NATIONAL AIDS COMMISSION

The Case for Increased and More Strategic Investment in HIV in Indonesia

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Foreward

We are pleased to present the results of the Investment Case Analysis (ICA) which was completed in 2014. This analysis was done to estimate the required investments in the future to respond to HIV and AIDS in a cost-effective and optimal manner.

Estimating the resources needed in response to HIV/AIDS epidemics is critical for determining the most efficient and effective approach to reducing new infections. HIV/AIDS effectiveness evaluation and cost effectiveness analysis are important tools for understanding the return from our investments on HIV prevention and treatment, whether the interventions have some impact on reducing new infections and AIDS deaths, and the return on investment.

The result of the ICA has been reviewed by all stakeholders involved in the national technical team which comprised the Ministry of Health, the National AIDS Commission, and development partners like DFAT, WHO and UNAIDS. The results of this review are based on an analysis of the best and most current data available as of September 2014 in terms of HIV epidemic data, the 2013 IBBS for category B districts, the 2013 Papua IBBS, and revised 2014 unit cost for treatment. Analysis obtained from the study results has also guided the selection of the optimal scenario for the National HIV and AIDS Strategy and Action Plan 2015-2019 and informed the preparation of Indonesia's Global Fund New Funding Model Concept note in 2015.

As such, it is important to note that this report is an on-going work-in-progress and does not incorporate data which will soon become available under the current mapping and estimations exercise in 2015 and the IBBS 2015 for Category A high burden districts whose results are expected to become available towards the third quarter of 2015. The present analysis also does not include the current efforts made to determine the optimal allocation of resources which is possible given the two year GFATM New Funding Model allocation for 2016-2017. The next version of the ICA report will be based on the new data sources which will become available in 2015. It will include the results from the optimization analysis which began in April 2015 and also a strategy to advocate for greater investment of domestic resources for HIV. We hope that this document could serve as

an useful reference for all partners and contribute towards advocating for greater domestic resources for the AIDS response in Indonesia.

Last but not least, we would like to extend our sincere thanks to all the members of the AIDS Epidemic Model work team who represented the key stakeholders (MOH, NAC, WHO and UNAIDS) of the AIDS response in Indonesia. They have worked very hard and effectively to produce this report. Special thanks go to Dr. Wiwat Peerapatanapokin of the University of Hawaii East West Center for the technical support provided and for training the national task team members to use the AEM and to Dr. Robert Magnani, Ph.D. for writing the report and for his patience in revising the draft taking into account the extensive comments for our key partners.

NATIONAL AIDS COMMISSION
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Dr. Kemal N. Siregar

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Executive Summary

Why an ICA Now?

Indonesia has mobilized unprecedented levels of domestic political commitment to respond to HIV since 2006, and significant domestic and international funding has been secured to support a greatly expanded national response. Recent data suggest that HIV transmission may be slowing. Further efforts are, however, needed in order to consolidate the gains made and further expand program coverage and intervention effectiveness for Key Affected Populations (KAPs), among some of whom HIV transmission continues to grow. The timing of this Investment Case Analysis (ICA) is fortuitous as there are several potential entry points for the ICA to influence important upcoming policy and funding decisions, including (1) the development of an updated National Strategy and Action Plan (SRAN) for 2015-2019 and (2) Submission of an application for GFATM funding under the New Funding Model (NFM). A new government will also be inaugurated in November 2014 and will require detailed briefing and advocacy if HIV and AIDS is to retain or increase its level of priority on the new administration.

Understand

Results from the epidemiologic modelling update exercise undertaken by the MOH in 2012 based upon the then-available data (through 2011) projected continued growth in the number of new HIV infections among most KAPs unless further action was taken. An unofficial updating exercise undertaken in connection with the present ICA that incorporated newly available 2013 IBBS data suggests that some progress has been made in stabilizing the sub-epidemics among some KAPs and in the general population of Tanah Papua, although the sub-epidemic among men who have sex with men (MSM) continues to expand. Some success has also been achieved in increasing the number of eligible persons on ART and improvements in retaining those on ART.

However, the annual number of new ART initiators continues to fall short of the estimated annual number of new HIV infections, and insufficient treatment retention rates limits both the prevention and mortality impact of resources being spend on HIV treatment. The strategies being employed to contain HIV in Indonesia are by and large appropriate given the stage of the HIV epidemic, but until have not been realizing their full impact due to insufficient scale and program implementation issues.

Design

The current GOI focus is on (1) Adoption of a unifying Continuum of Care (COC) model at the district level (the Layanan Komprehensif Berkelanjutan (LKB – Integrated, Decentralized Continuum of Care Services), (2) Expanding the Strategic Use of ARVs and (3) Wider adoption of evidence-based good practices to increase the effectiveness of key interventions The bulk of program efforts are concentrated in the n=141 districts targeted for supplementary GFATM resources. LKB will be implemented initially in 75 districts and expanded to reach all 141 GFATM-supported districts by mid-2015.

Epidemiologic modelling was undertaken to assess the potential impact of these initiatives under differing levels of intervention coverage and effectiveness. Six (6) scenarios were compared to assess the range of potential impacts. Impact indicators considered included (1) Annual number of new HIV infections, (2) Number of HIV infections averted, (3) Number of PLHIV, (4) Number of HIV-associated deaths, (5) Number of deaths averted and (6) Number of DALYs saved. Significant impact is projected for the current initiative, the magnitude of which depends upon the levels of program coverage and implementation effectiveness.

At a "high" level of implementation performance (see the report for the operational definition of "high") in the current 141 priority cities and districts, the following results are projected:

- PLHIV: Peaks at 702,000 in 2019, falls to 509,000 in 2030
- Annual new HIV infections: From 66,000 in 2013, falls to 32,600 in 2020 and 17,400 in 2030
- HIV-related deaths averted: 13,800 by 2020 and 33,700 by 2030
- DALYs saved: 4.2M by 2020 and 18.5M by 2030

It should be noted, however, that even with these impressive results, reaching zero new HIV infections and zero HIV-related deaths would not occur until sometime after 2030 – there would still be 17,400 new infections 39,000 HIV-related deaths annually in 2030 under the "high" performance scenario. It should also be noted that successful scaling up of strategic use of ARV requires that the LKB/PMTS "Continuum of Care" model underlying the national HIV strategy also be successfully implemented as the latter provides the platform from which strategic use of ARV can be effectively scaled up. Sensitivity analyses indicate that while the level of CD4 to start ART and ART effectiveness in preventing transmission are important, the impact of changes and/or improvements in these parameters is muted at low levels of ART coverage such as characterize Indonesia at present. The immediate priority in Indonesia should be to get more people tested and onto treatment. Changing the starting criteria to CD4 = 500 will do little to increase ART coverage at current levels/rates of HIV testing and treatment start-up. Furthermore, the CD4 = 350++ criteria for starting HIV+ persons on ART would avert more infections and would be more cost-effective vs. the CD4 = 500 cut-off point for initiating treatment. The sensitivity analyses do confirm, however, that at any given level of non-ART prevention performance, strategic use of ARVs significantly enhance the impact of program efforts.

Deliver

Resource needs: The total costs for program outputs in 2013 are estimated to have been about US$ 108M. Once LKB/PMTS is fully implemented in 141 priority districts beginning in 2015, the costs begin to mount rapidly. In order to fully scale up LKB/PMTS and Strategic use of ART (SUART) as envisioned in the "LKB/PMTS High" scenario, US$ 1.48B will be needed between 2014 and 2020 (about US$ 211M per year on average) and US$ 3.22B between 2021 and 2030 (an average of US$ 330M per year). It should be noted, however, that projected annual program costs begin to decline in 2027.

Cost-effectiveness: The estimated cost of expanding HIV programming ranges from around US$ 3,800 to around US$ 9,000 per infection averted depending on projection scenario and annual treatment costs. At the current estimated lifetime costs of treatment for a person infected today of about US$ 15,250, the projected cost to prevent a new infection through expanded programming is in the worst case scenario only 2/3 of the cost of providing ART if that person became infected under plausible medium-term scenarios concerning treatment costs. The estimated cost per DALY saved also indicates that investing in HIV would be highly cost-effective. Return on Investment (ROI): At current program unit costs discounted annually at 3%, the estimated Return on Investment (ROI) per US$ 1 invested today under the "LKB/PMTS High" scenario would be US$ 2.10 through 2020 and US$ 3.7 through 2030. Further savings could be realized by switching to less costly ART drugs.

Sustain

The estimated funding gap in 2014, the first year of LKB and SUART, is estimated to be about US$ 30M. Under the "LKB/PMTS High" scenario and current assumptions concerning domestic and international funding, this will rise to US$ 176M in 2020. Additional funding and/or program efficiencies will be needed in order to achieve the results sought.

Potential funding sources for filling this resource gap include, in addition to increased national program and international funding:

- Increased local government funding
- Increased private philanthropy
- Increased coverage of HIV-related services by the JKN
- Increased private health sector participation in addressing HIV and AIDS via GOI subsidies. Priority targets for increased efficiency might include:
- Reduced price ART drugs
- Improved integration of services at health facilities to reduce "missed opportunities" to get KAPs tested for HIV and STIs treated
- Improved coordination between health facilities and community-based organizations (CBOs) to take greater advantage of CBOs connections with KAP groups.

None of these are likely to raise/save sufficient resources on their own, and thus multiple strategies should be pursued by the National HIV Program.

The immediate priority in Indonesia should be to get more people tested and onto treatment. Changing the starting criteria to CD4 = 500 will do little to increase ART coverage at current levels/rates of HIV testing and treatment start-up. Furthermore, the CD4 = 350++ criteria for starting HIV+ persons on ART would avert more infections and would be more cost-effective vs. the CD4 = 500 cut-off point for initiating treatment.

Why an ICA Now?

Indonesia is at a key juncture in its response to HIV. The Indonesia AIDS National Strategy and Action Plan 2007-2010 (SRAN 2007-2010) marked the beginning of a period of growing GOI commitment to combatting HIV. The more recent Indonesia AIDS National Strategy and Action Plan 2010-2014 envisions that by 2014 national program efforts will have reached 80% of Key Affected Populations (KAPs) with comprehensive packages of effective interventions and that 60% of KAPs would be engaging in safer sexual behaviours, targets which if reached would go a long way toward containing HIV in Indonesia.

Indonesia has mobilized unprecedented levels of political commitment to respond to HIV since 2006, and significant domestic and international funding have been secured to support a greatly expanded national response. Until recently, the available data and program review results suggested that while progress was being made, national HIV program efforts lacked the coverage and intervention effectiveness needed to have a major impact on the course of HIV in the country.

However, Integrated Biological-Behavioural Surveillance (IBBS) data collected from KAPs in 2013 in nine (9) provinces and among the general population in Tanah Papua suggest that program efforts have slowed the growth of the epidemic, and perhaps stabilized epidemic progression among some groups. Further efforts are, however, needed in order to consolidate the gains made and expand program coverage and intervention effectiveness for KAPs among whom HIV transmission continues to expand (primarily men-who-have-sex-with men (MSM).

The timing of this Investment Case Analysis (ICA) is fortuitous as there are several potential paths through which ICA results can influence important decisions that will be made over the next 12 months or so.

These include:

- The Indonesian National AIDS Commission (KPAN) will soon begin work on an updated National Strategy and Action Plan (SRAN) for the years 2015-2019, and the analyses, justifications and conclusions presented in the ICA can provide important input into the deliberations undertaken by the KPAN and other stakeholders in developing the new SRAN. The SRAN is the first step in getting increased priority and funding for HIV included in the GOI's 2015-2019 Medium Term Development Plan, which is essential if a substantial increase on GOI funding for HIV is to be realized;

- A new government will also be inaugurated in November 2014 and will require detailed briefing and advocacy if HIV and AIDS is to retain or increase its level of priority on the new administration. Targets for briefing and advocacy include the new President, the new Ministers of Health, Home Affairs and Finance, and the Parliament.

- The GOI must submit an application for GFATM funding under the New Funding Model (NFM), and the analyses and justifications provided in the ICA can, along with the updated SRAN, provide the type of clear linkage with GOI strategic development planning and national financing of HIV that the GFATM desires to see in country applications;

- The GOI will begin rolling out a universal health/social protection scheme in 2014. It would appear at present that some HIV-related serves will be covered (e.g., STI diagnosis and treatment and treatment of opportunistic infections (e.g., TB), but others (including HIV testing and ART) will not. In making the case for increased funding for HIV either as part of or separately from the national health insurance scheme, the GOI must have a handle on the cost and potential returns on investment of alternative National HIV program scenarios through the year 2020 (at minimum). Such data and analyses will also be useful in advocating for a larger share of national HIV program costs to be covered by the national health insurance scheme.

The SRAN is the first step in getting increased priority and funding for HIV included in the GOI's 2015-2019 Medium Term Development Plan, which is essential if a substantial increase on GOI funding for HIV is to be realized

Understand

Results from the epidemiologic modelling update exercise undertaken by the MOH in 2012[1] based upon the then available data (through 2011) projected persistent growth in the number of new HIV infections in the country to 2025 unless further action was taken, with a rapidly expanding sub-epidemic among men who have sex with men (MSM) being the primary driver (see Annex 1a).

An unofficial updating exercise undertaken in connection with the present ICA analysis that incorporated the newly available 2013 IBBS data suggests that some progress has been made in stabilizing the sub-epidemics among some KAPs and in the general population of Tanah Papua. This is reflected in the flatter projected trajectory of overall numbers of new HIV infections for Indonesia as a whole, as is shown in Annex 1b. This trajectory is based upon the assumption that HIV programming would continue at 2013 levels of national program coverage and intervention effectiveness.

Consistent with the 2012 projection, MSM remain the primary epidemic driver. Annexes 1c and 1d show projected trajectories for Tanah Papua and non-Papua (that is, for all provinces other than those in Tanah Papua), respectively, from 2014 forward. A flattening of the epidemic trajectory is apparent in both Papua and non-Papua. Annex 1e shows projected HIV prevalence levels for selected population sub-groups under the assumption that HIV programming would continue at 2013 levels of coverage and intervention effectiveness.

The most recent surveillance data available upon which the above "baseline" projections were based indicate mixed results with regard to extent to which HIV sub-epidemics among the various KAPs have been or are on course to be contained. Annexes 2a and 2b summarize trends in HIV prevalence among KAPs for two groups of provinces: (1) Category A provinces, which have the largest populations of KAPs and were the initial set of priority provinces targeted with additional funding support from the GFATM (GFATM Round 8) and (2) Category B Provinces, which consist of the next set of provinces for priority attention (GFATM Round 9)[2].

Trends in the former group of provinces were measured by comparing the 2007 and 2011 IBBS among KAPs, while trends in the second group were measured by comparing the 2009 and 2013 IBBS. These data indicate stable HIV prevalence levels among several KAPs, including both Direct and Indirect FSWs and Waria (i.e., transgendered persons), but an expanding epidemic among MSM. The trend in HIV prevalence was among PWID quite different for Category A vs. Category B

[1] Republic of Indonesia, Ministry of Health. Pemodelan Matematika Epidemi HIV di Indonesia Tahun 2011-2016. 2012. Jakarta: MOH.
[2] HIV programming is essentially the same in the two sets of provinces.

provinces, with the former indicating declining and the latter increasing prevalence driven by sharp increases in HIV prevalence in two cities between 2009 and 2013. These data highlight the local character of the KAP sub-epidemics. The data on "High Risk Men," that is, male clients of female sex workers, are inconclusive with regard to trend. IBBS data in Tanah Papua indicate a flat trend in general population HIV prevalence – 2.4% on 2006 and 2.3% in 2013). Persistently high STI prevalence continues to fuel several sub-epidemics, this despite some aggressive control efforts – for example, periodic presumptive treatment (PPT) of female sex workers was implemented in major cities during the 2009-2011 period. As may be observed in Annex 3a, no clear trend emerges during the 2003-11 period with regard to prevalence of Chlamydia or Gonorrhea in Category A Provinces, although prevalence of both STIs appears to have increased among FSWs between 2007 and 2011. The comparable data for Category B Provinces in Annexes 3b and 3c indicates declining rates for some KAPs (Indirect FSWs and Waria), but rising rates for HRM and MSM. Data for Tanah Papua, where STI control services have only recently been introduced on a significant scale, indicate declining rates from in some of the larger cities, but from very high prevalence levels. These data suggest the possibility of improved STI control efforts from 2011 on, but further data will be needed to conform this. The trend in syphilis prevalence has been flat.

The limited success to date in controlling STIs is due both to insufficient coverage of STI screening and treatment among KAPs, as well as to insufficient consistency in condom use among KAPs, which leads to rapid reinfection. As may be observed in Annexes 4a-4d, for the most part condom use has not changed dramatically among any of the KAPs in recent years, although increases for certain KAPs in certain cities have been observed. Overall, however, there has at best been a gradual upward drift in condom use. Balanced against these less than favourable observations are several positive developments.

First, there has been positive trend with regard to the sub-epidemic among persons who inject drugs (PWID) in Category A Provinces, with considerable success having been realized in reducing exposure to risk via sharing of contaminated injecting equipment among injection drug users (Annex 5a). However, these successes have yet to be replicated in Category B Provinces (Annex 5b). A recent review of the national MSM program also found sizeable increases in the proportion of MSM being tested for in provinces that had three (3) or more CSOs working with MSM versus, but little change overall (Annex 6). Another recent review, this one of interventions at selected "localisasi" for commercial sex, points to local successes in promoting condom use among sex workers and reducing STI prevalence, and recommends that these successes be used as models for further expansion[3].

Some success has also been achieved in increasing the number of eligible persons on ART (Annex 7a). However, the annual number of new initiators continues to fall short of the estimated annual number of new HIV infections and needs to be significantly increased. MOH ART Cohort Data indicate that although ART retention rates among annual cohorts of new ART initiators have gradually improved, the rate of retention among even recent cohorts needs significant improvement (Annex 7b).

Recent reviews and analyses suggest that the strategies being employed to contain HIV in Indonesia are by and large appropriate given the stage of the HIV epidemic, but are not seeing their full impact for a variety of reasons, mainly

[3] Richard Steen. Making Localisasi Safer: A Review of Interventions in Five Locations. 2013. WHO.

having to do with program implementation and management:

- Insufficient utilization of services: while the supply of prophylactics and the services needed to control HIV are generally (but not always) in place, demand has not been generated sufficiently among target sub-populations to utilize them. As the MSM data above suggest, an enhanced role for community health workers and CBOs will likely be needed to mobilise communities, increase demand for services, and facilitate adherence and compliance.
- Slow decentralization of HIV treatment services from large hospitals.

- Lack of international standards of intervention quality: Further attention needs to be directed to deviations from international good practices in terms of quality and standard of intervention; examples include (1) dose and frequency of peer outreach contact and education, (2) requiring clients offered HIV testing by attending physicians to then be seen by a counsellor as an intermediate step prior to testing, (3) limited use of information technology (e.g., internet, SMS and social media) to reach "hard to reach" population sub-groups, (4) limited use of "task shifting" to extend the public health workforce, and (5) limited health facility and community support mechanisms for patients on ART.

- Insufficient integration of health facility-based services and coordination of facility- and community-based services.

- Limited attention and resource allocation for programming to key population sub-groups among whom epidemic growth is currently the most robust – MSM in particular.

- Limited in-depth review and mid-course correction both in overall response and in specific programmatic areas, including interventions among different sub-populations

- Weak data management.

The strategy outlined in the SRAN 2010-14 envisions the development of a comprehensive continuum from prevention to care (COPC), including the strengthening of an enabling environment and wider participation of civil society in the national response to HIV. While the growth of national and local commitment to the response evidenced in policy, action, and budgets has been encouraging, it is not yet adequate to sustain the national consistency and integration of the response, which must be maintained and expanded further if HIV is to be brought under control in Indonesia. Analyses undertaken in connection with the GFATM Phase 2 Renewal Request Resubmission in mid-2012 suggested that implementation during that the national response had to that point in time failed to produce the expected outcomes and impact, this despite solid PR performance per GFATM grant implementation standards. In view of this, the GFATM recommended that Indonesia's Renewal Request be resubmitted after careful, evidence-driven deliberation as to what needs to be done differently in order to result in impact of a magnitude commensurate with the level of GFATM investment in HIV programming in Indonesia.

In response, Indonesia proposed a re-focused effort concentrating on the consolidation and strengthening of the systems newly established while building toward greater effectiveness and sustainability in all locations, with an eye toward "reprogramming for impact."

The proposed program currently being implemented features four (4) strategic elements:

1) Wider adoption of evidence-based good practices to increase the effectiveness of key interventions,

2) More efficient leveraging of the resources of international development partners,

3) Adoption of a unifying Continuum of Care (COC) model at the district level, including a more participatory, systematic, data-driven district management model, and

4) Adoption of an enhanced monitoring and evaluation system that permits earlier assessment of intervention impact.

Although national HIV program cover all 33 provinces, the bulk of program efforts and activities are concentrated in the n=141 districts targeted for supplementary GFATM resources – 11 in Tanah Papua and 130 in the rest of the country (see Table 1 below). These were chosen on the basis of population size of KAPs and assessed level of local government commitment and readiness to scale up HIV programming. In the aggregate, these districts contain 60% of the total population of KAPs nationally and 63% of persons living with AIDS (PLHIV). If the program target of 80% population coverage by 2015 were to be achieved, the result would be 48% of KAPs being reached by HIV program services and activities.

Table 1:
Population Data on Priority Districts for GFATM Support (n=141)
and for Initial Roll-Out of LKB and Strategic Use of ART (n=75)

KAP	Size Estimation									
	Total National		141 districts				75 districts			
	KAP	PLHIV	KAP		PLHIV		KAP		PLHIV	
			#	%	#	%	#	%	#	%
DFSW	124,996	10,616	66,502	53,2	6,337	59,7	48,626	38,9	4,817	45,4
IDFSW	104,856	4,872	57,615	54,9	2,936	60,3	45,410	43,3	2,529	51,9
TG	38,031	9,152	20,453	53,8	5,502	60,1	13,425	35,3	3,898	42,6
PWID	74,326	27,763	43,633	58,7	17,809	64,1	34,699	46,7	14,783	53,2
MSM	1,095,970	81,338	748,578	68,3	50,335	61,9	446,426	40,7	26,416	32,5
Client of DFSW	5,229,686	98,443	3,009,757	57,6	61,197	62,2	2,382,611	45,6	51,313	52,1
Client of IDFSW	1,517,817	9,341	933,255	61,5	6,290	67,3	759,094	50,0	5,634	60,3
Total	6,667,865	232,184	3,946,538	59,2	144,116	62,1*	2,971,197	44,6	103,756	44,7

**) the estimated PLHIV in 141 districts is 62.1 %. But in AEM analysis, the estimated PLHIV in 141 districts is used 70% with the justification have higher prevalence than the rest of 141 districts.*

The COPC concept has been operationalized via the national Layanan Komprehensif Berkelanjutan (LKB – Integrated, Decentralized Continuum of Care Services) program. Further details on the LKB program are provided in Annex 8. LKB will be implemented initially in 75 districts, expanded to reach all 141 GFATM-supported districts by mid-2015, and then be expanded incrementally thereafter (firm targets have not yet been articulated).

The initial 75 LKB districts also constitute the initial targets for the "Expanding the Strategic Use of ARVs" initiative, which aspires to take maximum advantage of the preventive aspects of AIDS treatment. This set of 75 districts contains an estimated 46% of KAPs nationally and 45% of PLHIV.

Also contributing to the operationalization of the COPC concept is the National AIDS Commission's PMTS Paripurna program. The PMTS program, which began in 2009 with a focus on HIV/STI prevention among female sex workers, has four (4) main pillars: (1) creation of an enabling environment, (2) BCC for prevention, (3) ensured condom supply, and (4) strengthened STI management. The expanded program, PMTS Paripurna, extended focus to include MSM and male clients of sex workers. The concept overlaps considerably with that of the LKB, and as such will be treated in the present analysis as components of a larger, more comprehensive COPC model.

With regard to financing, NASA data are available through 2012 – see Table 2. The data indicate a rise in financing levels for HIV from 2009 on from both domestic and international sources, although improved domestic data quality may have also contributed to this. A large majority of annual domestic spending comes from GOI funds. The GFATM is the largest contributor among international funding sources, with annual shares of total program financing ranging between 50% and 65%, depending upon year.

