_Allocation_FINAL_05_13_10_acc.pdf

At the end of the 1990s, Kenya espoused the medium-term expenditure framework (MTEF) approach to budgeting. In a significant departure from previous budgeting approaches, Kenya linked resource allocation to proposed outputs.

In theory, the Treasury sets expenditure ceilings for sector working groups (SWGs) of stakeholders who must agree on budget allocations within the group. The presumption is that membership in these SWGs is broad enough to give voice to national and sub-national priorities. In reality, however, information from the sub-sectors and the sub-national level does not flow well to the SWGs, and the sub-national agendas often are ignored.

When the Ministry of Health (MOH) acquires its share of resources from the SWG envelope, the health ministry distributes its resources among different health priorities. The Health Policy Initiative was unable to find any documentation on how this process works, but a knowledgeable official reported that it is done through a Ministerial Budgeting Committee attended by all department heads. Each head brings budgetary proposals to this committee and relies on persuasion, political influence, and the good will of other departments to allocate resources. Only a small portion of these resources are allocated on a more objective and measurable basis through a Resource Allocation Criteria formula.

Since 2000, the MOH has allocated 10 percent of its funds on the basis of a Resource Allocation Criteria (RAC) formula. The RAC uses weighted variables to reflect the relative need of various Kenyan districts. The formula is only applied to the recurrent budget in allocating money to curative care and Rural Health Facilities. The RAC was designed to bring an end to the long-standing incrementalist practice of resource allocation that fails to address variations in need in different regions of the country. Under the incrementalist approach, the ministry merely increased district allocations by a flat rate, without regard to factors such as poverty rates, local population characteristics, service use, and case loads or relative burden of disease. Implementing the RAC formula attempts to address the need for a transparent, objective, efficient, and equitable resource allocation process.

A major potential constraint to the equity impact of such formulas is the poor quality of data used in the formula. Workload and morbidity data captured by the ministry's Health Management Information System (HMIS) reflect wide variations in reporting rates across regions and over time. The ministry acknowledges the challenges involved in using the RAC formula; for one thing, ministry officials are inadequately trained in its use, sometimes resulting in misuse and miscalculations. Also, the aggregation levels within databases are too high, obfuscating potentially wide health or wealth discrepancies that might exist within regions. Fixing this problem would require more data collection at sub-district levels. Finally, the MOH acknowledges a weak framework for monitoring RAC implementation. For example, government officials report an ongoing need to track centrally purchased supplies and resources that go directly to the districts. These challenges are similar to those facing neighbouring Tanzania and Uganda, as they also attempt to implement resource allocation formulas.

Under the National Health Sector Strategic Plan II, the health ministry requires districts to produce AOPs that are costed. These AOPs serve as district budget requests to the ministry. It is not clear how the top-down provisions of the RAC formula are reconciled with the bottom-up requests of the AOPs from the districts. Reconciling the two processes by standardizing their data sources and methodologies probably would make both processes more effective, as demonstrated in the following examples.

Health Policy Initiative researchers visited six Kenyan districts—Kajiado, Kisumu East, Kitui, Koibatek, Nyambene, and Nyando—to gain a better understanding of the interactions between subnational and national health resource stakeholders. This fieldwork elicited survey responses from two district medical officers (MOs) of health and 27 DHMT members. The

district medical officers explained that in generating their budget requests, they initially undertake a monitoring and evaluation activity to determine the extent to which their current AOPs are being implemented. The MOs use indicators to measure performance and then set new targets within the anticipated financial resource envelope they have received from ministry headquarters.

The MOs get these health indicators from multiple sources, including their own databases, the health ministry's HMIS, and development partners. This is problematic because these databases use varied data collection and analytical methods that result in different estimates of financial resource needs. The MOs specified indicators for decision-making that include service delivery rates, efficiency levels through the proxy of case fatality, previous funding levels, and logistical support systems (through the proxy of stockouts). These indicators do not match those employed by the RAC formula. This is one of many reasons why the budgeting and resource allocation process may produce discrepancies between budget requests, allocated resources, and actual disbursements in the form of Authority to Incur Expenditure (AIE).

