Title

Towards participatory and evidence-based resource allocation decisions for AIDS funding in Indonesia

Authors

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Abstract

Funding gaps to fight HIV/AIDS likely remain despite countries' efforts to increase AIDS funding, and this raises important questions on how governments make allocation decisions in severely resource-constrained settings. Here, we describe the first time implementation and evaluation of the integrated multi criteria decision analysis (MCDA) and accountability for reasonableness (AFR) approach to support the selection of interventions for the five-years (2014-2018) HIV/AIDS strategic plan for West Java province in Indonesia. The strategic plan functions as a leading document for the allocation of domestic funding in the province.

Introduction

Funding gaps to fight HIV/AIDS likely remain despite countries' efforts to increase AIDS funding [1], and this raises important questions on how governments make allocation decisions in severely resource-constrained settings [2]. These decisions are complex and driven by competing considerations of equity, efficiency, and feasibility [3]. The decision making *processes* are challenging, as these are often characterized by limited stakeholder participation [4] and absence of systematic evidence [5], and may result in ad-hoc decisions that are hard to justify to the community at large [7,8].

The World Health Organization, in its guidelines on the strategic use of antiretrovirals (SUFA), recommends the use of participatory and evidence-based approaches to make allocation decisions [8]. Several scholars have further operationalized these guidelines in order to provide practical guidance for countries to support allocations decisions at the local level [9]. They propose the use of a tool that integrates two increasingly important generic frameworks for allocation decisions in health: Multi Criteria Decision Analysis (MCDA) [6] and Accountability for Reasonableness (AFR) [10]. The MCDA framework fosters evidence-based priority setting on the basis of a set of explicitly defined criteria and ranks interventions on the basis of the performance of interventions on these

criteria [11]. The AFR framework fosters participatory and legitimate priority setting and outlines the necessary conditions for fair deliberative processes involving all relevant stakeholders (e.g. patients' groups, health workers, scientist, activists and politicians) [12].

Indonesia has one of Asia's fastest growing HIV/AIDS epidemic with 610,000 people that were living with HIV/AIDS (PLWHA) in 2013 [13]. The country is challenged by a funding gap of US$ 83 million for HIV/AIDS control, as only US$ 69 million was spent while an estimated US$ 152 million was needed in 2012 [14,15]. Here, we describe the first time implementation and evaluation of the integrated MCDA-AFR approach to support the selection of interventions for the five-years (2014-2018) HIV/AIDS strategic plan for West Java province in Indonesia. The strategic plan functions as a leading document for the allocation of domestic funding in the province.

Methods

The integrated MCDA-AFR approach was implemented in West Java (46 million inhabitants), which is among the highest hit provinces in Indonesia with an estimated 59,000 PLWHA in 2013 [16]. The epidemic is concentrated in high-risk groups, with estimated HIV prevalence rates of 23.2% among people who inject drugs (PWID), 6.3% among female sex workers (FSW) and 8.4% among men having sex with men (MSM) in 2013 [17]. The West Java provincial AIDS commission is responsible for coordination of HIV/AIDS activities and has a multi-sectorial design, consisting of representatives of various government institutes, community based organizations and health care facilities.

A project team (NT, RP, AS, AL, RW, RB) coordinated the implementation process and was formed by the West Java AIDS commission, Padjadjaran University in Bandung and Radboud University in the Netherlands. The MCDA-AFR approach consists of 5 steps (Figure 1, for more details see appendix) [9]. These are: the formation of a multiple stakeholder consultation panel (step 1); the definition of the priority setting criteria including weights to reflect their importance (step 2); a listing of HIV/AIDS intervention options by the consultation panel including the collection of data to assess their performance (summarized in a performance matrix that presents an overview of the performance scores of all intervention options on all criteria) (step 3); a deliberative process by the consultation panel on the performance matrix to reach consensus on the rank order of interventions (step 4); and implementation and funding institutions of high priority interventions (step 5).

The implementation process was evaluated using in-depth interviews with the consultation panel members by an independent researcher and using participant observations during meetings by the project team. The interviews were carried out using semi-structured questions obtained from the Sibbald and Kapiriri frameworks for successful priority setting in health [18,19]. Interview topics were

related to decision-making quality and stakeholder understanding and satisfaction of the strategic planning process.

