

# Preparedness of the Urban Health Extension Program to provide priority health services identified in its packages

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## Abstract

**Background:** The Urban Health Extension Program (UHEP) – an innovative Ethiopian government plan to ensure health service equity by creating demand for essential health services through the provision of appropriate health information at a household level – is one of the three approaches of the national Health Extension Program (HEP). The UHEP is organized to deliver services within 16 packages. This study is aimed at assessing the preparedness of the program to provide priority health services identified in its packages.

**Methodology:** The study covered sampled urban health extension facilities within five study regions, and included 26 facility assessments, and 330 urban health extension professionals' (UHE-ps') assessments.

**Results:** According to the findings of the facility assessment, most items within the UHEP packages are available, even though very few facilities were found to stock delivery kits, dressing materials, and oxytocin. Adrenaline was also observed to be found in only a limited number of facilities. Regarding teaching aids and services guidelines, most of the facilities had health education materials, Health Management Information System (HMIS) recording and reporting formats, family health services guidelines, disease prevention guidelines, family planning guidelines, and environmental health guidelines. All of the facilities observed seemed to have most of the services that are prioritized within the UHEP packages. The items less available include HIV testing and counseling guidelines, first aid kits, and infant weighing scales. A knowledge assessment through a test of 327 UHE-ps using questions based on the guideline manual showed a mean score of 76.2% (32 out of 42), with minimum of 33.3% (10 out of 42) and maximum of 90.5% (38 out of 42). Considering the mean score (76.2%) as the passing grade, only 43% of the UHE-ps scored above the average. Questions on controlling communicable diseases and postnatal care (PNC) were items on which the UHE-ps scored highest.

**Conclusions and Recommendations:** The findings of the present survey show that there is an overall fair level of preparedness within the UHEP to provide the services identified within its various component packages. However, there are still a few services packages for which the UHE facilities do not seem to be well prepared. [*Ethiop. J. Health Dev.* 2020; 34(Special issue 2):76-82]

**Key words:** Preparedness; Urban Health Extension Program; Urban Health Extension Professionals.

## Background

As a way to tackle the health problems in the country, as well as to achieve the Millennium Development Goals, the Ethiopian government launched the country-wide Health Extension Program (HEP). The HEP is “a package of basic and essential preventive and curative health services targeting households in a community, based on the principle of Primary Health Care (PHC) to improve the people’s health status with their full participation” (1). The HEP was initiated in 2003 in rural communities in Ethiopia as part of the Health Sector Development Program, by expanding physical health infrastructure and training, and deploying a cadre of female health extension workers (HEWs). The overall goal of the HEP is to create a healthy society and reduce maternal and child morbidity and mortality rates. To ensure the effective functioning of the HEP, measures were taken in: the expansion of primary health care units and strengthening the health system; and procurement of drugs and supplies have been emphasized in both its design and implementation. The main objectives of the HEP are to improve equity and access to essential health interventions at the community level by ensuring ownership and participation of the community, increasing health awareness and skills among community members, improving the utilization of PHC services, and promoting lifestyles which are conducive to good health (2). The HEP has been implemented in households, schools and youth centers in a wide range of socioeconomic, cultural and environmental contexts (1).

The Urban Health Extension Program (UHEP) is expected to be provided through 16 packages. The services are grouped into four main themes: hygiene as well as in the areas of environmental sanitation, family healthcare, prevention and control of communicable and non-communicable diseases, injury prevention and control, and in first aid and referral linkages.

In Ethiopia, although there has been a remarkable improvement in health status over the past 20 years, across the four phases of the Health Sector Development Program, the quality aspect of health care received by the citizens has been given little attention, especially at lower-level health facilities. This is supported by the results of a national survey conducted by the Ethiopian Food, Medicine, Healthcare Administration and Control Authority in 2014, which assessed the status of the application of quality standards by health facilities and found out that “it was below the expectation” (3). Furthermore, according to a report on the quality improvement process of health institutions and services in Ethiopia (4), technical quality standards were at the inception stage and had a low average score of 3.9 in the four cities of Adama, Bahir Dar, Mekelle and Hawassa.

