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# Awareness and Adherence to Health Care Facility Standards Among Health Workers in Selected Private Medium Clinics of Nifas Silik Lafto and Kolfe Subcities Adidis Abeba, Ethiopia, 2023

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## Abstract

**Background**: Health workers adherence to health care facility standards is a complicated process. So, when health professionals comply with standards, they must first become aware of the standards, then intellectually agree with them, then decide to adopt them in the care they provide, and then regularly adhere to them at appropriate times. Health workers simply cannot be familiar with standards because they have not been communicated clearly. Commonly, providers are aware of standards but may hold beliefs or attitudes that inhibit them from adhering to them. Evidence on awareness and adherence to healthcare facility standards among health workers working in Private health facilities in low-income countries are poor.

**Objectives**: The aim of this study was to assess the level of awareness and adherence to healthcare facility standards among health workers in selected private medium clinics in Addis Ababa.

**Methods**: A facility-based cross-sectional descriptive study design was used to conduct the study, and the study units were selected using a simple random sampling technique. Descriptive statistics, including frequencies and percent, were used in order to summaries variables. To determine the association between each variable, a binary logistic regression model was used, and variables with a p-value less than 0.05 were considered statistically significant. OR and CI were used to see the strength of the association between the independent variables, awareness, and adherence.

**Result**: A total of 372 participants were included in the study, which makes the response rate 100% with a mean age of 35.98 years. The majority, 56% of whom were male, and 72% were not heard about Ethiopian medium clinic standards, even though 95.8% of them had no on-the-job training on them. Further, 22.4% and 44.8% of the study participants had good levels of awareness and adherence, respectively. Factors such as the age interval of 21–25 years (AOR 0.19, 95% CI 0.06–0.60) and 26–30 years old (AOR 0.06, 95% CI (0.01, 0.32)) had a statistically significant association with a level of adherence as compared to the 20- and below-age groups. But not participating in informing about the Ethiopian medium clinic standard (AOR 1017.49, 95% CI (35.99, 28768.10) was the only variable that had a statistically significant association with level of awareness.

**Conclusion and recommendation**: study result indicated that almost more than half of participants had poor levels of awareness and adherence towards the Ethiopian-medium clinics standards. Therefore, providing continuous per-recruitment and on-the-job educational training on Ethiopian-medium clinics supported by health institutions are essential.

***Keywords:*** *awareness, adherence, health workers and healthcare facility standard.*

## Introduction

### Background

A health care system is the organization of individuals, institutions, and resources to provide health care services to meet the health needs of target populations. A wide range of healthcare system throughout the world, with as many backgrounds and organizational structures as there are nations [1].

In order to optimize healthcare services, numerous standards and guidelines have been provided by many organizations globally and nationally. For example, there are four HSDPs in Ethiopia to improve the quality of the country's health sector, and the former EFMHACA has established various guidelines, directives, and standard operating procedures [SOPs]. Healthcare facilities, like other sectors, share knowledge according to a set of standards and have established methods to connect health systems together [2].

According to research conducted in 2017 on knowledge towards standard precautions among health care providers of hospitals in Ethiopia, 74.3% of health care workers had good knowledge towards standard precautions, 85% of the respondents adhered to standard precautions, and only % of study participants involved in standard precautions had training programs [55].

According to a study conducted on infection control knowledge, attitudes, and practices among healthcare workers in Addis Ababa, only 69% of healthcare workers had good knowledge towards standard precautions [53], and the other study done on the assessment of knowledge practices of healthcare workers towards infection prevention and associated factors in health care facilities in West Arsi District, south-east Ethiopia, only 53.7% of healthcare workers had good knowledge towards standard precautions [51].

And also, according to the other study done on knowledge, attitude, and practice of healthcare, professionals regarding infection prevention at Gondar University referral hospital, North West Ethiopia, only 57.4% of healthcare workers had good knowledge of standard precautions [54]. According to the study conducted on knowledge of standard precautions and barriers to compliance among healthcare workers in the Lower Manya Krobo District, Ghana. Only 37.0% of health care workers were aware of standard precautions [38].

According to a study conducted on the knowledge and practice of standard precautions among health care workers in the Federal Medical Centre, Asaba, Delta State, Nigeria, only 37.7% of HCWs had good knowledge of standard precautions [52].

