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Logistics Brief

Ethiopia: Assessment of Pharmacy Human Resources in Public Health Facilities



A pharmacy staff person takes inventory in Ethiopia.

This brief recommends four practical measures stakeholders can take to improve Ethiopia's public health supply chain by strengthening its pharmacy human resources.

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Background

Human resources are a strategic asset for any organization, but they are particularly important in the health services. Service quality, and the ability of the sector to respond to the growing demand for healthcare, primarily depends on the availability of adequate human resources, with the required skills.

The USAID | DELIVER PROJECT (the project) and other partners frequently report the high turnover of trained pharmacy staff in public health facilities as a major challenge to improve the supply chain system in the country and to implement the Integrated Pharmaceutical Logistics System (IPLS). Inadequate numbers of staff and/or losing these critical employees negatively impacts the supply chain system in a variety of ways. Too few or untrained staff can result in improperly managed drugs and medical supplies, incorrectly filled forms, and failure to use consumption data to estimate resupply quantities. These situations have a direct negative effect on the availability of medicines and can lead to wastage and expiry.

However, to date, not enough data is available to assess the magnitude of the problem. Therefore, the project, in collaboration with the Pharmaceutical Fund and Supply Agency (PFSA) and the Regional Health Bureaus (RHBs), conducted a rapid assessment of pharmacy human resources at selected health facilities.

Objective

The main objective of the survey was to assess the human resources situation for pharmacy staff in public health facilities.

Methodology

The assessment took place from July to October 2012, in selected health facilities in Amhara; Oromia; Tigray; and Southern Nations, Nationalities, and Peoples (SNNP) regions; and Addis Ababa and Dire Dawa city administrations. About one-third (228) of the health facilities supported by the project were included in the assessment. The facilities were selected using a purposive sampling technique (not random), and it cannot be considered representative. The facilities chosen were, for most part, larger, more established health facilities; and they were likely to underestimate the scale of the problem because these facilities probably have better and larger staffing than the newer, smaller, or more remote facilities.

At each facility, the pharmacy unit head or store manager was interviewed; they provided information on the pharmacy human resource situation at their facility. A semi-structured questionnaire was used to collect data; project logistics advisors and regional health bureau pharmacy unit staff conducted the interviews. The field interviewers were oriented to the study objectives and the data collection process. The collected data were manually edited before being entered into the computer using the Statistical Package for Social Sciences (SPSS) Version 19.0 for data entry and analysis. The data cleaning and editing that followed the data entry focused on checking the legitimacy of the assigned value for each case, and the logical consistency and structure of cases. Simple, non-parametric statistics—for example, mean, frequency, and percentages—were used to describe and analyze the data.

Results

Profile of Existing Staff

A total of 228 health facilities (26 hospitals and 202 health centers) from four regions and two city administrations were included in the assessment. The assessed facilities currently working had 707 pharmacy staff; 474 (67 percent) male and 233 (33 percent) female. Almost all the pharmacy staff had a professional qualification; 24 percent have a pharmacy degree and 74 percent had a diploma. See table 1 for general information about the facilities.

Table 1: General Information of Assessed Facilities

| Facilities Sampled | Number | Percentage |
|---------------------------|---------------|-------------------|
| Region | | |
| Tigray | 10 | 4.4 |
| Amhara | 76 | 33.3 |
| Oromia | 73 | 32.0 |
| SNNP | 34 | 14.9 |
| Addis Ababa | 28 | 12.3 |
| Dire Dawa | 7 | 3.1 |
| Level of facility | | |
| Hospital | 26 | 11.4 |
| Health center | 202 | 88.6 |

Almost 75 percent of the pharmacy staff had less than a total of five years' experience, while only 14 percent had worked for five or more years in the current facility (see table 2). More than 43 percent of staff had one year or less of experience at their current facility. The mean and the median total years of experience were 3.2 years and 3 years, respectively. About one-third (28.7 percent) of the staff in the assessed facilities reported that they did not receive training in IPLS; the highest percentage were in Tigray (59.1 percent) and Addis Ababa (43.8 percent).

Table 2: Years of Experience of Staff Currently Working in the Assessed Facilities

| (N=707) | Regions | | | | | | Total |
|--|---------|--------|--------|------|-------------|-----------|-------|
| | Tigray | Amhara | Oromia | SNNP | Addis Ababa | Dire Dawa | |
| Years of experience in the facility | | | | | | | |
| <=1 | 59.1 | 51.8 | 33.2 | 42.7 | 39.0 | 66.7 | 43.1 |
| 2-4 | 40.9 | 34.8 | 55.8 | 49.4 | 36.3 | 16.7 | 42.9 |
| >=5 | 0.0 | 13.4 | 11.1 | 7.9 | 24.7 | 16.7 | 14.0 |
| Total years of relevant work experience | | | | | | | |
| <=1 | 59.1 | 21.9 | 23.1 | 30.3 | 13.0 | 16.7 | 22.5 |
| 2-4 | 40.9 | 51.3 | 57.2 | 56.2 | 37.0 | 66.7 | 50.8 |
| >=5 | 0.0 | 26.8 | 19.7 | 13.5 | 50.0 | 16.7 | 26.7 |
| Trained in IPLS | | | | | | | |
| Yes | 40.9 | 73.7 | 76.0 | 68.5 | 51.4 | 83.3 | 68.3 |
| No | 59.1 | 22.8 | 21.2 | 31.5 | 43.8 | 16.7 | 28.7 |
| DK/No response | 0.0 | 3.6 | 2.9 | 0.0 | 4.8 | 0.0 | 3.0 |

