Center for Global Development

Intergovernmental Fiscal Transfers for Health: Overview Framework and Lessons Learned

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Motivation

Background

Currently, most of the world's poor live in populous lower middle-income countries—namely Pakistan, India, Nigeria, China and Indonesia—where the majority of the world's disease burden is also concentrated (Glassman, Duran et al. 2011). These five countries, and many other low- and middle-income countries (L/MICs), share one thing in common: the majority of their health spending is executed by sub-national governments, and the role of the central government in health spending is declining over time. In most populous highly decentralized countries, sub-national governments spend over half of all public monies for health (see Table 1).

Table 1. Share of public spending on health at sub-national level in populous L/MICs

	Total Health Spending Per Capita, USD PPP (WHO 2010)	Share of Health Expenditures by Government (WHO 2010)	Share of Public Health Spending at Sub-National Level	Year[1]	Source
Argentina	$1,287	55%	57%	2004	IMF GFS Data, 2011
Brazil	$1,028	47%	54%	2009	Langevin, 2012
Ethiopia	$51	54%	67%	2005	Garcia and Rajkumar, 2008
India	$132	29%	68%	2007	IMF GFS Data, 2011
Indonesia	$112	58%	69%	2005	World Bank, 2008
Nigeria	$121	38%	64%	2005	Olaniyan and Lawanson, 2010
South Africa	$935	44%	81%	2005	IMF GFS Data, 2011

Given these figures, improving health outcomes in these countries becomes contingent on improving the efficiency and effectiveness of health spending at the sub-national level. Although most public spending in these countries goes through sub-national governments, many global health funders still work mainly with central governments and regional inequities are often ignored. Further, there are gaps in evidence and low uptake of recommendations by health policymakers and global health funders, and the specific best practices for health and other social sectors are not well-defined. The efficiency and

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[1] Data for the share of public health spending financed sub-nationally is from latest available year.

effectiveness of health spending at the sub-national level will become increasingly important, as many federal countries are projected to increase health spending significantly in the coming decade and as other countries progress towards decentralization (Clements, Coady et al. 2012).

Yet there are reasons to worry about the efficiency and equity of this spending. Variations in health status, access and care are large across sub-national entities. According to data from the 2002/3 Indonesian Demographic and Health Survey, post-neonatal mortality rates in the poorer provinces, such as Gorontalo and West Nusa Tenggara, are five times higher than in the best performing provinces, such as Bali and Yogykarta (World Bank 2007). In Pakistan, the proportion of pregnant women who visited health professions for antenatal care can vary greatly—for example, 70% in Sindh and 40% in Balochistan (World Bank 2013).

Decentralization as a solution?

If done under the right conditions, economic theory suggests that decentralization can be an efficient way of delivering public services (Oates 1972). By bringing government "closer to the people" through better information, greater local participation, greater accountability, and less onerous policy challenges (Channa and Faguet 2012), decentralization can lead to improved service delivery—which could in turn lead to better health outcomes. Local governments have more information than federal governments on local conditions, leading to decisions that likely better reflect local need (Hayek 1945). Intergovernmental competition, under the assumption that citizens are mobile, leads to a more efficient allocation of local public goods (Tiebout 1956). These positive theories argue that decentralization of spending and services can improve the responsiveness of the state, decrease corruption, and decrease the unit costs of government expenditure (Bankauskaite and Saltman 2007).

A growing body of empirical literature explores the effect of decentralization on health outcomes, finding that the effect of decentralization on health outcomes can be mixed and depend greatly on the details of their design, implementation and accountability arrangements.

A number of studies on both high income countries and L/MICs show that decentralization—measured in several different ways—is associated with lower mortality rates. Of these studies, which define decentralization as local health expenditure as a proportion of total health expenditure, many find that as sub-national health expenditure as a proportion of national health expenditure increases, infant mortality rate decreases. For example, Robalino, Picazo, et al. 2001 shows that based on a panel of high income countries and L/MICs, in a country with a GDP per capita of $2,000, a 10% increase in sub-national expenditure would result in a decrease in the infant mortality rate by 3.6%.This study also suggests that fiscal decentralization is particularly important for countries with lower GDP per capita (Robalino, Picazo et al. 2001). Studies conducted in Canada (Jimenez-Rubio and Smith 2005; Jimenez-Rubio 2011), China (Yee 2001), Colombia (Soto, Farfan et al. 2012), and Spain (Cantarero and Pascual 2008) show similar associations over time.

Other studies measure decentralization as local revenue as a proportion of total government revenue. For example, Jimenez-Rubio 2011shows that across 19 OECD countries, a 1% increase in the proportion of autonomous tax revenue controlled by the sub-national government leads to a 0.05% decrease in infant mortality (Jimenez-Rubio 2011). Similar results are found in Argentina (Habibi, Huang et al. 2003) and Nigeria (Akpan 2011). In addition, studies that use other definitions of decentralization find favorable effects of decentralization on infant and child mortality (Mahal, Srivastava et al. 2000; Uchimura and Jutting 2009; Samadi, Keshtkaran et al. 2013).

A few studies explore another health outcome metric—immunization coverage. In Ebel and Yilmaz 2001, the authors compare measles and DTP3 immunization rates before and after major decentralization initiatives in 6 countries—Argentina, Brazil, Colombia, Philippines, South Africa, and Venezuela—and their results suggest that decentralization produces better outcomes (Ebel and Yilmaz 2001).

Yet, there is some evidence that suggests that decentralization can have a negative or at least mixed impact on health outcomes and service delivery. In Khalegian (2004), decentralization is associated with higher measles and DTP3 immunization coverage rates in low-income countries but with lower immunization coverage rates in middle-income countries, using two definitions of decentralization: one as a binary variable—the presence of taxing, spending or regulatory authority on the part of sub-national authorities, and the second as government expenditure at the sub-national level. In addition, this study finds that in low-income countries, development assistance at moderate levels—5 to 10% of GDP—is associated with a decrease in immunization coverage in decentralized countries but an increase in centralized countries (Khaleghian 2004). Similarly, some empirical studies find unfavorable associations between decentralization and infant mortality. Jin and Sun find that decentralization has an adverse impact in reducing infant mortality in China (Jin and Sun 2011). A forthcoming paper in the Journal of Development Studies shows that decentralization exacerbated geography-related inequity in health services utilization and outcomes with respect of neonates (-- 2014). A small study shows that similarly, in Nigeria, the urban-rural divide in terms of health service delivery deteriorated after decentralization (Gupta, Gauri et al. 2003).

These studies show that decentralization's effect on health depends much on the specific design features and conditions of the transfers themselves, as well as the capacity of sub-national entities. For example, institutional capacity of sub-national entities—both financial and operational—is important so that local governments can execute and deliver the services under their responsibility (Robalino, Picazo et al. 2001; Khaleghian 2004). In the Philippines for example, where decentralization rolled out quickly, administrative preparation was inadequate, leading to personnel shortages (Lieberman, Capuno et al. 2005).

Despite the literature that does exist, the volume of empirical evidence available for health is thin, and some argue that the rigor of the studies needs to improve (Channa and Faguet 2012). In a review of empirical literature on decentralization of health and education in developing countries, Channa and Faguet 2012 find that fewer than a third of the econometric techniques employed by the studies can be classified as being "highly credible" based on the nature of the data and identification strategy (Channa and Faguet 2012).

This paper

In this paper, we focus on inter-governmental fiscal transfers (IGFT) between national governments and sub-national governments for health: how transfers are allocated, what incentives are implicit and explicit in transfers, and what kind of accountability arrangements—if any—are tied to these transfers. In focusing on IGFT, a main instrument of decentralization, we avoid a discussion of terminology on decentralization, deconcentration or devolution, and merely focus on any kind of transfer of funding between levels of government, allowing for various sub-national arrangements and capturing a broader universe of experiences.

Our goal with the paper is to document and synthesize common challenges and lessons learned in IGFT from around the world, as a first step towards developing better government and global health policy. Too often, driven by political imperatives or broader fiscal or governance objectives, IGFT in L/MIC are designed and implemented without attention to the intended use or impact of transferred funding, in this case health. While there are many political and institutional reasons behind this inattention, the result can be simply bad policy and likely limited impact on health, and persistent inequalities and variations in health care and status between sub-national entities.

We recognize that there is a contested dynamic between the goals of the federal government for its sub-national entities and the own-goals of sub-national governments. In certain instances, the federal government has the right to decide whether or not to give funds, on what basis, and according to their goals. In other instances, the sub-national authorities have political power, responsibilities, and claims on national revenues. The sub-national entities also may legitimately claim that their goals are the more appropriate ones and that federal involvement is distorting. Usually, the holder of the fund varies depending on the fund and/or source of funds within each country's IGFT system—and the question of which works better is appropriately indeterminate.

