

Tuberculosis Medicines Web-Based Ordering and Reporting System (TWOS) Report Period: April-May 2019



MINISTRY OF HEALTH

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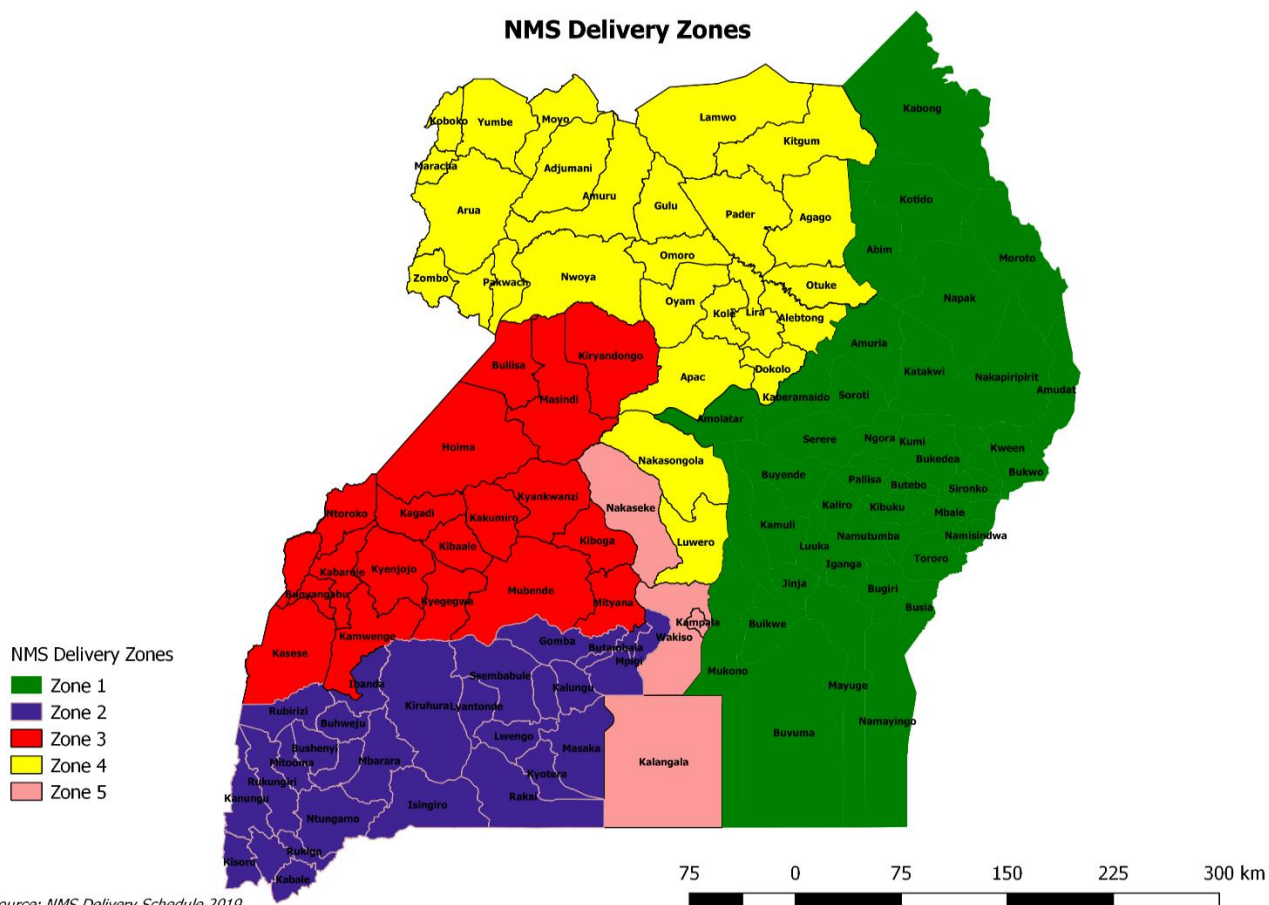
Tuberculosis medicines web-based ordering and reporting System (TWOS) is hosted in the Ministry of Health (MOH) DHIS2, the official national HMIS. It was introduced to increase timeliness of TB medicines orders/reports, ease monitoring of facility reporting rates, ease access to facility stock status and reduce central warehouse workload in compiling paper based orders before resupplying health facilities with TB medicines.

