Working paper

Understanding the institutions of domestic health financing decisions

Insights from immunisation services in three low- and middle-income countries

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Abstract

The Sustainable Development Goal of universal health coverage, coupled with the withdrawal of international donors in a growing number of countries, has underscored the need for resource prioritisation in the health sector in low- and middle-income countries. These shifts pose not only a financing challenge but also an institutional one. In this paper, profiles of Laos, Liberia and Kenya illustrate the different challenges countries were facing in 2019 and the complex institutional landscapes involved in health financing decisions. We identify three key domains where more targeted attention could be directed when developing donor transition strategies, when strengthening national decision-making processes, and in future research. These are the interfaces between (1) domestic and international financing, (2) national planning and budgeting, and (3) central and subnational levels of government.

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Acronyms

CDC	Centers for Disease Control and Prevention
EPI	Expanded Programme on Immunization
GDP	gross domestic product
GNI	gross national income
HBP	health benefit package
HIV	human immunodeficiency viruses
HPV	human papilloma virus
HSCC	Health Sector Coordinating Committee (Liberia)
HTA	health technology assessment
KEMRI	Kenya Medical Research Institute
LMICs	low- and middle-income countries
MFDP	Ministry of Finance and Development Planning (Liberia)
MoH	Ministry of Health (Laos, Liberia, Kenya)
NIP	National Immunization Programme (Laos)
NITAG	national immunisation technical advisory group
PEFA	Public Expenditure and Financial Accountability assessment
PFM	public financial management
SDG	Sustainable Development Goal
UHC	universal health coverage
USAID	US Agency for International Development
WHO	World Health Organization

1 Background and approach

Aspirations for universal health coverage (UHC) have highlighted the need for priority setting processes to determine how limited public resources are spent (Glassman et al., 2017). This concern is particularly salient for countries where rising national income levels may not offset the loss of development assistance for health as they become ineligible for donor support (Silverman, 2018; Engen and Prizzon, 2019). As low-income countries have grown their economies, public finances have often been reoriented towards infrastructure rather than health and education (Engen and Prizzon, 2019). Following the reduction of donor support, studies have documented declines in routine immunisation spending per child (Cambridge Economic Policy Associates, 2019), in immunisation rates (Jaupart et al., 2019), and reductions in HIV outreach, access to HIV care and quality (Wilhelm et al., 2019). Moreover, Yamey and colleagues (2019) found that relative to recent 'graduates', the next set of countries projected to pass transition thresholds have weaker health systems, governance and institutional quality ratings and higher levels of debt and inequality. This has led health officials and donors alike to ask how health gains can be sustained and UHC be achieved as international donors reduce their support to an increasing number of countries, while health sectors are funded through domestic resources instead.

This is not solely a financing challenge but also an institutional one. Institutions – formal rules, policies and procedures, as well as informal norms and practices (North, 1990) – shape resource allocation and implementation processes, influencing how individuals and organisations relate to one another and affecting their room for manoeuvre. Shifts in the composition of health financing involve different configurations of actors and agencies, each with their own mandates and established ways of working.

Over the last two decades, international resources for health increased significantly and research in the health sector was predominantly focused on the institutional challenges of *harmonisation* across many disease-specific initiatives and *alignment* between these parallel structures and national health systems (World Health Organization Maximizing Positive Synergies Collaborative Group, 2009; Biesma et al., 2009; Balabanova et al., 2010; Spicer et al., 2020). Now, there is increasing acknowledgement of the institutional challenges related to the interfaces between health and finance ministries and the relationship between central and subnational levels of government, which have received relatively little attention until recently (Abimbola et al., 2019; Welham et al., 2017; Miller et al., 2021). As health financing and allocation decisions become increasingly driven by national systems, it is important to understand how decision-making processes in the health sector relate to established national planning and budgeting processes, and how existing arrangements affect the scope of future policy options.

Most previous work has been written from the perspective of health or public financial management and has tended to focus on discrete mechanisms within broader processes.[1] Here we intentionally look at both health and public finance processes and key points of interaction within and among them. This scoping paper is driven by two broad questions: what are the institutional arrangements within which health policy and resource allocation decisions are made, including the processes and actors involved and types of evidence considered? And how might these existing arrangements shape efforts to marshal funds and prioritise essential health services using domestic resources and national institutions?

The paper reviews these questions in the context of immunisation services in three countries at different income levels and correspondingly different phases of donor transition: Liberia, Kenya and Laos. Each country experience highlights distinct challenges related to the level, composition and shifts in health financing and associated decision-making management and delivery systems, and related to changes in domestic institutional structures and processes. Together, they point to three key interfaces that should be taken into account when targeting future research in this area and when developing donor transition strategies and strengthening national decision-making processes. These are those between (*1*) *domestic and international financing systems,* (*2*) *national planning and budgeting, and* (*3*) *national and subnational levels of government*. By understanding institutional arrangements, including previous challenges and attempts to improve alignment, future investments can be grounded in a more realistic acknowledgment of the structures within which key stakeholders work and interact, and how this affects the scope and options for change.

This paper aims to engage those in the health and public finance communities who may be involved in donor transition efforts, in national decision-making and budgeting processes that affect health resource allocation, or in studying these processes. As such, it discusses issues that may be very familiar to some readers and unknown to others. For instance, the unintended effects of efforts to maximise attention and resources for specific diseases – fragmentation across health areas (i.e., immunisation, HIV, maternal health, non-communicable diseases) and across domestic and international funding sources – have been debated at length in the health sector (Buffardi, 2018), but public finance officials may be less aware of these critiques and

1 For example, the World Bank (2013) has examined whether medium-term expenditure frameworks affect the share of health expenditures in the budget and the volatility and efficiency of health expenditure. Lakin and colleagues (2018) review the design, processes and effects of programme-based budgeting practices in low- and middle-income countries (LMICs). Abimbola and colleagues (2019) examine mechanisms through which decentralisation affects health system performance, noting the mediating effect of context and capacity. Earlier research on vaccine decision-making processes has identified the health actors involved and types of evidence considered, noting a lack of clarity about the role of the ministry of finance despite the importance of funding availability (Burchett et al., 2012). More recent reviews have characterised ways of working and assessed effectiveness of national immunization technical advisory groups (NITAGs) specifically (Adjagba et al., 2015; Howard et al., 2018; Bell et al., 2019, among many others). Other scholars, including McCollum et al. (2018) and Waithaka et al. (2018), have focused on the subnational level, examining county health priority setting in Kenya.

attempts to address them. On the other hand, discussion of the different structures shaping wage, operational and capital expenditures is uncommon in health systems research, despite serving as the overarching framework for government spending controls and having implications for resource reallocation during the budget year.

Approach

Mindful of this paper's multiple intended audiences and the limited crossover among them to date, section 2 first identifies key features of each sector, both well-established and more emergent. Drawing on existing literature, it briefly reviews previous efforts to improve resource allocation in the health sector and aspects of public financial management (PFM) processes that influence resource allocation and disbursement from the perspective of a finance ministry. Within the context of broader resource allocation considerations, *immunisation financing and delivery decisions* and *national budget processes* serve as the entry points for our enquiry into health and public finance systems, respectively.

Section 3 then investigates the actors, decision-making processes and institutional arrangements in two lower-middle (Laos and Kenya) and one low-income country (Liberia). These income differences affect their eligibility for international support. In the case of immunisation financing, Liberia is in Gavi's Vaccine Alliance initial transition phase, Kenya is in preparation for transition to self-financing, and Laos is in the accelerated transition to self-financing. Kenya and Laos have also recently established new institutional mechanisms for advising on vaccine decisions and systematically assessing the value of a range of health interventions, enabling us to learn about the early phases of these efforts.

These country profiles provide a brief overview of the *context* and then characterise the *actors and processes*[2] involved in the three areas of interaction mentioned above: domestic and international financing, and associated decision-making, management and delivery systems; national planning and budgeting; and (in Kenya, the most highly devolved health system of the three countries) subnational planning and budgeting, including relationships among levels of government. Because interactions among entities involved in decision-making has been identified as a gap in previous studies, we provide a finer level of detail than is often documented. For each country, we also note specific ways in which different types of *evidence* are used to guide decision-making and steps that are currently being taken to strengthen capacity in this area. The dominant concerns in each country reflect the orientation of the individual profiles; thus, the profiles are not intended to be directly comparable but rather highlight particular considerations for countries at particular points of transition.

2 Context, actors and processes reflect the core elements of Walt and Gilson's (1994) 'policy triangle' framework for analysing health sector reform. The fourth element, policy content, is similar across the three countries, through our focus on immunisation.

Our country selection took place as part of a larger study of which these analyses are part. Selection was based on four criteria: *diversity* in country profiles; *relevance* to low- and middle-income countries (LMICs) that may need continued international support; *additionality*, aiming to avoid duplication of previous case studies that have already been conducted; and *feasibility*, including availability of information and access to key informants in a short timeframe.

Design, data collection and analysis took place between April and May 2019, with updates in December 2019. Because decision-making processes are often iterative and undocumented, we aimed to leverage long-term experience of research team members who worked closely with national ministries and institutes. This was supplemented by a review of primary and secondary source documents, including national health plans, budgets, Gavi joint appraisals, and Public Expenditure and Financial Accountability (PEFA) reports, as well as selected expert consultations. Authors used a standardised template to develop each country profile.[3]

While the country profiles were prepared prior to the Covid-19 pandemic, the issues they identify are just as important today. The full implications of the pandemic on donor transitions are not yet clear. Graduation timelines may be extended because of effects on national economies. On the other hand, it is possible that international funding for health services falls as the global economy slows and aid funding is reprioritised – such as towards the war in Ukraine. Regardless of this uncertainty, it's clear that the question of 'transitioning' out of aid remains an important issue for many countries in the longer term and that this is particularly true for the health sector, which has historically received high levels of international assistance.