The paper starts with a fuller description of the allocation-incentives-accountability framework of analysis then dives into each topic including mini case studies of country practices, finally wrapping up with conclusions and next steps.

Three Key Elements of IGFT

Careful design of IGFT is crucial in making sure government funding enables local service provision in an efficient and equitable way. Based on international experience, a number of principles can describe better IGFT design (Bird and Smart 2002; Pearson 2002; Shah 2007; Steffensen 2010). These 'better practices' are listed in Table 2.

Table 2. Better practices for IGFT design

Better practices for allocating IGFT	
Simple	Allocation for health is based on an objective, simple, and easy to understand formula
Predictable	Future health transfers are predictable and stable; a government may publish five-year projections (with ceilings and floors) and accompany major changes to the formula withhold-harmless provisions
Promotes equity	Allocation varies directly with health-related fiscal need factors and inversely with the tax capacity of sub-national entities
Promotes revenue adequacy	Give state governments sufficient revenues to fulfill programmatic expectations
Betters practices for using incentives in IGFT	
Fulfills grantor's objectives	In order to fulfilling grantor's objectives, transfer conditions specify health results to be achieved (such as through output-based transfers)
Promotes efficiency	Transfer system provides incentives for sound fiscal management and encourages efficient practices; does not make specific transfers to finance sub-national government deficits
Autonomous use of grants	Sub-national governments have independence and flexibility in setting health priorities for health
Better practices to account for IGFT	
Ensure financial and performance accountability	Grantors are held accountable for transfer system design and operations; grantees are held accountable to the grantors and its citizens for financial integrity and results
Promotes transparency	Allocation formula and allocations are disseminated widely in order to achieve as broad a consensus as possible on the objectives and operation of the program

Source: Adapted mainly from Shah 2007 and also draws from Bird and Smart 2002; Pearson 2002; and Steffensen 2010

In this paper, we describe transfer design along three dimensions: allocation, incentives, and accountability. Transfers with good allocation principles should be simple and predictable while promoting equity and revenue adequacy. Transfers should promote efficiency in order to fulfill the grantor's objectives while giving transfer recipients autonomy in fund use. Finally, IGFT should be embed accountability mechanisms focused on performance into IGFT design and enhance community participation mechanisms to ensure accountability. While in reality, IGFT systems do not satisfy every single criterion, some transfer systems are designed particularly well in certain areas.

In the following sections, this paper explores the challenges and better practices of transfer design—with a view to assessing lessons learned—specific to each key element, drawing on examples in current practices in low-, middle-, and high-income countries (Table 3).

Table 3. Challenges and lessons in IGFT allocation, incentives, and accountability

Key Element	Challenges	Lessons
Allocation	• Government health funding is allocated from multiple sources and without a formal methodology • Mismatches between responsibilities of central and local governments limit impact	• IGFT should have a needs-based, explicit allocation methodology that is simple and predictable • IGFT should promote equity and revenue adequacy
Incentives	• Incentives for better performance are weak or non-existent	• IGFT should promote efficiency in order to fulfill shared health objectives • IGFT should give sub-national entities greater autonomy in fund use
Accountability	• Local governments are often not held accountable for the use of the public's funds • Local data is limited and unreliable • Lack of focus on performance measures	• Embed accountability mechanisms focused on performance into IGFT design • Enhance community participation mechanisms

Our review of IGFT has several limitations. First, we do not carry out a comprehensive assessment of all IGFT arrangements that exist; rather, we aim to choose those that illustrate relevant practices and lessons learned under the allocation-, incentive-, and accountability-related features of IGFT. There are many other challenges that are not captured by this categorization, and we recognize that there are other ways to categorize IGFT practices.[2]

Second, we have also omitted in-depth discussion of India as a forthcoming companion piece by Victoria Fan and Anit Mukherjee will carry out a deep dive on IGFT in India.

Third, there are several relevant topics that we do not explore in depth including sub-national capacity building, "decision space" in decentralization, health finance sourcing and purchasing, taxation, capital vs. recurrent budgets, and detailed discussion of case vs. capitation payment methods to sub-national entities. In addition, we omit explicit discussion of the role of aid in sub-national spending on health, and its related effects on allocation, incentives and accountability, as we will address this issue in a forthcoming companion piece.

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[2] For example: categorizing by the reason for IGFT allocation—need, effort, and performance.

Finally, our work is limited by the scarcity of empirical evidence of effects and documentation of practice related to IGFT, particularly in L/MICs. Although both the better practices and lessons learned discussed are accepted practices which seem reasonable, limited outcomes data leads them to remain unproven.

1. **Allocating IGFT Better**

National governments often devolve responsibility for arranging health care to a sub-national entity, which could be a local government, other local administrative body, or a health care specific fund. In these cases, the sub-national entity is responsible for organizing specified types of health care for designated populations. Despite this responsibility, financing functions generally operate centrally; for instance, the funding is pooled at the national level. It then becomes a task of the national government to allocate and distribute the funds for health care in a way that is equitable and efficient (Rice and Smith 2002).

This section examines challenges and practices in the allocation of health funding in federal or highly decentralized countries, with particular focus on the allocation-related aspects of IGFT design. While it is clear that one size does not fit all, there are common experiences in most countries related to allocation methods that suggest lessons for other contexts.

Challenge 1.1: Government health funding is allocated from multiple sources and without a formal methodology

The allocation of intergovernmental transfers is crucial in ensuring equity. For health specific transfers, there are numerous ways in which allocation of health system funds can be determined. As defined in Panel A, they include: de facto or retrospective, and ex ante or prospective methods, such as historical precedent, local performance measures, political patronage (or factors such as ethnicity), and mathematical formula (Rice and Smith 2002). Both kinds of transfers—whether ex ante or ex post—can be assessed with regard to their impact on equity and efficiency in various dimensions.

PANEL A: ALLOCATION METHODS

<u>Retrospective (de facto) transfers</u>

Actual spending

Allocations are made based on how much sub-national entities actually spend. Although this approach is likely to incentivize greater than necessary levels of spending, it forms a basis for matching transfers, which encourage spending where sub-national entities would otherwise spend below efficient levels. (Smith 2008)

<u>Prospective (ex ante) transfers</u>

Need-based mathematical formula
Funding may be determined through a predetermined formula based on subjective or objective mathematical rules and reflecting perceived health needs (Pearson 2002; Smith 2008). The rules can be simple and incorporate a few factors—such as in Norway, where the formula includes age, gender, mortality, low birth weight —or very complex—such as in Brazil and South Africa, where the formulas incorporate 10 or more factors (Rice and Smith 2002; Shah 2007; Smith 2008).

Local government bids

Funding for health can be allocated by bids placed by local governments that reflect national health priorities and local disease burdens. In some cases, the transfers can be partially tied to improvement of health indicators. If successful, this mechanism can ensure that government funds are spent cost-effectively and in line with central or local government goals. Transfers based on local performance require greater scrutiny from the central government and technical capacity by the local entity, which may lead to large geographical inequality. (Rice and Smith 2002; Smith 2008)

Historical precedent

Central governments can allocate health funds based on historical precedent. Sub-national governments may receive adjustments based on changes to the overall budget (Pearson 2002). Allocation through historical spending can minimize disruptions to existing systems, but it also leaves local entities reliant on historical funding levels (Smith 2008). In some cases, this allocation mechanism could perpetuate inequity and inefficiencies in localities (Pearson 2002; Rice and Smith 2002).

Political patronage

The allocation of health funding can be influenced by political patronage or factors such as ethnicity, where funds to local entities are allocated based on past support or importance for future government. While governments would be reluctant to admit to this funding mechanism, it has been found in many supposed "non-partisan" funding systems. (Pearson 2002; Rice and Smith 2002; Smith 2008)

Health funding from the federal government to sub-national entities are usually allocated through a combination of general transfers and health-specific transfers, and often through

multiple channels. General transfers allocated through mathematical formulas in populous, federal or highly-decentralized middle-income countries include the *Dana Alokasi Umum* (DAU) formula in Indonesia, the National Finance Commission (NFC) Award formula in Pakistan, and the Intergovernmental Revenue Allotment (IRA) formula in the Philippines. General transfers are typically based on factors such as population, geography, and expenditure and revenue assessments, although they can often be allocated without a formal methodology. In India, resources allocated from central government ministries to states are transferred through over 100 different 'Centrally Sponsored Schemes' (Fan and Mukherjee 2014), and a similar situation can be found in Ghana (Collaborative Africa Budget Reform Initiative 2011).

