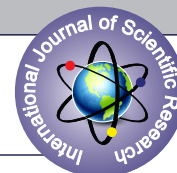


A CROSS SECTIONAL STUDY TO ASSESS KNOWLEDGE, ATTITUDE AND PRACTICES REGARDING INFLUENZA H1N1 A AMONG PUBLIC HEALTH WORKERS OF SELECTED URBAN AREA OF AHMEDABAD

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ABSTRACT

Background: The deadly disease swine flu is, without an ounce of doubt, has caused a major fear among health care workers as well as across various strata of the society. Knowledge of causative agent, symptoms, mode of transmission and its prevention of Influenza A is necessary to know for individual protection as well as to control the spread of the disease in community.

Objective: To study the awareness, attitude and practices regarding H1N1 Influenza A among the health care workers in urban area.

Material and Methods: A Cross-sectional study was conducted among 156 health care workers in urban field practice area of Ahmedabad. Pre-designed and pre-tested questionnaire to elicit information regarding knowledge, attitude and practises of Influenza A. Data such collected was analysed using Chi-Square Test.

Results: Out of 156 participants, Common symptom of H1N1 such as fever was known to 82.69% respondents. Participants had poor knowledge regarding H1N1 influenza Confirmatory Test and Preventive vaccine against swine flu limited to only 25.64 % and 14.74% participants respectively and 94 (60.25%) participants had good attitude.

Conclusion: Knowledge regarding Influenza A (H1N1) needs to be enhanced among individual through appropriate awareness programs to prevent spread of disease on large scale.

KEYWORDS

Swine Flu(H1N1), Public health, Awareness

INTRODUCTION :-

Claiming the lives of approximately 50-100 million people, the Spanish flu pandemic caused by the H1N1 subtype of influenza A virus alarmed the world by its immense pandemic potential.(Jeffery Taubenberger & Morens, 2006) One of the factors that make these organisms a considerable threat is the frequent occurrence of minor point mutations in their genetic material, resulting in different strains of viruses. After multiple outbreaks throughout the 20th century, perhaps one of the most striking events occurred in 2009 when a novel H1N1 virus emerged; this resulted in the swine flu pandemic, that by June 2009 had caused the World Health Organization (WHO) to raise its pandemic alert level to phase six.(Centers for Disease Control and Prevention, 2010) By 20th March 2015 according to the data released by the Health Ministry 31,974 cases had been reported and 1,895 people had died to the disease.(“Indian Swine Flu Outbreak 2016,” 2015)(National Centre for Disease Control, 2019) Of these 6495 cases and 428 deaths occurred in Gujarat.(“Gujarat H1N1 cases,” 2016)

Health care workers will be expected to play a cornerstone role in disseminating targeted implementation preventive strategies and education programs aimed at reducing influenza A/H1N1 related morbidity and mortality. The achievement of these goals varies with whether health care workers are knowledgeable, have positive attitudes, and acquire adequate information. Also, they are a high risk group in the transmission of the disease.(Occupational Safety and Health Administration U.S. Department of Labor, 2009)

OBJECTIVE:-

Present study was carried out to find out the association of knowledge, attitude and practises among health care workers regarding H1N1 influenza A and its prevention with selected demographic variables.

METHODOLOGY:-

A cross-sectional study was conducted from January 2019 to June 2019 amongst healthcare workers in selected urban health centre in Ahmedabad, including health assistants and Nurses who have completed at least 6 months in service. The estimated sample size was 156 including 80 males and 76 females. The participants who were present at the time of study and who were willing to give written informed consent were included in the study.

The questionnaire used was pre-tested and pre-validated. Questions regarding the knowledge, modes of transmission, and preventive measures of Influenza A were derived from previously published standards.(World Health Organization: Pandemic Influenza Preparedness and Response: a WHO Guidance Document, 2009)(Golawar, Chavan, & Somkuwar, 2017) It had three sections as Knowledge (7 questions), Attitude (5 questions) and Practice (6 questions). Descriptive statistics (percentage, mean, standard deviation, range) were used to summarize baseline characteristics of

the study subjects. Chi-square and Fisher exact test were used where appropriate. P value <0.05 was considered to be statistically significant.

RESULTS:-

Majority (80.13%) of Health care workers were in the age group of 25 - 55 years with mean age 40.40 ($\pm$ 9.60) years. Total 156 participants included in the study were from two groups as Male participants (80) and Female participants (76). Out of 156 participants, Average 52(65%) Male Health care workers, 51 (67.43%) Female Health care workers had good knowledge about common symptoms, and 53 (29.44%) participants had poor knowledge. 'The mode of transmission of H1N1 virus is through coughing, sneezing and speaking' was known to 68 (85%) Male employee, 55(72.37%) Female workers. Only few of the Health workers 23(14.74%) knew about availability of different vaccines for H1N1 influenza. ($p < 0.453$, table 1)

Table 1. Distribution of study participants via their correct responses to questions pertaining to knowledge regarding H1N1 virus

