



ສູນຄວບຄຸມວັນນະໂລກ



National TB Control Center (NTC)

Health and Nutrition Services and Access Project

GF Evaluation Mission

CCM Meeting 30 September, 2022

Content

1. National TB Control Program updates
2. Best practices, challenges and action plan to achieve TB NSP and HANSA year 3 targets
3. Enhancing collaboration with other partners/donors/implementers
4. The Global Fund Covid-19 Response Mechanism (C19RM), LAO-C-MOH

1. National TB Control Program update year 2-year 3 (until Sep 2022)

1.1 TB case notification: active case finding, contact tracing, case finding in children, community engagement

1.2 GeneXpert and x-ray machine utilization

1.3 TB treatment

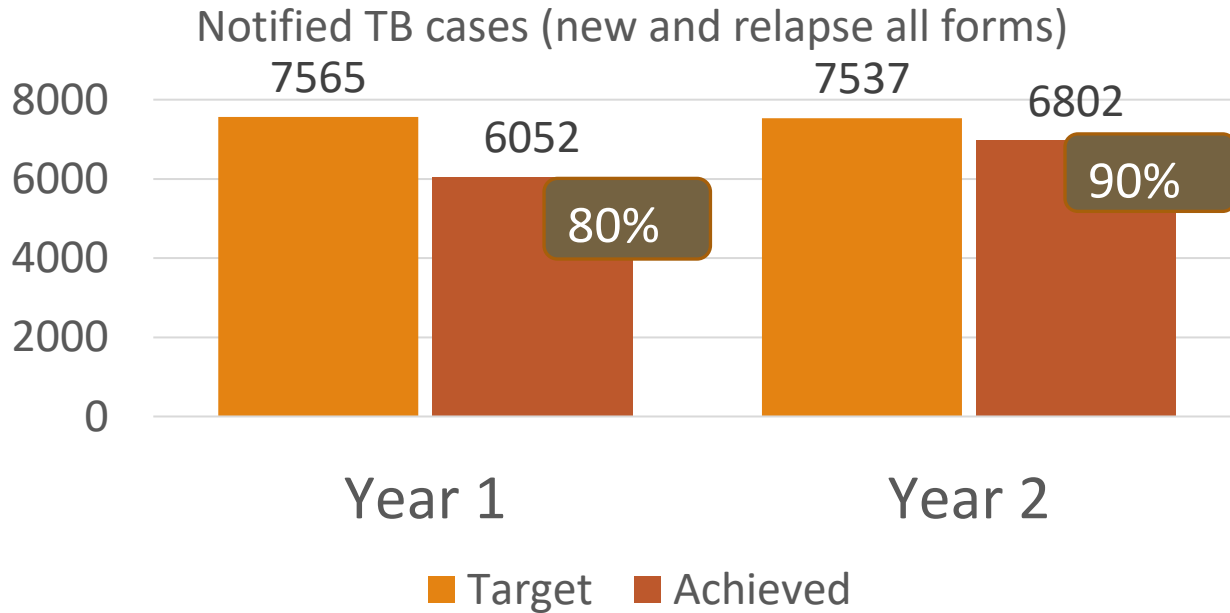
1.4 Addressing catastrophic costs for TB patients

1.5 TB/HIV collaboration: testing, treatment, referrals and TPT

1.6 Surveillance and real time monitoring with TB tracker

1.1 TB case notification: DLI-J Achievement in Y2 (Jun-21 to May-22)

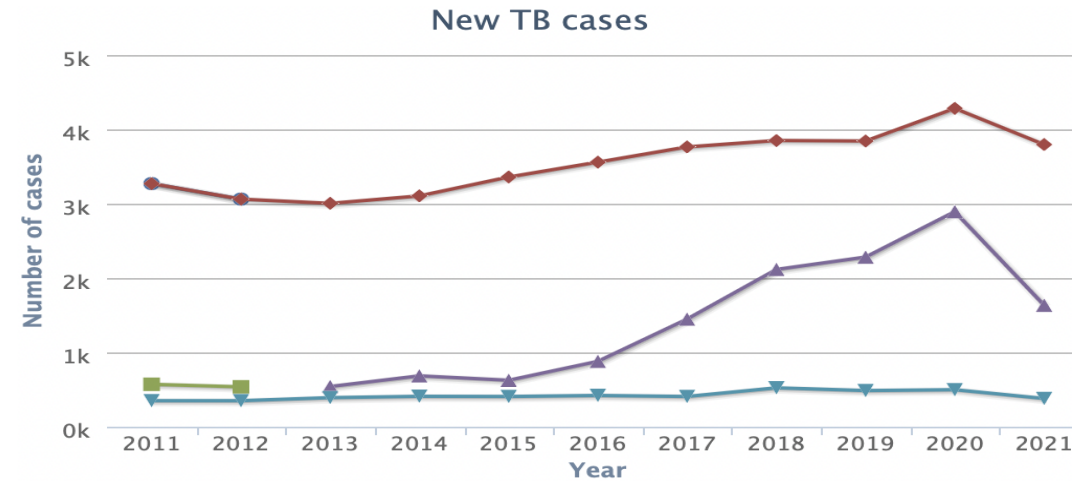
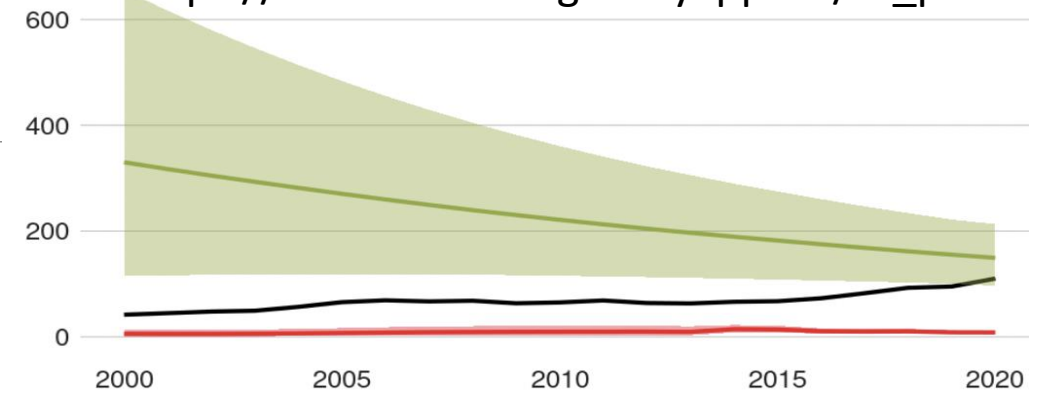
DLI-J	Y2 (Jun 2021 to May 2022), DHIS2		
	Target	Result	% of target
TB notification # (new and relapse all forms)	7,537 TB cases	6,802 TB cases (source TB tracker DHIS2)	90%
Xpert coverage %	100%	100%	100%



