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An analysis of GAVI, the Global Fund and World Bank support for human resources for health in developing countries

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Shortages, geographic imbalances and poor performance of health workers pose major challenges for improving health service delivery in developing countries. In response, multilateral agencies have increasingly recognized the need to invest in human resources for health (HRH) to assist countries in achieving their health system goals. In this paper we analyse the HRH-related activities of three agencies: the Global Alliance for Vaccines and Immunisation (GAVI); the Global Fund for Aids, Tuberculosis, and Malaria (the Global Fund); and the World Bank. First, we reviewed the type of HRH-related activities that are eligible for financing within each agency. Second, we reviewed the HRH-related activities that each agency is actually financing. Third, we reviewed the literature to understand the impact that GAVI, Global Fund and World Bank investments in HRH have had on the health workforce in developing countries. Our analysis found that by far the most common activity supported across all agencies is short-term, in-service training. There is relatively little investment in expanding pre-service training capacity, despite large health worker shortages in developing countries. We also found that the majority of GAVI and the Global Fund grants finance health worker remuneration, largely through supplemental allowances, with little information available on how payment rates are determined, how the potential negative consequences are mitigated, and how payments are to be sustained at the end of the grant period. Based on the analysis, we argue there is an opportunity for improved co-ordination between the three agencies at the country level in supporting HRH-related activities. Existing initiatives, such as the International Health Partnership and the Health Systems Funding Platform, could present viable and timely vehicles for the three agencies to implement this improved co-ordination.

Keywords Health workforce policy, donor assistance for health, aid harmonization

KEY MESSAGES

- GAVI, the Global Fund and the World Bank together provide significant financial resources to developing countries to strengthen the health workforce.
- By far the most common activity supported across all agencies is short-term, in-service training. There is relatively little investment in expanding pre-service training capacity, despite large health worker shortages in developing countries.
- Most GAVI and Global Fund grants finance health worker remuneration, with little information available on how payment rates are determined, how the potential negative consequences are mitigated, and how payments are to be sustained at the end of the grant period.
- There is an opportunity for improved co-ordination between the three agencies at the country level. Existing initiatives, such as the International Health Partnership and the Joint Health Systems Funding Platform could present viable and timely vehicles to implement this improved co-ordination.

Introduction

Shortages, geographic imbalances and poor performance of health workers pose major challenges for improving service delivery in developing countries. The World Health Organization (WHO) estimates that there is a global shortage of 2.4 million doctors, nurses and midwives based on minimum staffing levels required to provide essential health services (WHO 2006). Beyond shortages, there are often major inequities in the geographic distribution of health workers (WHO 2010). Staff productivity and quality of care provided are also major problems (Vujicic *et al*. 2009). These health workforce challenges are a major bottleneck to improved health systems and health service delivery in developing countries (WHO 2006; TIIFHS 2009a).

In response, multilateral agencies have increasingly recognized the need to invest in human resources for health (HRH). The Global Fund for Aids, Tuberculosis, and Malaria (the Global Fund), since its inception in 2002, has invested in HRH and has encouraged countries to use its grants for this purpose through all financing rounds. Through its health systems strengthening (GAVI HSS) financing stream, the Global Alliance for Vaccines and Immunisation (GAVI) has also encouraged countries to include HRH-related activities in proposals (GAVI 2007; GAVI 2009a). One of the goals of the United States President's Emergency Plan for Aids Relief (PEPFAR) is to train and retain 140 000 additional health workers in PEPFAR focus countries by 2014. In the United Kingdom, the Department for International Development (DFID) has worked with the government of Malawi to provide training and base salary support for the country's medical staff since 2006 (DFID 2010). Multilateral institutions such as WHO, the World Bank and the International Labour Organization have also supported countries to improve their HRH policies through both lending and policy reform (WHO 2006; World Bank 2007; IEG 2009).

