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System-wide effects of Global Fund investments in Nepal

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Nepal, with a concentrated HIV epidemic and high burden of tuberculosis (TB) and malaria, was perceived to have immensely benefited from grants by the Global Fund to Fight AIDS, Tuberculosis and Malaria in addressing the three diseases, amounting to total approved funding of US$80 million. This paper looks at the interaction and integration of Global Fund-supported programmes and national health systems. A mixed method 'case study' approach based on the Systemic Rapid Assessment Toolkit (SYSRA) was used to systematically analyse across the main health systems functional domains. The Country Coordinating Mechanism has been credited with providing the stewardship in attracting additional resources and providing oversight. The involvement of civil society for delivering key HIV and malaria interventions targeting high-risk groups was perceived to be highly beneficial. TB and malaria services were found to be well integrated into the public health care delivery system, while HIV services targeting at-risk groups were often delivered using parallel structures. Political instability, absence of continuity in leadership and sub-optimal investments in health were together perceived to have led to fragmentation of financing and planning activities, especially in HIV the programme. The demand for timely programmatic and financial reporting for donor-supported programmes has contributed to the creation of parallel monitoring and evaluation structures, with missed opportunities for strengthening and utilizing the national health management information systems.

Keywords Nepal, health systems strengthening, financing, Global Fund

KEY MESSAGES

- The wider effects of disease-specific initiatives on health systems can be viewed as positive in a resource-constrained environment, especially by strengthening disease structures and systems and facilitating civil society involvement.
- Political context, disease epidemiology and the capacity and reach of the public health care delivery system determine the nature and extent of integration of disease interventions with health systems.

Background

The Federal Democratic Republic of Nepal, situated in the Himalayas, is a land-locked country in South Asia bordered to the north by the People's Republic of China, and to the south, east and west by the Republic of India. It is the youngest republic in the world and is home to over 28 million people, 85% of whom live in rural areas (WHO 2010).

Nepal made the transition from an absolute monarchy to a parliamentary monarchy in 1990, followed by a Maoist movement during 1996–2001 and restoration of parliamentary democracy by a populist movement called the *Loktantra Andolan*

in 2006, and then complete transition to a republic in May 2008. The last 8 years have seen over 12 governments and the ensuing socio-political instability and insecurity have effected economic growth, and severely compromised the delivery of social and public health interventions.

Nepal currently ranks 144th out of 177 countries on the UNDP Human Development Index (HDI) (UNDP 2009). Nearly one-quarter of the country's population earns less than US$1 per day and 31% live below the poverty line (Government of Nepal and UNDP 2005), one of the important contributing factors being the high population growth, which has led to fragmented land holdings and depletion of forests, upon which much of the rural population depends for their livelihood (Government of Nepal and UNDP 2005). Other contributing factors for the poor socio-economic condition include low rates of literacy in the general population (56.5%), poor health, poor sanitation, low food grain productivity, high child malnutrition, poor access to basic services and inequities resulting from a tradition-driven social structure (National Planning Commission 2005). The high emigration rate of men in search of employment has tilted the sex ratio, currently at 89 males to 100 females (Government of Nepal 2007).

The overall pattern of morbidity in Nepal is driven by reproductive health issues (both maternal and perinatal), infectious diseases and nutritional disorders. These are responsible for approximately 68% of the disease burden. The country has made significant progress toward achieving the health-related Millennium Development Goals (Table 1) (National Planning Commission and United Nations 2005). Malaria, tuberculosis (TB), leishmaniasis (kala-azar) and filariasis are endemic and recognized as important public health problems. HIV is also recognized as a significant health threat, with an estimated 70 000 people living with HIV (representing a prevalence of 0.49% of the population) (National Planning Commission and United Nations 2005). HIV prevalence is primarily concentrated among people who inject drugs (amongst whom a prevalence of 34.7% has been reported), female sex workers (1.4%) and men who have sex with men (3.3%).

Nepal has received Global Fund financial support to fight the three diseases through numerous rounds of funding. These investments have a potential total approved amount of US$86 million. Forty-seven per cent of the approved funding has been directed to HIV programmes (Rounds 2 and 7), while malaria (Rounds 2 and 7) and TB (Rounds 4, 7 and a National Strategy Application) account for 29% and 23% of approved funding, respectively. The total cumulative disbursement in Nepal since 2004 is US$38.2 million, of which US$18 million was for HIV, US$11 million for malaria and US$9 million for TB. Between 2006 and 2008, the Global Fund accounted for 22% of HIV funding in Nepal (with USAID and the UK Department for International Development contributing 36% and 24% of the total HIV funds, respectively), and between 70 and 80% of the TB and malaria funding in the country (The Global Fund 2009).

