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| **TB CARE I**

# **TB CARE I-Indonesia**

**Year 1**

**Annual Report**

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## List of Abbreviations

ACSM	Advocacy, Communication and Social Mobilization
AIDS	Acquired Immunodeficiency Syndrome
ATS	American Thoracic Society
C/DST	Culture and Drug Susceptibility Test
CST	Care, Support and Treatment
DHO	District Health Office
DI	<i>Daerah Istimewa</i> (Special Region)
DKI	<i>Daerah Khusus Ibukota</i> (Capital Special Region)
DOTS	Direct Observation Therapy, Short-Course
DRS	Drug Resistance Survey
DST	Drug Susceptibility (Sensitivity) Test
EQA	External Quality Assurance
FHI360	Family Health International 360
FLD	First Line Drug
FM	Faculty of Medicine
GFATM	Global Fund to Fight AIDS, Tuberculosis and Malaria
GoI	Government of Indonesia
HIV	Human Immunodeficiency Virus
HLM	High Level Mission
HRD	Human Resource Department
HSS	Health Systems Strengthening
IC	Infection Control
IEC	Information, Communication and Education
ISTC	International Standards of Tuberculosis Control
JATA	Japan Anti Tuberculosis Association
KNCV	Koninklijke Nederlandse Centrale Vereniging
LJ	Lowenstein-Jensen
M&E	Monitoring and Evaluation

MDR	Multi Drug Resistant
MoH	Ministry of Health
MoLHR	Ministry of Law and Human Rights
MONEV	MONitoring and EValuation
MSH	Management Science for Health
N/A	Not Applicable
NAP	National AIDS Program
NGO	Non-Governmental Organization
NTP	National Tuberculosis Program
OI	Opportunistic Infection
OR	Operational Research
PHO	Provincial Health Office
PITC	Provider-Initiated (HIV) Testing and Counseling
PLHIV	Person Living with HIV
PMDT	Programmatic Management on Drug Resistant Tuberculosis
PPM	Public-Private Mix
Puskesmas	<i>Pusat Kesehatan Masyarakat</i> (Public Health Center)
QA	Quality Assurance
R&R	Recording and Reporting
SLD	Second Line Drugs
SNRL	Supra National Reference Laboratory
TA	Technical Assistance
TB	Tuberculosis
TO	Technical Officer
TOT	Training of Trainer
UGM	University of Gadjah Mada
UI	University of Indonesia
VCT	Voluntary Counseling and Testing
WHO	World Health Organization

## **Executive Summary**

### **TB CARE I Indonesia Project**

TB CARE I is one of the main USAID mechanisms to contribute to the achievement of the USAID's TB Control goal and targets in selected countries by 2015 including Indonesia. TB CARE I is the expanded follow-on mechanism to the previous TB CAP.

TB CARE I Indonesia is a five-year cooperative agreement, started in October 2010 and will finish in September 2015. USAID Indonesia collaborates with implementing partners including KNCV Tuberculosis Foundation as lead partner and six other collaborating partners (ATS, FHI360, JATA, MSH, WHO, The Union). Technical assistance has been and is being provided to Indonesia's NTP to control TB nationally with specific emphasis in some TB technical areas such as DOTS expansion and strengthening, PMDT, TB-HIV care and treatment, and health system strengthening.

USAID's support for Indonesia's NTP began in 2000 through the TBCTA Project in 9 provinces, continued with TB CAP in 10 priority provinces and now 11 provinces in TB CARE I. While USAID assistance focuses primarily at district and provincial level, it also helps the national TB control program. Provinces were selected based on request of NTP, TB and HIV/AIDS prevalence levels, and where USAID Indonesia is currently providing assistance.

#### **Achievements and Challenges by Technical Areas**

TB CARE I work in Indonesia covers 8 technical areas, i.e. 1) Universal Access, 2) TB Laboratories, 3) Infection Control, 4) Programmatic Management on Drug Resistant Tuberculosis, 5) TB/HIV, 6) Health Systems Strengthening, 7) M&E, Surveillance and Operations Research (OR), and 8) Drugs Supply and Management.

