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Assessment of Infection control precaution in blood banks in Makkah Al-Mukarramah Saudi Arabia 2022

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Abstract

Background: Health care staffs working in the blood banks are constantly exposed to microorganisms. Many of which can cause serious or even lethal infections. Lab technician in particular are often exposed to various infections during the course of carrying out their lab activities. Therefore lab activities should have sound knowledge and strict adherence to infection control practice and transfusion services are at risk of exposure to pathogenic organisms in blood. While transfusion-transmissible diseases, including AIDS and viral hepatitis, continue to spread especially in developing countries, the issue of safeguarding the world's blood supply is of paramount importance and thus its blood supply has the potential to affect the global community. In recent years, Saudi Arabia blood centres have tried to improve the nation's blood safety. Although substantial progress has already been made, many daunting difficulties remain. Aim of study: To Assessment of Infection control precaution in blood banks in Makkah Al-Mukarramah Saudi Arabia 2022. Methods: This cross sectional study included (200) health care professionals in Makkah City at Saudi Arabia 2022. (doctors, nurses, lab workers) from primary healthcare (PHC) centers an self-administrated questionnaire was constructed by the researcher and was used for data collection. Divided in to 3 parts and contains items i.e., socio-demographic characteristics, questions about infection control precaution regarding infection control in blood banks. Results: there were 200 participants, the majority regarding the degree of availability of needs for precautionary measures the majority of participant answer available were (66.0%) a significant relation were P-value=0.001 X2 99.04. The degree of application of precautionary measures the majority of participant answer The procedures are implemented with high quality were (81.0%).Conclusion: performance toward infection control in blood bank it can be concluded that in spite of having good practice level regarding infection control in blood bank , health care worker had fair Infection control precaution in blood bank not bad, but must be updating knowledge and practice of health care worker through continuing in-service educational programs.

Keywords: *knowledge, practices, infection control, standard, (HCWs) primary, health care, Makkah.*

Introduction

There are Infectious diseases control quality assurance departments that are established at a healthcare facility or institution with the task of implementing infection control programmes and guidelines especially in blood banks(1). Term "Blood Bank" typically refers to a division of a hospital laboratory or primary health care where the storage of blood product occurs and proper testing of blood is performed to reduce the risk of transfusion-related events(2). Blood transfusion services in Saudi Arabia were fragmented and consisted of hospital based Blood Banks and primary health care these blood banks collect process, test and issue blood products (3). Worldwide, the healthcare workforce represents 12% of the working population. Healthcare workers operate in an environment that is considered one of the most hazardous occupational settings. In addition to the usual workplace related exposures, healthcare professionals encounter diverse hazards due to their work related activities (4)

Many infection control measures, such as appropriate hand hygiene and the correct application of basic precautions during invasive procedures are simple and of low-cost, but require staff accountability and behavioral change, in addition to improving staff education, reporting and surveillance systems (5). To utilize these precautions, the human element plays an important role in increasing or decreasing the chances of catching HCAI (6). Therefore, adequate blood bank staff is necessary because a higher patient-to blood bank staff ratio decreases the blood bank infection control.7)) In the occupational health setting HBV is the most easily transmitted blood borne pathogen, followed by Hepatitis C virus, and then HIV.(8) The annual proportions of health care workers exposed to blood borne pathogens were 2.6% of HCV, 5.9% of HBV and 0.5% for HIV, corresponding to about 16,000 HCV infections and 66,000 HBV infections in healthcare workers worldwide.(9) Standard precautions (SPs) are meant to reduce the risk of transmission of blood borne and other pathogens from both recognized and unrecognized sources and the Standard precautions measures replaced the previous Universal precautions. (10)

These injuries result in 70,000 HBV infections, 15,000 HCV infections, and 500 HIV infections(11). Occupational exposure to agents that cause these infections is linked to the fear and prejudice present among health care workers. This fact may make some of the healthcare professionals neglect the health risks in their workplaces and make others looking for continuing education (12)