Structure (viewed as the capacity to provide high-quality care), process (now often termed as “performance”) are among the critical parameters in assessing health care quality (5). Structural measures of quality typically include the characteristics of the

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resources in the health care system – including individual practitioners, groups of practitioners, organizations and systems of care. They are measures of the presumed capacity of the practitioner or provider to deliver quality healthcare.

This study aims to provide insight into the structural level of quality in terms of preparedness of the UHEP service delivery within the five major regions and two city administrations that are included in the overall quality assessment.

### Methods

The study area included the 13 cities and towns where the Strengthening Ethiopia's Urban Health Program (SEUHP) is being implemented. The specific cities/sub-cities and towns within the target regions that were selected randomly for the present study are: Yeka (Addis Ababa); Bahir Dar, Gondar and Debre Berhan (Amhara); Dire Dawa; Harar; Adama, Asella and Jimma (Oromia); Durame and Hawassa (SNNP); and Adigrat and Mekelle (Tigray).

A cross-sectional, facility-based study was conducted among UHE-ps in the study cities. The sample size for UHE-ps was determined by using a single proportion formula using Epi Info statistical software version 3.5.3 for Windows, based on the following assumptions:

The desired degree of precision was set at 5%, with a 95% confidence interval, and

- $z_{\alpha/2}$  = the Z-score corresponding to the 95% confidence level, which is 1.96
- $d = \pm 5\%$  maximum discrepancy between sample and population ( $d=0.05$ )
- $p$  = the prevalence rate for patient satisfaction was assumed to be 50% (since there was no previous study done on such a program) ( $p=0.5$ )

$$n = \frac{(z_{\alpha/2})^2 * p * (1-p)}{d^2} = \frac{(1.96)^2 * 0.5 * (1-0.5)}{(0.05)^2} = 354 * 1.5 = 384$$

Therefore, the calculated sample size was 384.

However, since the total number of UHE-ps under JSI nationally is 2,163, we used correction formula:

$$N_f = \frac{n}{\frac{(1+n)}{N}} = \frac{384}{\frac{1+384}{2,163}}$$

With the calculated sample size using a contingency of 10% for non-respondents, this resulted in a total of 326 UHE-ps.

To collect data on structural parameters, checklists were prepared for assessment at the level of selected health facilities. In addition, in-depth interviews were conducted with health sector officials, UHEP supervisors and HEP team leaders. The UHE-ps were assessed on the revised HEP Implementation Manual of 2016, and were asked to respond to questions regarding antenatal care, postnatal care, child health, family planning, disease prevention, emergency care, immunization, communicable diseases, first aid, environmental health, water supply, and sanitation. The questionnaires were adapted from various other tools used for the same purpose, and 5% were pre-tested on non-sampled areas before actual data collection.

Data entry was performed using EpiData, and then data were exported and analyzed using SPSS. Analysis of qualitative data was made using a thematic content analysis technique, and transcribed data were analyzed using MAXQDA 12 qualitative software.

### Results

Twenty-six health centers where UHE-ps are based were interviewed using a modified checklist adopted from the FMOH. All sampled health facilities were visited (100%) in all study areas. Table 1 shows the availability of health-related items and supplies within the observed urban health centers, as listed in the national guidelines.

