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## Evaluation of the effectiveness of infection control and its impact on the performance of Forensic Medicine work in MOH

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### Abstract

This research aims to define clear, documented, and approved infection control standards by the Ministry of Health for forensic medicine, and their impact on the performance of work in forensic medicine. The researcher and his colleagues distributed this electronic questionnaire over the phone and via the Internet and social networks. On more than 1000 forensic medicine employees only, in various cities of the Kingdom, more than 550 answers were obtained and no interviews were conducted due to the Corona Virus (Covid-19) pandemic, and also due to the distance between the various cities of the Kingdom of Saudi Arabia.

**Keywords:** FMC, Infection control, GDIPC: General Directorate of infection prevention & control. GAOFMC: General Administration Of forensic Medicine centres

### 1. Introduction

Infection control indicate the arranging for the prevention of nosocomial infections or infections associated with the provision of health care services. The issue of infection control addresses the factors associated with the spread of infection within health care settings (whether from patient to patient, or from patients to hospital staff, or vice versa from staff to patients, or among staff members themselves), including prevention (either from During sanitary measures of hand hygiene, cleaning/disinfection/sterilization, vaccination, and surveillance), as well as procedures for controlling/investigating the spread of suspected infection within a health care delivery area (monitoring and spreading infection), as well as management (province of outbreaks). infection). Hence the commonly used title within the healthcare field here is "Infection Control and Prevention" [8]. The waves of epidemics caused by unfamiliar illnesses in the last decade have aroused interest widespread among the general public, as well as among health services workers, and the media played a role great in shedding tears on the various challenges faced by health facilities in mandatory epidemics such as SARS, bird flu, swine flu, and the modern addition of Corona and EBOLA. The Ministry of Health has replied to the challenges of new epidemics with full power, and the Ministry's Agency Public Health and the Assistant Agency for Preventive Health and its general departments: General Administration, Environmental health and occupational health, the General Administration for Infectious Diseases Control, and the General Administration

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to conflict infection in health facilities, the field epidemiology program plays an important role in issuing proof Guidelines, policies and, procedures for dealing with various stand out epidemics, In addition to other cases of infection known and popular before in society and in establishments health<sup>[4, 7]</sup>.

Transmission of infection within health facilities is a danger to the safety of patients and providers of health services, and the risk of transmission of infection may go on even after the death of the patient as a result of health care providers dealing with the body of the deceased, which may include some infectious microbes that threaten the health of workers in death the departments and medical centers forensic law in the absence of the application of the standard for provision infection control<sup>[6]</sup>.

The workers in the departments of refrigerators and forensic medicine are among the most at-risk groups Transmission of infectious microbes when dealing with dead bodies and the deceased, so can be reduced. These general risks stem from the application of standard infection control precautions These risks include: 1- Puncture injuries with sharp instruments.

2- Exposure to infectious body fluids through droplets during washing or autopsy, which may also arise through the use of water in the washing process, sawing of bone, or dissection of lung tissue or other soft tissue, as well as exposition to blood or other vital bodily fluids, is at risk Infection. The goal of infection control is to prevent and reduce the risk of transmission of infection to health care providers at the time of the patient's death, all workers in the mortuary department, the forensic medicine department, and family members of deceased patients. Standard principles of infection

Prevention and control. These principles were originally referred to as 'universal precautions' and are often referred to as 'standard precautions, To break the chain of infection the standard principles of infection control should be applied, which are: 1-Hand hygiene. 2-Correct use of personal protective equipment (gloves, aprons, visors, and masks). 3- Control of the environment, which incorporates decontamination (of healthcare equipment and the healthcare environment; management of blood and body fluid spillages, isolation and cohorting, respiratory hygiene, safe management of sharps and stain injuries, safe severes practice, safe disposal of clinical waste, safe handling of line and laundry. The aseptic non-touch technique is included here, as it is essential for infection prevention and control<sup>[1]</sup>.

