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ASSESSMENT OF LMIS FOR TB DRUG MANAGEMENT IN KAZAKHSTAN

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ACRONYMS

DOTS	Directly Observed Treatment, Short Course
LMIS	Logistics Management Information System
MOH	Ministry of Health
PHC	Primary Health Care
TB	Tuberculosis

1. GOAL OF THE ASSESSMENT

The main goal of the assessment visit was to assess the current system of anti-tuberculosis (TB) drug management, especially the functioning of the Logistics Management Information System (LMIS) that provides regular reports on drugs dispensed to patients and records balances, stock losses, and adjustments. This system is essential for maintaining an uninterrupted drug supply for the national TB program.

During the visit, other aspects of drug management were considered, including drug ordering procedure, forecasting, calculation of drug needs, inventory control, and storage of anti-TB drugs in TB and primary health care (PHC) facilities.

The assessment was conducted jointly by Musabekova G., the National Drug Supply Coordinator at the National Center for TB; Makhmudova M., the Quality Project Regional Drug Management Specialist; and Maretbaeva S., the Quality Project Kazakhstan Drug Management Specialist.

This report includes assessment results and main recommendations for improving the functioning of LMIS for TB control.

The assessment team visited medical facilities in East Kazakhstan Oblast; these are listed in Table 1.

Table 1

Medical facilities visited in East Kazakhstan Oblast

Oblast level	Oblast TB Dispensary, city – Ust-Kamenogorsk	Oblast Drug Store Drug Store of Dispensary Department
	Regional TB dispensary, city - Semey	Drug Store of Regional TB Dispensary Drug Store Room of Dispensary Department
District/City level	TB room, district hospital, district - Glubokoye	Drug Store Room
	Children TB hospital, city – Ust-Kamenogorsk	Drug Store
	TB room, State Communal Medical Enterprise (Unit), district – Baradulikha, village - Baradulikha	Drug Corner in TB Room
PHC level	Polyclinic #2, city – Ust-Kamenogorsk	“Directly Observed Treatment, Short Course” (DOTS) Room
	Outpatient clinic #7, district Ulbinsk, village - Octyabr	DOTS Room
	Polyclinic #1, city – Semey	DOTS Room
	Polyclinic #11, city – Semey	DOTS Room

2. **MAIN FINDINGS**

- 1) The use of non-standard recording forms was observed.

It was found during the visit that the “Drug Dispensed to User Register” form was not available in PHC health facilities, including polyclinics and medical outpatient clinics; in treatment rooms of Dispensary Departments; or in therapeutical departments of oblast and regional TB dispensaries (i.e. the places where patients are given their drugs). Instead, some facilities used the TB-12 form, “Anti-TB Drugs Register”, which was designed for recording drugs in warehouses and storage rooms. The TB-12 form is designed to provide information on reception from and issuance of drugs to other facilities. Since the form was not designed to record drugs dispensed to users, it should not be used for this purpose.

In some facilities, health providers use non-standard DOTS monitoring forms, which are not approved by the Ministry of Health (MOH).

A number of facilities use forms which list information that is not required in the approved forms (e.g. price information included in reporting forms, requests, and invoices). The use of these forms is related to convenience: reports are sent simultaneously to the higher-level TB facility as well as to the accounting department of the reporting facility.

To record drug prices, health facilities use additional recording forms (registers), which are also not standardized and not approved by MOH.

At some of the sites that were visited, chief nurses and treatment room nurses in the same facility duplicate reporting of anti-TB drugs and use different recording forms. This is an inefficient use of time.

- 2) The system of collection, analysis, and aggregation of information on the circulation and movement of anti-TB drugs is not working properly.

During the visit, it was observed that some PHC facilities submitted their monthly reports on drug circulation and movement to the TB room of the district hospital. However, this information is not analyzed by TB specialists and is not incorporated into the overall district report. As a result, the information on drug balances, level of consumption, and losses taking place in PHC facilities in the district is not reported to the upper level. Hence, oblast-level management is informed only about the drug movement of the TB room at the district hospital.