Results

In step 1, the consultation panel (n=23) was formed and consisted of government staff from the health office, labour office, education office and the coordinating body for family planning (n =6); staff from community organizations working on family planning and representing PLWHA and high at risk groups (n=4); program managers from the West Java AIDS commission (n=7); and researchers with backgrounds in economics and epidemiology working on HIV/AIDS at Padjadjaran University (n=6).

In step 2, the following four criteria were selected for priority setting: 'impact on the epidemic', 'stigma reduction', 'cost-effectiveness', and 'universal coverage' and were based a local survey on the importance of criteria for priority setting [20], the WHO SUFA guidelines [8] and implicit criteria used during the development of the National and West Java strategic plans in 2008 and 2009 respectively [14,21]. The average criteria weights assigned by the consultation panel members on a scale from 0 to 100 were: 34 for impact on the epidemic, 25 for stigma reduction, 18 for cost-effectiveness and 23 for universal coverage.

In step 3, a larger group of seventy stakeholders were invited and proposed a set 50 interventions (including new ideas) for the strategic plan. Scores were assigned to the interventions for each criterion, with 2 indicating high, 1 moderate and 0 low performance, based on literature studies, projections of the Asian Epidemic Model for West Java and expert opinion. The quality of evidence was indicated using a star system. Expert opinion for new ideas for interventions was indicated as lowest quality (one star), expert opinion for existing interventions as mediate quality (two stars), and the Asian Epidemic Model projections and scientific literature data as high quality (three stars).

The resulting performance matrix (Table 1) shows that the *HIV testing and treatment package* is the most attractive intervention to scale up in West Java, followed by *school based education*, *information and education during Moslem Friday prayers, websites and social media interventions* and *the citizens AIDS program. Harm reduction for PWID and mitigation interventions* were considered less attractive to scale up as they performed least on the four criteria used for priority setting.

In step 4, during a deliberative process, the consultation panel reflected on the performance matrix. First, an interactive session was organized in which the stakeholders individually commented on the performance of each intervention presented on a poster (see for a detailed description the appendix

and online video material). Only few changes were made in the scores and this did not affect the overall rank order of interventions. Second, the consultation panel commented that due to ethical considerations it was undesirable to not provide mitigation interventions (activities to reduce the economic and psychological burden of those living with HIV/AIDS) in West Java province, and proposed to split up the performance matrix in three categories: prevention, treatment and mitigation.

In step 5, the panel listed which stakeholders should fund and implement the five highest priority interventions, separately for the prevention, treatment and mitigation interventions categories. The results of the priority setting process were included in West Java's five years (2014-2018) strategic document for HIV/AIDS control, which was approved by the Governor early 2014.

The in-depth interviews (n=21) revealed that the consultation panel members were overall positive about the process. All respondents stated that they had learned form the process, especially regarding the new way of setting priorities and most were satisfied by the way community organizations were better involved. They also stated that the new approach improved the decision-making quality, especially regarding the use of criteria and evidence for decisions. They also expressed it increased the transparency of the process and reduced the possibilities for corruption. Aspects mentioned for improvement were a shorter timeframe for the meetings and more education on the HIV/AIDS epidemic, HIV/AIDS interventions and the MCDA and AFR principles. While the project team observed dominance of participants in the discussions, the interview respondents declared that they were fully able to give their opinion in the process.

Discussion

The application of the integrated MCDA-AFR approach is an important step forward for Indonesia in the response to the HIV/AIDS epidemic. Compared to earlier strategic planning processes explicit priorities were set with involvement of various stakeholders and the use of available evidence [22]. The key value of the approach is the strong integration of the worlds of science and policy making. The stakeholders involved in policy making (the consultation panel) were supported by researchers (the project team) to select criteria for priority setting and to critically assess evidence on the performance of different interventions options. The approach advances in two ways from other methods for priority setting: first it uses multiple criteria for the selection of intervention and second, it uses a participatory approach to involve all relevant stakeholders in the process. Although international guidelines for HIV/AIDS response recommend participatory and evidence-based approaches, they lack clear structure on how to do this [23–25]. This paper fills in this important gap.

