

Appendix

Detailed description of the five implementation steps of the integrated MCDA-AFR approach to select interventions for the five years (2014-2018) HIV/AIDS strategic plan for West Java province in Indonesia.

Formation of the project team

In September 2012, the West Java provincial AIDS commission, Padjadjaran university Bandung in Indonesia and Radboud university in The Netherlands established an agreement to implement the integrated MCDA-AFR approach for priority setting to support the development of the five-years (2014-2018) HIV/AIDS strategic plan for West Java. These parties formed a project team (authors: NT, RP, AS, RW, AL and RB) that coordinated the implementation. The West Java provincial AIDS commission, which coordinates the development and implementation of the strategic plan, has a multi-sectorial design. The commission comprises representatives of various government offices (i.e. health, education, social tourism, law, and religious affairs), non-governmental organizations (including community-based organizations) and health care facilities. The daily staff of the AIDS commission is responsible for the coordination of HIV/AIDS activities in the province and provides support to the various government and non-government agencies that implement HIV/AIDS control activities [1]. In order to implement the integrated MCDA-AFR approach, the project team followed the five steps as proposed by Baltussen *et. al.* in 2013 [2]. Hereafter, we will describe the implementation of each step.

The priority setting process: five steps

Step 1. Formation of consultation panel

In step one, a consultation panel (n=23) was established that involved members from *Tim Asistensi* (a working group of HIV/AIDS experts established at national and provincial AIDS commissions in Indonesia), which consists of retired government staff (n=1), current government staff (from the health office, labour office and coordinating body for family planning (n=3)) and a representative of a community based organization (CBO) on family planning (n=1). This team was complemented with government staff working on HIV/AIDS (from the health and education office (n=2)), staff of CBOs (representing PLWHA and high at risk groups like people who inject drugs, transgender, and men having sex with men (n=3)), AIDS commission program managers (n=7) and researchers from Padjadjaran university in Bandung (with backgrounds in economics and epidemiology (n=6)).

To stimulate participation, the consultation panel agreed that those not attending meetings could not influence the decisions that would be taken. On request of the panel, the project team developed an information bulletin to keep not participating panel members and other relevant persons

informed about the process and any decisions taken. Facilitated by the project team, the consultation panel agreed on a schedule of meetings based on the MCDA-AFR approach for the development of the strategic plan.

Step 2. Definition of relevant set of criteria

A focus group discussion (FGD) was held with the consultation panel (attendance rate: 43%) to select criteria for priority setting. Four different sources were used to guide the discussion: 1) results of a survey on the importance of HIV criteria for priority setting rated by health care workers, policy makers, PLWHA and general population in West Java [3], 2) criteria implicitly used during the development of the West Java HIV/AIDS strategic plan 2009-2013 [1] 3) considerations stated in Indonesia's national HIV/AIDS strategic plan 2010-2014 [4], and 4) criteria proposed by the World Health Organization (WHO) for the strategic use of antiretrovirals [5]. An overview of the criteria is presented in Table 1. The criteria were separated into two categories, based on whether criteria are related to the WHO health systems' goals or to the building blocks and presented to the consultation panel.

To avoid dominance, each consultation panel member was asked during the meeting to list on a paper a top 5 of goals criteria for priority setting. The results were collected by the project team and presented plenary to all members of the meeting. After a discussion the panel agreed to select four criteria related to the health system goals for inclusion of HIV interventions in the strategic plan: 1) its impact on the epidemic (in terms of new HIV infections averted), 2) its impact on reducing inequality in society, 3) its cost-effectiveness, and 4) its contribution to universal access. Together these criteria reflect stakeholders' preferences for the health system goals that HIV intervention would need to contribute to. The same procedure was repeated for the feasibility criteria (related to the health system building blocks) and in the end four were selected: 1) health workforce capacity, 2) infrastructure capacity, 3) sustainability of funding, and 4) cultural, political and religious acceptability. Together, these criteria reflect stakeholders' opinions on the most important barriers for implementation of HIV/AIDS interventions in West Java province.

After the meeting, the project team decided to only use the health systems goals criteria to select interventions for the five years strategic plan for West Java province. The feasibility criteria were not selected for priority setting because the feasibility of interventions (e.g. health workforce capacity) likely differs per district in West Java. In addition, it should not guide a five years plan as feasibility constraints could be resolved by stakeholders within the timeframe.

As a next step, a survey was held among 19 out of the 26 members (response rate 73.1%) of the consultation panel to measure their perception on the relative importance (also called weights) of the goals criteria. The members were asked to divide 100 points among the four criteria to indicate

its relative importance. 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.