Incidence, New and relapse TB cases notified, HIV-positive TB incidence

(Rate per 100 000 population per year)

https://worldhealthorg.shinyapps.io/tb_profiles



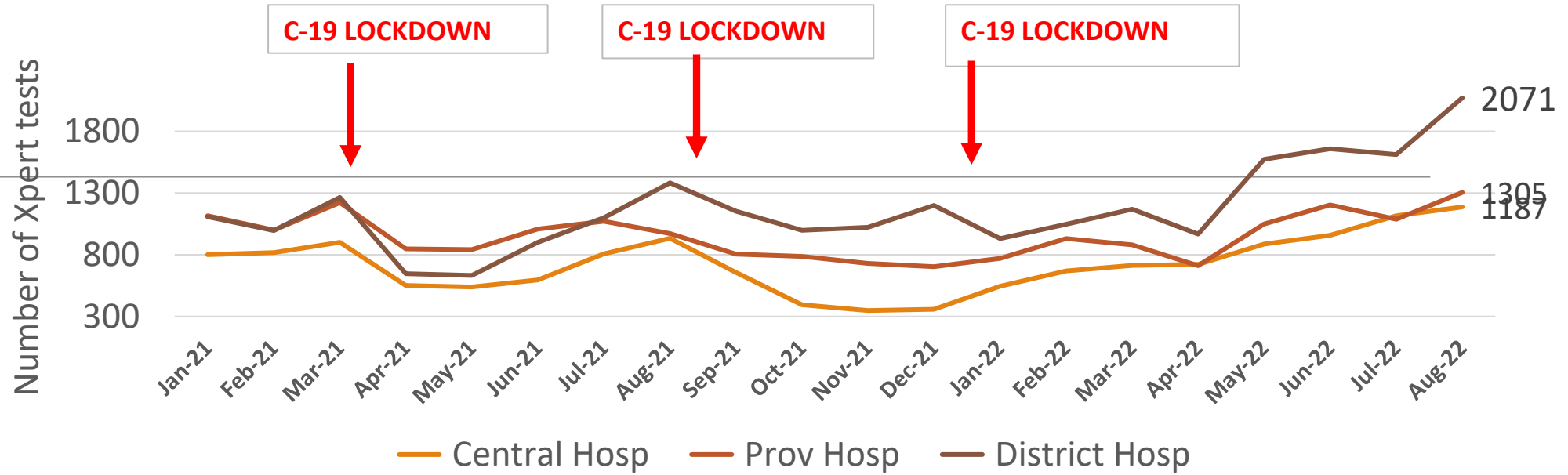
<https://extranet.who.int/tme>

1.1 TB cases notified by provinces (Jun-21 to May-22, DHIS2 TB tracker)

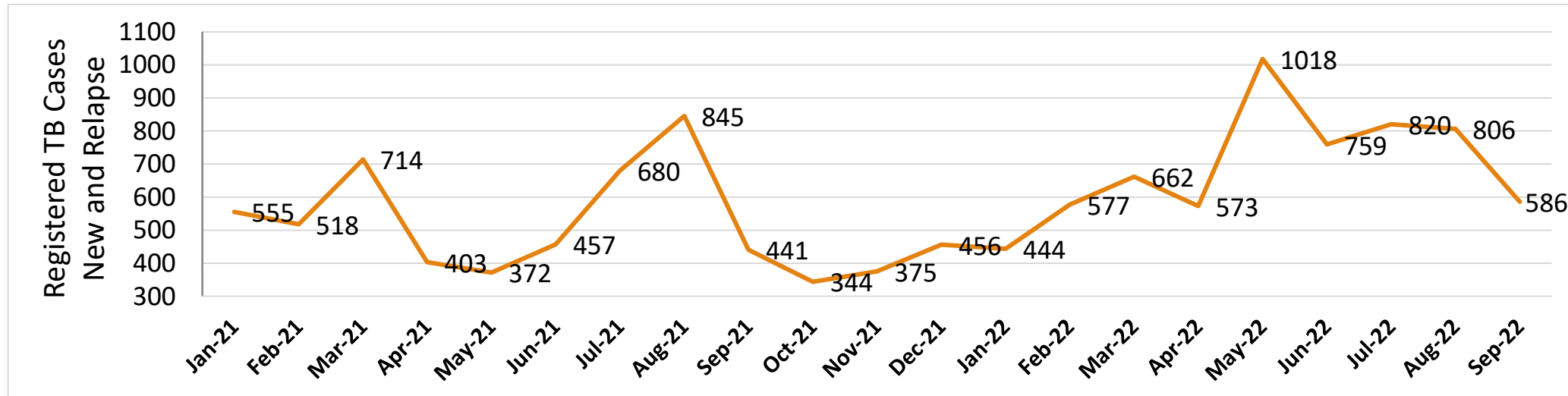
TB: Registered Cases New and Relapse	Jun-21	Jul-21	Aug-21	Sep-21	Oct-21	Nov-21	Dec-21	Jan-22	Feb-22	Mar-22	Apr-22	May-22	Total Y2	Target	%
01 Vientiane Capital	92	104	137	93	62	55	51	81	106	103	100	126	1,110	990	112%
02 Phongsali	9	9	17	13	8	2	6	5	70	7	6	22	174	203	85%
03 Louangnamtha	21	17	19	30	20	9	12	16	32	33	23	24	256	201	127%
04 Oudomxai	33	23	31	27	27	11	15	19	24	100	29	28	367	365	100%
05 Bokeo	6	15	19	14	16	10	8	8	14	19	8	57	194	202	96%
06 Louangphabang	23	25	87	10	14	4	20	22	44	30	28	167	474	509	93%
07 Houaphan	12	50	4	5	3	2		1	1	6	28	7	119	358	33%
08 Xainyabouli	16	21	12	18	11	8	10	13	21	37	30	80	277	420	65%
09 Xiangkhouang	1	3	5	3	5	3	3	3	22	1	65	5	119	224	53%
