

FIGHT AGAINST COVID 19

Logistics Management Perspectives

May 21, 2020 (Jestha 8, 2077)

Ministry of Health and Population
(Incident Command System)

Incident Commander
Secretary, Yadav Prasad Koirala
Ministry of Health and Population

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Mr Diwakar Ghimire
Mr Mohan Thapa
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Forecasting on 1 month, 1500 case Scenario

- Basis of Forecasting
- PoE,
- Triage Screening,
- Case Investigation,
- Out patient,
- Case Investigation,
- Laboratory
- Hygiene Team ,
- Case management,
- Quarantine

Forecasting =1500 case Scenario (1 month)

Basis

- Guidance from MoHP
- WHO Guideline
- Rational use of PPE

Service points

- PoE,
- Triage Screening,
- Case Investigation,
- Out patient,
- Case Investigation,
- Laboratory
- Hygiene Team ,
- Case management,
- Quarantine

Procurement Responsibility

15% Management Division

- 20 ICU Bed
- 10 Ventilators
- 1000 Beds
- Laboratory items
- PPE

85% G2G

- ICU Equipment
- General Hosp item
- Hygiene and sanitation
- Laboratory items
- PPEs

Procurement Status and gaps (1 month; 1500 cases)

SN	WHO DESCRIPTION	TOTAL REQUIRED QTY FOR ALL	G2G	MD	Total Procured	Gap
1	GOOGLES PROTECTIVE, polycarbonate (re-usable), 3M 1621	143,695	122,142	21,550	143,692	3
2	BAG BIOHAZARD, REFUSE, AUTOCLAVABLE, 30x50cm	609,950	518,458		518,458	91,492
3	GOWN, AAMI level 3, non sterile, disp., size XXL	562,947	200,000	84,440	284,440	278,507
4	GLOVE EXAMINATION, nitrile, pf, size XL	1,544,195	1,312,566	231,620	1,544,186	9
5	HEAVY DUTY GLOVES - Cleaners, size-M				-	-
6	MASK SURGICAL, type IIR, level 2, s.u, non sterile, earloop, size L	8,348,615	2,500,000	1,252,280	3,752,280	4,596,335

SN	WHO DESCRIPTION	TOTAL REQUIRED QTY FOR ALL	G2G	MD	Total Procured	Gap
7	RESPIRATOR, mask, FFP2/N95, type IIR, s.u., unvalved, noseclip	250,000	212,500	37500	250,000	-
8	Isolation Gown with Hood XL	709,716	603,259	106,460	709,719	(3)
9	FACE SHIELD, clear plastic, disp.	56,294	47,850	8440	56,290	4
10	Plastic Shoe Cover(L /M upto knee length)	300,000	255,000	45000	300,000	-
11	Buoffant Cap (Diff Sizes)	200,000	170,000	30000	200,000	-
12	ALCOHOL-BASED HAND RUB, gel/liquid,500mL, bottle	301,380			-	301,380
13	CHLORINE NaDCC, 45-55%, gran., 1kg, pot	7,989			-	7,989

SN	WHO DESCRIPTION	TOTAL REQUIRED QTY FOR ALL	G2G	MD	Total Procured	Gap
14	THERMOMETER, INFRARED, no contact, handheld	6,163	5,239	900	6,139	24
15	DIGITAL Thermometer to be used by individual	149,000		22000	22,000	127,000
16	SAFETY BOX, needles/syringes, 5l, cardboard for incineration	10,620			-	10,620
17	BOX, triple packaging, biological substance UN3373 + pouch	82,152			-	82,152
18	BOX, triple packaging, infectious substance UN2814	3,228			-	3,228
19	GUM BOOT, pairs, L	100,000	42,500	15000	57,500	42,500
20	Scrubs, Tops	41,772		6000	6,000	35,772

SN	WHO DESCRIPTION	TOTAL REQUIRED QTY FOR ALL	G2G	MD	Total Procured	Gap
21	Scrubs Pants	41,772		6000	6,000	35,772
22	Liquid Soap - 1 litre	3,540			-	3,540
23	Apron, heavy duty , reusable	31,860			-	31,860
24	Reusable Surgical Gown XL	100,000			-	100,000
25	Apron, heavy duty , reusable L	95,580			-	95,580

SN	WHO DESCRIPTION	TOTAL REQUIRED QTY FOR ALL	G2G	MD	Total Procured	Gap
26	CARDIAC MONITOR WITH EtCO2 , ECG, Non Invasive BP,SpO2	1000	150		150	850
27	ICU VENTILATOR	500		10	-	490
28	MULTIFUNCTIONAL ICU BED	1000			-	1000
29	ICU VENTILATOR (Paed)	100			-	100
30	Oxygen Plants	10				10