Facilities with computer, internet and DHIS2 access rights place their orders directly into TWOS. Facilities without computers and internet connectivity submit hard copy orders to the district office/biostatistician who enters the orders into the web based system.

The TWOS report for the period April- May 2019, summarizes facility reporting rates, timeliness of submission, patient numbers, estimates of stock status and central warehouse order fulfilment rates. It provides recommendations and actions to be taken by various stakeholders to mitigate supply issues.

The information presented reflects data extracted from registers, stock cards and dispensing logs as reported by the health facilities.

NMS Delivery Zones



Key highlights

- There was an overall reporting rate of 76% (1,270/1,681); zone 3 having the highest reporting rate (81%)
- Timeliness of ordering and reporting was at 71%; with zone 2 having the highest timeliness (90%)
- Adult formulations RHZE 150/75/400/275 mg and RH 150/75 mg were over stocked in 36% and 32% of facilities respectively. A redistribution from the overstocked can help to improve the stock status in the facilities that are stocked out and reduce risk of expiry at the sites with excess stock.
- 79% of the orders had an acceptable deviation ($\pm < 5\%$) of calculated closing balance from the reported physical count.
- 5,392 new adult cases and 767 child cases were reported. Reported IPT cases were 44,025 for adults and 12,148 for children

Reporting Rates and timeliness of report submission

The reporting rate is the percentage of facilities that submitted order reports to the warehouse. Timeliness of ordering is the percentage of orders that were submitted to the warehouse before the warehouse (NMS) deadline.

Key findings

Reporting rates

There was an overall reporting rate of 76% (1,270/1,681) facilities, this is an improvement of one percent point from the previous reporting rate. Basing on ownership, government facilities had 83%, PNFP 55% and PFP 21% reporting rates

Reporting rate was lower in MDR medicines at 82% (14/17 sites) compared to the previous reporting cycle.

Timeliness

The overall timeliness of reporting was 71% (898/1,270). Basing on ownership, government facilities had 71%, PNFP 69%, and PFP 38% reporting rate.

Timeliness for MDR sites was at 64% (9/15)

Table 1: Reporting rates by Ownership and NMS Zone

Reporting	Number of active DTUs	Facilities that reported through TWOS N (%)	Facilities that reported by NMS deadline N (%)
Over all	1,681	1,270 (76%)	898 (71%)
Ownership			
<i>Government</i>	1,293	1,077 (83%)	763 (71%)
<i>PFP</i>	61	13 (21%)	5 (38%)
<i>PNFP</i>	327	180 (55%)	124 (69%)
Zone			
<i>Zone 1</i>	525	383 (73%)	205 (54%)
<i>Zone 2</i>	390	308 (79%)	278 (90%)
<i>Zone 3</i>	280	227 (81%)	201 (89%)
<i>Zone 4</i>	344	273 (79%)	164 (60%)
<i>Zone 5</i>	142	79 (56%)	40 (51%)
MDR TB			
TB-MDR sites	17	14(82%)	9(64%)

Facility stock status

Stock status is computed from the data submitted by the facilities in TWOS. IPs are urged to support facilities to submit quality and accurate data. Figures 1 and 2 below show the national stock status of first line, adult and pediatric TB formulations and Multi Drug Resistant TB (second line) medicines respectively.

Stock status highlights

Adult formulations

- RHZE 150/75/400/275 mg and RH 150/75mg were overstocked in 36% and 32% of the facilities while 22% and 27% were stocked out respectively.