In regards to the objective of universal access to TB quality diagnosis and treatment, during APA1 technical assistance, training and supervision have been done to reach risk populations in Papua and West Papua province. Through the collaboration between MOH and MoLHR, TB control has been implemented in 10 prisons and 92% of HIV+ persons in supported prisons have been screened for TB. A National accreditation standard for DOTS implementation in hospitals has been developed. This will be the basis of DOTS expansion to new hospitals. Lack of human resources to support assistance in DOTS expansion has been a challenge.

To improve laboratory diagnostic quality, efforts have been made to strengthen laboratory network and QA system. To support EQA for microscopy, 7 provincial referral microscopy labs have been established. Five C/DST labs have been certified for first-line and second-line drugs to support PMDT implementation and scale-up. TB CARE I also supported the procurement of 17 GeneXpert machine units to scale up PMDT and strengthen diagnosis of TB among HIV patients.

In terms of TB-IC, during year 1 TB CARE supported renovations of 3 PMDT hospital wards and 8 PMDT health centers. Altogether, TB-IC has been implemented in 26 sites including hospitals and health centers. TB-IC guidelines in prisons have been developed and the implementation is in progress.

PMDT was implemented in 5 sites, with a total of 1,585 MDR-TB suspects identified, out of these suspects 471 MDR-TB cases have been confirmed, 332 cases were put on treatment and 32 cases were still in pre-enrollment phase. Reasons for low enrollment are high refusal rate and some patients dying before having lab result.

Eight new provincial TB/HIV TWGs have been established, exceeding the target of 2 TWGs. TB/HIV IEC materials were developed and the Management Guidelines of TB/HIV Collaborative Activities were finalized. Planning and Budgeting Tool was developed and piloted in 10 districts in Central Java province. Training of trainer workshop to roll out this tool and evaluation of the tool's implementation will be conducted in APA2.

The first Draft of National Sentinel DRS plan was finalized. Assessments in 5 provinces were conducted by a team consisting of NTP and partners including TB CARE to select health facility units as sentinel sites.

In total, 29 provincial OR teams were trained to support OR activities, especially those related to PMDT, TB/HIV and new diagnostic methods. GeneXpert research for data collection was discussed and planned under APA2. TA was provided for international publications writing and for the development of OR proposal for 5 OR teams. TA was also provided for HAIN test phase 2, HAIN test sequencing and HAIN test for MDR SL research.

In terms of drug management, drug supply budget was increased by 70% compared to the previous year as a direct impact of the HLM from international partners after JEMM in February 2011. More than 90% districts reported no stock-out of first line anti-TB drugs. Time constraint was a challenge in drug management programs. TB CARE I provided significant TA to the NTP for the revision and finalization of the GF Round 10 PSM plan. Grant signing was completed in August 2011 and the drug management component of Country Profile was drafted.

#### **Total Buy-In Amount**

For APA1, a total of US\$ 9,000,000 was budgeted. Late start of APA1 resulted in only 2 quarters to conduct all programs and activities planned in APA1. This caused under spending of APA1 budget. An amount of US\$ 5,377,923 (60%) was spent by the end of September 30<sup>th</sup>, 2011. Expenses planned until the end of November 2011 is US\$ 1,212,868. Carry forward amount for APA2 is US\$ 2,409,209.

## **Introduction**

TB CARE I is the expanded follow-on mechanism to the previous TB CAP as a five-year cooperative agreement, started in October 2010 and will finish in September 2015. USAID Indonesia collaborates with KNCV Tuberculosis Foundation in Jakarta as lead partner and ATS, FHI360, JATA, MSH, UNION also WHO as other collaborative partners.