New forecasting and procurement status

- Prioritized medicines (96 medicines including 20% buffer) for severe and critical cases (15% and 5% respectively, total 1000 cases, in Level 2 Scenario having 5000 cases)
 - Invitation to bid already opened.
 - Supplier meeting completed
 - To be supplied to L2 and 3 designated hospitals
- ICU consumables (70 items including 50% buffer) for 500 +50% critical cases
 - List finalized
 - Seeking final approval
 - To be supplied to L2 and 3 designated hospitals
- PPE forecasting completed for the following (1 month, 5000 cases)
 - Quarantine sites, PoE, HF (HF for basic counselling and referral)
 - COVID clinics hospitals (111), L1 hospital (13), L2 hospitals (12), L3 hospitals (3)

Projection of PPE for one month

(Based on HEOC guidelines on PPE use)

Item/Site	Quarantine sites	PoE	Health Facilities	COVID Clinics	Level 1 Hosp	Level 2 and 3 Hosp	Total (Ideal)	Plus Additional 50%	Tentative Price (NPR)	Cost if strictly follow of protocol/m(Million)	Cost If 50% additional added (Million)
Number	2561	74	4963	89 (64+24)	13	15 (12+3)					
N95 (or equivalent mask)	0	0	0	0	0	26550	26550	39825	275	7.3	11.0
Medical / Surgical Masks	3150030	19200	583560	159840	13982	57595	3984207	5976310.5	40	159.4	239.1
Gloves	614640	19200	583560	213120	28062	154065	1612647	2418970.5	16	25.8	38.7
Heavy duty gloves	76830	0	0	22200	2444	2820	104294	156441	135	14.1	21.1
Goggles or Visor	0	0	0	73260	12422	55795	141477	212215.5	700	99.0	148.6

Projection of PPE for one month

(Based on HEOC guidelines on PPE use)

Item/Site	Quarantine sites	PoE	Health Facilities	COVID Clinics	Level 1 Hosp	Level 2 and 3 Hosp	Total (Ideal)	Plus Additional 50%	Tentative Price (NPR)	Cost if strictly follow of protocol/m(Million)	Cost If 50% additional added (Million)
Number	2561	74	4963	89 (64+24)	13	15 (12+3)					
Gowns	0	0	0	95460	12422	55795	163677	245515.5	2100	343.7	515.6
Caps	0	0	0	69930	8262	48295	126487	189730.5	4.5	0.6	0.9
Hand Sanitizer (500 ml)	19208	600	36473	6660	780	900	64621	96931	460	29.7	44.6
Scrub Set	0	0	0	0	8262	48295	56557	84835.5	50	2.8	4.2
Shoe Cover	0	0	0	0	8262	48295	56557	84835.5	50	2.8	4.2
Gum Boots	0	0	0	9990	2444	2820	15254	22881	550	8.4	12.6
Total										693.6	1,040.5

Stock Summary as of Jestha 7 (Based on eLMIS Report)

Items (Name of Goods,Drugs)	Projected Requirement	Current Stock	GAP (+/-)	Rate (Tentative)	value in Mn
Gloves	2418971	321,415	(2,097,556)	16	33.6
Goggles/Visor	212216	38,780	(173,436)	700	121.4
Gown	245516	255,868	10,353	2100	0.0
Gum boot	22881	6,468	(16,413)	550	9.0
Hand sanitizer (different size) in Liter	48465	3,043	(45,422)	1000	45.4
Heavy duty gloves	156441	3,070	(153,371)	135	20.7
Mask	5976311	1,775,356	(4,200,955)	40	168.0
N95 mask	39825	176,982	137,157	275	0.0
Shoe cover	84835	56,206	(28,629)	50	1.4
Surgical cap	189731	22,024	(167,707)	4.5	0.8
Total NRS					400.3