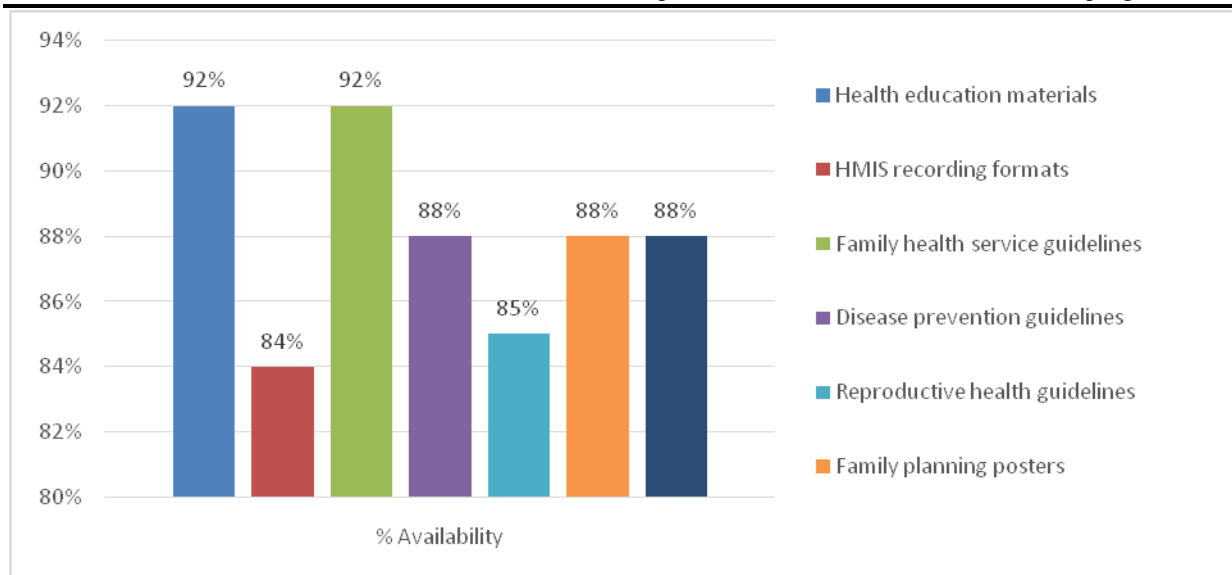
**Table 1: Availability of items as per national guidelines in the observed facilities, 2017**

Item available	% (Number=26)	
	Yes	No
Condoms	88.0	12.0
Oral contraceptives	73.1	26.9
Injectable contraceptives	61.5	38.5
Implanlol	61.5	38.5
Rapid test kits for PMTCT	46.2	53.8
Delivery kits	11.5*	88.5
Dressing materials	11.5	88.5
Adrenaline	15.4	84.6
Oxytocin	–	100

\*One not functional

The observation findings showed some of the items as being fairly widely available, including condoms (88%) and oral contraceptives (73.1%). On the other hand, rapid test kits for the prevention of mother-to-child transmission (PMTCT) of HIV were available in

only 46.2% of the visited health facilities, and delivery kits and dressing materials were available in just 11.5% of them. Oxytocin was not available in any of the visited facilities.