Challenge 1.2: Mismatches between responsibilities of central and local governments limit impact

In many federal or highly decentralized L/MICs, there is a mismatch between revenue- and expenditure-sharing. Usually, revenue is raised on the central level, but expenditure responsibilities fall on local governments. In certain cases, local governments lack the capacity or authority to execute their responsibilities due to limited capacity to raise revenues and insufficient levels of transfer from the national level.

The ability of sub-national governments to execute their responsibilities in the health sector is hampered by, one the one hand, no real capacity to generate their own revenue, and on the other, federal transfers that are insufficient or are late to be disbursed. Such is the case in Tanzania, where fiscal decentralization is based on principles that give authority to Local Government Authorities (LGAs) to levy local taxes, but in reality, the LGAs do not have adequate sources to generate their own revenues (Frumence, Nyamhanga et al. 2013). The Tanzanian central government also has an obligation to provide LGAs with central to local fiscal transfers, but these transfers end up being late and are often strict and conditional in their terms (Frumence, Nyamhanga et al. 2013). As a result, the LGAs do not have enough resources to adequately support the delivery of health services. Similar issues occur in many other L/MICs, including Ethiopia (Garcia and Rajkumar 2008; Mann, Alebachew et al. 2013), Mexico (Lakin 2010), the Philippines (World Bank 2011; Lieberman --), and Uganda (Frumence, Nyamhanga et al. 2013).

The imbalance in local government responsibility and available funding can also be the result of the lack of capacity and know-how on spending the resources. In Indonesia, districts have the autonomy to tailor services and expenditures for local needs, and thus improve the allocative efficiency of health spending. However, in reality, local governments and health institutions defer to instructions from the central government on how to spend their resources (World Bank 2007).

For greater equity in allocation of IGFT, two lessons can be drawn from country experiences: IGFT should have a needs-based, explicit allocation methodology that is simple and predictable, and IGFT should promote equity and revenue adequacy.

Lesson 1.1: IGFT should have a needs-based, explicit allocation methodology that is simple and predictable

Simplicity and predictability are key principles of well-designed transfers. The allocation method should be simple and easy to understand, and future transfers should be stable and predictable. As such, defining transfers explicitly through a mathematical formula has become a preferred method. Sometimes, governments may publish five-year projections with ceilings and floors or accompany major changes to an allocation methodology with hold-harmless provisions. We can draw on examples in high-income countries, as below, for simple and predictable allocation formulas.

Generally, each country has its own set of factors that best reflects the needs of each sub-national entity. As shown in Table 4, in most industrialized, European countries, input-based transfers for health care tend to use relatively simple demographic factors such as age, gender, employment status, and mortality (Shah 2007). In contrast, middle-income countries like Brazil and South Africa use composite indices involving formulas with over ten factors (Shah 2007). It is important for countries to ascertain whether composite indices are determining need better than a simple proxy measure. In Malawi, Manthalu et al. (2010) found that there was no statistically significant difference in health resource allocation when the formula used stunting and composite indicators of socioeconomic status. Since 2007/8, the allocation formula is weighted by an index for differential costs of service provision, bed capacity, outpatient utilization, and a proxy for socioeconomic status—stunting. (Manthalu, Nkhoma et al. 2010)

Table 4. Need factors used for transfer financing of health care in selected European countries

Need based top-up for health care in general transfer	
Country	**Factors**
Belgium	Age, gender, unemployment, disability
Finland	Age, disability, remoteness, local tax base
Germany	Age, gender
Netherlands	Age, gender, urbanization, income base
Switzerland	Age, gender, region, income
Need based health-specific transfers for core services	
Country	**Factors**
Denmark	Age, children of single parents
England	Age, gender, mortality, unemployment, elderly living alone
France	Age
Italy	Age, gender, mortality
Norway	Age, gender, mortality, low birth weight
Portugal	Burden of illness (diabetes, hypertension, AIDS, tuberculosis)
Scotland	Age, gender, mortality, rural costs
Spain	Cross-boundary flows
Sweden	Age, living alone, employment status, housing
Wales	Age, gender, mortality, rural costs

Health transfers using composite indexes based on principal component analysis	
Country	**Factors**
Brazil	Infant mortality, 1–64 mortality, 65+ mortality, mortality rate by infectious and parasitic diseases, mortality rate for neoplasia, mortality rate for cardiovascular conditions, adolescent mother percentage, illiteracy percentage, percentage of homes without sanitation, percentage of homes without running water, percentage of homes without garbage collection
South Africa	Percentage female; percentage children under 5; percentage living in rural area; percentage older than 25 without schooling; percentage unemployed; percentage living in traditional dwelling, shack or tent; percentage without piped water in house or on site; percentage without access to refuse disposal; percentage without access to phone; percentage without access to electricity; percentage living in household headed by a woman

Source: Shah 2007

Lesson 1.2: IGFT should promote equity and revenue adequacy

In addition to being simple and predictable, well-designed transfers promote equity and revenue adequacy. In essence, health funding should be allocated based on need-based factors that give sub-national governments sufficient revenues to provide the necessary health services. At its core, allocation formulas should include population, age, gender, and degree of poverty (Pearson 2002) as shown in various examples in Table 4. These are basic factors that affect the necessary budget, since, for example, the young compared to the old have different health needs.

Below, we examine several cases where governments transitioned to a needs-based formula system. England is a classic example where the allocation formula, since its inception, has always had the goal of equal access to services for equal need. In Colombia, the formula-based allocation method at least in part helped to improve equity issues in government health funding.

United Kingdom (England)

Needs-based allocation in the United Kingdom originates from the recommendations of the Resource Allocation Working Party (RAWP) in 1976. In the UK, the responsibility for health services is devolved to the Scottish, Welsh, Northern Irish, and English administrations (Wood and Heath 2014). The National Health Service (NHS) delivers more than 87% of the UK's health care and spends about 8.4% of the country's GDP (Smith 2008). Until the RAWP recommendations, funding for the National Health Service was determined by historical precedent, which in England, led to London and southeast regions receiving a greater share of funds (Smith 2008; Buck and Dixon 2013).

Based on the principles that allocation of health funds should be equitable and reflect need, the RAWP recommended a 'weighted capitation' formula to calculate per capita capitation payments based on age and sex, local clinical need, and area costs (Smith 2008). These factors are further defined in Table 5. Under the RAWP recommendations, the 'weighted

capitation' formula set the budgets for regional health authorities which were responsible for primary care trusts (PCTs), then the local administrators of the English NHS (Smith 2008).

Table 5. Definition of factors included in RAWP recommended 'weighted capitation' formula

Factors	Definition
Age and sex	Expected health care utilization of each demographic group, approximated using national average of hospital bed utilization and adjusted standardized mortality ratios
Local clinical need	Conditions broken down into a number of broad categories; local, condition-specific standard mortality ratios calculated for population of an area
Area-specific costs	Area cost adjustments applied to all budgets to reflect the large variations in input prices, especially pay, among regions

Source: Smith 2008

Since its inception, the 'weighted capitation' formula has been refined and changed multiple times. In the 1970s, the UK government was hampered by a shortage of adequate data, as the factors were aggregated to the regional level (Smith 2008; Buck and Dixon 2013). It was based on expected utilization—under the assumption that current needs were being met—so any existing inequities were perpetuated (Smith 2008). Over time, as more granular data became available, the 'weighted capitation' formula has been refined to use more detail and more precise formulas for each type of service and update methods to calculate population and adjustments for input costs (Buck and Dixon 2013). As of March 2013, PCTs were abolished and funding will instead be allocated to clinical commissioning groups (CCGs) in a similar manner (Wood and Heath 2014). Despite changes to the formula over time, the goal of allocation, to secure 'equal access to NHS services for equal need' (Buck and Dixon 2013), remains the same.

Colombia

In Colombia, prior to 1993, about 75% of the population was uninsured, and the allocation of public funds was skewed to favor the rich over the poor. The ratio of health expenditures between municipalities with the richest and poorest deciles was 41.5, and those in the lowest income decile spent much more of their income (10%) on health than those in the highest income decile (0.5%) (Bossert, Larranaga et al. 2003; Fleisher, Gottret et al. 2008). At the basis of this inequality was an allocation mechanism based on historical spending rather than people's needs.