10 Vientiane	14	19	201	19	11	8	18	23	27	25	20	26	411	566	72%
11 Bolikhamxai	10	55	26	16	9	12	16	25	13	22	11	16	231	325	71%
12 Khammouan	50	105	32	17	29	54	43	51	29	40	28	31	509	457	111%
13 Savannakhet	63	69	74	77	41	106	76	51	66	67	75	187	952	1,116	85%
14 Salavan	34	76	96	28	21	30	29	34	35	39	19	30	471	447	105%
15 Xekong	5	2	8	6	8	2	2	4	4	52	2	11	106	126	84%
16 Champasak	63	72	77	41	53	55	134	58	63	63	88	108	875	810	108%
17 Attapu	4	13	1	6	4	1	2	26	3	9	3	33	105	159	66%
18 Xaisomboun		2		17	2	2			3	1	1	24	52	60	86%
Total	456	680	846	440	344	374	445	440	577	654	564	982	6,802	7,537	90%

TB testing and notification progress post Covid-19 (NTC/NRL, HMIS TB tracker)

*Xpert
MTB/RIF
testing*

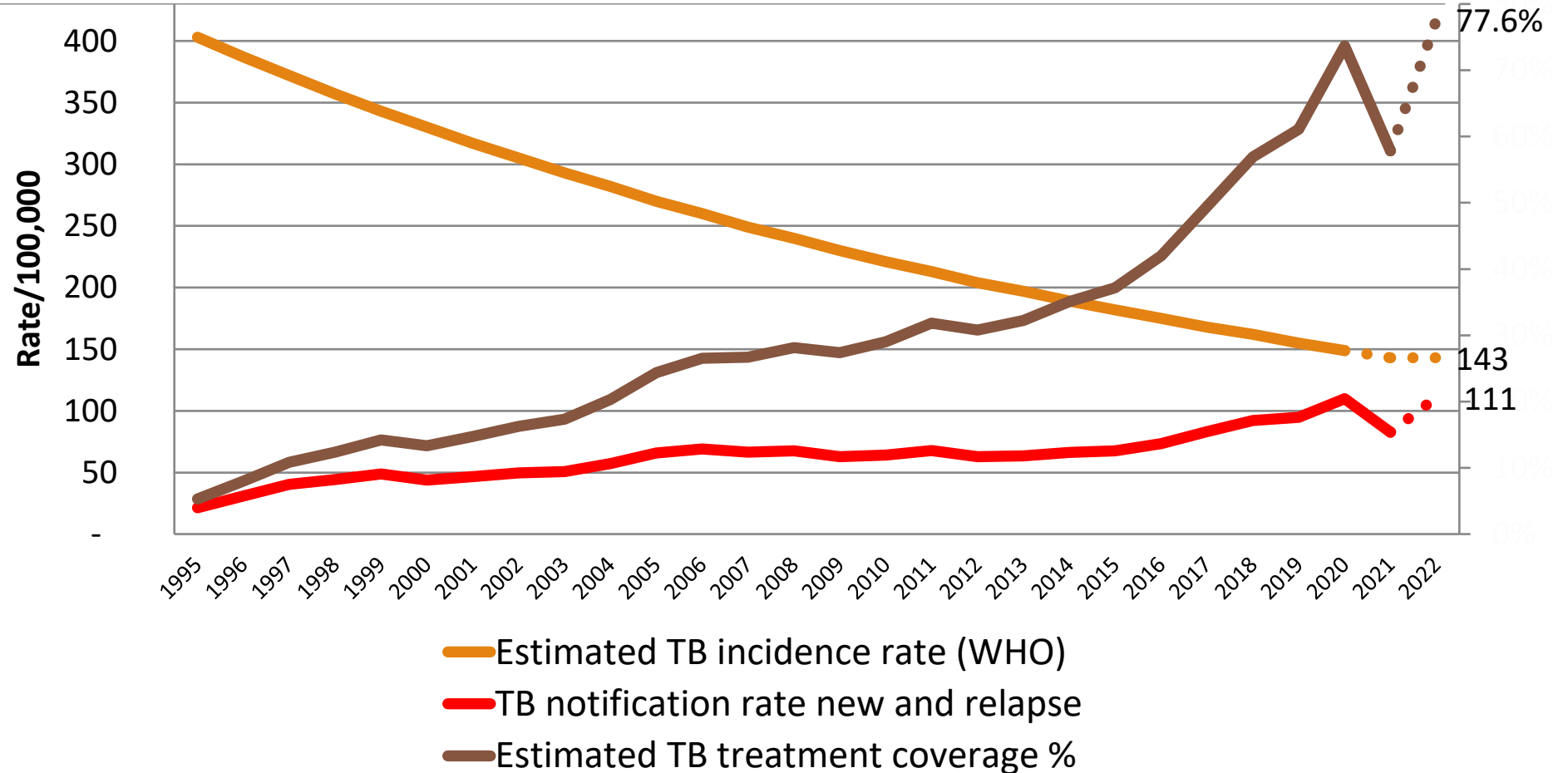


*TB
notification
(all new and
relapse)*



TB treatment coverage, Lao PDR, 1995-2022*

* 78% TB treatment coverage can be achieved in 2022 based on yearly projection of first 3 quarters notification (Jan. to Sept. 2022), assuming no variation of WHO TB incidence estimate in 2022 (143/100,000 same as 2021).