Global Fund investments in Nepal have facilitated improved reach of HIV interventions: more than 1.6 million people have been reached through behaviour change communication interventions, over 94 000 people have been tested for HIV, over 39 000 clients have been provided with services for sexually transmitted infections, and nearly 2000 people have been initiated onto antiretroviral therapy in the last 4 years. The tuberculosis programme has initiated treatment for more than 36 000 cases (including over 500 cases of multidrug-resistant tuberculosis), achieving treatment success rates of over 85%. To mid-2009, over 535 000 malaria cases were diagnosed and treated, and over 430 000 long-lasting insecticide-treated nets were distributed (The Global Fund 2009).

This article reports on the main findings from a case study in Nepal, conducted as part of a series of country case studies to assess the interactions and extent of integration of Global Fund-supported HIV, TB and malaria programmes with the general health system.

Methods

A mixed-method case study approach was adopted using the adapted Systemic Rapid Assessment (SYSRA) case study guide (Atun *et al*. 2004) to systematically analyse the interactions across the six critical health system functions: stewardship and governance, financing, planning, service delivery, monitoring and evaluation (M&E), and demand generation using the health systems framework developed by Atun *et al*. (2010).

Fieldwork was conducted from September to October 2009. Data were collected using semi-structured key informant interviews (as outlined in the SYSRA case study guide), field observations, and the examination of secondary data sources, primarily national policy documents and reports, and national and disease statistics and reports. A total of 29 individual and group interviews were conducted by the authors, selected purposively or through snowball sampling to include a diverse range of implementers, policy makers, and partners. After assuring of the confidentiality and obtaining informed consent, interviews were recorded and subsequently transcribed and analysed across different thematic issues.

Results and discussion

The main discussion points from the key informant interviews on interactions across four key health system functions are summarized below.

Stewardship and governance

Nepal has been practicing the sector-wide approach (SWAp) of pooled funding in health since 2004, and has demonstrated increased government leadership and ownership. In contrast to the emerging epidemic of HIV, the long-standing tuberculosis and malaria control programmes were observed to be more readily integrated across all levels of health care delivery (see Table 2).

With reference to Global Fund grant management, the Country Coordinating Mechanism (CCM), comprising representatives from government, civil society and other partner organizations, has successfully attracted resources as well as demonstrated flexibility, proactive grant management and oversight to achieve results. While TB grants are managed by the Ministry of Health and Population, the CCM responded to

Table 1 Nepal Millennium Development Goal indicators: progress report

Indicator	1990	2000	2005	2015 (Target)
Poverty and hunger				
Proportion of population below minimum level of dietary energy consumption (2200 Kcal)	49%	47%	–	25%
Proportion of under-weight (<−2SD) children aged between 6–59 months	57%	48%	38.6%	29%
Child mortality				
Infant mortality rate (per 1000 live births)	108	64	48	34
Under-5 mortality rate (per 1000 live births)	162	91	61	54
1-year-olds immunized against measles	42%	71%	85%	>90%
Maternal health				
Maternal mortality ratio (per 100 000 live births)	515	415	281	134
Deliveries attended by health staff	7%	11%	18.7%	60%
HIV, TB and malaria				
HIV prevalence in population aged between 15–49 years (%)	n.a.	0.29%	0.5%	Halt & reverse the trend
Malaria prevalence (per 100 000 population at risk)	115	65	78	
TB prevalence (per 100 000 population)	460	310	280	
Water and sanitation				
Proportion of population with access to improved water source	36%	67%	73%	73%
Proportion of population with access to improved sanitation	6%	30%	39%	53%

sub-optimal progress in previous HIV and malaria grants by inviting additional Principal Recipients (PRs) from civil society to share the responsibility of implementation. This allowed Nepal to circumvent delays resulting from political instability and insufficient capacity, and to ensure the effective delivery of services.

Increasing reliance on civil society PRs for service delivery has been viewed differently. While it is perceived to strengthen civil society participation and community systems for targeted interventions, there is a risk of inadvertently encouraging fragmentation and diluting the stewardship role of the government.