It is usually recommended that health workers be vaccinated against HBV and vaccination can also protect against infection if administered post exposure. Post-exposure prophylaxis in the form of antiviral medication exists for HCV, but this therapy is not endorsed by the American Centers for Disease Control (CDC) given the low risk that the patient will become infected.(13)

In a health care setting, accidental transmissions of BBPs occur as a result of exposing the skin and mucous membrane to blood and other potentially infectious body fluids; through needle sticks or cuts from other sharp contaminated instruments(14). The World Health Organization (WHO) estimated that each year, among the 35 million health care workers (HCWs) worldwide, approximately 3 million experience percutaneous exposure to blood-borne pathogens (2 million to HBV, 0.9 million to HCV, and 170,000 to HIV((16).

Literature review

The Centers for Disease Control (CDC) estimates that 5.6 million workers in the healthcare industry and related occupations are

at risk of occupational exposure to blood borne pathogens, including human immunodeficiency virus (HIV), hepatitis B virus (HBV), hepatitis C virus (HCV), and others (Occupational Safety & Health Administration (17).

Interestingly, there are existing pathogen inactivation technologies that might minimize the risk of transmission of SARS-CoV-2 via blood transfusion; coronaviruses are highly susceptible to heat inactivation and/or denaturation at acidic or basic pH(18)

In Ethiopia (2019) Beyamo et al assessed the compliance of health care workers with standard precaution practices and identified its determinants in public health institutions. The study included 250 HCWs. Nearly two-thirds (65%) of them had complied with standard precaution practices. Factors significantly associated with compliance to standard precaution practices were experience of ≤5 years, training on standard precaution, having good hand hygiene and availability of (personal protective equipment's)(19)

The American Association of Blood Banks (AABB) and Centers for Disease Control and Prevention (CDC) currently do not recommend any specific SARS-CoV-2-related actions by blood col-lection establishments (20)

Meanwhile, the European Center for Disease Prevention and Control (ECDC) suggests a precautionary deferral from donation of blood for 21 days after any possible expo- sure to confirmed patients.(21)

In Al-Qassim (2018), Al Ra'awji et al evaluated in a multicenter cross-sectional study among 354 HCWs the knowledge, attitudes, and practices regarding guidelines of hand hygiene. The average knowledge score was 63%. Health-care workers aged over 30 years had higher scores than those younger than 30 years. Those at tertiary care hospitals had higher scores than those at secondary hospitals. Almost all had positive attitudes toward hand hygiene as well as adhering to the guidelines regularly. This study concentrated on only hand hygiene as a component of standard precautions.(22)

Additionally, those recovering from COVID-19 should avoid donating blood for at least 28 days after symptom resolution and completion of therapy(23). SARS-CoV-2 infection can result in a spectrum of diseases, from mild respiratory symptoms to severe, life-threatening pneumonia. Therefore, it is critical to consider the potential for transmission of this infection by blood transfusion24))

All the staff members were advised to follow the World Health Organization guidance document on the safety of the healthcare professionals and AABB resource document for blood establishments regarding the COVID-19 outbreak (25)

In Al-Kharj, Alotaibi et al assessed the knowledge of as well as compliance of health care students with standard precautions. Results revealed that among surveyed 353 students, 70% had previously attended an infection control course. The knowledge and compliance with SPs levels were high. The commonest source of information self-learning while the current curriculum was the least reported one. Female students were more knowledgeable and compliant with SPs compared to males. Student`s specialty and academic level were significantly associated with knowledge and compliance regarding SPs. (26)

Rationale

Effective about Infection control precaution in blood banks must know the standard precautions of infection control and having favorable attitude towards them as well as practicing them properly is very critical in controlling the transmission infections in blood banks among HCWs, The difficult challenge faced by the Saudi Ministry of Health is the health care services regarding blood borne infections prevention. services that are provided free of charge to all HCW Saudi citizens, increasing awareness of health and disease . Healthcare workers are at a greater risk of acquiring and transmitting infections through blood transmitting during the course of carrying out their daily usual duties in primary healthcare facilities.