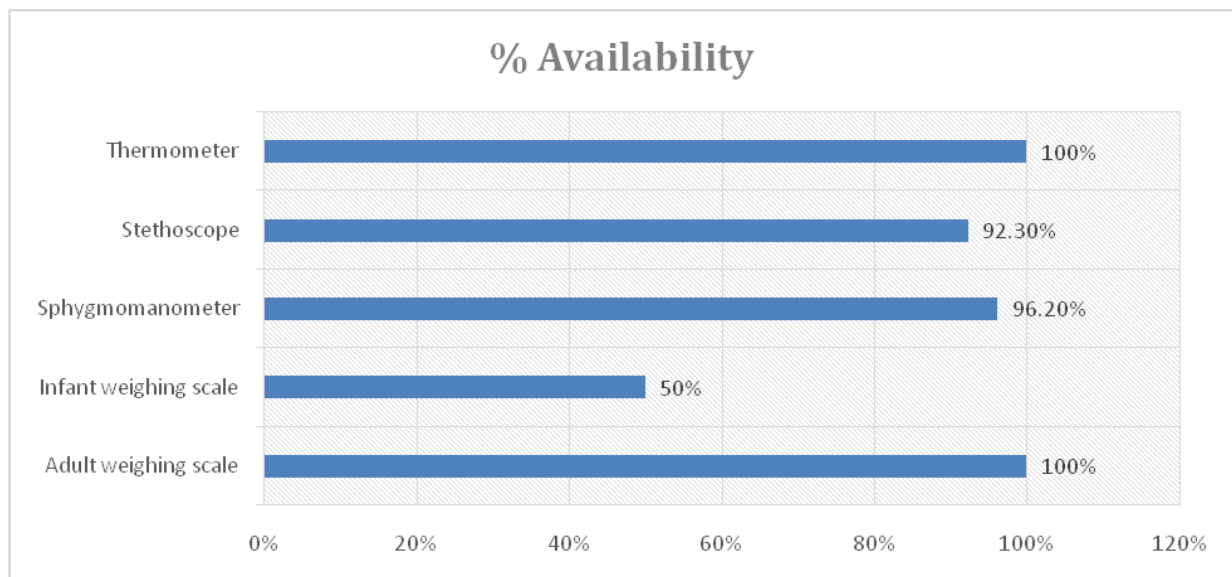


**Figure 1: Availability of teaching aids and service guidelines in observed facilities, 2017**

Figure 1 shows the availability of teaching aids and guidelines related to UHEP within the observed facilities. Accordingly, in 24 (92.3%) of the 26 visited facilities, health education materials were available. HMIS recording materials and reporting formats were available in 21 (80.5%) of the facilities. All UHEP-related package materials were available in all visited health facilities. Twenty-four of the facilities had family health service guidelines; 23 had disease prevention guidelines; 22 had reproductive health guidelines; 22 had family planning guidelines; and 23

had hygiene and environmental sanitation guidelines. The least available item was HIV testing and counseling guidelines (in 20 of 26 health facilities).

In addition, all the visited facilities had referral slips, thermometers and adult weighing scales. Sphygmomanometers were available in 23 (96.2%), and stethoscopes in 24 (92.3%), of the facilities. On the other hand, only 13 (50%) of the observed facilities had first aid kits and infant weighing scales (see Figure 2).



**Figure 2: Availability of medical equipment, 2017**

Regarding the findings on the knowledge test, results were obtained from a total of 327 UHE-ps. The mean age of those who took the test was 28 years, and 82.3% were diploma holders, with a mean service period of six years. Overall, among the 42 questions administered to the 327 UHE-ps, the mean ( $\pm$ SD) score

was 32( $\pm$ 3.7), with a maximum score of 38 and minimum score of 10. If one considers the mean score as a passing point, 43% of the examined UHE-ps scored above the mean and 57% scored below the mean.

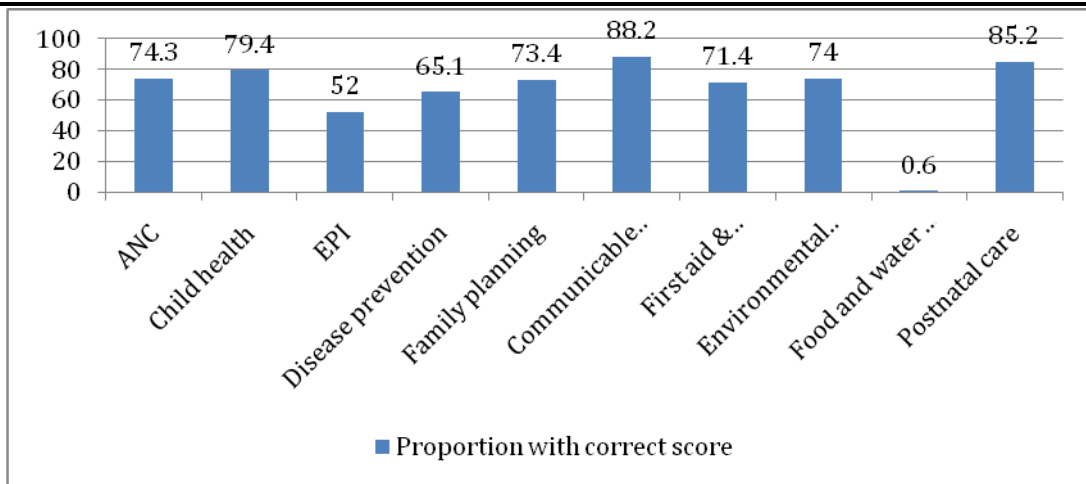


Figure 3: Knowledge test scores of UHE-ps, 2017

When one looks at the knowledge test scores across the study regions (Figure 4), the highest score was obtained by UHE-ps in Amhara Region (76% above

average), followed by those in Dire Dawa (73.5% above average). The lowest was obtained by UHE-ps in Addis Ababa (41.7% above average).