Financing

The importance of Global Fund financing can be summarized through the observations of one of the key informants:

> *''The Global Fund programme has given the TB programme sustainable support and enabled long term planning . . . and the [National Strategy Application] is an important part to continue the development of sustainable structures.''*

While all Global Fund grants are being captured within the sector budget, they were also viewed as funding to meet resource gaps or introduce newer strategies, such as long-lasting insecticide-treated nets for malaria, and interventions for at-risk groups (including harm reduction strategies for people who use drugs). However, with limited government investments and frequent changes in leadership, the planning and financing of HIV activities remains highly fragmented (Table 2).

Service delivery

The integration of services into the public health system was dependent on the perceived burden of disease, the beneficiaries being targeted, the nature of the intervention and, most importantly, the reach and capacity of the public health system. Early diagnosis and treatment of malaria and TB have been successfully decentralized to all levels of health care, while HIV services—such as counselling and testing, care and support, and antiretroviral therapy—remain highly centralized or delivered in a non-integrated fashion, as are the distribution of insecticide-treated nets and indoor residual spraying operations for the prevention of malaria.

Respondents perceived a missed opportunity in linking HIV prevention, care and support interventions to the public health system. This has resulted in a lack of ownership of the sector-wide response by public health functionaries at the regional and district levels. Similarly, there are missed opportunities to strengthen access to diagnostics and screening through the integration of HIV, TB and malaria laboratory services, and to improve treatment through enhanced collaboration between TB and HIV services (and HIV and reproductive and child health services).

There has, however, been a visible effect on the recruitment and retention of human resources through involvement of civil society, as well as an improved reach. While the TB programme was reported to have a long-term strategic human resource development plan, HIV and malaria training were often considered as one-off efforts with limited plans for addressing capacity building on a long-term basis.

All the three disease programmes utilize procurements systems outside the Ministry of Health, with varying levels of

Table 2 Extent of integration of the disease programmes into the general health system, and the Global Fund portfolios for HIV, TB and malaria into the disease programmes, for each health system element and function in Nepal (2009)

Health system functions	Elements of integration	Disease programme into the health system			Global Fund portfolio into the disease programme		
		HIV	TB	Malaria	HIV	TB	Malaria
Stewardship and governance	**Overall extent of integration**						
	1: Regulatory mechanisms						
	2: Accountability framework						
Financing	**Overall extent of integration**						
	1: Fund pooling						
	2: Provider payment methods						
Service delivery	**Overall extent of integration**						
	1: Infrastructure						
	2: Human resources						
	3: Procurement and supply management						
Monitoring and evaluation	**Overall extent of integration**						
	1: Data collection and analysis						
	2: Supervision and monitoring						
	3: Evaluation and reviews						

Key:

High: the large majority of elements are fully integrated, i.e. this element is exclusively under the management and control of the general health care system.

Moderate: most elements share common strategies, policies or activities, or there is a mixture of integrated and non-integrated elements, i.e. this element is managed and controlled both by the general health care system and a specific programme-related structure.

Low: there is some interaction across elements but no coordinated activities.

None: the large majority of elements have no interaction.

support and inputs provided by the disease programme divisions.

Monitoring and evaluation

The national health management and information system (HMIS) was considered to be weak, incomplete and unresponsive. The demand for reporting to funding agencies, including the Global Fund, in a timely fashion and on varied process and output indicators has created parallel structures for data collection and reporting. This has in some ways contributed to improving the timeliness and completeness of disease-specific reporting, especially that of TB. With most of the activities for HIV and malaria being managed outside of the public health system, reporting and information sharing between programme divisions and civil society at district, regional and national levels were highly variable. As one of the International Health Partnership (IHP+) countries, Nepal is perceived to benefit from a more harmonized approach to strengthening HMIS.

Conclusion

The political environment (weak systems and capacity), the epidemiology of the diseases (concentrated epidemics appeared to particularly benefit from parallel and targeted interventions), and the capacity and reach of the public health system have determined the interactions and extent of integration of Global Fund-supported programmes into national disease programmes and health systems in Nepal.

The wider effects of disease-specific initiatives on health systems can be viewed as positive in a resource-constrained environment, especially by strengthening disease structures and systems and facilitating civil society involvement. However, as also opined by several informants, the challenge is to ensure that new implementation arrangements are complementary to the public health system (and not a replacement), and that stewardship lies with the public health system to manoeuvre all stakeholders for collective good, in line with the international guiding principles of health systems strengthening (WHO 2010).

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Conflict of interest

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