There are two main enablers for the success of the application of the approach in West Java. First, the implementation was followed up on a five years (2007-2011) European Commission funded project on the Integrated Management for Prevention and Control & Treatment (IMPACT). This project has built strong capacity of multi-disciplinary HIV/AIDS researchers at Padjadjaran University and established strong relationships between those working at the university and stakeholders from the AIDS commission, government institutions and community based organizations [26]. Second, the West Java AIDS commission showed strong leadership for the implementation of the MCDA-AFR approach and was already familiar with multi-stakeholder processes for example through their multi-disciplinary expert team that they consult for questions. Leadership is addressed of one of the key enablers for the successful implementation of priority setting methods [27,28].

There are three main areas for attention for the application of the approach to support resource allocation decisions for HIV/AIDS control. First, one should be aware of decision spaces and implement the approach in the setting where largest impact can be achieved. In the case of Indonesia, the health system is decentralized and guidance on resource allocation should also take place at this decentralized level. Second, capacity for health technology assessment (HTA) is needed in the project team that coordinates the five steps of the approach. Knowledge is needed on how to identify and select stakeholders for the consultation panel, how to use criteria for priority setting, how to collect and critically appraise evidence for different intervention options and how to facilitate deliberative discussions. A key consideration is also to select methods that are appropriate to the cultural setting. While in some settings voting is an option to reach consensus in some areas this is less appropriate [22,27]. A situational analysis on the context of the priority setting exercise is instrumental and we recommend adding this as an initial and additional step in the integrated MCDA/AFR approach. Third, a country's priority setting exercise for allocation decisions for AIDS funding should be a continuous cycle. To improve the impact, the approach should be a continuous democratic learning process, in which stakeholders reflect, evaluate and improve the priority setting process to respond to the HIV/AIDS epidemic. This may also result in a shared research agenda on the missing data for the performance of certain HIV/AIDS interventions options [29]. A participatory action research approach can support such continuous learning processes [12,30].

We encourage others to provide feedback and debate with us on the application of the MCDA-AFR approach to further support resource allocation decisions for AIDS funding.

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Tables and Figures

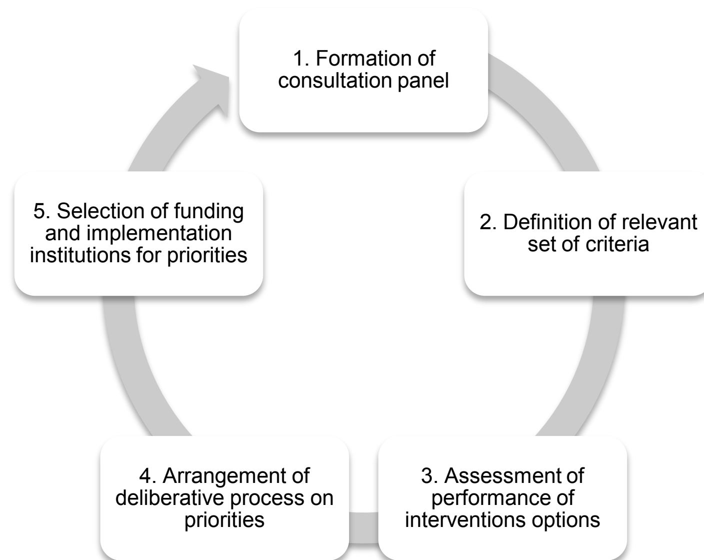

Figure 1 The five steps of the integrated MCDA-AFR approach for priority setting of health interventions based on Baltussen *et al*. 2013 [9]

Table 1 Performance matrix used for priority setting of HIV interventions for West Java's HIV strategic plan 2014-2018