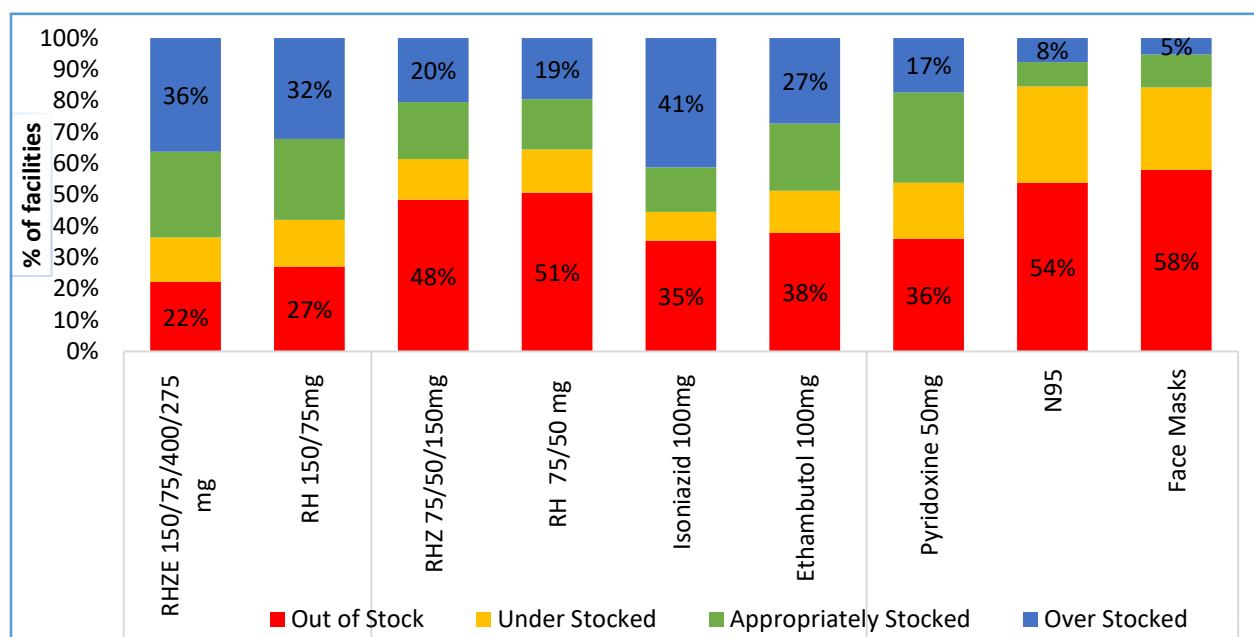
Pediatric Formulations

- RHZ 75/50/150mg and RH 75/50 mg were stocked out in 48% and 51% of facilities respectively.
- Ethambutol 100mg was stocked out in 38% of the facilities
- Isoniazid 100mg was overstocked in 41% of the facilities

Ancillary medicines

- Pyridoxine 50mg was stocked out in 36% of the facilities

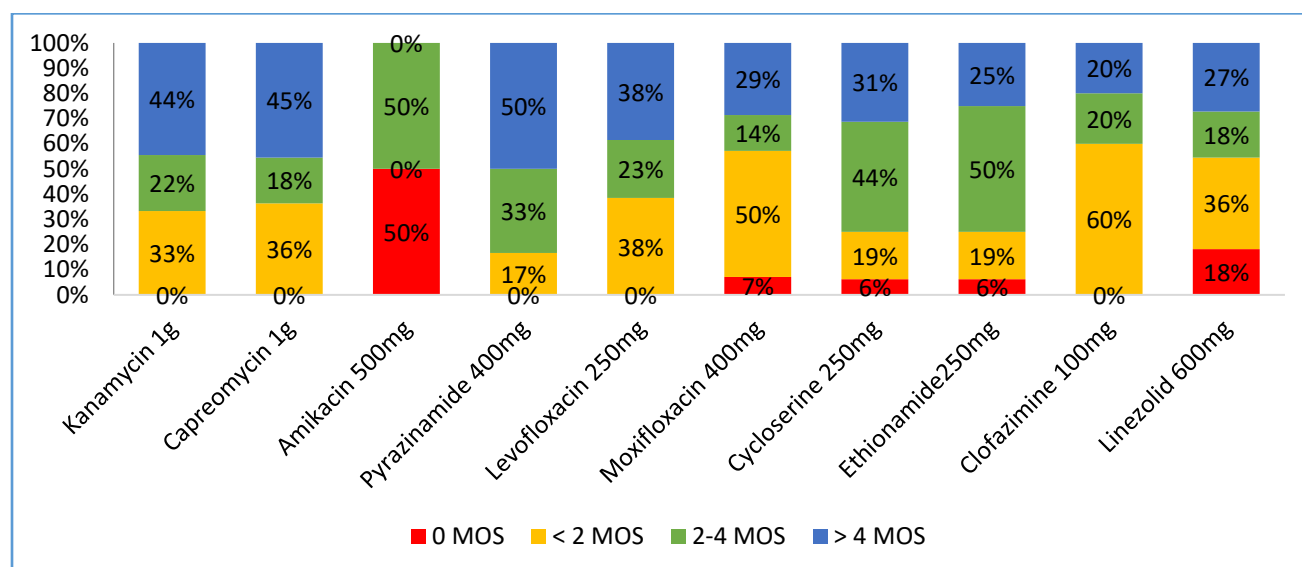
Figure 1: Stock status for TB first line formulations



Stock status of MDR TB medicines

- Majority of the commodities were available with minimal stock outs of Amikacin 500mg, Moxifloxacin 400mg, Cycloserine 250mg, Ethionamide 250mg and Linezolid 600mg
- Sites were over stocked on Kanamycin (44%) and Capreomycin (45%). There is a planned transition to oral medicines in July, however there seems to be early adopter sites which may increase the risk of wastage.

