

**Research Article****A Study on Awareness Regarding Swine Flu (Influenza A H<sub>1</sub>N<sub>1</sub>) PANDEMIC IN AN Urban Community of Maharashtra**Naik JD<sup>1</sup>, Swapnil Jain<sup>2</sup>, Babar SD<sup>3</sup>, Mathurkar M.P<sup>3</sup>, Kamble SV<sup>3</sup>, Patil V<sup>3</sup><sup>1</sup>Professor & Head, <sup>2</sup>Assistant Professor, <sup>3</sup>Junior Resident, Department of Community Medicine, Government Medical College, Miraj Maharashtra-416410, India.**\*Corresponding author**

Dr Swapnil Jain

Email: [sjvicky85@gmail.com](mailto:sjvicky85@gmail.com)

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**Abstract:** Swine flu disease is pandemic and is widely spread across the India. More number of swine flu cases is rising in India and Maharashtra. As minimal literature is available on awareness of swine flu in this area. So this study was conducted to assess the awareness of swine flu disease in urban slum population of Miraj city, Maharashtra. It was a cross-sectional study about knowledge, attitude and practice about swine flu disease among urban slum population (adopted community of tertiary care hospital) of Miraj city Maharashtra for period of one month among 217 study subjects. Subjects were selected by systematic random sampling method. The data analysis was done by using frequency and proportion after entering in Microsoft excel. Most of study subjects were Male (63.13%). With regard to age group most of them were in 50-59 years of age group. Inhalation was most common route of transmission i.e. 57.6%. Fever was the most common symptom known to majority of the participants in our study [80.18%], Hand washing was most common preventive measure adopted by majority of subjects. Mass media was most common source of information to the study subjects. Awareness of swine flu among study subjects was not so good, as most of them confused the transmission route of A/H1N1. There are many factors influencing the KAP related to A/H1N1 which can be brought up to the knowledge of the masses through health education.

**Keywords:** Swine flu, urban, Miraj, awareness, H<sub>1</sub>N<sub>1</sub>, Pandemic

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**INTRODUCTION**

WHO declared H1N1 infection as a pandemic on 11 June 2009. About 208 countries reported laboratory-confirmed cases of H1N1 influenza including 12,220 deaths. The new virus emerged through cross-species transmission and assortment of H1N1 antigens and recombination between swine, avian and human strains[1]. India confirmed its first case on 16 May 2009, when a man travelling from New York via Dubai and Delhi tested positive for the H1N1 Influenza virus in Hyderabad. The second case was reported by the National Institute of Virology (NIV), Pune, in a mother and son duo from Chennai on 1 June 2009[2].

India is ranked 3rd among the most affected countries for cases and deaths of swine flu globally. The highest number of cases were reported in 2009 (27,236), followed by 2010 (20,604) and 2012 (5,054 cases). The highest number of swine flu deaths took place in 2011 (1,763), followed by 2009 (981) and 2012 (405)[3]. Causes of death can be refractory shock, acidosis, and acute renal failure and Multiorgan dysfunction due to Acute Renal Failure syndrome was

present in 20%, and incidence of ARF was significantly higher in H1N1+ patients in comparison to H1N1-patient[4].

Knowledge, attitude and practice (KAP) of people regarding swine flu are a cornerstone in prevention of virus spread and outbreak [3]. "The Government has been successful in providing information to people on swine flu. Even television channels have played a major role in educating people by inviting doctors and experts in their studios every day to provide information about the deadly virus[5]. The Ministry of Health and Family Welfare joined hands with WHO, UNICEF, and the media to strategize on how to inform and protect the public from Pandemic H1N1 (2009) Influenza at the National Media Communication Workshop held in New Delhi on 23-24 July, 2009[6]. Keeping all this in view the study was designed to assess the awareness, practices, their attitude and myths regarding Swine flu among urban population of Miraj Maharashtra India.

**MATERIALS AND METHODS**

This cross-sectional study was conducted for period of one month (15September- 15October) among urban slum population (adopted community of tertiary care hospital) Miraj city Maharashtra. According to guidelines for conducting Knowledge, Attitude and Practice study, minimum sample size required for KAP study is 200[7] but for the sample to be more representative of a population, a total of 217 participants were included in the study. Total urban slum population was 3268 and Total families present were 651 .With systematic random sampling procedure every third family was selected and interview was taken preferably from head of family with this the sample size came out to be 217 .The data analysis was done by using frequency and percentages . The subjects were assessed using a pre-tested self-administered questionnaire containing the following information: Personal demographic characteristics (name, age, gender, educational qualification and working status) Ethical clearance was obtained from the Institutional Ethical Clearance Committee of the Medical College and Hospital before commencement of the study and individual verbal informed consent was taken from study subject. For convenience, age was divided into five groups as follows: 30 to 39 years; 40

to 49 years; 50 to 59 years, and  $\geq 60$  years. Similarly, educational status was divided into two groups: illiterate and literate and working status into working and non-working.

**RESULTS**

Demographic profile of study subjects reflected in Table 1. Most of study subjects were Male (63.13%). With regard to age group most of them were in 50-59 years of age group. Illiteracy was seen only in few 31.79% subjects. As far as occupation was concerned most of them non-working(56.22%). Mass media was most common source of information to the study subjects(72.35%)[Table 2].

