

Original Article

Knowledge and Awareness about H1N1 Flu in Urban Adult Population of Vadodara, India

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ABSTRACT:

Objective: To investigate the knowledge and awareness about H1N1 flu in urban population of 18 years and above of Vadodara, India.

Methods: A pre-designed self-rated instrument survey was conducted among 100 adults of 18 years and above through a cross-sectional study design and a descriptive analysis was performed.

Results: Present study showed that a substantial number of participants have adequate knowledge regarding causative organism (87%), mode of spread (45%) and prevention (83%). Majority of participants (96%) would consult doctor for management of H1N1 flu and also participants (82%) believe that hand washing is most important preventable measure for H1N1 flu.

Conclusion: Although there is an appropriate knowledge and awareness regarding various aspects of H1N1 flu among urban adult population still, active interventions are required in all areas of H1N1 flu pandemic not only to improve their knowledge and awareness regarding H1N1 flu of urban adults but also for rural adults.

Keywords: H1N1 flu; Pandemic; Awareness; Infectious Disease; India

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1. INTRODUCTION

Infectious diseases have not only become the world's leading cause of premature death, but they also threaten to cripple the society, social and economic development in third world countries. New epidemics of infectious diseases continue to hit the deck and H1N1 flu or Influenza A is one of them. H1N1 flu (Swine flu, Hog flu, or Pig flu) is an infection by any one of several types of Swine influenza virus (SIV). SIV is any strain of the influenza family of viruses that is endemic in pigs

(1). The common clinical features are fever, common cold and cough with muscle ache. These symptoms are similar to seasonal flu but due to havoc created by H1N1 flu every case of fever with cough and cold is being considered as H1N1 flu by general public (2).

H1N1 flu is emerged from Mexico and suddenly spread all over the globe causing the first pandemic of the 21st century of phase 6 level as defined by the criteria of World Health organization (WHO) (3-6). According to WHO estimates, 1/3rd of the world's population will be affected with H1N1

flu within two years (2) and India is no exception. It ranked 3rd most affected country for cases and deaths of swine flu globally (5) and it is probably one of the most appalling words in Gujarat, especially in Vadodara because people equate H1N1 flu with death due to very high case fatality rate.

This is a viral disease and till date no specific treatment is available. Although drug Tamiflu is available but effectiveness is demonstrated in early diagnosed cases which is not always the case in low and middle income countries especially in India. Coupled with this, declaration of phase 6 level pandemic by WHO presents a scenario of high mortality and morbidity rates and interrupt normal productive economic activities that will result in increasing worry in general masses. Furthermore, vaccine trials are going on but these still require time. Transmission of H1N1 virus from an infectious source case to people with whom they share air is governed by several factors. These factors, which determine whether H1N1 virus transmission will occur and establish a new infection are related to the source case, the virus, the environment and the people who are exposed to the source case. Contacts of the H1N1 flu cases constitute a high-risk group for acquiring H1N1 flu. In addition, for primary prevention sound scientific knowledge about H1N1 flu is a prerequisite for suggesting preventive measures. Hence in current situation prevention is the most appropriate measure to control H1N1 flu pandemic and awareness of H1N1 flu is ranked very high in preventive measures. The distribution of proper information to the public on the status of the H1N1 virus pandemic will be important to achieve a broad awareness of the potential risks and the optimum code of behaviour during the pandemic. Besides this, through awareness public should be convinced that although H1N1 flu is a pandemic but it is not severe. This paper reports the knowledge and pattern of awareness about H1N1 flu of adult (≤ 18 years) population in urban area of Vadodara, India.

