RESEARCH REPORT

Decentralized Local Health Services in Tanzania

Are Health Resources Reaching Primary Health Facilities, or Are They Getting Stuck at the District Level?

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Decentralized Local Health Services in Tanzania

Background

Over two-thirds of Tanzanians reside in rural areas and rely on local health facilities (such as Dispensaries and Health Centers) run by their Local Government Authorities (LGAs) to provide them with basic health services. Therefore, efforts to achieve major, sustainable improvements in local health outcomes will have to ensure that resources (including health staff, drugs and medical supplies, operational expenses, as well as other health-related resources) reach the primary health facilities that form the front-line of public health service delivery in Tanzania.

Quite a bit is known about the composition of public health expenditures in Tanzania. For instance, the Government of Tanzania spends a considerable amount on the health sector—close to 10 percent of its total budgetary resources. Roughly one-third of these resources are channeled to LGAs in the form of sectoral block grants in order to fund the salaries of local health workers as well as the operation and maintenance cost of District Hospitals and primary health facilities. On average, LGAs receive around TSH 10,700 per person (roughly USD$6) in recurrent health grants each year. In addition, LGAs receive financial resources and in-kind support for the provision of basic health services from a range of different sources, including—among others—the Ministry of Health and Social Welfare; international development partners; user fees; and Tanzania's National Health Insurance Fund.

Beyond concerns about the limited amount of health resources that find their way to the local level, there are considerable concerns about the 'horizontal' distribution of local health resources among Tanzanian LGAs (Boex 2009; Tidemand et al. 2014). Despite the official introduction of a formula-based recurrent grant system in 2004, in practice the allocation formulas are seldom applied. It has been well-documented that some LGAs receive considerably greater health resources than their fair share, while others receive much less than their formula-based grant allocation (Boex 2015). For instance, while Pangani District Council receives a Health Block Grant of more than TSH 50,000 per person, there are 16 LGAs that receive less than TSH 5,000 per person.

Although numerous studies have analyzed the distribution of health resources from the central government level to the local government level in Tanzania, much less is known about the "last mile" of

health financing in Tanzania: how much—and how—do local health resources trickle down from the district level to the public health facilities?[1] Given that front-line health services cannot meaningfully improve if health resources get stuck at the district level, ensuring that local health finances are managed efficiently at the local level is a critical to achieving sustainable improvements in health outcomes.

Objective of the Study

The objective of this study is to develop a more thorough understanding of how public health resources in Tanzania flow from the district level to front-line primary health facilities. It is through these front-line health facilities that health resources are transformed from inputs (such as health staff and drugs) into outputs (patients attended by clinical staff at primary health facilities) and health outcomes (improved public health status). This study particularly focuses on the allocations and use of recurrent resources at the local level, including expenditures on Personal Emoluments (PE) and Other Charges (OC) funded by block grants and Health Sector Basket Fund (HSBF) allocations.

The research questions in which we are interested are various: What share of health resources reaches primary health facilities? Do health facilities have a meaningful Health Facility Plan? Are these plans prepared at the facility-level, or at the district level? Do health facilities receive an indicative planning figure within which they plan their priorities? Do health facilities have any discretion over the resources earmarked for spending at the facility level? What obstacles does facility-level staff face in prioritizing or accessing the financial resources that are set aside for providing health services at the facility level? To what extent do resources indeed get stuck at the local (district) level instead of reaching the local health facility level?

These questions will take on greater prominence over the coming years as the health sector seeks to improve the efficient use of health resources at the local level, including through the introduction (and possibly main-streaming) of results-based finance (RBF).

We pursued three separate research strategies in order to explore management of health resources at the local level. First, we reviewed the available literature and policy documents on the topic. Second, we conducted a detailed analysis of health finances in six rural LGAs, which were selected to serve as an illustrative sample of experiences in rural health service delivery and finance. Third, field visits were undertaken to Mkuranga District Council and Morogoro Municipal Council. Discussions

with district-level health officials and facility-level health staff at these locations provide considerable insight into how health resources are actually allocated and used.

An Overview of Local Health Services and Local Health Finance in Tanzania[2]

The Structure of the Public Sector in Tanzania

The public sector in Tanzania Mainland is divided into two government levels: the central government level and the local government level.[3] The central government comprises the ministerial tier as well as the regional administration tier. At the ministerial level, the Ministry of Health and Social Welfare (MOHSW) is the lead authority for the health sector. In addition, several other central government agencies are responsible for specific health services, most prominently, the Tanzania Commission on AIDS, TACAIDS. At the regional level, Tanzania is divided into 25 administrative regions. These regions are an administrative extension of the central government. As such, the Regional Medical Officers in each region are primarily accountable to the MOHSW for providing regional health services and for supervising the delivery of health services in their region.

The local government level is divided into 158 district-level (urban and rural) LGAs. An average LGA has approximately 300,000 residents and is led by an elected local government council. This is the main government level responsible for the delivery of decentralized public services in the country, including the delivery of local health services.[4] The most senior local official in the health sector is the District Medical Officer (DMO). The DMO is supported by the Council Health Management Team (CHMT) which is comprised by the DMO and senior local healthcare administrators.

The Assignment of Functions and Expenditure Responsibilities in the Health Sector

The assignment of functions and expenditure responsibilities in Tanzania generally follows the subsidiarity principle, which suggests that public functions and service delivery responsibilities should be assigned to the lowest government level that can perform the function efficiently.

The roles and responsibilities of local government authorities are clarified in the Local Government (District Authorities and Urban Authorities) Acts of 1982 (as amended). The law assigns local

government authorities the responsibility to "promote the social welfare and economic wellbeing of all persons within its area of jurisdiction" and requires LGAs to take all measures "for the furtherance of and enhancement of the health, education, and the social, cultural and recreational life of the people" (Section 111). The First Schedule of the Act specifically assigns LGAs the authority to "build, equip and maintain, or grant sums of money toward the establishment, equipment and maintenance of hospitals, health centers, maternity clinics, [and] dispensaries."

The Vertical Organization of Health Services

In line with other countries in sub-Saharan Africa, Tanzania has a hierarchically organized public health care system. Table 1 shows the distribution of health facilities by type and ownership for 2010. An overview of the organizational structure for the delivery of public health services is shown in figure 1.

In following the subsidiarity principle, the health sector in general aims to deliver health services as close as possible to the people. National Treatment Guidelines specify what health services should be offered at which facility type, and in which cases treatment should be referred to a higher facility level. As a result of the desire to deliver health services close to the community-level, most common illnesses can be treated at the dispensary-level, or at local Health Centers. This is especially true in rural areas, where transportation costs typically prevent residents from accessing either the District Hospital or private health services.

