

## HEALTH FINANCING: ACHIEVING MORE WITH THE AVAILABLE RESOURCES

### OVERVIEW

Health financing is a recurrent item on the agenda of the GFF Investors Group. At the second Investors Group meeting, the financing discussion focused on issues related to health financing transitions and on trends in development assistance for health and for RMNCAH. At the third Investors Group meeting, partners shared their experiences with providing complementary financing while at the fourth meeting the focus was on domestic resource mobilization (DRM). This paper is focused on efficiency, namely achieving more with the available resources. The paper uses the term “achieving more with the available resources” to emphasize that the objective of improving efficiency in low and lower-middle income countries is not to reduce the health budget but to make better use of available resources to achieve better health outcomes. The paper outlines the challenges and benefits of measuring and addressing inefficiency, using country data and examples, and explains how the GFF is helping countries to achieve more with available funds.

### SUMMARY OF FINDINGS

Getting more for the available resources is an essential complement to raising more funds for health. It allows countries to expand coverage with needed services including those for RMNCAH, increase financial protection in health, and improve health outcomes, so is critical to the goals of the GFF. The possible gains that can be made from improving efficiency are substantial in GFF countries, although the magnitude differs from country to country as do the most important sources of inefficiency. The GFF is actively engaged with countries to help them identify the main sources of inefficiency in their settings and to develop and implement strategies that improve efficiency in areas related to RMNCAH services as well as the broader health system. Measuring and monitoring progress in reducing inefficiency is, however, complex and more systematic approaches for regularly assessing and monitoring efficiency are needed at the country level if the potential efficiency gains are to be realized. This has implications for the way countries track their own progress and how the GFF can report on aggregate progress in this area.

### ACTION REQUESTED

The Investors Group is requested to consider the information presented in the paper and discuss appropriate ways to support countries in addressing inefficiency.

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Section 1 of the paper outlines why efficiency is an important part of smart, scaled and sustainable financing and a complement to DRM. Section 2 describes the most common sources of inefficiency and how countries can identify which ones are most prominent in their settings. The available data on inefficiency across GFF countries is presented in Section 3, information that is valuable to identifying the areas for policy action as well as for tracking progress. Section 4 then moves to possible solutions, particularly those linked to the health financing system, while Section 5 explains how the GFF is currently helping countries achieve more for the available funds.

### 1. Efficiency and Smart, Scaled and Sustainable Financing

Raising resources for RMNCAH is a key objective of the GFF, integral to the development of smart, scaled and sustainable financing as outlined in the GFF Business Plan (Box 1). The needs and opportunities for increasing the availability of resources, particularly domestic resources, were discussed at IG4. This time the focus is on achieving more with these resources, commonly called efficiency. It is a critical component of smart financing, but also closely linked to scaled and sustainable financing.

#### Box 1: Smart, Scaled and Sustainable Financing Definitions

- **Smart financing:** interventions proven to have a high impact are prioritized and delivered in an efficient and results-focused way, while seeking to reduce inequities in coverage.
- **Scaled financing:** mobilizing the additional resources necessary from domestic and international (public and private) sources, while reducing reliance on direct out-of-pocket payments (OOPs).
- **Sustainable financing:** ensuring that health & RMNCAH funding benefits from economic growth, and addresses the challenges faced by countries transitioning from low- to middle-income status.

**Source:** GFF Business Plan

Typically, health economics has defined efficiency as both “doing the right things” and “doing them right”. “Doing the right things” corresponds with the formal concept of allocative efficiency – choosing the mix of interventions that maximizes benefits – usually expressed in terms of maximizing population health for the available resources. In terms of the GFF and smart financing, this describes the importance of prioritizing RMNCAH interventions that are proven to have the greatest impact (e.g. childhood immunization has one of the highest returns on investment).

“Doing them right” captures the formal concepts of production and technical efficiency – choosing the mix of inputs (e.g. people, buildings, equipment, medicines) that achieves the desired output (e.g. coverage with childhood immunization) at the lowest cost, and ensuring that those inputs achieve the maximum possible output (e.g. the highest possible level of coverage). In the Business Plan description of smart financing, this is described as ensuring that the chosen interventions are delivered in an efficient and results oriented way.

To this we add the idea that these interventions should be done “in the right place”. One component relates to the geographical location of services, but another component is to consider whether there are possible efficiency gains to be made from shifting services into the most appropriate care setting (e.g. primary or community levels versus secondary or tertiary; daycare versus inpatient care etc.). A mechanism for ensuring

continuity of care (including health promotion and prevention) across levels and across the lifecycle is a critical element of doing the right things in the right place, something that is considered in most Investment Cases (ICs).

There are various estimates of the extent of the losses through waste and inefficiency in the health sector but they all show that the magnitude of the problem is large. For example, WHO estimated that globally between 20-40% of health resources could be wasted through major forms of inefficiency.<sup>1</sup> More recently, OECD suggested that between 20% and 50% of resources invested in health in OECD countries could be wasted because of “doing things wrongly”, one component of the broader concept of inefficiency.<sup>2</sup>

The extent of inefficiency does, of course, vary across countries. It is also rarely possible to eliminate all forms of inefficiency in any setting and there are sometimes considerable up-front investment costs required before they start to be reduced. Moreover, efficiency gains do not always translate into financial savings but are reflected in freeing up resources (e.g. health worker time) that could be used in other more effective ways to improve health.

Recognizing this, it is still possible to estimate the order of magnitude of the possible gains to countries from improving efficiency. To do this, we apply the WHO estimates of the extent of inefficiency (estimated to 20-40% of health resources) to the average total health expenditure of GFF countries in 2014. This indicates that total potential savings from eliminating all inefficiencies would range from US\$12 billion to US\$24.1 billion (or US\$13.5 to US\$27 per capita)<sup>3</sup>. These are large amounts of resources that could instead be used to improve access to quality RMNCAH services.

For the lowest spenders, the potential value of the resources freed-up through efficiency improvements are less – between US\$3.81 and US\$7.62 per capita in DRC, for example. Although this would, by itself, be insufficient to effectively move the DRC (and most of the other GFF countries) from current levels of health spending to the \$89 per capita needed to assure universal primary health coverage (UHC)<sup>4</sup>, a total of between US\$285-570 million per year would be freed up. Achieving these gains results in immediate benefits in terms of achieving more for the available funds, and reflects the capacity to effectively absorb and spend additional resources when they become available.

## 2. How to Identify the Most Common Causes of Inefficiency?

Before countries can develop strategies to reduce inefficiencies in their health systems, particularly those relating to or affecting the delivery of RMNCAH services, it is necessary to understand the major causes of inefficiency. The most pragmatic way to do this is to start with one of the checklists that have been developed based on thorough literature searches. Box 2 outlines common sources of inefficiency in health systems drawing on WHO (2010) and OECD (2017) but modified to capture inefficiencies beyond the service delivery system alone.

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<sup>1</sup> WHO. World Health Report 2010. *Health Systems Financing: the Path to Universal Coverage*, WHO, Geneva. Chapter 4.