Table 2: Annual AIDS Expenditures 2006 – 2012, in US$

	2006	2007	2008	2009	2010	2011	2012
Domestic	15,038,057	15,421,976	19,839,380	21,318,844	27,779,280	29,730,070	36,850,506
International	41,538,530	43,258,421	30,991,725	38,966,576	41,367,600	43,030,748	50,618,057
Total	56,576,587	58,680,397	50,831,105	60,285,420	69,146,880	72,760,818	87,468,563

Source: National AIDS Spending Assessment (NASA), 2011 – 2012

The strategy outlined in the SRAN 2010-14 envisions the development of a comprehensive continuum from prevention to care (COPC), including the strengthening of an enabling environment and wider participation of civil society in the national response to HIV.

Design

What programme elements are required for an optimized response and at what scale? In order to contain HIV in Indonesia, the reach, integration and quality of HIV-related interventions must be increased further.

The following are the priorities for action:

- Decentralize and improved integration of services within health facilities, between health facilities, and with CSOs and other groups working with KAPs in community settings: Getting key interventions implemented in an integrated, efficient manner on a wider geographic scale, including at Puskesmas and in community settings, is central to increasing service access and use. Indeed, achieving such objectives is the focus of the LKB and PMTS Paripurna initiatives.

- Aggressive implementation of SUART: In view of the limited success to date in increasing consistent condom use among KAPs and the GOI's unease in openly endorsing condoms as a key to HIV prevention, taking greater advantage of the preventive benefits of HIV treatment is strongly indicated. However, in order for this approach to be effective, significant improvements will be required in (1) the coverage of HIV testing among KAPs and other Priority population sub-groups, (2) strengthened linkages between testing and CST services and (3) retention of patients on ART. The decentralization of treatment from hospitals to reference Puskesmas (n=5 per district) under the LKB initiative will likely facilitate both improved linkage between HIV testing and CST and patient retention.

- Increase HIV testing: SUART cannot be successful unless the number of persons tested for HIV in Indonesia is dramatically increased. This effort can be jump-started by focusing initially on "the low-hanging fruit"; that is, by increasing the rate of HIV testing among key groups of individuals that already have contact with the health system – recipients of STI services, TB patients, women receiving ANC services, and injection drug users receiving MMT and clean needles via more aggressive implementation of PITC. Efforts could then be expanded to increase coverage of other important population sub-groups in community settings (e.g., partners of HIV-positive persons, clients of FSW).

- Increase the intensity/quality of implementation: the Indonesian GFATM SSF Phase 2 resubmission application identified a number of areas where implementation practices were to be adjusted to more closely approximate international good practices, and analyses of "best practices" in Indonesia point to elements that need to be implemented on a wider scale. These need to be aggressively implemented.

- Increase program coverage among MSM and clients of sex workers/high risk men (HRM). To date, national program efforts directed to MSM and clients of sex workers have been sporadic, unfocused and grossly under-funded.

  The need to increase the priority of MSM is evident from the epidemic trajectory graph shown in Annex 2. The reason for increased attention to clients of FSWs is to address the rapidly growing number of general population women who have been infected and will continue to be infected (again, refer to Annex 2). It night be argued that increasing program coverage of FSW and thereby increasing STI screening and treatment and use of condoms will satisfy this need, but the likelihood of success of expecting FSWs to successfully negotiate condom use with all or a high proportion of clients given their weak bargaining positions is at minimum questionable, and perhaps untenable. Male aversion to condom use must be addressed in some fashion. Reaching these groups in significant numbers with information and services is essential to national program success, but will require "out-of-the-box" thinking and larger-scale, more sustained implementation than has been the case to date. Although reaching.

- The US Centers for Disease Control (CDC) has recently approved use of the anti-retroviral drug Truvada to be used prophylactically for HIV prevention. Indonesia should consider at least a pilot test of this strategy.

What would the impact of this optimized response be?

a. Impact of LKB/PMTS

Currently, the main strategic priorities of the national response to HIV are (1) LKB/PMTS and (2) SUART. Accordingly, the impact modelling undertaken for the ICA focused on assessing the potential impact of these initiatives under differing levels of intervention coverage and effectiveness.

The range of potential impacts was modeled using the following six (6) scenarios (see parameter assumptions in Annexes 9 and 10):

1. Baseline: Levels and trends from IBBS through 2013 and 2013 ART coverage assumed to remain constant
2. GFATM – no LKB/PMTS: assume coverage, effectiveness and trends from n=141 GFATM-supported districts prior to introduction of LKB
3. LKB/PMTS – Low: assume LKB/PMTS implementation with low implementation performance
4. LKB/PMTS – Medium: assume LKB/PMTS implementation with medium implementation performance
5. LKB/PMTS – High: assume LKB/PMTS implementation with high implementation performance
6. LKB/PMTS – High – All Districts: assumes high LKB/PMTS implementation performance in all districts in Indonesia[4].

The Asia Epidemic Model (AEM) software used to generate the main findings presented in this report bases results on assumptions as to levels and trends in HIV-related program coverage and

[4] Some notes on how the modeling results can be translated into program action to improve effectiveness may be found in Annex 18.

intervention effectiveness. All assumptions used are specific to particular KAPs or other population sub-groups, and are based as much as possible on levels and trends observed in IBBS, MOH program data and other data sources. Coverage pertains to program reach with regard to key intervention components. "Other prevention" pertains to interventions intended to reduce the rate of HIV transmission other than ART, the main components being behaviour change communications, peer education, outreach, partner reduction, condom use, STI control, needle exchange and OST. Effectiveness is conceptualized in AEM with reference to global good practices, with intervention effectiveness being operationalized as a percentage of the effectiveness achieved via the optimal application of global good practices.

So, for example, an effectiveness score of 80% for condom promotion and supply (indicator = consistent condom use during a specified prior reference period) would indicate that the intervention was 80% as effective as the global good practice, which represents the "gold standard." The gold standard for ART is the results obtained in clinical trials of SUART – 96% reduction in HIV transmission. Coverage levels and effectiveness scores for key interventions were assigned by a consensus panel consisting of representatives of key stakeholders in the national HIV program based upon existing data as much as possible. The coverage and effectiveness assumptions used in producing the epidemiologic modelling results are documented in Annexes 9a – 9d. The cost data used in the economic analyses were assembled by a Consensus panel based upon data provided by the University of Indonesia. These data, which reflect actual program costs, including the cost of "social enablers," are documented in Annex 10[5].

The results of the epidemiologic projections of the impact of the LKB/PMTS initiative are displayed in the set of graphs in Annex 11. With regard to numbers of annual new HIV infections (Annex 11a), with no changes in programming from that in place in 2013 (i.e., the baseline scenario) going forward, the number of new infections is projected to rise steadily from around 66,000 in 2014 to about 77,000 in 2020 and 102,000 in 2030. Continuation of program performance levels with GFATM support prior to the introduction of the enhanced LKB/PMTS initiative is projected to sharply curtail the number of new HIV infections, but the number of new cases per year is projected to continue to rise, reaching about 78,000 new infections annually by 2030. A significant impact is projected for the LKB/PMTS initiative, but the magnitude of anticipated impact depends upon the level implementation effectiveness. Seventy percent KAP population coverage combined with low level implementation effectiveness (i.e., operationalized as 50% of global best practice effectiveness) per the LKB/PMTS "Low" Scenario is projected to result in the annual number of new infections falling to 46,500 by 2030 compared with the 2014 estimate of around 66,000 annual new infections.

More substantial reductions in numbers of new HIV cases are observed for the LKB/PMTS "Medium" and "High" performance scenarios, with numbers of new infections declining to around 28,800 per year under the Medium scenario and around 17,400 per under the High scenario. The results for the "LKB High – all Districts" indicate the hypothetical of what could be achieved if LKB/PMTS were to be implemented in all districts in Indonesia beginning in 2015 – a reduction in new HIV cases to about 19,000 by 2020 and 7,300 per year by 2030.

[5] The cost data used in the economic analyses do not include start-up costs for LKB. The main costs here concern the decentralization of treatment from hospitals to reference Puskesmas (five per district). The incremental costs largely entailed training costs that were absorbed by existing budgets. Little infrastructure cost was involved. Nevertheless, the cost data do represent a small under-estimate actual costs insofar as all costs associated with LKB roll-out are not accounted for.

Similar results are observed with regard to projected numbers of HIV infections averted under the various scenarios considered – see Annex 11b. LKB/PMTS is projected to result in an increase in numbers of infections averted from around 24,200 under the "GFATM/non-LKB" Scenario to around 55,700 under the "LKB/PMTS Low" Scenario. Under the "LKB/PMTS High" Scenario, this number increases to about 84,700 infections averted annually in 2030.

Annex 11c shows the projected number of PLHIV under the various analytic scenarios considered. In the Baseline Scenario (i.e., no changes in programming performance from 2013 levels), the number of PLHIV continues to increase through 2030, and at an accelerating rate. LKB/PMTS implementation is projected to result in substantial reductions in numbers of PLHIV in future years. For example, the number of PLHIV in 2030 projected under the "Low" Scenario is about 714,000, compared with 1.08 million in the Baseline Scenario. Under the LKB/PMTS "Medium" Scenario, the number of PLHIV levels off around the year 2019 and declines somewhat to 593,000 (compared to the 2014 projection of around 640,000 persons). More substantial impact is projected for the LKB/PMTS "High" Scenario, with the number of PLHIV also peaking around the year 2018 at around 700,000 persons and then declines to 508,000 by 2030, below the estimated level in 2014.

The number of persons on ART at any given point in time depends upon (1) the rate of new infections in the population and (2) the success in detecting HIV-infected persons and getting and retaining them on treatment. Annex 11d displays the projection results of numbers of persons on ART. In the Baseline Scenario (i.e., no changes in program performance from 2013 levels), the number of persons on treatment increases slowly through 2030, but only reaches around 65,000. The projections for the LKB/PMTS "Medium" and "High" Scenarios in Annex 11d illustrate the powerful combined impact of more effective (non-ART) prevention combined with effective implementation of SUART.

The number of persons receiving ART for both scenarios are higher than for the above two lower performing scenarios, but due to the combined prevention effects, the rate of growth in numbers of persons begins to taper and is growing only very slowly by 2030 in the "Medium" Scenario and actually begins to decline after 2024 in the "High" scenario, this despite higher ART coverage than in lower-performance LKB/PMTS scenarios. Under the "Medium" scenario, the number of persons on treatment would stabilize at around 146,000 around 2029. Under the "High" Scenario, the number of persons on treatment would reach about 171,000 by 2023, and would then decline to 158,000 by 2030. The results for the "LKB High – all Districts" indicate the hypothetical of what could be achieved if LKB/PMTS were to be implemented with high implementation performance in all districts in Indonesia beginning in 2015. Under this scenario, the number of persons on ART would peak earlier than in other scenarios and decline thereafter, falling to around 178,000 by 2030.

Annex 11e displays the projected number of HIV-related deaths and Annex 11f the number of deaths averted under the various scenarios. The differences among scenarios again reflect the combined effect of differences in prevention and SUART performance. Noteworthy is the magnitude of difference between "High" and "Low" implementation effectiveness of LKB/PMTS. In the "High" Scenario, the number of deaths averted annually reaches around 33,600 vs. 21,800 for the "Low" Scenario[6].

[6] The discontinuities in the projections of HIV-related deaths and deaths averted are an artifact of the assumption made in the modeling of LKB/PMTS scale up to reach maximum coverage under each scenario in 2020. It was assumed that coverage and effectiveness levels would remain constant at the 2020 levels in the 2021-2030 period. Once scale-up ceases in 2020, the rate of decline in number of annual HIV-related deaths and rate of increased in the number of deaths averted annually slows for a few years before accelerating once again. It will be observed that the discontinuities are more pronounced at higher levels of LKB/PMTS coverage.

Disability-adjusted Life Years (DALYs) saved provide a broader measure of health impact. This broader measure includes both the additional years of life provided by postponing AIDS deaths in those already infected as well as infections averted. The projected DALYs under selected scenarios are displayed in Table 3: LKB/PMTS Medium, High and High All-Districts, with ART coverage varying from the current level of 24% among KAPs to 80% coverage.

Table 3:
Projected DALYs saved, by scenario, 2014-2030

Scenario	2014-2020	2014-2030
LKB/PMTS – Medium at current ART coverage (17%; 24% among KAPS)	2,030,028	11,292,840
LKB/PMTS – Medium at 50% ART coverage	2,928,315	14,407,920
LKB/PMTS – Medium at 80% ART coverage	3,505,043	16,691,760
LKB/PMTS – High at current ART coverage	3,328,762	15,780,949
LKB/PMTS – High at 50% ART coverage	3,736,420	16,980,262
LKB/PMTS – High at 80% ART coverage	4,186,297	18,419,654
LKB/PMTS – High All Districts at current ART coverage	5,468,617	20,518,735
LKB/PMTS – High All Districts at 50% ART coverage	5,887,106	21,159,561
LKB/PMTS – High All Districts at 80% ART coverage	6,116,145	21,682,767

b. SUART Sensitivity Analyses

The above analyses assumed levels of ART coverage consistent with the level of performance in implementing LKB/PMTS and ART effectiveness in reducing onward transmission of 75% (see Annexes 9 and 10). Further sensitivity analyses were undertaken to assess the potential HIV prevention impact of ART by systematically varying assumptions about selected key ART-related parameters while holding constant non-ART prevention intervention coverage and effectiveness and comparing results across scenarios.

Variations in three aspects of ART programming were included in the analyses: (1) ART coverage (i.e., the proportion of persons eligible for treatment who are on treatment), (2) the CD 4 cut-off for initiating treatment and (3) the effectiveness of ART in preventing onward transmission of HIV from infected persons to others. The levels of these three elements modelled were as follows:

1. Coverage
   a. 20%
   b. 50%
   c. 80%

2. CD 4 cut-off point to initiate treatment
   a. CD 4 = 350, plus KAPs, HIV+ pregnant women, TB patients and the HIV-negative partner in sero-discordant couples
   b. CD 4 = 500

3. Effectiveness of ART in preventing onward HIV transmission
   a. 50%
   b. 75%
   c. 96% (clinical trial results)

The first analysis assessed the impact of variations in ART coverage while holding constant coverage

and effectiveness of non-ART prevention interventions. The analysis, the results of which are displayed in Annex 12, assumed the "Medium" LKB/PMTS performance level for prevention interventions other than ART (see Annex 9 for details) and ART effectiveness in reducing onward transmission of HIV (IR) of 75%. The first graph in Annex 12 shows the projected impact of different levels of ART coverage on annual numbers of HIV infections averted.

As may be observed, even at low levels of ART coverage (20%), significant reductions in new HIV infections are expected, largely the result of non-ART prevention interventions. At ART coverage of 20%, the number of annual new HIV infections is projected to fall from 66,000 in 2013 to 47,000 in 2020 and 35,000 in 2030. The graph also shows that increasing ART coverage greatly magnifies prevention impact. At 50% ART coverage, annual new HIV infections would fall to 40,000 in 2020 and 27,000 in 2030. At ART coverage of 80%, the corresponding figures would be 32,300 in 2020 (less than 50% of the number in 2013) and 18,500 in 2030.

Analyses were also undertaken with numbers of PLHIV, HIV-related deaths and HIV-positive persons on ART and the outcomes of interest. With regard to numbers of PLHIV, the differences in projected impact by ART coverage level are substantial. With ART coverage of 80%, it is projected that there will be 708,000 PLHIV in 2030 vs. 602,000 with ART coverage of 20%. The fact that the projected number of PLHIV is higher at higher levels of ART coverage (see the second graph in Annex 12) reflects the impact of ART on saving lives of HIV-infected persons (see the third graph in Annex 12), an impact that is larger than the prevention impact of ART. The dramatic impact of expanded ART coverage on the number of persons projected to be on ART is shown in the fourth and final graph in Annex 12. The second sensitivity analysis undertaken examined the impact of variations in CD4 count to start treatment on selected epidemic outcomes.

The analysis again assumed the "Medium" LKB/PMTS performance level of non-ART prevention interventions and ART effectiveness in reducing onward transmission of HIV (IR) of 75%. The results are displayed in Annex 13. The number of people on ART under with different eligibility criteria depends critically on the proportion of those eligible who actually initiate ART. Currently only a very small percentage of those with CD4 counts between 350 and 500 are identified. Thus, expanding eligibility without also expanding testing and linkage to care would not significantly increase the number persons receiving treatment.

As may be seen in the first graph in Annex 13, at ART coverage of 20% increasing treatment eligibility from the current criteria of 350+++ to all those with CD4 under 500 would only add another 15,000 or so persons on treatment by 2020 and about the same by 2030 (compare the two lowest curves in the graph). Increasing ART coverage to 50% would increase the projected number of persons on ART from about 190,000 in 2020 and 215,000 in 2030 to around 233,000 in 2020 and 275,000 in 2030. With high coverage, that is 80%, the implications of the CD 4 cut-off for initiating treatment become more substantial, and even here the difference only emerges after 2020. High coverage of persons eligible for treatment would result in between 430,000 and 550,000 persons being on treatment in 2030, depending upon the CD 4 cut-off in effect. Similar conclusions may be drawn with regard to (1) annual number of new HIV infections, (2) number of PLHIV, and (3) number HIV-related deaths annually – see graphs 2-4 in Annex 13.

In all cases, the differences in outcomes under differing coverage scenarios are substantially larger than those under differing treatment initiation criteria. Of particular note, however, is the larger impact on the rate of new infections for treatment starting point CD4 = 350++ than for CD4 = 500 (see the second graph in Annex 13). The reason for this is that under the CD4 = 350++,

a larger proportion of persons who are at greater risk of onward transmission of HIV due to their behaviours (e.g., FSWs, MSM, Waria) are being treated earlier than they would be under the CD4 = 500 criteria, thus maintaining mean CD4 counts and viral loads at levels that reduce the risk of onward transmission. Interestingly, as is shown in the final graph of, total resource needs for the CD4 = 350++ starting criteria are lower than for CD4 = 500 at all levels of ART coverage, with the magnitude of savings growing with increasing ART coverage. The estimated Return on Investment (ROI) for the period 2015-19 would be US$ 1.70 per US$ 1 invested in HIV programming using the CD4 = 350++ cut-off point for strating ART vs. US$ 1.30 for CD4 = 500. For the 2020-2030 period, the respective ROIs would be US$ 2.40 for CD$ - 350++ and US$ 3.10 for CD4 = 500. For HIV prevention at least, it would appear that the CD4 = 350++ criteria is relatively more cost effective than CD4 = 500.

The final sensitivity analysis assessed the impact of variations in treatment effectiveness in relation to ART coverage. The analysis again assumed the "Medium" LKB/PMTS performance level of non-ART prevention interventions, and the results are displayed in Annex 14. The first graph in Annex 14 shows the projected annual number of new HIV infections with ART coverage of 20% and different scenarios with regard to treatment effectiveness in preventing HIV transmission (IR) ranging from 0% to 96%. As may be observed, increased IR is indeed associated with increased prevention impact. However, the projections indicate that magnitude of impact at lower levels of ART coverage is modest. At 20% ART coverage, for example, the difference between 0% treatment effectiveness and 96% effectiveness in preventing onward transmission would only be about 7,000 new infections in 2020, and in 2030 only 17,000 new infections.

The second and third graphs show that the impact of treatment effectiveness grows increasingly large with increased ART coverage. By way of comparison with the above figures, at ART coverage 50% the difference between 0% treatment effectiveness and 96% effectiveness in preventing onward transmission would be about 24,000 new infections per year and 38,000 new infections per year in 2030. At 80% ART coverage, the differences would increase further to about 36,000 in 2020 and 55,500 in 2030.

The main message emerging from the ART sensitivity analyses undertaken is that while the level of CD4 to start ART and ART effectiveness in preventing transmission are important, the impact of changes or differences in these parameters is muted at low levels of ART coverage. The immediate priority in Indonesia is to get more people tested and onto treatment. A closing note for the ART sensitivity analyses concerns the extent to which scaling up strategic use of ARV should or can be pursued independently of LBK/PMTS. It might be argued, for example, that the global evidence on the effectiveness of non-ART prevention interventions is less robust than for SUART, and it has certainly been the case in Indonesia that non-ART prevention interventions have to date produced mixed results at best.

However, it should be borne in mind that the non-ART interventions are being implemented within the context of the LKB/PMTS Continuum of Care model, and thus the extent to which strategic use of ART can realistically be scaled up the levels envisioned in the modelling work reported above very much depends upon the effectiveness of implementation of both the underlying LKB/PMTS model and a number of the non-ART prevention interventions that use LKB/PMTS as a platform.

For example, being able to significantly increase the number of persons on ART depends first and foremost on getting sufficient numbers of persons tested for HIV, especially in KAPs, among whom the large majority if undetected HIV cases may be found. Unless interventions to inform, motivate and facilitate much larger numbers of HIV-infected persons to be tested for HIV via community

outreach, peer education, strategic use of information technology and related mechanisms, identification of a sufficiently large number of persons eligible for treatment will not be possible. The same goes for clinic-based services – unless services are adequately integrated and PITC is well implemented, the number of "missed opportunities" to get HIV-infected persons tested for HIV will make it very difficult to achieve the results anticipated by the scaling up strategic use of ARV component of the national strategy. Indeed, it is difficult to conceive of a scenario where the strategic use of ARV initiative can be successful without LBK/PMTS also being successful.

The main message emerging from the ART sensitivity analyses undertaken is that while the level of CD4 to start ART and ART effectiveness in preventing transmission are important, the impact of changes or differences in these parameters is muted at low levels of ART coverage.

The projected epidemiologic impact of these actions under several scenarios as to implementation effectiveness was presented above, and estimates of cost-effectiveness (CE) and return on investment (ROI) are presented below.

The second action is potential reduction in the cost of ART. In recent years, Indonesia has relied upon first-line ART drugs manufactured domestically. The cost of one years' treatment, including drug costs, has been estimated as $US 995[7]. Beginning in 2014, a portion of the supply of first-line ART drugs will be replaced by imported Atripla, resulting in a reduced one-year treatment cost of $US 889. Further gains in efficiency could be realized by using Atripla as the primary first-line drug, which would reduce the cost of one year of treatment to US$ 640. The projected gains in efficiency in doing so, as represented by cost-effectiveness and return on investment ratios, are presented below.

How much money will be needed for HIV in the future? Estimates of resources needed under different scenarios concerning LKB implementation are shown in Annex 15. Three sets of estimated costs are displayed: (1) prevention other than ART, (2) ART, and (3) total or combined costs. As shown in the first graph of Annex 15, "other prevention" costs are largely a function of program coverage that, after the scale-up period to year 2020, increase gradually thereafter with the projected growth in the size of at-risk sub-populations (the projections assume program coverage and effectiveness to remain at 2020 levels to 2030). Annual 2014 resource needs for "other prevention" for the three plausible LKB/PMTS Scenarios are in the US$70-75M range (vs. US$92M for the hypothetical LKB/PMTS "High-All Districts" Scenario). These annual need levels increase to US$92 in 2020 and US$142M in 2030 for the LKB/PMTS "High" Scenario, US$121.6M in 2020 and US$134M in 2030 for the "Medium" Scenario, and US$103.5M in 2020 and US$114M for the "Low" Scenario. Projected treatment costs, assuming annual costs per patient of US$995, are presented in the second graph in Annex 15. As may be observed, more aggressive treatment (i.e., getting a higher proportion of treatment-eligible persons on and retaining them on treatment) is associated with higher annual costs until around 2020, at which the point the prevention impact of both "other prevention" and ART begins to stabilize the number of new persons requiring treatment. During the 2020-30 period, treatment costs for LKB/PMTS "High" and "Medium" Scenarios are projected to grow at a much slower rate than during the 2013-20 period, and for the hypothetical LKB/PMTS "High-All Districts" Scenario annual treatment costs actually begin to decline in 2021.