3 The template covered: decision-making processes and actors, types and sources of evidence that are used to inform decisions, perceived strengths and conducive factors, perceived challenges, weaknesses and barriers, support needs/gaps, other settings where lessons may be most relevant, and information sources.

2 Sector-specific processes influencing resource allocation and spending controls

Although resource prioritisation is becoming more pressing for some countries, it is important to acknowledge that efforts to improve resource allocation and management through a variety of means have been ongoing for many years, with mixed success; and that this is true for both PFM and health systems strengthening.

Previous efforts to improve resource allocation in the health sector

Essential medicines lists and health benefit packages (HBPs) are two key ways the health sector has sought to prioritise health interventions (Glassman et al., 2017; Wright and Holtz 2017, 2017). Some forms of an explicit benefit package have been established in at least 64 LMICs (Glassman and Chalkidou, 2012), including in 13 out of the 16 countries in eastern and southern Africa (Todd et al., 2016). These packages have often reflected ambitious national health strategic plans – driven in part by global norms and targets – whose cost far exceeds the resources available to implement them. For example, the 2011–2016 Malawi Essential Health Package was costed at $44 per capita, despite a health budget of $14.50 per capita (Love-Koh et al., 2019). Other calculations suggest that no low-income countries, and only one-third of LMICs, can afford the basic package of highest priority interventions identified by the Lancet Commission on Investing in Health (Schäferhoff et al., 2019). Domestic and international actors are gradually acknowledging the need to consider economic constraints when formulating health policy (Rajan et al., 2016; Cashin et al., 2017; WHO, 2019). Therefore, more recent efforts have aimed to identify techniques to ensure HBPs prioritise the most cost-effective health interventions within the resource envelope available (Glassman et al., 2016; Love-Koh et al., 2019).

Some countries have formalised health technology assessment (HTA) processes or bodies to systematically evaluate the value of a broad set of health interventions (WHO, 2016a), drawing on available evidence to inform resource allocation in a transparent manner. HTA is less common in LMICs (Babigumira et al., 2016; Siegfried et al., 2017); however, the International Decision Support Initiative (iDSI), an international network of priority setting institutions that works with LMICs to build technical and institutional capacity for HTA, has reported increased demand for this type of support.

In many countries, specialised advisory groups also make recommendations to health ministries regarding specific interventions or health areas, including vaccines. National immunisation technical advisory groups (NITAGs), which advise on new vaccine adoption and other immunisation-related matters, are currently functioning in 123 countries

(NITAG Resource Centre, n.d.). Their context-specific recommendations aim to draw on local evidence, where possible. However, evaluations have noted particular gaps in cost-effectiveness data and economic expertise, as well as limited integration of NITAGs into broader national decision-making processes (Adjagba et al., 2015; Howard et al., 2018; Bell et al., 2019).

If these types of prioritisation processes are going to influence national health budgets, they need to be well-integrated into the systems guiding budget management. Yet, this is often overlooked in researching and reforming decision-making processes in the health sector. As just one example, prioritisation of health interventions continues to recommend international benchmarks, such as cost as a factor of gross domestic product (GDP) per capita, when nationally determined cost effectiveness thresholds have been shown to set a much stricter level of prioritisation (Ochalek et al., 2018).

More generally, a number of studies in the vaccine and donor transition literature have identified existing weaknesses in costing and financing and emphasised the significance of: (1) projecting and planning of vaccine financing; (2) resource mobilisation, including for roll-out costs; (3) attention to health systems capacity, such as procurement and supply chain management; and (4) broad engagement of a range of domestic and international stakeholders (Bao et al., 2015; Bennett et al., 2015; Resch and Hecht, 2018; Cernuschi et al., 2018; Mihigo et al., 2019; Gotsadze et al., 2019; Sambala et al., 2019; Saxenien et al., 2015; Gilbert et al., 2019; Ikilezi et al., 2020).

Notably, the 2019 evaluation of Gavi's transition policy highlighted the need at country level for better collaboration between the Expanded Programme on Immunization (EPI) and other health programmes, increased donor coordination, and deeper involvement of key actors, including finance ministries and subnational governments (Cambridge Economic Policy Associates, 2019). Despite these observations, these studies say little more about the specific role of the finance ministry beyond the importance of its involvement. The links between health policy and intergovernmental fiscal arrangements has also received little attention.

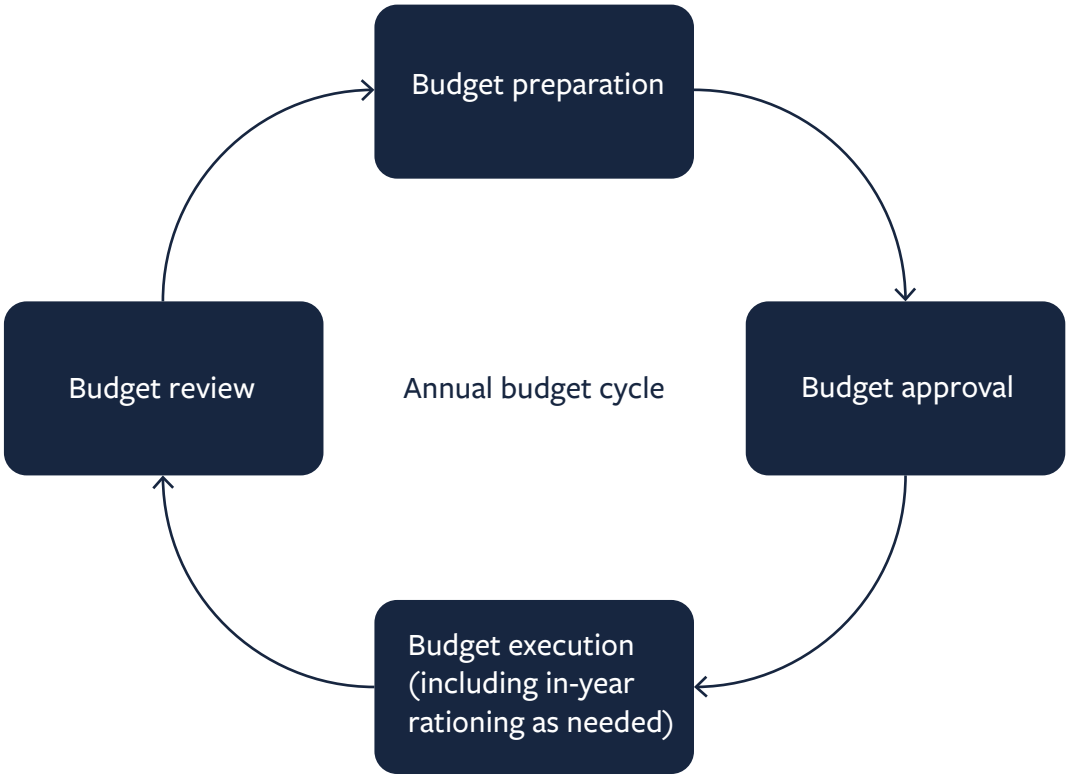
Features of public finance processes that affect health resource allocation

The transition from donor-supported vaccination programmes to a decision-making system that is strongly integrated into national systems for policy-making and financing clearly involves more than the initial recommendation from an advisory body like a NITAG or HTA. Resource allocation is not a one-time determination, but rather a series of decisions made by different people and organisations.

The decision-making structures for public spending are most commonly described in relation to the budget cycle, which consists of phases for budget preparation, approval, execution and evaluation (Figure 1). However, decisions will also be shaped by the basic accountability structure

for public spending. In most low- and middle-income countries, the budget is allocated and controlled with a focus on who is in charge (the administrative unit) and the transactions involved (the economic item).

Figure 1 Ministry of finance classifications and cycles



Generic economic cost classifications

Wage recurrent costs (e.g. health worker salaries)
Operational or non-wage recurrent costs (i.e. vacancies, supplies)
Capital or development costs (e.g. cold-chain equipment, health facilities)

Source: Adapted from Andrews et al. (2014)

There are several reasons why these basic features of financial management are important for understanding the links between priority-setting processes and actual resource allocations and spending. The literature on public sector budgeting frequently refers to the difficulties of developing and implementing reliable, policy-informed spending plans (Caiden and Wildavsky, 1980; CABRI, 2006; Wilhelm and Krause, 2008). We do not review the full range of decision-making processes involved in doing so, including macroeconomic, revenue and expenditure forecasting, and bottom-up cost estimation; instead, we focus on two issues that are particularly relevant as background to the country profiles.

First, the literature shows that there is a multiplicity of actors involved in spending decisions, and exactly who is involved often varies according to classifications of government spending

(e.g., wage recurrent, non-wage recurrent and capital spending). For example, the civil service regulations and payroll systems which determine wage costs and how funds can be spent on human resources are usually governed by a public service ministry. Competitive tendering and procurement regulations which affect non-wage operational expenses like vaccines are often overseen by a public procurement department or agency. Subnational spending will be influenced by laws governing intergovernmental fiscal relations and associated financing arrangements (Boadway and Shah, 2007).