The Ministerial Budgeting Committee is responsible for allocating resources among services and across regions. The output of this activity is reflected in the district allocation budgets however, HMIS data collection is incomplete and inconsistent. For example, the data sometimes omit health facility visitors when the facility submits late or incomplete returns. Consequently, the data are not reliable enough to allow for analysis of the relationships between changes in attendance or return visits and changes in demand for services. Any correlation could reflect either causation or varying reporting performance.

The 2008 split of the Ministry of Health into the Ministry of Medical Services (MOMS) and MOPHS complicates tracking resources. At the district level, the curative/hospital budget is tracked exclusively by MOMS through the Hospital Superintendent, while the RHS budget is tracked by MOPHS through the MOH head of the public health department in the district. The bulk of district healthcare delivery takes place in hospitals; under the new structure, the district department head of the MOH has no budgetary control over the pre-eminent healthcare delivery facilities.

It is useful to compare district-level budget requests and actual disbursements to ascertain whether the budget process is sensitive to sub-national needs. However, the recent split of the health system between MOMS and MOPHS complicates analysis and budget tracking. In addition, there was a low district-level response rate to the Health Policy Initiative survey on budget data. The data indicates that there is a low rate of disbursements compared to budget requests. In Kisumu East and Koibatek, actual district-level disbursements fall far short of district-level MOH allocation requests. In Kisumu East, actual disbursements varied significantly among the various years—from a low of 7.4 percent of the budget request in FY2007/08 to a high of 22.4 percent of the budget request in FY2008/09. In Koibatek, allocations were only a fraction of district budget requests—2.3 percent in FY2007/08 and 1.2 percent in FY2008/09. Altering resource allocation procedures at the national level to improve health equity must be accompanied by improvements in aligning actual disbursements with requested allocations. During interviews, the staff of district MOHs explained that they respond to such budget gaps by scaling down activities and/or requesting supplementary resources from local nongovernment sources. For example, for FY2009/10, the DRH expects to actually receive about 50 percent of its resource demand; DRH must seek alternative sources of financing for the remaining 50 percent of the budget. The anticipated budget shortfall is expected to cause staff shortages and will undermine the delivery of planned activities.

Direct facility funding as a response to user fee reduction: implementation and perceived impact among Kenyan health centres and dispensaries

Opwora A et al, 2010, Health Policy Planning 25 (5)

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2929466/>

There is increasing pressure for reduction of user fees, but this can have adverse effects by decreasing facility-level funds. To address this, direct facility funding (DFF) was piloted in Coast Province, Kenya, with health facility committees (HFCs) responsible for managing the funds. We evaluated the implementation and perceived impact 2.5 years after DFF introduction.

Quantitative data collection at 30 public health centres and dispensaries included a structured interview with the in-charge, record reviews and exit interviews. In addition, in-depth interviews were conducted with the in-charge and HFC members at 12 facilities, and with district staff and other stakeholders.

DFF procedures were well established: HFCs met regularly and accounting procedures were broadly followed. DFF made an important contribution to facility cash income, accounting for 47% in health centres and 62% in dispensaries. The main items of expenditure were wages for support staff (32%), travel (21%), and construction and maintenance (18%). DFF was perceived to have a highly positive impact through funding support staff such as cleaners and patient attendants, outreach activities, renovations, patient referrals and increasing HFC activity. This was perceived to have improved health worker motivation, utilisation and quality of care.

A number of problems were identified. HFC training was reportedly inadequate, and no DFF documentation was available at facility level, leading to confusion. Charging user fees above those specified in the national policy remained common, and understanding of DFF among the broader community was very limited. Finally, relationships between HFCs and health workers were sometimes characterized by mistrust and resentment.

Relatively small increases in funding may significantly affect facility performance when the funds are managed at the periphery. Kenya plans to scale up DFF nationwide. Our findings indicate this is warranted, but should include improved training and documentation, greater emphasis on community engagement, and insistence on user fee adherence.