The projected total program costs shown in the third graph in Annex 15 represent the combined

[8] Anita Alban, 2013, for UNAIDS.

totals of the previous two graphs for the various projection scenarios. The prevention impact of both "other prevention" and ART program components may be observed in the declining rates of growth in resource needs after 2020 in the more aggressive program scenarios. Annual total program costs are projected to reach around US$294M in 2020 and US$314M in 2030 under the LKB/PMTS "High" Scenario.

The above resource need projections assumed annual treatment costs per patient of US$995. In view of the potential for Indonesia to lower treatment costs by shifting to cheaper imported first-line drugs, a sensitivity analysis was undertaken to assess the magnitude of potential savings[8]. The results are shown in Table 4 below.

Table 4:
Total treatment costs by scenario, level of ART coverage and annual treatment costs per patient, 2013-2030, with costs discounted at 3% (in 000s of US Dollars)

Scenario	Annual treatment costs per patient					
	US$ 995		US$ 889		US$ 640	
	2014-19	2020-30	2014-19	2020-30	2014-19	2020-30
LKB/PMTS – Medium at current ART coverage (24% among KAPS)	769,580	1,398,735	745,232	1,358,728	688,037	1,264,750
LKB/PMTS – Medium at 50% ART coverage	1,059,967	2,736,753	1,004,826	2,555,036	875,297	2,128,172
LKB/PMTS – Medium at 80% ART coverage	1,286,889	4,223,949	1,207,733	3,885,134	1,021,792	3,089,240
LKB/PMTS – High at current ART coverage	908,530	1,766,826	876,268	1,710,184	800,483	1,577,129
LKB/PMTS – High at 50% ART coverage	1,118,041	2,794,244	1,063,601	2,628,952	935,720	2,240,673
LKB/PMTS – High at 80% ART coverage	1,341,475	4,242,713	1,263,392	3,924,433	1,079,970	3,176,776
LKB/PMTS – High All Districts at current ART coverage	1,026,602	2,029,817	1,002,939	1,998,354	947,351	1,924,445
LKB/PMTS – High All Districts at 50% ART coverage	1,335,082	3,045,431	1,278,695	2,906,498	1,146,238	2,580,136
LKB/PMTS – High All Districts at 80% ART coverage	1,548,478	4,377,098	1,469,514	4,097,551	1,284,023	3,440,878

[8] The US$ 995 cost figure in the table includes ART drug costs for 100% domestically manufactures drugs. The US$ 889 figure is for 17% imported Atripla (the estimated mix for 2014) and 83% locally produced drugs. The US$ 640 figure is for 100% imported Atripla.

As may be observed, the potential savings are indeed substantial. The present plan to shift up to 50% imported Atripla beginning in 2014 is projected to result in about an 11% savings in both the 2014-19 and 2020-30 periods. If imported Atripla were to be used exclusively as the first-line drug combination, the savings would reach just under 36% during both reference periods. Also noteworthy in Table 4 is that at any given level of ART coverage (i.e., 24%, 50% or 80%), the projected costs of treatment decline as the level of LKB/PMTS performance increases. This is due to the impact of "other prevention" interventions in reducing numbers of new HIV infections, and serves to illustrate the importance of supporting and complimenting SUART with other prevention interventions.

Cost-effectiveness and return on investment: Table 5 shows the cost per HIV infection averted for the period 2014 to 2030 when both costs and new infections are discounted at 3% annually. The cost of expanding HIV programming ranges from around $3800 to just under $9000 per infection averted depending on annual treatment costs and LKB/PMTS implementation performance. At the current cost of $995 per patient year of treatment and the high survival rates provided by effective treatment programs, the lifetime costs of treatment for a person infected today would be just over $15,000[9].

Therefore, in the medium-term and beyond, expanding HIV control programs should be cost-saving. That is, the cost to prevent a new infection through expanded ART is considerably less than the cost of providing ART if that person became infected under all currently plausible medium-term scenarios concerning treatment costs.

Table 5:
Cost per infection averted by scenario and annual treatment costs per patient, 2014-2030
(assumes 75% treatment effectiveness and costs discounted at 3% annually)

Scenario and ART Coverage	Annual Treatment Cost		
	ART 995	ART 889	ART 640
LKB Medium, ART = Current Coverage (24%)	5,222	5,067	4,703
LKB Medium, ART Coverage = 50%	7,167	6,720	5,670
LKB Medium, ART Coverage = 80%	8,980	8,298	6,699
LKB High, ART = Current Coverage (24%)	4,611	4,458	4,098
LKB High, ART Coverage = 50%	6,266	5,915	5,088
LKB High, ART Coverage = 80%	8,245	7,660	6,285
LKB All District High, ART = Current Coverage (24%)	4,051	3,978	3,807
LKB All District High, ART Coverage = 50%	5,631	5,380	4,790
LKB All District High, ART Coverage = 80%	7,433	6,983	5,927

[9] This estimate assumes that treatment starts 5 years after infection and continues for 20 years at a cost of $995 per year discounted at 3% per year.

Cost-effectiveness can also be expressed in DALYs, disability-adjusted life years saved. This broader measure of the cost-effectiveness of ART includes both the additional years of life provided by postponing AIDS deaths in those already infected as well as infections averted. Table 6 shows the cost per DALY by scenario and annual treatment costs[10]. As a general guide health interventions are considered cost-effective if they provide an additional quality-adjusted life year for less than three times the Gross National Income per capita and very cost-effective is they cost less than one times GNI per capita. With a GNI per capita of about $2940 in Indonesia, all of the scenarios shown in Table 6 would be qualify as being very cost effective.

Table 6:
Cost per DALY saved by scenario and annual treatment costs per patient, 2014-2030
(assumes 75% treatment effectiveness and costs discounted at 3% annually)

Scenario and ART Coverage	Annual Treatment Cost		
	ART 995	ART 889	ART 640
LKB Medium, ART = Current Coverage (24%)	260	253	234
LKB Medium, ART Coverage = 50% LKB Medium, ART	354	332	280
Coverage = 80%	443	409	330
LKB High, ART = Current Coverage (24%)	227	220	202
LKB High, ART Coverage = 50%	308	291	250
LKB High, ART Coverage = 80%	404	376	308
LKB All District High, ART = Current Coverage (24%)	196	193	185
LKB All District High, ART Coverage = 50%	272	260	231
LKB All District High, ART Coverage = 80%	358	337	286

Net savings due to averted treatment and care costs, e.g. hospitalization costs: What is the potential magnitude of investment returns if Indonesia were to invest more heavily in HIV control? Relevant data are provided in Table 7 below for the LKB/PMTS "High" scenario under three alternative assumptions concerning annual treatment costs (discounting at 3%). In addition to HIV infections averted and deaths averted, effective implementation of the LKB/PMTS CoC model is projected to save the GOI between US$ billion 2.00 and US$ billion 3.11 through 2020, depending on annual treatment costs. Corresponding figures through 2030 are between US$ billion 10.79 and US$ billion 16.78. The magnitude of cost savings declines in lock step with declining annual treatment costs, but so do total costs to the GOI.

Translating these estimates into estimates of return on investment (ROI), it is estimated that US$ 1 invested in HIV programming will result in treatment cost savings of between $ 1.61 and $2.10 per US$ 1 during 2014-2020, and between $2.79 and $3.57 during the 2014-30 period, depending upon annual treatment costs. These returns on investment in the form of treatment cost savings are indeed attractive.

[10] These calculations use the following disability weights: 0.453 for the terminal stage of AIDS, 0.453 for CD4 counts <200, 0.779 for CD4 counts 200-350, 0.947 for those on ART.

Table 7:
Projected Return on Investment from Successful Implementation of LKB/PMTS "High" Scenario (assumes 3% annual discount rate)

Parameter	ART 995		ART 889		ART 640	
	2014-2020	2014-2030	2014-2020	2014-2030	2014-2020	2014-2030
Invest prevention cost (thousands USD)	806,059	2,371,247	806,059	2,371,247	806,059	2,371,247
Invest treatment cost (thousands USD)	671,510	2,328,503	599,972	2,080,442	431,926	1,497,731
Invest total cost (thousands USD)	1,477,569	4,699,750	1,406,031	4,451,688	1,237,985	3,868,977
Return of Invest						
Lives Saved	49,861	270,076	49,861	270,076	49,861	270,076
Total HIV infections averted	156,095	843,162	156,095	843,162	156,095	843,162
Total person-years on treatment saved for those averted	3,121,896	16,863,239	3,121,895	16,863,239	3,121,895	16,863,239
Future treatment cost saved(thousands USD)	3,106,286	16,778,922	2,775,365	14,991,419	1,998,013	10,792,473
Future treatment cost savings per USD1 investment in HIV programming	2.10	3.57	1.97	3.37	1.61	2.79

The savings on treatment costs apparent in the ROI calculations in the table above could be further enhanced by shifting to lower-priced ART drugs. For example, the above calculations indicate that an annual treatment cost of US$ 640 per patient, the total treatment costs saved from 2014-20 would be nearly US$ 2B, yielding a ROI of 1.61%. However, the use of lower-priced drugs would result in reduced GOI investment requirements of approximately US$ 240M during the 2014-20 period [11], which would constitute savings in addition to the ROI on the amount that would need to be invested as shown in the table above.

[11] Calculated by subtracting the total investment need with annual per patient treatment cost = USD 640 vs. from that required with annual per patient treatment cost = USD 995

Therefore, in the medium-term and beyond, expanding HIV control programs should be cost-saving. That is, the cost to prevent a new infection through expanded ART is considerably less than the cost of providing ART if that person became infected under all currently plausible medium-term scenarios concerning treatment costs.

What options are available to close the financing gap?

The National AIDS Strategic and Action Plan 2010-2014 (SRAN) set 70% of total program costs as the target for national financing of total HIV program costs. Annex 16 provides estimates of the magnitude of the resource gap for the 2014-2020 period based upon the most up-to-date information on expected funding flows. The national program was short of the total funding needed to implement the LKB/PMTS "High" scenario in 2014 by about US$ 30M. Even with projected growth in national budget allocation to combat HIV, the resource gap is projected to grow to US$ 175M by 2020.

The graph in Annex 17 assesses the magnitude of the funding gap between estimated total costs and GOI funding set at 50%, 60% and 70% of total program costs and the resulting requirements for international funding in order to fund the total costs for the "LKB/PMTS High" Scenario with 80% ART coverage annually form 2014-2030. As may be observed, once the LKB/PMTS is fully implemented in 141 districts beginning in 2015, the costs begin to mount rapidly. If the GOI were to fund 50% of the total cost (up from an estimated 43% at present), domestic financing requirements would rise to USD 151M by 2020, and would have to matched by a comparable amount of international and other financing, all of which figures exceed current funding levels by a considerable margin. Total resource requirements would peak in 2026 at about US$ 326M, and then begin to decline slowly. At 50% GOI contribution to total funding needs, a maximum of US$ 163 would be needed in 2026 from domestic resources, and would have to be matched by a comparable amount from other sources. The above analyses assume a fairly aggressive increase in GOI funding for HIV from the current 43% to between 50% -70% of total program costs. The degree to which this is feasible is contingent to some degree upon trends in GOI budget allocations to health. The trend in GOI spending on health in recent years has been unremarkable, hovering around 2%, and there is little reason to anticipate a significant change until after the upcoming 2014 presidential election at the earliest.

Increased international funding is of course one option, but the prospects for significant increases from current levels do not look promising at present – if anything a more reasonable expectation is that international funding HIV will remain level or decline. It has been a strategy of the KPAN to seek increased funding from provinces and districts to supplement national and international financing, and this continues to be a viable option. Efforts to date have yielded some incremental funding, but not of the magnitude needed to significantly close the resource gap. More effective national strategy and advocacy efforts will be needed to substantially increase the share of program costs borne by provinces and districts.

Undertaking ICAs for cities and districts might well provide the type of clear information and analyses needed to sway local political leaders and financial decision-makers to make commitments of the magnitude needed to sustain national HIV program efforts long enough to put the country on the path to achieving zero-zero-zero. An assessment as to what would be required to carry out ICAs for provinces and cities/districts may be found in Annex 18.

The Indonesia 2012 NASA report indicated that only 13% of public financing for HIV came from the sub-national level. Thus, there is considerable potential for increased provincial and district funding, although competition for funds will be still. The MOH already requires that districts cover 45% of the cost for HIV test reagents. Private domestic Indonesian philanthropy is another potential source of increased funding, and there have been some recent successes in this domain, with sizeable donations for HIV and AIDS and other priority national health programs being realized from wealthy Indonesians (donations that were matched by the Bill & Melinda Gates Foundation). The most effective way of leveraging further private funding would be to put the funds received to date to productive use and have positive results to show.

Nevertheless, it is unlikely that private funds will be sufficient to significantly close the funding gaps for HIV and AIDS and other priority diseases that may be of interest for domestic donors in a sustainable manner. Of considerable promise is the potential for a more sizeable share of national HIV program costs to be absorbed by the new universal health insurance scheme (Jaminan Kesehatan Nasional – JKN) that was initiated in January 2014 and is to be fully rolled-out by 2019. As present, the costs of HIV-related services for the portion of the population covered by JKN (poor families, government employees and self-enrolees in selected locations) are covered by a combination of JKN funds, national HIV program funds and optional supplemental funding provided by cities and districts. Persons not covered by JKN must rely on national HIV program funds and out-of-pocket payments. In principle, funding for HIV programming could be augmented by having the JKN cover a larger share of the costs for HIV-related services, leaving the National HIV Program to use its funds to expand program coverage and improve the effectiveness of interventions.

This assumes, of course, that National HIV Program funds will not be used to subsidize JKN in order to expand the range of covered services. The JKN is in its early stages of roll-out, and modifications will undoubtedly be made along the way. However, given the current tension between keeping insurance premiums affordable and covering the service delivery costs of hospitals and Puskesmas, it would seem unlikely that JKN would be willing/able to take on a significantly larger share of HIV program costs over the medium term. Incremental increases in population and service coverage might be possible, and the National HIV program should be prepared to advocate for and take advantage of any opportunities that might arise along these lines.

Finally, in response to a rapidly growing middle class with disposable income to spend on goods and services (such as health services), significant new investment in private sector clinics and hospitals is in the pipeline. Although the private sector in Indonesia has to date played only a minor role in addressing HIV, the limited engagements to date have shown signs of promise. For example, female sex workers in Batam (Riau Islands Province) are paid generally higher fees than their counterparts in other places in Indonesia, and the private sector is the preferred source of sexual-reproductive health services among Batam-based sex workers, even in the absence of any GOI subsidies. Similarly, a private-sector, MSM-oriented clinic in Bali has in a very short time attracted more MSM clients than a string of public clinics had attracted in the

previous several years. The GOI could facilitate the private-sector assuming responsibility for a larger share of HIV-related services for KAPs via, for example, subsidies for HIV and STI test kits and reagents, drugs and/or condoms. If the private sector were to be able to reach the portions of KAP communities that the GOI has heretofore been unsuccessful in reaching, subsidizing such services might be highly cost-effective.
Aside from seeking increased and/or additional sources of funding, greater attention needs to be directed to reducing program costs and increasing operational efficiency. Reduced price ART drugs is one possibility, and the potential impact of changing the sourcing of drugs to reduce costs was quantified in the economic analyses above.

Of course, there are national security and other issues that may preclude this, but shifting to a mix of domestically produced and imported drugs would provide significant savings, as was also indicated by the economic analyses undertaken for this ICA. Two other measures, improved integration of services at health facilities to reduce "missed opportunities" to get KAPs tested for HIV and STIs treated and improved coordination between health facilities and community-based organizations (CBOs) to take greater advantage of CBOs connections with KAP groups, were also discussed briefly. It should be noted that these measures are embedded in the LKB/PMTS concept, and thus strong LKB/PMTS implementation performance should provide savings/reduce unit costs vis-à-vis those assumed in the above economic analyses. Realizing these efficiency gains will, however, require significant changes both in health facility practices and in relationships between health facilities and community-based organizations (CBOs).

None of these are likely to raise/save sufficient resources on their own, and thus all should be pursued by the National HIV Program.

The Indonesia 2012 NASA report indicated that only 13% of public financing for HIV came from the sub-national level. Thus, there is considerable potential for increased provincial and district funding, although competition for funds will be still. The MOH already requires that districts cover 45% of the cost for HIV test reagents.


KOMATSU

Key Messages Emerging from the ICA

The following are the key or "take-home" messages emerging from the ICA:

- Recent data suggest that the HIV sub-epidemics among most KAPs and in the general population in Tanah Papua have been slowed. The major exception is MSM, among whom HIV infections continue to spread rapidly.

- However, without further expansion in program coverage and increases in intervention effectiveness, the number of annual new HIV infections will continue to grow briskly, reaching over 102,000 in 2030 and resulting in rapidly mounting treatment costs.

- If well implemented, the current priority national program focus on implementation of LKB/PMTS and SUART has the potential to contain HIV in the medium term and put Indonesia on a course leading to sharply declining rates of new HIV infections and HIV-related deaths.

- At a "high" level of implementation performance in the current 141 priority cities and districts, the following results are projected:
  - PLHIV: Peaks at 698,000 in 2019, falls to 509,000 in 2030
  - Annual new HIV infections: from 66,000 in 2013, falls to 32,600 in 2020 and 17,400 in 2030
  - HIV-related deaths averted: 13,800 by 2020 and 33,700 by 2030
  - DALYs saved: 4.2M by 2020 and 18.5M by 2030

- Accomplishing this will, however, require attention to both program coverage and rigorous implementation of key interventions following national and global good practices.

- Successful scaling up of strategic use of ARV requires that the LKB/PMTS "Continuum of Care" model underlying the national HIV strategy also be successfully implemented as the latter provides the platform from which strategic use of ARV can be effectively scaled up.

- The main message emerging from the ART sensitivity analyses undertaken is that while the level of CD4 to start ART and ART effectiveness in preventing transmission are important, the impact of changes or differences in these parameters is muted at low levels of ART coverage. The immediate priority in Indonesia should be to get more people tested and onto treatment. Changing the starting criteria to CD4 = 500 will do little to increase ART coverage at current levels/rates of HIV testing and treatment start-up. Furthermore, the sensitivity analyses indicate that the CD4 = 350++ criteria for starting HIV+ persons on ART would avert more infections and would be more cost-effective vs. the CD4 = 500 cut-off point for initiating treatment in a highly concentrated HIV epidemic situation that characterizes Indonesia.

- The estimated cost of expanding HIV programming ranges from around US$ 3,800 to around US$ 9,000 per infection averted, depending on projection scenario and annual per-patient treatment costs. At the current estimated lifetime costs of treatment for a person infected today of about US$ 15,250, the projected cost to prevent a new infection through expanded programming is in the worst case scenario only 60% of the cost of providing ART if that person became infected under plausible medium-term scenarios concerning treatment costs. The estimated cost per DALY saved also indicates that investing in HIV would be highly cost-effective.

- At current program costs and discounting at 3% annually, the estimated Return on Investment (ROI) per US$ 1 invested today in HIV programming under the LKB "High" scenario would be US$ 2.10 through 2020 and US$ 3.57 through 2030.

- The total costs for program outputs in 2013 are estimated to have been about US$ 107.7M. In order to fully scale up LKB/PMTS and SUARTas envisioned in the "High LKB/PMTS" scenario, US$ 1.48B will be needed between 2014 and 2020 (about US$ 211M per year) and US$ 3.22B between 2021 and 2030 (US$ 330M per year).

- Additional funding will be needed. The estimated funding gap in 2014 is estimated to be about US$ 30M. Under the "High LKB/PMTS" scenario and current assumptions concerning domestic and international funding, this will rise to US$ 176M in 2020.

- Potential funding sources for filling the resource gap in addition to increased national program and international funding include:

  - Increased local government funding
  - Increased private philanthropy
  - Increased coverage of HIV-related services by the JKN
  - Increased private health sector participation in addressing HIV and AIDS via GOI subsidies.

- Priority targets for increased efficiency might include:
  - Reduced price ART drugs
  - Improved integration of services at health facilities to reduce "missed opportunities" to get KAPs tested for HIV and STIs treated
  - Improved coordination between health facilities and community-based organizations (CBOs) to take greater advantage of CBOs connections with KAP groups.

None of the above revenue sources and efficiency gains are likely to raise/save sufficient resources on their own to fully close the resource gap, and thus all should be pursued by the National HIV Program.

Advocacy Strategy for Increasing Financial Support for HIV Programming in Indonesia

Advocacy is the effort to change public perception and influence policy decisions and funding priorities. Advocates raise awareness about issues and propose specific solutions among different publics, including policy-makers, experts, the media, and affected communities. Advocacy involves making a case in favor of a particular issue, using skillful persuasion and strategic action. Simply put, advocacy means actively supporting a cause and trying to get others to support it as well.

Advocacy has been an important strategy to improve public health throughout the world. It has been used to call attention to and promote improvements in services in health facilities, schools, and refugee camps. It also has been used to protect the health and well-being of large populations, such as international advocacy efforts in support of routine immunization, regular cervical screening for women, and safety and protective gear for workers in high-risk occupations.

As is clearly indicated by the present ICA, additional funding for HIV will be needed if the GOI is to be able to implement its current HIV strategies at a scale and level of intervention efficacy needed to attain the potential results identified in the ICA. The ICA was developed to, among other things, provide analyses and data that would be useful in advocacy efforts to secure such funding. However, in order to be effective, advocacy efforts are best guided by a framework that identifies key steps and activities that need to be undertaken. This section of the ICA document suggests such a framework, which is then used to suggest an advocacy strategy for increasing funding for HIV in Indonesia.

FRAMEWORK

In practical application, advocacy consists of series of considered and strategic steps that, if well-conceived and implemented, lead to progress toward the ultimate end result sought, if not the end result itself. Although different approaches and sequences are possible, one insightful (and eminently successful) approach is suggested in the publication Advocating for Change: Raising Awareness for Avian Influenza (No date, Academy for Educational Development, Washington, DC, USA). The strategy recommended for Indonesia is an adaptation of this approach.

The specific steps are:

1. Identify the Specific Advocacy Issue and Potential Solutions
2. Select Advocacy Audiences
3. Gather Information on What Your Advocacy Audience Thinks
4. Develop Advocacy Messages to Frame Your Actions
5. Select Advocacy Tactics and Tools
6. Develop Partnerships to Gain Support for your Action
7. Mobilize Resources
8. Monitor and Evaluate

The table below summarizes some initial thinking as to target audiences, objectives, key messages, steps in the process and timeline. Note that in many instances the target audiences have already been engaged to varying extents, and thus the focus is on re-engagement from the present point in time.