TB CARE I Indonesia covers 8 technical areas including: 1) Universal and early access; 2) TB laboratories; 3) TB infection control; 4) PMDT; 5) TB/HIV; 6) health systems strengthening; 7) TB M&E, Surveillance and OR and 8) drug supply and management. Within TB CARE I, USAID supports and assists Indonesia's NTP in 11 provinces and this assistance focuses primarily at district and provincial level. These 11 provinces are North Sumatra, Riau Islands, West Sumatra, DKI Jakarta, West Java, Central Java, DI Yogyakarta, East Java, South Sulawesi, West Papua, and Papua. These provinces were selected based on request of NTP, considering TB and HIV/AIDS prevalence levels, and where USAID/Indonesia is currently providing assistance.

The total budget for APA1 was US\$ 9,000,000 and carry forward to APA2 is US\$ 2,409,209 per 1 December 2011.

## Universal Access

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Base-line	Target Y1	Result Y1	Comments
1	Reaching Risk Populations	Prisons implementing routine TB screening to all new inmates	Proportion of prison with routine screening among new inmates implemented divided by all prisons supported by TB CARE	N/A	9% (5/55)	18% (10/55)	<b>Status: Accomplished</b> The activities to accomplish the target were started in quarter 3 in coordination with MoLHR. In quarter 4, 10 prisons conducted TB symptom screening and HIV risk factors screening for all inmates. Advocacy meeting to get support and commitment for prison program was attended by 76 participants from FHI, MoLHR, NAP, NTP, Provincial Law and Human Rights, Provincial Parole Office, Provincial Health Office and Prisons/Detention center Health staffs. The next step is to continue providing support and mentoring to prisons.
2	Engaging local communities	HIV+ persons screened for TB	Proportion of PLHIV screened for TB among HIV+ attended cases in supported provinces	60%	60%	92%	<b>Status: Accomplished</b> PITC and R&R trainings were given to prison health staffs. IEC materials were developed. Advocacy meeting with local NGO was done to expand community based DOTS and provide TA. Clinical mentoring and monitoring was done in 5 prisons. The next step in APA2 is to expand the clinical mentoring and monitoring in the remaining 5 prisons.
3	Engaging all provider	Hospitals and lung clinics implementing DOTS	Proportion of hospitals and lung clinics implementing DOTS in TB CARE supported areas	38.6% (113/293)	40.3% (118/293)	38.6% (113/293)	<b>Status: No Progress</b> NTP policy suggested to focus on systems strengthening to engage TB provider using regulation based approach. DOTS implementation accreditation in hospitals should be finalized first before any starting DOTS expansion to new hospitals. The policy and regulation on hospital accreditation was

						completed in APA1, with support and facilitation by TB CARE I. In APA2 the regulation will be implemented.
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### Key Achievements

1. 10 out of 55 prisons carried out complete screening for TB sign and symptoms and screen for HIV risk factors.
2. 92% of HIV+ persons in prisons in supported provinces were screened for TB.
3. National standard and accreditation of hospital DOTS implementation were developed.



*TB/HIV, PITC and Recording & Reporting Training for Prisons*

### Challenges and Next Steps

Engagement of all providers could not be conducted optimally because of absence of TOs in some areas. Recruitment process is planned to conduct in quarter 1 of APA2.

Clinical monitoring and mentoring was only done in 5 prisons due to time constraint. The 5 remaining prisons will be addressed altogether with the expansion of the activity in APA2 to 20 prisons.

With hospital accreditation standards including DOTS being ready, the next challenge is to implement these in all hospitals in a stepwise manner, based on a well prioritized roll-out plan, under APA2.