Standards are used to measure a particular organization's ability to deliver healthcare facilities that are capable of delivering the service [3]. Standards and guidelines support the clear, effective use of scientific evidence for treatment provided by health professionals when used by direct providers [4]. Awareness of health workers contribution to the quality of the health care facility is the capability of health workers to specifically know and interpret, feels, or be aware of the standards and guidelines of the health facility, or a level of awareness of the content of the standards and guidelines of a health facility. The states of awareness are often related to the states of experience in such a way that the structure of awareness is reflected in the structure of experience. It is also defined as a state where certain information is known about a subject when that information is directly available to bring to bear in the direction of a wide range of behavioral actions [5].

Adherence of health workers to health facility standards is the degree to which health workers obey the standard or guidelines in real life or in day-to-day health service delivery activities [6].

Awareness and adherence to health care facility standards by healthcare workers are essential to ensuring that patients achieve optimum clinical benefits through successful diagnosis and treatment to maintain good health quality [7].

### Statement of the Problem

Ethiopian Federal food, medicine healthcare administration and control authority (EFMHACA) developed healthcare facility standards to improve the health care service for clients and health care providers. But according to (Heiby 1998; Kelley et al. 2000) awareness of health care facility standard and adherence toward standard is poor in developing countries health systems including Ethiopia [8]. Healthcare facility standard awareness and use avoids the resource wastage but in most of the private medium clinics denied to use it which leads to resource wastage and shortage in the clinics and as a country.

Lack of awareness and adherence with national minimum requirements among health care workers in medium clinics has a number of problems like scarce of resources especially over and under use of health professionals and medical products, doing professional mal practices or

unprofessional incidents, unknowing scope of practices, unknown work or job descriptions,

unknown organizational structure and processes, increase patient stay mostly due to lack of estimated turnaround time (TAT) at laboratory and imaging services, lack of equity of service delivery, lack of proper management of life- threatening emergency conditions like shock, coma, bleeding etc., lack of knowledge about threatening waste at a site of generation and disposal mechanisms. For instance, even in highly developed countries, medical error is the third highest leading cause of death and patient harm from medical error can occur at an individual system level.

For example as research conducted on surgical medical error claim reported from 125 case decisions by Ethiopian federal ethics committee, 57.6% of death claims, 21.6% of the claimants associated the error with bodily injury were reported [49]. In addition, in Addis Ababa only 30.4% of medical doctors had good practice of professional code of ethics [48].

Failure to perform according to standards has other negative consequences as well: dissatisfied patients, loss of staff and patient time and most importantly lost opportunities. Given limited resources, effective interventions and strategies to enhance performance according to standards are vital for achieving sustainable and quality health services [9]. The long term impact of non- adherence and use of national minimum healthcare facility standard is drug resistance, increase mortality and morbidity rate [10].

The growth of private health facilities may be linked to society's health-care needs, private sector customer management, and the private health sector's ability to provide greater access to advanced and up-to-date medical services facilities and technologies. Furthermore, the private sector is more likely to recruit highly skilled professionals and medical care practitioners than the public sector.

Technology and the acquisition of advanced skills usually go hand in hand. Existing ad hoc research suggests that many clinicians believe these factors have a significant impact on their practice.

Political stability and the government's commitment to supporting the private sector were also important factors in promoting private sector growth. Ethiopia's federal government is now a proponent of the private sector, with favorable laws and regulations for health-care investors.

Biomedical instruments and facilities are tax-free, and the government is generous with land for hospital building.

As previously noted, despite the fact that the private health sector has expanded dramatically, it continues to face numerous challenges. The most serious issue that all providers face is a scarcity of qualified physicians, especially doctors in specialty fields Africa Health Workforce Observatory

(AHWO) 2010. It is important to recruit and retain skilled and qualified staff in order to provide high-quality care. The growth of health human resources and their preparation has not kept pace with the growing number of facilities, according to private providers.

There is a widespread lack of skilled professionals, particularly in certain areas of specialization, because such highly specialized and sub-specialized medical training is not widely available in the country. As a result, the private sector has been forced to recruit from other nations, but they lack the ability to do so. The availability of medicines is also the second significant factor. Regulated drug development, delivery, and importation. The number of pharmaceutical firms is small, and there is a large difference between drug demand and supply.

