

The impact of implementing quality in the forensic morgue in Mecca

Nawaf.N.Ahmed¹, Hani.M.Alqurashi², Ayman.H.Ahmad³, Hani.MS.Sharkhan⁴,
Ameen.H.Alansari⁵, Mohammed.A.Boties⁶, Yasser.K.Alghamdi⁷,
Abdullah.M.Alahmadi⁸, Dhakeelallah.D.Almusoudi⁹, Salem A.Alghamdi¹⁰, Abdulhadi
.A. Alqurashi¹¹, Hisham. N. Awlia¹²

^{1,2,3,4,5,6,7,8,9,10,11,12}Ministry of health Forensic medicine department in Mecca

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ABSTRACT

This current study aims to know the impact of applying quality standards in the forensic medicine refrigerator, and the impact of employees applying quality standards at work. The questionnaire was prepared via Google Drive and distributed to all employees of the Forensic Medical Services Center in Mecca (administrators, technicians, and doctors). The questionnaire was distributed to them via the social networking program (WhatsApp), and responses were obtained via email. It concluded that the principles and basics of quality are applied in the forensic morgue at a rate of 81.8%, which is a good percentage.

Keywords:the impact, of implementing quality, in the forensic morgue, in Mecca.

1. INTRODUCTION

Mortuary ⁽¹⁾ is a place designated for the bodies of the dead. It may be called a morgue if it is a place designated for dealing with corpses in terms of dissection ⁽²⁾⁽³⁾⁽⁴⁾⁽⁵⁾. It is a place where forensic medicine is practiced. Types of morgues Slices with temperatures above zero Bodies are kept in this type of morgue between 2 and 4 ⁽⁶⁾ degrees Celsius, and it is recommended that the morgue wall be insulated and a thickness of no less than 80 mm ⁽⁷⁾. These morgues are typically used to preserve bodies for up to several weeks, but they do not prevent decomposition, which proceeds at a slower rate than at room temperature ⁽⁸⁾⁽⁹⁾. During the forensic examination of the corpse, it is necessary to establish the presence and degree of alcohol intoxication. The correct determination of ethanol content in the blood is important for law enforcement officers investigating the causes of death and employees of insurance companies making decisions about payments to insured people ⁽¹⁰⁾. The fact that alcohol is present in biological fluids at the time of death does not present difficulties for conducting research as soon as possible after taking the biological material. Difficulties arise for district doctors and forensic experts due to the territorial remoteness from forensic chemical laboratories since it is impossible to deliver sectional material on the day of the forensic autopsy. The same difficulties may arise in a disaster situation, i.e. in the event of an accident mass death of people when before conducting a forensic chemical study for the presence of alcohol it is necessary firstly to conduct a molecular genetic or medical-forensic examination, which naturally takes a certain period of time during which samples for chemical research are stored ⁽¹¹⁻¹⁶⁾. Proficiency testing is a requirement of all accredited forensic science service providers. These tests provide insight into where errors occur and how they can be remediated, as well as serving as a means to assess training, methods, and interlaboratory differences ⁽¹⁷⁾. Open proficiency provides a tool to assess the performance of analytical steps but is limited for testing the entire process. Most proficiency tests are open, or declared, and as a result, forensic practitioners are aware they are being tested. This awareness often occurs because the test items do not resemble evidence and submissions received in the normal workflow of a forensic laboratory.

2. MATERIAL AND METHODS

The study began in (the city of Mecca in the Kingdom of Saudi Arabia), and the study ended with writing the data collection in June 2024. The researcher used descriptive analysis, an approach that uses quantitative or qualitative description of the social phenomenon (the impact of implementing quality in the forensic morgue in Mecca) The independent variable (the percentage of applying quality in the forensic morgue in Mecca annually) and the dependent variable (the percentage of applying quality in the forensic morgue in Mecca). This type of study is characterized by analysis, reason, objectivity, and reality. It is also concerned with individuals and societies, as it studies the variables and their impact on the health of the individual, society, and the consumer,

and the spread of diseases and their relationship. For demographic variables such as age, gender, nationality, and marital status. Status and occupation⁽¹⁹⁾, and use the Excel 2010 Office suite pie chart to sort the results⁽¹⁸⁾. The questionnaire is a wonderful and useful tool for collecting a huge amount of data, but the researchers were not able to conduct personal interviews with the participants in the online survey, the questionnaire was only answered electronically, it consists of fifteen questions, all of which are closed-ended.