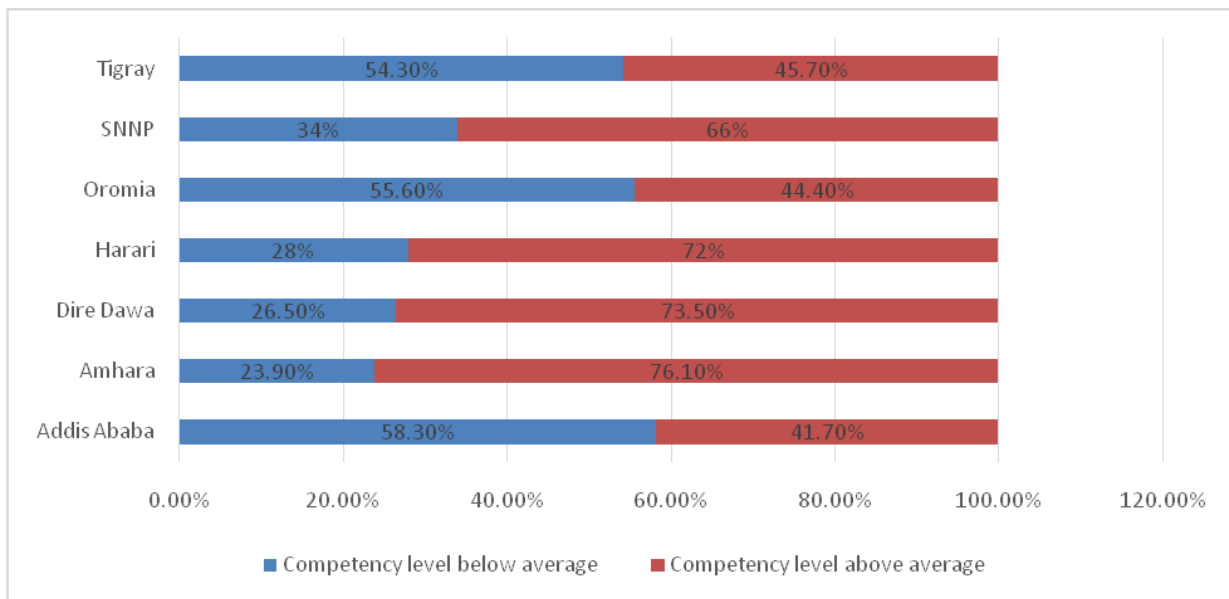


Figure 4: Regional distribution of scores, 2017

The mean ( $\pm$ SD) work experience of the UHE-ps who took the knowledge test was 5.19 ( $\pm$ 2.5) years. When comparison of the knowledge test scores was done across years of experience of the UHE-ps, among those

who have above average knowledge, 57.4% have work experience above the mean. On the other hand, of those who have below average knowledge, 48.6% have work experience below the mean (see Figure 5).