HIV FUNDING ADVOCACY STRATEGY SUMMARY TABLE

Target Audience	Objective(s)	Key Messages	Steps	Timeline
SRAN Working Group	1. Socialize ICA results 2. Clarify priorities for the SRAN emerging from the ICA	1. Recent data suggest HIV epidemic continues to grow, but growth in new infections is slowing (including in Papua) 2. Modeling indicates with current priority LKB/PMTS and SUARTstrategies, HIV can be curtailed by 2020 and begin to contract from 2020-2030 with high performance implementation • Highly cost-effective in terms of HIV infections averted and DALYs saved • Projected ROI to 2020 is US$ 2.10 per US$ 1 invested now; ROI to 2030 is US$ 3.57 per US$ 1 3. But, wider adoption of national & global good practices needed – need improved intervention effectiveness, not just higher coverage 4. Focus on priority strategies/concentrate resources – don't try to do too much 5. Increased funding needed to fully implement in priority districts – estimated budget gap 2015-19 = US$ 176M	1. Present ICA results 2. Make available additional analyses undertaken by ICA Team 3. Be ready to run further analyses to support inquiries from SRAN Team	April – August 2014
CCM/GFATM	Secure as large a share of country funding as is feasible for HIV	1. Nationally, HIV epidemic continues to grow, but recent data suggest some success in slowing growth 2. Modeling indicates significant impact of LKB/PMTS combined with SUARTif well implemented • Highly cost-effective in terms of HIV infections averted and DALYs saved • Projected ROI to 2020 is US$ 2.10 per US$ 1 invested; to 2030 = US$ 3.57 per US$ 1 3. But increased funding needed to fully implement in priority districts – estimated budget gap 2015-19 = US$ 176M 4. Time for action is now – delays will be costly in terms of future treatment costs	1. Prepare presentation of ICA results for CCM 2. Compile evidence as to LKB/PMTS implementation and results (for GFATM)	1. Contingent upon timing of discussions on allocation to 3 diseases 2. Contingent upon timing of preparation of joint TB-HIV Concept Paper
MOHA and Priority Districts	1. Raise awareness of HIV as public health threat and benefits of immediate, scaled-up action	1. Nationally, HIV epidemic continues to grow, but recent data suggest slowing growth 2. Current priority LKB/PMTS and SUARTstrategies can accomplish the following nationally 2015-2019 if well implemented: • 46,000 HIV infections prevented • 13,800 HIV-related deaths prevented • Numbers of PLHIV stabilized	1. Present national ICA results 2. Show illustrative provincial modeling results	Begin as soon as ICA and provincial AEM analyses are final (as early as possible for next budgeting cycle)

HIV FUNDING ADVOCACY STRATEGY SUMMARY TABLE

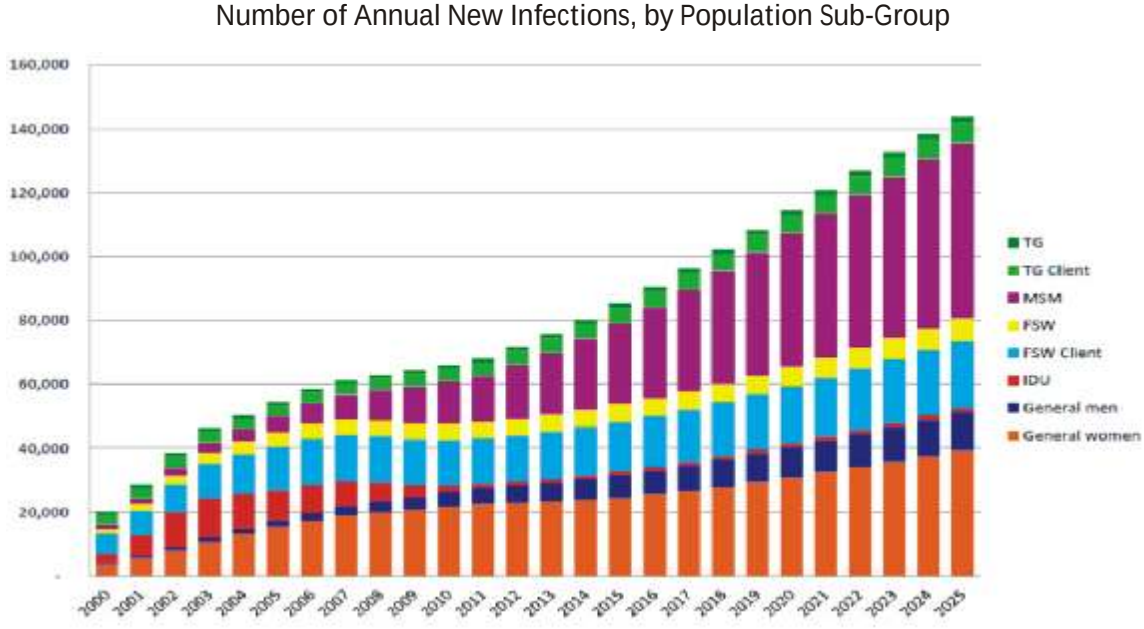
Target Audience	Objective(s)	Key Messages	Steps	Timeline
	2. Increase local funding for HIV	3. But increased funding needed to fully implement in priority districts 4. Modest local funding needed to realize major benefits at local level 5. Time for action is now – delays will be costly in terms of future treatment costs	3. Develop illustrative analyses of benefits and costs of achieving higher coverage/ quality at district level 4. Support cities/ districts to do local ICAs	
BAPPENAS	Provide updated evidence and estimates as to developmental benefits of immediate, scaled-up action as justification for funding increase	1. While recent data suggest some success in slowing epidemic, projected growth in GOI liability for HIV treatment costs is alarming if more is not done to contain epidemic 2. Modeling indicates significant impact of LKB/PMTS combined with SUART if well implemented • 46,000 HIV infections averted • 13,800 HIV-related deaths averted • US$ 3.1B saved in treatment costs 3. Highly cost-effective in terms of HIV infections averted and DALYs saved 4. Projected ROI to 2020 is US$ 2.10 per US$ invested now; ROI to 2030 is US$ 3.57 per US$ invested 5. But increased funding needed to fully implement in priority districts – estimated budget gap 2015-19 = US$ 176M 6. Time for action is now – delays will be costly in terms of future treatment costs	1. Prepare presentation of ICA results for CCM 2. Compile evidence as to LKB/PMTS implemen-tation and results	Target revised or updated MDP under new government
MOH PPJK (Pusat Pemblayaan Jaminan Kesehatan)	Provide updated evidence and calculations as to medium-term benefits of covering HIV services through JKN (social protection of vulnerable pop. sub-groups)	1. Even with recent success in slowing epidemic, projected growth in GOI liability for HIV treatment costs is alarming if more is not done to contain epidemic – US$ 4.7B from 2014-30 2. Modeling indicates significant impact of LKB/PMTS combined with SUARTif well implemented • 46,000 HIV infections averted • 13,800 HIV-related deaths averted • US$ 3.1B saved in treatment costs 3. Highly cost-effective in terms of HIV infections averted and DALYs saved 4. Projected ROI to 2020 is US$ 2.10 per US$ invested now; ROI to 2030 is US$ 3.57 per US$ invested	1. Undertake economic analysis of "main-streaming" HIV services 2. Engage health economists to support advocacy 3. Engage BPJS staff to better understand what will be required for desired	1. Begin steps 1 and 2 ASAP and incorporate results into SRAN 2. Steps 3 and 4 as soon as SRAN is finalized

HIV FUNDING ADVOCACY STRATEGY SUMMARY TABLE

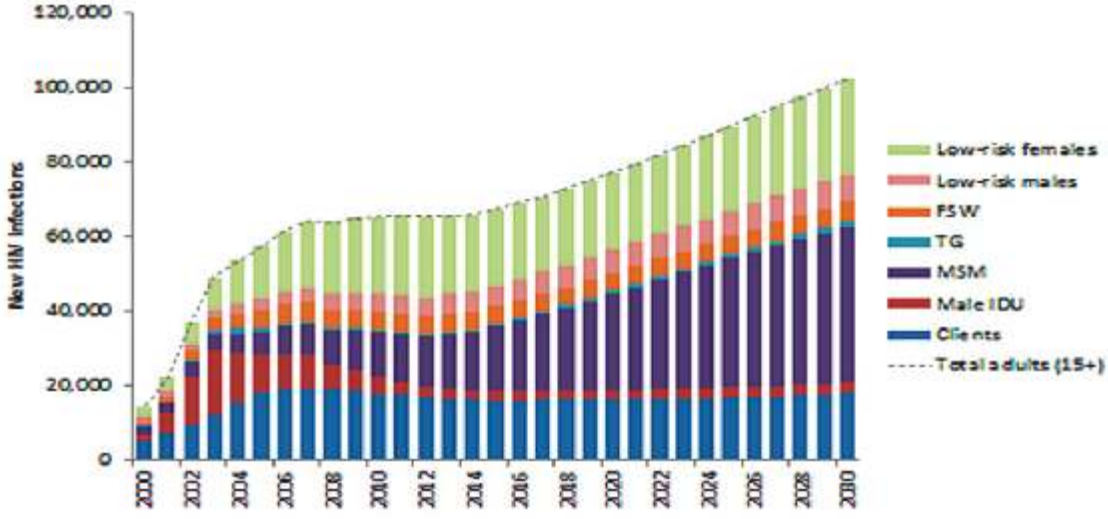
Target Audience	Objective(s)	Key Messages	Steps	Timeline
		5. But increased funding needed to fully implement in priority districts – estimated budget gap 2015-19 = US$ 176M 6. "Mainstreaming" HIV services through JKN will expand coverage and increase CE/ROI	results to be obtained 4. Prepare and deliver pre-sentation(s)	
Media	1. Raise awareness among journalists of HIV as public health threat and benefits of immediate, scaled-up action 2. Enlist and provide support to media to inform general public and opinion leaders on HIV-related issues and benefits of immediate, scaled-up action	1. Although epidemic may be slowing, numbers of annual new HIV infections and HIV-related deaths will continue to rise unless more is done 2. Modeling indicates significant impact of current priority GOI strategies if well implemented • 46,000 HIV infections averted • 13,800 HIV-related deaths averted • US$ 3.1B saved in treatment costs 3. Highly cost-effective in terms of HIV infections averted and DALYs saved 4. But increased funding needed to fully implement in priority districts and reach underserved KAPs	1. Identify "friendly" / progressive journalists 2. Provide steady stream of 1-page, reader-friendly information sheets 3. Make key personnel available for interviews 4. Encourage articles on HIV-related topics, esp. human interest stories	As soon as ICA is finalized
Legislature	Raise awareness among legislators of HIV as public health threat and benefits of immediate, scaled-up action	1. While recent data suggest some success in slowing epidemic, projected growth in GOI liability for HIV treatment costs is alarming if more is not done to contain epidemic – US$ 4.7B from 2014-30 2. Modeling indicates significant impact of LKB/PMTS combined with SUARTif well implemented • 46,000 HIV infections averted • 13,800 HIV-related deaths averted • US$ 3.1B saved in treatment costs 3. Highly cost-effective in terms of HIV infections averted and DALYs saved 4. Projected ROI to 2020 is US$ 2.10 per US$ invested now; ROI to 2030 is US$ 3.57 per US$ invested 5. But increased funding needed to fully implement in priority districts – estimated budget gap 2015-19 = US$ 176M	1. Identify "friends" and "sympathizer" 2. Provide steady stream of 1-page, reader-friendly information sheets (lots of graphs and charts) and key messages bulleted 3. Encourage and support distribution to colleagues 4. Provide district-specific data / evidence as possible	1. Begin after legislative elections are completed/ when new legislature is seated

Annexes

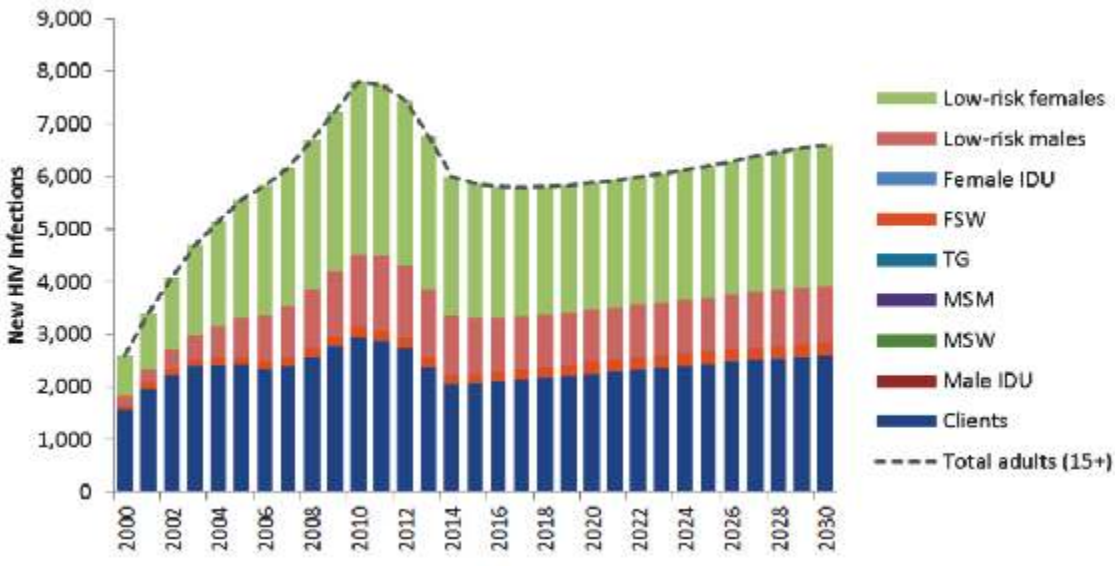
Annex 1a:
Estimated and Projected Number of Annual New HIV Infections, by Population Sub-Group, Indonesia, 2012



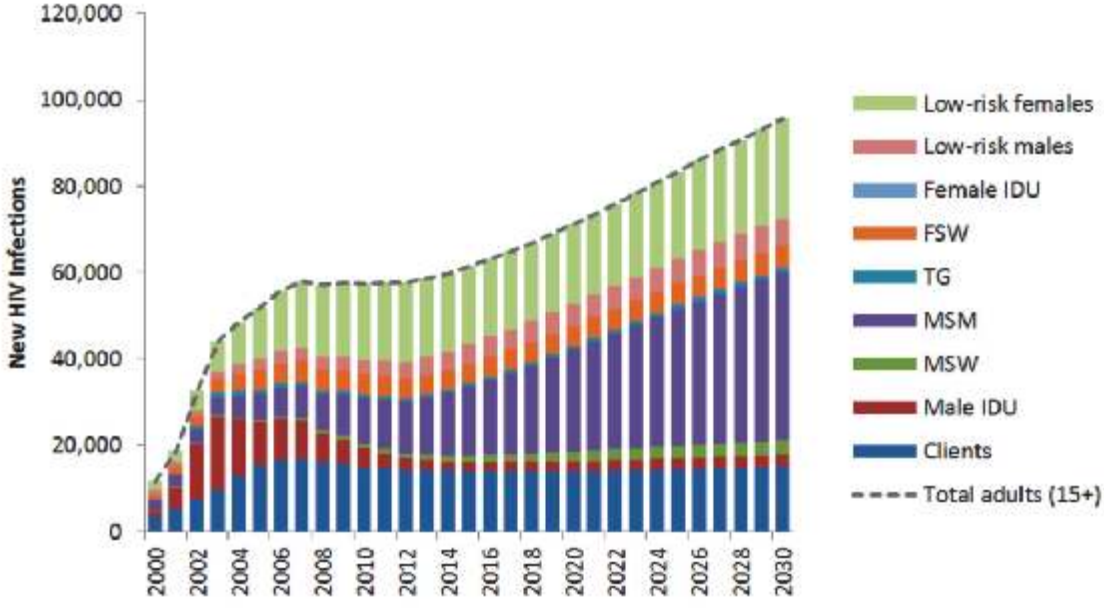
Annex 1b:
Estimated and Projected Number of Annual New HIV Infections, by Population Sub-Group, Indonesia, 2014



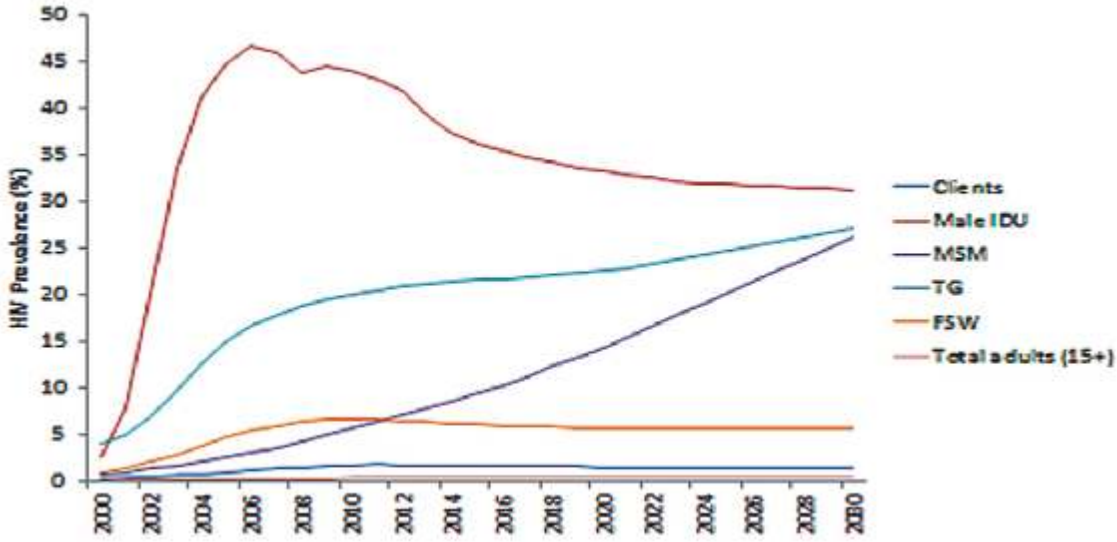
Annex 1c:
Estimated and Projected Number of Annual New HIV Infections,
by Population Sub-Group, Tanah Papua, 2014



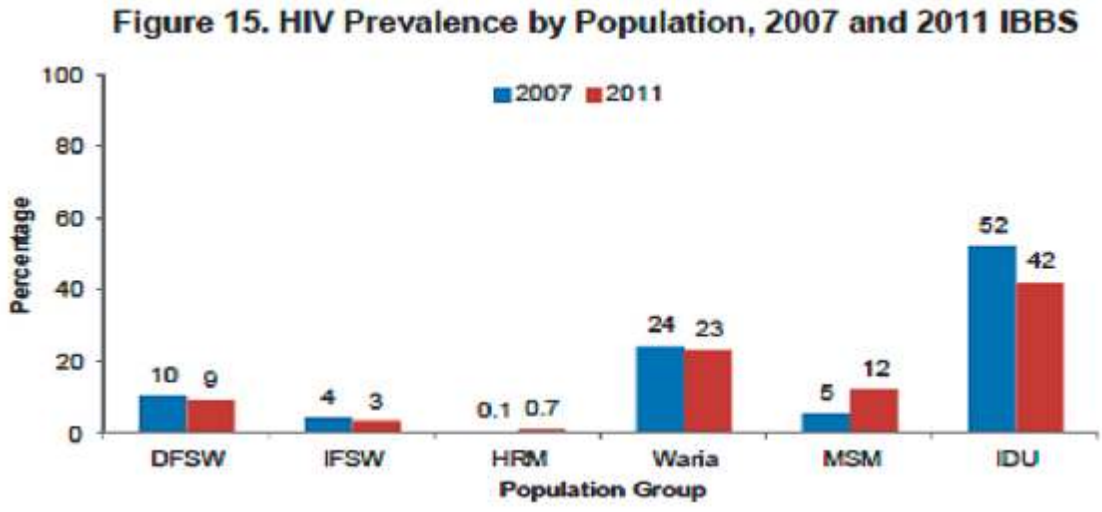
Annex 1d:
Estimated and Projected Number of Annual New HIV Infections,
by Population Sub-Group, non-Papua, 2014



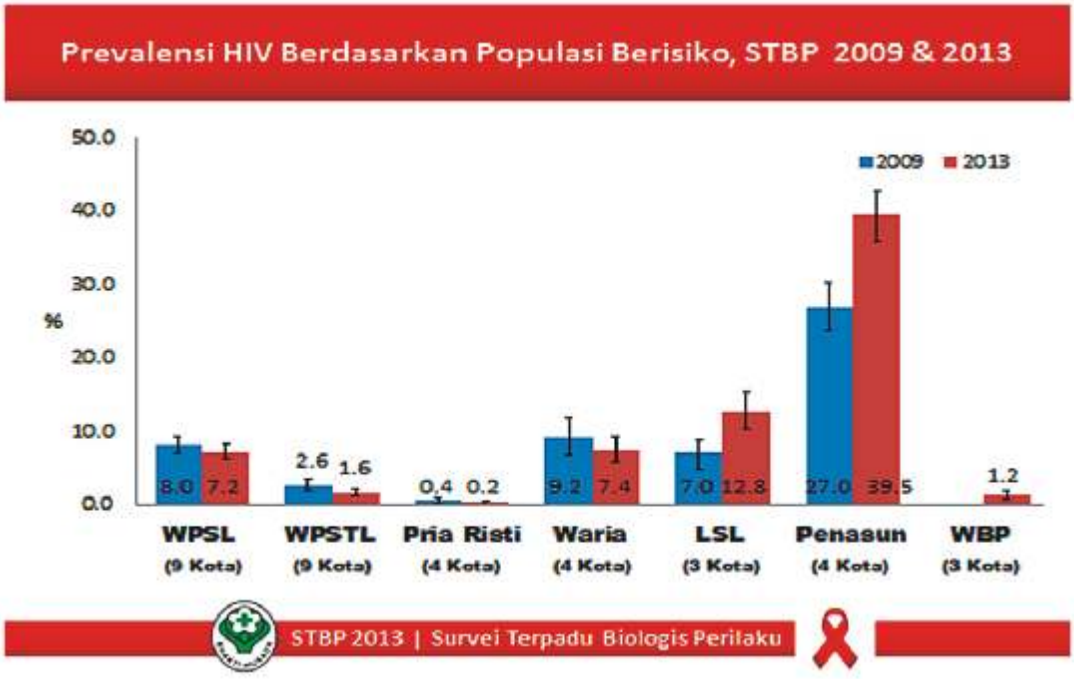
Annex 1e:
Projected HIV Prevalence for Selected Population Sub-Groups, Indonesia, 2014-2030



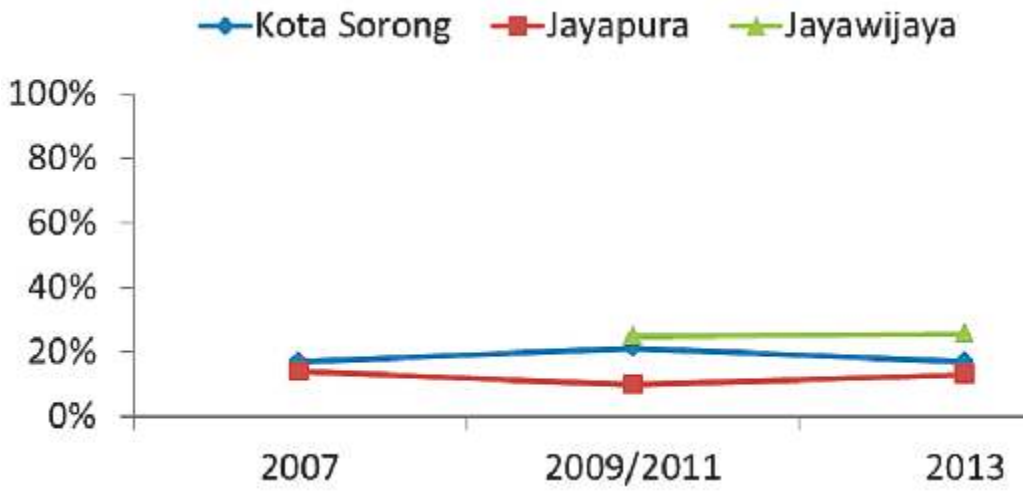
Annex 2a:
Changes in HIV Prevalence among KAPs in 12 Provinces, 2007 & 2011
[Source: IBBS among KAPs, 2007 and 2011]



Annex 2b:
Trends in HIV Prevalence among KAPs in 9 Provinces, 2009 & 2013
[Source: IBBS among KAPs, 2009 and 2013]

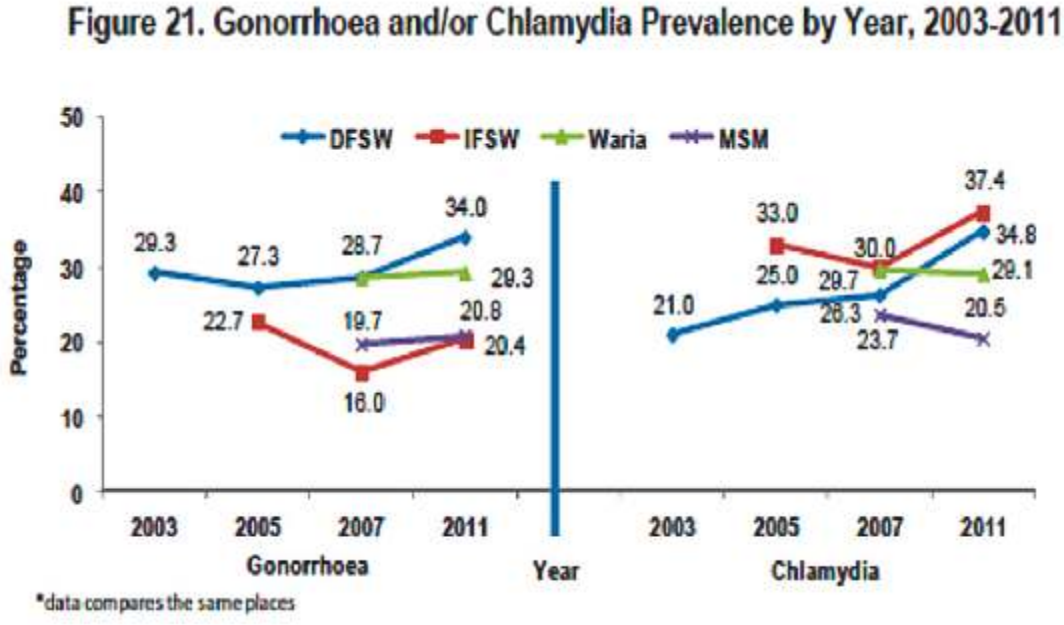


Annex 2c:
Changes in HIV Prevalence among Direct FSWs in 3 Cities/Districts in Tanah Papua, 2007 – 2013
[Source: IBBS among KAPs, 2007 and 2011; MOH and
CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]