TABLE 1

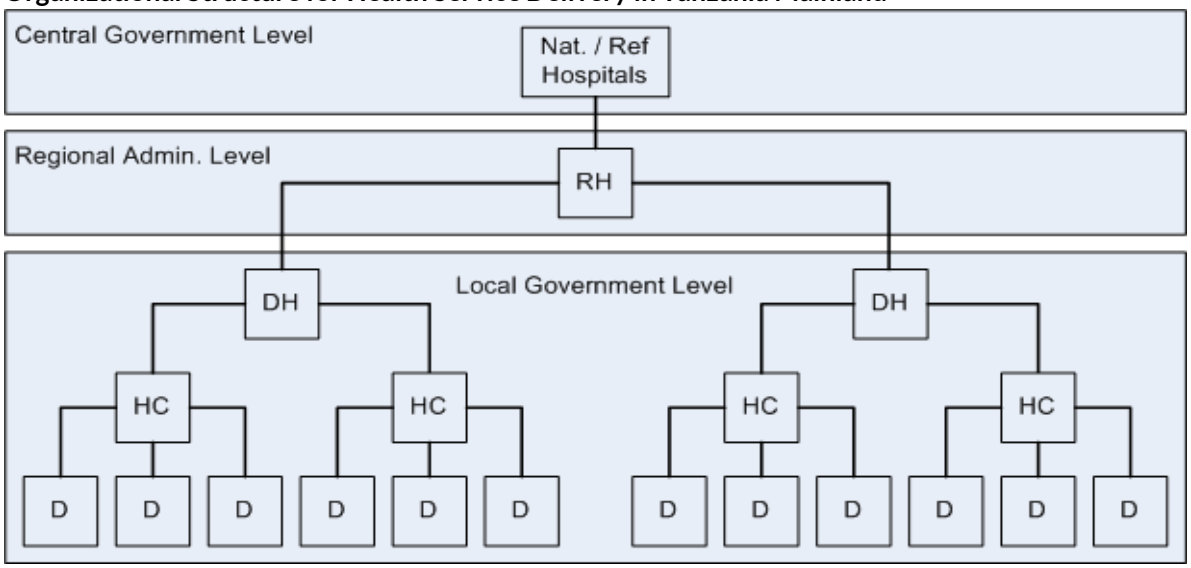
Health Facilities in Tanzania by Ownership and Facility Type (June 2010)

	Hospitals	Health Centers	Dispensaries	Total
Government	95	434	3,889	4,418
FBOs	101	134	625	860
Parastatal	8	10	168	186
Private	36	55	787	878
Total	**240**	**633**	**5,469**	**6,342**

Source: MOH&SW (2011b).

FIGURE 1

Organizational Structure for Health Service Delivery in Tanzania Mainland



Primary Health Facilities (PHFs)

The two types of health facilities closest to the community in Tanzania are Dispensaries (D) and Health Centers (HC). There are currently approximately 3,250 public dispensaries in Tanzania, in comparison to 340 public Health Centers. The formal distinction between Dispensaries and Health Centers is that while Dispensaries exclusive provide out-patient care, a HC should be able to provide around-the-clock care to patients; therefore, any conditions that require in-patient care are referred from dispensaries to the nearest Health Center. In reality, however, the distinction is less clear as many Dispensaries have been upgraded to provide child and maternal health services. Health centers and Dispensaries are the

frontline in providing primary curative and preventative health services in Tanzania and are the main source of health services for the preponderance of the population, particularly in rural areas.

Although these facilities operate with some degree of autonomy on a day-to-day basis, they are supervised by—and fully accountable to—the District Medical Officer (DMO) for all aspects of their operations.

Since primary health facilities—as well as the District Hospital—fall under the direct responsibility of the DMO, the current assignment of functional responsibilities has resulted in a relatively decentralized assignment of health services to the local government level. However, at the local level itself, control over the planning and management of health services is quite centralized. The DMO—who is appointed by the Ministry of Health, but formally reports to the local council through the Executive Director—plays an important role in planning, coordinating and implementing the delivery of local health services at the local level. The DMO is supported in this role by the Council Health Management Team (CHMT) and guided in this task by central guidelines and instructions. In order to assure the coordinated delivery of health services at the local level, the DMO and CHMT are required to prepare a Comprehensive Council Health Plan (CCHP) that guides the delivery and development of health services. Furthermore, a system of committees (at the district level, but also facility-level) has been set up to assure public participation, oversight and accountability over local health services.

Local Health Expenditures

The local government health budget is broken down into six cost centers:

- Office of DMO
- Council Hospital
- Voluntary Agency Hospitals (VAH) and Service Agreements (SA)
- Health Centers (public or owned by voluntary agency)
- Dispensaries (public or owned by voluntary agency)
- Community health services

The Comprehensive Council Health Planning Guidelines (2011) provides guidance on the distribution of the Health Block Grant between these cost centers. For each cost center the percentage

allocation range for the combined funding from the health basket and OC of the Block Grant is shown in table 2.

TABLE 2

Guidance on the Use of Local Health Resources

Cost center	Ceiling range for allocation by Council
Office of DMO	15%–20%
Council Hospital /CDH	25%–30%
Voluntary Agency Hospitals (VAH) *	10%–15% (Health basket funds only)
Health Centre	15%–20%
Dispensary	20%–25%
Community Initiatives	2%–5%

Source: MOHSW CCHP Planning Guidelines (2011).

The CCHP Planning Guidelines also set ceilings for spending HSBF allowances for "supervision and distribution activities" (maximum 20 percent) and on "Transport" including fuel and maintenance of vehicles (maximum 20 percent).

Although Dispensaries and Health Centers are separate cost centers in the local government budget, individual primary health facilities do not have their own sub-accounts as part of the local government's budget accounts.[5] This means that although the council's financial accounts can be used to identify how much funding goes to dispensaries and health centers overall, it is not possible to identity the resources that flow to individual health facilities in the budget. This can therefore be viewed as a potential limitation of any such study on Tanzanian public finance.