## Laboratories

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments	
				Y1	Y1		
1	Strengthened lab network and QA for smear microscopy labs	Quality assured laboratories for SS microscopy	Proportion of laboratories which participate in external quality assurance (cross-check and panel testing) for smear microscopy examination in TB CARE supported areas	N/A	60%	70% (7/10)*	<b>Status: Accomplished*</b> In APA1, TB CARE I supported QA activity for 7 new provincial labs and 3 intermediate labs. By the end of September 2011, seven provincial laboratories passed the panel testing and 3 intermediate labs were in the last stage of panel testing.
2	Strengthened lab network and QA for culture and DST	C/DST quality assured labs	Number of reference laboratories that are quality assured by SNRL for culture, and DST	5	5	5	<b>Status: Accomplished</b> 5 labs have reached international performance and certified for 1st line DST by the end of 2010 and 2nd line DST by the end of September 2011. TB CARE I also supported the development of 3 new C/DST laboratories by preparing the building standard for C/DST lab.
3	New diagnostic tools implemented and integrated into lab network	New diagnostic tools implementation	Number of health facilities implement the new diagnostic tools: GeneXpert or Hain test; at least one in PMDT site	0	13	2	<b>Status: In Progress</b> Two PMDT sites use Hain test to support MDR-TB diagnosis. 17 GeneXpert machines were procured. Training materials and curricula were adjusted to local needs and used in TOT. First trainings for 5 sites were successfully conducted in October 2011.

## Key Achievements

1. Seven new provincial laboratories have passed panel testing for SS microscopy examination, capable to conduct QA for microscopy lab within their respective area.
2. Five laboratories certified for 1<sup>st</sup> and 2<sup>nd</sup> line DST, 3 new laboratories completed renovation and are in process for being certified.
3. Seventeen GeneXpert machine units were procured.
4. Staffs in 5 sites were trained for GeneXpert implementation.



## Challenges and Next Steps

There was limited HR capacity, site assessment, and laboratory capacity for PMDT scaling up.

Under APA2, three new quality-assured laboratories for C/DST and 3 NRLs to support PMDT scale up will be established. The three NRLs will be established in Surabaya for C/DST referral, in Bandung for smear microscopy referral, and Jakarta for research and molecular TB referral.

The 17 procured GeneXpert machine units will be distributed and integrated into the existing laboratory networks in APA2. GeneXpert training for staffs in remaining 12 sites will be done to support phased new diagnostics technology implementation. The detailed GeneXpert implementation plan will be worked out in collaboration with NTP and other stakeholders.

# Infection Control

## Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments	
				Y1	Y1		
1	Improved TB-IC in PMDT sites	PMDT sites with QA assured TB-IC	Number of PMDT sites where TB infection control assessment has been completed and a plan has been implemented according to international standards	2	5	5	<b>Status: Accomplished</b> Assessment was done in 5 PMDT sites by national team (MOH and TB-IC working group members), assisted by a consultant, showing progress in TB-IC implementation.
2	Improved TB-IC in specific settings	Prisons with TB-IC implemented	Proportion of prisons where TB infection control assessment has been completed and a plan has been implemented according to international standards	N/A	5 of 55	0 of 55	<b>Status: No progress</b> TB-IC in prison guideline is available but review is needed due to the TB-IC in prison implementation complexity. A meeting to discuss TB-IC in prison M&E system was conducted.
3	Improved TB-IC Implementation	Health facility with TB-IC implemented	Number of health facilities (hospitals and PHCs) implementing minimal TB-IC package	7	10	26	<b>Status: Accomplished</b> TB-IC full package implemented in 5 PMDT hospitals with TB-HIV care and 13 PMDT health centers and 8 non PMDT hospitals with TB-HIV care.

## Key Achievements

1. Renovations for TB-IC were completed in 3 PMDT hospitals and 8 PMDT health centers.
2. TB-IC full package implementation in 26 sites:
  - a. 5 PMDT hospitals with TB-HIV care
  - b. 13 PMDT health centers
  - c. 8 hospitals with TB-HIV care



*TA for TB-IC assessment by Hans Mulder in Jakarta*

### **Challenges and Next Steps**

Implementation of TB-IC in 5 provinces (DKI Jakarta, West Java, Central Java, East Java, South Sulawesi) including hospitals and prisons will be initiated in APA2. The major challenges to implement TB-IC are lack of commitment and knowledge of health facilities staffs. Revision of TB-IC engineering design guidelines, TB-IC guidelines in prisons and update of the National TB-IC plan and policies will be conducted in APA2.