Step 3. Assessment of performance of intervention options

The performance matrix is a key feature of MCDA and presents the scores obtained for each HIV intervention on the selected criteria, which can then be systematically compared and ranked [6]. Hereafter, the steps are described that were taken to establish the performance matrix.

Identification of interventions - The consultation panel established a wider list of 70 stakeholders (including national government institutions, CBOs and eight private sector parties) who proposed interventions for the strategic plan during six FDGs. The FDGs were categorized according to the working groups established in most AIDS commissions in Indonesia and the attendance rate differed per group: prevention sexual transmission 60% (6/10), care support treatment 2% (3/18); harm reduction 100% (11/11); mitigation 39% (7/19); media 67% (12/18) and workplace 41% (7/17). The proposed interventions were divided into core and support interventions, with the latter referring to advocacy, policy and coordination activities. Only core interventions were included in the performance matrix as the project team reasoned that supporting interventions could only be implemented for prioritized core interventions. For example, advocacy activities to reduce cultural and religious barriers related to condom use to ensure effective implementation are required only if condom interventions are prioritized for the new five-year plan. In addition, the project team added interventions that already existed in West Java province and intervention options related to international debates, for example alternative ART strategies. Some interventions were combined, for example a treatment package was defined that included outreach, voluntary counselling and testing, partner notification, antiretroviral treatment, adherence counselling and peer support. This was done in the understanding that it would be unrealistic to evaluate treatment interventions without taking into account the testing. In total 50 interventions were identified of which 10 were new ideas put forward by stakeholders and not yet established and implemented in West Java.

Scoring of interventions - To establish scores on the performance of interventions per criterion we first consulted a database with Indonesian HIV peer-reviewed literature collected up to June 2013 (described in detail elsewhere [7]) and the Indonesian HIV grey-literature inventory 1995-2009 (National AIDS commission 2009). From both sources two studies on cost-effectiveness of a methadone maintenance treatment [8] and voluntary counseling and testing program [9] could directly inform on the scores of interventions in the performance matrix. Due to the limited Indonesian evidence base, we performed an additional non-systematic search in Pubmed to find evidence on the cost-effectiveness and impact on stigma reduction of interventions. We identified no articles that could inform on the impact of stigma reduction of the included interventions, and one

comprehensive review on the impact on the epidemic and cost-effectiveness on a wide range of HIV interventions in Asia [10].

Due to scarce availability of literature the project team decided to consult Indonesian experts to score the performance of interventions. A relatively simple three level 'low', 'moderate' and 'high' performance scoring system was used to make the performance matrix understandable for the consultation panel. For the criterion 'impact on the epidemic' a panel of three experts (a health economist, a public health expert and WHO country office staff member) scored all interventions on the basis of discussion. The panel was informed with the available literature on the effectiveness and cost-effectiveness of HIV interventions and the latest projections of the HIV epidemic with use of the Asian Epidemic Model (AEM) version 3.2 (described in detail elsewhere [11]. For the harm reduction and condom distribution interventions the panel was informed with effectiveness estimates (in terms of HIV infections averted) based on the AEM. For the other interventions, the effectiveness could not be evaluated with the AEM due to limitations related to the design of the model.

For the criterion 'cost-effectiveness', the project team calculated first the budget impact of each intervention using coverage data, population size estimations from local monitoring data and local experts and the intervention unit cost estimations obtained from the national inventory of the National AIDS commission [12], scientific literature for Indonesian setting [13], the Futures international literature database [14] and expert opinion of local program managers from the West Java AIDS commission, governments, and CBOs. For each intervention the budget impact was calculated for 5 years (2014-2018) assuming a scale up coverage of 50% among target population and 43% additional programs costs based on the latest National AIDS spending assessment (NASA) from 2011 [15]. To score the cost-effectiveness of interventions the budget impact was then divided by the project team into four categories: low, middle, high and very high budget impact. The project team determined the overall cost-effectiveness scores by combining the impact on the epidemic and budget impact scores. The results are presented in Table 2.

For the criterion 'stigma reduction', one anthropologist and one HIV counsellor (trained as a psychologist) formed an expert panel. The panel decided to rate first the impact of interventions on 'self-enacted' and 'societal stigma' and then agreed on an overall score. For the criterion 'universal coverage', the project team gave 'moderate' scores for all interventions because they reasoned that the coverage target set for 2018 and not the current coverage (in 2013) determines the performance of an intervention. At this stage of the strategic planning process coverage targets for 2018 were not yet defined and therefore the performance of interventions on achieving universal coverage did not differ.