The availability and expense of skilled manpower, the availability and cost of medications, the availability, cost, and maintenance of bio-medical equipment and technology, and the cost of capital and funding structures are some of the critical factors affecting private providers. This study was carried out to assess the level of health workers awareness of health facility standards and their proper utilization of those standards by health workers. The study result will help clinic managers or owners, health professionals, Addis Ababa FMACA, Addis Ababa City Administration Health Office, and other responsible bodies know the status of health workers awareness and adherence towards health facility standards and appropriate intervention mechanisms for future improvements. Children with Down syndrome and follow up at black lion specialized teaching hospital in Addis Ababa in 2019.

### Significant of the Study

This study sought to provide scientifically sound evidence on the existing level of minimum standard utilization of health care facility that will be the useful input for policy makers, administrators, researchers and academia, private and public health facilities. Standardized healthcare service delivery improves the trusts of clients/patient and healthcare provider satisfactions and resource abuse. Assessing awareness and adherence to healthcare facility standards among health workers in private medium clinics has immediate relevance for the management of health services and also it is a turning point for

health workers working in any health care facility to update themselves in order to aware and adhere to the national minimum requirement healthcare facility standards and saves also the professionals from doing mal practices which is currently the issue of medico-legal and also it will be guarantee for health workers to do with the recommended work descriptions and scope of practices. The national medium clinic minimum requirement standard mainly focuses on 4p's which is assessing of premise, professionals, product and practices.

Therefore, this study will help the clinic managers or clinic holders, health workers, FMOH, Addis Ababa food medicine health care administration and control authority (AFMHACA) and other responsible bodies to know the status of the implementation and design, appropriate intervention mechanisms for future improvements and it is important to establish whether there is any gaps in compliance with minimum requirement standards in order to take corrective actions. The study was also mainly focusing in Addis Ababa, where there could be relatively better private health facilities, experienced health workers and where the private health sector has relatively better capacity and organized.

## Objectives

### General objective

To assess awareness and adherence to health facility standards among health workers in selected private medium clinics of Nifas silk and Kolfe keraniyo sub cities in Addis Ababa Ethiopia 2023.

### Specific objectives

- To assess awareness of health workers to health facility standards among health workers in selected private medium clinics of Nifas silk and Kolfe keraniyo sub cities in Addis Ababa Ethiopia 2023.
- To assess adherence of health workers to health facility standards among health workers in selected private medium clinics of Nifas silk and Kolfe keraniyo sub cities in Addis Ababa Ethiopia 2023.

## Research Method and Material

### Study area and period

The current metro area population of Addis Ababa in 2023 is 5,461,000, a 4.46% increase from 2022. The metro area population of Addis Ababa in 2022 was 5,228,000, a 4.43% increase from 2021.

The study was conducted in Addis Ababa the capital city of Ethiopia, Specifically Nifas Silk and Kolfe Keraniyo Sub cities. Addis Ababa has eleven independent sub cities and one hundred seventeen Woreda. Its area is estimated to be 530 Km2 with altitudes ranging from 2,200 to 3,000 m above sea level, average temperature of 22.8°C and average rainfall of 1,180.4 mm and has seven functional public

General hospitals and three under construction, 98 functional public health centers and 23 health centers under constructions, 22 private general hospitals and 3 private primary hospitals, 1,071 all types of private clinics including 290 private medium clinics and 816 drug stores and pharmacies [29]. The data was collected from July to August 2020 at selected private medium clinics of Addis Ababa, Ethiopia.

### Research Design

The study used cross sectional design and Quantitative methods approaches of data collection.

### Population

### Source of Population:

All health workers working in private medium clinics Addis Ababa city in Kolfe Keraniyo and Nifasilk subcities administration.

### Study population:

Selected health workers who were working in private medium clinics in Addis Ababa city, Kolfe Keraniyo and Nifasilk Sub cities administration during the study period.

### Eligibility criteria

### Inclusion criteria

All health workers who were working in the selected private medium clinics in Addis Ababa city, in Kolfe Keraniyo and Nifasilk sub cities administration during the study period and worked at the institution for at least three months were included to the study.