Despite increased attention and investment, a systematic comparative analysis of HRH-related activities funded by bilateral and multilateral agencies and their impact on the HRH situation in low- and middle-income countries has not been carried out. Such an analysis is important at this time. There is clear commitment among development and financing agencies operating in the health sector to better co-ordinate activities and align support behind national health strategies, as is evident in initiatives such as the International Health Partnership and the Health Systems Funding Platform. These initiatives aim to better harmonize donor financing commitments, enhance alignment with country systems and improve the way international agencies, donors and developing countries work together to develop and implement national health plans, support country progress toward national health goals, and accelerate progress toward the Millennium Development Goals.[1]

This paper provides a first step in a comparative analysis of key multilateral agency work in the area of HRH. Specifically, we examine the HRH-related activities supported through select financing streams of three multilateral agencies: GAVI, the Global Fund, and the World Bank. We focus on these agencies for three reasons. First, these are three major multilateral agencies that substantially invest in the health sector in low- and middle-income countries. In 2010, the three agencies combined accounted for 20% of the total global development assistance for health and for 53% of all multilateral development assistance for health (IHME 2010). Second, these three agencies, together with WHO, are collaborating to harmonize health system strengthening actions, including HRH, through the Health Systems Funding Platform (TIIFHS 2009b). The analysis sheds light on areas where closer agency co-ordination and alignment is needed. Third, and most important, these agencies make available data which allows detailed comparative analysis of country-level investments in health systems strengthening activities, including for HRH. The specific objectives of this paper are to: (i) develop a framework for categorizing HRH-related activities funded by donor agencies; (ii) describe which HRH-related activities are eligible for financing through specific GAVI, Global Fund and World Bank financing streams; (iii) describe the pattern of financing for each agency according to type of HRH-related activities; and (iv) review published peer-reviewed literature to understand the overall impact of HRH-related donor investments in low- and middle-income countries on the health workforce.

Methods

Our aim was to capture important differences across the three agencies in terms of key HRH-management functions being supported (e.g. training health workers, paying health

workers), the extent to which the agencies assist governments in strengthening policies and building capacity, and the balance between recurrent and investment costs. We drew on several existing health systems strengthening and HRH-specific frameworks (WHO 2006; Bossert *et al*. 2007; Shakarishvili *et al*. 2010). Our final classification had five major categories of activities we were interested in tracking: training health workers, expanding pre-service training capacity, strengthening government HRH policy and planning capacity, reforming health worker incentive policies, and financing remuneration. The activities falling within these categories are summarized in Table 1.

Our analysis draws from three sources of information. First, we reviewed current and past GAVI HSS and the Global Fund grant proposal guidelines and evaluation criteria as well as World Bank lending policies.

Second, we reviewed GAVI HSS and the Global Fund approved grants and World Bank approved projects over a common time period. Specifically, we reviewed all GAVI HSS proposals that were approved between 2005 and November 2008 ($n=45$); all the Global Fund proposals which were approved in November 2008 through the Round 8 grant cycle ($n=90$); and project appraisal documents, which describe planned activities within projects, for all World Bank Health, Nutrition, and Population projects approved between 2005 and November 2008 where the main thematic code is 'health systems performance' ($n=72$). This was the most recent information available when we commenced our analysis that would provide a comparison of concurrent HRH-related activities funded by each agency. We focused on approved proposals (rather than a retrospective review of activities), as this provided the most current information on what activities agencies are supporting, and because proposals provided the most comparable information for all three agencies. Two researchers independently reviewed proposals for approved grants and projects. Relevant information was entered into a data extraction form and all data were then entered into a data base. Any inconsistencies were identified and resolved by the lead researcher.

Third, we reviewed published peer-reviewed literature to understand the overall impact that GAVI, Global Fund and World Bank investments in HRH have had on the health workforce in low- and middle-income countries. We analysed the independent 5-year evaluation of the Global Fund (TERG 2009) and the supporting background documents (Macro International Inc. 2009a; Macro International Inc. 2009b; Macro International Inc. 2009c) and independent evaluations of GAVI (GAVI 2009b) and the World Bank (IEG 2009). While our focus is on the three agencies, we also highlight findings concerning other agencies supporting HRH activities where relevant (e.g. PEPFAR).

There are several limitations to our analysis. We focus on planned activities. However, for all three agencies, proposed activities can be revised during implementation. We do not capture all of the possible GAVI, Global Fund and World Bank financing streams that could be used to support HRH-related activities within a given period. These include earlier rounds of the Global Fund as well as GAVI grants and World Bank loans and credits that do not focus on health systems strengthening. One of the most important limitations is that budget information within GAVI and the Global Fund proposals and World Bank project appraisal documents is limited. While the total financing for HRH is provided, the breakdown of this financing by specific activity is provided only in rare cases and even then is not provided in a standardized way. As a result, it is not possible to determine the specific amount budgeted for training, expanding pre-service training capacity, and the other categories of activities, even though the proposals clearly state this activity will be financed in their narrative.

