

Awareness and Compliance of Paramedics Towards Airborne Infection Control in Sindh

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ABSTRACT

Objective: To evaluate the knowledge and compliance of paramedics regarding preventive measures in Sindh.

Study Design: Cross Sectional Study

Place and Duration of Study: This study was conducted at the Naz Memorial Hospital, Karachi from January 2020 to May 2020.

Materials and Methods: 100 numbers of paramedics from different medical institutes through snow ball sampling selected. The valid questionnaire was filled by the paramedics and received via email with the ethical approval from concerned ethical bodies. Both gender with 18 years and above age were included, no medical professional other than paramedics were included in present study. Both questionnaires were filled by the participant, who voluntarily participates in the study. The data was expressed in the form of frequency and percentage through SPSS version 21.0

Results: 100% of paramedic's well response the knowledge at higher level of appreciation regarding preventive measures and their application at their work places. They are well trained and excellent skills in their field of health care, the deficit area if the availability of resources for both the workers and patients.

Conclusion: In fighting a battle against the corona virus team of paramedics are generally highly equipped with knowledge, skills and attitude. The only barriers at their work place are the availability of resources that can make hazards in management of illness and meanwhile cure the patients and self-protection are at high risk. If the ministry involved and make sure the proper accessibility of all protective maneuvers at the site of health management, the outcomes will be more than the thought.

Key Words: Cough etiquettes, Corona virus, air born disease, preventive measures

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INTRODUCTION

The Coronavirus pandemic has been an issued faced by the entire medical world since the start of the year 2020. This has led to the hospitals being overwhelmed due to the high infection rate of this diseases also affecting surveillance of further outbreaks systems and response measures to other diseases¹.

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Previously, just like the current pandemic of the SARS-COV2, we also saw epidemic of SARS in china in 2003, and MERS in the middle east all having the commonality of being from the same family of RNA positive Viruses, spreading mainly by airborne droplets from, which are generated through coughing and sneezing eventually leading to transmission from person to person². If proper washing of hands and respiratory hygiene isn't followed, they can become a source of infection for other either directly or indirectly⁽³⁾. The people working in this pandemic, such as the doctors and most importantly the paramedical staff are at the highest risk of contracting the infection from infected people they are treating. The awareness and knowledge concerning with the transmission of people working in HealthCare setting is very important, in order to stop the further spread of these types of virus which have a high transmission rate⁴. Hence it is very important that during outbreaks like these doctors, nurses, and paramedical staff follow the correct infection guidelines issued by various health agencies and administration in order to prevent further spread of the diseases⁽⁵⁾. On 26th February 2020, the first case of SARA-COV2 was also reported in Pakistan and it became necessary for all workers in hospital settings to be prepared for the worse possible outcome by following proper infection control guidelines and PPE

in order to contain the spread of the virus. Hence a study was conducted in order to assess the awareness and compliance of paramedics towards airborne infection control in Sindh. The basic concept of the study to highlight the barriers, that were creating hurdles while serving to the community, and also impact on their health. Community based health departments can establish the new policies and SOPs for the hospital and higher authorities.

MATERIALS AND METHODS

The cross sectional study was designed at Naz Memorial Hospital, and conducted from January to May 2020. Total 100 numbers of paramedics were included from different medical institutes through snow ball sampling. The valid questionnaire³ was filled by the paramedics and received via email with the ethical approval from concerned ethical committee. Both gender with 18 years and above age were included, no medical professional other than paramedics were included in present study. Both questionnaires were filled by the participant, who voluntarily participates in the study. The data was expressed in the form of frequency and percentage through SPSS version 21.0.

RESULTS

Table No.1: Shows the Frequency and Percentage of Knowledge regarding preventive maneuvers among the paramedics

Knowledge regarding cough Etiquettes	Reactions	Frequency & %age
Mode of transmission	Through coughing, spitting & sneezing	100 (100%)
	Direct contact	100(100%)
	Through blood	0(0%)
Preventive methods used to avoid transmission	Cover the month during coughing	100 (100%)
	Face mask	78(78%)
	Don't come in contact with others	68(68%)
	Avoid spitting	76(76%)
	others	17(17%)
Do you have any idea about cough etiquettes?	Yes	100(100%)
	No	0(0%)
What is your main source of information?	Physicians	53(53%)
	paramedics	100(100%)
	Friends & family	24(24%)
	Television, social media & internet	95(95%)
	others	11(5.5%)
Can you explain respiratory hygiene?	Correctly reply	94(94%)
	Incorrectly reply	6(6%)
Can you explain hand hygiene?	Correctly reply	92(92%)
	Incorrectly reply	8(8%)
In your opinion cough etiquettes can help to prevent the transmission of infection?	Correctly reply	100(100%)
	Incorrectly reply	0(0%)

Table No.2: Shows the Frequency and Percentage of Application of preventive maneuvers among the paramedics