In 1993, the allocation mechanism for federal transfers to provinces (departments) and municipalities was changed from a historical budgeting system to two mathematical formulas with earmarks for health and education. The formulas each corresponded to a funding source, the "municipal participation" and "situado fiscal," and adjusted based on the factors listed in Table 6.

Table 6. Funding source and need-factors for health care in Colombia

Funding Source	Factors
"Municipal participation"	Poverty level, unmet basic needs, own-source fiscal contribution, administrative efficiency, and quality-of life indicators
"Situado fiscal"	Equal allocations to all departments and municipalities, per capita expenditure and use, rate of inflation

Source: Bossert, Larranaga et al. 2003

Between 1994—the last year allocations were based on historical budgets—and 1997, when decentralization was in effect, the gap in national resources available for health expenditures available between the richest and poorest municipalities decreased. The ratio of expenditures between municipalities with the richest and poorest deciles reduced from 41.5 to 11.9 (Bossert, Larranaga et al. 2003). It may be incorrect to attribute all improvements in equity to decentralization and reform of the allocation mechanism—general changes in social insurance and socioeconomic status occurred at the same time—but at least in part, allocation methods can improve equity issues between provinces (Bossert, Larranaga et al. 2003; Flores, Riutort et al. 2006; Faguet 2008). The new allocation methodology was simple, predictable, and promoted equity.

England and Colombia have had relative successes with their reforms. However, Tanzania's allocation reform shows that although formulas can be designed with the right principles in mind, simply implementing a mathematical allocation formula is not enough.

Tanzania

Until 2004, IGFT in Tanzania were allocated on a highly discretionary basis and lacked objective standards (United Republic of Tanzania 2010), such that per capita resources varied greatly. For example, local governments in the Pwani Region received over twice as much those in the Shinyanga Region (Boex 2003). Because resources were allocated based on supply—such as student-teacher ratio—a larger share of transfers was likely to go to wealthier and more urban regions (Boex 2003).

In 2004, the Tanzanian government introduced an allocation formula for local health services and primary education transfers. For the health sector, the block transfer from the Treasury to the Local Government Authorities (LGAs) took into account the following need-based factors and weights for each factor: population (70%), under-5 mortality rate (10%), poverty level (10%), and district medical vehicle route (10%) (Mollel 2010; United Republic of Tanzania 2010; Sikika 2012). The Health Basket Fund, a transfer from the Ministry of Health and Social Welfare to LGAs, also follows the same formula (Sikika 2012). Formula funding was phased in gradually to prevent inefficient allocation or misappropriation of funding by local governments, due to the sudden increases in funding. In addition, a hold-harmless baseline was established, so that for a transition period, no LGA could receive fewer resources than this baseline (United Republic of Tanzania 2010).

The formula was successful in creating a simple, transparent, and predictable explicit resource allocation mechanism. However, it has had its limits. For example, data sources are outdated, and the need factors need to be reconsidered. Adherence is variable, in part because the formula does not capture the appropriate needs. The particular issues of accountability and reliable data will be discussed later in this paper.

When allocating IGFT, many L/MICs do not decentralize their funds in an equitable or efficient way. Many allocate in an ad hoc way, and the result is inequality and a gap between the sub-national entities' responsibility and capacity to carry out service delivery with the available funds. A simple and predictable mathematical allocation formula tends to promote equity and revenue adequacy, but not without proper incentives and accountability, as discussed in the following sections.

2. INCENTIVES: STRUCTURING IGFT BETTER

Federal governments can structure fiscal transfers to meet certain goals, such as increasing spending on health. One way may be simply to increase the funding going to a sub-national entity, with hopes that spending on health will increase. But to ensure that health spending increases, the federal government might provide incentives—for example, that the sub-national entity must spend the funding on health services—if they want the funding. While various options for IGFT structures exist (see Panel B), IGFT are rarely designed to achieve the grantor's goals in an efficient way.

PANEL B: TYPES OF INTERGOVERNMENTAL FISCAL TRANSFERS

General- vs. specific-purpose (unconditional vs. conditional) transfers

General purpose transfers, or unconditional transfers, are the simplest form of transfers. They have "no strings attached," and give local governments the autonomy to allocate funds across various uses (Shah 2007).

On the other hand, specific purpose or conditional transfers adds an incentive for local governments to spend funding on a program or area in which the federal government wants to advance (Shah 2007). These transfers specify what expenditures can be financed with the transfer. As such, the condition is input-based. Conditions can also be placed on outputs, where expenditures are financed based on the condition that the local government meets certain targets, such as health outcomes. Transfer recipients have the autonomy to use funds in a way they believe will produce the required outputs. In this way, performance-based financing "ties finance with service delivery" (Shah 2007).

Some output- or performance-based transfers are linked to future transfers, in a performance-based budgeting scheme.

Non-matching vs. matching transfers

IGFT can also be further classified as matching or non-matching. Through the use of matching, which requires recipients to match transfers out of their own funds, central and local governments share the cost of a particular expenditure (Shah 2007).

> Cost-sharing can vary in degree. Transfers can have no limit in matching provisions, as in open-ended transfers, or can be provided to a limit, as in closed-ended matching transfers (Shah 2007).

Challenge 2.1: Incentives for better performance are weak or non-existent

Careful design in the structure of IGFT allows governments to improve on allocation-related issues in funding for health. When designing the structure of IGFT, the incentives are not exploited properly in many countries. In many cases, no incentives are applied, and in others, policymakers do not consider the perverse incentives the structure of an IGFT can create.

As mentioned previously, simply implementing a sophisticated allocation method or structure does not lead to equitable and efficient allocation for health or to positive health outcomes. In other words, design seems to matter for impact. Careful design, with context in mind, is important to successfully reach the goals of funding allocation (Litvack, Ahmad et al. 1998). For example, in South Africa, conditional transfers are used frequently and fund relatively new programs for basic services, such as HIV/AIDS prevention and treatment and school nutrition (Khumalo and Mokate 2007). However, the discretionary nature of the transfer, designed with conditions that are unreasonable and with outputs that are unable to be measured, makes the system less transparent, difficult to monitor, and undermines coordination between policy and budgeting (Khumalo and Mokate 2007; Shah 2007).

Furthermore, a federal government needs to consider the implicit incentives that a system creates: for example, whether sub-national entities will decrease their own spending when they get more money from the federal government. In India, states actually decreased their own health expenditures when they got more money from the central government that was specified for health. Similarly, in China, many poor states do not match federal matching grants with their own budgets (Hipgrave, Guo et al. 2012). In Brazil, the Unified Health System (SUS) has many implicit incentives that results from the system's complexity that conflict with explicit incentives, such as payment for services delivered; this contributes to inefficiency and poor quality (LaForgia, Couttolenc et al. 2007). Another example where perverse implicit incentives affect expenditures is Medicaid in the United States.

<u>United States</u>

Medicaid, jointly financed by federal and state governments, uses matching transfers to incentivize state governments to invest more in health care for the low-income population. At the same time, the program gives states the autonomy to respond to the changing factors of its population in a way they see fit. Medicaid, a federal health coverage program for a broad group of low-income Americans, covers 62 million people, or 1 in 5 Americans (Kaiser Commission on Medicaid and the Uninsured 2012). In addition, Medicaid coverage will expand access through the Affordable Care Act, and the federal government will provide substantial funding to states for this expanded group.

Medicaid is co-financed by the federal government and state governments. When a federal government contributes financial resources to a sub-national entity, a challenge is to incentivize the sub-national entity to maintain levels of spending for the same use. Matching transfers attempt to provide this incentive. The federal government provides states with a matching transfer determined through a simple and predictable formula, based on the state's spending and per capita income. The minimum federal match is 50%, and the lower the state's income, the higher the match rate (Kaiser Commission on Medicaid and the Uninsured 2012). In terms of equity at the individual level, Medicaid's allocation methodology leads to two people with the same income in two states can with different health services and costs associated with health care.

The federal matching structure incentivizes states to invest more in health care for the low-income population. Because the federal government only directly determines the share of Medicaid contribution to a state, the Medicaid program gives states the autonomy to respond to the changing factors of its population—such as health care needs, demographics, and economic conditions—in a way they see fit (Kaiser Commission on Medicaid and the Uninsured 2012). As states spend more on Medicaid, they draw more federal matching funds, which extend their resources to respond to changes, and to respond in creative ways. In addition, dollars spent on Medicaid, both through the federal government and the state, supports state economies such as through job creation and from yielding increased state revenues from taxes (Kaiser Commission on Medicaid and the Uninsured 2012).