Recent work from Malawi illustrates the challenges of budgeting for a health benefit package in this web of decision-making structures (Hart and Miller, 2022). One challenge is to allocate resources across the different organisations that deliver health services in line with the health benefit package. Another is to ensure that the right resources are also allocated to the right types of expenditure in the budget. There are also broader constraints, including the political reality that not all of the health budget will be spent on the most cost-effective interventions. Many of these lessons are relevant for vaccine decision-making processes.

Second, the literature also shows that many LMICs face persistent challenges executing budgets as planned (Simson and Welham, 2014; Allen et al., 2017; Mills, 2018; de Renzio et al., 2019; de Renzio and Cho, 2020; Piatti-Funfkirchen et al., 2021). There are many factors that can contribute to large differences between approved budgets and actual spending, but what is important for the context of this paper is that budget execution incorporates a further layer of decision-making structures that influence how plans are executed in practice.

When budgets are not fully financed, finance ministries often employ a strategy of 'cash rationing', where spending limits for line ministries and other units are allotted on a monthly or quarterly basis based on estimates of the available financing (Miller and Hadley, 2016). This can help the finance ministry maintain aggregate control of spending and inflation, but it often comes at the cost of greater unpredictability of resources for spending departments (Stasavage and Moyo, 2000; Fozzard and Simwaka, 2002; Welham et al., 2017). This may affect the ability of the government to bulk procure vaccines, to maintain reliable supply chains and cold storage facilities, and to plan and execute targeted vaccine campaigns.

Even resources that are released by the finance ministry may not reach the front-line service providers and may be used poorly (Welham et al., 2017; Gauthier, 2010). Public Expenditure Tracking Surveys suggest that this is generally more problematic for non-wage recurrent spending, and particularly resources delivered in-kind, such as drugs. In Morocco, for example, less than 30% of the official value of a sample of 16 drugs reached primary health providers (Gauthier, 2020). A study of immunisation financing in Tajikistan found that 98% of facilities faced a stockout of at least one type of vaccine in 2005 (Brenzel et al., 2008). These various examples illustrate how decisions made during budget execution are also critical when it comes to resource prioritisation.

More generally, it is important to recognise that international support for strengthening health sector decision-making has been matched by parallel efforts to strengthen financial management systems in order to improve allocative and technical efficiency within an affordable overall level of spending (Schick, 1998; Schick, 2013; World Bank, 2013; Moynihan and Beazley, 2016; Von Trapp et al., 2016; Allen et al., 2017; Fritz et al., 2014; Barroy et al., 2018). There are also long-term questions about the role that donors play in reinforcing or undermining national decision-making and financial management processes (Hart et al., 2015). One of the contributions of this paper is to help join the discussions across the health sector and public financial management communities and to reflect both national and international structures used in decision-making.

3 Case studies of country decision-making processes and institutional arrangements

The sector-specific features described so far reflect established and emerging policies and practices, which are applied in various forms in unique country contexts. As noted, the three countries profiled here are situated at different points in the donor transition spectrum. Laos is at one end, in Gavi's accelerated transition phase, and Liberia is at the other, expected to remain eligible for international support for the foreseeable future. Kenya is in the preparatory transition phase and also offers insights into decision-making in a devolved governance system. Table 1 illustrates how they vary along key demographic, health, economic and governance indicators.

Table 1 Demographic, health, economic and governance country profiles

	Laos	Kenya	Liberia
GNI per capita[a]	$2,570	$1,750	$580
Population size[a]	7.2 million	52.6 million	4.9 million
Infant mortality rate[a,b]	36.4	31.9	62.2
Under 5 mortality rate[a,b]	45.5	43.2	84.6
Health spending per capita[c]	$52	$82	$81
Health spending as a share of GDP[c]	2.4%	6.3%	14.7%
Government health spending[c]	33%	34%	10%
Out-of-pocket spending[c]	49%	27%	42%
Development assistance for health[c]	14%	24%	42%
Cumulative Gavi support[d]	$45.3 million	$504.9 million	$51.4 million
Proportion vaccine support	68%	90%	61%
Proportion non-vaccine support	32%	10%	39%
Transition phase	Accelerated, fully self-financing in 2023	Preparatory, accelerated in 2022	Initial
Government effectiveness rank[e]	21	38	9
Control of corruption rank[e]	13	25	19

Sources: [a]2019 World Development Indicators; [b]per 1,000 live births; [c]2016 rates, Chang et al. (2019), proportions do not total to 100% in source article; [d]Gavi disbursements by year paid (31 July, 2019), Gavi country fact sheets and co-financing information sheets (2019a, 2019b); [e]2019 Worldwide Governance Indicators – percentile rank among all countries 0 (lowest) to 100 (highest) rank.

NB: There are some uncertainties related to spending figures quoted here. In the past, GDP in Liberia has been significantly underestimated while per capita spending for 2016 will have risen above normal levels following the Ebola outbreak in 2014. The 2018 World Development Indicators report current health expenditure as percentage of GDP as 6.7%, 5.2% and 2.2% respectively.

Each country experience highlighted particular financial and institutional challenges at the time of the research. In Laos, this was prioritising resources and managing transition planning in anticipation of donor withdrawal at the end of 2022. In Liberia, it was sustaining basic health services given severe revenue shortfalls and the implications of heavy reliance on external support. In Kenya, it was coordinating central and subnational roles as the country transitioned from a centralised health function in a devolved system following the adoption of a new constitution in 2010. In the rest of this section, we look in greater detail at specific actors and processes associated with decision-making in each country and the interfaces between domestic and international financing, national planning and budgeting, and (in Kenya) decentralisation.

Laos: prioritising resources and managing transition planning in the face of impending donor withdrawal

Context

Of the three countries profiled here, Laos has the highest gross national income (GNI) per capita, which has affected its eligibility for both Gavi and International Development Association funds. This change had occurred nearly a decade earlier than projected in 2009 (Kallenberg et al., 2016). At the time of research, Laos was in Gavi's accelerated transition phase, with plans to move to fully self-financing in 2023, unless an extension was granted. This date is one year later than scheduled as a result of a freeze in country eligibility status instituted by the Gavi Board in response to the Covid-19 pandemic. Thus, despite attempts to plan for a phased transition, the timing has shifted in both directions, with less predictability than intended.

Even without considering the impact of donor transitions, Laos had much lower health spending rates, a higher proportion of out-of-pocket spending, and higher infant and child mortality rates than Kenya – the other LMIC in our small sample of countries. In preparation for donor withdrawal, the country was in the midst of several institutional shifts to strengthen its evidence base and advisory processes, with a focus on building capacity for economic evaluation. If domestic resource mobilisation is insufficient to offset the loss of international funds, the country may have to suspend introduction of new health services or reallocate funding within and/or across sectors within a lower budget ceiling.

Domestic and international financing

Laos has received Gavi funding since 2000/01 and has been progressively increasing its contribution to immunisation costs for more than a decade. The government began co-financing Gavi-supported vaccines in 2009, and in 2012 began financing traditional vaccines (Masaki et al., 2017).[4] In response to the polio outbreak in 2016, Laos also received financial support for vaccines

4 Traditional vaccines include BCG, Hepatitis B (birth dose), Pentavalent, Poliovirus, Meningococcal and Tetanus.

from the Japanese Rotary Foundation, through UNICEF. The World Health Organization (WHO), the Centers for Disease Control and Prevention (CDC), UNICEF and the Clinton Health Access Initiative provide technical, advocacy and delivery support to the Ministry of Health for vaccination programmes.

While government expenditure on health has risen over time, it is not increasing sufficiently to cover the decrease of Gavi funding. General government health expenditure as a proportion of general government expenditure has grown steadily since 2012 (World Bank, 2018). The government set a national target for healthcare at 9% of general government expenditure; however, a Joint Appraisal indicated that in 2017 general government health expenditure was 7.2%.[5] Relative to other countries transitioning from Gavi support, vaccines represent a much higher proportion of general government health expenditure in Laos: 2% as compared to a median of 0.6% (range 0.2–3.4%) (Kallenberg et al., 2016). However, even if this priority is maintained in the future, vaccine supply is not the sole funding concern post-transition. The Laos Government will need to allocate funds for other operational costs including training, delivery, cold chain and transport, while budgetary planning will also need to factor in other competing healthcare priorities.

At the time of research, funding gaps had already affected new vaccine introduction. Human papilloma virus (HPV) and rotavirus vaccines were recommended by the NITAG and approved by the government for inclusion in the National Immunization Program (NIP), which leads coordination and implementation of immunisation services. Both were planned to be co-financed by Gavi, and the NITAG played a key role in applying for this funding. The HPV vaccine has since been introduced. Implementation of the rotavirus vaccine, however, was initially postponed due to delays in vaccine supply shortages from the manufacturer and again just in the past year because of concerns about financial sustainability.

This reflects a broader mismatch between the transition plan and actual financing. The Laos Government, with support from partners, developed a five-year transition plan for 2017–2021 that maps out steps to be taken ahead of the graduation and members of the recently reformed NITAG participated in a 'Learning Network for Countries in Transition' meeting in 2017. However, there appears to be a disconnect between the transition plan and the NIP's multi-year planned budget (2017–2020). According to the 2018 Gavi Joint Appraisal, only five activities noted in the transition plan were accounted for in the multi-year budget. The Joint Appraisal recommends for the NIP to work with other departments to align the immunisation transition plan with other transition plans including HIV, malaria, tuberculosis, as the plans are generally fragmented (Gavi, 2018).