### Exclusion criteria

Health workers who were working at dental medium clinics, optometry medium clinics, ophthalmology medium clinics and other linics such as home based or mobileclinics were excluded from the study.

### Sample size determination

Sample size was determined by using single population proportion formula, 95% confidence interval with 5% margin of error.

$$n = \frac{(Z\alpha/2)2\ P\ (1-p)}{d2}$$

$$n = \frac{(1.96)2(0.5)\ (0.5)}{(0.05)2} = 384$$

Where

$P$ = no previous study was found on the proportion of awareness and adherence of health workers towards FDA medium clinic standard. So, to obtain maximum sample size 50% proportion will used by considering good awareness and adherence.

$d$ = margin of error = 0.05;

$Z\alpha/2$ = the value of Z in the standard normal distribution that corresponds to 95% confidence level=1.96

$n$ = the required sample size so, $n$ = 1.962 0.5(1−0.5) 0.5 2 = 384

Then by considering 10% non-response rate the final sample size becomes 384

Sampling procedure

There were 460 private medium clinics in Addis Ababa city administration and first by having all the lists of the clinics; two sub cities which was Kolfe Keraniyo and Nifas Silk Lafto were selected using a simple random sampling technique from the total of eleven sub cities found in Addis Ababa city administration. Among all the clinics, a total of 134 private medium clinics (70 private medium clinics found in Kolfe keraniyo and 64 private medium clinics found in Nifas silklafto sub cities). Among these a total of 60 private medium clinics which 32 private medium clinics from Kolfe Keraniyo sub city and 28 private medium clinics from Nifas Silk Lafto sub-city as a study area were randomly selected from the lists of the clinics and proportionally allocated to both sub-cities. Then the number of respondents from each selected private medium clinics; were selected proportionally by using lottery method from each department (HRM, OPD room, Emergency/injection room, Laboratory room, recording room and housekeeping room) until the calculated sample size was achieved.

### Data Collection procedures and tools

The quantitative self-administered written questionnaire was used to collect the data which was developed from the EFMHACA (Ethiopia food medicine health care administration and control authority's medium clinic minimum requirements ES3633.2012) guideline. Ten BSc nurse or/and public health professionals were recruited as data Collectors and four health professionals recruited as supervisors. Both data collectors and supervisors were trained on the aim of the study, the study procedures, data collection instruments, and research ethics.

The data collection instrument was pre tested for clarity and to know the time it took to complete the data of private medium clinic requirements other than the study areas and then revised accordingly. The questionnaire, includes questions on socio-demographic characteristics of respondents, specific practice area and questions to assess the level of health workers awareness and adherence toward the Ethiopian medium clinic minimum requirements.

### Data Analysis

The data was coded, typed and entered in to Epi.Data3.1 software and exported to SPSS version 21for final analysis. Descriptive statistics including frequencies and proportion was used in order to summarize variables. To determine the association between each variable binary logistic regression model was used. Bivariate analysis was done in between each explanatory variable and the outcome variables. Then these variables which had an association at p-value less than 0.05 were considered for further multivariate analysis. Variables with p-value less than 0.05 during multivariate analysis were considered as statistically significant. Both crude odd ratio (OR) and adjusted odd ratio (AOR) with 95% confidence interval was used to estimate the association between variable and control for possible confounding factors. Data was presented in texts, tables and figures.

### Operational definitions

Healthcare workers; all health work forces working in the private medium clinic at a time of data collection. They may include medical doctors, health officers, BSC and diploma nurses, laboratory professionals, recording and housekeeping workers.

Health professionals: - All medical professionals working in a medium clinic who serve, diagnosis, care, counselling and prevention of human disease, disability and other physical and mental impairments or services directly to patients. Or all health workers working in a medium clinic excluding receptionist and janitors.

Minimum requirement: -a criteria or qualification that a medium clinic must have in order to put in use. (Ethiopian medium clinic minimum requirements)

Private clinics: - refers to private-for-profit medium clinics

Awareness: - Having knowledge or well informed about the Ethiopian medium clinic minimum requirements. So, those who were scored above the mean score of the awareness related questions were considered as having a good awareness and those who scored below the mean score were categorized

under poor level of awareness.