1.2 TB treatment:

NTC is securing WHO prequalified first and second line TB drugs through GDF <https://stoptb.org/gdf/oms/default.asp> with GF and GoL co-financing:

All Y2 TB drugs (FLDs and SLDs) paid by GF already arrived in country.

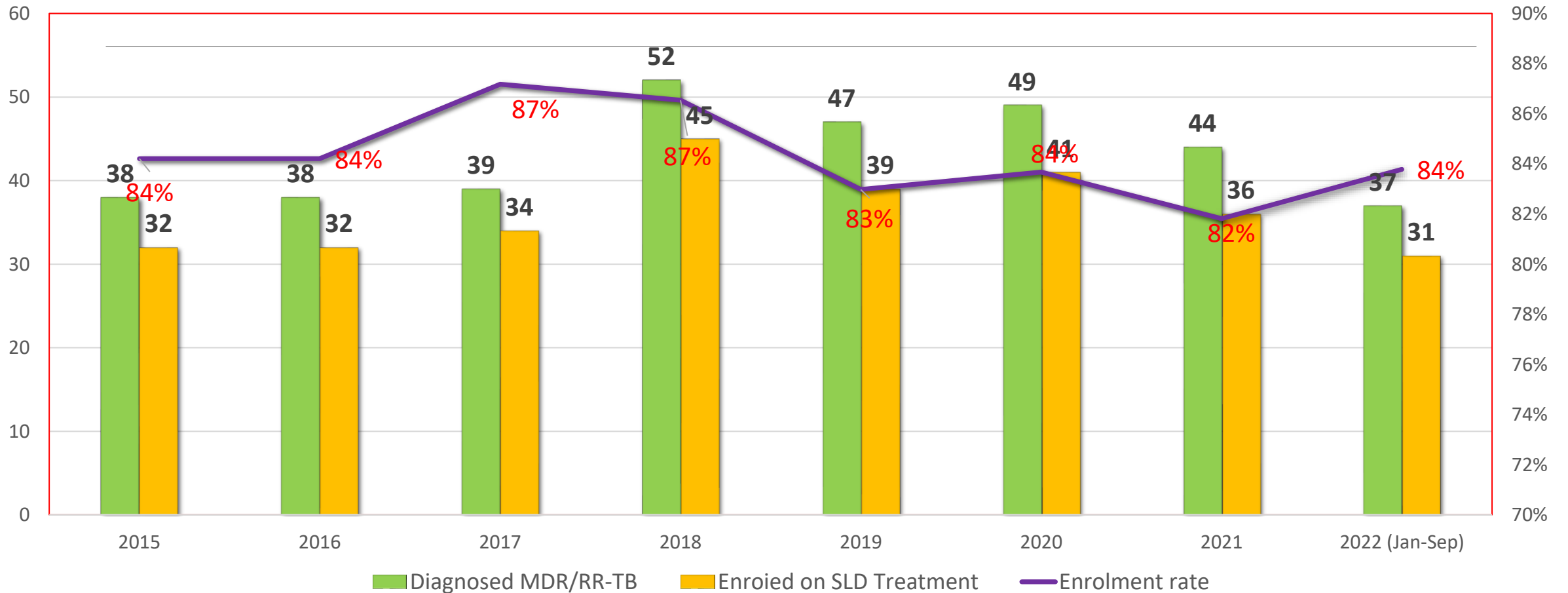
Y3 TB drugs: split order (No1. GDF in-voices submitted to DPC (pending GoL payment); No2. expected to be ordered in Jan23 and paid by GoL co-financing).

Treatment success rate was $\approx 90\%$ among DS-TB patients and 73% among DR-TB in 2021

Addressing barriers to treatment:

- to reduce diagnosis and treatment delays especially for DR-TB patients;
- to use newly recommended TB drugs and shorter regimens;
- to arrange for patient centred ambulatory treatment as much as possible

DR-TB Diagnosed and enrolled on SLD



Source: NTC data

MDR/RR-TB DIAGNOSED AND ENROLLED 2015 - 2022

Year	2015	2016	2017	2018	2019	2020	2021	2022
MDR/RR-TB diagnosed	38	38	39	52	47	49	44	37
Died before treat	1	3	1	3	3	3	1	2
Other treatment	-	2	-	-	-	0	-	-
Refused treatment or lost	1	1	4	5	4	5	4	3
Transferred out	2	0	-	-	1	0	-	1
No. MDR/RR-TB enrolled on treatment (rate)	32 (84%)	32 (84%)	34 (87%)	45 (87%)	39 (83%)	41 (84%)	39 (82%)	31 (84%)
Cured	25	26	28	37	30	23	22	
Complete	2	-	2	1	-	6	5	
On going treatment							5	
Death	2	2	2	4	8	6	7	1
Refused treatment or lost	3	4	2	3	1	5	1	2
treatment success rate	84%	81%	88%	84%	77%	72%	(82%)	

1.3 Addressing catastrophic costs for TB patients

Lao PDR Patient costs survey in 2018-19 found 63% of DS-TB patients and 81% of DR-TB patients facing catastrophic costs.