## Programmatic Management of Drug Resistant TB (PMDT)

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline	Target Y1	Result Y1	Comments
1	Diagnostic (Lab)	Number of MDR-TB suspects tested by DST	Number of MDR-TB suspects tested by DST among number of MDR TB suspects (should be in absolute number)	300	2100	1585	<b>Status: In Progress</b> The APA1 work plan specifies targets to develop 4 new PMDT sites. Since this scale up plan was postponed by NTP, the target could not be achieved. A total of 1109 MDR-TB suspects now have lab results on DST out of 1585 suspects.
2	Treatment (scale up plan)	Number of MDR-TB received for treatment	Number of MDR-TB patients received for SLDs treatment among identified MDR-TB patients by DST (should be in absolute number)	100	400	332	<b>Status: In Progress</b> Only 332 cases were put on treatment and 32 cases were still in pre-enrollment phase. The reasons for low enrollment are high refusal rate (mostly fear of losing job) and patients dying before having lab result.

### Key Achievements

- Total MDR suspects: 1,585
- Suspects with lab result: 1,109 (70% of total MDR suspects)
- Confirmed MDR: 471 (42% of suspects with lab result)
  - o MDR cases put on treatment: 332 (70% of confirmed MDR)
  - o MDR cases still in pre enrollment process: 32
  - o MDR cases died before treatment: 45
  - o Lost MDR cases: 13
  - o MDR patients refused to be enrolled: 39
  - o MDR cases excluded from the therapy: 10 due to clinical status, severe liver and heart failure, down syndrome, schizophrenia

### Challenges and Next Steps

PMDT implementation in 4 new sites was not started because NTP had postponed the expansion plan until the revision of PMDT policy and guidelines are completed (in September 2011). Next step is to speed up implementation in new 4 sites. Altogether, nine PMDT sites (4 from previous year plus 5 new sites for year 2) will be developed in APA2 to scale up PMDT. This is in line with PMDT expansion plan under the Global Fund. E-TB Manager will be implemented in all PMDT sites in APA2.

Inadequate HDL expansion was a challenge, therefore networking between health centers providers with PMDT hospitals and between hospitals needs to be improved.

Diagnostic delays are caused by the poor access of PMDT sites to C/DST labs (transport delay) and because of long diagnostic time of conventional method of C/DST. To address this, GeneXpert as one of new diagnostics technology focusing on PMDT sites will be implemented in APA2.

The low PMDT enrollment among confirmed patients will be addressed through improving quality of health education and counseling.

## TB/HIV

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1f	Strengthening TB/HIV collaborative mechanism	TWG in provincial level is available	Number of TWG established at provincial level; at least once a year and documentation submitted	1	2	8	<b>Status: Accomplished</b> TWG Meeting conducted in West Java, Central Java, DKI Jakarta, East Java, North Sumatra, Riau Islands. Routine meetings to discuss challenges and to have joint planning.
2	Decreased TB burden among PLHIV	TB treatment among PLHIV with TB	Number of PLHIV treated for TB among all PLHIV enrolled in HIV care (in absolute number)	30%	30%	27%	<b>Status: In progress</b> 50 lab technicians were trained about HIV rapid test and OI in West and East Java. 36 VCT and CST staffs were trained about TB-HIV infection in East Java. Technical assistance, monitoring and evaluation. Maintain quality assurance and quality improvement. Advocate program managers and policy makers about need for HIV test reagents.
3	Decreased HIV burden among TB patients	TB patient with HIV co-infection received CPT	Percentage of all registered TB patients who are tested for HIV in TB CARE supported areas	10%	10%	25%	<b>Status: Accomplished</b> FHI conducted PITC training for prisons health staffs, Puskesmas and hospitals; and provided mentoring and supervision to facilities that have been trained.

### Key Achievements

1. Established 8 TB/HIV TWGs.
2. TB/HIV IEC materials have been developed, tested and finalized.
3. Management guidelines on TB/HIV Collaborative Activities were developed and finalized.
4. 25% of all registered TB patients in TB CARE supported areas were tested for HIV.