2. MATERIAL AND METHODS

A cross-sectional study was conducted by enrolling 100 study subjects in the month of January 2010. The study subject was defined as, any person having age 18 years and above of either sex, residing in urban area of Vadodara for at least 2 years and belonging to lower middle and lower class. Rich and upper middle class people were excluded on the account of that it is difficult to approach them owing to security precautions and lack of cooperation from them. There was no compulsion for them to participate in the study. A pre-designed self-rated instrument was used to collect the data after taking verbal consent of the study subjects during house to

house survey through convenience sampling methodology. This self-rated instrument consists of socio-demographic characteristics (age, sex, education and occupation), knowledge and awareness about the disease (nature, mode of spread/transmission, clinical features and preventive measures). The self-rated instrument was drafted in a close-ended manner into local vernacular language (Gujarati) and translated into English language. Although mostly the questions were having yes or no type responses but few questions have more than one response. In addition to one of the authors (HNG), one (intern doctor) was assigned the job of data collection. Both were quiet fluent in Gujarati language. SKR briefed the data collector's team on the process of data collection during the training session, which included seeking the consent of the subject and being polite and considerate. Data were processed using Excel sheet and analyzed through Statistical Package for Social Science (SPSS) software program for Windows (version 11.5). Mean and standard deviation for continuous variable and percentages for categorical variables were calculated.

3. RESULTS

A total of one hundred (100) adults 18 years and above of age participated in the study. There were no refusals, as complete anonymity was ensured. Of 100 participants, 94 heard about H1N1 flu. Hence, further analysis was performed on 94 participants.

Table 1. Socio-demographic characteristics of the study participants recorded during a cross-sectional study of Awareness about H1N1 flu among Indian adults (January 2010)

Characteristics	Number (n = 94)	%*
Sex		
Male	53	56
Female	41	44
Age (years)		
(Mean \pm sd)	35.64 \pm 13.68	
Education		
Up to 10 th Standard	04	4
11 th – 12 Standard	17	18
Graduate	51	54
Post-graduate	22	24
Occupation		
Govt. Service	18	19
Private Service	13	14
Self-employed	24	26
Unemployed	39	41

*All percentages rounded to whole numbers

Table 2. Knowledge and awareness about H1N1 flu among study participants recorded during a cross-sectional study of Awareness about H1N1 flu among Indian adults (January 2010)

Characteristics	Number (n=94)	%*
Infectious Disease		
Yes	90	96
Causative Organism		
Bacteria	1	1
Fungi	4	4
Parasite	7	8
Virus	82	87
Modes of transmission		
Swine	28	30
Human	30	32
Swine and Human (Both)	30	32
Others (birds, animals)	06	6
Preventable		
Yes	78	83
Preventable by Vaccine		
Vaccine availability in India	26	28
Preventable by hand washing	77	82
Preventable by mask or handkerchief	87	93
Availability of Medicine	56	60
Infected person roam freely	12	13
Should we go to crowded places	06	6
Isolation of infected person	74	79
Impact of proper nutrition	73	78
For management of H1N1 flu		
Consult to Doctor	90	96
Home based Management	1	1
Doctor and Home based (both)	1	1
Nothing to do	2	2

*All percentages rounded to whole numbers

4. DISCUSSIONS

Very few epidemiological studies on H1N1 flu are available because of its recent origin. To the best of our knowledge, this is the first study of its kind among urban adults in India so we are unable to compare the results of this study with other Indian studies. Nonetheless, few comparable studies from other parts of the globe were added in the literature in recent past (7-11).

The present study showed that majority of the participants are adequately aware of the H1N1 flu regarding causative agent, mode of spread and prevention but only half of the participants were clear of the origin of the H1N1 flu.

In our study, the respondents were more knowledgeable about following preventive measures as: frequently washing hands, avoid going out and in crowded places as compared to study by Hao HA et al (3). However, our study's findings for isolation of infected persons and wearing mask were differing from the study by Balkhy et al (7). The reasons may be that our population is highly literate and study area has seen more deaths of H1N1 flu. Hence population is more aware of H1N1 flu.

The most important findings of our study were: most of the participants (82%) were believe that hand washing will prevent H1N1 flu and also majority of the participants (96%) would consult the doctors for management of H1N1 flu.

Some limitations of our study need to be acknowledged. First, the study is limited by cross-sectional design so temporal or cause-effect relationship cannot be established. Final and most important is small sample size with convenience sampling strategy for selection of the study subjects. Hence we cannot generalize the study findings.

5. CONCLUSION

We recommend in the light of study findings that however, awareness is quiet good but still needs health education sessions, seminars, workshops and symposia for creating awareness in all areas of pandemic of H1N1 flu to urban as well as rural masses. Public Health Professionals should develop communication messages closely related to the pandemic situation to target the information needs of the public.

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