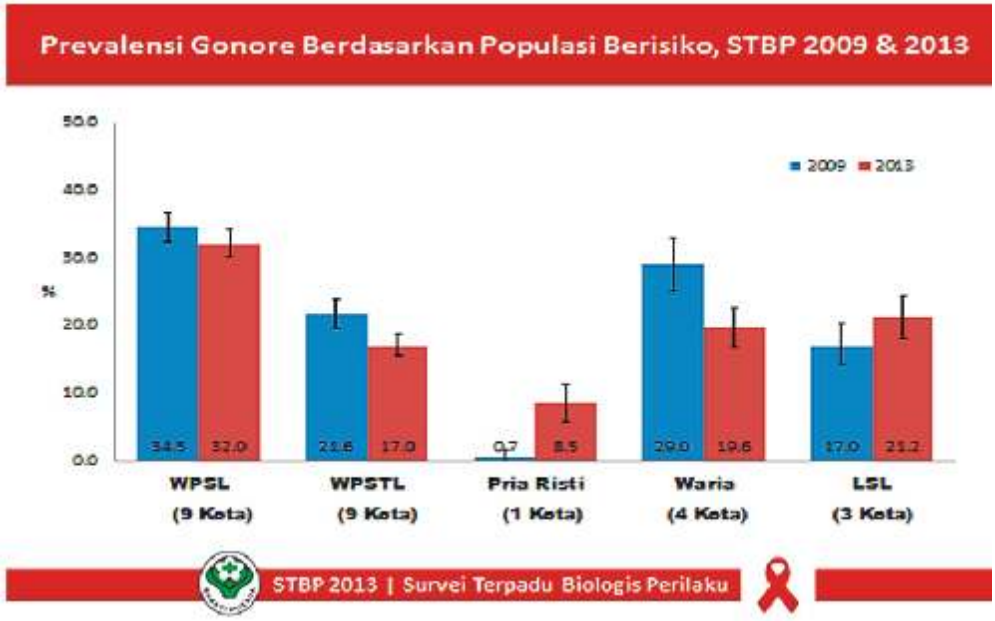


Annex 2d:
Changes in HIV Prevalence among FSWs in 3 Cities/Districts in Tanah Papua, 2007 – 2013
[Source: IBBS among KAPs, 2007 and 2011; MOH and
CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]

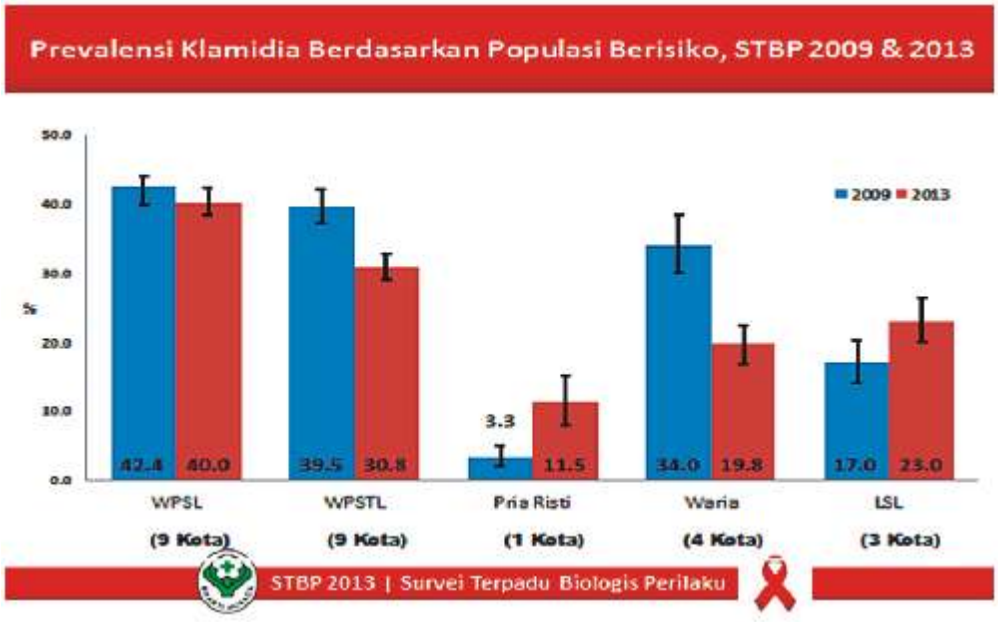
Annex 3a:
Changes in Prevalence of Gonorrhea and/or Chlamydia among KAPs in 12 Provinces, 2003 – 2011
[Source: MOH and FHI RTI among FSWs Surveys, 2003 and 2005; IBBS among KAPs, 2007 and 2011]



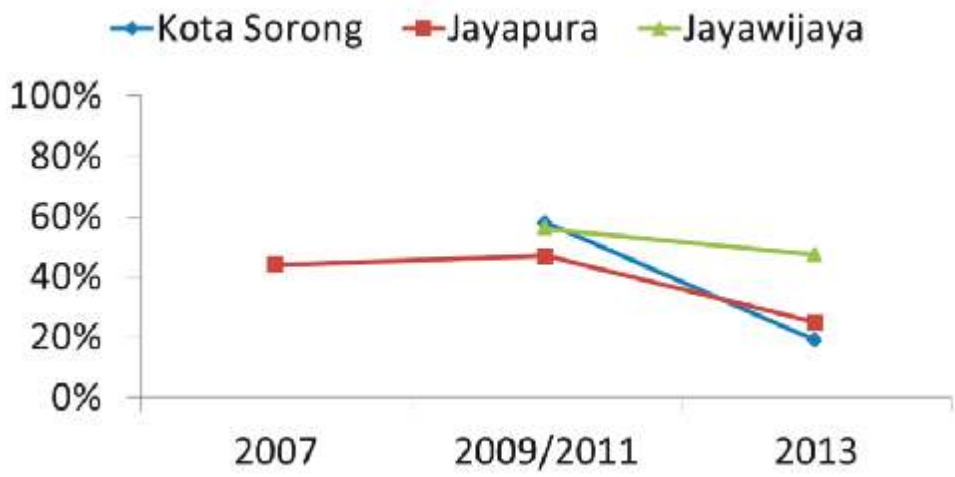
Annex 3b:
Changes in Prevalence of Gonorrhea among KAPs in 9 Provinces, 2009 & 2013
[Source: IBBS among KAPs, 2009 and 2013]



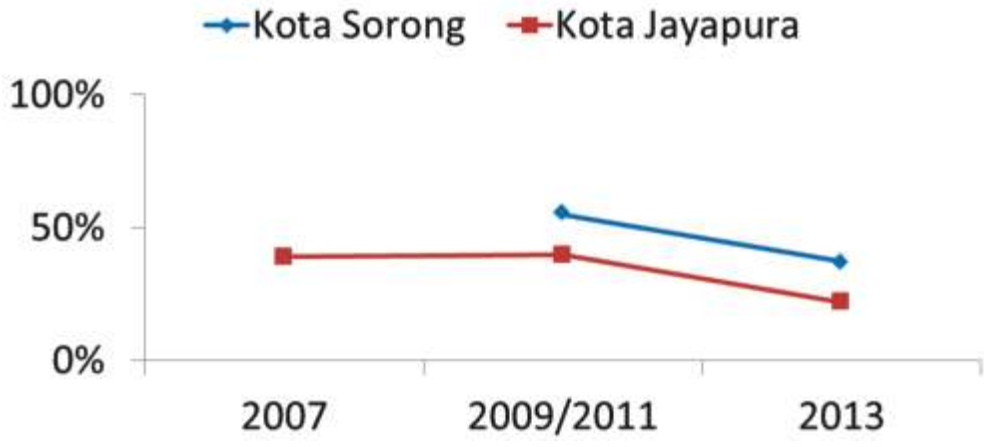
Annex 3c:
Changes in Prevalence of Chlamydia among KAPs in 9 Provinces, 2009 & 2013
[Source: IBBS among KAPs, 2009 and 2013]



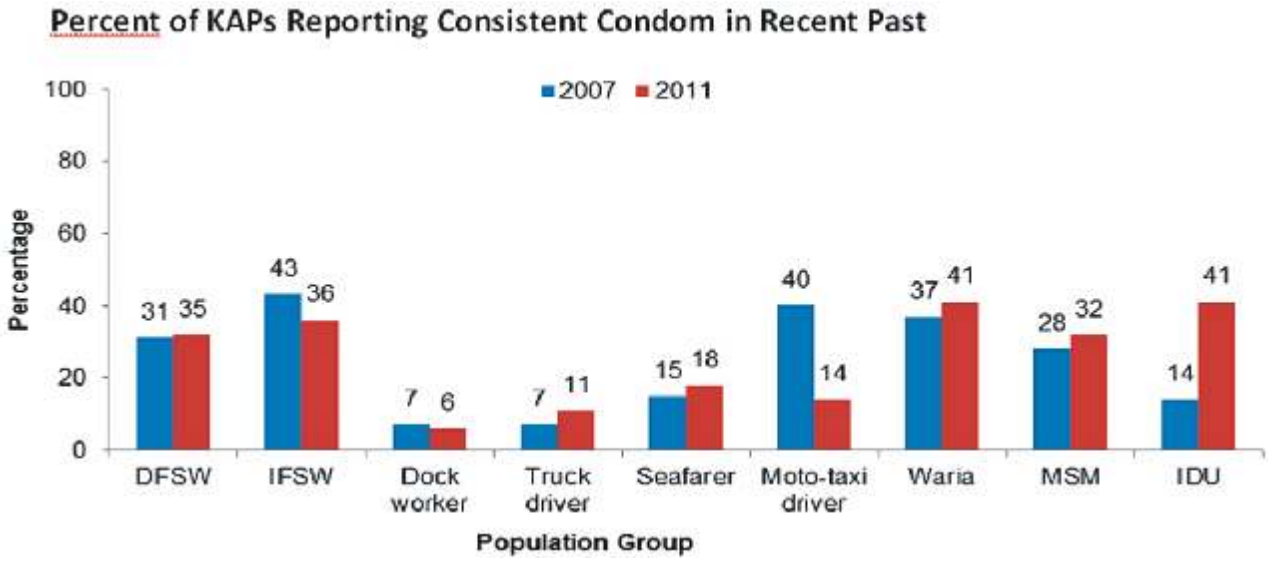
Annex 3d:
Changes in Prevalence of Gonorrhea and/or Chlamydia among Direct FSWs in 3 Cities/Districts in Tanah Papua, 2007–2013 Source: IBBS among KAPs, 2007 and 2011; MOH and CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]



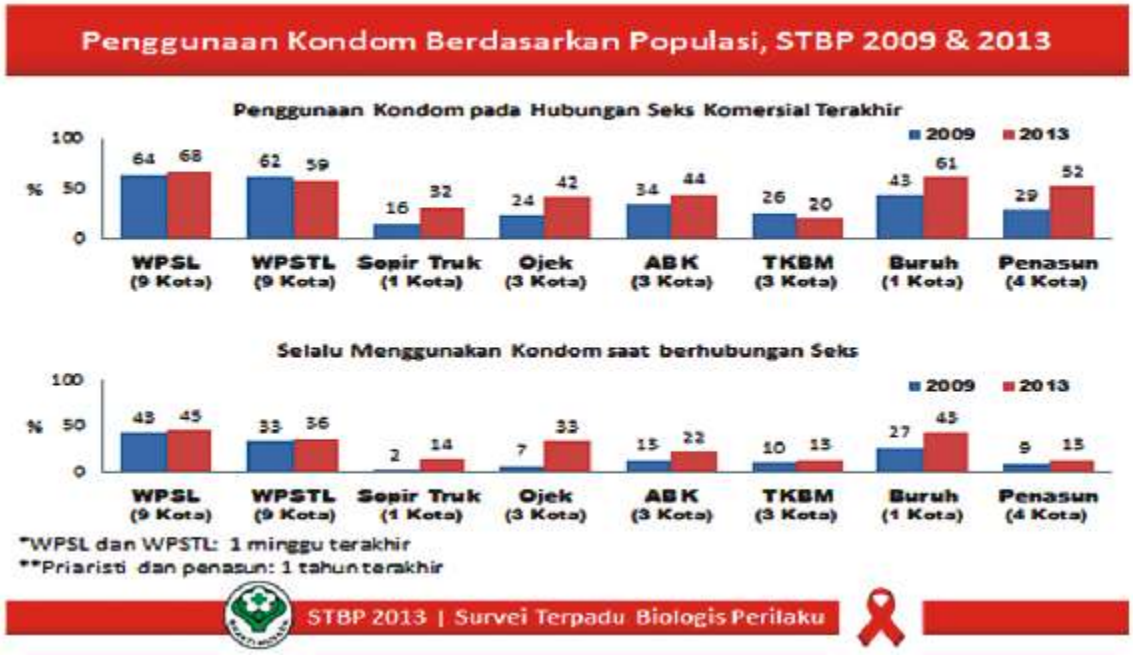
Annex 3e:
Changes in Prevalence of Gonorrhea and/or Chlamydia among Indirect FSWs in 2 Cities/Districts in Tanah Papua, 2007–2013 [Source: IBBS among KAPs, 2007 and 2011; MOH and CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]



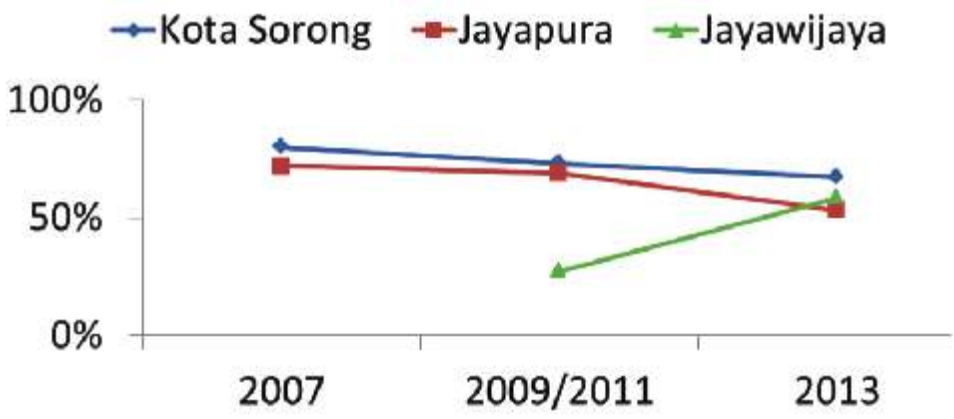
Annex 4a:
Changes in Consistent Condom Use ("Always") During Selected Recent Reference Periods among KAPs in 12 Provinces, 2007 & 2011
[Source: IBBS among KAPs, 2007 and 2011]



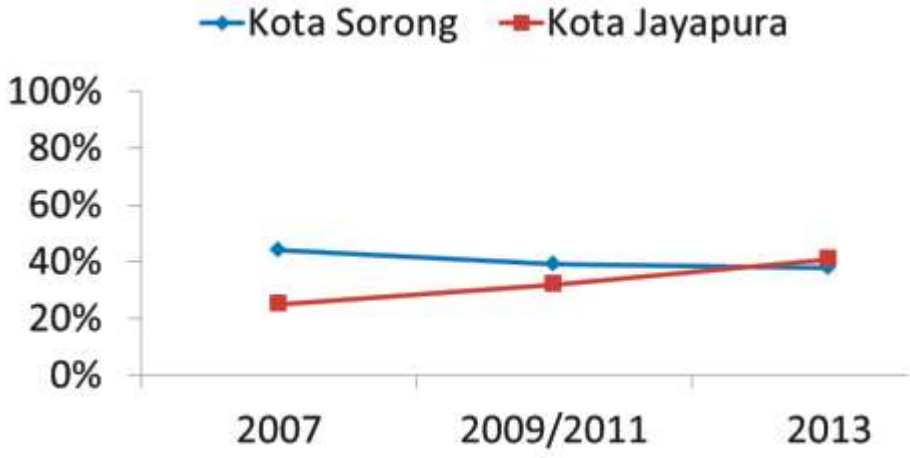
Annex 4b:
Changes in Condom Use at Last Sex and Consistent Condom Use ("Always") During Selected Recent Reference Periods among KAPs in 9 Provinces, 2009 & 2013 [Source: IBBS among KAPs, 2009 and 2013]



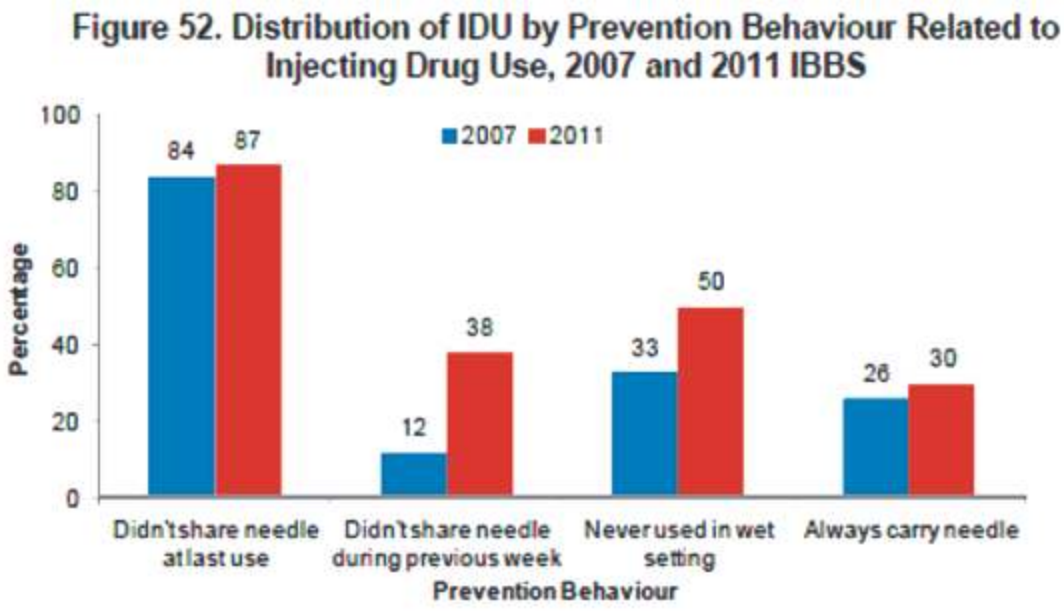
Annex 4c:
Changes in Consistent Condom Use ("Always") During the Past Week among Direct FSWs in 3 Cities/Districts in Tanah Papua, 2007 – 2013
[Source: IBBS among KAPs, 2007 and 2011; MOH and CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]



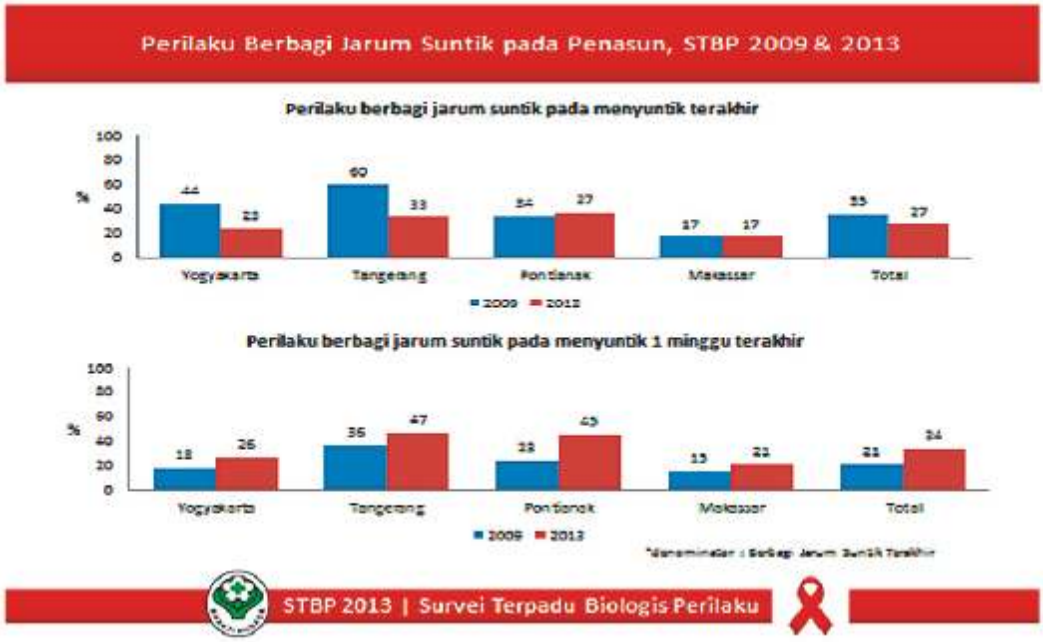
Annex 4d:
Changes in Consistent Condom Use ("Always") During the Past Week among Indirect FSWs in 2 Cities/Districts in Tanah Papua, 2007 - 2013
[Source: IBBS among KAPs, 2007 and 2011; MOH and CHAI STI Survey among FSWs in 8 Cities/Districts in Tanah Papua, 2013]



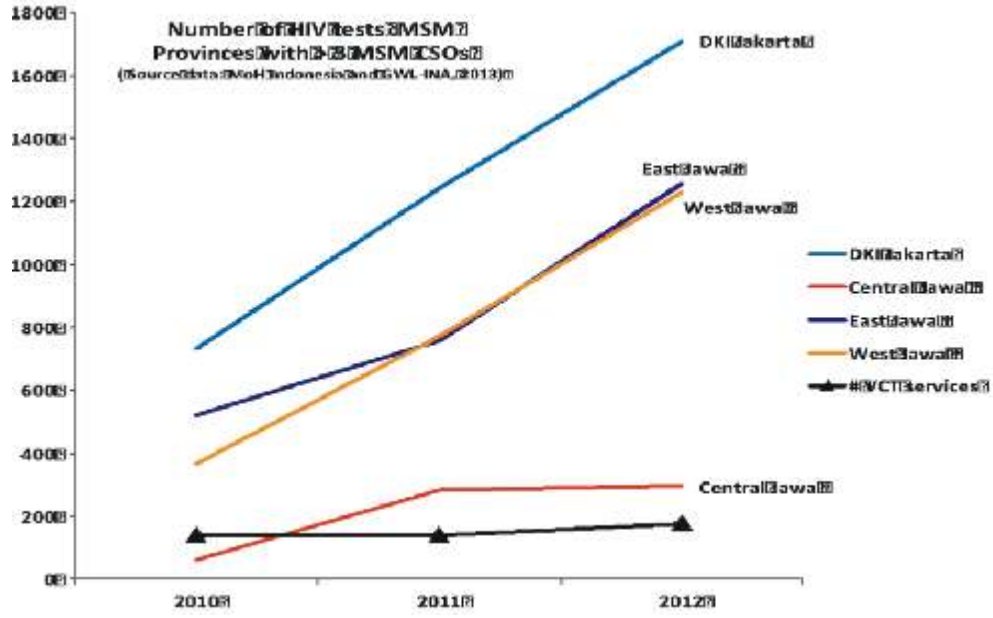
Annex 5a:
Changes in Prevention Behaviours among Persons who Inject Drugs in 12 Provinces, 2007 & 2011
[Source: IBBS among KAPs, 2007 and 2011]



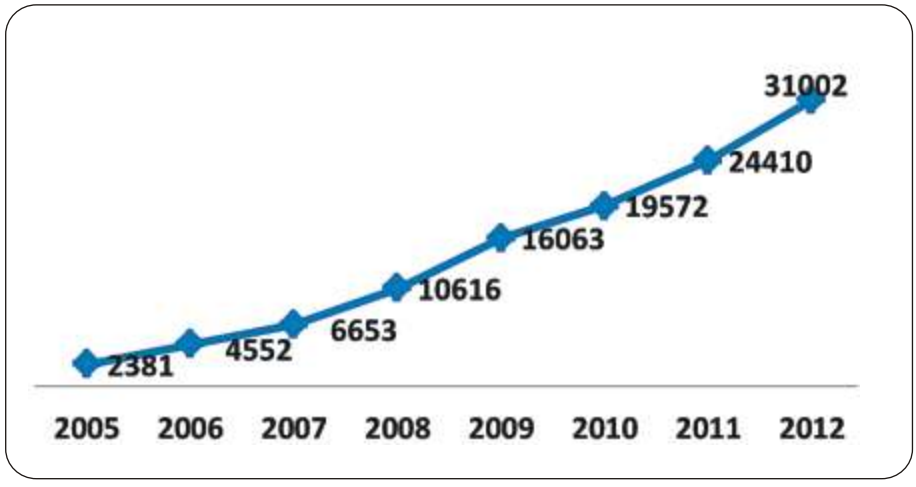
Annex 5b:
Changes in Prevention Behaviours among Persons Who Inject Drugs in 9 Provinces, 2009 & 2013
[Source: IBBS among KAPs, 2009 and 2013]



Annex 6:
Number of HIV Tests among MSM in Relation to the Number of MSM CSOs Operating Per Province
[Source: MoH and GWL-INA, 2013]



Annex 7a:
Number of Persons on ART, 2005-2012



Source: MOH

Annex 7b:
ART Retention Rates from Annual MOH Cohorts, 2004-2013

Source: MOH

Annex 8:
Layanan Komprehensif Berkesinambungan (LKB)

The strategic use of ARV requires infrastructure able to provide a comprehensive continuum care. The LKB is the most suitable condition available to have a focused intervention and to obtain rapid result as demonstration sites. In its original concept, the LKB aims to (1) increase access and coverage of quality promotion, prevention, and treatment of STI and HIV, as well as rehabilitation endeavors as to expand the services to primary health care facilities with focus on key affected populations; (2) increase in knowledge and responsiveness health providers in providing HIV and STI services through practicing intensive coordination, community participation with the drive coming from the civil society; (3) to demonstrate higher impact of ART with adaptation of the Treatment 2.0[12] framework in a model of decentralized and integrated services.