*TB/HIV Coordination Meeting in Riau*

### **Challenges and Next Steps**

Insufficient TB/HIV collaboration at district/province level and lack of clear guidelines on TB/HIV reporting are challenges in TB/HIV area. Meetings to develop joint planning and discuss collaborative activities among related stakeholders (PHO, DHO, health facilities, Local AIDS commission and NGOs) will be done in APA2 to develop a plan of action. Training in TB/HIV R&R will also be done in APA2 to improve reporting quality.

Health facilities have not yet begun to undertake PITC and TB screening in PLHIV in a systematic way. Training on PITC, provision of IEC materials, and development and improvement of internal linkage between MDR-TB and HIV unit will be done in APA2 to scale-up PITC in TB patients and TB screening among PLHIV.

## Health Systems Strengthening (HSS)

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Highlights of the Quarter	
				Y1	Y1		
1	Increased Political commitment	Government funding for TB	Number of districts showing an increase in TB funding compared to previous year	N/A	20	32	<b>Status: Accomplished</b> At least 32 districts in 3 provinces reported budget increase (11 in East Java province, 6 in DKI Jakarta Province and 15 in Central Java) as a result from implementation of advocacy tool and planning/budgeting tool developed during TB CAP. Development of more informative advocacy material has finalized. There are limited data on funding specific to TB at district or provincial level in other provinces.
2	Strengthened leadership and management	Districts with staffs trained in leadership and management	Number of districts trained in leadership and program management	0	8	0	<b>Status: No Progress</b> Leadership and program trainings are planned to be carried out in APA2
3	Strengthened HR Capacity	Provinces with Provincial Training Plan	Percentage of provinces with provincial training plan on TB related issues (DOTS, PDMT, TB-HIV, surveillance etc.) from all sources of funding	N/A	10%	88%	<b>Status: Accomplished</b> 29 of 33 provinces have already a training plan in 2011. The challenge is to implement it given the limited number of facilitators and limited budget (either from local government or donor).

### Key Achievements

1. Advocacy materials were developed to support advocacy effort.

2. Development and introduction of planning and budgeting tools to be used for TB advocacy.
3. Increased TB-specific funding in 32 districts.

### **Challenges and Next Steps**

Inconsistent and/or inadequate allocation of local government budget for TB was a challenge in HSS area. Various activities to increase the awareness on TB issues are planned to conduct in APA2. These include sensitization of media and journalists, World TB Day Campaign, implementation of Patient Centered Care and consensus building meeting.

The limited capacity of HR in TB to cope with the increasing workload in TB programs and activities especially at provincial and district level was also a challenge. Next step is to build capacity of HR for TB in APA2. Follow up in regards to ACSM trainings and modules will be done in APA2, including ACSM trainings and modules evaluation, training for trainers, and supervision and technical assistance on ACSM implementation. Planning and Budgeting Tool was developed and piloted in 10 districts in Central Java Province in APA1. This pilot implementation will be evaluated in APA2.

## Monitoring & Evaluation, Surveillance and OR

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments
					Y1	Y1	
1	M and E	National TB CARE I MONEV meeting conducted	Number of National TB CARE I MONEV meeting conducted	2	2	2	<b>Status:</b> <b>Accomplished</b> Two MONEV meetings were conducted in APA1 simultaneously with NTP MONEV meeting, as insisted by NTP. The TB CARE partners' meeting was conducted on a monthly basis.
2	Surveillance and Information	- DRS plan finalized - TB Prevalence Surveys protocol finalized	- National DRS plan (with sentinel sites, sampling size/ methodology of new cases etc.) and specific protocol for each site - National Protocol of TB Prevalence Surveys finalized (with sampling methodology and size, screening strategy, preparation plan etc.)	N/A	No	Yes	<b>Status:</b> <b>Accomplished</b> First Draft of National Sentinel DRS plan. Site assessment site to 5 provinces conducted by team of NTP and partners including TB CARE I, conducted in September-October. TA was given to development of TB-HIV variables for health facilities involved in the TB Prevalence surveys. MOH Launched TB-HIV variables in August 2011, with support from TB CARE I. The National Sentinel DRS will start in January 2012 with funding from GF. Several activities were already proposed for APA2.
3	Strengthening	Provincial OR	Number of	24	27	29	<b>Status:</b>