The Primary Health Facilities are authorized to have a facility-level account for the receipt of user fees and Community Health funds.[6] However, these accounts are generally not used for receiving or distributing block grant resources or the HSBF. The CCHP Guidelines (2011: p 37) note that "[a]llocation of the Health Block grants and Basket funds for … Health Centres and Dispensaries are mainly not in cash terms…" The CCHP Guidelines recognize that not all primary health facilities may have their own bank accounts, as the guidelines instruct that "Health Centres and dispensaries that have no bank accounts should maintain a vote book". Anecdotal evidence, however, suggests that it is common practice for district officials to manage user fee collections and other facility-level revenues on behalf of the front-line facilities.

Map 1. Location of Sample Districts

Medical Stores Department (MSD)

In principle, all drugs and medical supplies used by public health facilities in Tanzania—those funded by the government, as well as those funded by external resources—must be purchased through the MSD. MSD is classified as an autonomous government department under MOHSW. As such, it has its own financial accounts and its operations are supervised by a Board, which includes representatives from the MOHSW, other ministries and health agencies. Primary health facilities have their own facility-level accounts with MSD for the purchase and distribution of drugs and medical supplies, although it appears that in practice, facilities rely on district-level officials to manage their accounts with MSD.

In recent years, local health facilities have been permitted to purchase some drugs from private-sector suppliers in case of MSD stock-outs. However, procurement obstacles in doing so have meant that the procurement of drugs outside of MSD rarely takes place.

Are Health Resources Reaching the Front Line, or Are They Getting Stuck at the District Level?

The Comprehensive Council Health Planning Guidelines (2011) suggest that "regular" health resources) should be managed at the council level on behalf primary health facilities. These regular resources include those provided through the LGA budget, excluding user fees, community health contributions and reimbursements from the National Health Insurance Fund. While this may be a practical approach given the limited administrative capacity at the facility level, placing the responsibility for the planning and control over facility-level health resources with district-level officials can result in these resources being "captured" by district level officials (Reinikka and Svensson 2004).

In order to analyze whether health resources are reaching the front-line or getting stuck at the district level, we obtained and analyzed budget accounts from a sample of six rural councils: Kasulu, Ludewa, Mbinga, Mkuranga, Nkasi and Ukerewe District Council (map 1).[7] These councils were not selected to reflect a representative sample of rural councils in Tanzania. Instead, the current analysis should be seen as exploratory in nature.

Table 3 presents the basic demographic conditions, and key indicators of primary health infrastructure and health services for these sample districts. The descriptive statistics reveal considerable variations in local conditions and local health services across the national territory in Tanzania. Due to variations in access to health facilities, as well other variations in demand and supply conditions, the utilization of public health services in our sample district varies from 0.63 Out-Patient Department (OPD) attendances per person per year (in Ukerewe) to more than twice that rate (1.47 and 1.53, respectively) in Nkasi and Ludewa. Unfortunately, no reliable district level health outcome data are available (e.g., the under-five mortality rate at the district level), making it impossible to establish a clear link between improvements in local health services to improved local health outcomes.

TABLE 3

Basic Demographic Conditions, Health Infrastructure, and Health Services in Sample Districts

District Council	Population (2014)	Dispen-saries (total)	Average catchment pop	Average catchment area (km^2)	Residents / health staff (in thous.)	OPD per resident	Pop. Density
Kasulu	455,399	64	6,238	98.6	2.41	1.18	63.3
Ludewa	134,076	46	2,578	120.1	0.71	1.53	21.5
Mbinga	373,860	89	3,776	48.9	1.05	0.90	77.2
Mkuranga	238,585	32	7,017	83.2	1.46	1.59	84.4
Nkasi	311,401	59	4,790	151.1	1.21	1.47	31.7
Ukerewe	372,206	26	12,834	21.7	3.41	0.63	592.6
Average	**314,255**	**53**	**6,206**	**87.2**	**1.71**	**1.22**	**145.1**

Source: Computed by authors based on MOH&SW (2011b) and Boex (2015).
Note: Health infrastructure and service data are for 2010.

For each of these six district councils, expenditure accounts were drawn from each LGA's computerized financial management system. The information contains annual budget estimates (budget amounts) as well as actual expenditures for FY 2013/14. District-level health expenditures were extracted by cost center (as discussed above), funding source (block grants or health basket funding), and by detailed type of expenditure based on the Chart of Account's detailed economic classification. Unless otherwise stated, our analysis is based on actual expenditures as opposed to budget estimates.

TABLE 4

An Overview of Total Health Expenditures by Cost Center in Selected Districts

District	CHMT	Hospital Services (combined)	Health Centers	Dispensaries	Community Health	Total
Panel 1. Total health expenditures by cost center (including wage expenditures) - in TZS millions						
Kasulu	656.5	864.2	538.7	1,207.5	0.0	3,267.0
Ludewa	533.2	339.2	281.6	513.5	0.0	1,667.6
Mbinga	849.9	552.7	234.7	1,144.4	0.0	2,781.7
Mkuranga	1,420.5	440.0	477.8	984.6	23.0	3,345.8
Nkasi	256.0	73.1	327.2	1,111.9	0.0	1,768.1
Ukerewe	478.3	964.3	455.3	541.2	0.0	2,439.1
Average	**699.1**	**538.9**	**385.9**	**917.2**	**3.8**	**2,544.9**
Panel 2. Per capita health expenditures by cost center (including wage expenditures) - in TZS						
Kasulu	1,442	1,898	1,183	2,652	0	7,174
Ludewa	3,977	2,530	2,100	3,830	0	12,437
Mbinga	2,273	1,478	628	3,061	0	7,441
Mkuranga	5,954	1,844	2,003	4,127	96	14,024
Nkasi	822	235	1,051	3,571	0	5,678
Ukerewe	1,285	2,591	1,223	1,454	0	6,553
Average	**2,625**	**1,763**	**1,365**	**3,116**	**16**	**8,884**
Panel 3. Total health expenditures by cost center (including wage expenditures) - as % of total						
Kasulu	20.1	26.5	16.5	37.0	0.0	100.0
Ludewa	32.0	20.3	16.9	30.8	0.0	100.0
Mbinga	30.6	19.9	8.4	41.1	0.0	100.0
Mkuranga	42.5	13.2	14.3	29.4	0.7	100.0
Nkasi	14.5	4.1	18.5	62.9	0.0	100.0
Ukerewe	19.6	39.5	18.7	22.2	0.0	100.0
Average	**26.5**	**20.6**	**15.5**	**37.2**	**0.1**	**100.0**

Source: Computed by authors based on LGA budget accounts.

Furthermore, table 4 provides an overview of total local health expenditures by cost center in the selected districts, including both wage and non-wage health expenditures. Table 5 provides the same general information, but only including non-wage expenditures.