Knowledge regarding swine flu	Male No. (%)	Female No. (%)	Total No. (%)	Significant/p value
Mode of transmission	68(85%)	55(72.37%)	123(78.85%)	0.374
Heard about common symptoms-Sudden High Fever	64(80%)	65(85.53%)	129(82.69%)	0.704
Headache	50(62.5%)	61(80.26%)	111(71.15%)	0.188
Cough/Sore throat	60(75%)	53(69.74%)	113(72.43%)	0.698
Muscle pain	32(40%)	26(34.21%)	58(37.18%)	0.553
Spread of Swine Flu	41(51.25%)	32(42.11%)	73(46.79%)	0.403
Confirmatory Test	25(31.25%)	15(19.74%)	40(25.64%)	0.155
Drug Of Choice	38(47.50%)	53(69.74%)	91(58.33%)	0.069
Preventive Vaccine	10(12.5%)	13(17.11%)	23(14.74%)	0.453

Out of 156 participants, 94 (60.25%) participants had good attitude whereas 62 (39.74%) participants had poor attitude. There was statistically significant in attitude score of workers seeking additional information regarding swine flu. ($p < 0.016$, table 2). The Global Influenza Programme(GIP) guidelines told by WHO for protection against H1N1 influenza does not sufficiently known by health care workers. Out of all participants, only 62 (39.74%) participants including Male-Female workers had heard about this guidelines. 90 (57.69%) workers believe that there will be mandatory vaccination for them every year.($p < 0.54$, table 2) The Standard deviation attitude score for Male workers, and Female workers were 9.75, and 14.21 respectively.

Table 2. Distribution of study participants via their responses to questions pertaining to attitude regarding H1N1 virus

Attitude questions	Yes No.(%)	No No.(%)	p value
Are we at higher risk of getting infection?	127(81.41%)	29(18.59%)	0.089
Do you know about Global influenza programme guidelines?	62(39.74%)	94(60.26%)	0.470
Do you seek for additional information regarding swine flu?	98(62.82%)	58(37.18%)	0.016*
Do you believe is that necessity of vaccination for health care workers every year?	90(57.69%)	66(42.30%)	0.549

*p<0.05 is statistically significant.

Majority of Health care workers 109 (69.87%) had knowledge about, practice of changing protective barriers such as masks and gloves after every treatment. Out of 109 participants, There was statistically significant in practice score of 48 (60%) were Male workers and 61 (80.26%) were Female workers. (p = 0.05, table 3). Out of 156 participants, 116(74.36%) were not vaccinated in last 6 months or unaware against H1N1 influenza infection. (p>0.031, table 3). Out of 156 participants, 81(51.92%) participants had chosen injectable route of vaccination against H1N1 influenza whereas 56 (35.90%) participants chose nasal route of vaccination and 19 (12.18%) participants were not sure about the route of vaccination. Out of 81 participants who have chosen injectable route of vaccination, 43(53.75%) were Male health care workers while 38(50%) were Female Health care workers. (p < 0.33, table 3)

Table 3. Distribution of study participants via their responses to questions pertaining to practises regarding H1N1 virus

Practice questions	responses	Male No.(%)	Female No.(%)	P value
Do you change mask & gloves in between two patients?	Yes	48(60%)	61(80.26%)	0.005*
	No	32(40%)	15(19.74%)	
Were you vaccinated during last 6 months?	Yes	21(26.25%)	19(25%)	0.031*
	No	59(73.75%)	57(75%)	
What will you do if patients come with symptoms like flu?	Advise Diagnostic tests	62(77.50%)	61(80.26%)	0.599
	Prescribe Oseltamivir	15(18.75%)	11(14.47%)	
	Treat ignoring symptomatic	1(1.25%)	3(3.95%)	
	No treatment	2(2.5%)	1(1.32%)	
Which route of vaccination administration you prefer?	Nasal	25(31.25%)	31(40.78%)	0.338
	injectable	43(53.75%)	38(50%)	
	No	12(15%)	7(9.21%)	

*p<0.05 is statistically significant

DISCUSSION :-

Our study has several key findings. Majority of health workers had correct knowledge regarding Mode of transmission (78.85%), classic symptom like sore throat (72.43%), and drug of choice (58.33%) for H1N1 influenza.(World Health Organization, 2019)

Correct knowledge regarding confirmatory test was present only in 40 (25.64%). This diversity in knowledge may be due to difference in levels of education and socio-economic status or difference in severity of disease status. In this study, participants were in agreement with the fact that health care workers are at a higher risk of getting infection also vaccination should be made mandatory for them; A few participants in our study were vaccinated against the virus but majority of them were unaware about Global Influenza Program guidelines.

Despite our best efforts, there are limitations to our study. Firstly, the sample size is small and did not represent all health related workers in the entire country. Secondly, we used convenience sampling to collect

responses and so our study suffered from the selection bias. Further longitudinal studies are recommended. Also Sensitisation programmes should be arranged for health care workers and society to create awareness. Such programmes will improve consequences for preventive practice against H1N1 influenza in future era.

CONCLUSION:-

Although the morbidity and mortality of this infection are very low in health workers, an outbreak of swine flu in India is inevitable effects to society. In this study, Majority of the participants have poor knowledge about deadly swine flu. Furthermore, we urge the healthcare professionals to practice preventative measures pertinent to controlling future outbreaks. We hope that this study can pave the way for surveys to be conducted on a larger scale, encompassing health care workers of the entire country.

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