The basic principle of the LKB is to have a stronger health system – a continuum of care, in integrated manner with community networks. The LKB has an end to reduce as much as possible the miss-opportunity the services potentially have to benefit the community. The LKB HIV include services of: IEC for increasing the comprehensive knowledge of HIV, condom promotion, risk assessment and control, VCT and PITC, CST, PMTCT, Harm Reduction (NSP, MMT, drug addiction & medical therapy), STI service, blood donor screening, outreach and support for adherence, activities related to monitoring and evaluation as well as epidemiological surveillance. The LKB is

The treatment 2.0 framework for action: catalyzing the next phase of treatment, care and support. 2011. WHO & UNAIDS

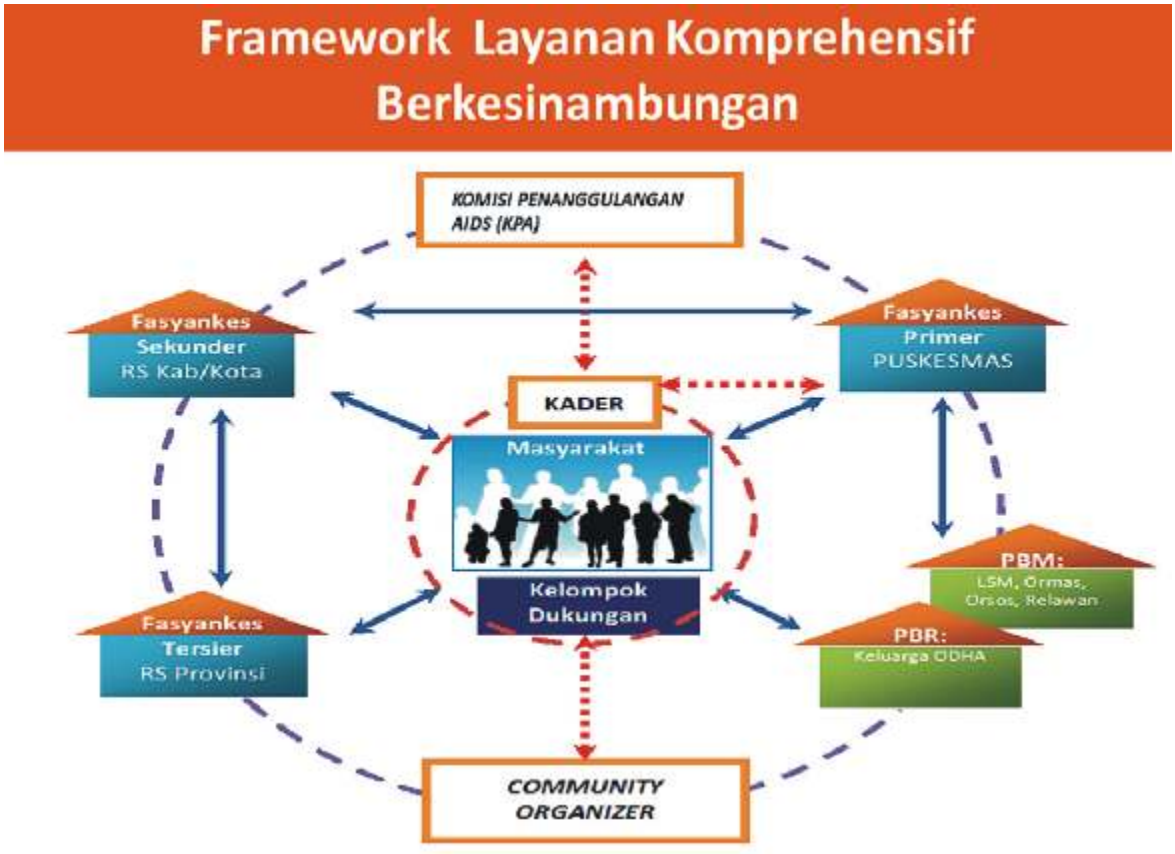
thus envisioned to contribute to increasing the ART coverage as well as the retention with a continuum of care. The overall framework for LKB is indicated in the figure below.

To have a complete working area, 6 pillars of LKB are used to monitor the implementation over time:

- Pillar 1: Coordination and partnership with all stakeholders at all level
- Pillar 2: Active roles of PLHIV and their families
- Pillar 3: Integrated services and decentralized as epidemiological situation required
- Pillar 4: Package of comprehensive and continuum HIV service
- Pillar 5: Referral system and networking
- Pillar 6: Social Protection for accessing health services

The steps for district to develop LKB are:

1. Reach consensus among stakeholders to support LKB
2. Develop networks
3. Undertake a situational analysis
4. Mobilize resources with APBD envisioned as the backbone
5. Implementation:
   a. Establish and further develop the LKB
   b. Increase active roles of PLHIV and the communities
   c. Establish good public relation with surrounding communities
   d. Develop the capacity of the health service facilities and the community.
6. Monitoring and evaluation, including documentation of best practices



Annex 9a:
Assumed year 2020 levels of coverage and effectiveness of prevention program components
Other than ART – Non-Papua (figures shown are percentages)

KAP and intervention	(1)* Base Line	Scenarios				
		(2)*	(3)*	(4)*	(5)*	(6)*
Weight of district type						
LKB_high_district	0	0	0	0	60	100
LKB_medium_district	0	0	0	60	0	0
LKB_low_district	0	0	60	0	0	0
GF_NonLKB_district	60	60	0	0	0	0
Non-GF_district	40	40	40	40	40	0
Total weight	100	100	100	100	100	100
Program quality compared to best practice						
LKB_high_district	100	-	-	-	100	100
LKB_medium_district	75	-	-	75	-	-
LKB_low_district	50	-	50	-	-	-
GF_NonLKB_district	25	25	-	-	-	-
Non-GF_district	5	5	5	5	5	-
Program coverage in 2020						
LKB_high_district	No change -	-	-	-	80	80
LKB_medium_district	Same	-	-	75	-	-
LKB_low_district	As	-	70	-	-	-
GF_NonLKB_district	2013	65	-	-	-	-
Non-GF_district		40	40	40	40	-
Input Coverage 2020						
DFSW	51	51.5%	52.9%	55.9%	61.1%	80.0%
IFSW	25	25.9%	31.5%	41.1%	54.1%	80.0%
IDUs	50	50.3%	51.9%	55.4%	60.8%	80.0%
MSM		26.1%	32.5%	41.8%	54.3%	80.0%
TG		33.8%	38.9%	46.1%	55.8%	80.0%
Direct FSW achievement in 2020						
Condom Use	62	63	64	68	73	85
STI Prevalence (Gonorrhea)	37.2	36.4	34.1	29.8	23.5	10
Indirect FSW achievement in 2020						
Condom Use	60	65	68	73	78	85
STI Prevalence (Gonorrhea)	14.9	15.9	14.1	11.5	8.7	5

KAP and intervention	(1)* Base Line	Scenarios				
		(2)*	(3)*	(4)*	(5)*	(6)*
MSM – high risk achievement in 2020						
Condom Use	60	63	65	69	73	85
STI Prevalence (Gonorrhea)	24	20.5	17.3	13.6	9.8	5
PWID achievement in 2020						
Percent of IDUs Sharing	30	29	26	20	14	2
Injections Shared (among who Share)	72.0	71	66.3	57	45.0	19
TG – high risk achievement in 2020						
Condom Use	60	63	65	69	73	85
STI Prevalence (Gonorrhea)	24	20.5	17.3	13.6	9.8	5

Note:

1. Baseline: Levels and trends from IBBS through 2013 and 2013 ART coverage assumed to remain constant
2. GFATM – no LKB/PMTS: assume coverage, effectiveness and trends from n=141 GFATM-supported districts prior to introduction of LKB
3. LKB/PMTS – Low: assume LKB/PMTS implementation with low implementation performance
4. LKB/PMTS – Medium: assume LKB/PMTS implementation with medium implementation performance
5. LKB/PMTS – High: assume LKB/PMTS implementation with high implementation performance
6. LKB/PMTS – High – All Districts: assumes high LKB/PMTS implementation performance in all districts in Indonesia[13].

Explanation on the assumptions for the above table on "Assumed year 2020 levels of coverage and effectiveness of prevention program components other than ART – Non-Papua (figures shown are percentages) "

1. Weight of district type:
   "weighting" to see what is the real coverage in Indonesia.

This scenario is to see how wide of the real coverage to focus of the KAP in the GF supported district/city. For example: to reach 80% KAP in the GF supported district, so for this is as part of Indonesia, the real coverage is not 80%, because the GF supported districts were only part of districts. Example: to reach 80% of the GF supported area, so the real coverage for the area in Indonesia is:
Based on the estimation data, total KAP in GF supported areas is 60% from the total of PLHIV in Indonesia, so the weight in GF supported districts is 60% and non GF is 40%.

So, the above question could be answered with: 80%(programme coverage) x 60% (weight in programme areas) = 48% (coverage for the whole Indonesia area)

With this basis, each scenario defines as, how much real coverage that we want to reach:
a. Baseline (current condition), current condition

[13] Some notes on how the modeling results can be translated into program action to improve effectiveness may be found in Annex 18.

is GF-non LKB and non GF areas, the weight is 60% for GF areas and 40% of non GF areas.

b. GF non-LKB, only GF, but the condition is increased from the current condition, so the areas are still divided by 2: GF and non GF, the weight is still the same with the above.
c. LKB low, LKB in GF area with low performance, so the areas are divided by 2, GF and non GF, the weight is the same with above scenarios.
d. LKB medium, LKB in GF areas with medium performance, the areas are divided by 2, GF and non GF, the weight is the same with above scenario.
e. LKB high, LKB in GF areas with high performance, the areas are divided by 2, the GF and non GF, the weight is the same with above.
f. LKB high all district, LKB in all Indonesia areas with high performance, so the areas is not divided by weight, the weight is 100%, no need weight.

2. Program quality compared to best practice:

The basis intervention in AEM:

If the coverage is increased in KAP A, how much we could increase the behaviour?

Example: FSW: current coverage is 50%, condom use 60%, and STI 30%. If the coverage is increased from 50% to 80%, what will be the increase in condom use? And STI will reduce to how many per cent?

The data from best practice will be used in this case (research result or programme result in specific area with the best result). Indonesia does not have it yet.
That is why, Thailand data was used. In the Thailand best practice, it is said if the coverage among sex workers is 80%, condom use 80% and STI is 10%.

With this basis, each scenario will not have the same quality (since we have low, medium and high scenario), how much different with the best practice? It could be defined as follow:

a. Baseline (current condition), since it is current condition, the coverage is not changing, that is why there is no value in the table below.
b. GF non-LKB, for GF areas, the consensus the condom use and STI change among FSW is 25% if it is compared with the best practice change for non GF areas is 5%.
c. LKB low, for GF areas, the consensus is the change in condom use and STI among FSW is 50% if it compared with the best practice change in non GF is 5%.
d. LKB medium, for GF areas, the consensus is the condom use and STI among FSW is 75%, if it is compared with the best practice, for non GF is 5%
e. LKB high, for GF areas, the consensus the change in condom use and STI among FSW is the same with the best practice change (100%) and non GF is 5%.
f. LKB high all district, the consensus is the change in condom use and STI among FSW is the same with the best practice (100%)

3. Program coverage in 2020

This basis considered, at the end of year of the coverage, how much coverage could be reached?

a. Baseline (current condition), since it is current condition, the coverage is not changing.
b. GF non LKB for GF areas, the consensus, the coverage is 65% in 2020 for non GF is 40%.
c. LKB low, for the GF areas, the consensus is the coverage will be reached is 70% in 2020 and non GF is 40%
d. LKB medium, the consensus is the coverage will be reached is 75% in 2020 and non GF is 40%
e. LKB high, for GF areas, the consensus is the coverage will be reached is 80% in 2010 and non GF 40%
f. LKB high all district, the consensus the coverage that will be reached is 80% in 2020.

Annex 9b:
Assumed year 2020 levels of coverage and effectiveness of prevention program components Other than ART – Tanah Papua (figures shown are percentages)

KAP and intervention	(1) Base Line	Scenarios				
		(2)	(3)	(4)	(5)	(6)
Weight of district type						
LKB_high_district	0	0	0	0	60	100
LKB_medium_district	0	0	0	60	0	0
LKB_low_district	0	0	60	0	0	0
GF_NonLKB_district	60	60	0	0	0	0
Non-GF_district	40	40	40	40	40	0
Total weight	100	100	100	100	100	100
Program quality compared to best Practice						
LKB_high_district	100	-	-	-	100	100
LKB_medium_district	75	-	-	75	-	-
LKB_low_district	50	-	50	-	-	-
GF_NonLKB_district	25	25	-	-	-	-
Non-GF_district	5	5	5	5	5	-
Program coverage in 2020						
LKB_high_district	No	-	-	-	80	80
LKB_medium_district	Change -	-	-	75	-	-
LKB_low_district	Same	-	70	-	-	-
GF_NonLKB_district	As	65	-	-	-	-
Non-GF_district	2013	40	40	40	40	-
Coverage Achievement in 2020						
DFSW	45	46.1%	48.3%	52.5%	59.4%	80.0%
IDFSW	47	47.9%	49.7%	53.5%	59.9%	80.0%
Direct FSW achievement in 2020						
Condom Use	60	61	63	67	73	85
STI Prevalence (Gonorrhea)	17.4	17.1	16.5	15.5	13.8	10
Indirect FSW achievement in 2020						
Condom Use	60	61	63	67	73	85
STI Prevalence (Gonorrhea)	17.4	16.8	15.7	13.6	10.7	5

Note:

1. Baseline: Levels and trends from IBBS through 2013 and 2013 ART coverage assumed to remain constant
2. GFATM – no LKB/PMTS: assume coverage, effectiveness and trends from n=141 GFATM-supported districts prior to introduction of LKB
3. LKB/PMTS – Low: assume LKB/PMTS implementation with low implementation performance
4. LKB/PMTS – Medium: assume LKB/PMTS Implementation with medium implementation performance
5. LKB/PMTS – High: assume LKB/PMTS implementation with high implementation performance
6. LKB/PMTS – High – All Districts: assumes high LKB/PMTS implementation performance in all Districts in Indonesia[14].

[14] Some notes on how the modeling results can be translated into program action to improve effectiveness may be found in Annex 18.

Annex 9c:
Assumed year 2020 levels of coverage and effectiveness of ART – Non-Papua
(Figures shown are percentages)

KAP	(1) Baseline		Scenario									
			(2)		(3)		(4)		(5)		(6)	
	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility
Direct FSW	3.5	CD4 all	16.1	CD4 All	53.1	CD4 All	57.2	CD4 All	61.1	CD4 All	86	CD4 All
Indirect FSW	3.2	CD4 all	13.9	CD4 All	49.1	CD4 All	53.3	CD4 All	57.5	CD4 All	81	CD4 All
Clients of FSW	12.4	CD4 350	17.7	CD4 All	21.2	CD4 All	30	CD4 All	38.7	CD4 All	50	CD4 All
Lower-risk females	18.2	Cd4 350	19.5	Cd4 350	23	CD4 350	31.7	CD4 350	40.5	CD4 350	50	CD4 350
Lower-risk males	11.7	Cd4 350	17.5	Cd4 350	21	Cd4 350	29.8	CD4 350	38.5	CD4 350	50	CD4 350
Effectiveness of ART	75% Infectivity reduction among people on ART for all scenarios											

Annex 9d:
Assumed year 2020 levels of coverage and effectiveness of ART – Tanah Papua
(Figures shown are percentages)

KAP	(1) Baseline		Scenario									
			(2)		(3)		(4)		(5)		(6)	
	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility	Cover	Eligibility
Direct FSW	15.1	CD4 All	47.9	CD4 All	54.7	CD4 All	61.8	CD4 All	68.3	CD4 All	77	CD4 All
Indirect FSW	10	CD4 All	30.1	CD4 All	35.8	Cd4 All	42.4	CD4 All	49	Cd4 All	57	CD4 All
Clients of FSW	18.9	CD4 350	23	CD4 All	26.5	CD4 All	37	CD4 All	47.5	CD4 All	60	CD4 All
MSM – high risk	12.8	CD4 All	38.7	CD4 All	44	CD4 All	49.7	CD4 All	55	CD4 All	62	CD4 All
MSM – low risk	6.1	CD4 All	15.7	CD4 All	17	CD4 All	18.4	CD4 All	19.8	CD4 All	22	CD4 All
PWID	13.6	CD4 All	37.7	CD4 All	43	CD4 All	49	CD4 All	54.9	CD4 All	62	CD4 All
Lower-risk females	21.1	CD4 350	23.6	CD4 350	27.1	CD4 350	37.6	CD4 350	48.1	Cd4 350	60	Cd4 350
Lower-risk males	18.9	CD4 350	23.2	CD4 350	26.7	CD4 350	37.2	CD4 350	47.7	Cd4 350	60	CD4350
Effectiveness of ART	75% Infectivity reduction among people on ART for all scenarios											

Annex 10:
Service package and unit costs assumptions for the economic analyses

Prevention other than ART

	Direct FSW	Indirect FSW	Higher risk MSM	IDU (NSE)	IDU (OST)
Condom	38,580	257,400	52,000	52,000	52,000
Lubricant			31,200		
Needle				1,460,000	
Methadone					3,650,000
Outreach	324,716	324,716	324,716	324,716	487,074
PE	100,000	100,000	100,000	100,000	100,000
STI	600,000	300,000	450,000	75,000	75,000
VCT	458,700	458,700	458,700	458,700	458,700
Meeting				300,000	
Basic Program Unit cost (Rp)	1,798,875	1,390,516	1,366,616	2,720,416	4,772,774
Basic Program Unit cost (USD)	191	148	146	289	508
Total Unit cost * including non basic program (USD)	338	261	257	511	897

	Unit cost (Rp)
Condom+distribution	1,000
Lubricant	1,200
Syringe + Alcohol swab + distribution	5,000
Cost of outreach per visit	74,179
Cost of STI treatment per visit	75,000
Cost of VCT per visit	100,000
Cost of methadone per visit	2,500
Transportation cost per visit	5,000

Number of outreach visits for IDU per year (NSE)	4
Number of outreach visits for IDU per year (OST)	6
Number of outreach visits for FSW per year (NSE)	4
Number of outreach visits for MSM per year (NSE)	4

Proportion of Non-Basic Program used to calculate Total Unit Cost 49%

* For Papua is 18% higher

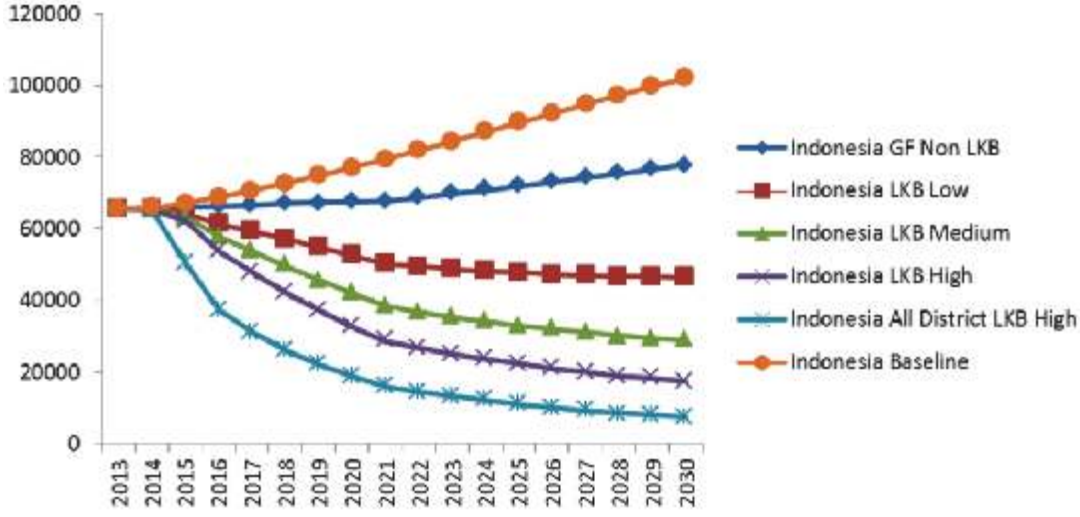
Treatment

No. of PLHIV on ARVs	2010-15
Total no. On ART	57,000
ART no.of new cases	10,000
ART total no. continued	47,000
1st line	108,990,034
2nd line	43,118,856
TOTAL ART	152,108,889
Cost of monitoring, 1st year	11,241,260
Cost of monitoring, cont.	37,517,382
Adherence	1,485,326
Training/year	189,110
Mgt/coordination/year	
Total Costs USD	202,541,967
Average cost	995