The top panel in each table presents total health expenditure in millions of Tanzania Shillings (TZS) in each of the six local government authorities. Although these figures reflect the total amount of spending in each council—ranging from TZS 256 million in Nkasi to TZS 1.42 billion in Mkuranga—it is hard to draw any conclusions based on these raw totals, as district population varies considerably

among the six sample districts.[8] Hence, the second panel in tables 4 and 5 presents the expenditures in per capita (per person) terms.

When local health expenditures are expressed in per capita terms, tables 4 and 5 confirm the variation and inequity in local finances across LGA which were uncovered by previous studies including, most recently, Tidemand et al. (2014). In per capita terms, the highest-spending districts in our sample (Ludewa and Mkuranga) spend 3-4 times more on health services than the lowest-spending districts (Nkasi and Ukarewe).[9] These variations do not appear to be related in any way to differences in the cost of health services. In fact, whereas Mkuranga in Coast Region—the best-off district in our sample—is relatively close to Dar es Salaam and has relatively good road access (especially when compared to the other sample districts); in contrast, Ukerewe in Mwanza Region is an island-district in Lake Victoria that has major accessibility constraints.

Tables 4 and 5 also provide insights as to the share of local health resources that flows down to front-line primary health facilities. This is most apparent in panel 3 of tables 4 and 5, which shows health spending by cost center, expressed as a percentage of total local health spending. Table 4 reveals that on average, the share of local health expenditures by the LGA for dispensary-level health services is 37.2 percent. Considering that the vast majority of rural health services are delivered at the local level, this statistics suggests considerable underfunding of front-line health services. Although the Dispensaries Cost Center receives more funding than other cost centers on average, this is not the case across all LGAs in our sample; for instance, in Mkuranga the CHMT is the largest cost category, while in Ukerewe hospital services attract the largest share of local health resources.

TABLE 5

An Overview of Total Health Expenditures by Cost Center in Selected Districts

District	CHMT	Hospital Services (Combined)	Health Centers	Dispensaries	Community Health	Total
Panel 1. Total non-wage health expenditures by cost center - in TZS millions						
Kasulu	167.2	453.8	172.4	217.1	0.0	1,010.5
Ludewa	80.2	174.4	66.4	98.2	0.0	419.3
Mbinga	162.1	376.0	88.6	239.1	0.0	865.8
Mkuranga	156.7	222.8	139.8	246.3	3.0	768.6
Nkasi	140.9	73.1	131.2	120.6	0.0	465.8
Ukerewe	123.7	298.5	127.1	142.5	0.0	691.7
Average	**138.5**	**266.4**	**120.9**	**177.3**	**0.5**	**703.6**
Panel 2. Per capita non-wage health expenditures by cost center - in TZS						
Kasulu	367.2	996.6	378.6	476.7	0.0	2,219.0
Ludewa	598.5	1,300.8	495.1	732.7	0.0	3,127.2
Mbinga	433.5	1,005.8	236.9	639.6	0.0	2,315.9
Mkuranga	656.8	933.7	586.0	1,032.4	12.7	3,221.5
Nkasi	452.6	234.6	421.3	387.3	0.0	1,495.8
Ukerewe	332.2	801.9	341.5	382.9	0.0	1,858.5
Average	**473.5**	**878.9**	**409.9**	**608.6**	**2.1**	**2,373.0**
Panel 3. Total non-wage health expenditures by cost center - as % of total						
Kasulu	16.5	44.9	17.1	21.5	0.0	100.0
Ludewa	19.1	41.6	15.8	23.4	0.0	100.0
Mbinga	18.7	43.4	10.2	27.6	0.0	100.0
Mkuranga	20.4	29.0	18.2	32.0	0.4	100.0
Nkasi	30.3	15.7	28.2	25.9	0.0	100.0
Ukerewe	17.9	43.1	18.4	20.6	0.0	100.0
Average	**20.5**	**36.3**	**18.0**	**25.2**	**0.1**	**100.0**

Source: Computed by authors based on LGA budget accounts.

Local health spending patterns are considerably different when we only consider non-wage expenditures, as shown in table 5. Panel 3 of table 5 shows that only 25 percent of non-wage resources are spent on dispensary-level health services. It would be easy to blame DMOs and CHMTs for retaining the bulk of non-wage resources for council-level spending (for health administration or on the District Hospital, which is often under the direct supervision of the DMO).[10] In reality, however, the situation is more complex as the CCHP Planning Guidelines (2011) specifically instruct LGAs to spend no more than 25 percent of health OC (from health block grants and Health Basket resources) at the

dispensary level. As such, in their current form, the CCHP guidelines may be constraining rather than promoting effective front-line health services.

Are Adequate Health Resources Reaching the Front Line?

There are numerous recommendations and guidelines on how much countries in Africa should spend on public health services, such as the Abuja Declaration of 2001, in which African Union countries pledged to increase government funding for health to at least 15 percent of budget resources. Regardless of whether countries should spend 15 percent of their budget on the health sector, or whether the "adequate" amount of health spending is USD$44 or USD$60 per capita (as others have suggested), most African countries fail to spend adequately on public health (WHO 2013; Avila, Conner, and Amico 2013). There is a critical question that receives much less attention: of the resources available to the health sector, how much should be channeled to the local level? And from this amount, how much should be used for the actual delivery of front-line health services? Few if any studies address this question, and no international benchmarks or norms are available to provide guidance on this matter.[11]

Moreover, we want to explore whether the funding that reaches front-line health facilities in Tanzania is adequate. Based on the minimal level of local health resources that actually reach the front-line (as revealed by the analysis above), the shortfall of resources at the local level is so obvious that we can conclude without any further analysis that the resources flowing down to the facility-level are not adequate to fund a desirable level of public health services. In other words, there is no doubt that more resources need to be directed in support of front-line services to improve overall health outcome indicators across the board in Tanzania.

However, can we draw any conclusions on whether adequate resources are reaching front-line health facilities in relative terms? The relative need for the funding of dispensary-level health services depends on several factors, including the relative demand for basic health services at different levels of the referral system (e.g., the number of patients at the dispensary level versus the number of patients at health centers, District Hospitals, etc.); the relative cost of providing health services at the front line versus health services higher up the referral system; and government priorities in the health sector.[12]

Given the limited availability of data about even the most basic local health finance and local health services in Tanzania (particularly at the district level), this question is almost impossible to answer without investing significant resources in obtaining relevant information. While the current study analyzes local health spending funded by block grants and health basket funding, no comprehensive

figures are available that show the total amount of funding for local health services, which should include allocations from MSD for drugs and medical supplies; financial and in-kind support received from various "vertical programs" managed by the Ministry of Health and Social Welfare; local health spending funded from local taxes and other own source revenues; spending on health infrastructure and development funded by the Local Government Development Grant (LGDG) and other development resources; as well as spending from (facility-level) user fees, community contributions and reimbursements from NHIF.