Figure 2: TB-MDR medicines stock status

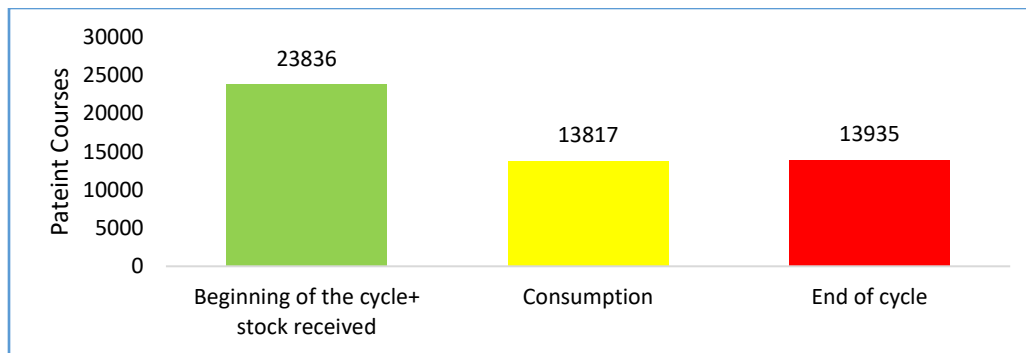


IPT Scale up

Isoniazid stock utilization

- Priority facilities had 23,836 courses available at the beginning of the cycle; of this, 13,817 courses were consumed while 13,935 courses were available at the end of the cycle.
- IPs are urged to support facilities to utilize the stock for all PLHIV adults

Figure 3: Isoniazid 300mg stock status



Order fulfilment rate for key formulations

The order fulfillment rate is the percentage quantity supplied by the warehouse compared to the quantity ordered by the facility as reported by the facility. It is computed by dividing the quantity ordered by a facility in the previous cycle by the quantity supplied by the warehouse as reported by the facility in the subsequent cycle.

Adult formulations

Order fulfillment rate for RHZE 150/75/400/275 mg and RH 150/75mg were 64% and 61% respectively.

Pediatric Formulations

Pediatric formulations RHZ 75/50/150mg and RH 75/50 mg had low order fulfillment of 26% and 40% respectively.

Ancillary Medicines

Pyridoxine had an order fulfillment of 178% because the orders made by the facilities were augmented with emergencies to match the need of INH