It should be also mentioned that there are different deadlines for monthly reporting in PHC facilities. Deadlines are supposed to be standardized.

- 3) There are different systems of ordering and distribution of the drugs at the district level.

At the district level, some facilities employ a bottom-up system of ordering drugs, called the “Pull System”. In other facilities, there is a top-down system of ordering the drugs, called the “Push System”. It should be noted that the system of ordering and distribution at the district and PHC levels should be uniform.

During visits to PHC facilities and dispensary departments, differences in the number of days per

week a facility dispenses TB drugs were observed. This issue is not related to treatment observation but instead relates to how facilities calculate drug orders and delivery. A standard approach would ensure that drug shortages will not occur at the facility level because of variations in the ordering system.

4) Different periodicity of ordering and level of stock.

According to standard stock management procedures, the process of drug ordering should be done regularly (quarterly with a buffer period). However, in Kazakhstan drug orders made at the district level are not placed regularly, and usually an order is placed when the district level receives information regarding the availability of TB drugs at the oblast level.

5) There are no defined procedures for the management of unused drugs in case of patient death, default, etc. There is also no procedure for transferring TB drugs from the penitentiary system to the civil system and back.

3. MAIN RECOMMENDATIONS TO IMPROVE LMIS FOR ANTI-TB DRUGS

- 1) Review current recording and reporting forms (approved and non-approved), make all necessary changes, and initiate development of new forms (for example, a form for drugs dispensed to user).
- 2) Improve the system of collection, analysis, and aggregation of drug data at district and oblast levels by defining the deadline for monthly reports and ensuring reports include all information as defined by the LMIS manual.
- 3) Define which kind of ordering and distributing systems is more suitable at the district level. Define procedures for calculation of drug needs and its ordering and distribution in accordance with the chosen system.
- 4) Define the order periodicity and level of stock for every level of the drug distribution system as well as a number of days per week for dispensing drugs to patients.
- 5) Develop a Manual on Drug Management with descriptions of main procedures, including receiving, issuing, dispensing, storage, managing of drugs soon to expire; reporting, recording/reporting forms, and job aids. Submit the draft of the developed instructions to MOH for approval.
- 6) Conduct training on drug management based on the approved instructions.

Table 2

Main activities to improve the functioning of LMIS

#	Activity	Run-time	Responsible
1	<ol style="list-style-type: none"> a. Review instructions on calculation of the need for first, second, and third line anti-TB drugs. b. Translate the draft of the reviewed Instruction into State Language and submit it for approval to MOH. c. Print the approved Instruction and distribute it to regions. 	<ol style="list-style-type: none"> a. October 2011 b. November 2011 c. December 2011 	National Drug Coordinator jointly with Quality Project Drug Coordinator

2	<p>Conduct training on drug data analysis at oblast level with presentation of instructions on calculation of drug needs.</p> <p>Note: This training is designated for oblast drug coordinators, representatives of the penitentiary system, and representatives of the Ministry of Internal Affairs.</p>	November 2012	National Drug Coordinator jointly with Quality Project Drug Coordinator
3	<p>Prepare draft of manual on drug management including the following parts:</p> <ol style="list-style-type: none"> a. Design of anti-TB drugs distribution and information system; b. Levels of the distribution system; c. Recording and reporting forms for each level of the distribution system; d. Instructions for filling in recording/reporting forms (job aids); e. Procedures for anti-TB drug movement (receiving, issuing, dispensing, storage, managing drugs close to expiration, and reporting); f. Responsible personnel at each level of distribution system; and g. Monitoring of side effects (adverse reactions). 	December- January 2012	National Drug Coordinator jointly with Quality Project Drug Coordinator
4	<p>Calculate the quantity of necessary recording/reporting forms. Print recording/reporting forms for pilot testing (every six months).</p>	December 2011	Quality Project Drug Coordinator
5	<p>Conduct training before pilot testing of drug management recording/reporting forms in East Kazakhstan Oblast. Specialists from PHC and TB services shall be educated in this training.</p> <p>TB service will be represented by:</p> <ol style="list-style-type: none"> a. Specialists from oblast and regional TB dispensaries including storekeepers (four specialists); b. Specialists from dispensary departments (chief nurses and chimizators) (four people); and c. Specialists from TB services at the district level (TB specialists of TB rooms, chief nurses, treatment room nurses) (12 people). <p>PHC facilities and hospital departments will be presented by:</p> <ol style="list-style-type: none"> a. PHC specialists (district medical ambulatory) 	December-January 2012	National Drug Coordinator jointly with Quality Project Drug Coordinator