Table 1 Classification of HRH-related activities used in review

Major classification	Specific activity
Training health workers	Reforming training policies
	Financing pre-service training costs, including tuition, room and board
	Financing in-service or post-basic training costs, including tuition, travel, room and board
Expanding pre-service training capacity	Financing to build or refurbish health worker training facilities
	Financing to expand tutor training capacity, including overseas and exchange programmes
	Financing to build or refurbish housing for in-service health workers
Strengthening government HRH policy and planning capacity	Establishing HRH unit in Ministry of Health or training staff to improve HRH management
	Designing policies that decentralize HRH management decisions to local authorities
	Designing HRH information management systems
Reforming health worker incentive policies	Designing, implementing or reforming performance-based pay policies
	Designing, implementing or reforming rural area retention policies
	Designing, implementing or reforming the sanctioning and promotion system for health workers
Financing remuneration	Financing health worker base salaries
	Financing health worker allowances, bonuses, top-ups, including performance-based bonuses and all other non-base salary remuneration

Findings

Activities eligible for financing

For all three agencies, a wide range of activities are eligible for financing. Within the GAVI HSS programme, countries can request financing for activities related to 'health workforce mobilization, distribution, and motivation including training, allowances, and capacity building' (GAVI 2009a). The Global Fund allows financing of a wide variety of items related to HRH including 'training, recruitment, deployment, salaries, and productivity incentives of health workers' (GFATM 2010). Over the 10 rounds there have been no major changes to eligible activities. The World Bank provides financing to countries in the form of credits and loans. It has a high degree of flexibility in terms of eligible activities governments

can finance. Depending on the government's policy on eligible expenditures and project disbursement arrangements, a broad range of activities, including base salaries of public sector employees, could be financed through World Bank projects (World Bank 2004).

Proposal evaluation criteria within GAVI and the Global Fund also influence which HRH-related activities can be financed. For example, activities within GAVI proposals must be, among other things, country-driven, additional to current financing levels, catalytic, innovative and results-oriented. HRH-related activities must also clearly be targeted at health workers who are engaged in immunization and other mother and child health services at lower levels of service delivery—the district level and below (GAVI 2007; GAVI 2009a). Similarly, the Global Fund proposal evaluation criteria (used by its Technical Review Panel when assessing technical robustness and feasibility of proposals) stipulate that requested funds must be complementary and additional; that is, they must not replace existing financing, duplicate financing for activities, nor allow diversion of government financing to other areas. They must target one or more of the three diseases, link to sector strategic plans, support national plans and strategies, be evidence-based and consistent with international best practice. Proposed activities ought to be grounded in a situation analysis and must be ready to implement (GFATM 2010).

A major criterion heavily emphasized by all three agencies is financial sustainability. For example, GAVI proposals must 'describe how they expect to sustain the recurrent costs and impact of GAVI HSS support beyond the life of GAVI funding' (GAVI 2009a). The Global Fund emphasizes the need for a sustainability strategy if salaries are funded: 'the applicant should explain how the proposed financing of salaries will be reflected in the medium-term expenditure framework' (GFATM 2010).

Activities actually funded

All the Global Fund and GAVI grants and just under half of World Bank projects in our sample financed HRH-related activities (Table 2). The median share of financing devoted to HRH-related activities within these grants and projects was 11% for World Bank projects, 27% for GAVI and 22% for the Global Fund. The maximum amount devoted to HRH-related activities in any single grant or project was 37% in World Bank projects, 100% in GAVI grants and 72% in the Global Fund grants.

The remainder of the analysis in this paper focuses on grants and projects within our sample that finance one or more HRH-related activities.

The average annual amount spent on HRH-related activities varies considerably. The average World Bank project devoted US$0.8 million per year [95% confidence interval (CI): US$0.5, US$1.1] to HRH activities compared to US$1 million for GAVI (95% CI: US$0.5, US$1.5) and US$2.7 million for the Global Fund (95% CI: US$2.0, US$3.4). Due to differences in both the size of grants and the share devoted to HRH-related activities, these data indicate that, on average, the Global Fund contributes much higher levels of financing for HRH-related activities in absolute terms than GAVI or the World Bank.