Similarly, while figures from MOH&SW (2011b) suggest that local health facilities saw 42 million patients on an out-patient basis as well as 1.5 million patients on an in-patient basis in 2010, it is not clear from the data that are made publicly available what share of these patients was seen at dispensaries versus health centers or district hospitals. If we assume however, that the vast majority of out-patient attendances took place at the dispensary level, then it is very likely that front-line health services are considerably under-funded not only in absolute terms, but also in relative terms.[13] Despite existing data limitations, a detailed costing-study of health services should at least be able to approximate the vertical funding imbalances that exist between health facilities at different levels and cost centers within the health sector.

It's Not Just the Amount, but also the Control That Matters.

Although the resources that trickle down to front-line health facilities may be inadequate, the amount is not negligible. As already noted, Health Block Grants for OC and Health Basket Fund allocations provide an average of TZS 4.2 million (or USD$2,400) per dispensary for recurrent non-wage operations. This begs the question whether these resources really reach the front-line, and if they do, whether they are put to their highest-priority use.

Field visits and interviews with local health officials suggest that local health facilities are asked to prepare an annual "facility plan", but that the money budgeted as part of Cost Center E (Dispensaries) is actually spent by the DMO (or CHMT) "on behalf" of the facility. Moreover, facilities are often asked to prepare facilities plans without being provided an indicative planning ceiling. In the absence of knowing their "fair share" of local health resources, facility heads can do little more than prepare a "wish list" for consideration by the DMO, leaving it fully up to the DMO's discretion to fund or not to fund the priorities of each individual primary health facility. In the absence of transparency, the discretion accorded to the council level over facility-level resources creates an opportunity for potential mischief. For instance, a review of expenditure records in Mkuranga District Council indicates that the second-

largest non-wage spending item for dispensaries is diesel fuel (TZS 9.3 million). Given the nature of health services typically offered at the dispensary level, it is unclear (in fact, it is unlikely) that this spending item is actually used for health services being delivered at the dispensary-level in Mkuranga. Instead, it is quite possible that these resources—while budgeted as part of the dispensary-level budget—are actually used to support the activities of council-level health officials.

Anecdotal evidence from our field visits also suggests that health facilities located further away from district headquarters have less access to council-level resources than those physically nearby. Unfortunately, analysis of this problem using facility-level data in Tanzania is limited.[14] Tidemand et al. (2014) find that "[i]n terms of intra-LGA fiscal inequity, there exists substantial fiscal inequity within LGAs that is often greater than the inequity between LGAs." For instance, the variation of staffing in health facilities is significant, with the number of staff per dispensary ranging from 9 to 1 within the same district. The same authors further find that the "main drivers of intra-LGA fiscal inequity are staff preferences for working and living in areas in which they are most comfortable, in the absence of incentives for them to remain in the less comfortable areas where they may have been allocated."

Given that easier-to-reach facilities appear to attract a larger share of available OC resources than harder-to-reach facilities within local government jurisdictions, to the extent that OC resources form part of the incentive to work at a certain location, this allocation pattern amplifies the existing staffing inequities within local jurisdictions rather than mitigating them. Since infant mortality rates, maternal mortality rates and other health outcomes are likely worse in harder-to-reach areas within each district, improved within-district allocation practices should form an important strategy in improving localized health outcomes in a sustainable manner.

In addition to the *de facto* negative incentive being given to staff to work in hard-to-serve areas, the fact that facility-level staff has limited involvement—and little or no real discretion—in facility-level planning and priority-setting likely has a negative impact on their professional motivation.

A More Detailed Look at Local Health Expenditure Patterns

Beyond studying the vertical allocation of local health expenditures in general, it may be instructive to analyze the vertical allocation of specific health expenditures. Unraveling the spending data further enhances our understanding of how these resources are being used by council-level officials, and where there may be opportunities to improve front-line health services. Specifically, we consider whether

some types of local health expenditures "get stuck" more at the council level than other expenditures. If so, what recommendations might we make about getting these resources unstuck?

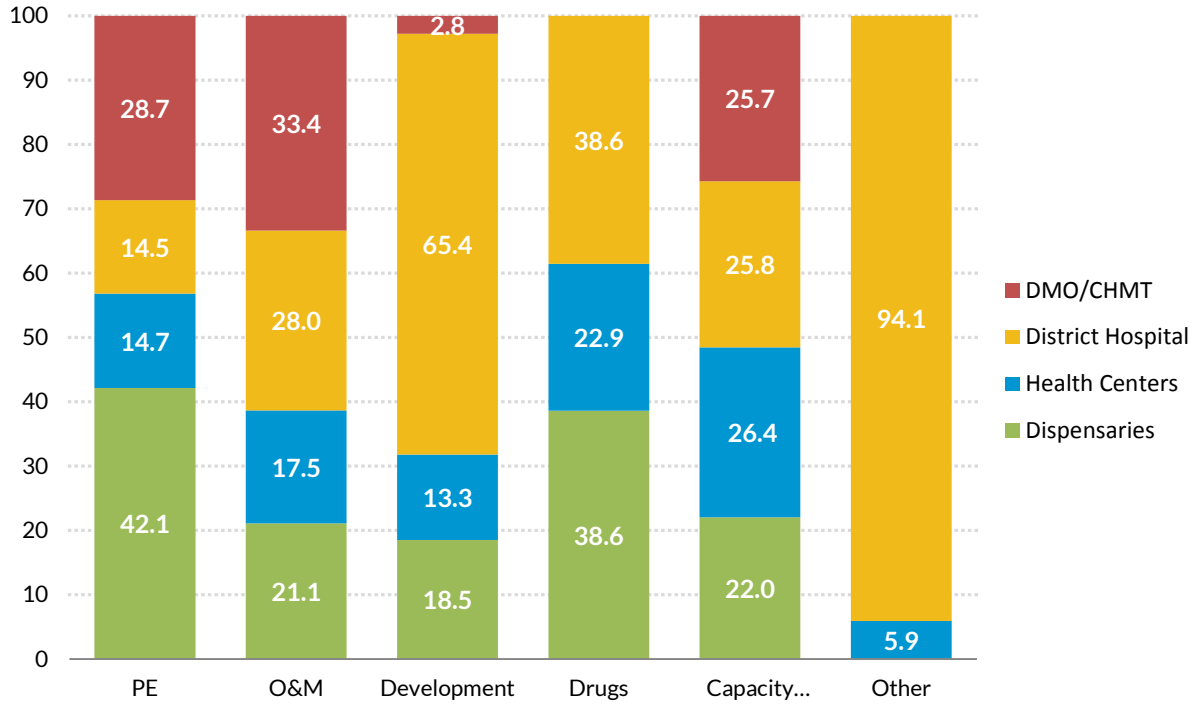
In order to analyze health spending patterns within and between different cost centers at the local level, we classified all local health expenditures into (i) spending on salaries and wages, or "personal emoluments" (PE); (ii) non-wage spending on operation and maintenance (O&M); (iii) spending on drugs and medical supplies; (iv) spending on the capacity development of local health staff; and (v) capital infrastructure / development spending.[15] As a reminder, our data set only includes health spending from central government transfers (Health Block Grant and Health Basket Fund), and excludes local spending on health from other sources.[16]

