

Original Research Article

Awareness and Practices Regarding Swine Flu among Interns and Nursing Staff: A Cross-Sectional Study at Tertiary Care Hospital, Pune

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Received: 09/10/2015

Revised: 10/11/2015

Accepted: 10/11/2015

ABSTRACT

Introduction: Swine flu also referred as novel A/H1N1 officially, is an acute respiratory disease caused by Influenza type a virus. In India, the highest number of cases was reported in 2009(27,236), followed by 2010 (20,604) and 2012 (5,054 cases). During the epidemic distribution of influenza, health care workers are responsible for delivering good quality management and treatment. Their knowledge and correct behavior can play an important role in prevention of disease spreading among individuals. Hence a study was undertaken to know the Knowledge and Practice of Nursing staff and Interns.

Material and Methods: Out of that 196 interns and 234 nurses participated and completed the study. A pretested, semi-structured questionnaire was used for obtaining knowledge and practices of the respondents regarding swine flu. The questionnaire was administered by interviewer. A written consent from each subject was taken and the respondent was counseled to provide correct information. The information collected was kept strictly confidential and anonymity was maintained.

Results: Both interns and nurses had good knowledge about the symptoms of H1N1 infection. However knowledge of interns was better than nurses. ($p < 0.05$). Causative agent of swine flu was known to 91.84 % interns and 66.67% nurses. Vaccination against swine flu was done only 1.53% interns and 6.24% of nurses. In our study the main obstacle to being vaccinated among nurses was fear of adverse reactions, whereas for doctors it was the lack of effectiveness.

Keywords: Swine flu, Novel A/ H1N1, Awareness, Health care providers.

INTRODUCTION

Swine flu also referred as novel A/H1N1 officially, is an acute respiratory disease caused by Influenza type a virus.

[1] Swine influenza was first proposed to be a disease related to human influenza during the 1918 flu pandemic, which was known as Spanish flu, which infected about 500 million people and caused approximately 50 million deaths. On 11th June 2009, the World Health Organization

(WHO) raised its pandemic alert level to Phase 6 which means that, the A/H1N1 flu had spread in more than two continents. By the year 2010 June, it has caused more than 18, 172 deaths in nearly 214 countries and overseas territories and communities.

[2] However, the number of people affected with this disease is consistently increasing ever since 2011. Worldwide there have been more than 375, 000 laboratory confirmed cases of pandemic influenza

H1N1 in 2009 and thousands of deaths reported to WHO. [3] Most illnesses, especially the severe ones and deaths have occurred among healthy young adults. [4]

The signs and symptoms of Seasonal influenza is characterized by a sudden onset of high fever, cough (usually dry), headache, muscle and joint pain, severe malaise (feeling unwell), sore throat and runny nose. Cough can be severe and can last 2 or more weeks. It is more fatal especially in high risk persons namely in - Children younger than age 2 years, elderly aged 65 years or older, pregnant women, and people of any age with certain medical conditions, such as chronic heart, lung, kidney, liver, blood or metabolic diseases (such as diabetes), or weakened immune systems. [5]

In India, the highest number of cases was reported in 2009(27,236), followed by 2010 (20,604) and 2012 (5,054 cases).The highest number of deaths due to swine flu took place in 2011 (1,763), followed by 2009 (981) and 2012 (405). [6] The number of deaths due to swine flu in India was 261 in the first 3 months of 2013, with most deaths reported from Rajasthan and Gujarat. There were 2,329 people who were tested positive for the Influenza a (H1N1) virus, in 35 states and union territories. [7] In Punjab, a northern state of India, total number of confirmed cases was 182 and 42 deaths. [8] The best we citizens can do is to keep ourselves informed about the happenings and the steps we can take to prevent the spread of swine flu. [9]

Although the swine flu is now in its Post-endemic phase there is always a risk of resurgence of disease in susceptible population. During the epidemic distribution of influenza, health care workers are responsible for delivering good quality management and treatment. Their knowledge and correct behavior can play an important role in prevention of disease spreading among individuals.