Half of the patients used savings, borrowed money or sold household assets to cope with TB.

Non-medical and indirect costs accounted for more than 80% of the total costs.

Free TB services is not enough, and expansion of social protection to TB patients is necessary.

<https://pubmed.ncbi.nlm.nih.gov/33180777/>

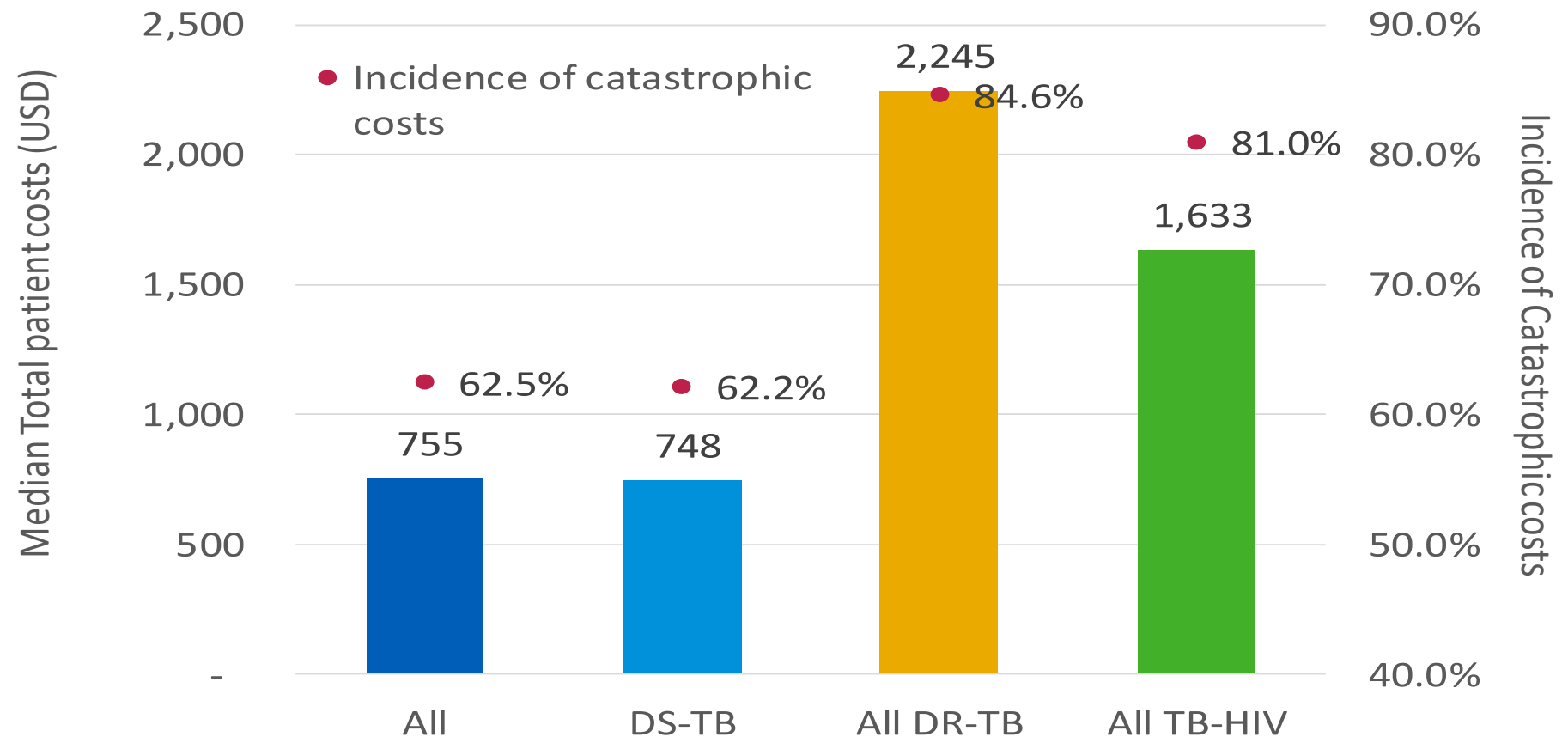
Challenges	Interventions
Late access diagnosis and treatment with high proportion of patients with low BMI	Earlier access to quality TB diagnostic services through decentralization of Xpert testing and ACF capacity in provinces
Improve nutritional support for DS and DR-TB patients including systematic nutrition assessment, counselling, and therapeutic and supplementary feeding	DR-TB patients have BMI measured and benefit from patient support for transportation, daily food, initial and follow-up examinations (chest X-ray, EKG, biological tests) Nutritional survey is under preparation for DS and DR-TB patients, including systematic BMI check, nutritional counselling and ready to use therapeutic food (RUTF) for patients with low BMI (≤ 16.5)
Insufficient social protection for TB patients	integration of TB services under the national health insurance scheme, and discuss with NHI for including full social protection package for diagnosis and treatment of TB patients.