When the existing staff number is compared with the number expected in the business process reengineering (BPR)¹ structure, half the health facilities (55.4 percent) reported having, at least, one less staff (see table 3). Region disaggregated data shows Oromia and Addis Ababa are better staffed; Tigray, Amhara, and SNNP reported more facilities with lower staff numbers than the number expected in the BPR. For the pharmacy unit, most regions also reported fewer staff than their ideal number.

¹ In 2009, with the goal of improving services, the Government of Ethiopia initiated the BPR process, which thoroughly analyzed the human resource situation in the country. Under the BPR, regional health bureaus determined the number of staff required for health facilities, by units, including the pharmacy. The number indicated in the structure varies by region—ranging between two and three for health centers and more than five for hospitals.

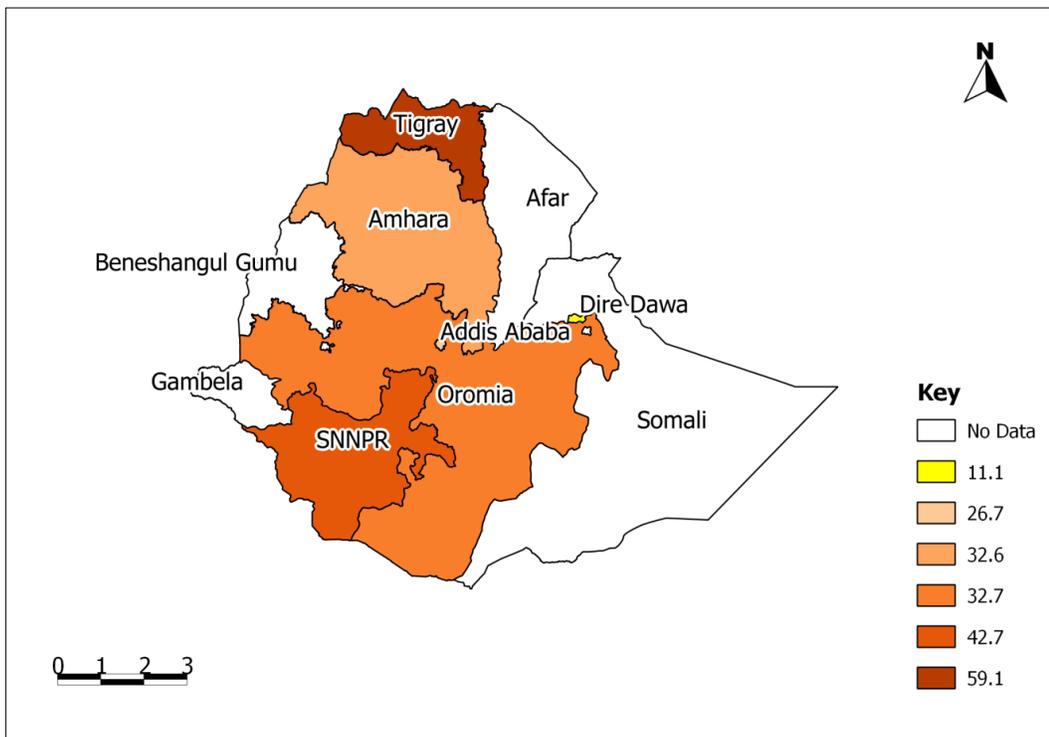
Table 3: Number of Staff Compared to Suggested Number in the BPR Structure

| | Regions | | | | | | Total |
|--|---------|--------|--------|------|-------------|-----------|-------|
| | Tigray | Amhara | Oromia | SNNP | Addis Ababa | Dire Dawa | |
| Number of staff compared to suggested number in the BPR | | | | | | | |
| -3 | 0.0 | 5.3 | 0.0 | 5.9 | 3.6 | 0.0 | 3.1 |
| -2 | 20.0 | 14.5 | 0.0 | 5.9 | 7.1 | 0.0 | 7.5 |
| -1 | 60.0 | 52.6 | 15.1 | 58.8 | 32.1 | 42.9 | 38.6 |
| Staffed according to the BPR | 20.0 | 27.6 | 84.9 | 29.4 | 57.2 | 57.1 | 50.9 |