Face Masks had an order fulfillment rate of 21%

Table 2: Order fulfilment rate for all TB items

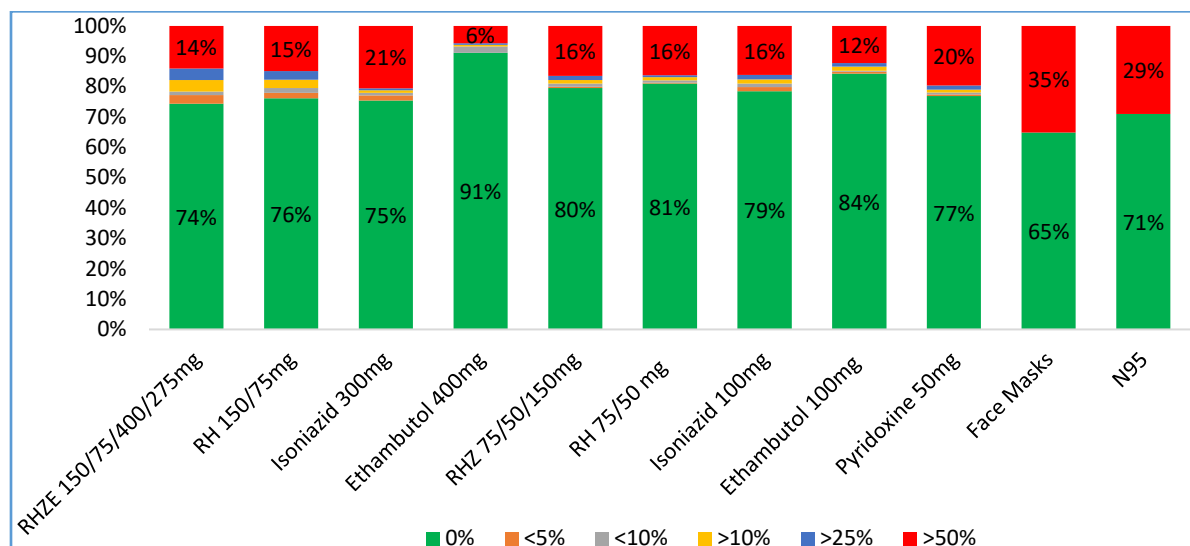
Formulation	Overall Average	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5
Adult Formulations						
RHZE 150/75/400/275 mg	64%	87%	97%	49%	32%	57%
RH 150/75mg	61%	83%	56%	68%	39%	58%
Isoniazid 300mg	45%	44%	27%	52%	7%	97%
Ethambutol 400mg	41%	48%	18%	32%	106%	0%
Pediatric Formulations						
RHZ 75/50/150mg	26%	58%	22%	23%	12%	17%
RH 75/50 mg	40%	132%	20%	18%	24%	7%
Isoniazid 100mg	107%	125%	71%	39%	154%	147%
Ethambutol 100mg	58%	51%	35%	23%	30%	150%
Ancillary Medicines and supplies						
Pyridoxine 50mg	178%	57%	44%	202%	44%	544%
Face Masks	21%	0%	0%	0%	0%	107%

Order quality

Order quality is measured by computing the deviation between system calculated closing balance and facility reported closing balance. An order with +/-5% deviation is considered accurate. Over all 79% of the orders had an acceptable deviation of calculated closing balance from the reported physical count.

Face masks and N95 had 35% and 29% of the orders with greater than 50% deviation, these commodities are shifting from a push to being ordered for in the system so most facilities are finding a challenge since the previous hard copy versions they have don't indicate facemasks and N95.

Figure 2: Deviation of calculated closing balance from the reported physical count



Patient Statistics

The patient statistics summarize the patient numbers as reported in TWOS and the paper based system.

Table 3: Drug sensitive and Multi-Drug Resistance TB patient statistics

Category	Number of TB patients reported
Drug Sensitive TB	
Number of New Cases	5,392
Number of Child Cases	767
Number of Transfers In	708
Isoniazid Preventive Therapy	
Number of children on IPT (0 -5years)	2,605
Number of children on IPT (5 – 14 years)	9,543
Number of Adults on IPT	44,025
Drug Resistant TB	
<i>Initiation & Continuation Phase</i>	
No. of patients on Regimen 1: 6Km+Lfx+Eto+Cs+Z/18Lfx+Eto+Cs+Z	42
No. of patients on Regimen 2: 6Km+Mfx+Eto+Cs+PAS+Z/ 18Mfx+Eto+Cs+PAS+Z	24
No. of patients on Regimen 3: 6Cm+Lfx+Eto+Cs+PAS+Z/ 18Lfx+Eto+Cs+PAS+Z	31
No. of patients on Regimen 4: 6Cm+Cfz+E+Eto+H+Mfx+Z/5Cfz+E+Mfx+Z	43

Category	Number of TB patients reported
No. of patients on Regimen 5: 6Km+Cfz+E+Eto+H+Mfx+Z/5Cfz+E+Mfx+Z	36
No. of patients on Regimen 6: 6Cm+BDQ+Cfz+Cs+Lnz+Mfx+PAS/18Cfz+Cs+Lnz+Mfx+PAS	5
Other MDR TB regimens	30

Key recommendations

- IPs should mentor facilities on how to order for formulations that were previously supplied through the credit line system but have been recently supplied through the TB supply chain like N95s, face masks and pyridoxine
- IPs should support facilities to access Isoniazid and pyridoxine and further more ensure proper utilization
- The system should be upgraded and old regimens that are no longer in use like RHZ 60/30/150mg, RH 60/30 mg and Streptomycin removed
- The DHOs and DTLS should ensure all DTUs in their respective districts order for TB medicines using TWOS in a timely manner.
- IPs should support the 17 MDR TB sites to manage their stock appropriately