1.3 Addressing catastrophic costs for TB patients (cont)

Total costs and incidence of catastrophic costs

- Median of total costs incurred by TB affected households was **6.4 million KIP (equivalent to more than 3 times** the average monthly salary of TB patients in the survey).
- **62% of DS-TB, 85% of DR-TB, and 81% of TB-HIV** coinfectd patients incurred catastrophic costs

Proportion of households facing catastrophic costs by DR and HIV Status



1.4 GeneXpert and x-ray machine utilization

➤ GeneXpert

44 GeneXpert instruments

24 laboratories equipped

6 Central level laboratories: 8 instruments

- NRL (3)
- Centre of Infectiology Lao Christophe Mérieux (CILM)
- Sethathirate Hospital
- Mithaphab Hospital
- 103 Hospital (Military hosp)
- 5 Mesa hospital (Police hosp)

17 Provincial hospital + 1 “district” hospital: 22 instruments

- Louang Prabang (2)
- Khammouane (2)
- Savanakhet (2)
- Champasack (2)+ 106 Military “district” Hospital (1)

Stand by at NRL: 12 instruments

73 Modules Broken countrywide



Xpert Maintenences



1.4 GeneXpert and x-ray machine utilization (Cont)

GeneXpert

44 GeneXpert systems are available for:

- TB and diagnosis in NRL and all central and provincial hospitals with annual calibration, regular maintenance and provision of Xpert MTB/RIF Ultra tests with over 40,000 tests of presumptive TB patients per year ($\approx 100\%$ coverage)
- COVID-19 testing in provinces (by NCLE)
- HIV viral load in 10 ART centres and 4 POC (CHAS/NCLE)
- Potential use for HIV-1 Qual for early infant diagnosis (EID) and Hepatitis B viral load.

X-ray machines

Use of portable digital X-ray is expanded and decentralised in routine and outreach ACF

ACF among TB contact persons, prisoners and other high risk groups, using algorithm with systematic screening by chest X-ray and Xpert testing among all identified presumptive

- 2,120 (27% of all TB cases) in 2020 and 982 (16%) in 2021 due to Covid-19 lockdowns;
- Allows earlier diagnosis and treatment of TB and TB case finding in prisons and hard to reach populations;
- saves lives and reduces transmission.
- Need to decentralise ACF by equipping and coaching more ACF provincial teams (5 additional X-ray machines requested in C19RM reprogramming)

1.5 TB/HIV collaboration: testing, treatment, referrals and TPT

TB	HIV
CHAS is screening for TB all PLHIV at each of their visit	HIV testing: 5,215/6,197 (84%) TB patients had and HIV test result available including 301 (5.8%) HIV positive in 2021.
Treatment: PLHIV receive same TB treatment	The proportion of TB/HIV patients started on ART decreased from 297/369 (80%) in 2020 to 203/301 (67%) in 2021, due to limited access to health facilities
Referrals: referral of non contagious TB patients to ART units for ART treatment start (based on Nal guidelines)	Referral of Bac+ TB PLHIV to TB units for severe forms needing to be hospitalized
	TPT among PLHIV: ART centres and POC provide 6-month isoniazid TB preventive treatment (TPT) to the newly diagnosed PLHIV who do not have active TB based on symptoms screening. The number of patients receiving TPT increased from 381 in 2018 up to 756 in 2021 (of estimated 1000 new PLHIV each year).

1.6 TB patient tracker and report on DHIS2

Challenges	Action taken
<ul style="list-style-type: none">▪ Data entry in TB tracker was delayed▪ Data quality improvement is needed▪ Limited use of data for decision making	<ul style="list-style-type: none">▪ Conducting weekly video meeting to follow up by coaching and exchange via WA group with implementing sites.▪ On site supervision visit provinces and districts where there is no Covid outbreak.▪ Set-up plan for retraining by tele-conference or social media discussion.▪ Using real time surveillance from DHIS2 TB Tracker and GeneXpert laboratories monthly reports.

2. Analysis of best practices, challenges and action plan to achieve year 3 targets

Challenges	Interventions
<ul style="list-style-type: none">➤ Increase TB diagnosis capacity in district hospital and health centres➤ Systematize contact tracing,➤ Improve DR-TB patients management➤ Improve case finding in children,➤ Increase community engagement	<ul style="list-style-type: none">➤ Scale-up active case-finding by provincial teams in high prevalence districts and prisons➤ Scale-up ambulatory treatment of DR-TB patients➤ Train/retrain physicians on diagnosis and treatment of TB in children;➤ Conducting quarterly video meeting in provinces to follow-up district catch up plans➤ Developing CBOs network closely linked to public health centres

3. Enhancing collaboration with other partners/ donors/implementers

NTC to ensure regular coordination and cooperation with:

Central level:

DPC, DCDC, DHR, FDD, National Nutrition Centre, NCLE, Health Education Centre, MPSC, NTC, CHAS Ministry of labour and social welfare (NHI bureau), Department of Security, Trade Union, Lao Women Union, Youth Union;

Provincial and district levels: PHOs and DHOs, all hospitals (central, province, district) and all health centres;

VHWs, VHV at community level country wide

Community based partners in CSOs project areas: CHIAS, PEDA, HPP

Other partners:

Global Fund, World Bank, private sector, international technical partners (WHO, CHAI, CILM, KIT)

4. The Global Fund Covid-19 Response Mechanism (C19RM), LAO-C-MOH

NTC C19RM Budget (LAO-C-MOH 2021 -2023)

Budget by Module - Intervention	Year 2	Year 3	Total Budget	%
COVID 19- COVID Diagnostics and testing	426.599	138.938	565.537	37,52%
COVID19-Case management, clinical operations and therapeutics	469.920	18.880	488.800	32,43%
COVID19-Laboratory systems	99.465	6.000	105.465	7,00%
COVID19-Mitigation for TB programs	143.553	121.349	264.902	17,57%
Program management-Grant management	46.190	36.380	82.570	5,48%
Total	1.185.727	321.547	1.507.274	100%

C19RM Activities Status (1 update)

No.	Description	Implementer	Budget 2021-2022 (USD)	Status of Activities	Expenditure of Q1-Q3/2022
1.	Maintaining Specimen transportation from district to provincial GeneXpert laboratories	NTC	50.064\$	SOP had been developed and send to implementing sites on 15 February 2022 Started transfer budget to provinces on Apr 2022	14.471\$
2.	Conducting ACF among high-risk group testing for Covid and TB (BASE ALLOC)	NTC	32.161\$	Activity completed by budget of 2022	31.908\$
3.	Community outreach for awareness raising among high risk group by 2 CSO organizations.	CSO	4.443\$	Activity was conducted by 2 CSOs RRDPA & MAAP	2.318\$
4.	Transportation of DR-TB patients from home to treatment unit and return (BASE ALLOC)	NTC	17.480\$	Ativity started conduct in SVK and KM	921\$
5.	Transportation of DR-TB patients from home to treatment unit and return (ABOVE ALLOC)	NTC	6.027\$	NTC will conduct at LPB in Oct 2022	00