Figure 2 presents the distribution of different types of health expenditures (PE, O&M, etc.) by cost center in six rural Tanzanian districts.[17] Visually, the bottom of each bar (green) represents spending on the facility level closest to the people, whereas spending on local health administrators (DMO/CHMT) is reflected in red toward the top.

FIGURE 2

Vertical Allocation of Health Resources at the Local Level, by Type of Expenditure

Each cost center as a share of each spending type (%)



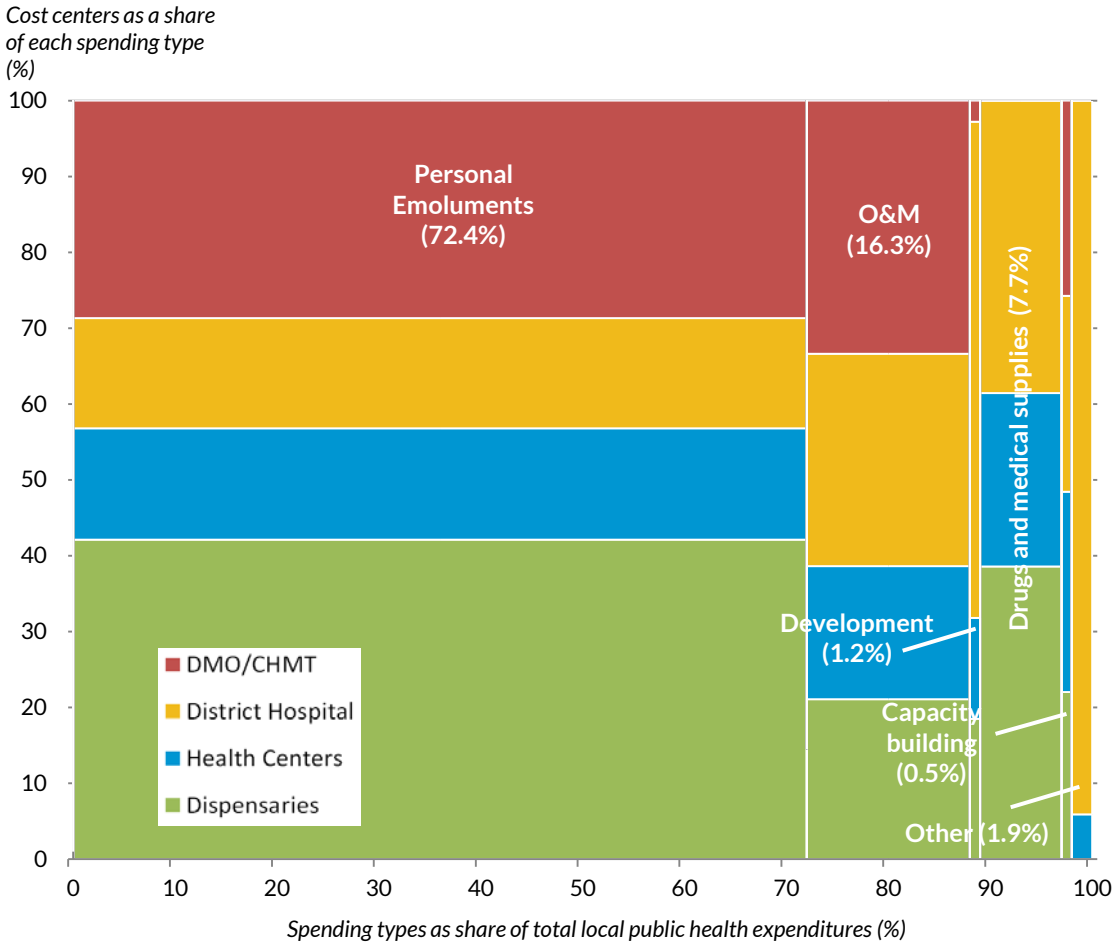
Source: District health expenditure records for FY2013-14, extracted from Epicore September 2014

Dispensaries receive around one-third of all resources on average, even though they likely treat the majority of out-patients. However figure 2 does not show that different cost categories represent vastly different shares of local health spending. Figure 2 does not show that PE expenditures (on salary and wages) form the vast majority (72 percent) of local health spending. Similarly, O&M expenditures form 16.3 percent of local health expenditures, while drugs and medical supplies account for 7.7 percent.

Figure 3 adjusts for this concern by making the width of the respective bars proportionate to the amount of spending in the category. This graph more accurately represents the share of each expenditure type in district health budgets, where funding seems to "get stuck" at the council-level, and where funding more readily flows to front-line health facilities.

FIGURE 3

Allocation of Health Resources at the Local Level, by Cost Center and Type of Expenditure



Source: Prepared by authors using district health expenditure records for FY2013-14.

Personal Emoluments

Personnel spending is by far the largest category of local health spending. This is consistent with expectations that primary health services are labor-intensive. At the same time, it is also the most "decentralized" spending category at the local government level, with 42 percent of PE expenditures being used at the dispensary level.

However as also already noted, it is likely that the vast majority (possibly more than 95 percent) of all 43.5 million out-patient attendances at public health facilities in Tanzania take place at the dispensary level. Given this statistic, we ought to be surprised that *only* 42 percent of local health staff spending is at the dispensary level. Moreover, the second-largest staff spending categories is not formed by Health Clinics or District Hospitals, but rather by the CHMT: almost 29 percent of salary spending is for health administrators. As such, local health systems seem quite top-heavy. For every thousand Shillings spent on front-line health staff, almost 700 Shillings are spent on local health administrators.