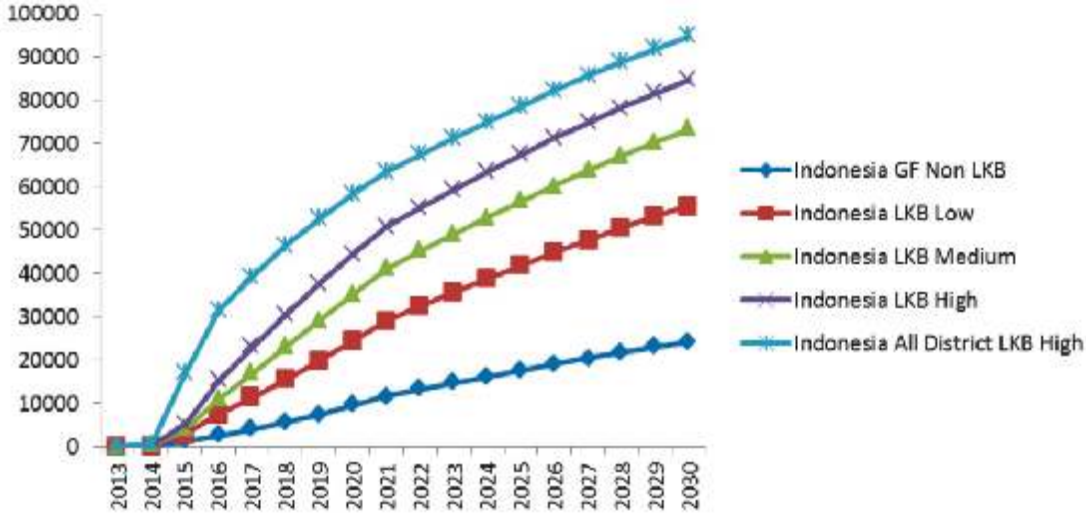
Basic Cost ARV Only	USD/000 MMK
Cost of ARV 1st line:	454
Cost of 1st line incl. OH	590
Cost of ARV 2nd line:	2133
Cost of 2nd line incl. OH	2775

* For Papua is 18% higher

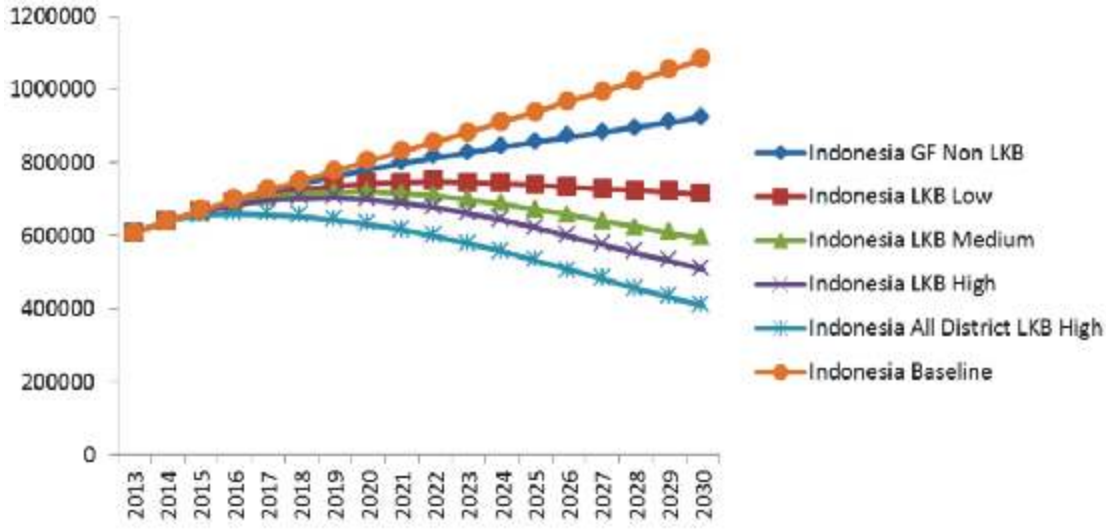
Annex 11a:
Modelling Impact of LKB/PMTS: Number of New Infections, by LKB/PMTS Scenario



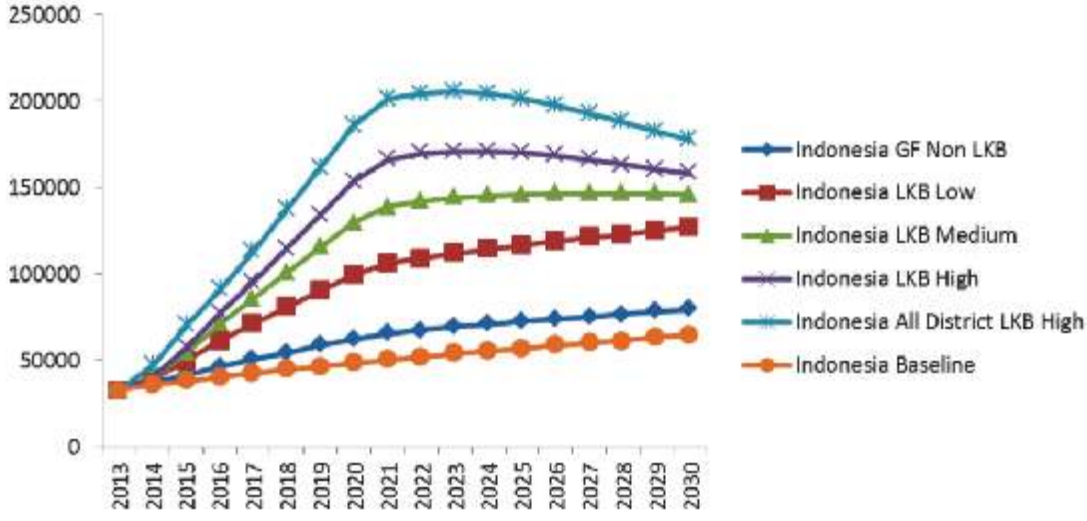
Annex 11b:
Modelling Impact of LKB/PMTS: HIV Infections Averted, by LKB/PMTS Scenario



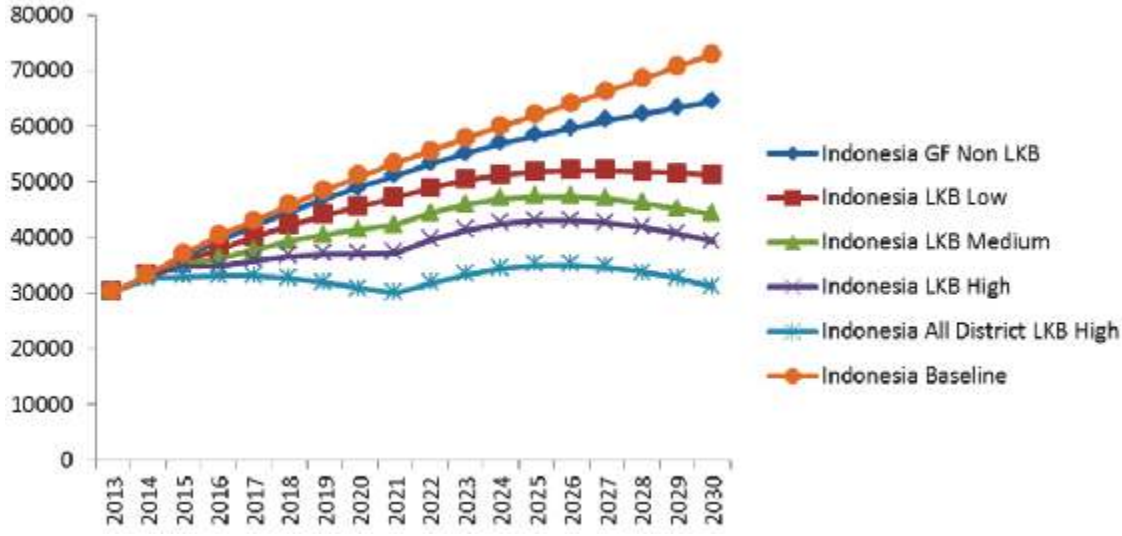
Annex 11c:
Modelling Impact of LKB/PMTS: Number of PLHVI, by LKB/PMTS Scenario



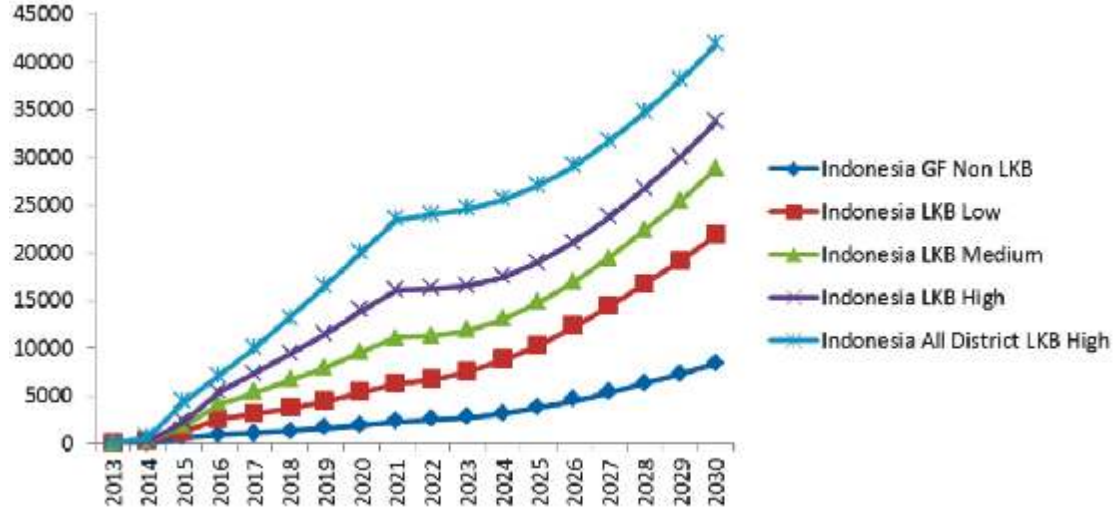
Annex 11d:
Modelling Impact of LKB/PMTS: Number of HIV+ on ART, by LKB/PMTS Scenario



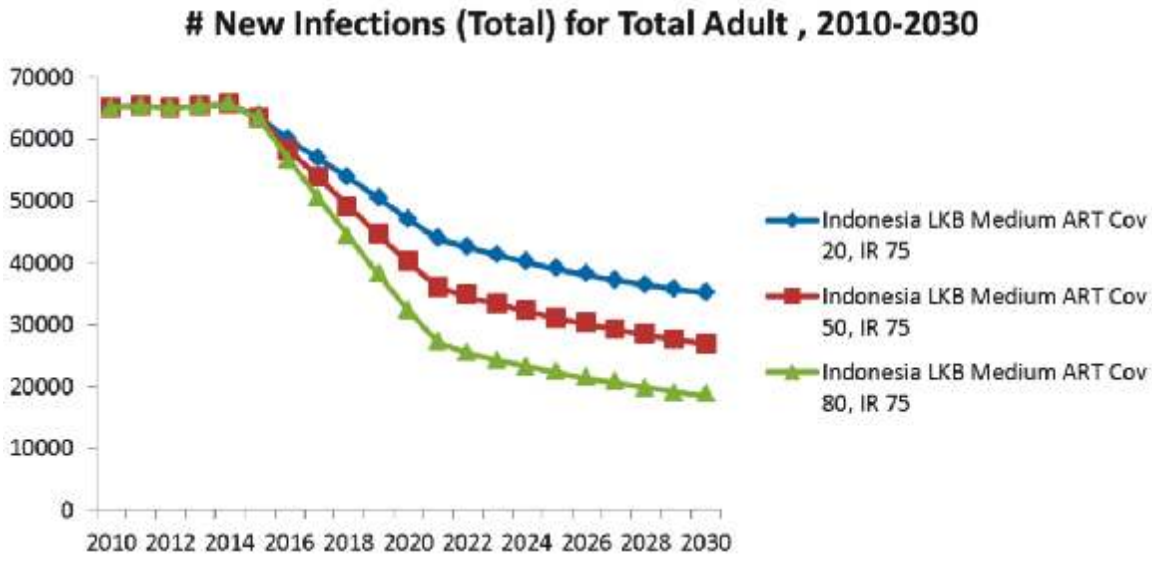
Annex 11e:
Modelling Impact of LKB/PMTS: Number of Adult Deaths, by LKB/PMTS Scenario

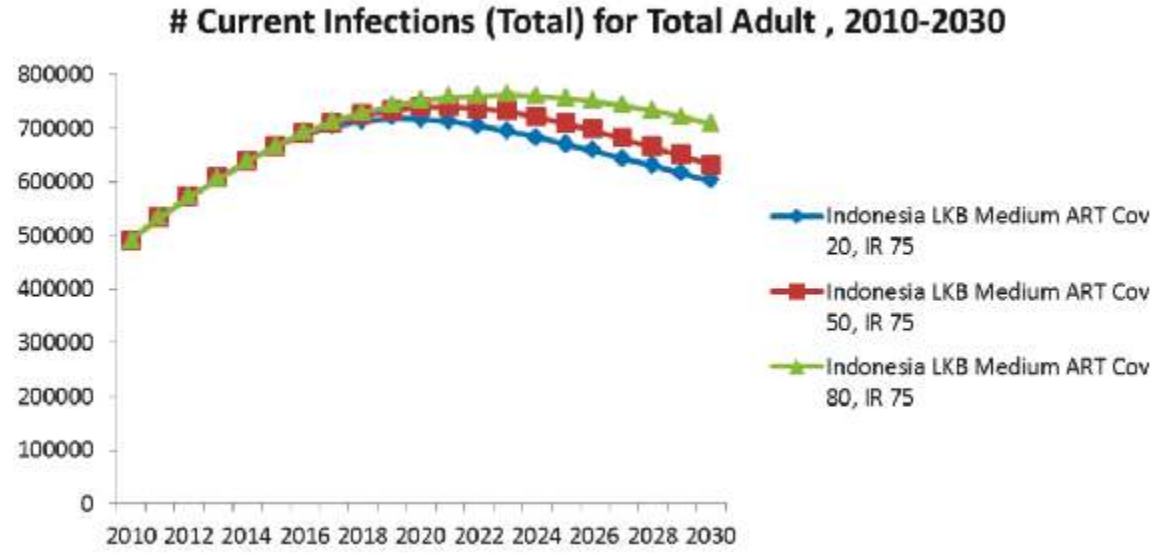


Annex 11f:
Modelling Impact of LKB/PMTS: Number of Deaths Averted, by LKB/PMTS Scenario

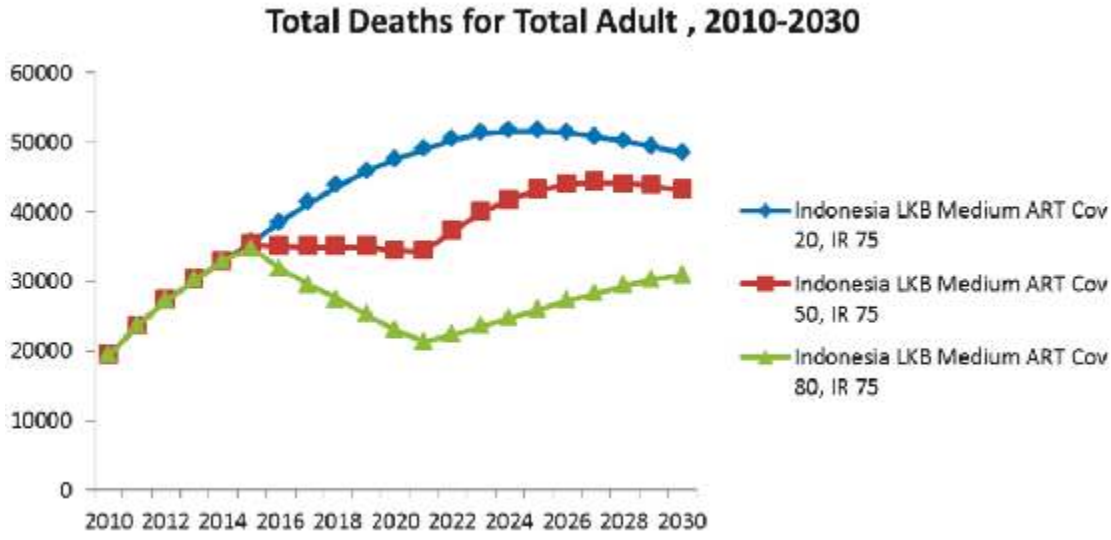


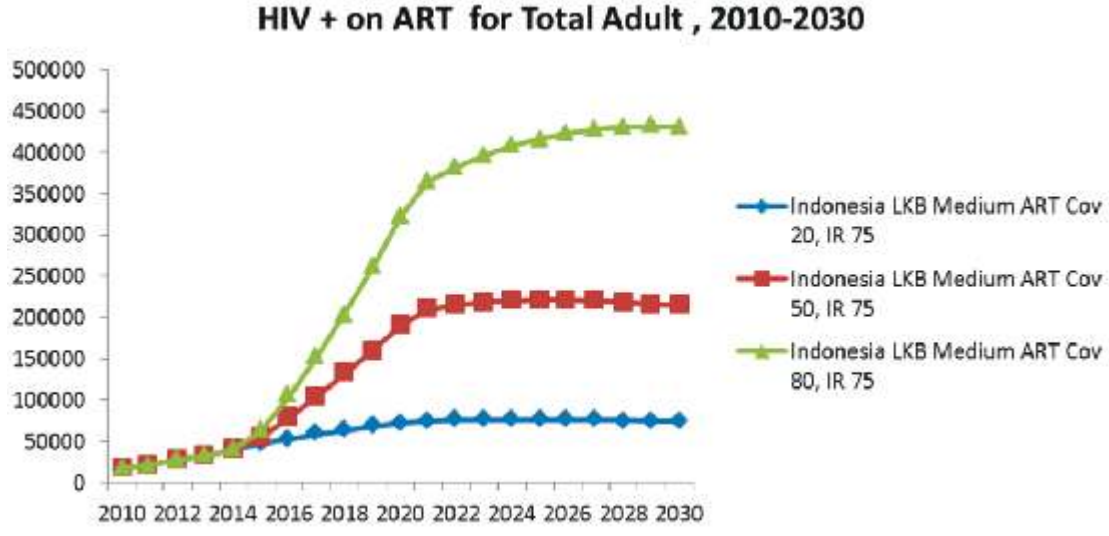
Annex 12:
Results of SUART Sensitivity Analyses – Program Coverage



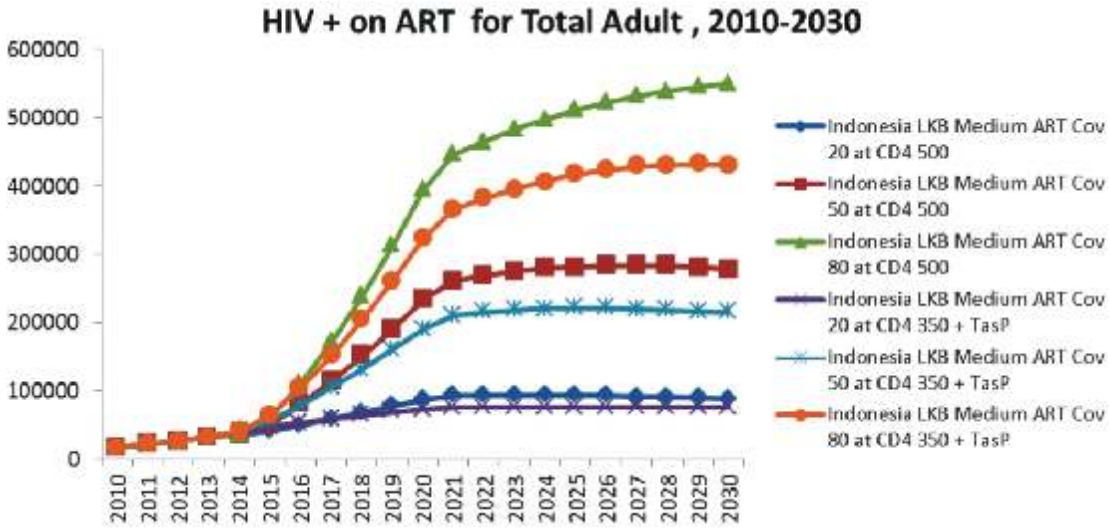


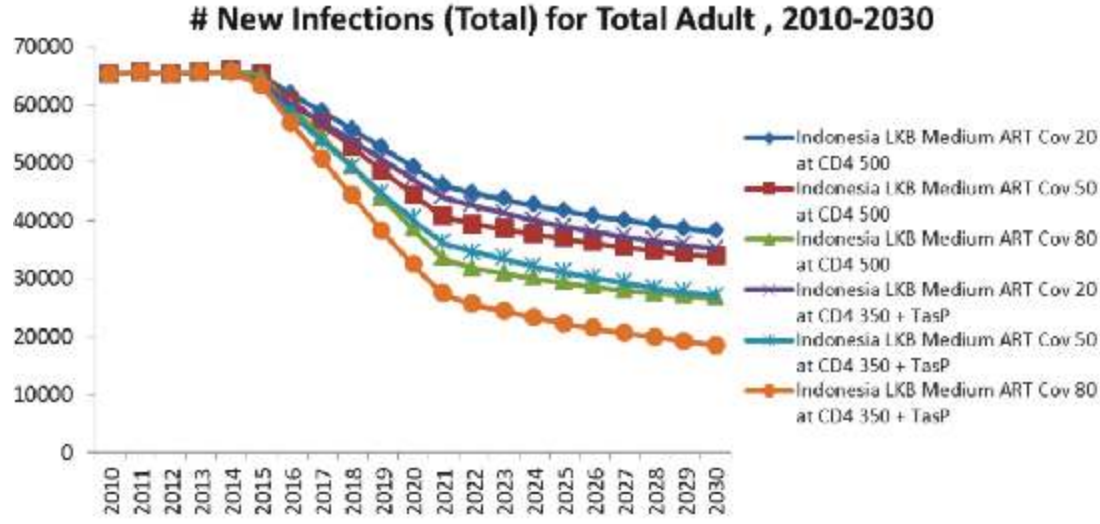
Annex 12:
Results of SUART Sensitivity Analyses – Program Coverage (cont'd)



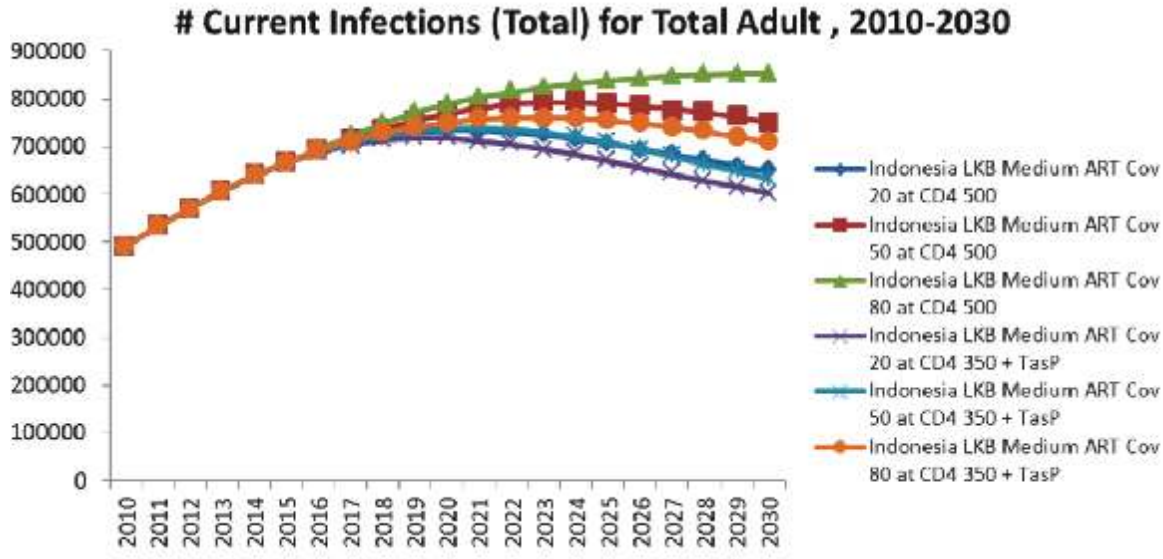


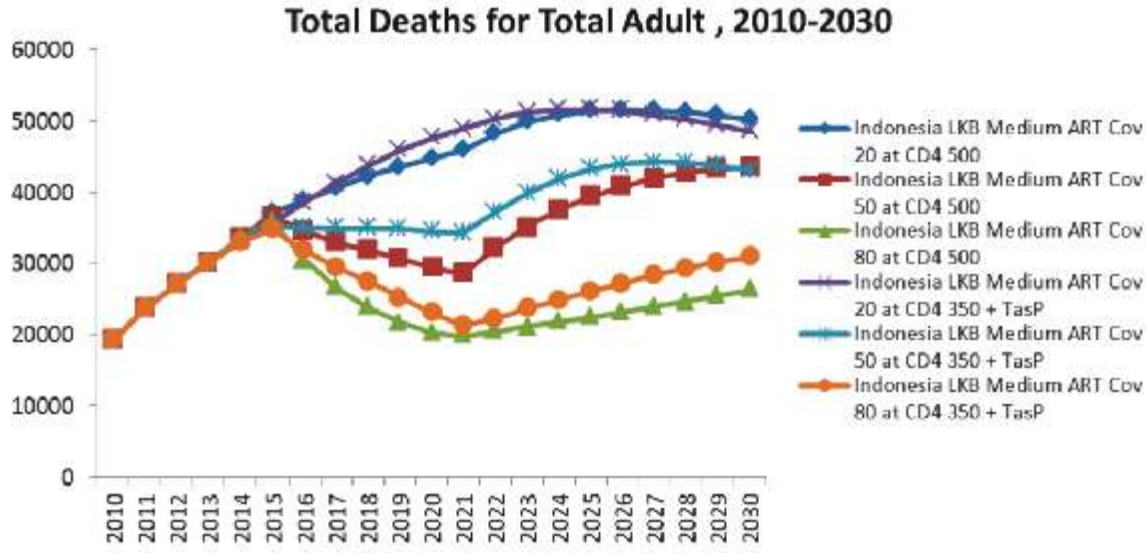
Annex 13:
Results of SUART Sensitivity Analyses – CD4 Starting Point