<sup>2</sup> OECD (2017), *Tackling Wasteful Spending on Health*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264266414-en>

<sup>3</sup>These estimates use current USD figures for total health expenditure from the WHO Global Health Expenditure Database.

<sup>4</sup> McIntyre D & F Meheus 2014. “Domestic funding of health and other social services”. Chatham House, Centre on Global Health Security, Working Group on Financing, paper 5. McIntyre and Meheus estimates were for 2012 and we have inflated them to 2014 prices. [https://www.chathamhouse.org/sites/files/chathamhouse/home/chatham/public\\_html/sites/default/files/20140300DomesticFundingHealthMcIntyreMeheus.pdf](https://www.chathamhouse.org/sites/files/chathamhouse/home/chatham/public_html/sites/default/files/20140300DomesticFundingHealthMcIntyreMeheus.pdf)

## Box 2: Common Causes of Inefficiency

### Doing the wrong things

1. This could be an imbalance between: population-based promotion and prevention versus personal and curative services; high cost, low impact health services versus low cost, high impact services; governance and public health functions versus other health services. Doing the wrong thing in the context of UHC can manifest also as inadequate attention to financial protection compared to the availability and quality of health services, or vice versa.

### Doing things in the wrong places

2. This would commonly include services located largely in metropolitan areas, being provided at higher level (e.g. tertiary) institutions when they could be done with the same quality but with lower costs at lower levels of the system (e.g. community or primary levels), or admitting patients to hospitals who could be treated using daycare. The lack of a mechanism for ensuring continuity of care across levels is also a cause of inefficiency.<sup>5</sup>

### Spending badly: higher cost inputs chosen or inputs not achieving their maximum potential

#### A. Inputs

3. Medicines:
  - a. under-utilization of generics or paying too much for any specific medicine;
  - b. use of ineffective medicines, the wrong medicines, or using them at the wrong time;
  - c. overuse or unnecessary use.
4. Infrastructure (e.g. health facilities) and equipment:
  - a. Inappropriate health facility size, particularly hospitals, for optimal efficiency;
  - b. Under or over-capacity in health facilities – linked to point 6 below;
  - c. Equipment that is purchased and cannot be repaired or is not used optimally.
5. Personnel: inappropriate mix between different cadres; located in the wrong places; demotivated workers with low productivity (e.g. low visits per health workers per day, high rates of absenteeism); poor quality of care provided.
6. Inappropriate mix of inputs: e.g. health workers but no medicines or other medical products, a lower cost mix of inputs is possible to achieve the same outputs, health facilities constructed (frequently by external partners) but no staff or budgets to run them at full capacity.<sup>6</sup>

#### B. Outputs and outcomes

7. Health services:
  - a. unnecessary tests, procedures, visits or underutilization of these compared to need; inappropriate inpatient admissions or longer than necessary length of stay;
  - b. medical errors and low quality care, including doing the interventions at the wrong time (e.g. late) meaning the inputs and outputs do not achieve the desired outcomes.

<sup>5</sup> Doing things at the wrong time in terms of patient care is captured under the service-delivery section below.

<sup>6</sup> There are some overlaps inevitably between the various forms of inefficiency. For example, health workers without medicines or diagnostic tests might be linked to administrative efficiency, while using higher cost inputs to achieve results that lower cost inputs could achieve is one aspect of health workforce management as well.

### **C. Health Financing and Health System Organization**

8. Waste (including expired medicines), corruption, fraud.
9. Poor public financial management practices, including low budget execution rates (national and/or subnational), reducing expenditure below approved levels.
10. Inefficiency in raising revenues for health, particularly when revenue raising for health is independent from general government revenue collection.
11. Fragmentation in the system: in pooling, but in the broader health system as well - e.g. procurement, supply chains, laboratories, service delivery. This can be associated with domestic decisions such as establishing separate insurance schemes for different population groups, or to decisions made about external partners to bypass existing national systems e.g. financial flows, audit, M&E, service delivery, laboratories. This is common in countries that have vertical disease programs, e.g. a supply chain that delivers only AIDS drugs, or similar.
12. Administrative inefficiency: higher than necessary costs for the services offered, including in health insurance agencies.

The box is organized according to the three main efficiency questions described earlier – doing the right things, doing them in the right places, and doing them right (which includes at the right time). Within the question of doing things right, the organization flows from thinking about inputs and whether they produce the maximum possible outputs for the available resources, to how the outputs are transformed into outcomes.

In every country, the people who work in, or come into contact with, the health system – i.e. virtually everyone – will have an opinion of the inefficiencies they have observed and which ones are the most important to address. A guidance note<sup>7</sup> on Health Financing currently being prepared by the GFF secretariat aims to show how a checklist like the one in Box 2 can be used to capture this knowledge as the basis for focus group discussions or interviews with key stakeholders (e.g. politicians, administrators, service providers, patients, health workers in laboratories, purchasing, and distribution centres).

At the same time, data on the various types of inefficiencies – see the next section – can be collected to confirm or question these perceptions about the most serious sources of efficiency. The results of the focus groups and/or interviews would then be fed into the policy dialogue with government as the starting point for discussions about the appropriate policies for improving efficiency.

The next section turns to the data that can help in this process and which can be used subsequently to monitor progress in reducing inefficiency.

### **3. Measuring and Monitoring Inefficiency**

- Macro-efficiency

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<sup>7</sup> The guidance note on health financing for country teams and GFF partners is currently under preparation by the GFF Secretariat. It will be shared on the GFF website as soon as the consultation processes on the draft document has been completed.

A number of techniques have been developed to measure efficiency of a health system as a whole using one summary number. They are based on cross-country comparisons of how much is achieved in terms of health for the level of health expenditure per capita, sometimes controlling for other types of inputs and determinants. The two most common forms are called stochastic frontier production (SFP) functions (parametric estimation) and data envelopment analysis or DEA (non-parametric). SFP functions and DEA map out a frontier based on the set of “efficient” countries – effectively those that achieve the highest level of a health output (e.g. under five survival rate) for a given input (e.g. health expenditure per capita). Countries on the frontier score 1, the maximum possible and are efficient. A score below 1 demonstrates poorer performance, especially if the score is close to 0. Thus, countries below the frontier would be able to achieve more outputs for their observed inputs or achieve the same results for lower a lower level of input.<sup>8</sup>

Table 1 shows the results of a formal analysis undertaken by the GFF secretariat using DEA for 2014 data. The results using two separate output variables are reported –under-5 and maternal survival – and health expenditure per capita was used as the input.<sup>9</sup> In this particular analysis, we use an input approach which estimates the extent to which the same output could be achieved with lower input (per capita health expenditure).<sup>10</sup> Only the results for the 16 GFF countries are included.<sup>11</sup> The rankings in Table 1 show the GFF countries compared to all 75 countries.