Training is by far the most common activity financed by all three agencies (Figure 1). Nearly all grants and projects support some form of training. This is most commonly in-service training rather than pre-service training. For example, when training is financed, 99% of the time within GAVI grants, 91% of the time within Global Fund grants, and 84% of the time within World Bank projects it is in-service training that is financed. This is much higher than for pre-service training: 29%, 12% and 41%, respectively (Table 3).

Expanding pre-service training capacity is less likely to be funded. Only one-third of the Global Fund grants and World Bank projects and 13% of GAVI grants make such investments.

Fewer than 5% of the Global Fund grants reviewed finance health worker incentive policy reform and fewer than 10% finance strengthening government HRH policy and planning capacity. Reforming health worker incentive policies is infrequently financed within GAVI grants, but about one-third of grants finance strengthening government HRH policy and planning capacity. Fifty per cent of World Bank projects finance reforming health worker incentive policies, and 60% finance strengthening government HRH policy and planning capacity. World Bank projects are also much more likely to finance reforming training policies than the Global Fund and GAVI grants (data not shown).

Training activities focus on a broad range of cadres, from highly skilled medical staff to community health workers, predominantly in the public sector. It is likely the focus of training activities is decided in the context of the type of health system strengthening activity the agency is financing. The Global Fund and GAVI grants are more likely to finance manager training than World Bank projects. In terms of

Table 2 Descriptive statistics for sample of GAVI and the Global Fund grants and World Bank projects reviewed

Description	GAVI	The Global Fund	World Bank
Number of grants or projects reviewed	45	90	72
Number of grants or projects that finance HRH-related activities	45	90	31
Mean length of grant or project, in years	3.7 (1.38)	5.0 (0.00)	2.6 (0.98)
Mean size of grant or project, US$ million	12.0 (16.1)	77.3 (109.8)	22.6 (23.8)
Median % of grant or project devoted to HRH-related activities	27	22	11
Maximum % of grant or project devoted to HRH-related activities	100	72	37
Mean annual grant or project amount devoted to HRH-related activities, US$ million	1.0 (1.6)	2.7 (3.2)	0.8 (0.8)
Total value of all grants or projects, US$ million	540	6957	723

Note: Standard deviations in parentheses. See methods section for description of grants and projects in sample.

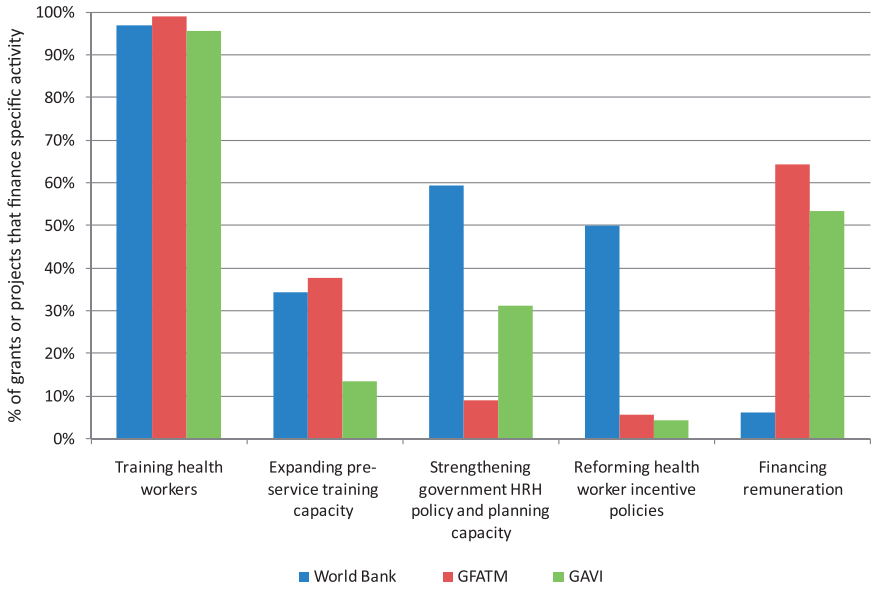

Figure 1 Summary of HRH-related activities within GAVI and the Global Fund grants and World Bank projects
Note: GFATM = The Global Fund

Table 3 Summary of training activities for GAVI and the Global Fund grants and World Bank projects