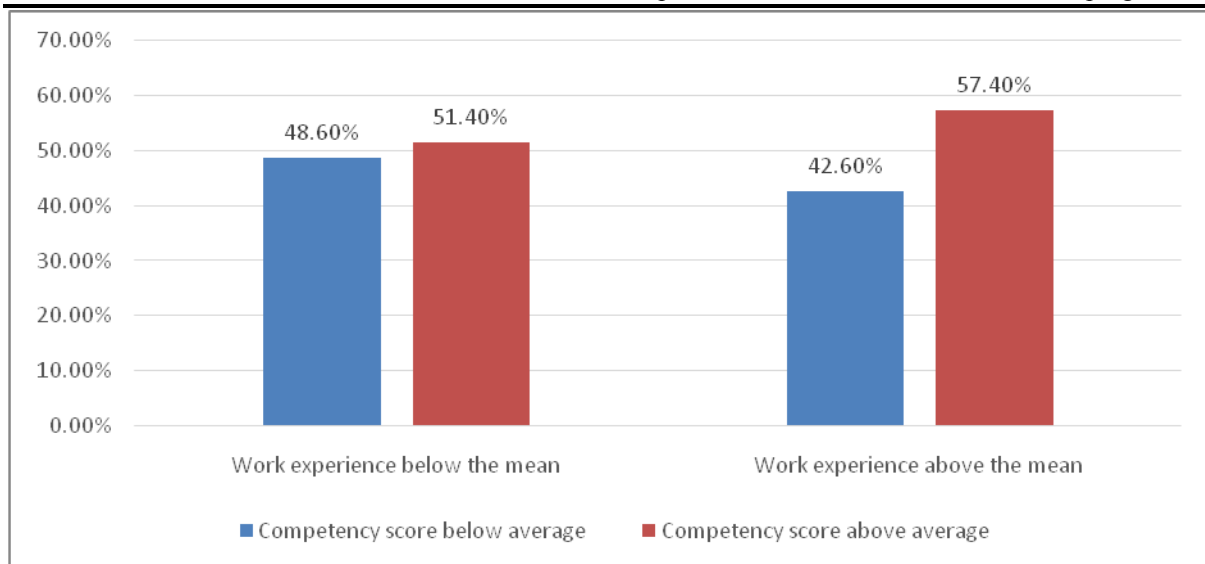


Figure 5: **Work experience by competency score, 2017**

Regarding the results of the qualitative study on preparedness of the program, the themes for the analysis pertained to: administration; logistics and supportive supervision; training and competency; appropriateness and importance of the program and components; data management and reporting; and coordination with other sectors and stakeholders.

**Administration:** In Amhara, Oromia, and SNNP Regions UHE-ps are stationed in kebele offices, and such arrangement was considered as not favorable by most of the respondents – as it sometimes exposes the UHE-ps to abuse by kebele officials by being subjected to political influences. Moreover, *woreda* health officials in SNNP Region compared the issue of duty stations between UHE-ps and those of rural health extension workers:

*“...when we go to rural health extension workers, they have their own health posts for conducting their activities. On the other hand, the UHE-ps have no place to even arrange their files, let alone for delivering other services...”* Woreda health office, Durame

**Supportive supervision and logistics:** In Harar, respondents were positive with regard to supportive supervision given to UHE-ps:

*“We had resource problems at the start of the program, but now through the support of the health bureau and JSI, those problems have been resolved. The other challenge was that health professionals working in the health facilities were not interested in working collaboratively with UHE-ps at household levels, but recently, there has been some improvement...”* Head of health center, Harar

In Addis Ababa, it was also reported that there is a proper mechanism for supportive supervision of UHE-ps, even though there are limitations in the regularity of supplying logistics and medical instruments:

*“... currently we face problems in terms of shortage of medical apparatus, such as BP apparatuses... In addition, there is a problem of getting shelves for storing documents properly...”* UHE-p, Addis Ababa

On the other hand, according to respondents from Amhara, supportive supervision is regularly conducted by UHE-p supervisors. Health workers are properly assigned to support and supervise UHE-ps, and most of the UHE-ps confirmed that this is the case and that health workers visit UHE-ps regularly, at least twice a week. However, the supervisors are said to be not usually cooperative in terms of them implementing the health extension package. One respondent described this challenge as:

*“... generally, when we look at health professionals working at health centers, I do not think they themselves voluntarily implement health extension packages... It might be due to personal opinion, but most health professionals, be they nurses or doctors, do not know the health extension packages. For instance, during a vitamin A supplementation campaign, a doctor attempted to refuse the administration of the vitamin to his own child...”* UHE-p, Debre Berhan

Another respondent complained that:

*“...health workers are challenging the health extension package program, as they are not practicing it themselves...”* UHE-p, Bahir Dar

According to IDI respondents in Tigray, UHE-ps from some of the *kebeles* complain that they do not get proper support from *kebele* officials. *Woreda* health officials also claim that *kebeles* do not give proper attention to the UHE-ps.

*“...we comment on every meeting that kebele*

*officials do not give emphasis. More emphasis is given to small and micro enterprise organizations. They used to assign health extension professionals to such kind of duties...*”Woreda health office, Mekelle

In addition, a few UHE-ps from Adigrat and Mekelle complained about the awkwardness of carrying weighing scales. One respondent stated:

*“...they give growth monitoring and vitamin A supplementation services, but the problem is carrying the weight scales from house to house. It is hard to carry it, and the health extension professionals are not happy about it, even though we are trying to convince them...”*Head of health center, Adigrat

The other challenge mentioned in the same region is the scarcity of blood pressure measuring apparatuses. As a result of this, many UHE-ps are said to be unable to help patients and thus send them to health centers.