5 The exact reference point is not clear from published sources. The World Development Indicators dataset presents a lower figure of 4.1% as the proportion of general government expenditure spent on health. Moreover, USAID (2019) notes that the 9% national target uses a definition that also includes user fees and some external assistance.

National planning and budgeting

The NIP, which is housed within the Mother and Child Health Center in the Department of Hygiene and Health Promotion, directly manages purchasing, supply and stock management and vaccine delivery, including cold-chain management. This was not the case in Kenya or Liberia at the time the research was conducted. Based on the approved immunisation budget, the central government provides funding to the NIP, which then transfers funds to provinces on a quarterly basis. The budget plan is approved only after endorsement by the National Assembly for the upcoming year, a process which usually occurs in the final quarter of the preceding year (Masaki et al., 2017).

The general budget institutions in Laos had strengthened significantly in the decade up to the 2019 PEFA assessment. The 2018 budget (January–December) was finalised at the end of March 2018 (Gavi, 2019b), though the PEFA assessment suggests this has not been a problem in most years (World Bank, 2019). Overall scores of aggregate budget credibility improved along with a number of specific public financial management processes. The PEFA assessment does, however, note weak links between the high-level, multi-year strategic plans, the sector strategic plans supported by international donors, and the annual resource allocation provided through the budget. Cash rationing was still a feature of fiscal management, with salaries given priority treatment and other spending managed on a first-come, first-served basis and health facilities relying on cash from user fees (World Bank, 2019). Overall, the public financial management systems were able to support overall fiscal control but showed considerable weaknesses in the areas needed to enhance allocative or technical efficiency.

In the past, immunisation decisions were made by senior health officials in the NIP. As noted, in more recent years, the Laos NITAG has provided technical advice to the Ministry of Health (MoH) on the prioritisation of new vaccines and immunisation activities in general. Following standard NITAG protocols, their recommendation first went to the MoH for approval and then to the Ministry of Finance (and in some cases, the Ministry of Education). NITAG members agreed during their first meeting at the end of 2017 that burden of disease, vaccine cost and efficacy would be the most important criteria, and that it should eventually be mandatory for cost-effectiveness evidence to be required before a vaccine could be introduced. Vaccine supply and delivery were also central considerations.

At the time of research, the NITAG intended to establish a committee to develop a formalised set of vaccine decision-making criteria. As other countries have reported (Howard et al., 2018; Bell et al., 2019), the NITAG has indicated challenges in terms of expertise and a lack of funding; it was seeking additional financial support to be more independent from the MoH, as NITAGs are intended to be. In the past, the CDC has provided support for NITAG capacity-building training and has invested in data quality and surveillance systems, including the Stop Transmission of Polio Immunization and Surveillance Data Specialists project.

A formalised HTA unit consisting of five staff members was in the process of being established in the Laos University of Health Sciences. By June 2019, this had included training on HTA concepts, including measuring healthcare costs and outcomes, and support for a cost-effectiveness study on introducing a typhoid vaccine. The study and subsequent HTA studies were intended to feed into NITAG deliberations. There was no direct funding earmarked to finance the HTA unit and the staff cited a lack of local data as a barrier to conducting HTA studies. Nevertheless, there was great interest and momentum to drive HTA forwards in Laos.

Thus, as the transition process in Laos nears the end, additional decision-making mechanisms are in the process of being established. Spending controls maintain discipline over the aggregate budget, but there remain gaps between plans, budgets and actual spending at the sector level. If current trends continue, priority setting will take place within a lower budget ceiling after 2022, and this is likely to compound the difficulty of prioritisation and budget implementation in Laos.

Liberia: sustaining health services given revenue shortfalls and managing the current and future implications of heavy reliance on external support

Context

Liberia is at the other end of the transition spectrum to Laos. The country's income level places it in the initial phase of the Gavi transition process, where it is projected to remain for the next five years. At the time of data collection, Liberia was facing a significant revenue shortfall, limiting the ability of the government to manage basic service delivery. Total revenues and grants had fallen from 33% of GDP in 2016 to an estimated 26% of GDP in 2018, almost doubling the budget deficit (IMF, 2019). The country faced heightened public and donor scrutiny regarding stockouts (Dodoo, 2019a; Sonpon, 2019; Koinyeneh, 2019) and use of external funds for purposes other than those agreed upon (Senkpeni, 2019), a strike by the National Health Workers Union of Liberia (Clayeh, 2019), and the resignation of the Director-General of the National Public Health Institute (Dodoo, 2019b).

Liberia's experience highlights the challenge of delivering basic health services in a low-income country that has seen successive waves of political and economic difficulties, and of managing a cohesive health system that is heavily financed by international donors. Most of the institutional structures in place in Liberia overlay what aim to be strategic health and investment plans across multiple programmes delivered by a wide range of actors, with the government predominantly responsible for wage costs. Moreover, much of the attention on Liberia from outside of the country, including research, has been focused on the Ebola outbreak in 2014–15 (Mussah et al., 2017; Wesseh et al., 2017; Wagenaar et al., 2018), a narrative that many in the country would like to move beyond.

Domestic and international financing

Since the return to peace in the early 2000s, Liberia has relied on external funding for essential health services, including immunisation. Much of this funding is managed off-budget, reflecting low confidence in government systems. Indeed, Liberia ranked much lower on government effectiveness in the World Governance Index than Kenya and Laos, although it compared more favourably on the indicator for control of corruption.

According to the 2018/19 budget, the government appropriated just under $82 million and disbursed just under $62 million (76%) to the health sector, relative to aid projections of $90 million, of which $55 million (61%) was disbursed. While this suggests that government contributions accounted for more than half of total health expenditures, international funding nevertheless represented a very large proportion of health financing compared to Kenya and Laos. This also indicates, however, that estimates of domestic resources were more reliable than external funding sources in that year.

There is, in effect, a division of labour between government and off-budget international resources and management systems, with the former covering wage costs, and the latter covering other operational expenditures including vaccines, which are often not managed through national systems. For example, Gavi-funded supply chains are separate from other medical consumables, driven in part by cold-chain requirements. Managing systems off-budget may be, or be perceived to be, more efficient, easier to track, and less of a fiduciary risk. However, when resources are not disbursed as planned or when donors eventually withdraw, it will require a substantial reorientation of national funding to cover non-wage costs, and either the merging of predominantly separate processes or the creation of new management systems.

National planning and budgeting

In Liberia, top-line national budget priorities are directed by the President and Ministry of Finance and Development Planning (MFDP). MFDP technocrats then allocate fiscal ceilings to spending entities – a ministry, agency or commission – which receive separate appropriations, within which the spending entity allocates across specific line items. The extent to which sectors can lead their budget planning varies across ministers and depends on the fiscal space, which changes annually. The 2016 PEFA assessment indicated that the aim of phasing out of cash rationing had not yet been achieved and spending entities continued to be issued in-year expenditure limits on a monthly basis (AECOM, 2016).

The Ministry of Health (MoH) has held a reputation for being one of the top-performing ministries in the country. Nonetheless, due to fiscal constraints and the large proportion of international funding, donors have a substantial influence on the sector and the design of its interventions. The Health Sector Working Group, chaired by a senior MoH official, has been more active in budget prioritisation in previous fiscal years than was the case in 2019. Sector policies,

planning and resource allocation are guided by two strategic documents: the National Health and Social Welfare Policy and Plan 2011–2021 and the Investment Plan for Building a Resilient Health System in Liberia 2015–2021. Cross-national analyses indicate that fewer cost-saving interventions were included in these plans relative to other LMICs (Leech et al., 2020).

Liberia does not have a NITAG or an entity leading HTA. However, there are numerous working groups and coordination mechanisms: across programmes within one ministry, across ministries and agencies, within the legislature (Parliamentary Forum for Immunization), among civil society groups (Liberian Immunization Platform), and between government, non-governmental organisations and international organisations. The Health Sector Coordinating Committee (HSCC) was co-chaired by the Minister of Health and WHO and served as the highest oversight body for the sector. The MFDP, Gavi and other international agencies were members. The HSCC met quarterly and oversaw multiple technical working groups. It received advice on policy options from the EPI Technical Coordination Committee. Other coordination bodies included the Liberia Coordinating Mechanism, which oversaw Global Fund activities, and the Pool Fund Steering Committee, which was in the process of being phased out when this research was conducted.[6]

In addition to the HSCC, the EPI manager also fed into the budget management committee of the Ministry of Health. This committee participated in pillar meetings convened by the MFDP for line ministries to communicate their priorities and collectively advance the medium-term national development strategy, the Pro-Poor Agenda for Prosperity and Development. Drafted by the Executive and adopted by the national legislature, this strategy includes plans to strengthen routine immunisation, outreach and mass campaigns for vaccine-preventable diseases.

Liberia had an established system for reporting and monitoring of immunisation performance at health facility, county and national levels, which aimed for quarterly verification of information and biannual data harmonisation exercises. Liberia has been part of a regional project to strengthen national health research systems (Sombié et al., 2017) and a US Agency for International Development (USAID) Strengthening Routine Immunization Systems initiative. In 2017, the Government worked with Gavi, the Global Fund and WHO to conduct a nationwide data quality review, intended to be used to develop an evidence-based Data Quality Improvement Plan for the health sector.