From a transfer design perspective, what is missing for Medicaid is an incentive for efficiency. The matching transfers indeed increased state spending on health programs for the low-income population, and in this way achieved the federal government's goals, but not necessarily in the most cost-effective way possible. Combined federal and state Medicaid spending has increased from 0.5% to 2.8% of GDP from 1970 to 2011. In 2011, total outlays were $432 billion, and over 60% of the total spend came from the federal government. (Truffer, Klemm et al. 2012)

Federal and state spending on Medicaid have continued to increase over time, because the incentives are skewed for the state and individual beneficiary in a number of ways. The more a state spends the more federal matching funds they draw down. Therefore, states are incentivized to spend on programs and methods, such as taxation, that will maximize the federal match (Gorman 2012). Under Medicaid, the individual beneficiary pays almost nothing for their health care; therefore, the beneficiary is not incentivized to seek health care only when necessary or to seek the least costly way to receive it (Gorman 2012). In addition, the individual has less incentive to detect and report fraud for services they did not receive (Gorman 2012).

Structure matters for IGFT to be efficient and equitable. Lessons that can be learned from country experiences are: IGFT should promote efficiency in order to fulfill the grantor's objectives, and IGFT should give transfer recipients autonomy in fund use.

Lesson 2.1: IGFT should promote efficiency in order to fulfill the shared health objectives

Output- or performance-based IGFT are an underutilized tool especially in L/MICs in attaining the goals of the grantor—usually the central government. In contrast to the US's Medicaid program, Canada's Health Transfer program uses an output-based system, adding incentives for efficiency on the part of the transfer recipient. By conditioning transfers on achieving particular results, output- or performance-based IGFT safeguard the grantor's objectives. In addition, output-based transfers enhance accountability by nature, because of conditions that require recipients to prove that they met their targets. In Pakistan, the "Performance-Based Equitable Resource Allocation Model" provides a L/MIC example of a system that employs output-based design, although its impact is not yet apparent.

<u>Canada</u>

In Canada, the federal government provides transfers to provinces and territories through the Canada Health Transfer (CHT) program, with penalties associated with the failure to meet stated outputs. Through CHT, the federal government transfers per capita health funding to provinces and territories in the form of cash and tax points[3], and the rate of growth of the transfers are tied to the rate of growth of GDP (Shah 2007). Through the 1984 Canada Health Act (CHA), provincial governments are required to meet nine outputs through the public health insurance plan in order to receive the full transfers from the federal government. The requirements include five criteria, two provisions, and two conditions. (Madore 2005)

CHA requires health care provided by the provinces to be (Madore 2005; Shah 2007; Health Canada 2012):

- Publicly administered: Provincial and territorial health care insurance plans are administered and operated on a non-profit basis and by a public authority.
- Comprehensive: Health care insurance plan of provinces and territories must provide all services that are "medically necessary."
- Universal: All insured residents of a province or territory are entitled to insured health services on uniform terms and conditions.
- Portable: If a resident moves to another province or territory, he or she retains health coverage in the province of origin for a transition period.
- Accessible: Insured residents of a province or territory must have reasonable access to health services, free of financial or other barriers.

In addition, the two provisions discourage provinces from charging user fees to patients and charging patients in excess of the prescribed schedule. The two conditions require provinces

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[3] Value of a tax point: amount of revenue generated by 1% of income tax. A tax point is a transfer of income tax room from the federal to provincial governments. (http://publications.gc.ca/Collection-R/LoPBdP/BP/bp450-e.htm)

to provide information on insured and extended health services and to recognize the federal financial contributions toward both (Health Canada 2012).

Since the goal of the CHA is to make health care affordable to all residents, transfer funds are reduced on a dollar-for-dollar basis for breaking either of the two provisions. If one of the five criteria or two conditions is not fulfilled, provinces may be penalized to an extent determined by the gravity of the breach. However, at least through 2012, discretionary penalties for breaking either the criteria or the conditions have not been applied. (Shah 2007; Health Canada 2012)

CHT is cited as a successful system, based on its ability to incentivize efficient allocation through such a simple and well-defined system.

Pakistan

In Pakistan, health service delivery and financing has been devolved from the provincial to district governments since 2001. In 2006, the government of Punjab, one of Pakistan's provinces, initiated a Health Sector Reform Programme, during which the government realized that the budget process did not link funding and the specific health care needs of the 36 districts. The Punjab government sought to reform the former allocation methodology from a traditional supply-side approach based on a district's population size to a "Performance-Based Equitable Resource Allocation Model" (Allocation Model). (Mahmood, Estacio et al. 2013)

The Allocation Model aims to allocate resources to districts based on local needs, while simultaneously rewarding them for improvement in health performance. Under the model, 70% of the full transfer accounts for the base allocation, and districts can obtain up to 30% of the full transfer by reaching relative improvement in predetermined performance indicators. The base allocation is weighted by the number of health facilities (40%), social deprivation index[4] (25%), rural population (25%), and maternal and child mortality index (10%). The performance indicators include the proportion of pregnant women receiving antenatal care, availability of essential maternal and neonatal health staff, and availability of essential drugs, and are listed in Table 7. (Mahmood, Estacio et al. 2013)

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[4] Indicators used to calculate the Social Deprivation Index include adult literacy, primary school enrollment, breastfeeding practices, skilled birth attendance, modern contraceptive use, adequate water and sanitation access.

Table 7. Performance-Based Equitable Resource Allocation Model indicators

70%	Base Allocation
	• Number of health facilities
	• Social deprivation index
	• Rural population
	• Maternal and child mortality index
30%	**Performance Indicators**
	• Proportion of pregnant women registered for antenatal care
	• Proportion of pregnant women receiving antenatal care
	• Proportion of women delivered by Skilled Birth Attendants
	• Proportion of women who delivered at a health facility
	• Proportion of fully immunized children between 18 and 30 months of age
	• Tetanus Toxoid II coverage in pregnant women
	• Population coverage by Community Midwives
	• Human Resources Index (availability of essential Maternal Neonatal and Child Health staff)
	• Drugs Index (availability of essential drugs at facilities)
	• Equipment Index (availability of essential Maternal Neonatal and Child Health related equipment at facilities)

Source: Mahmood, Estacio et al. 2013

Formal results of the impact of the Allocation Model on allocative efficiency and health outcomes are not yet available, but what started with a pilot in a few Punjab districts in 2010 are expected to be followed by provincial and national rollouts (Mahmood, Estacio et al. 2013). From what we can see, the Allocation Model is designed to reward districts for improvements in the performance indicators from their baseline and in theory to lead to better health outcomes as well.

BOX: Nigeria Governor's Immunization Leadership Challenge

The Immunization Leadership Challenge, launched in 2011, is a collaboration between the Bill & Melinda Gates Foundation and the Nigeria Governor's Forum with the goal of interrupting further transmission of polio. If a state met the Challenge's objectives during each quarter of 2012, the Gates Foundation would award $500,000 to the state's governor as a grant to support its health priorities, such as malaria, tuberculosis, immunization, HIV prevention and treatment, or water and sanitation. The Challenge incentivizes sub-national leaders to play a visible role in polio control efforts through a conditional grant, although there is some flexibility within the health sector for its use.

Performance is tracked and transmitted to the Nigeria Governor's Forum on a monthly and quarterly basis. In addition, the World Health Organization manages an independent monitoring system to ensure over 90% coverage in each reporting period.

Sources: Bill and Melinda Gates Foundation press release (http://www.gatesfoundation.org/media-center/press-releases/2012/01/nigerian-governors-sign-up-to-immunization-leadership-challenge); Nigeria Governor's Forum, NGF Issue Brief No. 2 (April 2012)

Lesson 2.2: IGFT should give transfer recipients autonomy in fund use

Furthermore, output- or performance-based IGFT are attractive because they maintain the local government's autonomy, providing sub-national entities the opportunity to use locally relevant, innovative approaches and learn from both positive and negative experiences. In the Medicaid case, states had the freedom to changing factors of its population in a way they see fit. Argentina's Plan Nacer is one of few examples of output-based IGFT for health in a L/MIC that is rolled out at the national level. The National Community Empowerment Program in Indonesia, which provides block grants to poor, rural communities, has thus far shown positive results.

<u>Argentina</u>

Argentina is a highly decentralized federal country, where more than 70% of public spending on health happens sub-nationally by independent provincial governments. Since budgetary transfers between levels of government have no conditions attached, the federal government has often struggled to influence the efficiency and impact of provincial government spending. This is a common challenge around the world, particularly in countries like China and Nigeria where most spending is decentralized.