C19RM Activities Status (2 update)

No.	Description	Implementer	Budget 2021-2022 (USD)	Status of Activities	Expenditure of Q1-Q3/2022
6.	Scaling-up of GeneXpert connectivity solution 2 days Practice workshop in all 164 TB Units: 10 subnational workshop (in Vientiane and Province) inviting 2 persons by TB unit; (BASE ALLOC)	NTC	13.328\$	NTC will conduct in Q4/2022	00
7.	Training of the 23 Gene Xpert laboratories on new SOPs and IPC and quality control for TB, COVID, HIV Viral load; 3 labs technicians per laboratory:	NTC	12.037\$	Activity was conducted in Q2/2022 before reprogramming the budget work plan	14.235\$
8.	Data quality improvement for laboratories: Training on data management of GeneXpert testing and results	NTC	7.592\$	Activity was conducted in Q1/2022 before reprogramming the budget work plan	12.502\$
9.	C19RM 2020 Roll Over - TB tracker practice workshop in all (164) TB	NTC	22.725\$	NTC conducted 2 sessions in HP&XK on Feb 2022	6.270 \$

C19RM Procurement Status (1)

No.	Description	Implementer	Budget (USD)	Status
1.	Portable digital X-ray machine set and accessories for outreach TB and Covid screening	NTC	180.000,00	First approved budget, received goods. Done
2.	PSM costs (12.5%) Procurement agent and handling fees	NTC	22.500,00	First approved budget, received goods. Done
3.	PSM costs (12.5%) Freight and insurance costs (Health products)	NTC	22.500,00	First approved budget, received goods. Done
4.	GeneXpert module replacement	NTC	10.800,00	In the process of requesting payment
5.	PSM costs 12.5% for GeneXpert modules	NTC	1.350,00	In the process of requesting payment
6.	GeneXpert Machine (4 modules, laptop, 10 color)	NTC	58.500,00	First approved budget, received goods. Done

C19RM Procurement Status (2)

No.	Description	Implementer	Budget (USD)	Status
7.	PSM for GXp machines: 12.5%	NTC	7.312,50	First approved budget, received goods. Done
8.	Vortex mixer	NTC	4.116,00	On the process of bidding document
9.	PSM 12.5% for vortex mixer	NTC	514,50	On the process of bidding document
10.	1 Teleconference set: 10,000 US\$	NTC	10.000,00	Done, received goods on 31 Aug 2022
11.	Portable digital X-ray machine set and accessories for outreach TB and Covid screening	NTC	180.000	On the process of Procurement/asking quote from Wambo. New budget from Reprogram
12.	PSM costs (5%) Procurement agent and handling fees	NTC	8.400	On the process of Procurement/asking quote from Wambo. New budget from Reprogram
13.	PSM costs (12.5%) Freight and insurance costs (Health products)	NTC	21.000	On the process of Procurement/asking quote from Wambo. New budget from Reprogram

C19RM Procurement Status (3)

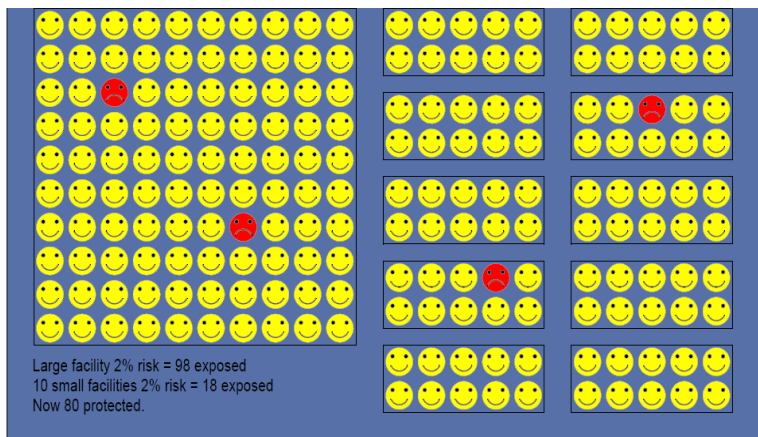
No.	Description	Implementer	Budget (USD)	Status
14.	GeneXpert Machine (4 modules, laptop, 10 color)	NTC	136.500	On the process of Procurement/asking quote from Wambo. New budget from Reprogram
15.	PSM for GXp machines: 12.5%	NTC	17.062	On the process of Procurement/asking quote from Wambo. New budget from Reprogram
16.	GeneXpert module replacement	NTC	63.000	In the process of requesting payment. New budget from Reprogram
17.	PSM costs 12.5% for GeneXpert modules	NTC	7.875	In the process of requesting payment. New budget from Reprogram
18.	Calibration Kits for gene Xpert @\$450.00: in ALLOC	NTC	18.000	On the process of Procurement, direct procure.
19.	PSM cost 10% Calibration Kits for gene Xpert @\$450.00: in ALLOC	NTC	3.600	On the process of Procurement, direct procure.