Such a high overhead rate could be the result of a variety of problems. For instance, it is possible that local health systems are excessively complex, requiring a disproportionately large council health management team. Alternatively, it is possible that the large amount of salary spending captured at the council-level is a combination of the fact that council-level jobs are relatively attractive (and therefore, relatively easy to fill) together with the ability of the CMHT to institutionally capture the necessary PE resources for its own priorities. Regardless of the reason, this spending structure warrants further investigation.

Operation and Maintenance (O&M) Resources

In addition, it is worth asking what O&M expenditures are incurred by LGAs and why? According to our data set, the top three items here include diesel fuel; per diem; and office consumables. Other O&M expenditure items include food (including special foods as well as food and refreshments); electricity; laundry and cleaning expenses; uniforms; outsourced maintenance of facilities; gasoline, and so on.

Overall, O&M expenditures account for 16.3 percent on grant-funded local health expenditures, forming the largest category of non-wage recurrent expenditures. O&M expenditures also form one of the least "decentralized" spending categories, with only 21 percent of O&M spending being directed to the dispensary level. Fully one-third of O&M expenditures are retained by the CHMT for administrative purposes.

Drugs and Medical Supplies

Spending on drugs and medical supplies represents 7.7 percent of recurrent local health expenditures. This spending is assumed to be *in addition* to the procurement of medicines funded centrally by the Ministry of Health (which is disbursed to MSD and 'deposited' into dedicated MSD accounts for each local health facility). This amount is also separate from drugs and medical supplies procured by local health facilities from user fees and other resources. Overall, the average amount of grant-funded spending on drugs and medical supplies equals TZS 634 per person per year.[18]

Local spending on drugs and medical supplies almost equally funds District Hospitals and Dispensaries on average, each receiving close to 40 percent of drug spending. The remaining expenditures on drugs (20 percent) contribute to the delivery of health services at Health Centers.

It is difficult to analyze the allocation of drug resources without taking into account the other funding flows for drugs and medical supplies. Given that the Ministry of Health is already providing central and local-level hospitals and primary health facilities financial support through the Chief Pharmacist—as well as through various vertical programs—it is unclear why LGAs would be required to spend their scarce resources on drugs and medical supplies. It appears that the central government is imposing an "under-funded mandate" on local governments, which is causing LGAs to re-direct local health resources away from other important activities, such as the maintenance of local health facilities training of local health workers.

Capacity Development of Local Health Staff

Capacity development is not only an important factor in achieving higher-quality local health services and better health outcomes, but also serves as an important motivator for health professionals. In this regard, the local health expenditure profile reveals two surprises: first, almost nothing is being spent on capacity development (0.5 percent), and second, this spending is heavily biased toward council-level officials (CMHT and DH) rather than at dispensary level clinical staff.

Leonard and Masatu (2010) show that improving the motivation of front-line clinical staff—even through non-monetary rewards such as mentoring and capacity development support—can have a major impact on the quality of local health services. Observations from the field (based on the authors' experiences) suggest that it is de-motivating to a health professional when he or she is required to deliver health services without adequate tools and resources; without any control over the way in which the limited resources are being spent; and with the often-justified suspicion that facility-level

resources are being spent in an inefficient manner by someone else "on behalf of the facility". As such, even without increasing the resources available to the local level, we would predict a major increase in the motivation and performance of front-line health workers if facility-level staff were tasked with preparing facility-level plans and budgets within the context of an indicative planning figure, were made aware of the resources available to them, and were given a more prominent role in prioritizing facility-level OC resources.[19]

There may be numerous reasons why LGAs do not spend their limited OC resources on capacity development for front-line staff. Resource scarcity may simply dictate that other more urgent needs are funded first. Additionally, capacity development in the health sector in Tanzania is largely regarded as a top-down exercise, where capacity development to local health workers is provided on a push-basis by Zonal Health Resource Centers, funded from the central government budget as well as development partner projects. This culture could be changed through reforms, as bottom-up approaches are more likely to help make the healthcare system more responsive to the needs on the ground.

Indeed, top-down capacity development interventions are potentially inefficient and inequitable, offering a one-size-fits-all approach to widely different capacity constraints in different local jurisdictions (Dominique et al. 2013). The *de facto* centralization of local capacity development in the Tanzanian health sector is disempowering to LGAs as well as to the local health staff themselves. To the extent that capacity development is funded and provided externally, LGAs generally are not in a position to effectively utilize staff development as a tool to improve local health services. Likewise, professional motivation is undermined and the opportunity for improved clinical practice is lost to the extent that clinicians lack a voice in identifying the type of training that would be most valuable to them in improving their clinical skills.

Conclusions and Next Steps

Based on the current exploratory analysis of local health expenditures, what conclusions and lessons can we draw about our primary research question? Are health resources reaching primary health facilities, or are they getting stuck at the district level? What intergovernmental and local systems need to be strengthened in order to achieve better health outcomes at the local level?

Although further research is needed to investigate local health expenditure patterns in greater detail (along the lines of observations made throughout the paper), our exploratory analysis based on a small sample of LGAs certainly seems to suggest that insufficient funding is reaching front-line facilities

(dispensary) at the local level, where the vast majority of health services are provided. This is true for the deployment of human resources (health staff) at the local level, and even more so for the way which non-wage recurrent resources are allocated locally.

Furthermore, the hierarchical structure of the health system focuses on top-down interventions and control, rather than on enabling front-line health facilities as the critical space for improving health outcomes in the country. Major improvements in local health services and local health outcomes are systematically held back by the desire of officials at the next-higher-level to spend resources "on behalf" of the next level down. This appears to be the case not only between central and local authorities, but between council health officials and facility-level officials.