Where training activities are financed...		**GAVI**	**The Global Fund**	**World Bank**
Which cadres receive training?	Medical	24%	83%	85%
	Nursing	43%	83%	85%
	CHW/Outreach	57%	83%	40%
	Managers (excl. project admin. staff)	69%	72%	50%
	Other	19%	93%	30%
Which sectors do they work in?	Public sector	79%	99%	88%
	Private sector (incl. NGOs)	9%	64%	19%
What is the nature of training?	In-service	99%	91%	84%
	Pre-service	29%	12%	41%
What is the focus of the training?	Disease-specific only	10%	97%	0%
	General only	65%	1%	70%
	Mixed	25%	1%	30%
	Total number of grants or projects where training activities are financed	43	89	31

Note: Figures in table represent percentage of grants and projects. Rows do not always add to 100% as some grants and projects have multiple entries. See methods section for description of grants and projects in sample.
NGO = non-governmental organizations.

content, the World Bank and GAVI fund a variety of training, including primary care and maternal and child health services, while the Global Fund focuses on disease-specific training.

Fifty-three per cent of GAVI and 64% of the Global Fund grants finance health worker remuneration. Within World Bank projects the figure is much lower, at only 6%. GAVI and the Global Fund finance both base salaries of health workers and allowances. The two World Bank projects in our sample that financed health worker remuneration supported a performance-based subnational block grants scheme (China) and a performance-based incentive scheme for district managers (Cambodia).

Looking more in-depth at those grants or projects that finance remuneration activities, the type of cadre that receives remuneration payments differs by agency. Within GAVI grants remuneration for lower-level, community health worker-type cadres is more likely to be financed (Table 4). Within the Global Fund grants, there is a more even balance across cadres. The Global Fund grants are also more likely to finance remuneration of managers (for example, hospital or district manager) than GAVI. Only one of the two relevant World Bank projects had information on which cadres receive allowances. In this case, the allowances were for managerial staff working in the Ministry of Health.

Health workers in the public sector are more likely to receive financing for remuneration than those in the private sector for all three agencies (Table 4). But the Global Fund is much more likely than the other two agencies to finance base salaries and allowances of health workers in the private sector.

The Global Fund and GAVI proposals have limited information about how remuneration payments will be sustained. Among grants and projects that finance remuneration, in 81% of cases within the Global Fund proposals and in 46% of GAVI proposals, there is no information on how these payments will be sustained beyond the grant life (Table 5). Where information is provided, the most frequent response is that the government will assume the additional costs. Thus, despite a strong emphasis on sustainability within GAVI and the Global Fund guidelines, the issue does not seem to be dealt with adequately at the proposal stage. In the Global Fund Round 10 guidelines, sustainability was not included as one of the evaluation criteria.

Table 4 Summary of remuneration activities for GAVI and the Global Fund grants and World Bank projects

Where base salaries or allowances are financed...		GAVI	The Global Fund	The World Bank
Which cadres receive payments?	Medical	30%	49%	0%
	Nursing	43%	49%	0%
	CHW/Outreach	78%	43%	0%
	Managers (excl. project admin. staff)	9%	68%	100%
	Other	9%	62%	0%
Which sectors do they work in?	Public sector	91%	89%	100%
	Private sector (incl. NGOs)	9%	40%	0%
	Total number of grants or projects where base salaries or allowances are financed	24	58	2

Note: Figures in table represent percentage of grants and projects. Rows do not always add to 100% as some grants and projects have multiple entries. See methods section for description of grants and projects in sample.

Table 5 Summary of remuneration payment sustainability strategy for GAVI and the Global Fund grants and World Bank projects

Where base salaries or allowances are financed...		GAVI	The Global Fund	The World Bank
What is the sustainability strategy?	Government to assume cost	69%	91%	100%
	Other agency to assume cost	0%	9%	0%
	Costs will not continue	0%	18%	0%
	Other	31%	0%	0%
How have payment levels been determined?	Government guidelines	20%	62%	100%
	Analysis of market rates	0%	23%	0%
	Other	80%	23%	0%
	Total number of grants or projects where base salaries or allowances are financed	24	58	2

Note: Figures in table represent percentage of grants and projects. Rows do not always add to 100% as some grants and projects have multiple entries. See methods section for description of grants and projects in sample.