Aim of the study

To Assessment of Infection control precaution in blood banks in Makkah Al-Mukarramah Saudi Arabia 2022

General objective:

To Assessment of Infection control precaution in blood banks in Makkah Al-Mukarramah Saudi Arabia 2022.

Materials and methods

Study design:

This study is descriptive cross-sectional study

Study sitting:

The study has been carried out in the city of Makkah Al-Mokarramah Makkah PHC centers in in Makkah City at Saudi Arabia Region. There are 42 primary health care centers belonging to Ministry of health (MOH) distributed as North (24) and South (18)

Study population:

MOH PHC health care professionals (n=200) distributed as follows: Sample was convenient; it included all 200 healthcare workers (family physicians, laboratory technicians, nurses and janitors)

Study duration: between June and October2022

Sample size:

Sample size was calculated using open Epi online sample size calculator at 95% confidence level with bound on error of 5% regarding standard infection control precautions max sample size required is 200 participants.

Sample technique:

Sample technique was two stage.

At first stage: simple random sampling method has be used to select primary health care centers. At second stage: all the doctors, nurses and laboratory technicians within the selected PHCCs enrolled in the study. There are total primary health care centers. Expected numbers of HCWs per each center are 10. So, we need 20 centers to collect the sample size.

Inclusion criteria:

Primary health care workers (doctors, nurses, laboratory technicians) in PHC center male and female, Saudi and non-Saudi, all ages, those who agreed to participate in the research.

Exclusion criteria:

Pharmacists, dentists, dental assistant . Those who have Vacation, disabled and absent during the data collection period .

Data collection tool and technique:

Data were collected by self-administrated questionnaire.

First part of the questionnaire includes questions about Demographic data of the physicians (gender, age, nationality, Years of experience)

Second part about personal characteristics in blood bank Infection control precaution in blood banks, and practice of standard precautions which including The degree of availability of needs for precautionary measures, and The degree of application of precautionary measures to standard infection control precaution. Score was created for the participants` responses to knowledge questions and statements.

Data analysis:

Data were entered and analyzed using Statistical Package for Social Sciences (SPSS) software, version 24. Descriptive analysis was carried out as the mean and standard deviation (SD) were calculated for quantitative variables, frequency and proportion were calculated for categorical variables.

For comparisons, chi-square and t-test was used for categorical and quantitative variables respectively. p –value ≤ 0.05 was considered significant for all inferential analysis.

Ethical approval:

The ethical approval was taken from the Regional Research Ethics committee. A

permission letter was obtained from the regional director of the city of Makkah Al-Mokarramah Makkah MOH before starting the data collection.

- A written Informed consent was obtained from each participant from commencing the data collection.

- The researcher preserved the confidentiality of the participants at all steps of the study for the data collection, analysis and result.

Budget: Self-funded.

Table 1 Socio-demographic characteristics of participants about Infection control precaution in blood banks.(n-200)

	N	%
Age		
< 30 years	74	37
30 - 35 years	90	45
> 35 years	36	18
Gender		
Female	116	58
Male	84	42
Level of education		
Health technical institute	64	32
Baccalaureates (medical, nursing and science)	84	42
Secondary	52	26
Years of experience		
< 5 years	84	42
5 - 10 years	62	31
10 years	54	27
Nationality		
Saudi	164	82
Non-Saudi	36	18
Marital status		
Married	146	73
Divorced	24	12
Widow	30	15
Occupation		
Nurse	74	37
Lab technician	84	42
Physician	24	12
Chemistrain	18	9

Table 1 shows there were 200 participants, and the majority age in (30-40)years, were (45.0%) while the age(<30)were(37.0%), the majority of them were females (58.0%) while male(42.0%), also regarding the Qualification most of participants Baccalaureates (medical, nursing and science) were(42.0%) followed by Health technical institute were(32.0%), regarding the years of the eexperience the majority of participant <5 years were (42.0%) followed by 5-10 years were(31.0%), regarding the Nationality most of participants Saudi were(82.0%), regarding Marital status the majority of participant are married were(73.0%)followed by Widow were(15.0%), regarding the Nationality most of participants Saudi were(82.0%), regarding Occupation the majority of participant are Lab technician were(42.0%) followed by nurse were(37.0%).