Status of Laboratory Logistics *(As of 7 Jestha)*

Source	PCR Kit (Units) set			RNA Ext Kit (units)			Portable PCR Kit (Units)		
	Received	Supplied	Stock	Received	Supplied	Stock	Received	Supplied	Stock
Omni	10000	10000	0	10000	10000	0			
Tibbet			0			0	20000	2000	18000
Chaudhary	1000	1000	0			0			0
WHO	1000	100	900			0			0
NRNA/Korea	4000	4000	0	4000	4000	0			0
GIZ	2880	0	2880		0	0			0
Singapore	10000	200	9800			0			0
NPHL Purchase			0			0			0
India	30000	0	30000	30000	0	30000			0
Swiss Government	30000	17000	13000	30000		3800			0
China	40000	38464	1536				20074	5070	15004
Total	128880	70764	58116	74000	14000	33800	40074	7070	33004

eLMIS Report: PCR reagent: 30000; RNA Kit: 60480

Requirement/distribution plan of Laboratory Logistics

Laboratory	Available Machine/	Max Capacity/day	Service Providing	Capacity utilisation%	Need of RT-PCR/month (based on service providing)	Stock Required for 1 month for 100% capacity
Bir Hosp	RT PCR	50	20	40.0	600	1500
Patan	RT PCR	50	20	40.0	600	1500
NPHL	RT PCR	800	700	87.5	21000	24000
PoAHS	RT PCR	150	100	66.7	3000	4500
Butwal	RT PCR	150	100	66.7	3000	4500
Bheri	RT PCR	150	100	66.7	3000	4500
KASH	RT PCR	100	20	20.0	600	3000
Surkhet	RT PCR	100	50	50.0	1500	3000

Requirement/distribution plan of Laboratory Logistics

Laboratory	Available Machine/	Max Capacity/day	Service Providing	Capacity utilisation%	Need of RT-PCR/month (based on service providing)	Stock Required for 1 month for 100% capacity
BPKIHS	RT PCR	300	100	33.3	3000	9000
Koshi Hospital	RT PCR	200	100	50.0	3000	6000
	Port PCR					
Janakpur	Port PCR	60	10	16.7	300	1800
Narayani Hospital	RT PCR	100	70	70.0	2100	3000
Hetauda	RT PCR	100	60	60.0	1800	3000
Chitwan	RT PCR	200	100	50.0	3000	6000
Dhulikhel	RT PCR	200	150	75.0	4500	6000
TOTAL		2710	1700	62.7%	51,000	81,300

Planning for RDT Distribution

(Calculated on the basis of Persons in Quarantine Plus Infected Cases)

Province	Cases in isolation	Infected cases	Total	3 Kit per cases for total cases	Round Up & Logical adjustment considering entry point
MD					35000
Province 1	1304	33	1337	4011	5000
Province 2	4144	131	4275	12825	14000
Bagmati Province	353	19	372	1116	3000
Gandaki Province	466	2	468	1404	3000
Province 5	14262	194	14456	43368	45000
Karnali Province	764	1	765	2295	5000
Sudur Paschim Province	1909	0	1909	5727	10000
Total	23202	380	23582		120000

Procurement Status

- PPEs = Completed (Goggles/ Mask/ Gloves/ Gown/ cap/ Shoe cover)
- G2G on the way Partially delivered
- Stock at hand to fight against 1000 case= expecting 1000 case in next 1 month
- Lab reagents= Available 73000 Test
- RDT 121000 will be delivered by this week

Storage sites

- Teku Central store
- WFP store at TIA
- Provincial Medical stores

Planning for Stock piling

- Inaruwa Prov Govt Store = province 1
- Nepalgunj WFP Store = Province 5
- **WFP** Store at Central ware house TIA

Distribution policy

- 50 % Commodity will be in Stock
- 50 % will be distributed
- Calculated need of each and every Level 1, Level2, level 3 Hospital
- 25% of calculated quantity already send to respective Hospital
- 25% of Calculated quantity of Fever clinic, PoE send to Provincial Store = assuming that can support according to case base
- Additional support will be made from central level as per need
- eLMIS is expanding to all provincial Store, Hospital and Health office
- Regular online monitoring started
- Support through online records

Challenges in Logistic Management

Unnecessary (beyond the protocol defined) and inappropriate use of COVID materials (specially PPE)

Possible solution

Increase information/education/training to the health workers and other concerns AND amendment in the current protocol in the use of PPE

At present supply is being made by MD, PHLMC, Palika, District and other organization. Supply source of COVID materials to the different level of health and other institutions (*PoE, Quarantine, Health facilities, COVID clinic and all level of COVID hospitals*) has to be fixed and complied rigidly.

Possible solution

Formulate and implement the supply source for all levels. Also define alternate source of supply. It is better if MD be responsible for PHLMC, designated COVID Hospitals (13+12+3) and hospitals within Kathmandu valley only. Other places be catered from PHLMC (where not feasible from the districts).

Mitigation in the large difference in the procurement price in order to correctly utilize the provided financial resources.