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<sup>8</sup> Different DEA programs calculate efficiency for those below the frontier in different ways. One way is to move vertically, where efficiency is the ratio of the observed output (under-five survival rates) divided by the maximum possible output for that level of input (e.g. health expenditure/capita) shown by the frontier. Another is to move horizontally with efficiency being the ratio of the lowest possible level of input given by the frontier for that level of output to the observed level of input of the country. More complex algorithms based on a mix between the two approaches are possible.

<sup>9</sup> Following standard practice, input and output variables were transformed into natural logarithms for the efficiency calculations. Maternal survival is calculated as the probability of a woman surviving a delivery (opposite of maternal mortality), and under-5 survival is calculated as the proportion of children surviving to 5 years of age (opposite of under-5 child mortality). Survival was used in preference to mortality because the relationship between health expenditure and outputs has to be positive.

<sup>10</sup> This follows the approach taken recently by Sun, D., Ahn, H., Lievens, T., & Zeng, W. (2017). Evaluation of the performance of national health systems in 2004-2011: An analysis of 173 countries. *PLoS one*, 12(3), e0173346.

<sup>11</sup> Results for all 75 low and lower-middle income countries for which data is available can be made available upon request to the GFF Secretariat.

**Table 1: Data  
Envelopment Analysis  
(DEA) Results**

	U5 survival		Maternal survival	
	Ranking	Score	Ranking	Score
DRC	3	0.99	2	0.93
Ethiopia	7	0.86	8	0.75
Bangladesh	8	0.84	14	0.72
Guinea	10	0.82	7	0.76
Mozambique	11	0.82	11	0.74
Myanmar	12	0.81	21	0.69
Senegal	15	0.81	22	0.69
Liberia	20	0.79	17	0.70
Vietnam	22	0.78	62	0.54
Tanzania	31	0.77	34	0.65
Uganda	33	0.77	32	0.66
Guatemala	36	0.75	69	0.52
Kenya	41	0.74	39	0.63
Cameroon	46	0.73	28	0.67
Nigeria	72	0.63	45	0.60
Sierra Leone	74	0.60	46	0.59
<i>Average LMIC countries</i>	-	<i>0.75</i>	-	<i>0.64</i>
<i>Average GFF countries</i>	-	<i>0.78</i>	-	<i>0.68</i>

Source: Authors' calculation based on data from the WHO Global Health Expenditure Database

The average efficiency scores of the GFF countries are slightly higher than those of the entire group of low and lower-middle income countries, but the difference is not statistically significant. This contrasts with the work undertaken for IG4 on domestic resource mobilization, which showed that GFF countries on average raised less government revenue as a share of GDP than other low and lower-middle income countries, but allocated more of that revenue to health.

The table shows rankings and scores for each GFF country. From this analysis, DRC is shown to be the most efficient in terms of both outcome indicators. The interpretation is that it could not reduce expenditure very much without reducing its outcomes. Indeed, a number of the countries that do not spend very much in per capita terms are also relatively efficient in this sense – if they reduce expenditures, maternal and child survival would fall. On the other hand, a number of the countries that spend relatively more than the others (including Guatemala, Kenya, Sierra Leone, Nigeria and Vietnam), are shown to have the capacity to achieve the same outcomes for lower expenditures.

There is relatively good consistency in the ranks and efficiency scores using the two outcome variables for most countries, though not for all. Myanmar and Vietnam are more efficient for child than maternal survival, while Cameroon's efficiency ranking is higher for maternal survival. One of the possible explanations is that countries typically do some things relatively well and some things not so well, something that is more apparent when we move to micro-efficiency indicators subsequently. A single efficiency score often hides this variability.

In this form of analysis, scores and rankings are also sometimes sensitive to the type of model used and the outcome and input variables included – for Table 1 we ran a relatively simple model with only one input and the variation in rankings and scores is not particularly large. As more inputs are included – for example, female education or literacy, indexes of good governance and population density are frequently used – or if SPF analysis were used instead of DEA, the rankings and scores change more so that countries that seem relatively efficient in one model can be less efficient in another.<sup>12</sup> On the other hand, there is often a set of countries that perform relatively poorly, or relatively well, regardless of the model – something that seems to be the case with certain GFF countries (Table 1) at least for the models we ran.

This form of macro-analysis helps to identify which countries offer the greatest potential to improve efficiency. In the GFF case, the countries with the lowest scores (Table 1) have the greatest potential to gain from addressing inefficiencies although important gains could be made in all GFF countries, except perhaps DRC where the levels of expenditure are so low that efficiency gains would be relatively small.

The country level analysis can also help countries to ask questions about attainment compared to potential – e.g. why are Bangladesh, Myanmar and Vietnam more efficient in terms of child than maternal survival while Cameroon does relatively better for maternal survival? Formal macro-efficiency analysis cannot answer these questions<sup>13</sup>, nor does it identify the areas where action should be taken to improve efficiency. The major benefits of efficiency analysis at the country level comes from micro-analysis, which we turn to next.

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<sup>12</sup> We also ran a model with multiple outputs of under-5 survival, child survival and life expectancy at birth, which showed higher efficiency scores on average, driven largely by the inclusion of life expectancy, but similar rankings.

<sup>13</sup> It is possible to identify the correlation between broader socio-economic variables with the efficiency scores, but most are not particularly policy relevant to developing policies in the health sector to improve efficiency – e.g. female education, income inequality, poverty levels, population density.



- Micro-efficiency

In 2016, the GFF partnership discussed a series of indicators to capture the ideas behind smart, scaled and sustainable financing (see IG Paper on Tracking Financing for RMNCAH, UHC and Health<sup>14</sup>). It was difficult to identify indicators of efficiency that are routinely collected across all GFF countries, and all low and lower-middle income countries for comparative purposes. Table 2 shows the efficiency indicators that were proposed at that time based on two considerations: a desire for parsimony, to limit the additional burden of monitoring and reporting on progress that countries already have for different external partners; a belief that it would be feasible for all GFF countries to monitor them, sometimes with technical support.

**Table 2: Proposed GFF Health Financing Efficiency Indicators**

	Proposed Core Indicators	Proposed Supplementary Indicators
<b>Doing the right things in the right places</b>	1. Percentage of current health expenditures on primary health care	3. Percentage of donors financing RMNCAH that directed their funding to the priorities identified in the Investment Case
<b>Doing things right</b>	2. Average price of a basket of essential RMNCAH medications compared to the international reference price	4. Government budget execution rate in health sector

Experience since then suggests that:

- The first indicator, the percentage of health expenditure on primary health care, requires a recent national health accounts (NHA) study using the System of Health Accounts 2011 classifications. Not all countries have this as yet, which is why the GFF secretariat is working with a number of the GFF partners to facilitate institutionalization of NHA at country level.
- Indicator 2, the prices of a basket of RMNCAH medicines compared to the international reference price –requires additional work at the country level because the data, although available, are rarely routinely collected and reported. The data lie in the records of the medicine purchasing authority(ies), but some of these agencies do not have electronic records and the paper records are sometimes missing.<sup>15</sup>
- Donors do not routinely report which interventions are financed by their development assistance, making indicator 3, donors directing their RMNCAH funding to the priorities of the Investment Case, difficult to monitor through the use of global database; this can be collected at country level, but this poses a challenge of aggregating across countries.
- Budget execution rates (indicator 4) exists and require assessing audited government accounts or a recent public expenditure review (PER). Data needs to be collected at the country level and audited government accounts are often only available after a time lag.