Table 2 Distribution of the participants regarding to their personal characteristics in blood bank Infection control precaution in blood banks

	N	%
Attending training on infection control		
Yes	148	74
No	52	26
Immunization against HBV		
Yes	172	86
No	28	14
Role in blood bank		
Make phlebotomy process/phlebotomy department	46	23
Work in serological department	52	26
Work in component department	36	18
Work in issuing department	42	21
Work in cross-matching department	24	12
Exposure to needle stick injury		
Yes	30	15
No	170	85
In case of exposure to needle stick injury		
No action	1	3.33
Squeeze the injury site	5	16.67
Put dressing on the injury site	6	20.00

Wash the injury site with running water	12	40.00
Disinfect the injury site with antiseptic solution	6	20.00

Table 2 shows regarding Attending training on infection control the majority Yes attend were (74.0%) while No were(26.0%), regarding Immunization against HBV the majority of them Yes were (86.0%) while No (41.0%), also regarding the Role in blood bank the most of participants Work in serological department were(26.0%) followed by Make phlebotomy process/phlebotomy department were(23.0%) but Work in issuing department were (21.0%), regarding the Exposure to needle stick injury the majority of participant No were(85.0)while Yes were(15.0%) regarding the In case of exposure to needle stick injury the most of participant wash the injury site with running water were(40.0%) followed by Put dressing on the injury site and Disinfect the injury site with antiseptic solution were(20.0%)

Table (3) Distribution of the participants regarding Infection control precaution in blood banks measures in (component, serology, and issuing laboratories in blood banks)

The degree of availability of needs for precautionary measures	**Done**		**Not done**		**Chi-square**	
	N	**%**	**N**	**%**	**X^2**	**P-value**
Hand washing is done before and after wearing gloves	176	88	24	12	115.520	0.000
Standard operating procedures (SOPs) are available.	178	89	22	11	121.680	0.000
Authorized person is present	138	69	62	31	28.880	0.000
Using paper towel for drying hands	190	95	10	5	162.000	0.000
Using soap for hand washing	182	91	18	9	134.480	0.000
Staff wearing lab uniform/coat	172	86	28	14	103.680	0.000
❖ **Using available material for waste disposal**						
Safety box for sharps	196	98	4	2	184.320	0.000
Scientific Nursing Journal Ahmed et al.,	156	78	44	22	62.720	0.000
Container for fluid waste	176	88	24	12	115.520	0.000
General waste basket	158	79	42	21	67.280	0.000
Eating food or drinks in labe	38	19	162	81	76.880	0.000
Clean the working surface before starting the work.	178	89	22	11	121.680	0.000
❖ **It is cleaned, with**						
Chlorox	156	78	44	22	62.720	0.000
Alcohol	196	98	4	2	184.320	0.000
Savlon	136	68	64	32	25.920	0.000
Water only	50	25	150	75	50.000	0.000
Others	32	16	168	84	92.480	0.000
Cleaning the working surface after finishing the work.	174	87	26	13	109.520	0.000
Staff wear gloves during working	172	86	28	14	103.680	0.000
Checking expiry dates of kits /reagent are checked	162	81	38	19	76.880	0.000

Equipment checked before procedure.	158	79	42	21	67.280	0.000
Hand washing after finishing the procedure	154	77	46	23	67.280	0.000