Staff Turnover Rate in Assessed Facilities

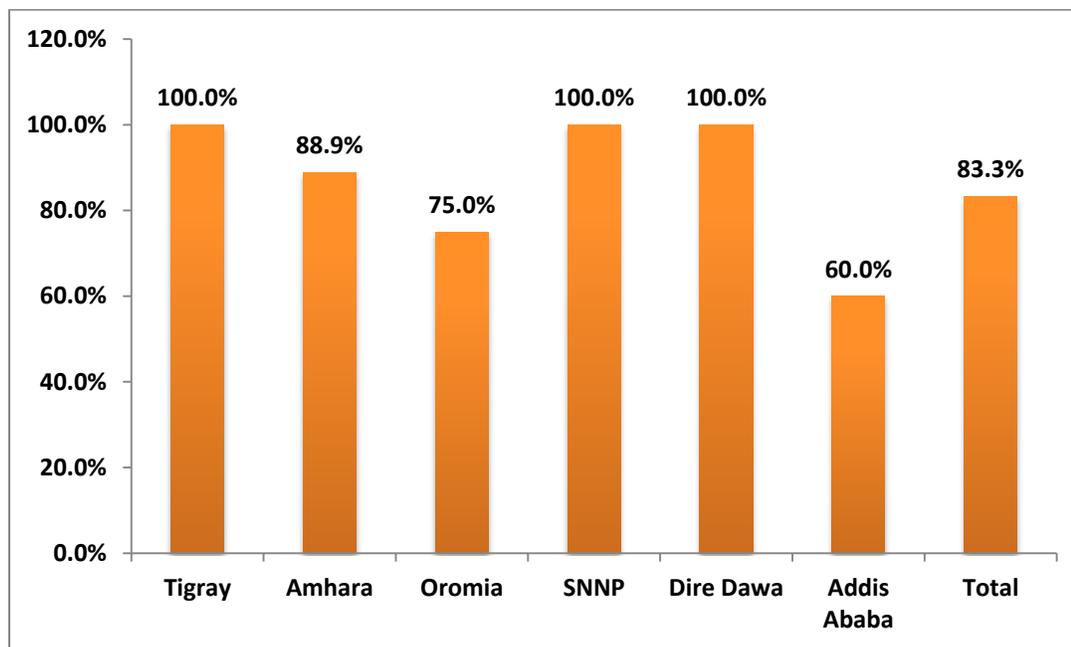
Most facilities (71.5 percent) reported that staff turnover is a major problem, or somewhat of a problem (see figure 1). In just the past year, 233 staff left the facilities—an average turnover rate of 33 percent—Tigray (59.1 percent) had the highest reported rate and Dire Dawa (11.1 percent) had the lowest. Approximately 50 percent of the staff who left the facilities were transferred to other public sector facilities; a little more than 25 percent joined the private sector. Combinations of one or more factors were reported as the reasons for staff turnover. Among staff joining the private sector, poor pay was the main reason for leaving the facilities; those transferred to other public facilities mentioned dissatisfaction with the area and poor working conditions.

Figure 1: Pharmacy Personnel Turnover Rate in Assessed Health Facilities



Among the total staff that left the facilities for the private sector, or who left the pharmacy field, 83.3 percent had been trained in IPLS (see figure 2). Only 24 percent of respondents reported that the departing staff were able to train their replacements before they left.

Figure 2: Percentage of IPLS Trained Staff That Left the Facility for Private or Public Sector



Conclusion

The assessment result revealed a high turnover rate for pharmacy personnel in public health facilities. The results also showed that a significant percentage of facilities are not staffed according to the structure recommendation; in addition many respondents claimed the number of staff assigned for the pharmacy unit in the structure is not adequate to provide quality services. The problem of a high turnover of pharmacy professionals, combined with a shortage of staff for the structure, is causing a major challenge in the effort to improve Ethiopia's health supply chain system. This is especially a concern for pharmacy store managers who have been trained in the Health Commodity Management Information System (HCMIS), an automated inventory management system that PFSA is implementing, with support from the project. HCMIS requires extensive on-the-job training; it takes several months before users become proficient. When these users are transferred or leave the sector, the process often must begin again with new users; and, frequently, the system must be discontinued.

This situation requires the attention of everyone concerned, including the ministry of health, RHBS, PFSA, and partners, to work together to ensure that—

- facilities have adequate pharmacy personnel
- pharmacy staff (especially stores staff) have incentives to stay longer in service
- new incoming staff are trained, preferably before they arrive at their new posts.

Recommendations

- **Continue in-service training for IPLS:** PFSA, with the support of partners, has made a significant investment in IPLS training for pharmacy staff. Nevertheless, due to the continued increase in pharmacy staff numbers and high turnover rates, about 30 percent of respondents had not received IPLS training. This calls for an increased effort for in-service trainings.
- **Ensure facilities are, at a minimum, staffed according to BPR standards:** Almost 50 percent of facilities reported being understaffed.
- **Explore pre-service training:** In-service training can be expensive and can also pull staff away from their posts for days at a time. It may be logistically difficult to ensure that all newly hired staff are trained. In some instances, pre-service training for pharmacy professionals, as part of their academic coursework, may be a cost-effective option.
- **Ensure newly hired staff are trained by their predecessors:** At only 24 percent of the facilities did respondents report departing staff trained their replacements. This kind of on-the-job training, especially for staff new to the system, is critical; in particular, for store managers using the HCMIS.

The authors' views expressed in this publication do not necessarily reflect the views of the U.S. Agency for International Development or the United States Government.

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