Adherence: - The action of making practical and effective use of Ethiopian medium clinic minimum requirement standard. Based on this those who scored 75% and above were grouped under 'good', those scored 51% to 74% are grouped under 'medium' and those who scored 50% and less are grouped under 'low'.

Non Health: - All peoples working in a medium clinic whose educational backgrounds are other

than health or not health related and or peoples who does not delivers care or services directly to patients or not involving or concerned with medical care or the field of medicine.

### Ethical considerations

Ethical clearance was obtained from the ethical Review committee of Rift Valley University Abichu Campus& Addis Ababa Public Health Research and Emergency Management Directorate Participants were received information on the purpose of the study, respondent selection procedures, and harms and benefits of the study. The respondents were informed of their right to refuse or agree to participate in the study, or discontinue their participation whenever they feel the need. Privacy was maintained or assured during data collection, and confidentiality of the data was also be assured. And they were asked to participate in the study as well as they voluntarily sign in an informed written consent form.

## Result

### Informant's Socio Demographic Distribution

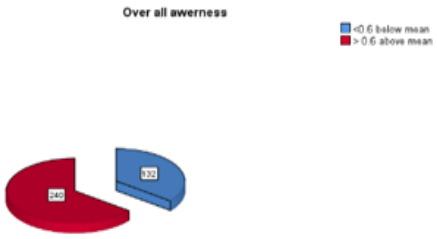
The survey had 372 participants, resulting in a 96.8% response rate because responders who refused to answer the questions had to be replaced. The mean age of the respondents was 26.82 (SD=21.29) years. Among the respondents, relatively higher portion of them which 93 (37.2%) were in the age interval of 21-25 years, 157 (62.8%) were female, 136 (54.4%) were unmarried, 119 (47.6%) had diploma/level4 educational status, 77 (30.8%) were supporting staffs (none health professional) and 51 (20.4%) laboratory head with respect to the current position. Further, 121 (48.4%) had two years and below works experience within the institution, whereas 136 (54.4%) of them had 5 years and above as a total year of working experience. Regarding monthly income of the study participants 98 (39.2%) of them had 2000 and below of Ethiopian birr.

### Information about Ethiopian medium clinic standards related characteristics of the respondents

Regarding to information about Ethiopian medium clinic standards related response of the study participants, the majority 168 (67.2 %) were heard about Ethiopian medium clinic standards, even though 196 (78.4%) of them had no any training on it. Written documents (30.8%) are source of infromation. In addition, 264 (98.4%) them had no on job trainings on it. Also, though all of them were register at FMHACA, 200 (80.0%) of them were not participated in informing other staff about Ethiopian medium clinic standard.

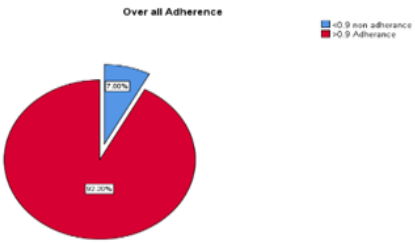
### Level of health workers awareness of about Ethiopian medium clinic standards

The current study revealed that the overall level of good awareness toward the Ethiopian medium clinics standards among health workers working at medium clinics was 240(64.5 %).




### Specific level of adherence to Ethiopian medium clinic standards

The overall adherence toward Ethiopian medium clinic standards among the professionals were 343(92.2%).




## Discussions

The current study found that 22.4 % of the health workers working at medium clinics had good level of awareness toward Ethiopian medium clinic standards, which is lower than the previous study finding which was conducted in North Showa Zone Oromia Region of Ethiopia, which reported 78.9% the health workers were aware of the manual listing and control policies and guidelines for healthcare workers [37] and from the other study which was done in Manya Krobo District of Ghana report that only 37.0% of health care workers knew about the standard precautions [38].

Further, the other study from India mentioned that 70.5% of the participants were aware and able to identify all of the components of the minimum standard precaution [39]. Whereas, it was quite higher as compared to the study that was conducted in North Eastern Nigeria which reported that 13% of the health workers had good knowledge toward universal precautions [40]. The variation might be due to the difference in sample size which involving 100 HCWs in Ghana [38] and 361 in North Showa Zone Oromia [37], and difference in place of study country [38, 40].