With the appropriate investment, it is technically possible to track all of these indicators but they are not yet routinely reported in a majority of the GFF countries. Discussions with countries around the causes of inefficiency in the previous section also suggest that each country might decide to address a different cause(s) of

<sup>14</sup> IG Paper on Tracking Financing for RMNCAH, UHC and Health can be found on the [GFF website](#).

<sup>15</sup> Health Action International provide price data based on surveys in the private sector, but data on the public sector is not available.

inefficiency in their Investment Case or health financing strategy, not necessarily linked to the indicators in Table 2 and would need to develop or choose indicators associated with the cause(s) they choose to address.

To help with this process, it was decided to collate the available indicators that address all the major causes of inefficiency from Box 2.<sup>16</sup> Many of them, however, are not routinely collected even in OECD countries and are certainly not available for most of the GFF countries. Very few are consistently available across all the GFF countries. Data on those that are most frequently available are shown in Table 3 for the GFF countries, with data sources and definitions in Annex A. All data points refer to the latest available year.<sup>17</sup>

The first point suggested by Table 3 is that routinely reported data on micro-level efficiency is sparse and scattered with different countries collecting different indicators at different time points. This contrasts with data on domestic resource mobilization reported in the financing paper for the fourth IG meeting, which are available from NHA data collected by countries and summarized in global databases by WHO and the WBG.<sup>18</sup> Few countries, even high income countries, routinely assess the efficiency of different components of their health systems so the data reported here have been collected largely for other purposes explaining why they are quite scattered.

Secondly, for some of these indicators there are clear yardsticks for assessing the appropriate level, and what direction denotes and improvement in efficiency. For example, it is generally accepted that the Caesarean section rate per 100 live births should be somewhere between 15% and 20% on medical grounds. Higher is inefficient in that it uses resources with no medical benefit. Lower is too low – another form of inefficiency in that the people who need an intervention do not receive it, thereby suffering increased morbidity or mortality and sometimes incurring additional costs.

On the other hand, there is no yardstick to determine what is efficient and what is not efficient for many of the indicators. For example, what proportion of health expenditure should be allocated to primary health care, or what is the efficient ratio of nursing and midwifery staff to doctors? This type of assessment can only be made using comparisons with other countries, focusing largely on outliers. To illustrate, Bangladesh, Guinea, Guatemala and Vietnam have relatively low ratios of nursing and midwifery staff to doctors – or more doctors per nurse/midwives than other countries - and although this could be partly a definitional issue of what types of health workers are classified as nurses and midwives, it suggests that the higher paid doctors might be doing tasks that other health workers could perform with the same impact, and lower cost.

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<sup>16</sup> Full details of the indicators that could be used to address the causes of inefficiency based on an extensive search of the literature, along with the advantages and disadvantages of each, are available upon request from the GFF Secretariat.

<sup>17</sup> Details of the sources and the years for which data are available are available in the Background Paper for the 2017 UHC Financing Forum and also available upon request by the GFF Secretariat.

<sup>18</sup> There are, however, sometimes questions on the reliability of the available health expenditure data.

**Table 3: Indicators of efficiency in GFF countries**

	Median consumer price ratio of selected generic medicines - Public	PHC share in THE (%)	Bed occupancy rate (%)	Number consultations per day	Ratio of nursing and midwifery personnel to physicians	Caesarean rate (%)	Antenatal 1 visit minus antenatal 4 (%)	Absenteeism rate (%)	Budget execution rate (%)
Bangladesh			92	5.0	0.6	23	33	7.5 to 40.0	90
Cameroon	13.6	65			5.7	2	24		
DRC	2.3	49	37		4.9	5	40		41
Ethiopia			51	2 -9	10.1	2	9		Recurrent 96% at federal, 89% at regional and 96% at local government level
Guatemala					1.0	26	5		90% for wages and 85% for non-wage expenditures over the past four years
Guinea					0.4	2	29		97
Kenya	3.3		43-73	15.2	4.4	9	38	28	75
Liberia		62			19.6	4	18		81
Mozambique			17.4	10.3	4	40	24		84
Myanmar			47		1.6		22		
Nigeria	4.3			5.2	4.0	2	10	32	
Senegal					7.1	5	48	20	
Sierra Leone		44	30	9.1	7.5	3	21		64
Uganda	2.6	34	69	6.0	11.2	5	46	47	90% for wages and development grants and 100% for non-wage expenditures
Tanzania	2.7	51		7.3	14.1	6	41	14	92
Vietnam		35	85–290	7.2	1.0	28	22		

Thirdly, as Table 1 showed, countries do not necessarily perform relatively well or relatively badly on all indicators. Bangladesh, for example, seems to have high bed occupancy (low excess capacity) and a high budget execution rate suggesting relative efficiency in these areas. On the other hand, the number of consultations per provider per day is low, Caesarean section rates seem to be too high, and there is a relatively high drop off of women between 1 and 4 antenatal visits. Sierra Leone had a very low bed occupancy rate (suggesting excess capacity or too many inpatient facilities for the available staff and resources) but had what seems to be a more appropriate ratio of nurses and midwives to doctors and a rate of drop off between 1 and 4 antenatal visits that is in the middle of the GFF country rates. DRC had the lowest budget execution rate among GFF countries (see Box 3) and a low bed occupancy rate, but seemed to pay less for selected generic medicines than other countries.

### Box 3: Low budget execution rate: DRC

DRC has a low and volatile budget execution rate for the health sector. The average budget execution rate for the Ministry of Public Health (MoPH) expenditure and transfers was 74 percent over 2007–2013. The rate was 127 percent in 2007 dropping to 68.2 in 2011 and to 41 percent in 2013. Since 2011, the execution rate for government health expenditure has declined primarily from non-execution of transfers to the provinces. The budget execution at central level is divided into four phases: commitment, validations, establishment and transfer of payment orders, and payments or transfer of funds. A Public Expenditure Review conducted a detailed analysis of the budget execution process, and showed that the main problems lie with the MoPH (commitments) and the Ministry of Economy and Finance (payments). Over 2011–2013, expenditure commitments were in line with the allocations received for personnel expenditure (94 percent), goods and services (116 percent), but less so for services, transfers by the MoPH, equipment and construction (table below). Payments come to only 55 percent of the transfers for goods and equipment and 40 percent of the transfers for construction. Because of the inefficient flow of funds from the government, most recurrent expenditure at facility-level come from either donors or user fees (Le Gargassona 2014). A report on budget process bottlenecks in DRC suggests improving allocations, following the budget voted by the parliament, and directing payments to beneficiaries directly in the payment phase as ways to improve budget executions rates in the country (Le Gargassona 2014).