This change reflects the challenge to develop a sustainability strategy at the proposal stage due to so much uncertainty about both the impact of remuneration payments (i.e. should they be continued?) and future financial resources available (i.e. what will be the government budget?).

Proposals also lack information on how health worker remuneration levels have been determined. This issue is extremely important and is discussed further in the next section. Our review found the vast majority of the Global Fund and GAVI proposals do not provide any information on how allowances and base salary levels have been determined (Table 5). Where information is available, there is no clear pattern; allowances and base salary levels are based on a mix of government guidelines, analysis of market wages, or other methods.

The impact of HRH-related activities on the health workforce

Data to track the impact of GAVI, Global Fund and World Bank investments on HRH outcomes are limited and of poor quality (GAVI 2009b; Macro International Inc. 2009c). There has been little analysis of the level of co-ordination among the three agencies in this area as well.

One study found that a large share of the Global Fund programmes that focus on short-term, in-service training do not have a clear link to any co-ordinated national training plan (TERG 2009). A co-ordinated approach might entail each agency and other development partners financing one or more components of a comprehensive training programme for health workers. This could be facilitated, for example, through a co-ordinated proposal-evaluation process. The alternative is one in which training activities are planned and financed separately by each agency, are specific to the particular objectives of that grant or project, with little evaluation or follow up on the greater system-wide impact. Under a less co-ordinated approach, the same health worker might, for example, receive short-term training multiple times per year without an overarching long-term training strategy.

Malawi offers a good example of a co-ordinated approach to financing training and other HRH-related activities, including remuneration. In 2004 the government implemented a 5-year, US$95 million emergency HRH programme with technical and financial support from development partners including DFID, the Global Fund, the World Bank, UNFPA, the Norwegian Agency for Development Cooperation and UNICEF. The programme included expanded training activities and a recent evaluation showed that it led to significant gains in the number of graduates in pre-service health training programmes (MSH and MSC 2010).

Financing base salaries and allowances of health workers has, in some cases, made an important contribution to country efforts to increase staffing and improve retention. Support for base salaries and incentives within Global Fund financed programmes has in some cases allowed expansion of hiring and improved health worker retention, especially in rural areas (Macro International Inc. 2009b; MPSCG 2009; PHR 2010; Oelrichs in process). In Kenya, for example, the Global Fund support, along with support from PEPFAR and the Clinton Foundation, enabled a major increase in the strategic recruitment and retention of public sector health workers to specific geographic areas by financing base salaries for newly created positions (Marsden and Chirchir 2008; Oelrichs in process). In Zambia, similar donor-supported programmes partly financed rural area bonuses, enabling strategic placement of health workers (MPSCG 2009). In Malawi, external resources were used to finance base salaries of health workers, leading to a 53% expansion in the health workforce in the public sector over 5 years (Brugha *et al*. 2010; MSH and MSC 2010).

However, there are also considerable risks that need to be managed when using external resources to finance health worker remuneration. These include macroeconomic and inflationary risks as well as contingent liability risks to the government that arise when external resources are used to finance remuneration of health workers in the public sector without a clear sustainability strategy. However, the empirical

evidence concerning these risks is limited (Gottret and Schieber 2006; Vujicic *et al*. 2009; Zurn *et al*. 2011).

There are also important unintended labour market distortions that could arise when using external resources to finance health worker remuneration. For example, targeting remuneration payments at health workers who focus on priority disease interventions could significantly alter relative pay in the health sector. In turn, this might lead to movement of health workers out of certain areas of care that receive less support from development agencies (general primary care, for instance) toward those that do (such as tuberculosis clinics or specialized laboratories). Likewise, when agency support is primarily to either the public or private sector, a similar effect may occur, leading to health worker movements between the public and private sector. The Global Fund, for example, emphasizes the importance of such risks and requires applicants to address them at the proposal stage: 'the applicant is encouraged to harmonize proposed human resource funding with existing compensation policies and incentive schemes as agreed within government, between government and donors as well as between government and CSOs [civil society organizations]. Non-adherence to existing compensation policies is possible, but needs to be justified.'