	from four districts and two cities (nurses responsible for dispensing anti-TB drugs at PHC level) (12 people); and b. Specialists from hospital departments (eight nurses).		
6	Conduct pilot testing of recording/reporting forms, including four monitoring visits to pilot facilities every six months (one visit per month during the first three months and one visit at the end of the sixth month).	January-June 2012	National Drug Coordinator jointly with Quality Project Drug Coordinator
7	Prepare a final version of the “Instructions on Drug Management” and submit it to MOH for approval.	July-September 2012	National Drug Coordinator jointly with Quality Project Drug Coordinator
8	Print approved instructions and distribute regionally.	October 2012	Quality Project Drug Coordinator

Table 3

List of persons met during the assessment visit

#	Organization	Name	Position
1	Oblast TB Dispensary, East Kazakhstan Oblast, Ust-Kamenogorsk	Seidakhmetova G.	Head of organizational and methodological department
2	Oblast TB Dispensary, East Kazakhstan Oblast, Ust-Kamenogorsk	Bashirova R.K.	Head of pharmacy
3	Oblast TB Dispensary, East Kazakhstan Oblast, Ust-Kamenogorsk	Rakhvalova K.	Head of MDR-TB Department
4	Oblast TB Dispensary, Ust-Kamenogorsk	Bakisheva L.	Head of Therapeutic Department
5	Children TB Hospital, Ust-Kamenogorsk	Malikova Z.	Chief Doctor
6	Children TB Hospital, Ust-Kamenogorsk	Nurgaliev Zh.	Chief Nurse of Children’s Department
7	Regional TB Dispensary, Semey	Zhaksidikova N.T.	Chief Doctor
8	Regional TB Dispensary, Semey	Raimova G.	Head of organizational and methodological department

9	Regional TB Dispensary, Semey	Rist L.V.	Head of pharmacy
10	Regional TB Dispensary, Semey	Asilkhanov A.	Doctor of monitoring team (clinic and drug coordinator)
11	Regional TB Dispensary, Semey	Sakharieva G.	Treatment Room Nurse
12	Polyclinic #2, Ust-Kamenogorsk	Yerekenova Zh.	Chimizador
13	Polyclinic #2, Ust-Kamenogorsk	Zhakupova A.	Chief Nurse of District Health Service
14	District hospital, TB room, Glubokoye Rayon	Rujinskaya V.I.	TB Specialist
15	Medical outpatient clinic #7, Ulbinsk, Octyabrsk	Kaierbayeva Z.	Treatment Room Nurse
16	Polyclinic #11, Vita, Semey	Nemidnechenko I.	Chimizador
17	Polyclinic #1, Semey	Ebisheva T.	DOTS Nurse
18	State Communal Medical Enterprise (Unit), TB room, Baradulikha Rayon, Baradulikha	Tusikova G.	TB specialist
19	Medical outpatient clinic, Baradulikha Rayon, Baradulikha	Orinkhanova A.	Chief Doctor
20	Medical outpatient clinic, Baradulikha Rayon, Baradulikha	Khalilova B.	DOTS Nurse