Table 3 shows that illustrate participants regarding to infection control measures in laboratory in blood banks. Regarding the hand washing is done before and after wearing gloves the most of participant were don (88.0%)while not done were(12.0%) and a significant relation were P-value=0.000 X2 115.520, Regarding the Standard operating procedures (SOPs) are available the most of participant were don (89.0%) while not done were(11.0%) and a significant relation were P-value=0.000 X2 121.680, regarding the Authorized person is present the most of participant were don (69.0%)while not done were(31.0%) and a significant relation were P-value=0.000 X2 28.880, Regarding the Using paper towel for drying hands the most of participant were don (95.0%)while not done were(5.0%) and a significant relation were P-value=0.000 X2 162.000, regarding the Using soap for hand washing the most of participant were don (91.0%)while not done were(9.0%) and a significant relation were P-value=0.000 X2 134.480, regarding the Staff wearing lab uniform/coat the most of participant were don (86.0%)while not done were(14.0%) and a significant relation were P-value=0.000 X2 103.680,

Regarding the Using available material for waste disposal, show regarding Safety box for sharps, Scientific Nursing Journal Ahmed et al, Container for fluid waste, General waste basket and Clean the working surface before starting the work most of participant were in don respectively(98.0%, 78.0%, 88.0%,79.0% and 89.0%) while all participant in not done and a significant relation were P-value=0.000 X2 respectively (184.320, 62.720, 115.520, 67.280, 121.680) while regarding Eating food or drinks in labe the most of participant in not done were (81.0%) while don were(19.0%) were P-value=0.000 X276.880.

Regarding the It is cleaned, with, show regarding Chlorox , Alcohol, Savlon , Cleaning the working surface after finishing the work, Staff wear gloves during working, Checking expiry dates of kits /reagent are checked, Equipment checked before procedure and Hand washing after finishing the procedure most of participant were in don respectively(78.0%, 98.0%, 68.0%, 87.0% , 86.0%,81.0,79%.0% and77) while all participant in not done and a significant relation were P-value=0.000 X2respectively (62.720, 184.320, 25.920, 109.520, 103.680, 76.880% , 67.280% and 67.280%) while regarding water only or others the most of participant in not done were (75.0% and 84.0%) while don were(25.0% and 16.0%) were P-value=0.000 X250.000 and 92.480)

Table (4) Distribution of the participants regarding Infection control precaution in blood banks measures in donation department in blood banks

The degree of application of precautionary measures	Done		Not done		Chi-square	
	N	%	N	%	X^2	P-value
Donation area is used only for donation	172	86	28	14	103.680	0.000
A separated clean area for phelopetomy process	152	76	48	24	54.080	0.000
Staff wash his/her hand before examining donors	156	78	44	22	62.720	0.000
Hand washing is done before and after examining donor	158	79	42	21	67.280	0.000
Hand washing done in between examination of donors	176	88	24	12	115.520	0.000
Hand washing before wear gloves and after remove it	172	86	28	14	103.680	0.000
Nurse makes hand washing before and after donation process	140	70	60	30	32.000	0.000
they change gloves between donors	166	83	34	17	87.120	0.000
Staff wear gloves	162	81	38	19	76.880	0.000
Staff wearing eye glass during the procedure of pheleptomy.	144	72	56	28	38.720	0.000
Venipuncture site is disinfected	166	83	34	17	87.120	0.000
The staff use70% alcohol as disinfection.	158	79	42	21	67.280	0.000

Staff put used needles in the right box**.**	136	68	64	32	25.920	0.000
The disinfected procedure is done in Circular motion from inner to outer.	144	72	56	28	38.720	0.000
Closed system is applied during phelopetomy process	138	69	62	31	28.880	0.000
Anew bag is used for every venipuncture	194	97	6	3	176.720	0.000
The staff recaps needles after the donation procedure.	154	77	46	23	58.320	0.000
❖ **The blood bag is labeled with**						
Donation date	178	89	22	11	121.680	0.000
Expire date	182	91	18	9	134.480	0.000
Donation number	190	95	10	5	162.000	0.000
Blood group	194	97	6	3	176.720	0.000