C19RM Procurement Status (4)

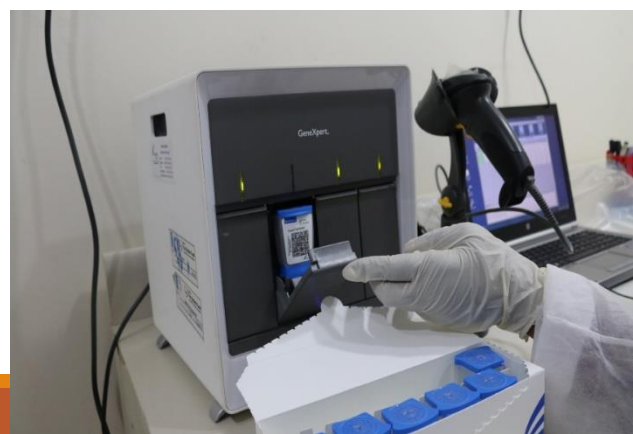
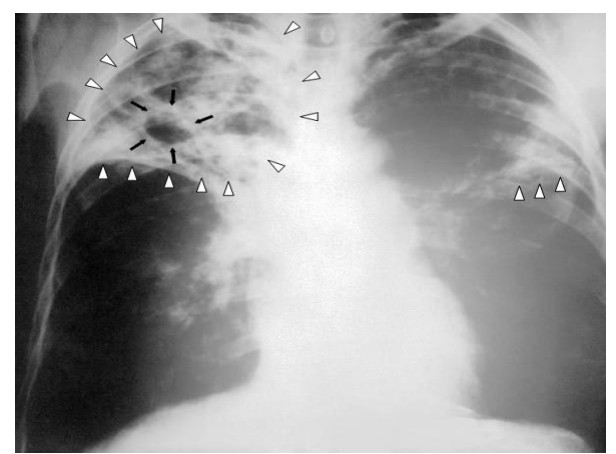
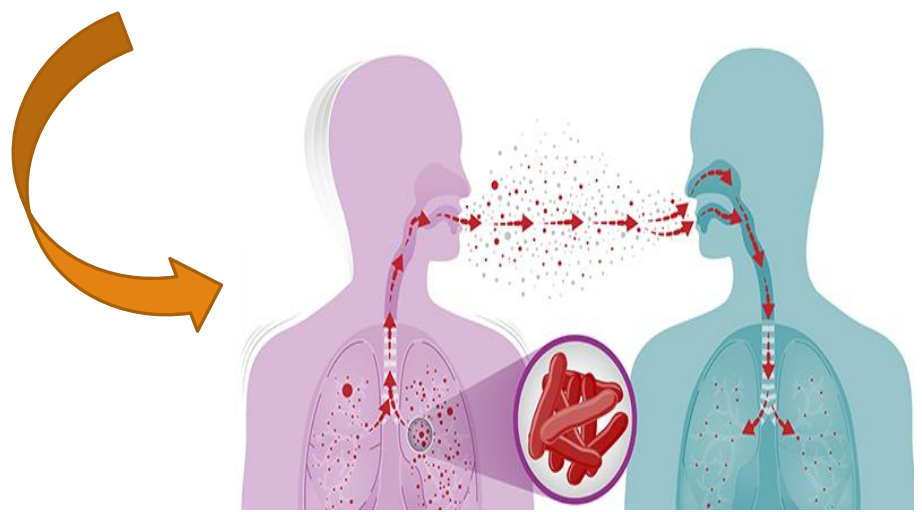
No.	Description	Implementer	Budget (USD)	Status
20.	3 electric generators for portable digital X-ray machines x 2000 US\$ in Y1 (local procurement)	NTC	6.000	On the process of bidding documents. Budget approved on Reprogram.
21.	Procure laptop for 45 district laboratories for data entry	NTC	67.500	On the process of bidding documents. Budget approved on Reprogram.
22.	UPS for GeneXpert machine: local procurement including PSM costs	NTC	38.325	On the process of bidding documents. Budget approved on Reprogram.
23.	Procure 4 laptop for X-ray Machine	NTC	8.000	On the process of bidding documents. Budget approved on Reprogram.
24.	Microscopes (Crucial tool to provide indicators such as failures or success treatment outcomes)	NTC	34.000	On the process of bidding documents. Budget approved on Reprogram.

C19RM Procurement Budget under NCLE

No.	Description	Implementer	Budget (USD)	Status
1.	GX C-19 Xpress tests cartridges	NCLE	180.250,00	Received goods
2.	PSM costs (12.5%) Procurement agent and handling fees	NCLE	22.531,25	Received goods
3.	<u>PSM costs (12.5%) Freight and insurance costs (Health products)</u>	NCLE	22.531,25	Received goods
4.	Centrifuge for plasma spin (15 tubes) for GeneXpert laboratory 650US\$ x 15 items	NCLE	9.750,00	On the process of bidding document
5.	PSM 12.5% for centrifuge	NCLE	1.218,75	On the process of bidding document
6.	UPS for GeneXpert machine: local procurement including PSM costs	NCLE	13.140,00	Activity is done.



Thank you



NTP strategy 2021-2025 (1) *optional slide*

Vision: END TB in Lao PDR

Objectives:

- To decrease mortality and morbidity due to TB as per End TB targets milestones (50% reduction in TB incidence and 75% reduction in mortality due to TB by 2025 compared to 2015)
- To develop patient centred approach and equity in access to quality TB services
- To protect all TB patients under the National Health insurance system
- To contribute to the Universal Health Coverage (quality TB services in primary health care at province, district and health centre levels)

NTP strategy 2021-2025 (2) *optional slide*

Priority interventions:

- Increase awareness and access for all TB patients from village to health centre level with community based approaches/partners;
- Test all TB presumptive patients for resistance to Rifampicin with Xpert;
- Free screening by chest X-ray especially for all TB contacts;
- Scale-up outreach active case finding (ACF) among high risk groups;
- Streamline TB and HIV collaborative activities within UHC;
- Real time surveillance with DHIS 2 TB tracker countrywide;
- PHO/DHO analyse TB data in DHIS2 and adapt interventions;
- Full NHI coverage and social support to all TB/MDR-TB patients;