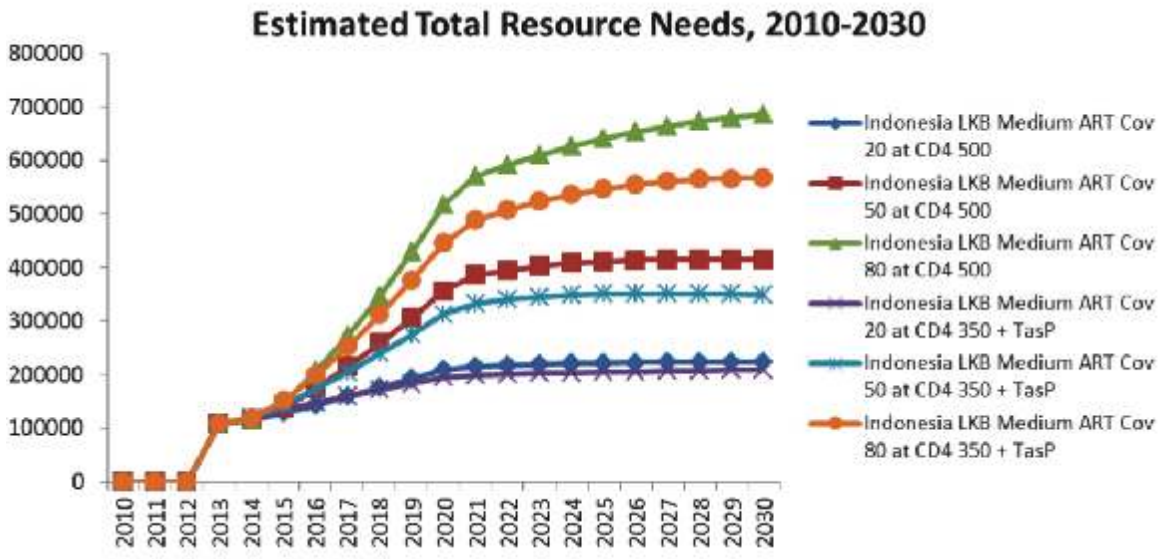


Annex 13:
Results of SUART Sensitivity Analyses – CD4 Starting Point (cont'd)

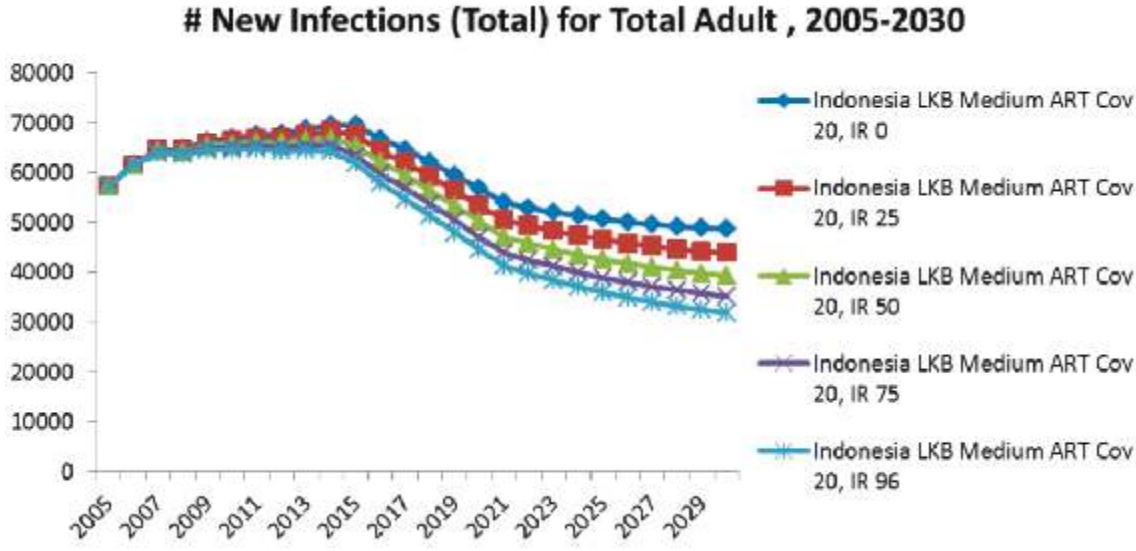


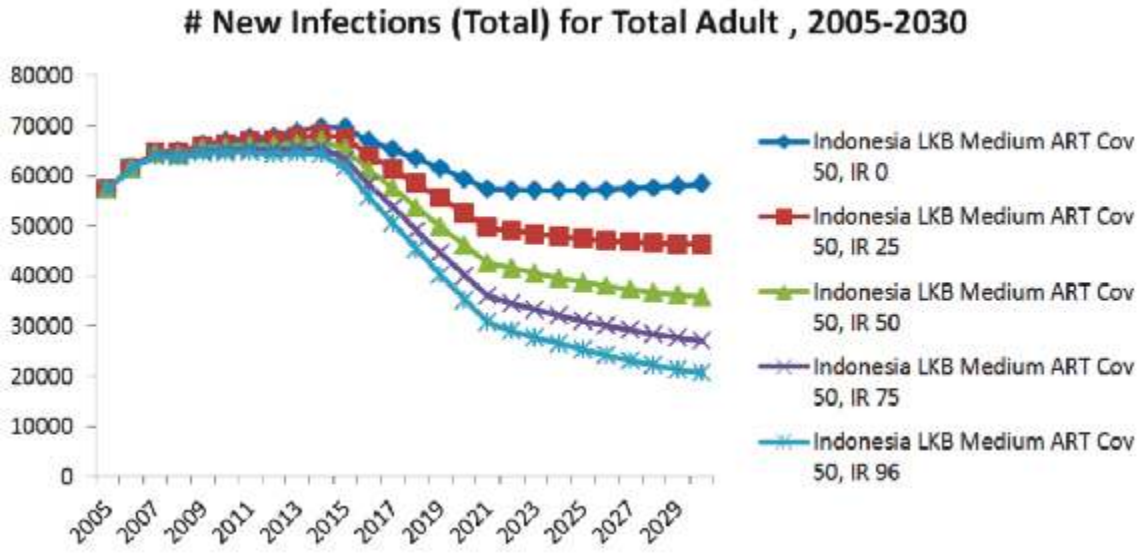


Annex 13:
Results of SUART Sensitivity Analyses – CD4 Starting Point (cont'd)

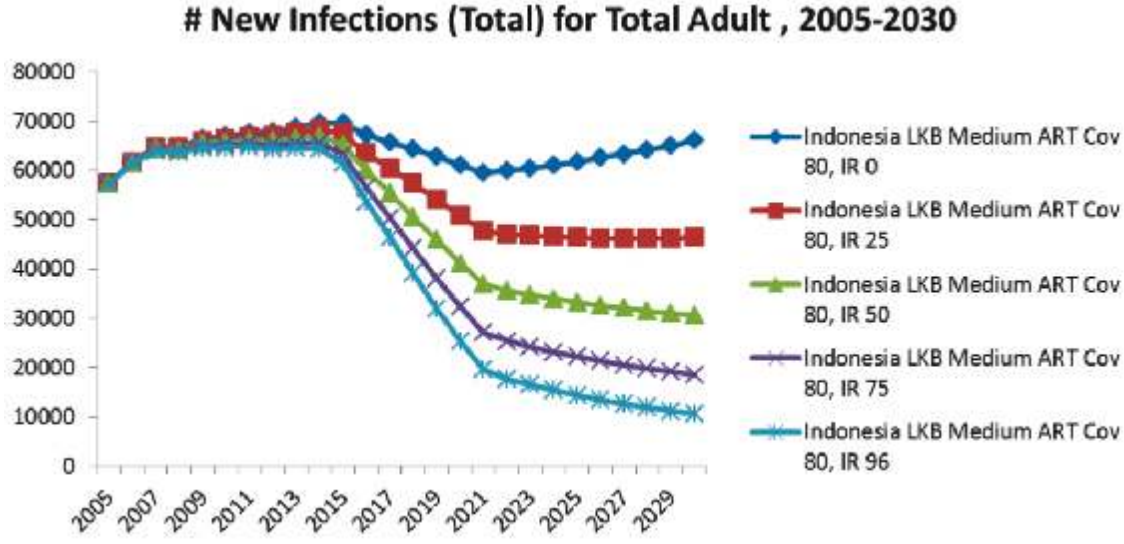


Annex 14:
Results of SUART Sensitivity Analyses – Effectiveness in Reducing Transmission

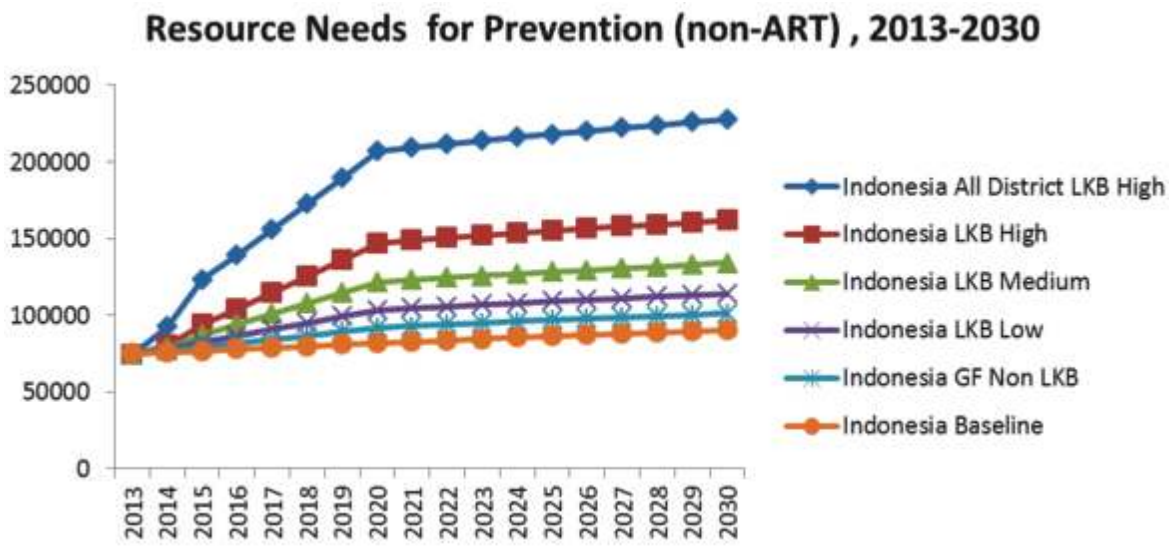


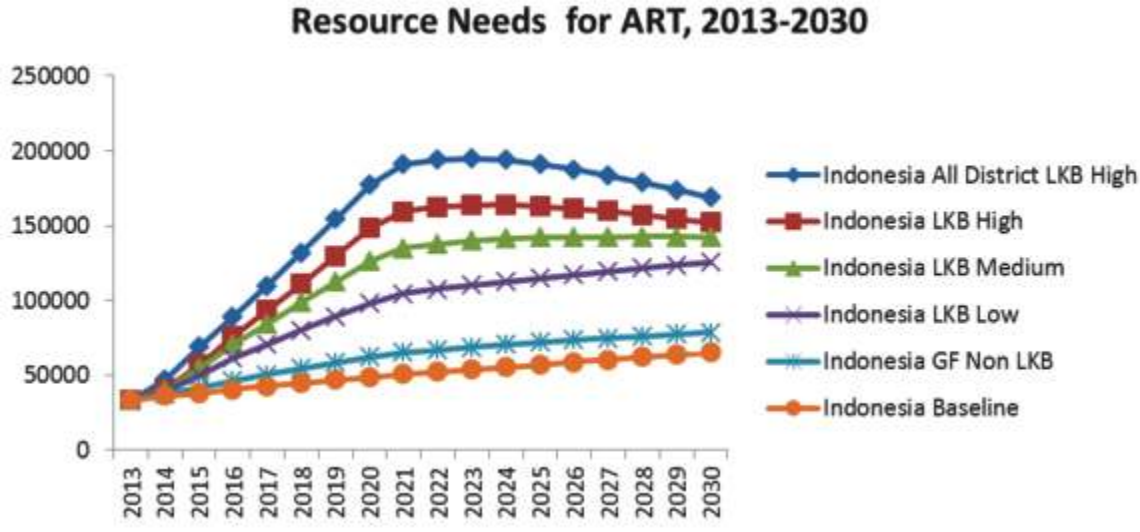


Annex 14:
Results of SUART Sensitivity Analyses – Effectiveness in Reducing Transmission (cont'd)

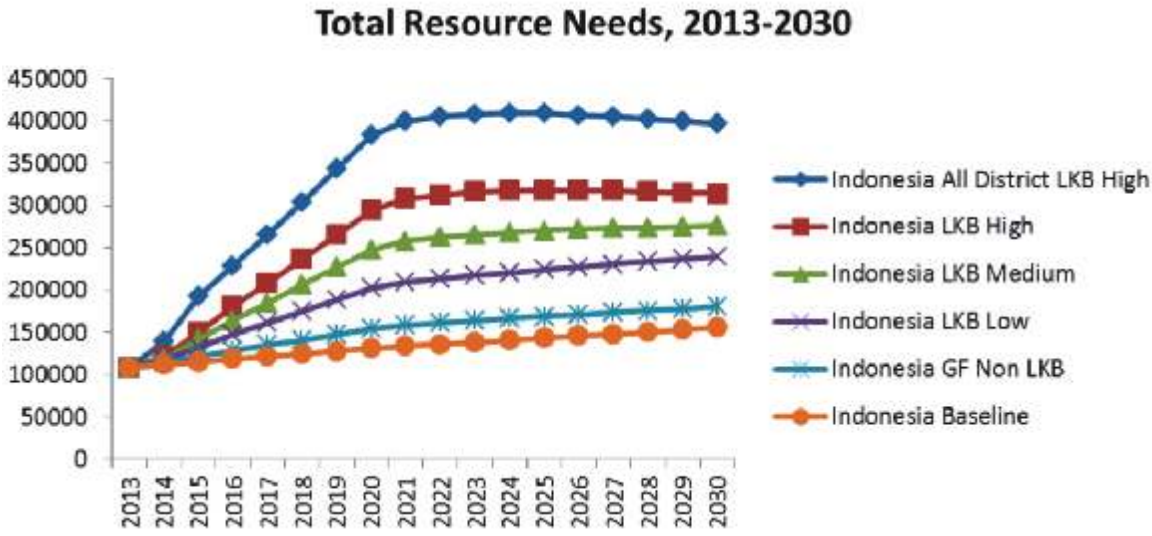


Annex 15:
Estimated Resource Needs

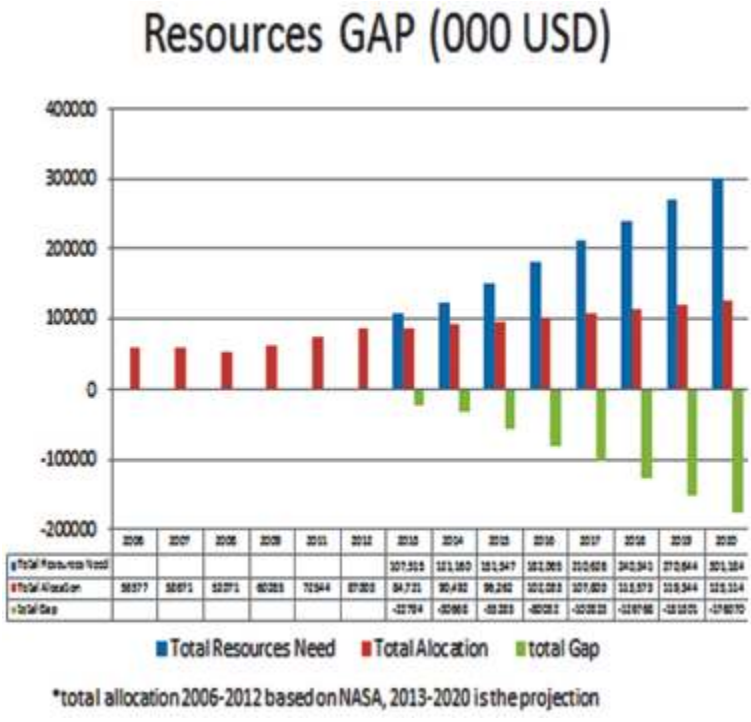




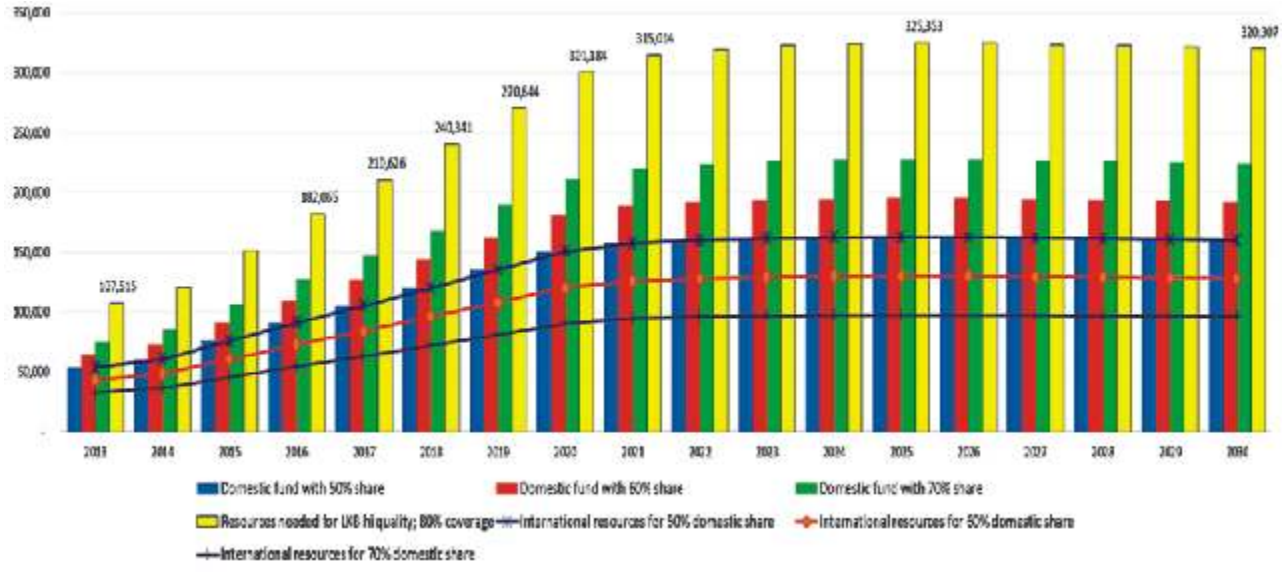
Annex 15:
Estimated Resource Needs (cont'd)



Annex 16:
Projected Annual Funding Gap, 2014 – 2020



Annex 17:
Projected Resource Needs, Funding Availability and Funding Gap, 2014 – 2030



Annex 17:
Recommendations for Undertaking Provincial- and District-Level ICAs

In view of the decentralized governmental system in Indonesia in which local (i.e., district level) funding plays an important role in the financing of health and other social services, developing ICAs for individual provinces and districts is quite logical. Ideally, ICAs would be available for all provinces and districts in Indonesia, or at minimum for the 141 HIV priority districts and their respective provinces. This would (1) provide a basis for a detailed understanding of the local HIV situation for local stakeholders and (2) provide useful materials for advocating for increased priority and funding for HIV.

The main constraint to accomplishing this will be the availability of data specific to a province and/or district of interest. All provinces and districts will have available (1) total population size estimates and (2) KAP population size estimates (from mapping) and official Kemkes size estimation exercises. But to undertake a meaningful ICA, behavioral and epidemiologic data such as are provided by IBBS are needed. The use of software packages such as AEM is helpful in carrying out such analyses as AEM provides "default" values for key parameters in the event that local data are not available, but analyses based entirely upon default values are likely not to describe local situations very well. Using epidemiologic data from comparable provinces or districts in lieu of province- or district-specific data is a step in the right direction. It should be recognized, however, that due to data limitations undertaking ICAs at the provincial or district levels may produce results that are unstable and should be viewed as indicative as opposed to precise data/results.

With these constraints in mind, the basic recommended approach is as follows. For provincial ICAs, the required epidemiologic parameters are taken from IBBS results for cities/districts in the reference province. The IBBS data are available for two or more cities/districts, the average of these could be used as a provincial estimate. If data is only available for one district, a decision will have to be made as to whether that district is sufficiently "representative" of the province. If not, then an informed judgment will have to be made as to how the values for the single district for which data are available should be adjusted to better represent the province. If there are no IBBS data for a province, the options are to (1) use epidemiologic data from another province that is thought to be similar or (2) use national-level data (i.e., national averages).

For district ICAs, the same basic logic is applied as for provincial ICAs with regard to non-availability of local data. If a given district was covered in one or more IBBS, those data should be used. If not, then data one of the following approaches could be followed:

1. Use data other districts in the same province or in other provinces that are thought to be similar,
2. Use provincial-level data as described above, or
3. Use national-level data.

Because provincial-and district-level will require strong assumptions as to which epidemiologic parameters to use in the absence of province- or district-specific data, consensus-building processes involving key stakeholders are recommended in order to give the ICA results some legitimacy. Even given consensus on the epidemiologic data to be input into the analyses, provinces and districts are going to require significant technical support in running the AEM analyses. Two areas in particular requiring high-level technical support are (1) assistance in "fitting the curves" in AEM and (2) assessing the plausibility of results. Obtaining a good fit between the AEM model results and observed HIV prevalence data is essential to obtaining meaningful results from AEM. Curve fitting can be a rather complicated exercise, and thus there will need to be a cadre of technical support personnel available to support ICAs if they are to be undertaken in multiple provinces and districts.

Beyond the model fitting, persons experienced in the interpretation of epidemiologic modelling and economic analysis results will be needed to assist provinces and districts given the possibility (and even likelihood) of "extreme" results due to limited local-level data in some cases. Provinces and districts will need assistance in assessing the plausibility of results and, as needed, in making adjustments to make them more plausible.

About National AIDS Commission

The AIDS Commission is a non-structural state agency that is established pursuant to the Presidential Decree No. 75 of 2006 with a mandate to carry out the AIDS prevention that is more intensive, comprehensive, integrated and coordinated. The National AIDS Commission is chaired by the Coordinating Minister for People's Welfare with the members consisting of ministries/institutions, private sector, the key population network and the representatives of the civil society that care about AIDS. In carrying out its activities, KPAN is assisted by a Secretariat headed by KPAN Secretary.

HIV infection or Human Immunodeficiency Virus results in the decline of the human immune. AIDS or Acquired Immune Deficiency Syndrome is a set of symptoms arising from the lower immunity of the body caused by the HIV infection. Prevent HIV infection with Abstinence - not having sex (celibacy). Be faithful - Always being mutually faithful with partner. Condoms - Use a condom in any sex relation at risk.

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