Several studies examine the labour market effects of external funding of health worker remuneration. Oomman *et al*. (2007) examine the case of Uganda and find that PEPFAR hiring policies have been criticized by the government for negatively affecting the public health system. According to key informants in their study, PEPFAR recipient organizations have attracted the best health workers from the government systems, especially doctors and high-cadre nurses, due to higher base salary scales. Other countries' experience suggests that where development partners have financed incentive schemes to motivate the health workforce, common unintended consequences include service fragmentation, divided loyalty among health workers and inflated payment rates through competition among partners for staff (Wilkinson 2005; WHO 2010). McCoy *et al*. (2008) provide evidence of physician salary differentials between the government and non-governmental organization (NGO) sector in Ethiopia. The independent evaluation of the Global Fund cited examples of senior staff moving from maternal and child health to HIV services in Cambodia and movement of health workers from the public sector to NGOs in Kyrgyzstan as a result of the Global Fund programmes, although this was based on expert opinion (Macro International Inc. 2009b).

Discussion

HRH issues are an important focus area of health systems strengthening activities supported by GAVI, the Global Fund and the World Bank. Our analysis shows that the three agencies recognize the need for significant investments in HRH. All GAVI and Global Fund grants and just under half of World Bank projects we reviewed financed HRH-related activities. Moreover, the agencies are willing to finance a wide array of HRH-related activities.

As part of our analysis, we developed a classification of HRH-related activities that allowed us to broadly categorize the types of activities financed by each agency. Our analysis found that by far the most common activity supported across all agencies is training. Almost all grants and projects that finance HRH-related activities have a health worker training component, in large part focused on short-term, in-service training. There is a relatively limited focus on expanding pre-service training capacity, despite large health worker shortages in developing countries (TIIFHS 2009b). A wide range of health workers are benefiting from training activities, including diverse sets of cadres in both the public and the private sectors.

In terms of training content, the Global Fund grants tend to focus on training that is specific to the three priority diseases, while training activities financed by GAVI and the World Bank tend to be more general, focusing on, for example, primary care or maternal and child health. One likely reason behind the heavy emphasis on in-service training—particularly for the Global Fund and GAVI grants—is the nature of proposal evaluation criteria. The emphasis is on showing results within the time frame of the grant and on sustainability of funded activities, potentially creating a bias toward short-term, non-recurrent expenditure items. Based on our findings, we believe that there is considerable scope to improve the level of co-ordination of training activities supported by the three agencies.

Our analysis has also shown that both GAVI and the Global Fund grants very frequently finance health worker remuneration, while within World Bank projects this is rare. Remuneration payments are often targeted to a wide range of cadres, in both the public and the private sectors. At the grant proposal stage, however, there is often little information available on how payment rates are determined, how the potential negative consequences are mitigated, and how payments are to be sustained at the end of the grant period. Financial incentives are potentially a powerful tool in addressing HRH issues. But, as our review of the literature has shown, there are also several risks involved in financing health worker remuneration. Therefore, we believe all three agencies should consider a more comprehensive and co-ordinated approach to mitigating these risks. For example, a clear sustainability strategy can be developed by the government and agreed to within a medium-term budget framework. The three agencies can also ensure that remuneration rates are consistent so that they do not promote unintended labour movements within the health system.

Over half of World Bank projects in our sample finance policy reform compared with less than one-third of GAVI grants and less than 10% of the Global Fund grants. Areas include redesigning pay policies, developing evidence-based national HRH strategies, improving information systems for monitoring the health workforce, and capacity-building activities to strengthen HRH units within the Ministry of Health. Developing countries with critical health worker shortages tend to lack the technical capacity to identify and assess crucial issues and to formulate evidence-based policy responses (WHO 2009; Vujicic *et al*. 2009).

The emerging picture from this review of GAVI, the Global Fund and World Bank support for HRH-related activities at the country level suggests an opportunity for greater alignment, co-ordination and complementarity among the three agencies.

Currently, some activities such as training are heavily supported by all three agencies while policy reform receives less attention. A more co-ordinated strategy will undoubtedly improve the overall impact of external financing on the health workforce. To this end, some of the existing initiatives, such as the International Health Partnership and the Health Systems Funding Platform, could present viable and timely approaches for the three agencies to pursue better aligned and ultimately more effective HRH-related financing efforts in low- and middle-income countries.

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Disclaimer

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Conflict of interest

None declared.

Endnote

[1] For the International Health Partnership, see http://www.internationalhealthpartnership.net. For the Joint Health Systems Funding Platform, see http://go.worldbank.org/0D4C6GPQU0.

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