Despite these coordination mechanisms and investments in data systems, planning and budgeting functions were not consistently aligned. For instance, county-level needs assessments, which could provide evidence to guide resource allocation, sometimes took place after budgets had already been set. Taken together, Liberia's experience suggests that continued efforts to link the

6 The Pool Fund was established in 2008 to support implementation of the National Health and Social Welfare Plan. The Steering Committee was created to provide oversight of the fund, with membership open to all donors who had entered into the Joint Financing Agreement with the Ministry of Health. See Hughes et al. (2012) for a discussion of the Fund based on early experiences.

activities of a wide range of stakeholders have not fully addressed the challenge of alignment, both across national planning and budgeting processes and between domestic and internationally funded functions. Although the country will continue to be eligible for international support for some time, the persistence of separate donor systems poses challenges in both the near and long term in terms of predictable distribution of resources and parallel structures that will need to be integrated.

Kenya: coordinating central and subnational roles in a devolved context

Context

Kenya is facing dual transitions with the implementation of devolution since 2013 and changes in the amount and composition of its external sources of financing. This profile therefore focuses on subnational as well as national decision-making processes.

At the time of research, Kenya was in Gavi's preparatory transition phase and expected to move to accelerated transition in 2022. As mandated in the 2010 Constitution, Kenya has decentralised responsibility for health service delivery to 47 semi-autonomous county governments. County governments are formally responsible for the provision of health services, including deciding the size of the budgetary allocation for health, and how this is allocated across human resources, operational inputs and capital investments, while the central government has a formal policy and regulatory role, led by the Ministry of Health (MoH). With respect to immunisation services, central government plays a more active role in procuring and distributing vaccines, in part due to the continued international support from Gavi.

Domestic and international financing

Kenya spends significantly more on health per capita and as a share of GNI than Laos, despite having a lower GNI per capita. At the time of the research, the Kenyan government funded traditional vaccines (measles, polio, tetanus), with penta, pneumococcal, rotavirus and yellow fever vaccines co-financed by Gavi. Although health services are a devolved function, county government authority influences spending on human resources and capital investments more than on vaccines, since financing and procurement of the latter are still largely centralised and driven by donors. The national government distributes vaccines to different regions, but counties are responsible for ensuring these reach facilities and for purchasing syringes, safety boxes and other complementary commodities (Simoneau and Bliss, 2020).

To support coordination with donors, national and county EPI focal persons and those in charge of the vaccine supply chain conducted joint annual planning and forecasting workshops. An Inter-agency Coordinating Committee on Healthcare Financing was established in 2007, prior to devolution in 2013, and received capacity-building support from USAID and PEPFAR (the US President's Emergency Plan for AIDS Relief) to reinvigorate this body in the early years

of devolution. However, some accounts suggested that coordination across Kenya's major health programmes (EPI, HIV, tuberculosis and malaria, nutrition, non-communicable diseases) and their donors was not particularly effective. Donor presence also varied considerably at the subnational level, with many external actors in some counties and none in others, with likely implications for equity.

National planning and budgeting

Broad health sector policies are set through the strategic planning process, typically drawing on epidemiological and coverage data from the national Health Information System. The National Health Strategic Plan should be linked to financial allocations in the budget through the medium-term expenditure framework, a process coordinated by the National Treasury. The Kenya Essential Package for Health and essential commodities list are important policy tools and act as an anchor for national priorities, including setting standards for services at different levels of care across the health service delivery system (Otieno et al., 2021). However, past analysis suggests that planning and budget processes are not generally well integrated, with the decisions and incentives associated with the annual budget process generally dominating (Tsofa et al., 2016; Waithaka et al., 2018). As in Liberia, the Treasury uses monthly cash rationing to limit spending by ministries and agencies according to the resources available at that time (ECORYS, 2019). This can sometimes affect the release of funds to county governments (Muwonge et al., 2022). Immunisation services may not be as significantly affected by these challenges as other aspects of the health system because vaccine procurement and distribution continue to receive significant financing and logistical support from international partners, most notably through Gavi.

In the years running up to 2020, Kenya had begun to establish more formal decision-making processes to inform priority setting. The nascent Kenya NITAG advised on the adoption of new vaccines and other immunisation matters, although a lack of national data reportedly made its decisions more difficult (Dawa et al., 2019). However, relative to many other countries on the continent, Kenya has more established research centres, including the Kenya Medical Research Institute (KEMRI), which has maintained strong institutional collaborations with local and international research institutions, including the US Centers for Disease Control and Prevention (CDC) since 1979 and the Wellcome Trust since 1989. More recently, the Kenyan government entered into a collaborative agreement with the Government of Thailand to access technical support and collaborate on UHC implementation. Subsequently, the KEMRI Wellcome Trust Research Programme, Thailand's Health Intervention and Technology Assessment Program and Imperial College have been collaborating with the MoH to drive forwards the institutionalisation of HTA in Kenya though technical capacity-building projects. Looking towards Gavi's departure, questions have already been raised about the value of more expensive vaccines relative to other health interventions (Simonsen et al., 2019).

Subnational planning and budgeting

At the county level, primary health services are primarily financed by a large unconditional fiscal transfer (termed the 'equitable share') using a formula proposed by the Commission on Revenue Allocation and debated and approved by the Senate. County governments use these unconditional grants, together with their own revenues, to varying extents to fund health services. Counties also receive conditional grants earmarked for specific health services that cannot be reallocated to other sectors like the equitable share. Counties spent 28% of their budgets on health on average in 2019/20. The national health budgets in 2019/20 totalled around $912 billion, and county health budgets around $1.2 billion.[7]

Counties decide how much to allocate to health services through their budgeting and County Assembly legislative process. This process is led by the County Treasury, with inputs from the County Department of Health based on its annual work plan, with accompanying quarterly budgets. As at the national level, planning and budgeting are supposed to be linked sequentially, with a five-year county development plan and annual development plans intended to influence the content of the budget. In practice, however, the research has shown that the budget process takes de facto priority and allocations generally build incrementally on the previous year's budget, with county political processes having a significant influence on priority setting (Tsofa et al., 2016; Tsofa et al., 2021).

Thus far, devolution has resulted in considerable variation in decision-making processes, healthcare access and delivery across counties (Ministry of Health, 2016; Tsofa et al., 2016; Waithaka et al., 2018). There are examples where previously marginalised counties have expanded access to services, driven by the strong emphasis on equity that underpins the formula for the equitable share. There are also significant improvements reported in order fill-rates for drugs in health facilities. At the same time, the process of devolution appears to have exacerbated delivery challenges in some areas, reflected in declining coverage for key antigens, even in regions that have previously performed well (Ministry of Health, 2016). Local politics may be encouraging higher spending on more visible curative interventions, staffing and infrastructure and lower spending on preventive services (Blampied et al., 2016; McCollum et al., 2018). Some county governments have broken with the standards set in the Kenya Essential Package for Health, investing in more complex services in facilities that would not qualify to hold them under national policies (Opwora et al., 2009; Waithaka et al., 2018). The degree to which this has affected immunisation services is not well documented, with one report suggesting that immunisation coverage has risen for the country as a whole but has fallen back in some poorly performing counties (Simoneau and Bliss, 2020).

As Kenya becomes less reliant on external support, it may increase the debate over the current distribution of spending responsibilities across central and county governments. The integration

7 KSh 93 and 124 billion respectively.

of HTA and NITAG recommendations into decision-making processes may enable national health policy to be guided by more transparent, systematic evidence assessments and to incorporate economic considerations in a more substantive way, which may change the composition of health services the government provides. How effectively the central government is able to enforce national standards, however, will likely depend on the future of intergovernmental relations and coordination. Some research on vaccine prioritisation suggests that counties were demanding greater involvement in the policy-making process at the national level (Otieno et al., 2021); but whether such pressures will lead to a change in responsibilities across central and county governments is, as yet, unclear.

4 Discussion and conclusions

A comparison of the specific contexts in Laos, Liberia and Kenya provides insights into the distinct challenges faced by countries at different stages of the international donor transition, but also reveals the complex network of interrelated decision-making processes and structures to coordinate them. What implications does this have for the international community as it seeks to support countries transition? What further questions does it raise?

Distinct challenges across national contexts

The case studies have illustrated how each country is facing different types of uncertainties in their resource base and role shifts among different sets of actors. The challenges they face underscore the interdependence of health and finance decisions, and of financial and institutional transitions away from donor dependency. To a large extent, the transition will be highly context specific, with each country having to negotiate a range of economic, political and institutional hurdles. However, each of the cases has also raised issues which will be relevant to other countries: fiscal constraints, intergovernmental relations and donor coordination.

Of the three cases offered in this paper, Laos was furthest along the Gavi transition process. Some of the institutional reforms needed for transition are being put in place as the NIP is already managing vaccine procurement and delivery and the country has been investing in economic evaluation capacity. However, low levels of domestic resourcing in Laos present a significant challenge for aid transition in the health sector. More specifically, domestic resources are not increasing sufficiently to offset the impending loss of external funds. This has already affected vaccine access, with the country in the difficult situation of suspending the planned rollout of the rotavirus vaccine.

The Kenya experience illustrates the particular challenges involved in managing health policy and spending in a context of significant and rapid devolution in the health sector. It highlights the importance of delineating responsibilities between levels of government and establishing the processes and trust needed to coordinate decision-making where there is shared responsibility. The task of defining responsibilities is compounded by variation across health areas, as they are differentially affected by the presence of international donors. These tensions will take time to resolve as political attention is focused on other aspects of a devolution process that goes well beyond concerns with health service delivery.