Table (4): show the distribution of participants regarding Infection control precaution in blood banks measures in donation department in blood banks, regarding the Donation area is used only for donation the most of participant were don (86.0%) while not done were(14.0%) and a significant relation were P-value=0.000 X2 103.680, regarding the A separated clean area for phelopetomy process the most of participant were don (76.0%) while not done were(24.0%) and a significant relation were P-value=0.000 X2 54.080, regarding the Hand washing is done before and after examining donor the most of participant were don (79.0%) while not done were(21.0%) and a significant relation were P-value=0.000 X2 67.280, regarding the they change gloves between donors the most of participant were don (83.0%) while not done were(17.0%) and a significant relation were P-value=0.000 X2 87.120, regarding the Staff wear gloves most of participant were don (81.0%) while not done were(19.0%) and a significant relation were P-value=0.000 X2 76.880, regarding the Venipuncture site is disinfected the most of participant were don (83.0%) while not done were(17.0%) and a significant relation were P-value=0.000 X2 87.120, regarding the Staff put used needles in the right box the most of participant were don (68.0%) while not done were(32.0%) and a significant relation were P-value=0.000 X2 25.920, regarding the staff recaps needles after the donation procedure the most of participant were don (77.0%) while not done were(23.0%) and a significant relation were P-value=0.000 X2 58.320,

Regarding the blood bag is labeled with Donation date the most of participant were don (89.0%) while not done were(11.0%) and a significant relation were P-value=0.000 X2 121.680, regarding the blood bag is labeled with Expire date the most of participant were don (91.0%) while not done were(9.0%) and a significant relation were P-value=0.000 X2 134.480, regarding the blood bag is labeled with Donation number the most of participant were don (95.0%) while not done were(5.0%) and a significant relation were P-value=0.000 X2 162.000, regarding the blood bag is labeled with Blood group the most of participant were don (97.0%) while not done were(3.0%) and a significant relation were P-value=0.000 X2 176.720.

Table (5) Distribution of Infection control precaution and practice of the healthcare workers about standard precautions of infection control

	N	**%**	**Chi-square**	
			X^2	**P-value**
The degree of availability of needs for precautionary measures				
Available	132	66	99.04	<0.001*
Available to some extent	44	22		
Not available	24	12		
The degree of application of precautionary measures				

The procedures are implemented with high quality	162	81	205.24	<0.001*
The procedures apply to some extent	24	12		
Not applicable	14	7		

This table 4 shows regarding The degree of availability of needs for precautionary measures the majority of participant answer available were (66.0%) followed by (22.0%) of participant answer available to some extent while not available were(12.0%) and a significant relation were P-value=0.001 X2 99.04.

Regarding The degree of application of precautionary measures the majority of participant answer The procedures are implemented with high quality were (81.0%) followed by (12.0%) of participant answer The procedures apply to some extent while Not applicable were(7.0%) and a significant relation were P-value=0.001 X2 205.24.

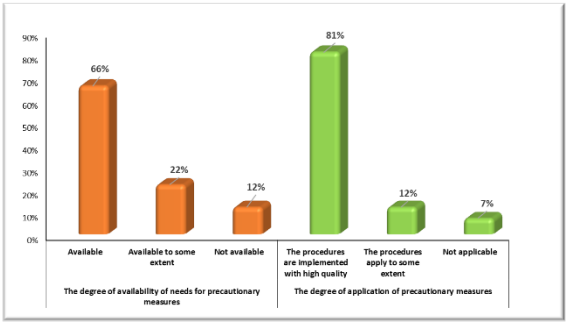

Figure (1) Distribution of Infection control precaution and practice of the healthcare workers about standard precautions of infection control