Further, the current study revealed that 55.2% of the health care workers working at medium clinics had overall level of poor adherence toward Ethiopian medium clinic standards. This implies higher proportions of the health workers were not adhered to minimum national recommended health facility standards. This might be related to lack of skill and knowledge on the minimum requirements. Because, lack skills and knowledge are among the different barriers that could lead HCWs impaired to provide comprehensive service and unable adhere with the standard [41].

The current study also tried to identify factors associated with level of awareness and adherence of health workers toward the minimum Ethiopian medium clinic standards. And, with respect to age those who were in the age interval of 21-25 years and 26-30 years of old were 0.19 and 0.06 time protective which means they were 0.81 and 0.96 times less likely to be not adhered with the standards as compared to those who were 20 years and below. This implies being in the age interval of 21-30 years are protective from being having poor level of adherence. Even if there might be different reason for the discrepancy on the demographic characteristics of individual's level of adherence, the increment in age may create a chance the HCWs to learn from their experience as well as academic careers. Education slightly improve healthcare workers' adherence to Standard Precautions [42]. Whereas, the integrative literature review study mentioned poor training, risk behaviors, unawareness of the importance of Standard Precaution, insufficient availability of personal protective equipment and inappropriate work conditions [excessive workload and reduced teams] as the main reasons for low adherence of health workers to standard precautions concerned [43].

In addition, during multivariate logistic regression of awareness, health workers who were not participated in informing other staff about Ethiopian medium clinic standard were 1017.49 times more likely to have poor awareness about the Ethiopian medium clinic standard as compared to who were involved. This could be associated the information given about ES3613 2012 standard.

Health organizations must educate their staff to increase the level of awareness toward universal or standard precaution, and increase the quality of patient care [44]. This is supported by the study

finding from two Public Health facilities of Nigeria which described that 57.7% of the HCWs got to awareness about universal precaution in the hospital, while only 28.5%, 4.6% and 9.2% learnt about it while in school, from workshops and the media respectively[45].Pre-service and earlier training are critically important in establishing a competent health care workforce, also regular refresher and in-service education opportunities are necessary to ensure that HCWs to have retained awareness and adherence toward health facility standards [41, 46].

## Strength and limitation of the study

### Strength of the study

As per of my review of different literature, this is the first study at the study area as well as national level to assess level of awareness and adherence toward a minimum national recommended health facility standard among health workers working in selected private medium clinics in Addis Ababa, Ethiopia.

### Limitations of the study

Among the limitation of this study, the fact related to the cross-sectional design used, which simultaneously evaluate variables of the effect of interest and their associated factors, should be emphasized. Thus, it could not possible to identify whether influenced the associated factors or the outcome variables such as awareness and adherence toward health facility standards. Second, since this was the first study to address the current topic, there was a scarcity of published literatures to make detail comparative explanation the current study finding with the previous study findings.

## Conclusion and recommendation

### Conclusions

The current study result indicated that most of the study participants had poor level of awareness and poor adherence toward Ethiopian medium clinic standards. Even though, the low adhesion to standard is linked to individual aspects of workers, employers and educational institutions, the factors such as age of the health care providers with level of adherence and being participated in informing other

staff about Ethiopian medium clinic standard with level of awareness had statistically significant association. Therefore, in order to provide crucial and potentially life-saving services, health care providers should have a better adherence toward the health facility requirements.

**Recommendations**

To the health institution, Addis Ababa FMHACA, Ministry of Health;

- Addis Ababa FMHACA, Ethiopian Ministry of Health and other related health institutions should develop a regular schedule to educate and desensitize the Ethiopian medium clinic standard for all health care providers who are working in private health institutions.
- Providing continuous pre-recruitment and on job educational training and awareness creation on Ethiopian medium clinic standard by the health institutions is essential.Ensuring a regular assessment of health care provider's level awareness and adherence toward the standards is an important intervention to improve the overall health care service.
- Generally capacitating the healthcare providers level of awareness and adherence toward the standards and regular supportive supervision or continuous monitoring and evaluation will have its own contribution in promoting health care service and system of the country.

To researchers;

- To conduct a comparative study by including government health institutions
- Better to use a mixed qualitative and quantitative data collection method.

recommended. In addition, in order to detect the possible Mvf malnutrition in the elderly MNA questionnaire for the elderly at the time of admission and also recommended its completion.

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