Application of cough etiquettes	Reactions	Frequency & %age
Do you practicing the cough etiquettes during daily life?	Yes	100(100%)
	No	0(0%)
Which one of the following Preventive methods you are using to avoid the transmission?	Cover the month during coughing with hand	71(71%)
	Cover the month during coughing with handkerchief/tissue	14(14%)
	Face mask	92(92%)
	Avoid spitting & generally used dustbin	78(78%)
	others	0(0%)
How often you practice these measures while coughing?	Constantly	57(57%)
	Infrequently	43(43%)
What are the reasons behind the non-compliance	Lack of knowledge	0(0%)
	Severity of symptoms	37(37%)
	Unavailability of tissues/ handkerchief	65(65%)
	No such benefit	0(0%)
	others	10(10%)
Are you habitual for hand washing after an episode of coughing and sneezing?	Constantly	31(31%)
	Infrequently	69(69%)
How frequent you are used to for such measures?	Constantly	68(68%)
	Infrequently	32(32%)
Which one of the following are used to for hand hygiene?	water	39(19.5%)
	water and soap	17(17%)
	Sanitizers	83(83%)
What the reasons behind the non-compliance of preventive measures	Lack of knowledge	100(100%)
	Unreachability of water, soap or sanitizers	83(83%)
	Others	17(17%)

Out of 100 numbers of respondent 44(44.0%) were male and 56(56.0%) were female.

Mean age of male participants was 29.3 ± 0.23 and Mean age of female was 31.4 ± 1.45

Figure: 1 shows Percentage of Paramedics Working at different Departments of Hospitals

Table 1: shows Frequency and percentage of awareness of paramedics regarding preventive measures

Table 2: shows Frequency and Percentage of Compliance of paramedics regarding preventive measure.

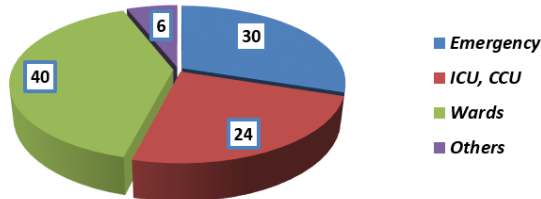


Figure No.1: Shows Percentage of Paramedics Working at different Departments of Hospitals

DISCUSSION

Now a day the world facing the crucial health situation, that gradually envelops the maximum portion of the world. Corona virus and its prevention, all health professionals are trying to spread their best services and information regarding preventive measure that can help to be safe from corona virus. The role of paramedics had a huge contribution towards the management and counseling the community and about to be staying safe. In accordance with the current situation in Pakistan, we have to take out the awareness data regarding paramedics and trying to know that how are they working in existing situation. The study that was done at Baghdad and evidences the perceptions of paramedic's about Swin flu. The educational status of paramedics was up to the mark, but unfortunately lack of knowledge about the spread, management and complication of the disease. Now in accordance with the study results at our region revealed the higher marking on knowledge and awareness about the preventive measures from the air borne disease and apply maneuvers that can facilitate the patients and community and full participate in war against corona virus and its unusual spread. Most of the paramedics ensure regarding their habitual use of respiratory hygiene by using cough etiquettes, the only deficient part of them is availability of resources like disinfectant, protective suits and others materials need for the prevention⁽⁶⁾. In accordance with another study that was evidence at Israel about the health care workers and their risk of life in performing the pandemic of Influenza virus at their continent. The study gives review about their health workers efforts voluntarily in that fatal condition, which was highly appreciated. Out of 1147 participants the 65% of the respondent get information through ministry of health, 61% from internet source while 35% from research article. Now in present study the main source of information was 100% from their concerned paramedics, 95% from internet and 53% through their physicians⁽⁷⁾. The study that was done at Baghdad and including the undergraduate students concerned with the field of paramedic's specialty, basic objective was to obtain their knowledge about pandemic influenza. Total 110 numbers of students participated in the study; more than 80% of the respondent had knowledge about

the etiology and its complication of the concerned disease, while below 50% of the participants showed low level of awareness about the main source of infection spread and basic epidemiology of the respective disease. In comparison with the level at our domain, 100% of the paramedics were well aware about the etiological factors, source of spread, preventive measures and maneuvers. The only deficit corner is the resources that act as a barrier in compliance of the respiratory and hand hygiene⁽⁸⁾. The study evidences about the perception of paramedics in controlling the respiratory illness at emergency department. The paramedics concluded the essential availability of resources for the prevention of other patients and health care providers, without these safety measures the life of all in danger and not able to control the infectious diseases. Similar requirement was documented in our study the availability of required facilities for the application of preventive measures. This can affect the compliance of precautionary measures in daily work⁽⁹⁾. In Japan the study was done regarding the preparedness of primary care centers for the precautionary measures towards the pandemic Influenza. The availability of N95 masks, gowns and eye protection devices at very low rate was stocked. That was below 50% of the total stocked. Similar at our country, the resources are limited and preparedness was at low level in accordance of resources while the knowledge and perception are at higher level⁽¹⁰⁻¹¹⁾. In Pakistan the study was done about the infection control of tuberculosis, the similar factors were mentioned, availability of recourses for both patients and health care professionals. In comparative to the recent study the education level is higher than the mentioned study, in previous results further retraining was the requirement of the field workers. They need advance level of knowledge to deal with the situation as in this study the paramedics are highly prepared and well aware the epidemiology of the current disease with low level of facilitation form the higher authorities^{12, 13, 14}.

CONCLUSION

In fighting a battle against the airborne diseases, team of paramedics are generally highly equipped with knowledge, skills and attitude. The only barriers at their work place are the availability of recourses that can make hazards in management of illness and meanwhile cure the patients and self-protection are at high risk. If the ministry involved and make sure the proper accessibility of all protective maneuvers at the site of health management, the outcomes will be more than the thought.

Author's Contribution:

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Conflict of Interest: The study has no conflict of interest to declare by any author.

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