	Total allocations in current CDF billions (2011–2013)	Expenditure commitments (% of allocations)	Validations (%)	Payment orders (%)	Payments (%)
Personnel	351.5	94.1	94.1	94.0	93.6
Goods and equipment	45.8	116	115	63.8	54.5
Services	5.5	20.9	20.2	18.3	18.1
Transfers	35.7	58.7	58.5	45.1	41.2
Equipment	597.5	14.4	14.4	14.1	13.5
Construction, rebuilding, renovations	59.9	67.0	49.2	59.5	39.5

Source: Health Public Expenditure Review 2014

This highlights the importance of each country assessing its main sources of inefficiency by making use of the knowledge that is already in the system (as described earlier), combined with the use of the available data. It is technically possible to define indicators for the major sources of inefficiency being addressed in each country,

for inclusion in the monitoring and evaluation component of the country's health financing strategy, Investment Case or other instrument used to advance the goals of the GFF at the country level. Sometimes the data are already collated and available for other purposes, but someone needs to seek them out – e.g. government budget execution rates; inpatient bed occupancy rates; out-patient visits per clinician. Other times, the collection of the data would require more effort including investment in collection systems. For example, if a country decided to reduce the prices paid for its medicines through strategic purchasing, eliminating corruption and leakages, or introducing a generics policy, it will need investments in an electronic records system for the procurement/purchasing agency(ies) to allow prices to be recorded and collated to track progress.

## IMPLICATIONS FOR THE GFF

There are some important implications of this for the work of the GFF. Country work to address inefficiencies as part of progress towards smart financing requires three important components:

- a. Identification of the major sources of inefficiency in each individual country context as part of the Investment Case and health financing strategy development/review processes;
- b. Collection and use of data to help in the identification process and subsequent monitoring of inefficiencies as they are addressed. This in turn might require a plan for developing the systems for routinely collecting the desired data;
- c. Development and implementation of strategies to improve efficiency as the Investment Case and health financing strategy are implemented.

At the global level, the GFF secretariat and partners can help countries in these processes by providing guidance on how to identify the main causes of inefficiency and the possible policies to address them. This is the focus of a guidance note under preparation by the secretariat, which also describes the indicators that could help countries assess progress in applying their chosen policies. Technical support in these processes will also be necessary – these issues are taken up further in subsequent sections.

## 4. Strategies for Achieving More for the Available Resources

There is considerable country experience on the possible technical solutions to improving efficiency in health.<sup>19</sup> The health financing system, and the incentives and disincentives inherent in it, is part of the problem of why inefficiency occurs and, therefore, changes to it must be part of the solution. We begin potential strategies related to the health financing before moving into other areas.

### ▪ Health Financing Strategies to Improve Efficiency

Changes to the financing system in the search for greater efficiency that have been well documented include:

- Increasing the efficiency of revenue generation through reducing the costs of enforcement and collection, reducing corruption and increasing yield. Although revenue generation is usually the domain of ministries of finance (MOF), sometimes working with external agencies like the IMF, the World Bank and Regional Development Banks, it is directly relevant to the health sector in two ways. First, the health sector needs to advocate for taxes on products harmful to health such as tobacco. This contributes to domestic revenue generation. Second, the collection of health insurance premiums or user-charges is sometimes part of the mandate of a ministry of

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<sup>19</sup> A list for all the causes of inefficiency identified in Box 2 is available upon request from the GFF Secretariat.

- health. Experience shows that it is difficult to use the income tax system to collect health insurance premiums directly from the informal sector, and countries such as Mexico and Thailand have found it was more efficient to use general government revenues to cover the insurance contributions of the informal sector rather than try to collect premiums directly. The informal sector contributes along with the rest of the population through forms of indirect taxation such as value added taxes.
- Financial incentives and disincentives (e.g. taxes, subsidies) to encourage people to promote and protect their own health (e.g. taxes on products harmful to health; subsidies on exercise programs);
  - Changing the way health service providers are paid to encourage quality and efficiency – e.g. moving from paying hospitals for each inpatient day to some form of prospective payment for different conditions such as Diagnostic Related Groups (DRGs); developing forms of payment for results (see Box 4 for an example of how selected countries have used the approach);

#### **Box 4: Performance Based Financing (PBF) as a Tool to Improve Efficiency**

PBF explicitly links payments to health care facilities to their performance, both in terms of quantity and quality of health services delivered. It has the potential to greatly contribute to efficiency in the health care system by channeling more resources to primary care facilities, where the most cost-effective interventions are provided (allocative efficiency) and by incentivizing health care providers to deliver these interventions in an appropriate way to the appropriate target population (technical efficiency). Rwanda was one of the first countries to experiment with PBF. Rather than paying providers on the basis of inputs and historical budgets, a substantial part of the budget of primary care facilities was made dependent on their performance on a key set of maternal and child health care indicators. Both the quantity and quality of the services provided was monitored and used in the calculation of the bonuses given to the facilities. This change in the provider payment mechanism – while keeping the total budget constant – led to a substantial increase in some key services, institutional deliveries went up by 23% and the rate of preventive visits for children more than doubled. Performance incentives can increase efficiency, even when implemented for a limited time. In Argentina, temporary performance incentives were used to address inefficiencies in health service delivery. To tackle the problem of late initiation of antenatal care during pregnancy, which limits the effectiveness of ANC on behavioral change in the first crucial 13 weeks, the government increased the fee that providers receive for an ANC visit within the first trimester by 200%. As a result, initiation of antenatal care within the first trimester increased by 35%. Interestingly, this effect was maintained even after the additional payments were stopped. The temporary financial incentives triggered a change to improve the efficiency of outreach activities by community health workers that was maintained in the longer run.

- Moving from passive purchasing (e.g. historical budgeting) to strategic/active purchasing whereby inputs and services are purchased with an eye on results and costs – e.g. paying less for medicines that are purchased, switching to generics where possible. Box 5 highlights Thailand’s use of strategic purchasing combined with modifications to provider payment mechanisms to improve efficiency as well as Indonesia’s changes to strategic purchasing arrangements for medicines designed to reduce costs;
- Revising salary structures and allowances to favor movement of staff to underserved locations;
- Reducing fragmentation in: revenue collection and fund pooling (e.g. eliminating multiple insurance funds each with their own collection strategies and administration costs); purchasing arrangements (e.g. central purchasing of medicines to gain lower prices); distribution of funds; budgeting, accounting and audit systems;

- Improving public financial management to reduce leakages and waste and to focus on results rather than inputs by e.g. linking resource allocations to performance on key indicators of institutions (hospitals, health facilities) or subnational entities (provinces, counties);
- Identifying and addressing the bottlenecks that prevent the available funds being used on time and from being returned to the ministry of finance.