To address this challenge, Argentina designed and implemented an innovative results-based financing program between its federal and provincial authorities called Plan Nacer, or the Maternal-Child Health Insurance Program, launched in 2004. Plan Nacer uses conditional transfers to incentivize provinces to expand coverage of maternal and child health interventions. In 2012, Plan Nacer had 1.84 million beneficiaries, or nearly 90% of the eligible population (Cortez and Romero 2013). The goal of Plan Nacer is to increase health coverage and—since public health services is free in Argentina—making access to services explicit (Cortez and Romero 2013).

The program uses small financial incentives—equivalent to less than 1% of total provincial spending on health—to reward those provinces that enroll poor, uninsured women and children in the program and improve related health outcomes. Three types of outputs—enrollment, effective delivery of priority health services, and health outcomes—are tied to funding (Cortez and Romero 2013). Sixty-percent of the federal transfers is based on the number of people enrolled, and the remaining 40% is disbursed based on improvements in health coverage and outcomes, measured using audited administrative data. There are ten measures, also known as 'tracers,' of health outcomes, which include number of eligible pregnant women with at least one prenatal care service before 20th week or number of eligible children less than 18 months old with measles vaccine or triple viral coverage. (Cortez and Romero 2013)

An evaluation of Plan Nacer in 7 provinces from 2004-2008 by the World Bank links the program to positive health outcomes: Plan Nacer improves quality of prenatal care by increasing the number of prenatal care visits and probability of receiving a tetanus vaccine. Being a beneficiary reduced low birth weight (-19%) and in-hospital neonatal mortality (-74%), partly due to prevention of low birth weight and partly due to better neonatal care. The authors of the evaluation argue that the program is very cost effective: Plan Nacer's cost

per DALY saved was $814, compared to the GDP per capita, $6,075. (Gertler, Giovagnoli et al. 2014)

Several aspects of Plan Nacer make it a strong example of an output-based transfer. It set clear and varied outputs for which provinces can gain rewards. It uses built-in enforcement mechanisms, through a strengthened provincial information system and external audit, to monitor and evaluate outputs. Finally, the funds go to provincial health authorities, which pass on payments to public sector health facilities. The health facilities, then, have the freedom to use the funding as they see fit. In sum, Plan Nacer strategically uses financing to boost coverage of higher quality maternal and child health care.

<u>Indonesia</u>

In Indonesia, village grants, determined through performance-based budgeting, have led to positive trends in health utilization. The National Community Empowerment Program—Healthy and Smart Generation (PNPM Generasi) provided annual block transfers to poor, rural communities. PNPM Generasi takes the idea of conditional cash transfers and enables communities and local health providers to collectively decide how to allocate funds to improve population health. The program had a positive effect on cutting malnutrition—reducing childhood malnutrition by 2.2 percentage points (10% over the control group), and a positive effect on health services utilization–increasing weight checks for children by 6.8% and iron supplement given to women by 4.7%. (Olken, Onishi et al. 2011; World Bank 2013)

PNPM Generasi incorporates aspects of pay-for-performance programs by linking a portion of future year transfers to targets (Table 8) met in the past. In this way, the program pushed communities to focus on the most effective policies. Researchers found that when future transfers were linked to outputs, communities performed better. (Olken, Onishi et al. 2011) Based on the positive results of the program, the Government of Indonesia plans to expand PNPM Generasi to more provinces with focus on combating nutrition (World Bank 2013).

Table 8. PNPM Generasi Health Indicators

Performance Metric
• Prenatal care visit
• Iron tablets
• Childbirth assisted by trained professional
• Postnatal care visit
• Immunizations
• Monthly weight increases
• Weight check
• Vitamin A pill

Source: Olken, Onishi et al. 2011

When designing IGFT, implicit and explicit incentives are too often not considered by policymakers. Like in Canada, Pakistan, Argentina, and Indonesia, policymakers can design transfers to promote efficiency to fulfill the federal government's goals while giving sub-national entities the autonomy for use of the funds. Output-based transfers automatically

collect data on fund use and performance, but such is not the case for the majority of IGFT, as explored in the next section.

3. ACCOUNTING FOR IGFT BETTER

A key issue in IGFT is making sure that the transfers reach the intended group and that impact is monitored. While it is easy to assume that more spending leads to better outcomes—and in many cases it does (Moreno-Serra and Smith 2011)—gains in health are by no means automatic (World Bank 2004; Goldstein 2008). Spending more money is not the easy solution for better health, particularly for the poorest in each country.

A better understanding of how government funding that flows from the federal to sub-national level, and how that funding is used, will enable policymakers to improve efficiency and effectiveness of those funds (Goldstein 2008). Further, to transform inputs into outcomes, need to measure service (Goldstein 2008). Local governments are usually not accountable—or many times only weakly accountable—towards the central government, and not at all accountable to the population on a day to day basis outside of elections. In the *World Development Report 2004: Making Services Work for Poor People*, the World Bank wrote: "health services are failing poor people not because of lack of knowledge for preventing and treating illnesses, but because health systems are trapped in a web of failed accountability" (World Bank 2004).

Challenge 3.1: Local governments are often not held accountable for the use of the public's funds

Too often, local governments are not—or only loosely—held accountable for the use of the public's funds, both to the central or regional government from where the funding originated and to the people for whom the funds are meant to serve. Financial and performance accountability, or the ability to prove that fiscal transfers reach the intended fund recipients and that the funds led to positive health outcomes, for the use of public funds is an often overlooked aspect of IGFT.

The most important instruments for accountability are internal tools such as the domestic budget accounting and public financial management systems. In most developing countries, reporting on budgets and expenditures remains weak. The Public Expenditure and Financial Accountability (PEFA) Initiative, through its Public Financial Management (PFM) Performance Measurement Framework, an indicator-based tool, finds—on average across 57 assessments—poor scores in accounting- and reporting-related indicators, particularly in the "availability of information on resources received by service delivery units" and the "quality and timeliness of annual financial statements." (de Renzio 2011) Similarly, the World Bank's Country Policy and Institutional Assessment (CPIA) rates countries on a scale of 1-6 for a number of measures, including quality of budgetary and financial management.[5] Of the 80 or

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[5] "Assesses the extent to which there is: (a) a comprehensive and credible budget, linked to policy priorities; (b) effective financial management systems to ensure that the budget is implemented as intended in a controlled and predictable way; and (c) timely and accurate accounting and fiscal reporting, including timely audit of public accounts and effective arrangements for follow up." CPIA

so World Bank International Development Association (IDA) borrowing countries, no countries satisfy a 5 or above criteria, which includes the ability for countries to report expenditures and audit findings in a timely matter without data concerns and the public has access to annual budget documentation.

With increases in aid from international donors and in public sector reforms such as decentralization, various methodologies to assess the finances and delivery of social services have emerged, as described in Panel C. These tools include public expenditure reviews (PER), public expenditure tracking surveys (PETS), quantitative service delivery surveys (QSDS), national health accounts and disease sub-accounts (NHA), and cost and human resources studies (Glassman, Becker et al. 2008). Despite these efforts, most L/MICs have not carried out a PETS in the last 5 years (Koziol and Tolmie 2010), and regardless, these tools do not provide real-time data. The World Bank and the IMF maintain a database of sub-national spending, but this database also has many missing observations. Further, most L/MICs do not report detailed expenditures to IMF's Government Financing Database.