At the end of this study, we offer several specific conclusions and recommendations with in five broad areas summarized below:

Increase Funding for Local Health Services and Improve Allocation of Health Resources between LGAs

- Take steps to address between-district inequities in health staffing
- Increase OC funding and address between-district inequities within this realm
    - » improve implementation of the formula-based allocation of health resources among LGAs
    - » monitor grant releases for completeness, timeliness, and adherence to formula

Better Targeting of Local Health Resources within LGAs

- Conduct analytical studies to determine appropriate shares of district health resources to be spent at the front-line (dispensary) level[20]
- Modify the guidance in the CCHP guidelines regarding the share of resources that should be targeted at dispensary level (based on findings from the preceding point)
- Improve the guidance in the CCHP guidelines on the allocation of local health resources within each district among front-line health facilities (most likely, in proportion to catchment population or attendances)

Strengthening Health Facility Processes and Procedures

- Ensure that PHFs in all LGAs have their own bank accounts and facility-level financial management manuals for improved control over resources
- Strengthen facility-level planning and budgeting processes
- Include facilities as trackable (sub-)cost centers in LGA PlanRep planning system
- Include facilities as trackable (sub-)cost centers in LGA Epicor systems
- When appropriate financial management and oversight systems are in place, pass dispensary-level OC into facility-level accounts
- Explore and implement options for local health facilities to procure common supplies from pre-approved vendors (reducing procurement costs)
- Support facilities in preparing different facility-level reports (eventually through an online reporting system)
- Introduce systems for meaningful mentoring front-line health staff and introduce demand-driven capacity development interventions

Production, Management and Sharing of Local-Level Health Data

- Ensure that MOH&SW and PMO-RALG public share available district-level and facility-level data from the Health Management Information System.[21]
- Set expectation that LGAs produce and share key information about local health services with citizens (on notice boards and online), including CCHP, Client Service Charter, facility-level information about available health services; support LGAs in sharing such information through the implementation of an online Open LGA platform.
- Require LGAs to report within-LGA distribution of staffing and other health resources by facility (e.g., on the Open LGA platform)
- Require LGAs to publicly share detailed LGA health expenditure data (from Epicor), allowing the tracking and analysis of local health expenditures

- Support the development of facility-level reporting systems for facilities to prepare facility-level reports (eventually through an online reporting system) on facility governance (committee); facility accounts; and service delivery outputs
- Develop a reporting mechanism to capture local-level health outcomes (such as infant mortality and under-five mortality), so that the public sector can target resources where they are needed the most and ensure resources are used efficiently and effectively at the local level.

Notes

1. See Boex (2015) for an overview of studies dealing with the horizontal allocation of grant resources in Tanzania.
2. This section draws on Boex and Omari (2013).
3. The current study focuses on Tanzania Mainland. The United Republic of Tanzania is a federation of Tanzania Mainland (formerly Tanganyika) and Zanzibar. The delivery of health services is not a Union affair, and therefore, health service delivery in Zanzibar is organized and funded separately from the mainland.
4. Although there is an elected level of local government below the district in rural districts (comprising approximately 10,500 village councils), the village level does not have any substantive service delivery responsibilities.
5. All LGAs in Tanzania use Epicor, a computerized, integrated financial management software package, to maintain their books of account. Their plans and budgets are prepared using PlanRep 3, a home-grown planning and budgeting software.
6. The authority for local health facilities to operate their own budget accounts was subject to a dispute between the Ministry of Finance (on one side) and PMO-RALG and the Ministry of Health (on the other side). An instruction issued by the Ministry of Finance for LGAs to close health facility bank accounts was eventually over-turned. In practice, however, some LGAs permit PHFs to maintain their own bank accounts, while in other LGAs, the DMO manages the funds of primary health facilities "on their behalf."
7. Budget data was also collected for two urban LGAs: Morogoro Municipal Council and Kinondoni Municipal Council. However, due to the different nature of urban health services, this paper focuses on rural health services,
8. In US dollars, this range is roughly equivalent to the range from USD$150,000 (in Nkasi) to USD$800,000 (in Mkuranga).
9. It should be borne in mind that these expenditures exclusively reflect grant-funded local health expenditures.
10. If this were the case, this would mirror a vertical fiscal imbalance that exists between the central government and the local government level: whereas local governments in Tanzania receive approximately 50 percent of PE resources (reflecting the tremendously important role that local governments play in the delivery of essential public services), LGAs only receive around 9 percent of all OC resources (in the form of OC grant allocations).
11. In an attempt to address this question, a recent study analyzed vertical expenditure patterns in the health sector in 29 developing and transition countries (Boex and Edwards 2015). This study found that on average, devolved health expenditures account for 29.3 percent of public health expenditures in the countries studied. However, practices varied greatly among different countries, with some countries relying exclusively on local governments for the provision of local health services, whereas other countries relied exclusively on non-devolved mechanisms to provide local health services.
12. Government priorities might dictate to share of the treatment cost should be borne by patients themselves. This share might different at different types of health facilities.
13. In addition to dispensaries providing the overwhelming majority of out-patient treatment, it is likely that dispensaries also account for a meaningful share of in-patient attendance, especially to the extent that dispensaries increasingly serve as maternity clinics).
14. Since local health expenditures are not coded by facility, it would in fact be hard to engage in a detailed analysis using existing financial records.
15. According to the budget terminology used, all non-wage recurrent expenditures are considered Other Charges (OC). Although our breakdown of OC expenditures generally follows the Chart of Accounts followed by LGAs, some of our spending categories (e.g., drugs and medical supplies; capacity development) combine funding lines from different expenditure categories.

16. We have to be aware that LGAs may follow somewhat different practices in accounting for spending of user fees collected at facility-level (formally and informally), and/or accounting for spending from national health insurance funds.
17. As before, spending on Volunteer Agency (VA) Hospitals and Service Agreements were combined with District Hospital spending. In addition, community health spending was included in Dispensary-level spending, as community health spending only represents 0.1 percent of total local health expenditures.
18. It is not clear from the budget accounts how or whether MSD resources are reflected on-budget and how user-fee funded drugs procurements are included in the local budget accounts. As such, it is possible that user fee resources are accounted through the budget. It is similarly possible that although LGAs receive drugs in-kind from MSD, (some) LGAs reflect their MSD allocation as part of their budget accounts.
19. Greater empowerment of facility-level staff will require not only a stronger role in planning, but also a stronger role in the management of facility-level finances and in the procurement of relevant items. Even if facilities would be empowered to prepare their own facility-level plan, and even if facilities are given a "fair share" of local health resources directly into facility-level accounts, they would still be hamstrung if they needed council-level permission or support to procure necessary inputs.
20. Health Centers play a different role in different LGAs. In some LGAs, they serve more like dispensaries, while in others, they take the pressure off of District Hospitals. As such, it may be appropriate to place fewer conditions on spending for Health Centers.
21. It should be recognized that sharing of disaggregated health information or data is not (just) a technical process, but also involves a (very important) political economy (and institutional power) challenges.

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