Hence a study was undertaken to know the Knowledge and Practice of Nursing staff and Interns of B.J. Medical College, Pune.

MATERIALS AND METHODS

A cross-sectional study was conducted in the month from Jan to April, 2010 among the interns and nurses working at Sassoon General Hospital attached with B.J. Govt. Medical College, Pune. Permission from the Dean, B.J.G.M. C. and Medical Superintendent at Sassoon General Hospital was taken prior to the study. The study also got approved by the Institutional Ethical Committee. Intern sand staff nurses who have been working for at least past 6 months in this hospital and those who gave consent to be a part of the study, were included in the study. Interns and nurses those who did not gave consent and those who did not respond even after two visits were excluded from the study. According to guidelines for conducting Knowledge, Attitude and Practice study, minimum sample size required for KAP study is 200. [10]

To meet this sample, a total of 506(206interns+300Nurses) health care providers were contacted. Out of that 196 interns and 234 nurses participated and completed the study. A pretested, semi-structured questionnaire was used for obtaining knowledge and practices of the respondents regarding swine flu. The questionnaire was administered by interviewer. A written consent from each subject was taken and the respondent was counseled to provide correct information. The information collected was kept strictly confidential and anonymity was maintained.

The information thus collected was computerized and analyzed by using Statistical Package for Social Science (SPSS 16.0) software program for Windows. Data was presented as proportions and Chi-square test was used as to find out the association.

RESULTS

Out of 196 interns 28.57% were female. Whereas 97.86% nurses were females by gender. Majority of the interns (96.94%) were in the younger age group (<26 years), whereas majority of the nurses (85.47%) were older than 32 years.

Both interns and nurses had good knowledge about the symptoms of H1N1 infection [Table 1]. However knowledge of interns was better than nurses. ($p < 0.05$). Causative agent of swine flu was known to 91.84% interns and 66.67% nurses. Transmission of infection by droplets was answered correctly by all the interns as compared with 98.29% of the nurses.

The incubation period of the swine flu disease was correctly answered by

91.84% of the interns and 59.83% of the nurses respectively as 1–7 days. When inquired about the ways of prevention against swine flu most of the interns and nurses told it correctly. But the knowledge regarding ways of prevention was better in interns. ($p < 0.05$)

Regarding treatment of swine flu correct drugs was known to 76.53% interns and only 47.01% nurses. About 2/3rd of the interns were aware about the chemoprophylaxis and correct distance to be maintained. Most of the nurses could not answer about the chemoprophylaxis and correct distance to be maintained. But the knowledge of the interns was better than nurses in this regard ($p < 0.05$).

Table 1. Knowledge of interns and nurses on different aspects of Swine Flu

Variable	Interns N (%)	Nurses N (%)	p-value
Symptoms of Swine Flu			
Fever	194(98.98)	200(85.47)	0.00
URI	192(97.96)	200(85.47)	0.00
Body ache	190(96.94)	196(83.76)	0.00
Vomiting	170(86.73)	178(76.07)	0.005
Diarrhea	165(84.18)	170(72.65)	0.004
Pneumonia	194(98.98)	198(84.62)	0.00
Causative Agent			
Transmission by droplets	196(100)	230(98.29)	0.1733
Ways of prevention			
Hand washing	190(96.94)	205(87.61)	0.00
Use of mask	194(98.98)	210(89.74)	0.00
Avoiding crowded places	178(90.82)	198(84.62)	0.074
Treatability			
Drug used for treatment	150(76.53)	110(47.01)	0.00
Chemoprophylaxis			
Correct distance to be maintained	135(68.88)	96(41.02)	0.00
Meaning of N95	58(29.59)	34(14.53)	0.00
Total	196	234	