No.	Category	Intervention	Impact on epidemic	Stigma reduction	Cost-effectiveness	Universal Coverage	Total score	Rank
			Criteria					
		weights	**34**	**25**	**18**	**23**		
1	Treatment	HIV testing and treatment package[a]	2[b]	2	2	1	177[c]	1
2	Prevention	School based education	2	2	2	1	177	1
3	Prevention	*Information and education during Moslem Friday prayers*	2	2	2	1	177	1
4	Prevention	Websites and social media	2	2	2	1	177	1
5	Prevention	Outreach stand alone	2	2	1	1	159	2
6	Prevention	Citizen's AIDS program	2	2	1	1	159	2
7	Prevention	Work place programs	2	2	1	1	159	2
8	Prevention	Condom distribution and promotion	2	0	2	1	127	3
9	Prevention	*Condoms sold with energy drinks in red light districts*	2	0	2	1	127	3
10	Prevention	PMTCT – information for women in reproductive age	1	2	1	1	125	4
11	Prevention	Radio talk shows	1	2	1	1	125	4
12	Prevention	Television talk shows	1	2	1	1	125	4
13	Prevention	Printed media, HIV columns	1	2	1	1	125	4
14	Prevention	Voluntary counseling testing stand alone	1	1	2	1	118	5
15	Prevention	PMTCT - family and reproductive health counseling for HIV-infected women	1	1	2	1	118	5
16	Prevention	PMTCT - HIV testing and treatment B+	1	1	2	1	118	5
17	Mitigation	Probation program for prisoners	1	1	2	1	118	5
18	Prevention	*PMTCT - opt-out testing for pregnant women*	1	1	1	1	100	6
19	Prevention	Universal precautions	1	1	1	1	100	6
20	Prevention	Training for journalists to write on HIV	1	1	1	1	100	6
21	Prevention	Printed information and education (leaflets, stickers, posters)	1	1	1	1	100	6
22	Prevention	Radio adlibs	1	1	1	1	100	6
23	Prevention	Radio HIV public service announcements	1	1	1	1	100	6
24	Prevention	Blood screening	1	0	2	1	93	7
25	Prevention	Sexual transmitted infections testing & treatment	2	0	0	1	91	8
26	Mitigation	Vocational training	1	1	0	1	82	9
27	Prevention	Television HIV public service announcements	1	1	0	1	82	9
28	Prevention	World AIDS day	1	1	0	1	82	9
29	Prevention	*Information and education on televisions in minimarkets*	1	1	0	1	82	9
30	Mitigation	Community-based rehabilitation	0	2	0	1	73	10
31	Mitigation	Stigma reduction training for police men & law enforcers	0	2	0	1	73	10
32	Mitigation	*Stigma reduction training for health care workers*	0	2	0	1	73	10
33	Prevention	Needle exchange and medical waste management	1	0	0	1	57	11
34	Prevention	Methadone + peer support for PWID	1	0	0	1	57	11
35	Prevention	*Voluntary counseling and testing for pre marriage couples*	0	1	0	1	48	12
36	Mitigation	PMTCT – milk program for HIV infected children	0	1	0	1	48	12
37	Prevention	*Functional cure experiments*	0	1	0	1	48	12
38	Mitigation	Education Scholarships for HIV-infected People	0	1	0	1	48	12
39	Mitigation	*Support for government insurance application*	0	1	0	1	48	12
40	*Mitigation*	*Psychological counseling*	0	1	0	1	48	12
41	*Mitigation*	*Legal support for stigmatized children in schools*	0	1	0	1	48	12
42	Prevention	Edutainment concerts	0	1	0	1	48	12
43	Prevention	*AIDS ambassador*	0	1	0	1	48	12
44	Prevention	Post exposure profylaxes	0	0	0	1	23	13
45	Treatment	Opportunistic infections treatment	0	0	0	1	23	13
46	Mitigation	Microloans	0	0	0	1	23	13
47	Mitigation	Social support for widows (group discussion)	0	0	0	1	23	13
48	Mitigation	Day care for children	0	0	0	1	23	13
49	Mitigation	Transport subsidies for HIV patients	0	0	0	1	23	13
50	Mitigation	In patient rehabilitation	0	0	0	1	23	13

Italics = new ideas for interventions that did not yet exist in West Java province

[a] The package consist of: outreach, voluntary counseling and testing, partner notification, antiretroviral treatment, adherence counseling and peer support

[b] The scores indicate the performance of an intervention on the criteria: *2 = high, 1 = moderate, 0 = low.*

[c] The total score per intervention is calculated by the sum of the weights times the score per criterion, e.g. 2*34+2*25+2*18+2*23 = 177

PMTCT = prevention of mother to child transmission