### Box 5: Strategic Purchasing and Provider Payment Changes in Thailand and Indonesia

**Thailand:** Three health “insurance” schemes cover the entire population with needed health services and financial protection – the Civil Servant Medical Benefit Scheme (CSMBS) for civil servants and their dependents; the Social Health Insurance (SHI) for formal sector employees; and the Universal Coverage Scheme (UCS) covering the remainder of the population. A purchaser-provider split was implemented for strategic purchasing with the UCS run by an organization that purchases services from service providers, public and private, often through contracts. Special attention was given to provider payment mechanisms in this system to ensure value for money, quality of care and effective coverage, especially given the increased utilization of health services after the introduction of the UCS scheme. For in-patient care, Diagnostic Related Groups have been implemented since 2009, along with global budgets and hard budget rules. In primary care, providers under the Universal Coverage Scheme are paid using capitation adjusted based on age and gender. The capitation rate was estimated using information on utilization rates and unit cost estimates for different services. For prevention and health promotion, cost and quantity of age and gender specific (e.g. cervical screening, family planning) services was used. The switch to capitation shifted the responsibility for cost-containment and efficiency to individual providers, which in turn encouraged the use of generic and essential medicines. This payment method was extended to the Social Health Insurance recently. Evidence shows that Thailand achieves very high levels of coverage with health services, health outcomes, and levels of financial protection at a very low level of expenditure.

**Indonesia:** Medicine prices in Indonesia were among the highest in the region, with some patent medicines priced at 26 times the international reference price (IRP), and generics priced at 9 times the IRP. In the context of Indonesia’s ambitious aim to reach UHC by 2019 through the rollout of the universal coverage insurance scheme (denoted by the acronym JKN), the procurement of medicines was centralized through an e-catalogue. All essential medicines listed in the JKN benefits package are included in this catalogue, which is administered by the Government Agency of Procurement Policy. Procurement is conducted through an auction. Suppliers that wish to participate in the auction must be willing to sell large quantities of their pharmaceutical products at a price lower than the market price. The MoH takes responsibility for determining the base prices of the medicines, which are then matched with the prices determined at auction.

**Source:** Tangcharoensathien, V., Limwattananon, S., Patcharanarumol, W., Thammatacharee, J., Jongudomsuk, P., & Sirilak, S. (2015). Achieving universal health coverage goals in Thailand: the vital role of strategic purchasing. *Health policy and planning*, 30(9), 1152-1161.

#### ▪ Other Strategies to Improve Efficiency

The other components of the health system also offer opportunities to achieve better value for money, to complement health financing reforms. The general actions can be summarized into the following categories, and they cut across medicines, the health workforce, service delivery and governance issues:

- Prioritization of high value interventions and ensuring they are delivered in the right places. This includes managing care across the different levels of the system and ensuring an appropriate balance between promotion, prevention, treatment, rehabilitation and palliation are also important. This can be achieved by using data in policy making, changing clinical protocols, health technology assessments etc.
- Administrative actions (e.g. monitor and publish prices paid for critical inputs such as medicines; increase government capacity to manage procurement, inventory and supply chains; increase



supervision of staff; increase intakes of students in areas where there are critical shortages of staff; merge fragmented systems or institutions such as laboratories, service delivery programs, insurance funds, procurement agencies; establish independent purchasing or revenue collection agencies; improve monitoring and evaluation and the use of data in policy development; development and adopt efficient service delivery models (public/private) for different types of care across the various levels of the health system; review and slowly change, where necessary, the location of health facilities and health workers).

- Legislation and regulation (e.g. develop and enforce an essential medicines list or a policy on generic substitution; penalties and enforcement for corruption; reduce taxes on imports of selected health products);
- Information, education and awareness strategies (for providers, pharmacists and consumers about generics and rational use of medicines; treatment guidelines).

Frequently these would be done in combination, sometimes with health financing components as well. The combined actions sometimes take several years, even decades, to be fully implemented through the political processes and to then achieve results. For example, a strategy to reduce the costs of medicines might include one or more of the following actions: merging fragmented purchasing systems to increase the country's capacity to negotiate lower prices with suppliers through greater volume; competitive bidding for purchasing medicines; legislation to enforce the use of generics rather than branded medicines where appropriate; strengthening the capacity to test quality of drugs not just at registration but at various stages of the supply chain; providing information on generic safety and effectiveness to prescribers, pharmacists and patients; development of treatment guidelines to reduce overuse, particularly of antibiotics; and removing financial incentives for prescribing branded medicines rather than generics.

Many of the strategies for improving efficiency are well documented, so that governments can choose which ones are the most appropriate to address the major forms of inefficiency they find. In doing this, they will need to account for the fact that inefficiencies are sometimes not just associated with decisions made by national or subnational governments but also by their development partners. Common types of inefficiencies associated with external partners involve bypassing existing government systems and establishing fragmented parallel systems, in: the way financial resources flow; planning processes; audit and accounting systems; purchasing and distribution systems; service delivery; laboratories; and monitoring and evaluation. This is a problem in countries that receive external financing and becomes a particular urgent issue to resolve in countries where key external partners are withdrawing their financial support – countries not only need to find additional domestic funds to replace those from external partners, but they also need to determine how best to continue the activities that have been established as parallel systems, frequently with staff paid at higher rates than available in government service.

Reducing inefficiency can be politically sensitive because someone typically loses even though the population at large benefit from the changes. For example, reducing the prices paid for medicines, or introducing a generics medicine policy, saves resources that can be used to buy more medicines or reinvested in other ways to improve health. These politics are sometimes opposed by the people who would lose money as a result. Countries need to develop political economy analyzes that work through the likely supporters and opponents to each proposed policy aimed at improving efficiency, and estimate the feasibility and the likely costs, benefits and time path of each option before moving ahead. Some of the technical solutions that other countries have used might not be feasible or politically acceptable in other settings, and other solutions would need to be found.



## Box 6: Equity Considerations

The forms of analysis that are generally used to identify the most important sources of inefficiency and to track progress in reducing them over time do not explicitly consider the impact on equity. The question of whether there is an efficiency-equity trade-off is not clear-cut. Some strategies to improve efficiency, such as strengthening the primary care system, can also improve equity in access to needed services.\* Some evaluations of various forms of task shifting, including training community health workers to undertake tasks previously done by other health workers, also suggest that it can reduce delivery costs, increase coverage with needed services and benefit the poor and people living in more remote areas.\*\*

On the other hand, studies of immunization programs in Cameroon and HIV/AIDS prevention and treatment in South Africa show that the most efficient programs in terms of improving the overall level of population health for the available resources are not the most equitable.\*\*\* Putting a higher priority on equity is possible – population health improves, and improves disproportionately among the poor, but the overall rise in the level of population health is less than under the most efficient options.

It is not only the impact of policies to improve efficiency on equity that is important, but also the converse – the efficiency of different approaches to improve equity in access to health services and financial protection. Most of the research on targeting versus a more universal approach to increasing coverage to health care for the poor, for example, has considered only the impact rather than the costs and comparative efficiency of the different options. Given that equity is an important objective of health policy and is an essential element in the GFF approach, ways of assessing the impact of the different policy options to improve efficiency on equity, and the comparative efficiency of approaches to improve equity, need to be better developed.