Table 2. Practices related to prevention of swine flu

Variables	Interns	Nurses	p-value
Use of N95 Mask			
All the time on duty	25(12.76)	34(14.53)	0.64
Intermittently	40(20.41)	60(25.64)	0.2067
During potential contact	60(30.61)	30(12.82)	0.00
During OPD	35(17.86)	70(29.91)	0.003
Not used at all	36(18.37)	30(12.82)	0.168
Correct use of mask			
Correct disposal	165(84.18)	211(90.17)	0.042
Vaccination			
Chemoprophylaxis taken	12(12.5)	50(21.37)	0.00
Total	196	234	

Very few interns and nurses used N95 mask all the time on duty. Most of interns and nurses practiced correct use of mask. But here nurses practiced correct

use of mask better than interns. ($p < 0.05$) Proper disposal of the used face mask was practiced by 84.18% of interns and 90.17% nurses.

Vaccination against swine flu was done only 1.53% interns and 6.24% of nurses. In our study the main obstacle to being vaccinated among nurses was fear of adverse reactions, whereas for doctors it was the lack of effectiveness. While chemoprophylaxis was taken only by 12.5 % and 21.37% of interns and nurses respectively.

DISCUSSION

Nursing Health staff and interns are the key persons in delivering health services in any tertiary care centre in case of epidemic and are important key persons in control of epidemic as they come first in contact of the patient. [11] To deliver the health services in a better and effective way, they should have a sound knowledge and practice regarding the disease. There are very few studies are available on this topic among medicos and Paramedical workers from India.

The interns as being medicos were having better knowledge regarding wine flu symptoms, causative agent, Mode of transmission infection, Incubation period as compared to nurses and it was found to be statistically significant. They were also having better knowledge regarding Primordial, primary and secondary prevention of swine flu such as correct distance maintained from flu patients, use of N-95 mask, Chemoprophylaxis and treatment aspects as compared to nurses. The findings were similar to the study conducted by Rajoura et al. [12] Another study done by Datta SS at Pondicherry among paramedical workers in an tertiary care hospital found that 91% of the participants had correct knowledge of causative agent which is comparable to our study. [13] A study by Sharma S et al. showed that the symptoms of swine flu were known to only half of the interns. [1] Which is very less when compared with our interns. This difference in knowledge may be because of large number of cases and more alertness at Pune.

Regarding Practice aspect is concerned with respect to swine flu, only 12.76% of interns and 14.53% of nurses used mask all the time in their duties. Most of the interns and nurses practiced correct use of mask, but nurses used it in better way as compared to interns and it was found to be statistically significant. It was also found that the correct use and disposal of masks (either in yellow bag or in hypochlorite solution) was practiced more by nurses as compared to interns. All these factors were found to be statistically significant. The findings were similar to the study conducted by Rajoura et al. [12]

Very few health care providers were immunized and had taken chemoprophylaxis and they were more among nurses as compared to interns and it was found to be statistically significant. ($p < 0.05$). These results are consistent with the study done by Naik JD et.al. [14] Vaccination for pandemic influenza is considered to be one of the most important primary preventive measures to reduce the disease burden of H1N1. Healthcare workers have been identified “as a first priority” to be vaccinated against influenza A (H1N1) but there is paucity of data about knowledge, current status, willingness and factors associated with acceptance in Indian setting.

CONCLUSION AND RECOMMENDATION

There is significant gap between knowledge and practice regarding swine flu disease among health care workers which should be filled up by proper training and Behavioral change and communication practices among health care providers. There is an immediate need for spreading correct awareness about the vaccine and its role in preventing H1N1 infection as health care workers are at high risk of contracting infection.

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How to cite this article: Patavegar BN, Kamble MS, Langare-Patil S. Awareness and practices regarding swine flu among interns and nursing staff: A cross-sectional study at tertiary care hospital, Pune. *Int J Health Sci Res.* 2015; 5(12):1-5.