	TB research network	teams trained	provincial OR team participated in OR workshop and conducting OR				<b>Accomplished</b> Five provincial OR team participated in OR workshop in Q4. The provinces are DKI Jakarta, West Java, East Java, and Central Java. With 4 topics i.e. PMDT, TB-HIV, TB in children, ACSM (two studies).
<b>4</b>	Supported operational research projects in the priority topics	Prioritized operational research conducted	Number of studies done and published or presented at international conferences	35	40	40*	<b>Status: In Progress</b> *5 publications from 2010 are in progress for international publication in 2011. Four new research proposals have been supported in APA1 from OR team batch 5/6. New proposals from OR team batch 7/8 will be supported in APA2.

### Key Achievements

1. Assessment visits to five provinces for DRS followed by finalization of first draft of National DRS plan were done.
2. TB-HIV variable development by MOH facilitated by TB CARE I. These variables have been launched in August 2011.
3. A total of 29 operational research teams trained until September 2011.

### Challenges and Next Steps

The complex set of activities to implement and manage DR-TB program makes it difficult to monitor and evaluate the program. As e-TB Manager could serve as comprehensive platform to support DR-TB program expansion, finalization of this system to be fully implemented is planned to conduct in APA2.

In terms of OR, more OR will be conducted in APA2 to support the NTP especially in areas of PMDT implementation, TB/HIV, and utilization of new technology in TB diagnosis. Capacity building for NTP to perform OR is needed and will be done in APA2. This should also be supported by intensification of OR results dissemination to local authority to advocate an increase in OR funding from local budget.

## Drug supply and management

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline	Target	Result	Comments	
				Y1	Y1		
<b>1</b>	Uninterrupted supply of quality TB drugs and commodities	Drug supply	Proportion of districts reporting no stock-out of first-line anti-TB drugs (category 1, category 2 and pediatric) on the last day of each quarter in supported TB CARE I area	75%	100%	91%	<b>Status: Accomplished</b> There was an increase in national budget for drug supply as much as 70% since the previous year that improved the drug supply status. This result is an impact from HLM from international partners, conducted after JEMM in February 2011. During meeting with the ministry, HLM strongly recommended GoI to increase budget for drugs procurement.
<b>2</b>	Improved DMIS	Drug management capacity	Proportion of districts with staff trained in logistic management (including DMIS) in supported TB CARE I area	62%	70%	64%	<b>Status: In progress</b> Districts trained in logistics management are from Aceh, North Sumatra, West Sumatra, DKI Jakarta, Central Java, East Java, and South Sulawesi Province.

### Key Achievements

1. Detailed strategy framework for further development of electronic TB/DR-TB surveillance and TB/DR-TB data management in Indonesia was developed.
2. Increase of national funding for drug supply as much as 70% since previous year as direct impact of the high level mission from international partners conducted after JEMM in February 2011.
3. 91% of districts reported no stock of first-line anti-TB drugs (category 1, category 2, and pediatrics) on the last day of each quarter in supported TB CARE I areas compared to 75% in previous year.
4. Development and finalization of SOP Book for SLD.
5. GF Round 10 PSM grant signing in August 2011, as TB CARE I provided significant technical assistance to the NTP for revision and finalization.

## **Challenges and Next Steps**

Limited number of drug management professionals in NTP/MOH and limited international expertise within the program. Next step in APA2 is to secure agreement for drug management plan including capacity building program to support NTP in managing the workload of drug management.

TB CARE I supports drug distribution coordination up to provincial level, not supporting in district level. Next step in APA2 is to revise national level storage arrangements and improve R&R system for drug management in order to ensure nationwide uninterrupted drug supply.