**Training and competency:** On the issue of the competence of UHE-ps, almost all respondents from Tigray agree that there are no gaps in the capacity and skills of these workers. They attribute this to the fact that the UHE-ps are recruited from among nursing professionals. Similarly, almost all informants in Addis Ababa, Amhara, Dire Dawa, Oromia and SNNP agree that the UHE-ps are recruited from the nursing profession and have good skills and knowledge for their tasks. The additional three-months training given before they start work is also said to help improve their competencies.

However, a lack of updated or on-the-job training was mentioned by respondents in Tigray and Harar:

*“...there is no on-the-job and capacity building training to update health extension professionals and development armies...”*Woreda health official, Mekelle

*“It has been two years since we took training...Trainings we took in the past has vanished...”*UHE-p, Harar

Health representatives at *kebele* level also raised the need for regularly updating the knowledge and skills of UHE-ps:

*“...health extension professionals should get on-the-job training to enhance their capacity. When we compare the rural and urban health extension programs, the capacity and knowledge of urban health extension professionals is lower because there is no training for them...”*Kebele health representative, Mekelle

The need for regular refresher training for UHE-ps was also equally shared among respondents at the federal level. One such respondent stated that there was an

assessment done within regional states that identified limitations in delivering refresher training:

*“For the rural health extension program, there is an on-the-job refreshing training module, but this is absent for the UHE-ps. The last time we did an assessment concerning this issue, the finding shows that the UHE-ps did not get any refresher training...”*Federal MOH official

## Discussion

This study has attempted to assess the preparedness of the UHEP to provide services in its packages by conducting a quantitative and qualitative survey of facilities, service providers and beneficiary communities.

The findings of the study showed that the majority of the health-related items and supplies listed in the national guidelines are available within the observed facilities. However, the extent of availability varies from item to item, as well as from region to region. For instance, most of the visited health facilities have relevant information, education and communication materials packaged for disease prevention and control activities. As for the HMIS, five of the visited health facilities did not have the required reporting formats, which could affect the reporting of the activities performed by UHE-ps, as it is one of the expected activities of these professionals. Furthermore, first aid kits and equipment necessary for infant weighting were available in only 50% of the visited facilities, while only 16.4% of beneficiaries are aware of the presence of child nutritional screening, and just 7.3% are aware of the availability of first aid services.

We used the parameters for evaluation of quality based on the conceptual framework advanced by Donabedian (5-7). According to the present study findings, even though the facility assessment shows that there is fair level of resources for providing some of the major components of the service packages (health education, environmental health, antenatal care, and communicable diseases control), there are acute shortages of drugs and supplies for the provision of delivery, postnatal and first aid-related services. There are also minor medical apparatuses that are lacking, which leads to and a high level of dissatisfaction on the part of household respondents.

The other item in structure is the presence of conducive working space for the UHE-ps. Most of them work in *kebele* offices, and such an arrangement does not seem to be convenient for their work. This seems to have resulted in the stigmatization of their function by mistakenly associating it with administrative and political issues within the *kebele*. Some of these issues are also identified in an earlier assessment (8).

## Conclusions and Recommendations

Overall, it seems that the majority of the UHE-ps assessed are performing most of the activities related to the focus areas of the UHEP. Even though the degree

of performance varies across the regions, the components or services performed by the large majority of the UHE-ps are limited to the major areas of disease prevention and control, family health, hygiene and environmental sanitation, and health education and communication. The provision of some services (visits to youth centers and prisons), even though at an early stage, seems an encouraging finding. The fact that more than 95% of the UHE-ps identified clients' health needs and referred them to higher facilities is also a positive development.

On the other hand, efforts must be made to strengthen the program through scaling-up the good practices identified, as well as building on the opportunities for improvement suggested in this study. Efforts should be made to increase the provision of the services that are found to have very low coverage at present, such as PNC, growth monitoring, immunization for pregnant women, non-communicable diseases control, provision of iron folate treatment for anemia, curative treatment for pregnant women and children under 5, the treatment of common conditions, and the provision of first aid services.

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