## 2. Material and Methods

The research was conducted in the Kingdom of Saudi Arabia from January 2022 to May 2022. The researcher used the descriptive-analytical approach, as it relies on the study of reality and is interested in describing it accurately and expressing it qualitatively or quantitatively, the quantitative expression describes the phenomenon and clarifies its characteristics, while the quantitative expression gives us a numerical description It shows the amount or magnitude of this phenomenon and its degrees with other different phenomena. This method uses research tools such as questionnaires and interviews, which are considered the most widely used in human studies so far. It also collects information and data on various representative astronomical, physical, chemical, and biological phenomena<sup>[3]</sup> to perform statistical analysis such as determining the averages and

statistics descriptive been used to contrast between the averages analysis and use Excel program Office Group 2010 graphics histogram to arrange results by dragging them on the statistical program<sup>[5]</sup>.

## 3. Results and Discussion

The questionnaire was used in this research because it was not possible to conduct interviews with the participants due to the distance between different countries of the Kingdom of Saudi Arabia, and also the fear of infection with the (Covid-19) as the virus did not completely and permanently disappear from society because the questionnaire is an appropriate tool for obtaining information and data And facts related to a specific reality<sup>[3]</sup>, where the questionnaire was in the form of questions consisting of 11 questions in a close format, the online approach was also used to generate valid samples in similar studies in KSA and other countries<sup>[2]</sup>. Regarding the first question, which was about the availability at work of enrolling in specialized courses in infection control, 37.1% answered that they strongly agree, while 30.6% agree, and those who do not know, and strongly disagree with an equal 8.1%, while 16.1% disagree. As for the second question, which was about having sufficient information about ways to combat infection at work, 33.9% answered that they strongly agree, while 56.5% agreed, and those who did not know were 1.5%, and the percentage of disapproval was 8.1%, while the percentage of strongly disagreed was 0%. Regarding the question of third, which was about I know infection control standards, 35.5% answered that they strongly agreed, while 53.2% agreed, those who did not know and strongly disagreed were equal by 2.2%, and the percentage of those who disagreed was 6.9%. Regarding the fourth question, which was about the application of all infection control procedures in the Forensic Medicine Department, 30.6% answered that they strongly agreed, while 40.3% agreed, those who did not know were 11.3%, and those who disagree were 8.1%, and the percentage of strongly disagreed was 9.7%.

Regarding the fifth question, which was about knowing exactly the correct way to wash hands, 72.1% answered that they strongly agree, while 27.9% agree, while the percentage of those who do not know, disagree and strongly disagree is the same at 0%.

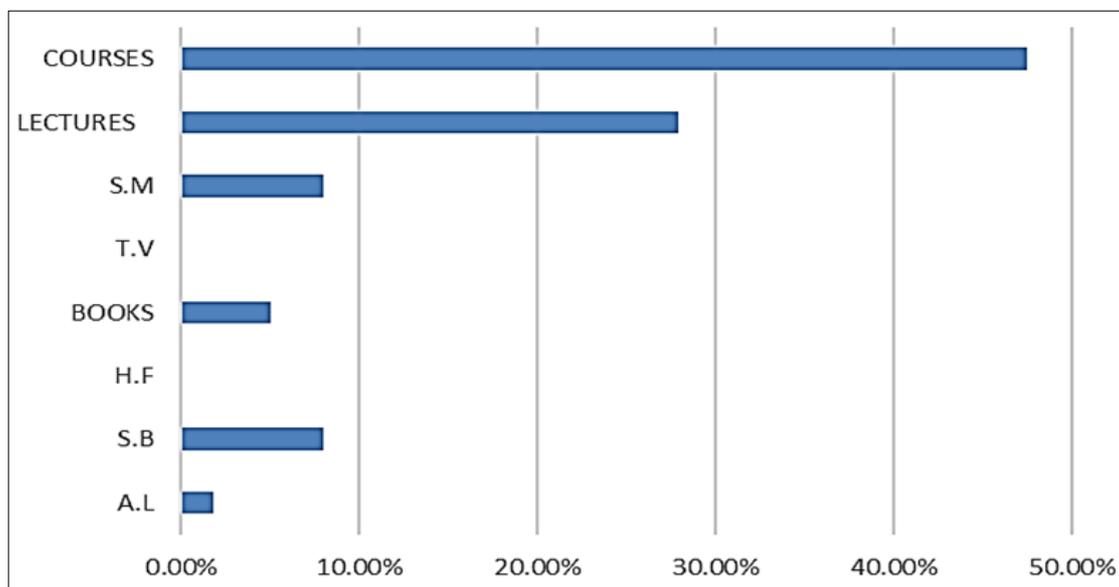
With regard to the sixth question, which was about all forensic work units with a high level of cleanliness, 30.6% answered that they strongly agree, while 35.5% agree, while 6.4% do not know, 19.4% disagree, and 8.1% strongly disagree. Regarding the seventh question that I had knowledge of the objectives of forensic infection control, 35.5% answered that they strongly agreed, while 51.6% agreed, while the percentage of those who did not know was 8.6%, disagree with 3% and strongly disagree with 1.3%. As for the eighth question about I would like to know more about infection control, the percentage of those who strongly agreed was 59.7%, and those who agreed was 40.3%, and the percentage of those who did not know, disagree, and strongly disagreed were 0%. For the ninth question about having sufficient information about infection control standards in the work environment and its tasks, the percentage of those who strongly agreed was 30.6%, and those who agreed was 54.8%, and the percentage of those who did not know was 6.5%, disagree with 8.1%, and strongly disagreed 0%. As for the tenth question about