\* e.g. Jamison et al. (2006), *Disease Control Priorities in Developing Countries*, Oxford University Press, NY; Asante, A., Price, J., Hayen, A., Jan, S., & Wiseman, V. (2016). Equity in health care financing in low-and middle-income countries: a systematic review of evidence from studies using benefit and financing incidence analyses. *PloS one*, 11(4), e0152866

\*\* Zachariah, R., Ford, N., Philips, M., Lynch, S., Massaquoi, M., Janssens, V., & Harries, A. D. (2009). Task shifting in HIV/AIDS: opportunities, challenges and proposed actions for sub-Saharan Africa. *Transactions of the Royal Society of Tropical Medicine and Hygiene*, 103(6), 549-558.

\*\*\* Ebong, C. E., & Levy, P. (2011). Impact of the introduction of new vaccines and vaccine wastage rate on the cost-effectiveness of routine EPI: lessons from a descriptive study in a Cameroonian health district. *Cost Effectiveness and Resource Allocation*, 9(1), 9; Verguet 2015; Cleary 2010.

## 5. GFF Support to Countries to Achieve More for the Available Resources

Addressing sources of inefficiency is important. It has substantial benefits in terms of achieving more for the currently available funds and using new funds to achieve the best results. It is also critical to deliver on the important agenda of increasing domestic resources for health, as no ministry of finance wants to increase allocations to a sector that is perceived to be wasting resources. Thus, policies to improve efficiency need to be allied to policies to increase domestic resources as well as those to improve financial protection through prepayment and pooling to achieve all the components of smart, scaled and sustainable financing.

The extent and nature of inefficiencies in the health systems, and those affecting RMNCAH services, will likely differ across countries as will the analysis of which ones that are feasible to target to get the biggest impact taking political consideration into account. This implies that strategies to address inefficiency in GFF countries need to be country driven and carefully crafted to fit each country context.

In many cases, this requires selecting a set of efficiency indicators for each country's own targeted improvements, which in turn might require investing in the information systems to routinely collect the needed data. This has implications for the nature of GFF reporting. The GFF countries might all choose different indicators to track their own progress because their main sources of inefficiency will differ. To assist with this

process, a set of indicators that countries can consider as candidates for monitoring progress in reducing inefficiency has been developed. In addition to reporting on individual efficiency indicators, the GFF Secretariat is exploring the possibility of developing a scorecard to track a number of efficiency indicators on a regular basis, including process related indicators (e.g., development of an action plan related to addressing key inefficiencies). A scorecard could pull information from various sources including Service Delivery Indicators Surveys, Service Availability and Readiness Assessments (SARA), and other relevant sources. To capture processes at the country level a similar methodology to the Country Policy and Institutional Assessment (CPIA)<sup>20</sup>, where World Bank staff report on changes in the policy and institutional environment against agreed standards could be used.

The GFF provides financial, technical and analytical support to countries to guide them through this process. As a first step and as described earlier, the GFF Secretariat is developing a guidance note to countries with practical steps to identify and address sources of inefficiency. The main steps that countries can take in this proposed approach are summarized in Box 7.

### **Box 7: Summary of Main Steps of the Framework Proposed to GFF Countries to Address Sources of Inefficiency**

#### **Country actions:**

Step 1: Identify key informants in countries who are likely to understand the way the health system operates. Engage them in discussions of the key causes of inefficiency in the health sector at the national or subnational level using the Common Causes of Efficiency (Box 2) framework to guide discussion. Develop a list of the key root causes of inefficiency that the stakeholders agree are important in the country. Start a conversation on barriers and enablers to improving efficiency for these causes.

Step 2: Seek data that might help to clarify the extent and nature of these inefficiencies.

Step 3: Present the top five or so sources of inefficiency that emerge from the stakeholder discussions to the key policy makers to confirm that they agree that they are important enough to try to take action and that there is sufficient political support for taking action. Supplement the perceived list with the data available from Step 2. Finalize the discussion about what are the obstacles, enablers and possible policy levers to improve each type of inefficiency to produce a final list of the sources that will be targeted.

Step 4: Develop a strategy for improving efficiency based on Step 3, outlining the sources, the policy changes that will be made, and how they will be implemented and monitored. This should include a stakeholder analysis. The strategy can be incorporated into the Investment Case and/or health financing strategy, depending on the nature of the change (short/long term).

Step 5: Implement the strategies identified in Step 4.

Step 6: Continually monitor and evaluate progress and modify strategies as necessary.

Building on this, the GFF also recommends that Investment Cases should draw on this type of analysis and specifically focus on the major inefficiencies in the health system that influence plans to scale up coverage of the needed RMNCAH services – inefficiencies that might be directly related to RMNCAH activities or to the broader health system but which restrict the implementation of RMNCAH plans. Plans to address these inefficiencies would also be included in the Investment Case.

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<sup>20</sup> The CPIA is one of the most important inputs to the Performance Based Allocation system that determines a country's IDA allocation.

The prioritization process, which is at the heart of the investment case process, is also a major driver of allocative efficiency by ensuring that high-impact interventions are financed first and delivered at the appropriate level of the health system.

The Investment Case process could also articulate a clear vision to steer the course of private sector engagement in the health sector in such way that it improves efficiency. If properly harnessed, the private sector can deliver value in a variety of ways e.g. business model innovation and a commitment to quality and transparency. Where governments have limited capacity for regulation and enforcement, private sector expansion can lead to expanding poor quality health services.

Where health financing strategies are being developed, or modified, policy makers should consider explicitly the inefficiencies inherent in the broader health system and a plan for addressing them. If a health financing strategy already exists and includes plans for reducing inefficiency, it might be necessary to strengthen components particularly drawing out the links with the IC work before using it as the basis for GFF support.

At the country level, this work is still developing as the GFF learns how best to support countries in this type of work. Three examples below show the different areas that countries are focusing on in the drive for further efficiency.