Liberia is almost certainly many years away from losing its eligibility for international support based on its GNI. Institutional arrangements for budget management and health decision-making are generally weak, though the health sector is stronger relative to most other sectors. External aid provides an important source of financing for services, but the poor predictability

of international funds affects budgets and service delivery. Furthermore, if unresolved, the persistence of parallel structures will make the future financial transition much more difficult since it will also require substantial changes in management and delivery systems.

Complex landscapes and persistent alignment challenges

Despite their unique situations, the institutional challenges across the three countries are in some ways more similar than one might expect given their different economic, epidemiological and governance contexts. Common among them are complex institutional landscapes, with many entities involved in decision-making and delivery within and across sectors and levels of government.

The density and diversity of *actors* involved is noteworthy in its own right. The current situation reflects the legacy of active involvement by international agencies, including bilateral engagements and the major global health initiatives of the 2000s. The influence of global trends on national systems continues today in a different form, with more recent global efforts encouraging further investment in evidence-informed decision-making and prioritisation processes, including the establishment of new groups and processes to advise on national-level immunisation and health technology assessment. As Liberia illustrates most prominently, there is a plethora of coordination mechanisms that attempt to facilitate interaction among the many actors involved in health decisions, financing and delivery. This proliferation of entities has implications for staff time, which rarely features in discussions on human resources for health. Instead, these which are overwhelmingly oriented towards delivery rather than coordination, analysis and decision-making (WHO, 2010; 2016b).

In terms of national decision-making *processes*, there are multiple points at which resource prioritisation takes place. These processes operate along different timeframes. National and subnational development plans, health sector strategies and NITAG recommendations generally set long-term priorities. On the other hand, financing decisions are often dominated by the annual budget process or the need to ration cash in-year on a quarterly or monthly basis depending on the resources available. Despite concerted efforts over the years to coordinate among many actors and to better link national planning and budgeting processes, alignment is clearly a persistent challenge in all three of the country cases explored here.

The *evidence* base informing decision-making processes draws on established monitoring systems and research studies, and all three countries have received external support in the past to strengthen these foundations. In Liberia and Laos, these have been time-bound initiatives, whereas Kenya's long-term research collaborations have been institutionalised for decades. These initiatives, and more recent efforts to strengthen NITAGs and HTA in Kenya and Laos, have sought to address specific evidence gaps. However, national actors continue to express a need for better data to inform their decision-making processes.

Implications

Although attention is shifting to the domestic arena – to relationships between ministries and across central and subnational levels of government – future efforts to improve evidence-informed resource allocation nevertheless still have to contend with existing institutional configurations that have been shaped by the past. They would also do well to learn from previous attempts to improve coordination and process alignment that have not fully resolved these challenges. For instance, creating new entities, which has been the tendency in the past, may not improve and could potentially exacerbate coordination issues and undermine broader priority setting.

Alignment challenges are not simply matters of structure or coordination. The overall aims and orientation of the health and finance sectors are distinct. The goal of Kenya's Ministry of Health, for example, is equitable, affordable, accessible and quality healthcare for all, whereas the National Treasury aims to achieve shared growth through prudent economic and financial policy (Ministry of Health, 2017; National Treasury; 2020). These mandates are reflected in institutional arrangements and practices, including national health plans and essential health packages that exceed available resources, the proliferation of donors to fill gaps, and financial management controls that offer limited discretion, flexibility and predictability for spending ministries.

In this context, reform efforts to strengthen one area may have unintended consequences for the other. Dedicated budget lines for vaccines, as called for in the Global Vaccine Action Plan (2013), have been seen as a way to protect resources for this purpose (Griffiths et al., 2020). This works in part by (intentionally) restricting the flexibility that ministries of health have to reallocate resources away from immunisation budget lines during the year. On the other hand, many countries are implementing programme budget reforms in order to increase spending efficiency; and the WHO has recently been encouraging governments to take these reforms further (Barroy et al., 2022). Budget managers are given more flexibility over financing in return for clearer links between financing inputs and service outputs. This has sometimes reduced transparency over immunisation services because they represent a relatively small part of the health budget (typically 1% of health spending or less) (Griffiths et al., 2020).

Importantly, each of the many decision-making processes and domains of interaction have their own political and power dynamics, which may manifest in different ways given the distinct configurations of actors and organisations. Resource allocation decisions will never be purely technical exercises. Priority-setting processes aim to make these debates and decisions more transparent and informed by evidence, including economic factors. How reforms are introduced will either reinforce or seek to change existing power structures and create political tensions. This was evident in the Kenyan case, where devolution has raised important questions about the roles of central and local government in policy-making for immunisation.

More broadly, health sector actors could also further consider how policies and priority areas may be affected by regulations guiding different expenditure categories (wage, operational and capital costs) and by cash rationing, and how health policies could better account for these reallocation processes throughout the budget year. Similarly, the fiscal challenges associated with transition from aid to domestic financing raise important questions about the use of generic cost-effectiveness measures that are not well suited to making trade-offs across interventions in a highly constrained budget (Newall et al., 2014; Kazibwe et al., 2022). International actors should explicitly consider how new investments and initiatives will relate to existing institutional arrangements; appraising the potential unintended consequences for other health or finance goals could help to build upon rather than undermine previous efforts.

Our research suggests that there are incremental steps that could be (or are being) taken. As they transition from donor support, Kenya and Laos are increasingly prioritising economic evidence in health policy decisions and are strengthening national capacity to conduct these analyses. They and other countries could further develop budget-constrained priority-setting processes, as Malawi is currently attempting. Ahead of financial transitions, Liberia could progressively start to integrate procurement and supply-chain processes and could more intentionally time county-level needs assessments around the budget cycle to increase the likelihood they will inform resource allocation.

Areas for future enquiry

How exactly financial and institutional transitions take place in different national contexts remains to be seen. Indeed, it is an area ripe for future enquiry. This scoping paper has identified three interfaces where more targeted attention could be directed: between domestic and international financing, between national planning and budgeting, and between central and subnational levels of government. Better documenting and analysing the interactions among actors, their roles and decision-making processes within and across these domains would help to characterise incremental changes as they are unfolding.

Within each of the domains, there is a series of questions that could be explored. How do prioritisation and re-budgeting processes operate in practice in different national contexts, including as economies stagnate, decline or improve and as they pass through phases of donor transition? How are previously vertically oriented programmes, including but not limited to immunisation, being integrated into the UHC umbrella, if at all? And importantly, what are the effects of financial and institutional changes on health access, quality and outcomes? How are countries balancing the trade-offs that must be made? How are these effects borne differentially across different subpopulations?

Against the backdrop of donor transitions and a series of efforts over the years to improve resource allocation and evidence-informed decision-making, there is evidence of growing interest from both the health and finance sectors to work together in more purposive ways. It is imperative

that momentum to do so continues to build. If the status quo persists, developing additional evidence-informed health policy recommendations may not influence resource allocation or disbursement to the extent intended (Hart and Miller, 2022). Similarly, initiating further PFM reforms may not necessarily translate into better health budgets (Welham et al., 2017).

The country profiles and analyses presented here represent an initial step in understanding existing institutional arrangements – the constraints and complications as well as promising foundations on which to further embed more integrated evidence-informed decision-making across health and finance sectors. As more concerted efforts are made to bridge resource allocation processes, this will provide the opportunity to investigate these questions in much greater detail, within and across dynamic national contexts.

References

Abimbola, S., Baatiema, L. and Bigdeli, M. (2019) 'The impacts of decentralization on health system equity, efficiency and resilience: a realist synthesis of the evidence' *Health Policy and Planning* 34(8): 605–617.

Adjagba, A., Senouci, K., Biellik, R., et al. (2015) 'Supporting countries in establishing and strengthening NITAGs: lessons learned from 5 years of the SIVAC initiative' *Vaccine* 33(5): 588–95.

AECOM (2016) *Public Expenditure and Financial Accountability assessment 2016 on Liberia's public financial management systems*. Government of Liberia and AECOM International Development Europe (www.pefa.org/sites/pefa/files/assessments/reports/LR-Jul16-PFMPR-Public-with-PEFA-Check.pdf).

Allen, R., Chaponda, T., Fisher, M.L. and Ray, R. (2017) *Medium-term budget frameworks in sub-Saharan African countries*. Washington DC: International Monetary Fund.

Andrews, M., Cangiano, M., Cole, N., et al. (2014) *This is PFM*. CID Working Paper No. 285. Cambridge: Center for International Development.

Babigumira, J.B., Jenny, A.M., Bartlein, R., et al. (2016) 'Health technology assessment in low-and middle-income countries: a landscape assessment' *Journal of Pharmaceutical Health Services Research*, 7(1):37–42.

Balabanova, D., McKee, M., Mills, A., et al. (2010) 'What can global health institutions do to help strengthen health systems in low-income countries?' *Health Research Policy and Systems* 8(1): 22.

Bao, J., Rodriguez, D.C., Paina, L., et al. (2015) 'Monitoring and evaluating the transition of large-scale programs in global health' *Global Health* 3(4): 591–605.

Barroy, H., Dale, E., Sparkes, S. and Kutzin, J. (2018) *Budget matters for universal health coverage: key formulation and classification issues*. Geneva: World Health Organization.