Discussion

Infection control precaution in blood banks is a common problem all over the world. Therefore, up to date knowledge to blood banks staff very important (Nurse, Lab technician, Physician, Chemistrain) Lab technician skills can play important roles in infection control. Blood banks staff should have the opportunity to practice infection. On a day-to-day basis as an integral part of patients' care that is why the current study was carried out. To Assessment of Infection control precaution in blood banks in Makkah Al-Mukarramah Saudi Arabia 2022 carried out. In our study that was conducted at primary health care center in Makkah Al-Mukarramah Saudi Arabia 2022 revealed from the current study, nearly two thirds of the studied sample aged between 40 to 35 years old. This finding is in concordance with that of (27) emphasizing the need to protect this group of workers in the prime of their life from blood banks infection. In our study showed there were 200 participants, and the majority age in (30-40)years, were (45.0%), majority of them were females (58.0%). Qualification most of participants Baccalaureates (medical, nursing and science) were(42.0%), years of the experience the majority of participant <5 years were (42.0%), the Nationality most of participants Saudi were(82.0%), regarding Occupation the majority of participant are Lab technician were(42.0%) followed by nurse were(37.0%).(See table 1), also the study revealed approximately shows regarding Attending training on infection control the majority Yes attend were (74.0%) while No were(26.0%), regarding Immunization against HBV the majority of them Yes were (86.0%) while No (41.0%), also the study revealed attending training on infection control the majority Yes attend were (74.0%), regarding Immunization against HBV the majority of them Yes were (86.0%), also regarding the Role in blood bank the most of participants Work in serological department were(26.0%), regarding the exposure to needle stick injury the majority of participant No were(85.0), the In case of exposure to needle stick injury the most of participant wash the injury site with running water were(40.0%)(See table 2) study from Nour, et al.(2016) indicated that more than one tenth of studied sample exposed to needle stick injury, these result agreed with (28)

Study by (Saleh et al., 2009) who reported about one-third of one or more exposure . The

variation in exposure from one study to another could be related to workload in the different settings and the safe procedures used to reduce the risk of exposure and could be related to the best practice of no needle recapping among the participants in the current study. Concerning to studied samples' performance of infection control measures in donation department. (27) The present study revealed that (88.0%)of studied sample of health team members who work in blood banks department perform hand washing before and after examine the donors these results in disagreement with who found that none of the studied sample (physicians, nurses or technicians) washes their hands between donors while these findings disagreed with. (29) who reported that near of three-quarters of participants always washed their hands before and after contact with clients. (See table 4)

In another Saudi study, In Al-Kharj. regarding Infection control precaution in blood banks In Al-Qassim, health-care workers aged over 30 years and those at tertiary care hospitals were more knowledgeable than younger physicians and those working in secondary care hospitals.(22,30) In Makkah, older age, previous training, and experience were positively correlated with higher scores of knowledge among HCWs about Infection control in blood banks .(26) In Ethiopia (2018), factors significantly associated with compliance to standard precaution practices among HCWs were experience of ≤5 years, training on standard precaution, having good hand hygiene and availability of (personal protective equipment. In another study carried out also in Nigeria, non-availability of the materials was the main factor reported for non-adherence to SPs.(19) In Nigerian, the most important factor influencing standard precautions practice was the lack of provision of adequate protective equipment. Other factors included carelessness, lack of display of standard precautions guidelines, emergency nature of the procedure, insufficient availability of needs for precautionary measures, patient`s perceived to be at low risk of blood borne pathogens, pressure of time and standard precautions equipment interfering with technical skills.(31) Regarding The degree of availability of needs for precautionary measures the majority of participant answer available were (66.0%) followed by (22.0%) of participant answer available to some extent while not available were(12.0%) and a significant relation were P-value=0.001 X2 99.04. Regarding The degree of application of precautionary measures the majority of participant answer The procedures are implemented with high quality were (81.0%) followed by (12.0%) of participant answer The procedures apply to some extent while Not applicable were(7.0%) and a significant relation were P-value=0.001 X2 205.24,(See table 5)

Conclusion

Based on the results of the present study, it was concluded that It concluded that the health team had un bad knowledge and performance toward infection control in blood bank continuous periodic education on standard precautions is recommended to cover areas for improvements in knowledge such as alcohol rubbing, that is not the required action on exposure to body fluids and the recommended time of hand washing (40-60 seconds); attitude towards revising guidelines and ensuring availability of infection control supplies; and ensure compliance with hand hygiene, sharps handling, decontamination of spills and wearing gowns.

Reference

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