Quality of evidence

To indicate the quality of evidence for the scores of interventions a three star rating system was used. Three stars indicated 'high quality' when based on scientific literature, two stars meaning 'moderate quality' when based on experts opinion given for existing interventions and one star meaning 'low quality' when based on expert opinion given for new ideas for interventions.

Step 4. Arrangement of deliberative process on priorities

The consultation panel participated during a full day meeting (participation rate 54% (13/24)) in an interactive exercise to critically assess and build consensus on the scores. For each intervention an A0 size poster was developed that presented the intervention description, performance scores and quality of evidence (Figure 1). All participants received 50 comment cards (Figure 2) and were asked to walk around to look at the intervention performance and indicate on the comment card if they agreed or disagreed with the scores. In case of disagreement the participant was asked to provide an alternative score and a related rationale. The comments were entered in an excel sheet on the spot and the consultation panel agreed to use a cut-off point of 19% disagreement (overall for all four scores) in order to discuss the scores of a program. In total, for 7 programs all scores were discussed and 10 scores were adapted (Table 3).

For each intervention a rank order was calculated by the sum of the weights times the scores per criterion. The performance matrix (Table 1 main manuscript) was then presented to the consultation panel and they were given the opportunity to move interventions up or down in the rank order on the basis of additional reasons that were not captured by the four criteria for priority setting. Meeting participants proposed changes in the rank order of five interventions but the reasoning was not always rational (according to the view of the project team) and only partly corrected by other members (Table 4). Therefore, no changes were made in the rank order of interventions. 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. Therefore, the performance matrix was split up in three categories: prevention, treatment and mitigation.

Step 5. Selection of funding and implementation institutions for priorities

The project team prepared and held an exercise in which the consultation panel was split up in three groups on the basis of the categories to discuss coverage targets and funding and implementing parties for top interventions. For the treatment category the testing and treatment package was discussed and for prevention and mitigation the top five interventions with the highest rank order. Thereafter, the strategy was offered to the West Java governor and approved early 2014.

References

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Tables & Figures

Table 1 Sources used during focus group discussion to define criteria for priority setting of interventions for the five years HIV/AIDS strategic plan for West Java province

Source	Criteria
Survey among health care workers, policy makers, people living with HIV/AIDS and general population in West Java (top 10 criteria of each stakeholder group was included) [3]	Impact on HIV epidemic Stigma reduction Quality of care Individual effectiveness Service requirement Health care workers requirements Information requirements Political acceptability Legal rules Sustainable financing Unit costs Prevention versus treatment Products requirements Individual effectiveness Level at risk individual
West Java planning process for 2009-2013 HIV strategic plan (criteria implicitly used in discussions) [1]	Current HIV/AIDS epidemic Guidelines from national AIDS commissions (four areas of intervention) Previous experiences of programs effectiveness Mix of local political, cultural, and religious values Feasibility related to current health system infrastructure Feasibility of reaching target groups Likelihood of receiving local budget funding Current program coverage Programs enacted in the past (but no longer relevant) Focus on high risk groups Programs applicable in all cities in province
Indonesia's national HIV strategic plan 2010-2014 (considerations stated in document) [4]	Impact on reducing spread of HIV epidemic Cost-effectiveness
WHO guidance for strategic use of antiretrovirals (SUFA) [5]	Cost-effectiveness Equity Feasibility

WHO = World Health Organization

Table 2 Categories used to determine the cost-effectiveness of HIV interventions

<i>Budget impact</i>	<i>Impact on the epidemic</i>	<i>Cost-effectiveness</i>
very high	moderate	moderately cost-effective
moderate	low	not cost-effective
moderate	moderate	moderately cost-effective
low	moderate	cost-effective
moderate low	moderate	cost-effective
moderate low	low	not cost-effective
very high	high	moderately cost-effective
very high	low	not cost-effective

Table 3 Overview of changes made in step 4 for the performance scores of interventions on the criteria

Intervention (criteria)	Criteria scores		Intervention total score		Intervention rank order	
	old	new	old	new	old	new
Outreach stand alone						
<i>Impact on the epidemic</i>	1	2	100	159	6	2
<i>Stigma reduction</i>	1	2				
Post exposure prophylaxes						
<i>Stigma reduction</i>	1	0	48	23	12	13
Microloans						
<i>Impact on the epidemic</i>	1	0	82	23	9	13
<i>Stigma reduction</i>	1	0				
Transport subsidies for ART patients						
<i>Stigma reduction</i>	1	0	48	23	12	13
World AIDS day						
<i>Impact on the epidemic</i>	0	1	23	82	13	9
<i>Stigma reduction</i>	0	1				
AIDS ambassador						
<i>Stigma reduction</i>	0	1	23	48	13	12
IEC in television in minimarkets						
<i>Cost-effectiveness</i>	1	0	100	82	6	9