Possible solution

A maximum price (ceiling) be fixed for which is possible by constituting a price limit fixation committee for PPE materials and other consumable used in COVID.

Demand of PPE and laboratory consumable from non-COVID hospitals (eg. Dhulikhel (which is acting as COVID), super specialty hospitals (Cancer, Gangalal, Eye etc) and other health program (Immunization, TB, Nutrition etc)

Possible solution

Identification of such institutions and provide policy decision whether supply from MD.

Monitoring the status of logistics (procurement, utilization and supply) and status of lateral supply by donors (which is not in the notice of MD).

Possible solution

Monitoring team to be instructed for monitoring and reporting regarding logistics (in numeric) with their comments and suggestions.

Efficient functioning of eLMIS and need of reliable and updated LMIS

Possible Solution: Depute/hire dedicated person in MD and Provinces to get such information from Provinces in daily basis in addition to eLMIS

Support acknowledged

- UNFPA
 - USAID
 - GIZ
 - NSI
 - Swiss
 - WHO
 - China
 - Tibet Province
 - Alibaba
 - India
 - DFID
 - WFP
- ETC

THANK YOU

मिति २०७७/२/१४ गते वितरण गर्न लागिएको सामग्रीहरूको विवरण तालिका

	गाउन	मास्क (सर्जिकल)	पंजा	एन ९५ मास्क	फेस सिल्ड	चश्मा (सेफटी)	सू कभर	बयाप (सर्जिकल बयाप)	सेन्टाइजर ५०० एमएल	गम बूट	पंजा हेभी ड्युटी
प्रदेश १	५,१००	१,१६,०००	३६,५००	१,८००	३७०	२,१२०	८००	२,३००	१,०६२	६६०	४४०
Hub Hospital											
बिपि कोइराला स्वास्थ्य विज्ञान प्रतिष्ठान, धरान	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
कोशी अस्पताल,	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
PHLMC											
प्रदेश स्वास्थ्य आपूर्ति व्यवस्थापन केन्द्र, प्रदेश नं १,	४,३००	१,१४,०००	३५,५००	०	२४०	१,८००	२००	१,९००	१,०५०	५००	४००
प्रदेश २	३,४००	८७,०००	२७,०००	१,८००	४१०	१,२८०	८००	१,६००	८६२	४६०	२८०
Hospital											
जनकपुर प्रादेशिक अस्पताल, जनकपुर	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
नारायणी अस्पताल, विरगंज पर्सा	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
PHLMC											
प्रदेश स्वास्थ्य आपूर्ति व्यवस्थापन केन्द्र, प्रदेश नं. २, जनकपुर	२,६००	८५,०००	२६,०००	०	२८०	९६०	२००	१,२००	८५०	३००	२४०
प्रदेश ५	६,३००	१,३९,०००	४४,५००	२,७००	९४५	२,२३०	१,६००	२,८००	१,१६८	८४०	५१०
Hub Hospital											
नेपालगंज मेडिकल कलेज, कोहलपुर	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
लुम्बिनी प्रादेशिक अस्पताल	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
भेरी अस्पताल, नेपालगंज	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
PHLMC											
प्रदेश स्वास्थ्य आपूर्ति व्यवस्थापन केन्द्र प्रदेश नं. ५,	५,१००	१,३६,०००	४३,०००	०	७५०	१,७५०	७००	२,२००	१,१५०	६००	४५०
प्रदेश ६	३,४००	८४,०००	२६,५००	१,८००	२३०	१,२८०	८००	१,६००	६९७	४६०	२८०
Hub Hospital											
कर्णाली स्वास्थ्य विज्ञान प्रतिष्ठान, जम्ला	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
सुर्खेत प्रादेशिक अस्पताल	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
PHLMC											
प्रदेश स्वास्थ्य आपूर्ति व्यवस्थापन केन्द्र कर्णाली प्रदेश	२,६००	८२,०००	२५,५००	०	१००	९६०	२००	१,२००	६८५	३००	२४०
प्रदेश ७	३,०००	७८,५००	२४,५००	९००	३०५	१,१२०	५००	१,४००	७०१	३८०	२६०
Hospital											
सेती अस्पताल	४००	१,०००	५००	९००	६५	१६०	३००	२००	६	८०	२०
PHLMC											
प्रदेश स्वास्थ्य आपूर्ति व्यवस्थापन केन्द्र, सुदूर पश्चिम प्रदेश, कैलाली जम्मा	२१,२००	५,०४,५००	१,५९,०००	९,०००	२,२६०	८,०३०	४,५००	९,७००	४,४९०	२,८००	१,७७०