whether there is a method or plan for implementing, activating and recording OVR at work, especially for mortuary workers (technicians and forensic doctors), the percentage of those who strongly agreed was 32.3%, and those who agreed was 40.3%, and the percentage of those who did not know was 16.1%, those who disagreed 6.3%, and those who strongly disagree 5%. As for the eleventh

(last) question about what is the source of your information about infection control standards, the courses were 47.5%, the electronic lectures were 27.9%, the social media and the information panels were 8%, the books were 5%, the attended lectures 1.8%, and finally television and exhibitions health at 0%.

**Table 1:** The percentage of the effectiveness of infection control and its impact on the work of forensic medicine centers in various cities of KSA

Question	The percentage of responds				
	Strongly agree	Agree	Don't know	Disagree	Strongly disagree
1-It is available at work to enroll in specialized courses in infection control	37.1	30.6	8.1	16.1	8.1
I have enough information about ways to fight infection at work	33.9	56.5	1.5	8.1	0
infection control standards	33.5	53.2	2.2	6.9	2.2
We have all the infection control procedures in the forensic department	30.6	40.3	11.3	8.1	9.7
Know the correct way to wash hands	72.1	27.9	0	0	0
All forensic work units are of a high level of cleaning	30.6	35.5	6.4	19.4	8.1
I know the objectives of forensic infection control	35.5	51.6	8.6	3	1.3
I would like to learn more about infection control	59.7	40.3	0	0	0
I have sufficient information about infection control standards in the work environment and its tasks	30.6	54.8	66.5	8.1	0
I have a method or plan for implementing, activating and recording OVR at work, especially for mortuary workers (technicians and forensic doctors)	32.3	40.3	16.1	6.3	5



**Fig 1:** Regional Forensic Center staff information source on infection control

**Conclusion**

Our rational government, represented by the Ministry of Health, seeks to implement global infection control standards, especially for forensic medicine, because it is important and has a great impact in the field of work in particular, as it has contributed to raising health awareness and education among the various categories of forensic medical personnel (administrators, non-physician specialists, technicians and doctors). legitimate), which will positively affect the members of their families, because the infection control contributes to preventing and reducing the transmission of infectious diseases among members of society, and therefore there is always an urgent need for development, improvement and knowledge of everything new in this field first-hand, especially epidemics such as the Corona pandemic (currently), which Infection control standards are very important in the prevention of (Covid-19), among workers in forensic medical centers in various cities of the Kingdom of Saudi Arabia  
Therefore, the results of the study came as follows:

Most of the forensic medicine workers fully agree that infection control standards have great importance and impact in the field of work, as they contributed through electronic courses and lectures to increase their awareness of the importance of infection control, especially in the mortuary and the mortality mortuary (in terms of full adherence to the importance of wearing personal protection tools to the maximum degree). And the importance of hand hygiene and the tools used at work before and immediately after work, and how to safely dispose of personal protection tools such as (gloves, aprons, gags, head mask, head coverings and shoe covers), and this largely indicates the effectiveness and impact of the application of infection control at work Significantly.

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