Table 4 Overview of changes proposed in step 4 for the rank order of interventions in the performance matrix and the rationale given

	Old rank	Proposed rank	Rationale given by meeting participant
Needle exchange and medical waste management	11	1	"The PWID epidemic might go up again, programs have been proven successfully in West Java to suppress the epidemic, this is the reason why the epidemic goes down'. This was challenged by another meeting participant who said: "But the National AIDS commission is not prioritizing on harm reduction programs anymore, because of the declining epidemic among PWID, they focus now more on sexual transmission of HIV"
STI testing and treatment	8	1	"STI should have higher priority because it covers the low at risk groups, it therefor can have a wide coverage and great impact on the epidemic"
Blood screening	7	1	"This is like the same for the STI program, the blood screening program focuses on low at risk groups and therefor has a wide coverage and therefor great impact on the epidemic"
IEC during Muslim Friday prayers	1	1	"Those that are at high-risk and need information on HIV never attend Friday prayer." Another participant challenged this and said: "The prevalence in low risk population (mainly women) is now increasing and that's why National AIDS Commission focuses not anymore on PWID but also on general population, and therefor Friday payer are useful."

PWID = people who inject drugs, STI = sexual transmitted infection, IEC = information, education and communication

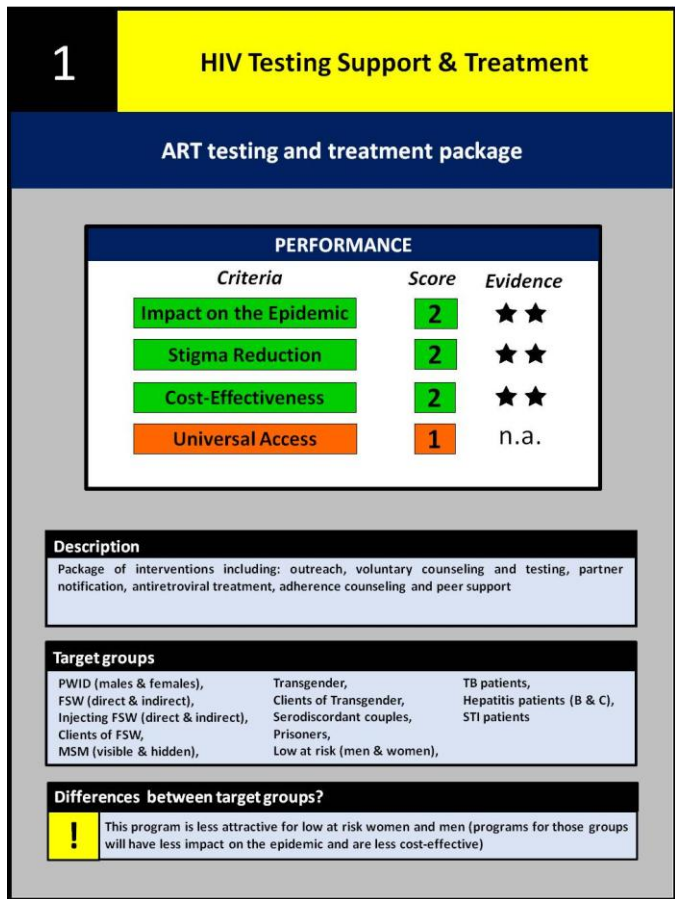


Figure 1 Example scoring card that presents the performance and strength of evidence for the HIV testing and treatment package. PWID = people who inject drugs, FSW = female sex workers, MSM = men having sex with men, TB = tuberculosis, STI = sexual transmitted infections, n.a. = not applicable

1 ART testing and treatment package

Criteria:	Agree/ Disagree:	Comment:	New score:
Impact on the epidemic	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/>
Stigma reduction	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/>
Cost-effectiveness	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/>
Universal access	<input type="checkbox"/> <input type="checkbox"/>		<input type="checkbox"/>

Other comments:

Figure 2 Example of a comment card used by the consultation panel members to comment on the scores collected by the project team on the performance of an intervention

Video Material

This is link to a video that shows the interactive exercise in step 4 of the implementation process (5 September 2013, Hotel Amaroosa meeting room, Bandung, Indonesia):

<https://www.dropbox.com/sh/oe59092rojuqvum/erJCTyFFft#/>