Improved Methods for Funding Public Hospitals in South Africa

Ensor T, Kruger J & Lievens T, 2009, Oxford Policy Management

<http://www.opml.co.uk/sites/opml/files/Financing%20hospital%20services%20in%20South%20Africa%20021209.pdf>

The principle behind a geographic resource allocation formula is that funds should be allocated to an area in proportion to the health service needs of the resident population (Smith, 2003). Need is usually differentiated from actual utilisation to reflect the unmet needs resulting from varying levels of access to services. The allocation of funds might also reflect policy decisions to privilege the needs of certain groups in order to promote a more equal distribution of health across the population. Most formulae usually begin with the size of the target population and then introduce other factors that proxy the differential need for services across populations of the same size.

The main needs-based distribution of resources is the equitable share (ES) formula used to allocate resources for services provided by provinces. The health component of the formula is indicatively set at 26 per cent of the total allocation (rising from 18 per cent in 1998/99) and is then distributed according to the size of the population, with a weight of 4:1 on the proportion outside medical schemes compared with internal schemes. Different criteria are used to determine the allocations for other sectors. No other factors are used to adjust the allocation. Using this formula, compared with an allocation based on unadjusted population, Limpopo and KwaZulu-Natal gain the most, at the expense of Gauteng and Western Cape.

The ES is provided as a lump sum allocation to each province for all services provided at that level. Health (26 per cent) and education (51 per cent) attract the bulk of the grant allocated. Provinces are free to utilise the funding as they wish, provided that they meet their obligations to deliver services for which they are responsible.

The formula does not currently take into account other indicators that affect need. In particular, in other countries adjustments are often made for the demographic distribution of population (the young, the old and women of reproductive age make greater use of services than others) and need associated with regional differences in morbidity. Formulae in other countries sometimes also adjust allocations for regional differences in cost.

In principle, age and sex have an impact on need since, typically, the very young (those under five years old, particularly those under one year old) women of reproductive age and the elderly have higher relative requirements for health care.

Enhancing the routine health information system in rural southern Tanzania: successes, challenges and lessons learned

Maokola W et al, 2011, *Tropical Medicine and International Health* 16 (6)

Not available online

Objective:

To describe and evaluate the use of handheld computers for the management of Health Management Information System data.

Methods:

Electronic data capture took place in 11 sentinel health centres in rural southern Tanzania. Information from children attending the outpatient department (OPD) and the Expanded Programme on Immunisation vaccination clinic was captured by trained local school-leavers, supported by monthly supervision visits. Clinical data included malaria blood slides and haemoglobin colour scale results. Quality of captured data was assessed using double data entry. Malaria blood slide results from health centre laboratories were compared to those from the study's quality control laboratory.

Results:

The system took 5 months to implement, and few staffings or logistical problems were encountered. Over the following 12 months (April 2006–March 2007), 7,056 attendances were recorded in 9,880 infants aged 2–11 months, 50% with clinical malaria. Monthly supervision visits highlighted incomplete recording of information between OPD and laboratory records, where on average 40% of laboratory visits were missing the record of their corresponding OPD visit. Quality of microscopy from health facility laboratories was lower overall than that from the quality assurance laboratory.

Conclusions:

Electronic capture of HMIS data was rapidly and successfully implemented in this resource-poor setting. Electronic capture alone did not resolve issues of data completeness, accuracy and reliability, which are essential for management, monitoring and evaluation; suggestions to monitor and improve data quality are made.

5. Additional information

Author

This query response was prepared by **Laura Bolton** l.bolton@ids.ac.uk

Contributors

Sharmila Mhatre, IDRC
Tim Ensor, University of Leeds
Helen Tilly, ODI

About Helpdesk reports: The HDRC Helpdesk is funded by the DFID Human Development Group. Helpdesk Reports are based on up to 2 days of desk-based research per query and are designed to provide a brief overview of the key issues, and a summary of some of the best literature available. Experts may be contacted during the course of the research, and those able to provide input within the short time-frame are acknowledged.

For any further request or enquiry, contact just-ask@dfidhdc.org

Disclaimer

The DFID Human Development Resource Centre (HDRC) provides technical assistance and information to the British Government's Department for International Development (DFID) and its partners in support of pro-poor programmes in education and health, including nutrition and AIDS. The HDRC services are provided by three organisations: Cambridge Education, HLSP (both part of the Mott MacDonald Group) and the Institute of Development Studies. The views in this report do not necessarily reflect those of DFID or any other contributing organisation.