- **Kenya – Improving efficiency at county level following decentralization.** A national Public Expenditure Review (PER) in Kenya highlighted several areas of inefficiency: low budget execution for the health sector, inefficient allocation of the funds that were spent, high spending on wages with insufficient on other inputs to allow health workers to do their jobs, high levels of absenteeism, problems with providers’ knowledge on clinical protocols, and unavailability of drugs and equipment. At the same time, Kenya has decentralized finance and decision making to lower levels of government, called counties, that receive block grants from the central government. To avoid risks of additional or increased inefficiency with this decentralization, the GFF is supporting Kenya to do in-depth studies in six counties (3 regarded as highly efficient and 3 of low efficiency) to identify if the issues raised in the national PER persist, and how any problems that are identified can be addressed in this devolved setting. Based on the proposed GFF procedure of Box 7, key informant interviews will be conducted with staff in the selected counties (at county and facility level) to understand the causes of inefficiencies and possible options to address them. Analysis of quantitative data on financial flows, resource allocation across sub-counties, levels of care, administrative and allocative efficiency etc. will also be part of this exercise. The second step in this support will be to assist counties to develop and implement an efficiency improvement plan that includes mechanisms to monitor efficiency.
- **DRC - Reducing fragmentation in financing by scaling up “Contrat Unique” and improving budget execution:** Fragmentation of financing and service delivery mechanisms is a major driver of inefficiencies in DRC. Efficiency is at the core of the Investment Case in DRC, which focuses on resource pooling at the provincial level by scaling-up the Contrat Unique (single contract) which to date has only been implemented in selected provinces. The objective of this reform is to have a one budgeted plan of activities at the provincial health administration that is financed through the domestic and external funds available at the province level with a single fiduciary arrangement (accountability, internal audits etc). A single monitoring and evaluation and reporting mechanism is also used. The single contract reform addresses fragmentation funding and implementation of programs, with the aim of strengthening planning and reducing administrative and management costs. Along with this single contract, a number of reforms (i.e. creation of a steering committee at the national level, reform of the drug procurement and supply mechanisms by reducing the number of parallel supply chains delivering drugs to the same facility, and decentralization of human resource management) have been implemented. A recent evaluation showed that those reforms

have helped decrease the management costs of projects supported by external assistance and saved US\$56 million between 2009-14 (Ntembwa et al., 2015). Analysis and implementation of reforms to improve budget execution rates are also supported in DRC.

- **Liberia - Increased coordination among external partners and prioritization of high impact/cost-effective interventions.** While external sources contribute significantly to Liberia's total health expenditure there is limited collaboration and considerable fragmentation in the activities of external financiers. The RMNCAH IC process was setup to foster collaboration. It was developed by the MOH, UN agencies, bilateral donors, and NGOs as a subset of the post-Ebola national investment plan. Given the limited resources and capacity of the country, the IC engaged in evidence-based prioritization of key bottlenecks. To ensure allocative efficiency, service coverage data across the continuum of RMNCAH services was compared to identify service bottlenecks, and over 20 RMNCAH indicators were compared for 16 counties. Consequently, areas with critical gaps were identified, including those that require multi-sector engagement such as adolescent health and civil registration and vital statistics (CRVS). Six counties with the worst RMNCAH indicators were prioritized. Furthermore, an improved resource allocation formula for distributing central funds to counties aims to reallocate resources based on needs. For these priorities, a resource map of partner funds was developed to ensure better alignment and improve efficiency of partner resources. US\$318 million in the next five years was mapped to the RMNCAH IC, with US\$127 million from domestic resources. In parallel, technical support to the health financing strategy is ongoing. The GFF is supporting the government to improve efficiency by implement performance-based financing, improving coordination of the pooled donor fund and improve the equity and efficiency in the use of available resources for example by supporting the implementation of a new resource allocation that will distribute resources according to needs and by identifying mechanisms through which the health budget execution rates will increase.

Although these examples focus primarily on work led by ministries of health, the ministry of finance also has a key role to play in this. Dialogue with ministry of finance officials can help to understand the relative performance of the health sector compared to other sectors on key efficiency indicators (related to, for example, human resources [wage bill] and budget execution rates). Given that the education and health sector often represent a large share of the government budget, ministries of finance are often keen to see how inefficiencies in these sectors can be addressed. Thus, the momentum for efficiency reforms may sometimes originate from ministries of finance rather than ministries of health.

To support countries to improve efficiency, a number of GFF partners (such as USAID, WHO and the World Bank) provide technical support to countries on undertaking an efficiency analysis, developing strategies to address key inefficiencies, implementation of these strategies and monitoring progress. This is partly in the context of health financing strategies and policies, but it also requires close interaction on the “non-financing” sources and solutions associated with, for example, service delivery, including drugs and the health workforce. The World Bank Group’s, and other partners’, broader (non-health sector) expertise in governance and public financial management, particularly related to the budget process and in procurement and fiduciary systems, has also proven useful to identify and address inefficiencies (e.g., those related to procurement of drug and human resources).

All GFF partners have a role to play in improving efficiency by reducing fragmentation associated with external financing, particularly in the area of RMNCAH. For example, partner can participate actively in processes to map external financing in the health sector. When key financial partners share information about their current and planned contributions (both on-budget and off-budget) with the government and development partners, gaps and possible duplications related to Investment Case priorities can be identified and addressed.

## CONCLUSIONS

Improving efficiency is a critical component of the GFF's Business Plan, highlighted in the definition of smart financing. It requires taking steps to do more of the right things, do them in the right places, and do them right. It must be part of a broader financing strategy at country level where the other components are raising more money for health and for RMNCAH, and pooling it to reduce financial barriers to access and to increase financial protection. Steps can be taken to improve efficiency immediately, even while waiting for increased funding for health. Indeed, evidence of improved efficiency can also help to persuade a ministry of finance or external partners that additional funding would be well-spent.

Methods for identifying the most important causes of inefficiency at the country level are available, and the range of possible policy options are fairly well established. However, implementing them can take time given the political nature of reforms aimed at improving efficiency, and the reforms even when implemented can also take time to produce results.

At the moment, the biggest gap is in the routine availability of the data that can be used to help identify the key causes of inefficiency and then to track progress. Most countries do not systematically review the efficiency of their health systems and how it is changing over time, and the available indicators that shed light on this are usually collected for other purposes. Many of the GFF countries will need to invest in the systems to routinely collect and collate their chosen indicators. This is an area where GFF partners can make a valuable contribution. GFF partners can also contribute to countries with which they partner to undertake efficiency analyses, develop and implement reforms and track progress as part of the implementation of the GFF process. This could be through policy dialogue with the country or technical and financial support. At the same time, anything the GFF partners can do to reduce inefficiency associated with external partner activities at the country level would also help, including being transparent about their activities in countries and trying to reduce parallel and fragmented mechanisms such as those linked to service delivery, financial flows, audit and monitoring and evaluation.

## ANNEX A: DEFINITIONS OF THE INDICATORS REPORTED FOR GFF COUNTRIES IN TABLE 3

**Median consumer price ratio of selected generic medicines (Public):** Median local unit price of selected generic medicines in public dispensaries divided by MSH international reference unit price.

**PHC share in THE:** Primary health care spending as a percentage of total health expenditure where PHC expenditure is based on a methodology developed by WHO and the Bill and Melinda Gates Foundation.

**Bed occupancy rate:** Number of beds effectively occupied for curative care divided by the number of beds available for curative care.

**Number consultations per day:** Number of outpatient visits per clinician per day.

**Ratio of nursing and midwifery personnel to physicians:** Average nursing and midwifery personnel density (per 1,000 population) divided by physician density (per 1,000 population).

**Caesarean rate:** Births by cesarean section divided by total live births.

**Antenatal 1 visit minus antenatal 4:** Difference between coverage of pregnant women receiving at least one antenatal care visit and those women receiving at least four visits.

**Absenteeism rate (%):** Average share of staff not in the facilities as observed during one unannounced visit.

**Budget execution rate:** The ratio of actual spending over approved budgeted figures.