Barroy, H., Blecher, M. and Lakin, J. (2022) *How to make budgets work for health? A practical guide to designing, managing and monitoring programme budgets in the health sector*. Geneva: World Health Organization.

Bell, S., Blanchard, L., Walls, H., et al. (2019) 'Value and effectiveness of National Immunization Technical Advisory Groups in low-and middle-income countries: a qualitative study of global and national perspectives' *Health Policy and Planning* 34(4): 271–81.

Bennett, S., Rodriguez, D., Ozawa, S., et al. (2015) 'Management practices to support donor transition: lessons from Avahan, the India AIDS Initiative' *BMC Health Services Research* 15(1): 232.

Biesma, R.G., Brugha, R., Harmer, A., et al. (2009) 'The effects of global health initiatives on country health systems: a review of the evidence from HIV/AIDS control' *Health Policy and Planning* 24(4): 239–252.

Blampied, C., Greenhill, R., Jalles D'Orey, M.A., et al. (2016) *Leaving no one behind in the health sector: an SDG stocktake in Kenya and Nepal*. London: ODI.

Boadway, R. and Shah, A. (eds) (2007) *Intergovernmental fiscal transfers: Principles and practice*. Washington DC: World Bank.

Brenzel, L., Cornejo, S., Chikovani, I., et al. (2008) *Immunization resource tracking exercise: case study on the Republic of Tajikistan*. Washington DC: World Bank.

Buffardi, A.L. (2018) 'Sector-wide or disease-specific? Implications of trends in development assistance for health for the SDG era' *Health Policy and Planning* 33(3): 381–391.

Burchett, H.E., Mounier-Jack, S., Griffiths, U.K., et al. (2012) 'New vaccine adoption: qualitative study of national decision-making processes in seven low-and middle-income countries' *Health Policy and Planning* 27(suppl_2): ii5–16.

CABRI – Collaborative Africa Budget Reform Initiative (2006) Bridging the gap: from policies to budget. 3rd Annual CABRI Seminar, 28–30 November, Addis Ababa. Pretoria: CABRI.

Caiden, N. and Wildavsky, A.B. (1980) *Planning and budgeting in poor countries*. New Brunswick: Transaction Publishers.

Cambridge Economic Policy Associates (2019) *Evaluation of Gavi's eligibility and transition and co-financing policies*. Cambridge.

Cashin, C., Bloom, D., Sparkes, S., et al. (2017) *Aligning public financial management and health financing: sustaining progress toward universal health coverage*. Health Financing Working Paper No. 17.4. Geneva: World Health Organization.

Cernuschi, T., Gaglione, S. and Bozzani, F. (2018) 'Challenges to sustainable immunization systems in Gavi transitioning countries' *Vaccine* 36(45): 6858–6866.

Chang, A.Y., Cowling, K., Micah, A.E., et al. (2019) 'Past, present, and future of global health financing: a review of development assistance, government, out-of-pocket, and other private spending on health for 195 countries, 1995–2050' *The Lancet* 393(10187): 2233–60.

Clayeh, J.H.W. (2019) 'National Health Workers Union of Liberia ends go-slow strike action' *Front Page Africa*, 28 September.

Dawa, J., Chaves, S.S., Nguz, A.B., et al. (2019) 'Developing a seasonal influenza vaccine recommendation in Kenya: Process and challenges faced by the National Immunization Technical Advisory Group (NITAG)' *Vaccine* 37(3): 464–72.

de Renzio, P. and Cho, C. (2020) *Exploring the determinants of budget credibility*. Washington DC: International Budget Partnership.

de Renzio, P., Cho, C. and Lakin, J. (2019) *Budget credibility across countries: How deviations are affecting spending on social priorities*. Washington DC: International Budget Partnership.

Dodoo, L. (2019a) 'Liberia: "Executive Horn" dies in presidential motorcade accident'. *Front Page Africa*, 10 February.

Dodoo, L. (2019b) 'Liberia: National public health boss resigns'. *Front Page Africa*, 18 October.

ECORYS (2019) *Public Financial Management and Accountability Assessment, 2017: Kenya. Rotterdam*.

Engen, L. and Prizzon, A. (2019) *Exit from aid: an analysis of country experiences*. London: ODI.

Fozzard, A. and Simwaka, C. (2002) *How, when and why does poverty get budget priority: Poverty Reduction Strategy and public expenditure in Malawi*. London: ODI.

Fritz, V., Sweet, S., Verhoeven, M. (2014) *Strengthening public financial management: exploring drivers and effects*. Policy Research Working Paper 7084. World Bank: Washington DC.

Gauthier, B. (2010) *PETS-QSDS in sub-Saharan Africa: a stocktaking study*. Washington DC: World Bank.

Gauthier, B. (2020) 'PETS as a tool to improve accountability and transparency in public services.' Presentation at ODI 2020 Public Finance Conference, 26 February, 2020.

Gavi (2018) 'Co-financing information sheet – Liberia'. Geneva.

Gavi (2019a) 'Co-financing information sheet – Kenya'. Geneva.

Gavi (2019b) 'Co-financing information sheet – Laos PDR'. Geneva.

Gavi (n.d.) 'Fact sheet – Liberia'. Geneva.

Gavi (n.d.) 'Fact sheet – Lao PDR'. Geneva.

Gavi (n.d.) 'Fact sheet – Kenya'. Geneva.

Gilbert, K., Tenni, B. and Lê, G. (2019) 'Sustainable transition from donor grant financing: What could it look like?' *Asia Pacific Journal of Public Health* 31(6): 485–98.

Glassman, A. and Chalkidou, K. (2012) *Priority-setting in health: building institutions for smarter public spending*. Washington DC: Center for Global Development.

Glassman, A., Giedion, U. and Smith, P.C. (eds.) (2017) *What's in, what's out: designing benefits for universal health coverage*. Washington DC: Brookings Institution Press.

Glassman, A., Giedion, U., Sakuma, Y. and Smith, P.C. (2016) 'Defining a health benefits package: what are the necessary processes?' *Health Systems & Reform*, 2(1): 39–50.

Gotsadze, G., Chikovani, I., Sulaberidze, L., et al. (2019) 'The challenges of transition from donor-funded programs: results from a theory-driven multi-country comparative case study of programs in Eastern Europe and Central Asia supported by the Global Fund' *Global Health* 7(2): 258–72.

Griffiths, U.K., Asman, J., Adjagba, A. (2020) 'Budget line items for immunization in 33 African countries' *Health Policy and Planning* 35(7): 753–64.

Hart, T., Hadley, S. and Welham, B. (2015) *Use of country systems in fragile states*. ODI Report. London: ODI.

Hart T. and Miller, M. (2022) *Health benefits packages: from a list to implementation, the case of Malawi's essential health package*. ODI Public Finance and Service Delivery Working Paper. London: ODI.

Howard, N., Bell, S., Walls, H., et al. (2018) 'The need for sustainability and alignment of future support for National Immunization Technical Advisory Groups (NITAGs) in low and middle-income countries' *Human Vaccines & Immunotherapeutics* 14(6): 1539–41.

Hughes, J., Glassman, A. and Gweingale, W. (2012) *Innovative financing in early recovery: the Liberia Health Sector Pool Fund*. CGD Working Paper 288. Washington DC: Centre for Global Development.

Ikilezi, G., Augusto, O.J., Dieleman, J.L., et al. (2020) 'Effect of donor funding for immunization from Gavi and other development assistance channels on vaccine coverage: evidence from 120 low and middle income recipient countries' *Vaccine* 38(3): 588–96.

IMF – International Monetary Fund (2019) *Staff report of the 2019 Article IV consultation*. IMF Country Report No. 19/169. Washington DC: IMF.

Jaupart, P., Dipple, L. and Dercon, S. (2019) 'Has Gavi lived up to its promise? Quasi-experimental evidence on country immunisation rates and child mortality' *BMJ Global Health* 4(6).

Kallenberg, J., Mok, W., Newman, R., et al. (2016) 'Gavi's transition policy: moving from development assistance to domestic financing of immunization programs' *Health Affairs* 35(2): 250–8.

Kazibwe J., Gheorghe A., Wilson D., Ruiz F., Chalkidou K., Chi Y.L. (2022) 'The Use of cost-effectiveness thresholds for evaluating health interventions in low- and middle-income countries from 2015 to 2020: a review' *Value Health* 25(3): 385–9.

Koinyeneh, G.C. (2019) 'Liberia: Bong County lawmaker demands health minister immediate resignation'. *Front Page Africa*, 4 October.

Lakin, J., Torbert, S. and Hasan, S. (2018) *Program budget structure in the health sector: A review of program-based budgeting practices in low and middle-income countries*. Washington DC: International Budget Partnership.

Leech, A.A., Kim, D.D., Cohen, J.T. and Neumann, P.J. (2020) 'Are low and middle-income countries prioritising high-value healthcare interventions?' *BMJ Global Health* 5(2).

Love-Koh, J., Walker, S.M., Kataika, E., et al. (2019) *Economic analysis for health benefits package design*. CHE Research Paper 165. York, UK: University of York Centre for Health Economics.

Masaki, E., Sorensen, B.H., Nagpal, S., et al. (2017) *Managing transitions: reaching the vulnerable while pursuing universal health coverage: Health financing system assessment in Lao PDR*. Washington DC: World Bank.