PANEL C: TOOLS TO ASSESS PERFORMANCE IN SERVICE DELIVERY

Public expenditure reviews (PER)

Conducted by the World Bank as a part of its country economic and sector work since the 1980s, PER are undertaken to assist the Bank's clients in understanding their development problems and potential solutions. PER typically analyze the levels and patterns, effectiveness, and equity of public expenditure, as well as identify bottlenecks to improved spending effectiveness. (Deolalikar 2008; Glassman, Becker et al. 2008; World Bank 2011)

Public expenditure tracking surveys (PETS)

Conducted by the World Bank since the mid-1990s, PETS track the flows of public funds through the various levels of government—from the central government level to the frontline service providers—to determine resource allocations for each level. Although initially intended as a purely diagnostic tool, it became apparent that a quantitative tool like PETS could be useful for identifying points of and reasons for leakages in the disbursement hierarchy and the amount of allocated funds that eventually reach the beneficiaries. In sum, PETS can provide useful data for analyzing service provider behavior and incentives (Glassman, Becker et al. 2008; World Bank 2011)

Quantitative service delivery surveys (QSDS)

QSDS studies monitor the impact of public spending. QSDS goes beyond PETS to examine spending efficacy, as well as incentives oversight and the relationship between those who contract for a service and those who deliver it (e.g., the relationship between parents and school administrators). The primary aim of a QSDS is to examine the efficiency of public spending, incentives and various dimensions of service delivery in provider organizations, especially in the frontline. QSDS can be applied to government and private—both for-profit and not-for-profit—service providers. (Dehn, Reinikka et al. 2003; Glassman, Becker et al. 2008)

2011 Criteria, World Bank Group
(http://www.worldbank.org/ida/papers/CPIAcriteria2011final.pdf).

National health accounts (NHA)

NHA constitute a systematic, comprehensive, and consistent monitoring of resource flows in a country's health system in order to measure total public and private national health expenditures. They are designed to capture a full range of information in health expenditure and to reflect the main functions of health care financing: resource mobilization and allocation, pooling and insurance, purchasing of care and the distribution of benefits. NHA can provide policymakers with reliable national and sub-national information on health expenditures as a tool for better understanding of a particular health system and how to improve its performance. (Glassman, Becker et al. 2008; World Health Organization 2014)

In spite of the issues listed above, which limit accountability and learning, these methodologies provide some information on the actual usage of public funds and expose issues in transfer efficiency. Perhaps the most compelling evidence of local capture are PETS that illustrate that the recipients—local and regional health centers or health care providers—of tracked resources do not receive the majority of the funding that central governments intended for them to receive.

In addition, several PER and PETS reviews across multiple countries have been conducted in the past, including Deolalikar 2008; Glassman, Becker et al. 2008; Savedoff 2008; Gauthier & Reinikka 2006; Engberg-Pedersen et al., 2005; and Reinikka & Smith 2004. There are several causes of leakage, including misuse, corruption, fiscal management issues, but the effect is the same; that the needed inputs to produce services are not available (Glassman, Becker et al. 2008) and local governments are not held accountable.

Challenge 3.2: Local data is limited and unreliable

The lack of accountability stems from limited recognition by central, regional, and local governments that basic data on public expenditure is necessary prior to increased decentralization or expanding transfers. In some cases, there is no systematic recording of performance indicators in health. For example, in Uganda, Reinikka 2001 found that spending data for health was not disaggregated by district or facility, for neither government nor donor funding. The study sought to compare actual service delivery with budgetary allocations implied, but Reinikka was unable to do so for health. For the 100 health clinics surveyed in the study, there was no systematic facility-level data on financial flows or outputs, such as the number of inpatients or outpatients from 1991-1995. Although there was a 2.5 times increase in budgetary allocations for health between 1991 and 1995, the impact of this increase on health service delivery is unclear without output data. (Reinikka 2001)

Financial data at the local level is often hard to find for several reasons, as outlined by Litvack et al. (1998). At the local level, administrative capacity and communication systems can be poor. The "building blocks" of national statistical systems, or data that are intrinsically important to the calculation of major economic and social welfare indicators— are weak in many L/MICs and especially in Sub-Saharan Africa (Data for African

Development Working Group 2014). With such a baseline, systematic collection is not a priority to countries and particularly local governments. Even with sufficient administrative capacity, local government structures are often differentiated and complex, making data collection procedures that captures reliable data difficult to design. In such situations, the challenge is to trace the fiscal flows and produce data that can be used by policymakers at all levels as well as civil society. (Litvack, Ahmad et al. 1998)

In addition, the Data for African Development Working Group 2014 found that in some African countries, there are significant inaccuracies in the data being published by national and international agencies—such as over- and under-reporting of vaccination rates, and that this is commonly the result of unintended consequences of misaligned incentives. Since this sub-national data is what drives policy, the inaccuracies in this data only perpetuates inefficient allocation but leaves higher levels of government with few other options.

A system is fair only if good performance is rewarded and poor performance is sanctioned—but how can policymakers, citizens, and donors tell if the foundational data is insufficient? (LaForgia, Couttolenc et al. 2007) Without accurate, timely, disaggregated, and widespread data "building blocks," information is useless to policymakers (Data for African Development Working Group 2014). In Tanzania, the allocation formula has limited function because of outdated data that could not sufficiently inform need-based factors. A similar issue exists in Uganda and other countries (Ministry of Health - Uganda 2010). Information is useless to citizens and donors, because the data doesn't reflect reality. In sum, the cycle of accountability does not work.

Finally, budget-setting processes are not transparent at the national and local level in many countries. Results from the Open Budget Survey (OBS) conducted by the International Budget Partnership (IBP) suggest that citizens lack information about government decision-making for the national budget (Masud and Lakin 2011). Through a more transparent budget decision-making process, governments are more likely to prioritize issues reflecting those of civil society (Masud and Lakin 2011). Among populous, middle-income countries[6], India and Indonesia provide significant information relative to Pakistan and the Philippines, and especially compared to Nigeria, which has almost no public access to budget information (International Budget Partnership 2012).[7]

Challenge 3.3: Lack of focus on performance measures

Similar to the previous discussion on limited and unreliable data, a study by LaForgia, Couttolenc et al. 2007 found that Brazil's health financing and budget monitoring system needs changes in order to be useful in decision making. Currently, the system is unstandardized across the country and at different levels of government. Data is presented

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[6] India, Indonesia, Nigeria, Pakistan, Philippines; Ethiopia not included, since it did not receive and Open Budget Index score.

[7] A core part of the IBP's work, including OBS, seeks to tackle transparency and efficiency issues in the government budgeting process. OBS is a 125 question survey with an extensive review process that "evaluates whether governments give the public access to budget information," taken by globally-located, independent researchers. The Open Budget Index (OBI) score ranges from 0 to 100 and those of our countries of interest vary.

on an aggregated basis and without evaluation or analysis of factors affecting production. But even further, what is missing from the picture is how these financial allocations translate to health services and ultimately, health outcomes.

In Brazil, the data is produced for procedural ends—for example, to trigger a fund transfer—not for evaluation of outcomes. As a result, the quality of the data is not appropriate for such analysis. Brazil's Unified Health System (SUS) legislation requires annual management reports, or Relatório de Gestão, to report how budgets are allocated. These reports are meant to increase accountability, but they tend to only show quantitative results on service volume. The State of Rio Grande do Sul was one exception and reported achievements of indicators such as infant mortality, but the indicators did not align with the targets of the annual State Health Plan. (LaForgia, Couttolenc et al. 2007)

The lack of data on performance measures is widespread across the world. Even in a country such as Rwanda, which is regarded as a leader in results-focused financing (Picanyol 2012), one of the main reporting systems housed in the Ministry of Health called the Health Resource Tracker (HRT) does not link the flow of resources to outcomes (Republic of Rwanda - Ministry of Health 2013).

BOX 1: BENCHMARKING

When a data system is available, benchmarking of costs and outcomes is another tool to hold governments accountable. In Mexico, the Ministry of Health has used a benchmarking approach for interventions based on the WHO concept of effective coverage[8] since 2001. The benchmarking efforts began when the government also designed, legislated, and implemented a major health system reform. The reform included several actions that affected the way central government funds were allocated for health, such as the decentralization of funds to state health ministries based on number of families, and the separation of federal to state resources flowing into funds for personal and non-personal health services (Gakidou, Lozano et al. 2006). Benchmarking of performance by measuring effective coverage encourages decision-makers to focus on quality service provision, not only service availability.

On the other hand, incentives must be considered here. In Mexico, data reporting has been inconsistent. While a benchmarking system linked to transfers may give incentives for states to collect and provide data, benchmarking as a tool on its own gives sub-national entities no reason to comply.

Accountability of IGFT needs to be improved for equity and efficiency. As such, lessons drawn from country experiences are: embed accountability mechanisms focused on performance into IGFT design, and enhance community participation mechanisms.

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[8] Effective coverage is "defined as the proportion of potential health gain that could be delivered by the health system to that which is actually delivered." (Lozano, R., P. Soliz, et al. (2006). "Benchmarking of performance of Mexican states with effective coverage." Lancet **368**(9548): 1729-1741.)

Lesson 3.1: Embed accountability mechanisms focused on performance into IGFT design

IGFT with optimal design are transparent, have embedded accountability measures that focus on specific performance and measureable results, and in turn enhance efficiency of the transfers. Output-based transfers automatically do this, since they require a data system that sufficiently links funding and achievement of results, or performance.