Majority of study subjects were aware of that inhalation is most common route of transmission i.e. 57.6%. Only 4.6% were under misconception that eating pork can lead to swine flu. Majority i.e. 53% was aware of test to detect swine flu. And 54.8% were availing the knowledge regarding vaccine availability. Fever was the most common symptom known to majority of the participants in our study(80.18%),[Table 3] Hand washing was most common preventive measure adopted by majority i.e.70.5% while use of mask/Handkerchief was seen in 38.2% for prevention of swine flu.[Table 4]

**Table1. Demographic characteristics of the participants (n = 217).**

Characteristics	Category	Number	Percentage
Gender	Male	137	63.13
	Female	80	36.87
Age (in years)	30-39	32	14.60
	40-49	44	20.27
	50-59	119	55
	$\geq 60$	22	10.13
Education	Illiterate	69	31.79
	Literate	148	68.21
Occupation	Working	95	43.78
	Non-working	122	56.22
Total		217	100

**Table 2: Source of information about swine flu (n=217) \***

Source of information	Frequency	Percentage
Mass media	154	72.35
Friends	43	19.81
Relatives	26	11.98
Health worker	29	13.36

\*Multiple responses.

**Table 3: Knowledge regarding various aspects related to swine flu. (n=217)**

Study variables		Frequency	Percentage (%)
Route of transmission	Inhalation	125	57.60
	Eating pork	15	04.60
	House fly and mosquitoes	18	08.30
	Food and water	51	23.50
	Don't know	13	06.00
Test to detect swine flu	Yes	115	53.00
	No	31	14.29
	Don't know	71	32.71
Availability Of vaccine	Yes	119	54.84
	No	53	24.42
	Don't know	45	20.74
Common symptoms of swine flu	Fever	174	80.18
	Cough and cold	150	69.12
	Diarrhea	65	29.95
	Breathlessness	102	47.0
	Vomiting	74	34.10
	Body ache	59	27.18
	Loose stools	29	13.36

\*Multiple responses.

**Table 4: Attitude and Practice of study subjects regarding prevention of swine flu.(n=217)\***

Preventive measure	No	Percentage
Hand washing	153	70.50
Use of mask/Handkerchief	83	38.2
Avoiding crowded places	64	29.49
Not eating flesh / meat products	19	8.75
Killing pigs in surroundings of your neighbourhood	21	9.67
Avoiding putting hands in mouth and nose	128	58.98
Keeping person with cold in a separate room	46	21.23
Started more nutritious diet	14	6.5

\*Multiple responses.

## DISCUSSION

Mass media was most common source of information to the study subjects (72.35%) [Table 2] similar to study by Singh S *et al* [8] in which TV was found to be the most common source of knowledge regarding swine flu for 76 % of the respondents. Newspaper in 68.5 % and Internet in 21.5%. According to Table 2, Majority of study subjects had knowledge regarding inhalation as the most common route (57.60%), while 6% of participants were not aware of the route of transmission in contrast to study by Nagar S *et al* [9] found that nearly 44% of the subjects had no idea regarding the various methods by which one can prevent from contracting the illness. Only 2.7% of the population in our study had a misconception that eating pork can spread swine flu, contradicting the observation made by Singh *et al* [8] which was 40.6%. In our study, Majority i.e. 53% were aware of test to detect swine flu. And 54.8% were availing the knowledge regarding vaccine availability, very similar to previous study by Singh S *et al* [8] in which availability of medicine and

vaccine against swine flu were known to 74% and 60.5%, respectively, Nagar S *et al* (44%)[9], While Joseph TF *et al* [10] found that 63% were not aware, regarding vaccine availability. High awareness among study subjects regarding availability of vaccine reflects better coverage of health education. Fever was the most common symptom known to majority of the participants in our study[80.18%], as was observed in other studies [3,8,11].

Hand washing as preventive measure for swine flu was practiced among 70% of study subjects [Table 4], quite similar to study by Rubin GJ *et al* (87.8%)[12] while it was low in Singh *et al* (36.0%)[8], Lin Y *et al* (56.9%)[13], and Nath *et al* (30.0%)[14]. It is a significant measure and high awareness denotes better mass media coverage in urban community. Use of face mask as a preventive measure was practiced only in 38.2% of the study population similar to studies done by Singh *et al* . 56%[8] and Farahat *et al* . 14.3%[11].

### Limitations

Our survey measured a specific population's views at a specific point in time; their beliefs and attitudes reflect the information available at the time and therefore are not stable and it was conducted in a single city, additional research into differing reactions to the outbreak among other ethnic groups is required.

### CONCLUSIONS AND RECOMMENDATIONS:

Swine flu being spread by food and water was wrong knowledge prevalent in urban slum area. The good thing about the knowledge regarding swine flu among them was, they know about the mode of transmission of disease which could help in prevention of disease. Most of study people have knowledge of use of face mask to prevent swine flu. Study population have less information about test available to detect swine flu. Since Swine flu is emerging disease and spreads very fast and simple preventive measures at an early stage will be very useful in containment of the disease which could only be achieved by raising the level of awareness. The role of the mass media is very important to create the awareness about swine flu in the community. Health education sessions, seminars, workshops for creating awareness in all areas of urban can be made more effective by involving Public Health Professionals. Information education and communication (I.E.C) activity should be strengthened to increase awareness among community.

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