McCollum, R., Theobald, S., Otiso, L., et al. (2018) 'Priority setting for health in the context of devolution in Kenya: implications for health equity and community-based primary care' *Health Policy and Planning* 33(6): 729–42.

Mihigo, R., Okeibunor, J., Cernuschi, T. et al. (2019) 'Improving access to affordable vaccines for middle-income countries in the African region' *Vaccine* 37(21): 2838–42.

Miller, M. and Hadley, S. (2016) *Cash management in cash-constrained environments: a public financial management introductory guide*. London: ODI.

Miller, M., Hart, T. and Hadley, S. (2021) *Public finance and service delivery: What's new, what's missing, what's next?* Working Paper 607. London: ODI.

Mills, Z. (2018) *Budget credibility: what can we learn from PEFA reports?* Washington DC: International Budget Partnership.

Ministry of Health (2016) Gavi application form: health systems strengthening support in 2016. Nairobi.

Ministry of Health (2017) 'About the ministry', Republic of Kenya (www.health.go.ke/about-us/about-the-ministry).

Moynihan, D. and Beazley, I. (2016) *Toward next-generation performance budgeting: lessons from the experiences of seven reforming countries*. Washington DC: World Bank.

Mussah, V.G., Mapleh, L., Ade, S., et al. (2017) 'Performance-based financing contributes to the resilience of health services affected by the Liberian Ebola outbreak' *Public Health Action* 7(1): S100–5.

Muwonge, A., Williamson, T. S., Owuor, C. and Kinuthia, K. (2022) *Making Devolution Work for Service Delivery in Kenya*. Washington DC: World Bank.

National Treasury (2020) 'Vision and mission.' Republic of Kenya (www.treasury.go.ke/aboutus/vision-misson.html).

Newall, A.T., Jit, M. and Hutubessy, R. (2014) 'Are current cost-effectiveness thresholds for low- and middle-income countries useful? Examples from the world of vaccines' *Pharmacoeconomics* 32(6): 525–31.

NITAG Resource Center (n.d.) NITAGs in numbers. (www.nitag-resource.org).

North, D. (1990) *Institutions, institutional change, and economic performance*. New York: Cambridge University Press.

Ochalek, J., Revill, P., Manthalu, G., et al. (2018) 'Supporting the development of a health benefits package in Malawi' *BMJ Global Health* 3(2): e000607.

Opwora, A., Kabare, M., Molyneux, S. and Goodman, C. (2009) *The implementation and effects of direct facility funding in Kenya's health centres and dispensaries*. Nairobi: Kenya Medical Research Institute.

Otieno, N.A., Malik, F.A., Nganga, S.W., et al. (2021) 'Decision-making process for introduction of maternal vaccines in Kenya', 2017–2018 *Implementation Science* 16(39).

Piatti-Funfkirchen, M., Barroy, H., Pivodic, F. and Margini, F. (2021) *Budget execution in health: concepts, trends and policy Issues*. Washington DC: World Bank.

Rajan, D., Barroy, H., Stenberg, K. (2016) 'Budgeting for health' in G. Schmets, D. Rajan and S Kadandale (eds.) *Strategizing national health in the 21st century: a handbook*. Geneva: World Health Organization.

Resch, S. and Hecht, R. (2018) 'Transitioning financial responsibility for health programs from external donors to developing countries: key issues and recommendations for policy and research' *Journal of Global Health* 8(1): 1–7.

Sambala, E.Z., Wiyeh, A.B., Ngcobo, N., et al. (2019) 'New vaccine introductions in Africa before and during the decade of vaccines: are we making progress?' *Vaccine* 37(25): 3290–5.

Saxenian, H., Hecht, R., Kaddar, M., et al. (2015) 'Overcoming challenges to sustainable immunization financing: early experiences from GAVI graduating countries' *Health Policy and Planning* 30(2):197–205.

Schäferhoff, M., Martinez, S., Ogbuoji, O., et al. (2019) 'Trends in global health financing: Low income countries are still unable to fund a basic package of health services' *BMJ* 365: l2185.

Schick, A. (1998) *A contemporary approach to public expenditure management*. Washington DC: World Bank.

Schick, A. (2013) 'Reflections on two decades of public financial management reforms' in M.M. Cangiano, M.T.R. Curristine and M.M. Lazare (eds.) *Public financial management and its emerging architecture*. Washington DC: International Monetary Fund.

Senkpeni, A.D. (2019) 'Liberia: Donors caution government of repercussions for "irregular withdrawals" of project funds for unapproved expenditures'. *Front Page Africa*, 9 May.

Siegfried, N., Wilkinson, T. and Hofman, K. (2017) 'Where from and where to for health technology assessment in South Africa? A legal and policy landscape analysis' *South African Health Review* (1): 42–48.

Silverman, R. (2018) *Projected health financing transitions: timeline and magnitude*. Washington DC: Center for Global Development.

Simoneau, M. and Bliss, K.E. (2020) *Kenya's immunization system in the post-COVID world*. Washington DC: Center for Strategic and International Studies.

Simonsen, L., van Wijhe, M. and Taylor, R. (2019) 'Are expensive vaccines the best investment in low-income and middle-income countries?' *The Lancet Global Health*, 7: e548-9.

Simson, R. and Welham, B. (2014) *Incredible budgets: budget credibility in theory and practice*. London: ODI.

Sombié, I., Aidam, J. and Montorzi, G. (2017) 'Evaluation of regional project to strengthen national health research systems in four countries in West Africa: lessons learned' *Health Research Policy and Systems* 15(1): 46.

Sonpon, L.M. (2019) 'No reason why Phebe hospital should lack fuel, medicines'. *Daily Observer*, 3 June.

Spicer, N., Agyepong, I., Ottersen, T., et al. (2020) "It's far too complicated": why fragmentation persists in global health' *Globalization and Health* 16(1): 1–3.

Stasavage, D. and Moyo, D. (2000) 'Are cash budgets a cure for excess fiscal deficits (and at what cost)?' *World Development* 28(12): 2105–2122.

Todd, G., Mamdani, M. and Loewenson, R. (2016) *Literature review: Essential health benefits in east and southern Africa*. EQUINET Discussion paper 107. Harare: EQUINET.

Tsofa, B., Molyneux, S., Goodman, C. (2016) 'Health sector operational planning and budgeting processes in Kenya – "never the twain shall meet"' *The International Journal of Health Planning and Management* 31(3): 260–276.

Tsofa, B., Musotsi, P., Kagwanja N, et al. (2021) 'Examining health sector application and utility of program-based budgeting: County level experiences in Kenya' *International Journal of Health Planning and Management* 36(5): 1521–1532.

USAID (2019) *Laos health strategy 2019–2023*. Washington DC.

Von Trapp, L., Lienert, I. and Wehner, J. (2016) 'Principles for independent fiscal institutions and case studies' *OECD Journal on Budgeting* 15(2): 9–24.

Wagenaar, B.H., Augusto, O., Beste, J., et al. (2018) 'The 2014–2015 Ebola virus disease outbreak and primary healthcare delivery in Liberia: Time-series analyses for 2010–2016' *PLoS Medicine* 15(2): e1002508.

Waithaka, D., Tsofa, B., Kabia, E. and Barasa, E. (2018) 'Describing and evaluating healthcare priority setting practices at the county level in Kenya' *The International Journal of Health Planning and Management* 33(3): e733–e750.

Walt, G. and Gilson, L. (1994) 'Reforming the health sector in developing countries: the central role of policy analysis' *Health Policy and Planning* 9(4): 353–70.

Welham, B., Hart, T., Mustapha, S. and Hadley, S. (2017) *Public financial management and health services delivery: Necessary, but not sufficient?* London: ODI.

Wesseh, C.S., Najjemba, R., Edwards, J.K., et al. (2017) 'Did the Ebola outbreak disrupt immunisation services? A case study from Liberia' *Public Health Action* 7(1): S82–7.

WHO – World Health Organization (2010) *Workload indicators of staffing need*. Geneva.

WHO (2016a) *Using health technology assessment for universal health coverage and reimbursement systems*. Geneva.

WHO (2016b) *Global strategy on human resources for health: workforce 2030*. Geneva.

WHO (2019) WHO symposium on health financing for UHC: A closer look at fiscal space and public financial management issues in health. Montreux, Switzerland.

Wilhelm, J.A., Qiu, M., Paina, L., et al. (2019) 'The impact of PEPFAR transition on HIV service delivery at health facilities in Uganda' *PloS One* 14(10): e0223426.

Wilhelm, V. and Krause, P. (eds) (2008) *Minding the gaps: integrating poverty reduction strategies and budgets for domestic accountability.* Washington DC: World Bank.

World Bank (2013) *Beyond the annual budget: Global experience with Medium Term Expenditure Frameworks.* Washington DC.

World Bank (2018) World Development Indicators. Washington DC.

World Bank (2019) *Lao PDR Public Expenditure and Financial Accountability Assessment.* Washington DC.

World Health Organization Maximizing Positive Synergies Collaborative Group (2009) 'An assessment of interactions between global health initiatives and country health systems' *The Lancet* 373(9681): 2137–2169.

Wright, J. and Holtz, J. (2017) *Essential packages of health services in 24 countries: findings from a cross-country analysis.* Bethesda, MD: Abt.

Yamey, G., Gonzalez-Garcia D., Bharali I. et al. (2019) *Transitioning from foreign aid: is the next cohort of graduating countries ready?* Duke Global Working Paper 9. Durham: Duke University Center for International and Global Studies.