In order to make output-based transfers work, governments do have to invest in their information systems. For example, in Argentina, Plan Nacer dedicated funds to strengthen the information system and also has several audit mechanisms for the evaluation of outputs. While most providers had basic and functioning medical record systems, Plan Nacer expanded and upgraded the information systems so that the tracer systems could respond to the specific health needs of the provinces (Cortez and Romero 2013). Providers send information on enrollment and service delivery to the Provincial Implementation Unit, where the information is audited and approved. In addition, Plan Nacer provided support to strengthen the national and provincial Ministry of Health capacity to monitor, evaluate, and audit performance through independent, external financial and technical audits and internal oversight (Cortez and Romero 2013). Through these mechanisms, the program aims to prevent fraud and increase accountability.

In many African countries, governments are incorporating performance- and/or program-based budgeting into their budget reforms (Collaborative Africa Budget Reform Initiative 2013). Some directly involve the health sector, such as in Mauritius. Yet, as mentioned previously, we do not know whether these changes to budgeting and transfer systems have an actual impact on people's health.

Lesson 3.2: Enhance community participation mechanisms

Information and citizen engagement are often associated with accountability, although empirical studies in L/MICs are not as common. Based on a synthesis of research on health provision in L/MICs and high-income countries on factors that shape health provider accountability, Berlan and Shiffman 2012 find that according to the literature, decentralization coupled with active community participation—which leads to increased citizen monitoring—is most likely to improve accountability (Berlan and Shiffman 2012).

The community can participate in a couple of ways, including decision-making. In Uganda, Bjorkman & Svensson (2009) showed that community meetings, which assisted in information dissemination and agreement in a community, improved health care service delivery. The study found that when communities discussed baseline information on the status of health service delivery—relative to that of other providers and to that of the government standard—the quality and quantity of primary health care provision, both in terms of outcomes and health utilization, improved. Through meetings, communities could collectively agree on actions to improve service provision (Bjorkman and Svensson 2009). As the two examples suggest, community participation can have an important impact on resource allocation issues and the quality and responsiveness of services (Glassman, Becker et al. 2008).

In addition, community participation can be in the form of oversight of service delivery. As discussed previously, in Indonesia's National Community Empowerment Program, community block grants allowed citizens to collectively decide how to allocate funds to improve population health (From Evidence to Policy 2013). Similarly, in Nigeria, a survey conducted by Gupta, Gauri, and Khemani 2003 finds that community participation in primary care—through facility visits or facility operations meetings, has been institutionalized at the district-level through the creation of local development committees— is significantly associated with greater productivity per staff in providing inpatient deliveries, immunizations, and outpatient consultations (Gupta, Gauri et al. 2003). While the authors call for alternate research design to re-evaluate this association, one interpretation of this result is that the greater the community participation, the more responsive facility staff are to the shows that community monitoring can help ensure that services meet community needs (World Bank 2004).

In L/MICs, information and data is scarce for use by policymakers, citizens, and donors alike. The poor especially lack information. Many call for empowerment of citizens through information, as an instrument for changing their own behavior as well as a way to monitor service providers (World Bank 2004). A variety of literature explores the relationship between information dissemination and accountability (Besley and Burgess 2002; Stromberg 2004; Ferraz and Finan 2008; Bjorkman and Svensson 2009; Grossman, Humphreys et al. 2014) and has found that generating and disseminating information on flows of public spending can improve allocative efficiency and service delivery. Few of these studies, however, have a focus on health.

The study in Uganda conducted by Reinikka and Svensson 2005 found that an information dissemination through newspapers can reduce capture—from about 75% in 1995 to less than 20% in 2001—and improve enrollment and student learning. Under the newspaper campaign, data on monthly capitation grant transfers to districts was published in major newspapers and broadcast on the radio. The authors argue that the improvement was mainly the result of better monitoring by the schools of local officials' handling of resources, stimulated by a government information campaign following the release of PETS survey results. While the evaluation strategy employed cannot eliminate the possibility that other features of schools or the presence of a new grant program could have had an effect on funding, the results are strongly suggestive that monitoring can inhibit leakage of non-wage funds. (Reinikka and Svensson 2005; Glassman, Becker et al. 2008)

However, some studies examining the effect of information on citizen engagement have had mixed results. For example, a study in rural Kenya, aiming to link an informational campaign to citizen activism and private behavioral change, provided parents with information about their children's performance on literacy and numeracy tests, and how to become more involved in improving their children's learning. The results showed no impact on citizens' behavior. (Lieberman, Posner et al. 2014) In another study in Kenya, information campaigns spreading information on politician spending—and thus exposing money unaccounted for that should have been used for visible public projects—left political knowledge and attitudes unaffected, and the report cards were insufficient to impact behavior. When the report cards were coupled with information on potential ways to

participate, researchers observed an overall increase in the local monitoring of goods. (Zhang 2012) Zhang argues that these findings have an important implication for the role of civil society and non-governmental organizations working to promote citizen engagement.

Decentralization is considered by many to improve accountability, but in many cases much work is still needed to be able to show that decentralization actually leads to better health outcomes. Embedding accountability mechanisms into IGFT and enhancing community participation mechanisms are least a start, and utilizing better practices in allocating and structuring IGFT can support accountability efforts.

Conclusions

Across the world, many L/MIC are decentralizing health services: the majority of their health spending is executed by sub-national governments, and the role of the central government in health spending is declining over time. In global health, many donors still primarily engage with national governments. Despite having regions that are poorer and larger than many low-income countries, the populous, highly decentralized L/MICs risk losing funding because their GDP is above an income threshold.

Most of the literature doesn't tie funding directly with health outcomes and results

A factor that makes it difficult for both policymakers and global health funders to take action to improve the efficiency and equity of IGFT is a lack of evidence in many countries showing that decentralization and certain IGFT designs lead to positive health outcomes. In this paper, we discussed three key elements of IGFT—allocation, incentives, and accountability—and the challenges and lessons associated with each (Table 9).

Table 9. Challenges and lessons in IGFT allocation, incentives, and accountability

Key Element	Challenges	Lessons
Allocation	• Government health funding is allocated from multiple sources and without a formal methodology • Mismatches between responsibilities of central and local governments limit impact	• IGFT should have a needs-based, explicit allocation methodology that is simple and predictable • IGFT should promote equity and revenue adequacy
Incentives	• Incentives are not exploited properly	• IGFT should promote efficiency in order to fulfill the grantor's objectives • IGFT should give transfer recipients autonomy in fund use
Accountability	• Local governments are often not held accountable for the use of the public's funds • Local data is limited and unreliable • Lack of focus on performance measures	• Embed accountability mechanisms focused on performance into IGFT design • Enhance community participation mechanisms

A simple and predictable mathematical allocation formula tends to promote equity and revenue adequacy, but not without proper incentives and accountability. When designing IGFT, implicit and explicit incentives must be considered. Output-based transfers automatically collect data on fund use and performance, but such is not the case for the majority of IGFT. Embedding accountability mechanisms, such as through output-based transfers, enhancing community participation mechanisms can enhance accountability.

However, while we can discuss "better practices," in current literature, we cannot isolate IGFT design as the factor driving improvements or lack thereof in health outcomes. For instance, in our discussion of Colombia's IGFT system—which has an allocation methodology that is simple, predictable, and promotes equity—we must also consider the changes in social insurance and socioeconomic status that occurred parallel to the changes to the allocation mechanism. In our best practices, we assume that a more efficient and equitable IGFT system, which ensures more money for health for the sub-national entities in need, leads to better health status. But we don't necessarily know that this is true.

An opportunity for future research

This recognition allows us to see that there is an opportunity for future research in this field. To start, we can better document the effects of fiscal reforms on health and other outcomes. For example, in Pakistan, regional and national rollouts of the "Performance-Based Equitable Resource Allocation Model" (Allocation Model) are expected to occur before any formal results of the impact of the Allocation Model on allocative efficiency and health outcomes are available. On the other hand, evaluations of these sorts of programs have been conducted in some countries, such as for Plan Nacer in Argentina, and this should be the norm.

In order to conduct such analyses, we can utilize the data available in some countries, such as Ethiopia, India, and Nigeria. Despite the data availability in a few countries, local data is limited and unreliable in the majority. In these countries, data at the local level is inaccurate if not nonexistent. Furthermore, even in countries with data availability at some level, the data collected lacks a focus on performance measures that ultimately link the structure of financing at the local and state level to health outcomes.

As the trend of declining central government responsibility and rising local and state government responsibility continues in L/MICs, we believe it is important that policy decisions are made based on evidence-backed programs and fiscal transfer designs. While our current and continued work tends to aim to engage policymakers, in our next steps, we plan to offer specific recommendations for donor engagement with sub-national entities.

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