3. RESULTS AND DISCUSSION

The percentage of approval in the questionnaire was 100%, and the average age of participants was as follows: from the age of 25-34 years, from the age of 35-44 years (both are the same rate, 31.8%), from the age of 45-55 years, 27.3%, and from the age of 56- 60 years, 9.1%. Their gender was male, 77.3%, and female, 22.7%. Their professions were as follows: male and female technicians, their percentage 72.7%, and male and female administrators by 27.3%. As for the educational status, it was as follows: secondary diploma 13.6%, health diploma 40.9%, university 36.4%, holders of high school, master's degrees and doctorates 0%, forensic medicine consultant 0%, specialist doctor Resident physician and forensic specialist, 4.5%. As for the responses to the questionnaire questions, they were as follows: First question: Is there a working guide that explains the mechanism and method of working in a forensic morgue? Yes, 81.8%, and No, I don't know. Both are the same percentage, 9.1%. The second question: Does the work manual explain how to deal with cases according to their current situation? Yes 77.3%, No 13.6%, and I don't know 9.1%. Question Three: Is there a work guide that explains the infection control mechanism in the forensic morgue from the Ministry? Yes, 86.9%, No, 4.5%, and I don't know, 9.1%. Question four: Are medical supplies (gloves, face mask, head cover, shoe covers, medical apron) used while receiving cases at the forensic morgue? Yes, 95.5%, No, 0%, and 4.5%, I don't know. fifth question: Is there a job description for all forensic medicine workers, including technicians and doctors, that explains the responsibilities of each of them? 95.5%, No, 4.5%, and I don't know, 0%. Question six: Are disinfectants and sterilizers used before and after completing cases in the morgue in forensic medicine? Yes, 95.5%, no, 4.5%, and I don't know, 0%. Question seven: Are the principles and basics of working in forensic medicine adhered to, especially by technicians and doctors? Yes, 95.5%, no, 4.5%, and I don't know, 0%. Question eight: Are the principles and basics of quality applied in the forensic morgue? Yes, 81.8%, No, 4.6%, and I don't know, 13.6%. Question nine: Are hands washed before and after finishing work in the forensic morgue? Yes 95.5%, No 4.5%, and I do not know 0%. Question ten: Are the instructions for working in the forensic morgue adhered to? Yes 100%. Question eleven: Is the forensic morgue cleaned before and after completion of the forensic morgue with sterilizers and disinfectants? Yes, 95.5%, no, 0%, and I don't know, 4.5%. Question 12: Are forensic waste (medical supplies) thrown away in the containers designated for them? Yes, 95.5%, no, 4.5%, and I don't know, 0%. Question thirteen: Are laboratory samples taken in a proper manner to specialized medical laboratories to be examined to obtain results? Yes, 95.5%, No, 4.5%, and I don't know, 0%. Last question: Are cases and injuries examined and documented using a camera and x-rays by a radiology technician in suspected cases? Yes, 90.5%, no, 0%, and I don't know, 9.5%.

Table 1: The impact of implementing quality in the forensic morgue in Mecca according to participates

The impact of implementing quality in the forensic morgue in Mecca	Yes	No	I don't know
Are the principles and basics of quality applied in the forensic morgue?	81.8%	4.6%	13.6%
Are hands washed before and after finishing work in the forensic morgue?	95.5%	4.6%	0%
Is the forensic morgue cleaned before and after completion of the forensic morgue with sterilizers and disinfectants?	95.5%	0%	4.5%
Are forensic waste (medical supplies) thrown away in the containers designated for them?	95.5%	4.5%	0%

4. CONCLUSION

Quality principles and basics are applied in the forensic morgue 81.8%. Hands are washed before and after completing work in the forensic morgue, 95.5%. The forensic morgue is cleaned before and after completing the preparation of the forensic morgue with sterilizers and disinfectants, 95.5%. forensic medical waste (medical supplies) is disposed of in designated containers 95.5%.

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